



# United States Department of the Interior



## BUREAU OF LAND MANAGEMENT

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SEP 28 2001

Honorable Dianne Feinstein  
United States Senate  
Washington, D.C. 20510

Dear Senator Feinstein:

As requested by the Department of the Interior, I am pleased to respond to your specific questions in your August 1, 2001, letter, cosigned by Representatives Jerry Lewis and Ken Calvert to the Secretary regarding the proposed Cadiz Groundwater Storage and Dry-Year Supply Program. The answers to these questions have been prepared in cooperation with National Park Service (NPS) Regional Director John Reynolds, U.S. Geological Survey (USGS) California District Chief Mike Shulters, County of San Bernardino Assistant County Administrator John Coss, and Metropolitan Water District's Chief Executive Officer Ron Gastelum. As noted in the Department's letter to you, all these issues and concerns are also addressed in the Final Environmental Impact Statement/Environmental Impact Report (EIS/EIR) just released.

The following responses are provided to the questions posed in your letter.

1. What is the recharge rate of the water in the Mojave aquifer?

Answer: The exact recharge rate of the Fenner, Bristol, and Cadiz watersheds is not known at this time. The draft EIS/EIR stated that the average amount of recoverable water available to the project area ranges between 15,000 and 37,000 acre-feet per year. A memorandum prepared by the USGS for the BLM indicated that the model used for the draft EIS/EIR overestimated the natural recharge to the basin by 5 to 25 times. Metropolitan believes that the natural recharge is higher than stated in the USGS memorandum. Because of these differences in recharge estimates, the agencies decided to develop a detailed groundwater monitoring and management plan, which will gather data on this issue. The plan is included in the Final EIS/EIR. However, the monitoring and management plan is designed to ensure there would be no adverse impacts to critical resources, no matter what the recharge rate is. The monitoring and management plan would provide "early warning" of potential adverse impacts to critical resources so that corrective measures could be implemented to prevent adverse impacts.

2. How much water is needed to protect the Federal lands including the Mojave National Preserve?

Answer: The Federal waters in this case consist mostly of springs existing on Federal lands that provide water for wildlife and other purposes. If the springs are connected to the groundwater, or

underground aquifer, they could be affected by the project and that contingency is addressed in the monitoring and management plan. If the springs are not connected to the underground aquifer, they would not be affected by the project. The monitoring and management plan data collection will make the determination as to the springs' source and provide specific mechanisms for monitoring those connected to the aquifer to ensure these critical resources are not adversely impacted by the project. Therefore, while we cannot answer this question in a quantitative manner, the plan will ensure that Federal water resources, whether on BLM or NPS lands, will not be adversely affected as a condition of the right-of-way.

3. Has the National Park Service articulated the water needs of the Mojave National Preserve? If not, why not? Will this project proceed before this data is made available?

Answer: Detailed information regarding water use within the Preserve is limited; however, NPS has identified future documentation of water resources and uses as a high priority. NPS has stated it cannot allow drawdown of the aquifer under the Preserve as it believes maintenance of groundwater levels are necessary to protect the Preserve's critical resources. That requirement is an important part of the monitoring and management plan. If monitoring data indicate actions are occurring that could lead to an impact on critical resources, any pumping authorized by the right-of-way grant would be required to cease. The monitoring and management plan provides for data collection on springs and the establishment of safety mechanisms to protect these critical resources. Once the program is authorized, the monitoring and management plan is designed to require corrective actions be taken before any adverse impacts occur.

4. Since the California Desert Protection Act stipulates that BLM wilderness areas are permitted to take all the water that is needed to sustain the ecosystem, will this project move forward without first assessing the federal need for water?

Answer: The same data collection and specific protection measures developed in the monitoring and management plan for the Federal springs in NPS' Mojave National Preserve are also designed to protect the Federal springs in BLM Wilderness Areas designated by the California Desert Protection Act. Therefore, while the right-of-way grant for the project could be issued before all data collection is completed, extraction of indigenous groundwater would not begin until the monitoring and management plan provisions covering this aspect are completed and operational. Again, even once the project is authorized, the monitoring and management plan is designed to require corrective actions be taken before any adverse impacts occur.

5. What water level is necessary to maintain the desert springs?

Answer: There are 28 known springs within the Fenner and Orange Blossom Wash watersheds. The closest springs to the project area are located in the Granite, Clipper and Old Woman mountains, more than 10 miles from the proposed spreading basins and well field. The potential connection between these springs and the regional aquifer used for the Cadiz Project is unknown at this time. Prior to project operations, all 28 springs will be inventoried in cooperation with BLM and NPS to determine

the spring type, surrounding geology, vegetation type and cover, flow rate of the spring, and the water level in the vicinity of the spring. These data will be used to determine if the springs are associated with the regional aquifer and have the potential to be affected by project operations. Approximately eight springs will be identified for continued monitoring to determine if the springs are being affected by the project. A key feature of the monitoring and management plan is the installation of a series of observation wells that will be installed between the project well field and the closest springs. Water-level fluctuations in these observation wells will act as an "early warning" measure of potential impacts that might extend to springs in the Mojave National Preserve or BLM administered lands in the affected watersheds. With such early warning, adverse impacts would be prevented by implementation of suitable corrective measures. While it is not possible now to state a quantitative groundwater level required to maintain desert springs, groundwater levels will be monitored continuously throughout the life of the project to ensure protection of the springs in the Preserve and BLM administered lands.

6. The 1980 Desert Plan under the Federal Land Policy and Management Act (FLPMA) attempts to minimize new corridors. Is there an existing corridor route that can be used instead of the new corridor that is proposed for the project? Does the federal government typically approve a Right of Way before having complete information from which to develop terms and conditions to protect the general public? Does the federal government typically propose to gather essential information during the monitoring phase of a project?

Answer: An alternative utilizing (to the fullest extent possible) the existing right-of-way corridor in this project area is analyzed in the Final EIS/EIR. This alternative would result in a 73-mile pipeline (compared to the preferred alternative of 34.6 miles), with about 60 miles of that pipeline going through designated critical habitat for the threatened desert tortoise (which the preferred alternative purposely avoided). While compliance with the groundwater monitoring and management plan is intended to be a term and condition of any right-of-way grant to be authorized, there will be other requirements, including mitigations for resources other than groundwater, and those resulting from the Section 7 consultation under the Endangered Species Act with the U.S. Fish and Wildlife Service. Therefore, prior to approval of a Record of Decision on this project, all terms and conditions will be fully specified. However, the groundwater monitoring and management plan (as a term and condition) will set up a data collection process and implementation effort that will cover the first years of the project's pre-operational phase. While not typical, there is ample precedent for such a phased approach, including monitoring plans associated with mining plans and other Federal land use authorizations.

7. What are the Cadiz Water rights to the aquifer?

Answer: Cadiz, Inc., Metropolitan's private partner in the project, owns about 27,000 acres of private lands in the project area. Under State law, the company utilizes about 5,000-6,000 acre-feet/year of groundwater for its existing agricultural operations. In addition, in 1993, the County of San Bernardino authorized expansion of Cadiz's agricultural operations that could result in withdrawal of up to 30,000 acre-feet subject to a groundwater monitoring plan.

8. What is the effect of Cadiz exercising its water rights on the federal water rights and water rights of others?

Answer: Under California water law, overlying owners (such as Cadiz) can extract indigenous groundwater for beneficial use. This water right is limited, however, to the amount necessary for use on the overlying land and applies to all overlying owners affected. Any conflicts among overlying owners are resolved pursuant to State law. Surplus water can be appropriated for uses outside of the overlying lands, once beneficial uses of overlying owners are satisfied. The water proposed for extraction in this project would be limited to surplus water determined to be available by the monitoring and management plan. As stated earlier, Federal water rights, since the Federal government is an overlying owner, would be protected by implementation of the monitoring and management plan as described.

9. If the Department cannot determine with certainty the needed flows, how would the Department determine an adverse impact? What management actions would be taken to address adverse impacts? If the proposed management action is the termination of the project, how can the Department ensure that this would not come too late?

Answer: During the pre-operational phase of the project, data will be collected to define the baseline conditions in the region and a series of water resources models will be developed and calibrated. These measured data will be used in conjunction with the models to refine estimates of natural recharge to the Fenner, Bristol, and Cadiz watersheds and test alternative monitoring designs, action criteria, and corrective measures that would be taken if monitoring data indicate the likelihood of adverse impacts to critical resources. The "triggers" that would require corrective measures (e.g. reducing or adjusting extraction authorizations, etc.) are specifically designed to be conservative, allowing BLM to anticipate any adverse impacts long before there is any damage to identified critical Federal resources. Termination of the entire groundwater extraction aspect of the project, while clearly within BLM's authority, would be the final step after all other corrective actions have been taken and adverse impacts are still determined to be likely to occur. In that case, the project could be limited solely to conjunctive use (i.e., Colorado River water storage and retrieval).

10. What safeguards will be put in place to ensure that the BLM can exercise its authority? When do these safeguards go into place? How would the Department change the terms and conditions of the project to reflect new information that arises?

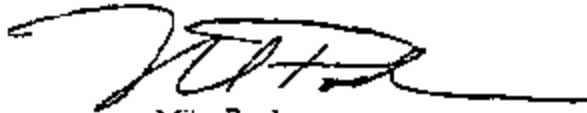
Answer: The right-of-way grant would provide BLM absolute authority over transfer of water both into (water storage) and out of (groundwater extraction) the Cadiz project area. Under the monitoring and management plan, a BLM authorized officer would be designated and given the authority to enforce all the terms and conditions. Among many other specific responsibilities cited in the plan, the authorized officer would approve monitoring features and water resources models during the pre-operational phase of the project and enforce the terms and conditions by requiring changes in project operations, where applicable, to protect critical resources.

These safeguards go into place initially at the time the right-of-way grant is issued (i.e. a Record of Decision approved by BLM) and BLM clearly has the authority to change them as necessary (with input and advice from the Technical Review Panel of agency experts as described earlier).

I hope you find these answers responsive to your questions.

Thank you for your interest. Identical letters have been sent to Representatives Lewis and Calvert. As stated in the Department's response, if you or your staff would like a briefing, please let me know.

Sincerely,

A handwritten signature in black ink, appearing to read 'M. Pool', with a long horizontal flourish extending to the right.

Mike Pool

cc: John Reynolds, National Park Service  
Mike Shulters, U.S. Geological Survey  
John Goss, County of San Bernardino  
Ron Gastelum, Metropolitan Water District