



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

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San Francisco, CA 94105-3901

FEB 22 2000

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James Williams  
Bureau of Land Management  
California Desert District  
6221 Box Springs Boulevard  
Riverside, CA 92507-0714

Dear Mr. Williams:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Report/Environmental Impact Statement (DEIS) for the Cadiz Groundwater Storage and Dry-Year Supply Program, San Bernardino County, California. Our comments are provided pursuant to the National Environmental Policy Act (NEPA), the Council on Environmental Quality's (CEQ) NEPA Implementation Regulations at 40 CFR 1500 - 1508, and Section 309 of the Clean Air Act.

The DEIS evaluates alternatives for conveying water from the Iron Mountain Pumping Plant on the Colorado River Aqueduct to a spreading basin in the Cadiz and Fenner valleys for storage of Metropolitan Water District's (MWD) water supplies during wet years. During dry years, the stored water, along with indigenous groundwater, would be extracted by wells and transferred to the Colorado River aqueduct for conveyance to MWD's service area. The proposed project, the Eastern Alternative, involves construction of 35-mile pipeline east of the Iron Mountains and north through Cadiz Valley. The project also involves construction of spreading basins in Cadiz and Fenner valleys; power lines, pumping plants, and service roads along the pipeline; and an extraction well field in Fenner Gap. Other alternatives include a western alignment alternative, combination alignment alternative, an eastern/canal alternative, and no action.

We have rated this DEIS as EO-2 -- Environmental Objections-Insufficient Information (see enclosed "Summary of Rating Definitions and Follow-Up Action"). We have strong objections to the proposed project because it would result in significant adverse impacts to air quality, and BLM has not conducted a conformity determination required pursuant to 40 CFR 93.153. It also appears that the project would adversely affect many ephemeral washes, which may be waters of the U.S. The DEIS, however, does not identify or include an analysis of the least environmentally damaging practicable alternative pursuant to 40 CFR 230 (Clean Water Act Section 404(b)(1) Guidelines). The project would also adversely affect sensitive habitats, but the DEIS does not provide sufficient specific information regarding mitigation to determine the full impact to these resources.

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The DEIS does not contain sufficient information for EPA to fully assess the impacts that should be avoided in order to fully protect the environment. The Final Environmental Impact Statement (FEIS) should include additional information regarding groundwater modeling and impacts, impacts to waters of the U.S. and other sensitive habitat, and mitigation and monitoring.

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In addition, in light of the omission of a conformity discussion in this DEIS, we recommend that BLM issue its draft conformity determination and allow for the 30-day comment period in accordance with 40 CFR 93.156(b) before publishing the FEIS. The FEIS should include a conformity discussion and describe the changes from the DEIS and update the discussion of impacts on the environment and public health. CEQ regulations (40 CFR 1502.9) require a supplement to a draft or final EIS when there are substantial changes to a proposed action relevant to environmental concerns or where there are significant new circumstances or information relevant to environmental concerns and bearing on the proposed action or its impact. If BLM can make a positive conformity determination with no significant changes to the proposed project, a supplemental draft EIS may not be needed. However, should significant changes to the project be necessary in order to make a positive conformity determination or for any other major project changes, we recommend that BLM seriously consider issuing a draft supplemental EIS. Our specific comments on the DEIS are enclosed.

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We appreciate the opportunity to review this DEIS. Please send a copy of the FEIS to this office when it is officially filed with our Washington, D.C., office. If you have any questions, please contact David Farrel, Chief, Federal Activities at (415) 744-1584, or Jeanne Geselbracht of his staff at (415) 744-1576.

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Sincerely,



Enrique Manzanilla, Director  
Cross-Media Division

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Enclosures

- cc: Dirk Reed, Metropolitan Water District
- Dave Spath, California Department of Health Services
- Charlse Fryxell, Mojave Desert Air Quality Management District
- U.S. Army Corps of Engineers - Los Angeles District
- U.S. Fish and Wildlife Service - Carlsbad Field Office
- Chris Stubbs, Mojave National Preserve

## General Comments

The proposed project is located in the California Desert Conservation Area (CDCA), which was expressly designated by Congress for the purpose of providing for protection of this exceptional place, which is "extremely fragile, easily scarred, and slowly-healed" (P.L. 94-579, Sec. 601). Congress was well aware of the need for protection of the CDCA's many important environmental resources because of its unique location adjacent to a large metropolitan area. We urge BLM to take great care in considering the potential impacts of the proposed project. We believe the DEIS lacks important information, which is necessary for informed decisionmaking. Our specific comments follow. F1-8

## Air Quality

DEIS Table 5.6-3, Summary of Estimated Construction Emissions, indicates significant levels of PM10 (particulate matter smaller than 10 microns), ROC (reactive organic compounds), NOx (oxides of nitrogen), CO (carbon monoxide), and SOx (sulfur dioxide) emissions. The DEIS also states that, even after mitigation measures are implemented, the project would result in significant impacts to air quality for these criteria pollutants. More importantly, the DEIS (pp. 5-117,118) states that the Cadiz Project was not included in the Air Quality Attainment Plan (AQAP) and the action alternatives would all contribute to delays in timely attainment of air quality standards in the Mojave Desert Air Quality Management District (AQMD). F1-9

Under Section 176(c) of the Clean Air Act, no federal agency may approve or support in any way any activity that does not conform to an air quality implementation plan. The 1990 Clean Air Act Amendments further define conformity to mean that the activity will not "(i) cause or contribute to any new violation of any standard in any area; (ii) increase the frequency or severity of any existing violation of any standard in any area; or (iii) delay timely attainment of any standards or any required interim emission reductions or other milestones in any area."

The DEIS (p. 5-109) states that the project would be located in a nonattainment area for ozone and PM10. It appears, however, that the project may *not* actually be in a federal nonattainment area for ozone. However, because the project would be in a federal nonattainment area for PM10, its emissions will be subject to General Conformity Rule found at 40 CFR 93.150 [and adopted by Mojave Desert AQMD Rule 2002 (64 FR 19916)]. The Clean Air Act conformity regulations initially require a federal agency to determine if the estimated emissions from a project are above the de minimus levels stated in the regulations. For example, in a PM10 serious nonattainment area, that level is 70 tons per year. If the projected emissions are below these levels, the project is presumed to conform by law. It appears from the information presented in the DEIS that the estimated project emissions are above the de minimus level for PM10. Therefore, BLM must make a conformity determination for the project using the criteria delineated in the regulation. We recommend that BLM coordinate with the Mojave Desert AQMD.

For future projects, we recommend that BLM issue the draft conformity determination concurrent with the DEIS so that any necessary modifications to the proposed project needed for conformity purposes can be addressed at the DEIS stage. In light of the omission of a conformity discussion in this DEIS, we recommend that BLM issue its draft conformity determination and allow for the 30-day comment period in accordance with 40 CFR 93.156(b) *before* publishing the FEIS. The FEIS should include a conformity discussion. Should significant changes to the project be necessary in order to make a positive conformity determination, we recommend that BLM seriously consider issuing a draft supplemental EIS.

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### Water Resources

The DEIS concludes saline water (brine) interface movement of no more than about 2000 feet toward or away from the Project wellfield (p.5-97). It is not clear whether this analysis takes into account the possibility of water level declines beneath Bristol Dry Lake. Wellfield extraction activities could result in a reduced quantity of groundwater recharge (underflow) to Bristol Dry Lake. In this case brine could move toward and be captured by the Project wellfield. A more rigorous evaluation of natural groundwater underflow to Bristol Dry Lake would help to guard against this. The approach to Water Quantity Impacts (p.5-99) and Groundwater Supply (p.5-100) contained in the DEIS relies on a deference to vague modeling results. As such, the DEIS does not provide the reader an opportunity to evaluate the appropriateness of the modeling methods used, the adequacy of any supporting raw data nor the validity of the conclusions drawn with the modeling. To redress this, appropriate field studies might be conducted that speak directly to infiltration and groundwater recharge phenomena in the Bristol, Fenner and Cadiz Watersheds. It is also possible that relevant studies of the Mojave Desert already exist in the scientific literature. Finally, the DEIS presents a series of operational scenarios (p.5-88) depending on a range of indigenous groundwater extraction (transfer) quantities. It would be helpful if additional scenarios could be developed that take into account significantly reduced indigenous groundwater extraction quantities. These could be a foundation for a mitigative project design that addresses the possibility of water level declines beneath Bristol Dry Lake and any revised estimates of underflow to that lake.

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The DEIS states that there will be a two way transfer of contaminants (p.5-107). It is likely that the proposed facility will result in a degradation of source water quality. Since the use of contaminated water as source water might pose a greater human health risk than otherwise, some steps to evaluate this risk seem appropriate. The DEIS does not systematically evaluate the possible human health impacts of the mixed source water. Thresholds relating to groundwater quality (DEIS, p.5-83) could be expanded to include parameters like the identification of potential contaminant sources and hydrogeologic (physical) barrier effectiveness. With this, more informed conclusions could be drawn about possible mitigation and pollution prevention steps to protect source water (and reduce human health risk). For example, the DEIS (p.5-106) indicates that monitoring would specifically address only total dissolved solids and perchlorate. The presence of additional contaminants (arsenic, bromide, nitrate, vineyard and citrus contaminants) is acknowledged in the DEIS (p.5-99, 5-66, 5-95). Also, the overall approach to monitoring

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apparently relies on existing public and private wells (p.5-106). This type of well configuration might be haphazard and not take in to account adjacent land uses (as potential contaminant sources) or the hydrodynamics of the source water spreading and recovery. Without evaluating human health impacts or considering pollution prevention steps, unexpected contaminants might inadvertently be conveyed back to the aqueduct.

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The DEIS indicates that most of the mixed source water, including contaminants, will be returned to the aqueduct (p.5-95). This implies the mixed source water will be contained within the immediate area of the wellfield/ spreading grounds and then captured and conveyed back to the aqueduct. Some explanation should be given as to how the hydrodynamic control needed for this level of containment will be achieved. The task seems to be complicated by an apparent temporal separation between source water storage and extraction activities (DEIS, p.5-88). If containment cannot be achieved, the excursion of contaminants to areas in hydraulic communication with the project area (and any drinking water intakes therein) area might occur.

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The DEIS discusses the potential for pesticides and other hazardous substances to be present in the project area. An analysis of the groundwater, however, is not presented in the DEIS, so it is unclear whether pesticides from nearby agricultural operations or hazardous waste from historical military operations are present in the indigenous groundwater. The FEIS should provide this information and discuss the potential human health impacts of any pesticides found in the water.

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The monitoring and mitigation measures in section 5.5.5 of the DEIS are extremely vague. For example, the DEIS does not indicate how often some monitoring activities would occur, who would enforce them, or what parameters groundwater would be analyzed for in the wellfield, spreading basin, and more remote monitoring wells. In addition, the DEIS does not indicate any action levels for mitigation or identify who would enforce the mitigation measures that are briefly mentioned in the DEIS. Furthermore, no details are provided regarding how the project storage and/or withdrawal schedules would be modified should this mitigation measure be deemed appropriate. According to the DEIS (p. 5-105), a comprehensive Groundwater Monitoring and Management Plan would be prepared by MWD. However, a mitigation plan is not mentioned. The FEIS should include detailed monitoring and mitigation plans so that decisionmakers and the public are fully informed regarding these important components of the project.

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Figure 5.8-1 in the DEIS indicates that numerous washes would be diverted around the spreading basin and wellfield or crossed by the conveyance pipeline. The DEIS, however, does not give any information regarding waters of the U.S. located within the project area. MWD should coordinate with the U.S. Army Corps of Engineers to determine if the proposed project requires a Section 404 permit under the Clean Water Act. Section 404 regulates the discharge of dredged or fill material into waters of the U.S., including wetlands and other "special aquatic sites." The FEIS should describe all waters of the U.S. that could be affected by the project alternatives, including past impacts. The discussion should include acreages and channel lengths, habitat types, values, and functions of these waters.

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If a permit is required, EPA will review the project for compliance with Federal Guidelines for Specification of Disposal Sites for Dredged or Fill Materials (40 CFR 230), promulgated pursuant to Section 404(b)(1) of the Clean Water Act ("404(b)(1) Guidelines"). Pursuant to 40 CFR 230, any permitted discharge into waters of the U.S. must be the least environmentally damaging practicable alternative available to achieve the project purpose. The FEIS should include an evaluation of the project alternatives in this context in order to demonstrate the project's compliance with the 404(b)(1) Guidelines. If, under the proposed project, dredged or fill material would be discharged into waters of the U.S., the FEIS should discuss alternatives to avoid those discharges. EPA strongly encourages early coordination with the U.S. Army Corps of Engineers. Information on waters of the U.S. is best disclosed at the DEIS stage so that the appropriateness of the proposed alternative can be evaluated in the context of the 404(b)(1) Guidelines, and relevant comments can receive responses and effect appropriate modifications in the FEIS.

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If a discharge to waters of the U.S. is permitted, the FEIS should discuss how potential impacts would be minimized and mitigated. This discussion should include: (a) acreage and habitat type of waters of the U.S. that would be created or restored; (b) water sources to maintain the mitigation area; (c) the revegetation plans, including the numbers and age of each species to be planted, as well as special techniques that may be necessary for planting; (d) maintenance and monitoring plans, including performance standards to determine mitigation success; (e) the size and location of mitigation zones; (f) the parties that would be ultimately responsible for the plan's success; and (g) contingency plans that would be enacted if the original plan fails. Mitigation should be implemented in advance of the impacts to avoid habitat losses due to the lag time between the occurrence of the impact and successful mitigation.

### Biological Resources

It is unclear from the DEIS whether a biological assessment has been prepared for the proposed project. It is also unclear whether BLM has conducted Section 7 consultation with the U.S. Fish and Wildlife Service. The FEIS should include the biological assessment and discuss the results of the Section 7 consultation, including the biological opinion if one will be prepared.

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According to the DEIS (p. 5-143), Schulyler Wash, the most extensive and biologically diverse wash in the project area, is located in the proposed well field. However, the DEIS does not discuss the specific potential impacts of the well field on Schulyler or other washes in the vicinity from either construction activities, diversions, or wellfield operations. The FEIS should discuss the project's potential impacts to all affected washes, and describe the design of the Schulyler Wash diversion structure, as well as any other necessary channel diversions structures, including channel geometry and vegetation specifications.

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Furthermore, the DEIS does not describe how or where the sensitive habitat losses would be replaced. The FEIS should include the detailed mitigation plan for habitat replacement. This plan should: (a) identify the replacement habitat areas; (b) describe how they would be preserved and protected; (c) identify who would be responsible for selecting and implementing the compensation

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and ensuring its success; (d) how success would be ensured; and (e) contingency plans that would be enacted if the original plan fails. Mitigation should be implemented in advance of the impacts to avoid habitat losses due to the lag time between the occurrence of the impact and successful mitigation.

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The DEIS biological resource mitigation measures do not include descriptions of how disturbed areas would be revegetated upon completion of construction. Realization of successful revegetation could take a long time in the CDCA, particularly in sand dune areas. The FEIS should include: (a) acreage and habitat type of habitat that would be restored; (b) the revegetation plans including the numbers and age of each species to be planted, and special techniques that may be necessary for planting; (c) maintenance and monitoring plans, including performance standards to determine revegetation success; (d) the parties that would be ultimately responsible for the plan's success; (e) how success would be ensured; and (f) contingency plans that would be enacted if the original plan fails.

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Figure 5.8-1 in the DEIS depicts several dune areas along the pipeline corridor. Table 5.8-3 also indicates that 148.7 acres of stabilized/partially stabilized desert dunes/sand fields would be temporarily affected by the Eastern Alternative, and 16.5 acres would be permanently affected by the Eastern Alternative. The DEIS, however, does not indicate how they would be affected overall, how temporarily disturbed dune/sand field areas would be reestablished, or how disturbance would affect the ability of the dunes and sand fields to restabilize. Would special revegetation/stabilization techniques be required to restabilize these features which could become highly dynamic if disturbed? The FEIS should provide this information. In addition, the DEIS (p. 5-53) states that the potential for impact to any sand dunes in or adjacent to the project area is very remote. In light of the impacts indicated above, the FEIS should rectify this discrepancy.

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The DEIS indicates that losses of Mojave Wash Scrub and Desert Tortoise habitat would be replaced at a 1:1 ratio. Losses of the stabilized/partially stabilized desert dunes/sand fields, however, would not be compensated. Dune areas could take years to recover, and it is unclear whether all dune areas would fully recover. The FEIS should discuss the likelihood and timing of successful recovery of dune areas affected by the project. We recommend that BLM require compensation for *all* permanent acreage losses of this habitat. We believe habitat losses in excess of 16.5 acres is likely and suggest that an escrow account be established to fund compensation of dune habitat losses beyond the 16.5 acres of projected permanent loss.

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The DEIS indicates that invasive non-native plants would be removed from the temporary impact area after summer and winter rains (p. 5-178), and vegetation that grows in the spreading basins would be cleared approximately once a year (p. 5-116). The FEIS should discuss how plant removal would be accomplished. If pesticides would be used, the FEIS should identify the pesticides and describe their potential impacts to wildlife and groundwater, as well as how pesticide application would be monitored for proper use and adverse impacts.

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