



**MWD**

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

**8-6**

June 23, 1998

**To:** Board of Directors (Water Planning and Resources Committee--Action)  
(Budget and Finance Committee--Action)  
(Engineering and Operations Committee--Action)

**From:** General Manager

  
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Debra C. Man

**Submitted by:** Debra C. Man, Chief  
Planning and Resources

**Subject:** Approve Principles of Agreement with Cadiz Land Company for Water Storage and Transfer Program and Authorize \$2,000,000 for Preparation of Environmental Documentation

**Reference:** Appropriation No. 15324

## **RECOMMENDATIONS**

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It is recommended that your Board:

1. Approve the Principles of Agreement (Principles) between the Cadiz Land Company, Inc. (Cadiz) and The Metropolitan Water District of Southern California (Metropolitan);
2. Authorize preparation of an Agreement along the terms of the Principles which will be brought back to your Board for approval; and
3. Appropriate \$2,000,000 for Metropolitan's half of the cost of preparing environmental documentation.

## **EXECUTIVE SUMMARY**

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Metropolitan staff has negotiated Principles of Agreement (Principles) with the Cadiz Land Company, Inc. (Cadiz) for a groundwater storage and dry-year supply program and now seeks authorization from your Board to prepare an agreement and expend funds necessary to complete the necessary environmental review.

The Principles call for Metropolitan and Cadiz to construct the facilities (pipeline, spreading basins, and extraction wells) to store and return water from the Colorado River Aqueduct (CRA) in the Cadiz and Fenner Valley groundwater basin and to transfer indigenous groundwater to Metropolitan as a dry-year supply. The implementation costs of the new facilities are estimated to be between \$125 and \$150 million and the parties will jointly share these costs. It is proposed

that Metropolitan's share of the capital facilities will be funded through public financing either by a State-wide bond measure or State legislation providing funding for storage of Colorado River water. If public financing does not become available, Metropolitan and Cadiz will reevaluate the program at the completion of the environmental review phase.

As proposed, Metropolitan will store a minimum of 500,000 acre-feet (AF) of CRA water in the groundwater basin and purchase a minimum of 1,100,000 AF of indigenous groundwater over the 50-year term of the agreement. Metropolitan will have the right to call on any additional water available for transfer over the agreement period and may store more water if desired. This water will be available on demand and returned to Metropolitan as a supplemental, dry-year source of water up to 100,000 AF per year. Metropolitan will pay \$90 per AF for CRA water cycled through the basin (\$50 on put of water and \$40 on return of water), and \$5 per AF per year storage fee which will be adjusted for inflation. On the transfer water, Metropolitan will pay a base rate of \$230 per AF which would be adjusted higher or lower according to a price index, minus an approximate discount of five percent, to account for Metropolitan's development of the program.

The final agreement will provide for legal and financial protections in the form of placing water in a trust and providing Metropolitan with a security interest in the Cadiz property. Compliance with the California Environmental Quality Act (CEQA) and other implementation costs are to be shared equally between Metropolitan and Cadiz and are estimated to cost \$4,000,000 total with Metropolitan's share at \$2,000,000. It is estimated that CEQA compliance will take approximately 18 to 24 months with the project to be operational by the end of year 2001.

In sum, the agreement will allow Metropolitan to store Colorado River water, an essential component of the California 4.4 Plan. The program will also provide Southern California with access to a new source of water. Additionally, the indigenous groundwater has a low total dissolved solids so it will provide a water quality benefit to water in the CRA. Most importantly, the program will provide these water sources to Metropolitan upon demand as a valuable dry-year source of water.

## **JUSTIFICATION**

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The studies and environmental documentation that will be undertaken with the requested funds are necessary to gather sufficient information to determine whether to proceed with implementation of the Cadiz Groundwater Storage and Dry-year Transfer Program.

## **ALTERNATIVE(S) TO PROPOSED ACTION**

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This proposed project is part of Metropolitan's effort to comply with the California 4.4 Plan. The alternative to compliance with the California 4.4 Plan is to accept lower water supply reliability of Metropolitan's Colorado River supplies.

**FUNDING REQUEST**

<b>Program Name:</b> Cadiz Groundwater Storage and Dry-year Supply Program			
<b>Source of Funds:</b> General Fund (Included in FY 1998-99 and FY 1999-00 Budgets)			
<b>Appropriation No.:</b> 15324	<b>Board Action No.:</b> 1	<b>FY 97/98 Budget:</b>	
<b>Requested Amount:</b>	\$2,000,000	<b>Capital Program No.:</b>	
<b>Total Appropriated Amount:</b>	\$2,000,000	<b>Capital Program Page No.:</b>	
<b>Total Program Estimate:</b>	N/A	<b>Program Category:</b>	Supply and delivery reliability

**ACTIONS AND MILESTONES**

Additional action will be necessary to fully implement this program. The required environmental compliance activities will take approximately 18 to 24 months to complete. The conceptual design will be optimized early in this process so that the environmental impacts can be adequately addressed. If authorized by the Board, final design will begin upon completion of environmental documentation with construction initiating in the fall of 2000. Construction would be completed and program operation would begin in the fall of 2001.

**CEQA COMPLIANCE/ENVIRONMENTAL DOCUMENTATION**

In accordance with the requirements of the California Environmental Quality Act (CEQA) and State CEQA Guidelines, the required CEQA documentation that assess the potential impacts associated with the proposed Cadiz/Metropolitan Water Storage and Transfer Program will be prepared and brought to your Board for approval. It is anticipated that the required CEQA documentation will take approximately 18 to 24 months to complete. Part of the recommended action is the appropriation of funds to finance Metropolitan's share of the cost of preparing the environmental documentation.

**DETAILED REPORT**

The Cadiz Land Company, Inc. (Cadiz) owns approximately 27,000 acres overlying groundwater basins in the Cadiz and Fenner Valleys in San Bernardino County. Cadiz farms about 1,600 acres of this property using indigenous groundwater for its water supply. In developing its agricultural operations on this property, Cadiz completed a CEQA review with San Bernardino County in 1993. The Environmental Impact Report identified over 1,000,000 acre-feet (AF) of surplus groundwater available for extraction and use. The aquifer is recharged from rainfall in the

watershed from a tributary area covering approximately 1,140 square miles. The recharge rate is estimated between 20,000 and 30,000 AF annually and the current volume of groundwater in storage is estimated between 12 million to 22 million AF. The indigenous groundwater has a total dissolved solids (TDS) level of about 300 mg/l.

Cadiz and Metropolitan have performed a detailed technical review of the property and have determined that the program is technically feasible. In addition to a variety of reports that Cadiz has commissioned, Metropolitan has engaged a technical panel of the foremost experts on groundwater extraction and storage. This technical review panel has analyzed the Cadiz reports and the field data and has concluded that the proposed program is viable.

The Principles of Agreement outline an agreement which would contain the following components:

- **Scope of Program** - The program consists of two parts: storage and transfer. Metropolitan would store a minimum of 500,000 AF of its California River Aqueduct (CRA) water in the groundwater basins and could store more water at Metropolitan's discretion. Metropolitan would also purchase a minimum of 1,100,000 AF of indigenous groundwater for transfer during dry-years. If another 400,000 AF of dry-year supplies can be made available due to proper management of the groundwater basins, Metropolitan will also commit to purchasing that water or substituting a like amount of CRA water for storage. Should more dry-year supplies become available for transfer, Metropolitan may purchase such water at its option.
- **Program Capital Facilities** - Approximately 810 acres of spreading basins, 33 extraction wells, a 35-mile pipeline and a pumping plant will need to be constructed to deliver water to and from the groundwater basins to the CRA. These facilities would be dedicated to Metropolitan's exclusive use during the term of the agreement and are estimated to cost between \$125 million and \$150 million. Cadiz would finance half of the facilities through its corporate resources. Metropolitan would fund half of the facilities through public financing for Colorado River storage programs either through a State-wide bond measure or legislation. Should that funding not become available by completion of the environmental review process, Metropolitan and Cadiz will reevaluate the program and either terminate the program or re-negotiate as appropriate.
- **Program Fees** - Metropolitan would pay \$90 per AF for CRA water that is cycled through the groundwater basins. The fees would be split \$50 on put of water and \$40 on take of water. Additionally, there would be an annual \$5 per AF fee for water in storage. All the fees for cycling CRA water through the basins would be adjusted to account for inflation. On purchased dry-year supplies, Metropolitan would pay a base rate of \$230 per AF which would be adjusted higher or lower according to a water price index, minus an approximate discount of five percent, to account for Metropolitan's development of the program. There would also be a water quality premium on water delivered to the CRA which will be calculated by determining the actual benefit received by Metropolitan looking at blending costs and other factors.

- **Program Commitments** - Metropolitan would commit to store a minimum of 500,000 AF and purchasing 1,100,000 AF of indigenous groundwater as dry-year supplies. The 500,000 AF of CRA water would be stored in the first five years the program is operational. Metropolitan would pay one half of the base price for 500,000 AF of the 1,100,000 AF when environmental documentation is completed. Metropolitan would complete the purchase once the program is operational. The remainder of the dry-year supply water would be purchased in ten year increments of 200,000 AF. These commitments provide a cash flow for the financing of the capital facilities but operationally Metropolitan may take this water at its discretion based on its needs. If additional dry-year supplies are available for transfer without harming the basin, Metropolitan would have a right to purchase that water or cycle additional water.
- **Program Safeguards** - Should the environmental review process reveal any fatal flaws to the program, the parties may re-negotiate or terminate the agreement. The same is true if public funding does not become available. The agreement would require that all water stored or purchased by Metropolitan in the groundwater basins would be placed in trust for bankruptcy protection. Additionally, Metropolitan would be given a security interest in the program property and Cadiz would not be allowed to transfer the property without Metropolitan's permission.
- **Term of Agreement** - The agreement would run from 50 years from the date the program is operational. At the end of the program, Metropolitan and Cadiz will jointly own a shared interest in the program facilities. Metropolitan and Cadiz would meet to determine interest in continuing the program and Metropolitan would retain a right of first refusal in any new program on the property that does not include Metropolitan.

If the Board authorizes proceeding with this program on these terms, the parties would begin preparing a comprehensive agreement in line with the Principles of Agreement. This Agreement would be brought to the Board for approval upon completion. Authorization will also include funding for proceeding with environmental review and final design. It is estimated that environmental review will cost up to \$4,000,000 which the parties propose to share equally. Environmental review would likely entail preparation of an environmental impact report under CEQA. The environmental review phase is expected to take 18 to 24 months.

As outlined above, this program would provide for storage of Metropolitan's Colorado River supplies enabling Metropolitan to take better advantage of surplus conditions on the Colorado River. Additionally, the program would open up a new supply of water for Metropolitan's use. The program would also provide Metropolitan with water quality benefits. Most importantly, the program would allow Metropolitan to regulate and keep the CRA full because the program provides water on demand as a supplemental, dry-year source of water.

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