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March 7, 2000

Metropolitan Water District
Water Resource Management Group
P.O. Box 54153
Los Angeles, CA 90054-1053
Attention:
Mr. Dirk Reed
Mr. Jack Safely

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

Subject: Environmental Defense Comments on Cadiz Groundwater Storage and Dry Year Supply Program (Draft Environmental Impact Report/ Draft Environmental Impact Statement, SCH. No. 99021039)

Dear Sirs:

Environmental Defense has reviewed the draft EIR/EIS for the proposed Cadiz Groundwater Storage and Dry Year Supply Program (Cadiz Project), as well as the February 23, 2000, memorandum from the United States Geological Survey which addresses some of the technical parameters of the project. Environmental Defense supports appropriate use of groundwater storage as a principal component of the integrated management of California's water resources. Nevertheless, we find that the draft EIR/EIS does not adequately address an appropriate range of the environmental impacts that may result from the operations of the Cadiz Project.

Gila-1

The EIR/EIS evaluates nine alternative storage/transfer operational scenarios. Only one of these, Alternative 9, could be truly characterized as a conjunctive use project, which would extract only the water transferred into the groundwater aquifer from the Colorado River. All other alternatives depend on extraction of local groundwater as a significant portion of the project's yield. Alternative 9 was eliminated from consideration as it would be too expensive on a unit cost basis (page 3-19).

Gila-2

Alternatives 1 through 6, which are "intended to define a range of probable Cadiz project storage and extraction operations; and to provide a basis for designing Cadiz project facilities and capacities", depend on a net withdrawal of between 1.3 and 2.0 million acre-feet of local water during the project period. In addition to this net withdrawal of local groundwater, the project would store and extract an additional 0.8 to 2.3 MAF of water from the Colorado River (Table 3-1).

The EIR/EIS assumes that this amount of net extraction of local water would be generally offset by 1.5 MAF of natural recharge over the project period (30,000 acre-feet per year over 50 years). The project's viability appears to depend heavily on this assumption. If the natural recharge rate is overestimated, then the alternatives evaluated by the EIR/EIS would not be representative of what would actually occur. Either the project would end up extracting only the volume of Colorado River water that it has put into the aquifer (as characterized by Alternative 9) or it would "mine" the indigenous groundwater without replacement.

Gila-3

As stated above, the EIR/EIS characterizes an alternative that extracts only the water diverted from the Colorado River and stored in the aquifer as too expensive. The EIR/EIS does not address the effects, pertaining either to water quality or to the local environment, of mining the indigenous groundwater. While the EIR/EIS notes that the total groundwater underlying the project area is between 3.65 and 6.69 MAF, it does not evaluate whether this amount (or anything close to it) can be safely extracted.

Gillo-3

The EIR/EIS does warn that groundwater mining could be a problem (page 3-18): "if extractions of groundwater for transfer purposes create a significant depression in the groundwater levels under the wellfield, this saline groundwater [underlying nearby Bristol Dry Lake - 15 miles to the northeast] could flow down gradient towards this depression. Migration of this saline water would have adverse impacts on water quality in the wellfield and other areas."

Gillo-4

The EIR/EIS also fails to address the local impacts of groundwater mining. As noted by the USGS, significant net extraction of groundwater may result in either a drying out of the upper layer sediments at Cadiz Dry Lake (or even Bristol Dry Lake) and the creation of dust problems, reminiscent of the problems caused by water project operations in the Owens Valley. Similarly, the EIR/EIS fails to address potential land subsidence, if the indigenous groundwater is extracted at rates that significantly exceed its recharge. Indeed, the Cadiz Project's EIR/EIS is heavily dependent on the accuracy of its assessment that the natural recharge to the underlying aquifer is as high as 30,000 acre-feet per year.

Gillo-5

The analysis by the United States Geological Survey, however, suggests that this estimate may be significantly in error. This analysis calls into question the application of both the methodologies (Chlorine mass balance and Carbon-14 isotopes) used to support the EIR/EIS. The USGS goes on to offer persuasive evidence that the natural recharge is much lower than the estimates provided by the EIR/EIS, and may be as low as 1,710 acre-feet per year.

This discrepancy regarding natural recharge to the aquifer must be resolved, and a new draft EIR/EIS issued, which uses the best available technical information and which sets forth the responsibilities and policies of the two project lead agencies regarding the groundwater basins involved. The Cadiz Project should not be allowed to move forward in any form unless it includes operational criteria which specifically address whether any net extraction of groundwater is acceptable as a matter of federal and State policy, and if it is, how much and under what conditions. Ultimately, any Record of Decision should also include criteria for monitoring any net groundwater extraction, and for assessing water quality, air quality and land subsidence objectives, as well as which parties would bear the responsibility should these objectives not be met.

Gillo-6

Sincerely,

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