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January 8, 2001

634

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

Dear Mr. Williams:

Enclosed please find a copy of comments on the Cadiz EIR/EIS.

Copies have been distributed this afternoon to Jack Safely and Kathleen Kunysz of MWD via personal delivery to their respective offices, which I understand is sufficient to have this letter entered in the official record today, but I also wanted you to have a copy as soon as possible.

634-1

Sincerely,

David Czamanske





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Angeles Chapter

January 8, 2001

Ron Gastelum, General Manager, Metropolitan Water District
700 N. Alameda Street, Los Angeles, California 90012

Attention: Jack Safely
and Kathleen Kunysz

RE: CADIZ GROUNDWATER STORAGE and DRY-YEAR SUPPLY PROGRAM:
Comments on Draft EIR/EIS and Supplemental Draft EIR/EIS

The comments below are focused primarily on major issues related to potential adverse impacts of drawdown of the groundwater aquifer under the proposed Project area in Fenner Gap. They, along with verbal and written comments by Elden Hughes, Chair of Sierra Club's California Desert Committee, and of Simeon Herskovits of the Western Environmental Law Center on behalf of the Sierra Club, express the Club's major concerns regarding this proposed Project.

A. Water transfers contemplated by the this project have the potential to severely deplete the groundwater aquifer underlying the proposed project wellfield.

634-2

The Draft EIR/EIS and its Supplement state that, based on preliminary studies prepared in 1999, the amount of groundwater currently in storage in underlying aquifer area of the proposed Project wellfield is estimated at 3.7 to 6.7 million acre-feet (page 7-3 of Supplement; restatement of estimate of 3.65 to 6.69 MAF on page 5-81 of Draft EIR/EIS).*

On January 5, 2001, MWD released in Board Letter 10-9 what the agency terms "Definitive Economic Terms and Responsibilities Between MWD and Cadiz, Inc." That Board Letter contains a 5-page Summary and a 25-page detailed statement of terms and conditions that specify the rate at which indigenous groundwater could be pumped from the Project wellfield and delivered to MWD's Colorado River Aqueduct. The relevant terms include:

a. A Transfer Component, assuming MWD and Cadiz maintain a partnership in operation of the Project, that includes sale and delivery by Cadiz of a minimum of 1.5 million acre-feet of water (60,000 af/yr for 25 years).

b. Alternatively, if MWD elects to cease participation in the Program due to a determination that Project yield will total less than 750,000 acre-feet, Cadiz may elect to purchase MWD's interest in the Program and operate the program itself. Under the proposed agreement "In any year up to and including year twenty-five of the Program, MWD shall deliver . . . up to 150,000 AF of indigenous water per year at Cadiz' request to purchasers within MWD's service area, . . . Cadiz and MWD shall jointly schedule the delivery of such water in each year." (Bullet 3 on page 4 of Summary; Section 4.6.3.4 on page 7-8 of detailed statement)



Comment and questions: Transfer of 150,000 AF of indigenous groundwater per year for 25 years totals 3.75 MAF. Since this alternative arrangement would come into play only if there was a determination that the Project yield will total less than 750,000 acre-feet, why is there provision for pumping and delivery of up to 3.75 MAF?

G-34-2

Also, as noted above, the amount of groundwater currently in storage in the aquifer area underlying the proposed Project wellfield is estimated at 3.7 to 6.7 million acre-feet. Why is any consideration being given to allowing the pumping and delivery of up to 3.75 MAF? Pumping and delivery of this much indigenous water would obviously completely deplete the aquifer, or diminish it to such an extent that many environmental impacts would be significantly adverse.

G-34-3

It is completely ingenuous to state, as both the Draft EIR/EIS and Supplement do, that impacts to the aquifer system, to brine resources and dust mobilization at Bristol and Cadiz Dry Lakes, to the recreation and wildlife dependent on water resources, and to all the other resources discussed in these documents will be less than significant* when the "Terms and Responsibilities" stated in Board Letter 9-10 and attachments thereto contemplate an agreement which would permit a potential groundwater depletion of 3.75 MAF. Either the Draft EIR/EIS needs to be revised or the "Terms and Conditions" must be altered so that these documents are consistent with each other. (See also note on last page of this 5-page document.)

G-34-5

* Remarkably, the only adverse impacts identified in the Draft EIR as significant are identified as: (a) potential adverse air quality impacts, (b) exposure to hazardous materials, and (c) potential damage to paleontological resources. According to the EIR/EIS, these are all short-term impacts which would occur during the construction phase of the proposed Project.

B. The EIR/EIR fails to accurately estimate annual groundwater recharge in the watershed that drains into the proposed Project wellfield, making it impossible to calculate safe yield.

G-34-b

Surprisingly, the Draft EIR/EIS and its Supplement contain differing statements about the recharge rate in the watershed supplying Fenner Gap where the Project wellfield is to be located.

The Draft EIR states that "Based on a comprehensive program of exploratory drilling and testing in Fenner Gap, and extensive computer modeling of the hydrology of the area, the sustainable groundwater yield available to the Project wellfield is currently estimated to be approximately 30,000 acre-feet/year (GEOSCIENCE 1999)."

In contrast, the Supplement states "Given the limited availability of site-specific data and current limitations in technology, the current estimates of natural recharge to the project area are considered inclusive."

Comment and question: There are significant differences of opinion among several qualified geohydrologic consultants who have addressed the topic of estimating the amount of annual recharge, with estimates ranging from 6000 af/yr to 50,000 af/yr. Who are these consultants, what are their current best estimates, and what is the basis of differing opinions?

Rather than state that "current estimates of natural recharge to the project area are considered inclusive", the EIR/EIS instead should identify the consultants that have made informed estimates of annual recharge and provide the estimates that each has provided.

C. Water Quality: There has been considerable public concern recently about the presence of chromium 6 in drinking water supplies. MWD revealed in November 2000 that data from wells in the Cadiz and Fenner valleys indicate a significant level of this potential carcinogen. Although the concentration of chromium 6, also known as hexavalent chromium, is below the level now considered dangerous, it is higher than the revised standard under consideration.

The "Terms and Conditions" released with Board Letter 9-10 state that MWD shall be responsible to ensure that any water introduced into the Cadiz groundwater basin from the Colorado River Aqueduct meets all existing and potential future federal and state water quality standards, while Cadiz shall be responsible for ensuring that any indigenous water introduced into the Colorado River Aqueduct from the Cadiz aquifer meets all existing and potential future federal and state water quality standards.

Comment and Question: If Colorado River water fails to meet federal and/or state water quality standards, under normal operating conditions this water could be treated and/or blended at MWD's existing treatment facilities. However under this provision of the "Terms and Conditions" MWD would be required to construct new treatment facilities for water destined for storage in the Cadiz Project aquifer. These facilities would have been constructed at the location along the Colorado River Aqueduct where water is diverted, somewhere along the 35-mile canal to the Cadiz valley, or at the spreading basins at the canal's terminus.

G34-7

Likewise if the Cadiz groundwater fails to meet federal and/or state water quality standards, new treatment facilities for water destined for the Colorado River Aqueduct would be required. These facilities would have been constructed at the Project wellfield in Fenner Gap, somewhere along the 35-mile canal, or at the location where indigenous Cadiz water is introduced into the Colorado River Aqueduct.

Where do the parties intend to construct these treatment facilities? Potential locations should be identified and environmental impacts addressed in the EIR/EIS.

In addition, the degree of chromium 6 contamination in the indigenous groundwater in the Cadiz and Fenner valleys needs to be thoroughly presented and evaluated in the EIR/EIS, as do current and prospective federal and state water quality standards for this and other contaminants and operational implications of treatment facilities that may be required to meet these standards.

G34-8

D. Groundwater Monitoring and Management Plan and Yield Determination. The EIR/EIS Supplement contains a lengthy discussion in Section 3 of a comprehensive Groundwater Monitoring and Management Plan. This section proposes establishment of a Technical Review Team, comprised of representatives of MWD, Cadiz, San Bernardino County, and the US Department of the Interior, with Interior representatives serving in an observer role, to collect and interpret data regarding impacts of Program operations, and to make recommendations for changes in operations based on new information developed during the monitoring process. Also proposed is establishment of a Basin Management Group, made up of representatives from the same entities, which would make management decisions regarding Technical Review Team recommendations.

G34-9

The "Terms and Conditions" released with Board Letter 9-10 state that MWD and Cadiz "in consultation with the Management Plan and in compliance with all applicable permit requirements, will determine the total expected yield for the life of the Program on an ongoing basis."

Comment and question: As proposed, the Technical Review Team and the Basin Management Group fail to include adequate representation of the public interest; only the County of San Bernardino would have voting representation on these entities. The two partners in this Project, MWD and Cadiz, would therefore control key decisions with major implications for addressing adverse environmental impacts of the Program. By what means do BLM and MWD plan to remedy this inadequacy?

634-9

E. Advance Purchase Concept creates undue pressure on the Technical Review Team and Basin Management Group in implementation of Groundwater Monitoring and Management Plan.

The "Terms and Conditions" create a situation not discussed in the Draft EIR/EIS which has the potential of making it very difficult if not possible for the Monitoring and Management Plan to function as designed. Under the "Terms and Conditions" MWD is obligated to purchase 600,000 of put and take activity upon contract execution. MWD is also obligated to purchase 30,000 AF per year of additional put and take activity during Years 5-14 of Program Operations.

634-10

In addition MWD is obligated to purchase up to 60,000 AF per year of indigenous water for the first 25 years of the Program (MWD must purchase at least 30,000 AF/yr; however a 3rd party could purchase up to 30,000 af/yr). However MWD (or a 3rd party if a 3rd party makes a purchase) is not required to take delivery at any specific time during the 50-year contract. MWD (or a 3rd party) could bank water that has purchased but not yet delivered.

Comment and question: The problem with this arrangement is that it undoubtedly will put constraints on the ability and willingness of the Technical Review Team and the Basin Management Group to develop and implement the Groundwater Monitoring and Management Plan in a neutral and unbiased manner. Should adverse environmental impacts of the Program indicate that a reduction in groundwater yield is needed to prevent significant impacts, these decision-making entities will be constrained by the fact that the aquifer will then contain stored Colorado River water and/or banked indigenous water which has already been paid for.

The absence of any discussion of this topic is an indication that the Draft EIR/EIS was not based on specific Program operations, but was instead based on abstract concepts divergent from that reality. By what means do BLM and MWD plan to remedy this inadequacy?

Summary. The Draft EIR/EIS and its Supplement fail to adequately address many of the major adverse environmental impacts of this proposed Project. BLM and MWD must address the issues discussed above and respond to the questions raised herein.

634-11

Sincerely,



David Czamanske, Water Resource Consultant

Angeles Chapter-Sierra Club and Sierra Club California

Note regarding estimate of indigenous groundwater available to supply transfer water for this Project: Although a public information brochure produced by MWD states that "Studies by independent experts have determined that the Program site overlies an aquifer system The aquifer system contains approximately 20 million acre-feet of high-quality groundwater.", this statistic evidently refers to the amount of groundwater in storage underlying the entire Bristol, Fenner, and Cadiz valleys, which is estimated to be 16.9 MAF (page 6-8 of Draft EIR/EIS), not that portion of the aquifer immediately under the proposed Project wellfield in the Fenner Gap, which as noted in the text of this letter is estimated at 3.7 to 6.7 million acre-feet.

634-12

**SPECIAL**

Page 1 of 2

Refer to comment
letter G34**Water deal or mirage? Southern California too rushed to pump the desert**

One has to flip deep into the history books to find the last time Southern California operated a project to import distant water to its thirsty customers -- projects like Los Angeles' infamous takeover of the Owens Valley. The southland's first major import project of the modern era may be launched as soon as Tuesday, as the Metropolitan Water District considers the terms of a deal to pump Mojave Desert groundwater.

This is historic and precedent-setting on many levels. It is California's first mega-deal with a private entrepreneur, an agribusiness that owns the potential pumping fields. It is a test of power, where control of desert pumping remains an unsettled issue between private interests, the would-be pump operators of Metropolitan, the local government (San Bernardino County) and the federal government, which owns most of this watershed.

Perhaps most important of all, this is a test of process. Will California build groundwater pumping projects only after there is a scientific consensus that the pumping is sustainable? Or will the course be to build the pumps, fire them up and discover the ramifications later? Metropolitan seems to be leaning toward the risky course, which for California water policy is the wrong one.

This corner of the Mojave, near the small community of Cadiz, indeed has an enormous reservoir of groundwater beneath it, estimated at many times as much water as that held behind Shasta Dam. A reality of desert pumping, however, is that nobody can sustainably take from the ground more than Mother

(continued)