

October 27, 1998

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

**From:** General Manager \_\_\_\_\_

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

**Subject:** Authorization to enter into agreements with Geoscience Support Services, Inc. to perform hydrogeologic investigations and pilot testing of the Cadiz and Fenner groundwater basins, P&D Environmental to perform environmental documentation, and Black & Veatch Inc. to perform feasibility/optimization studies for the Cadiz Groundwater Storage & Dry-Year Supply Program.

**Reference:** Appropriation No. 15324

## RECOMMENDATIONS

It is recommended that the Board:

1. Authorize the General Manager to enter into an agreement with Geoscience Support Services, Inc., in an amount not to exceed \$1,650,000 (to be equally shared between Metropolitan and Cadiz), for consulting services involving the development of an optimization plan and groundwater demonstration project for spreading/extraction facilities;
2. Authorize the General Manager to enter into an agreement with P&D Environmental, in an amount not to exceed \$1,100,000 (to be equally shared between Metropolitan and Cadiz), for consulting services involving environmental documentation; and
3. Authorize the General Manager to enter into an agreement with Black & Veatch Inc., in an amount not to exceed \$450,000 (to be equally shared between Metropolitan and Cadiz), for consulting services involving the development of a conveyance facility optimization.

## EXECUTIVE SUMMARY

At the July 14, 1998 meeting of the Board of Directors, the Board approved Principles of Agreement with Cadiz, appropriated \$2,000,000 to undertake technical studies, prepare environmental documentation for the Program, and instructed staff to conduct a financial review of the proposed transaction. These proposed studies will provide the technical information needed to locate, size and schedule future facilities for ultimate project implementation. The total

budget for the technical studies and environmental review is \$4,000,000. Metropolitan and Cadiz have agreed to share these contractual expenditures on an equal basis. Staff is in the process of developing a scope of work and retaining a financial consultant to complete the financial review.

Cadiz Inc. (Cadiz) owns approximately 27,000 acres overlying groundwater basins in the Cadiz and Fenner valleys in eastern San Bernadino County. Under the Cadiz Groundwater Storage and Dry-Year Supply Program (Program), Metropolitan will store a minimum of 500,000 acre-feet of Colorado River Aqueduct (CRA) water in the groundwater basin underlying the Cadiz properties and will purchase a minimum of 1,100,000 acre-feet of indigenous groundwater over the 50-year term of the agreement with a total melded cost, not-to-exceed \$255 per acre-foot (1998 dollars). This water will be available on demand and will be conveyed to Metropolitan as a supplemental, dry-year source of water up to 100,000 acre-feet per year. In addition, the indigenous groundwater has a lower level of total dissolved solids than the Colorado River supplies, so it will provide a water quality benefit to Metropolitan. Most importantly, the Program will provide these water sources to Metropolitan upon demand as a valuable dry-year source of water, which is an essential component of the California 4.4 Plan.

To undertake technical and environmental studies, three separate Requests for Proposals (RFPs) were developed for the following work: (1) optimization plan and a groundwater demonstration project for the spreading/extraction facilities; (2) California Environmental Quality Act (CEQA) and National Environmental Protection Act (NEPA) environmental documentation; and (3) conveyance facilities optimization plan. In August and September 1998, Request for Proposals (RFP Nos. 360, 355, and 350 respectively) were made available with notification posted in several local newspapers and mailed directly to 21 firms expressing interest in the Program. A total of eight proposals were received in response to the three RFP's. Interviews were conducted with all respondents and selections were made based on staff evaluation of consultant's experience, technical approach, methodology, management abilities and cost effectiveness. The following firms are proposed:

- Geoscience Support Services, Inc. for consulting services involving the development of an optimization plan and groundwater demonstration project for spreading/extraction facilities;
- P&D Environmental for consulting services involving the environmental documentation; and
- Black & Veatch, Inc. for consulting services involving the development of an optimization plan for the pumping and conveyance facilities.

## **JUSTIFICATION**

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The studies and environmental documentation that will be undertaken with the requested funds are necessary to optimize the proposed facilities and to gather necessary information to undertake Program environmental review in compliance with the California Environmental Quality Act and so enable the Board to determine whether or not to proceed with implementation of the Cadiz Groundwater Storage and Dry-Year Transfer Program.

## ALTERNATIVES TO PROPOSED ACTION

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The Cadiz Groundwater Storage and Dry-Year Transfer Program is a part of Metropolitan's effort to comply with the requirements of the California 4.4 Plan. The alternative to compliance with the California 4.4 Plan is to accept a lower water supply reliability of Metropolitan's Colorado River supplies. The action requested in this letter is to enter into consulting agreements with three firms to supply consulting services to conduct needed technical evaluations and environmental documentation. The alternative to entering into the proposed consulting agreements would be to re-bid the proposed services, thereby experiencing a delay of approximately 150 days.

## ACTIONS AND MILESTONES

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Initial feasibility studies for the proposed program have been completed. Additional actions will be necessary to fully implement the Cadiz Groundwater Storage and Dry-Year Transfer Program (Program). The Groundwater Demonstration Program for spreading and extraction facilities will take approximately 12 months to complete. The required environmental documentation will take approximately 18 to 24 months to complete. The conceptual design of the involved facilities will be optimized early in this process so that the environmental impacts can be adequately addressed. Staff is currently negotiating a comprehensive agreement for the Program with Cadiz based upon the Principles of Agreement adopted by the Board. When these negotiations are completed and when sufficient information is available from the proposed studies, staff will make a recommendation to the Board concerning further program implementation. If authorized by the Board, final design and implementation will begin upon certification of environmental documentation in the fall of 2000.

## CONTRACT SUMMARY

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<b>Contract Status:</b> New	<b>Type of Selection:</b> Competitive Proposals (Conveyance Facilities) RFP No. 350 (Environmental Studies) 355 (Demonstration Project) 360
<b>Contract Form:</b> Professional Services	Firms Receiving RFP: Proposals Submitted No. 350 ----- 8 2 No. 355 ----- 8 4 No. 360 ----- 5 2
<b>Contract Type:</b> Time and Materials	
<b>Evaluation Criteria:</b> Evaluation based on qualifications, expertise, methodology, and cost-effectiveness.	

## MBE / WBE

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The Minority-Owned Business Enterprises (MBE) and Women-Owned Business Enterprises (WBE) anticipated levels of participation and actual participation levels are shown below:

	RFP 350		RFP 355		RFP 360	
	MBE	WBE	MBE	WBE	MBE	WBE
<b>Anticipated Levels of Participation</b>	15.0%	5.0%	15.0%	5.0%	15.0%	5.0%
<b>Actual Levels of Participation</b>	28.0%	7.7%	15.0%	5.0%	15.0%	2.5%

## DETAILED REPORT

The Cadiz Inc. (Cadiz) owns approximately 27,000 acres overlying groundwater basins in the Cadiz and Fenner valleys in eastern San Bernardino County. Cadiz farms about 1,600 acres of this property using indigenous groundwater. Under the proposed Cadiz Groundwater Storage and Dry-Year Supply Program (Program), Metropolitan will store a minimum of 500,000 acre-feet (AF) of Colorado River Aqueduct (CRA) water in the groundwater basin underlying the Cadiz properties and will purchase a minimum of 1,100,000 AF of indigenous groundwater over the 50-year term of the agreement with a total melded cost of \$255 per acre-foot (1998 dollars). By the end of the environmental review phase should the melded cost exceed \$255 per acre-foot, Metropolitan and Cadiz have the option to discontinue the Program or renegotiate the Program.. This water will be available on demand and will be returned to Metropolitan as a supplemental, dry-year source of water up to 100,000 AF per year.

Cadiz completed a California Environmental Quality Act (CEQA) review with San Bernardino County in 1993 concerning a proposed expansion of its agricultural operations on this property. The Environmental Impact Report identified over 1,000,000 AF of replaceable groundwater supplies in the underlying groundwater basin which was 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 to be approximately 30,000 AF annually and the current volume of groundwater in storage is estimated to be between 12 million and 22 million AF. The indigenous groundwater has a total dissolved solids (TDS) level of about 300 milligrams per Liter (mg/L), which is approximately equal to the TDS of State Water Project (SWP) supplies but considerably less than the 600 to 700 mg/L TDS level of Colorado River supplies.

To undertake these studies, three separate Requests for Proposals (RFPs) were developed for the following work: (1) optimization plan and a groundwater demonstration project for the spreading/extraction facilities; (2) CEQA and National Environmental Protection Act (NEPA) environmental documentation; and (3) conveyance facilities optimization plans. In August 1998, RFP No. 350 for the conveyance facilities was advertised and mailed directly to eight interested firms. Two responses were received to the RFP. In September 1998, RFP No. 355 for the environmental studies was advertised and mailed directly to eight interested firms. Four responses were received to the RFP. In September 1998, RFP No. 360 for the groundwater demonstration studies was also advertised and mailed to five interested firms. Two responses to the RFP were received. Interviews were conducted with all respondents and selections were made based on staff's evaluation of the consultant's experience, technical approach, methodology, management abilities, and cost effectiveness.

## Recommendation

At the July 14, 1998 meeting of the Board of Directors, funds were appropriated to undertake technical studies and environmental documentation of the Cadiz Groundwater Storage and Dry-Year Supply Program. It is recommended that the Board now authorize the General Manager to enter into contracts with the selected consultants to perform the required work. The studies and actions are needed to assist in optimizing the proposed facilities for potential implementation and to undertake environmental documentation. The following consulting teams are proposed to undertake these studies:

- Geoscience Support Services, Inc. for consulting services involving the development of a feasibility/optimization plan and groundwater demonstration project for spreading/extraction facilities;
- P&D Environmental for consulting services involving the project environmental documentation; and
- Black & Veatch Inc. for consulting services involving the development of a optimization plans for conveyance and pumping facilities.

DWR:jpa