

- **Board of Directors**
Engineering and Operations Committee

December 10, 2002 Board Meeting

9-4

Subject

Appropriate \$18.14 million for final design and enter into professional services agreements for the Hayfield Groundwater Storage Program (Approp. 15402)

Description

In anticipation of reduced long-term availability of Colorado River water in normal and dry years, Metropolitan has pursued water storage and transfer programs along the Colorado River Aqueduct. In addition to the development of agricultural transfers and conservation programs associated with the Quantification Settlement Agreement and the federal Interim Surplus Guidelines, Metropolitan has investigated potential groundwater storage and dry-year supply projects. To date, the Board has approved one groundwater storage project, the Hayfield Groundwater Storage Project. The Hayfield Project has an estimated storage capacity of 800,000 acre-feet. The annual “put and take” capacity is expected to be 150,000 acre-feet per year.

In June 2000, the Board authorized the Hayfield Project and appropriated funds for preliminary design, land acquisition, environmental permitting, water quality monitoring, and other related efforts. In accordance with board direction, surplus CRA water has been stored in the Hayfield aquifer beginning in 1999. To date, approximately 67,000 acre-feet of CRA water has been stored in the Hayfield aquifer. Preliminary design activities are underway and the Hayfield Project is currently on schedule to be completed in 2006. However, due to recent critical hydrological conditions on the Colorado River system, Metropolitan may be required to use the CRA water stored in the Hayfield aquifer prior to project completion in 2006. The purpose of this board action is to appropriate funds necessary to complete design activities and prepare for Phase 1 construction of extraction facilities at an accelerated pace. This action will enable partial extraction of stored CRA water to return to the Metropolitan service area by the end of 2004, with full extraction capability by 2006 or later.

Metropolitan issued RFQ No. 528 for design and construction support services in June 2002. A qualifications-based selection process conducted in accordance with Metropolitan's policies and procedures has identified several respondents qualified to perform the anticipated work. Metropolitan will enter into several professional service agreements with firms selected through RFQ No. 528 for the design and construction support of the Hayfield Project. This action will authorize entering into agreements for hydrogeology and groundwater modeling, additional basin characterization, and the design of Phase 1 facilities, including design and equipping of Phase 1 wells, and design of conveyance facilities and appurtenant structures.

Details of the Hayfield Project will be provided during the presentation at the Board meeting. Information to be provided will include known characteristics of the groundwater basin, information to be sought from the proposed exploratory program, a description of the proposed exploratory and design work by both Metropolitan and consultant staff, and the basis for development of the Capital Investment Plan program estimate.

This project has been evaluated and recommended by the CIP Evaluation Team, and is included in the CIP budget for fiscal year 2002/03. A detailed report is provided in [Attachment 1](#). The project financial statement is shown in [Attachment 2](#).

Policy

Metropolitan Water District Administrative Code § 5108: Capital Project Appropriation

Metropolitan Water District Administrative Code § 8117: Professional and Technical Consultants

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The environmental effects of the Hayfield Groundwater Storage Project were evaluated in the Mitigated Negative Declaration which was approved by Metropolitan's Board of Directors in April 1999. The Board also approved the Mitigation Monitoring and Reporting Plan and the Hayfield Groundwater Storage Project. The present proposed board action authorizes expenditure of funds to complete design, further feasibility studies, and other pre-construction activities.

The Mitigated Negative Declaration fully complies with CEQA and the State CEQA Guidelines, and no further environmental documentation is necessary for the Board to act on the proposed action.

The CEQA determination is: Determine that the proposed action has been previously addressed in the 1999 Mitigated Negative Declaration and no further environmental analysis or documentation is required.

CEQA determination for Option #2:

None required

Board Options/Fiscal Impacts

Option #1

Proceed with design of Phase 1 facilities for the Hayfield Groundwater Storage Project on an accelerated schedule with an on-line date of 2004.

Adopt the CEQA determination and

- a. Appropriate \$18.14 million in budgeted CIP funds;
- b. Authorize amending Agreement No. 40443 for an additional \$2.5 million for additional aquifer characterization;
- c. Authorize completion of design, preparation of construction bid documents, and performance of all other work in advance of award of competitively bid contracts for Phase 1 facilities and completion of design for the entire Hayfield Groundwater Storage Project; and
- d. Delegate to the CEO the authority to enter into professional service agreements for hydrogeology and groundwater modeling for Phase 1 facilities; design of Phase 1 wells; design of equipping of Phase 1 wells; and design of conveyance facilities and appurtenant structures in amounts not to exceed \$800,000, \$400,000, \$500,000, and \$3.5 million, respectively.

Fiscal Impact: A total of \$18.14 million of budgeted CIP funds under new Approp. 15402.

Option #2

Do not proceed with design of Phase 1 facilities for the Hayfield Groundwater Storage Project on an accelerated schedule. Design and construction of the Hayfield Groundwater Storage Project would proceed in accordance with the current project schedule with an on-line date of 2006 or later. Water currently stored in the Hayfield Groundwater Basin would not be available for use in the CRA to make up for potential shortfalls due to recent critical hydrological conditions on the Colorado River system.

Fiscal Impact: Unknown. Metropolitan would be required to procure water from other sources to make up for any shortfalls in water on the Colorado River system. This increase in cost could be significant.

Staff Recommendation


Option #1



Roy L. Wolfe
Manager, Corporate Resources

11/25/2002

Date



Ronald R. Gastelum
Chief Executive Officer

11/25/2002

Date

Attachment 1 – Detailed Report

Attachment 2 – Financial Statement for the Hayfield Groundwater Storage Program

BLA #1918

Detailed Report

Background

In anticipation of reduced long-term availability of Colorado River water in normal and dry years, Metropolitan has pursued water storage and transfer programs along the Colorado River Aqueduct. In addition to the development of agricultural transfers and conservation programs associated with the Quantification Settlement Agreement and the federal Interim Surplus Guidelines, Metropolitan has studied a number of groundwater storage and dry-year supply projects. To date, the Board has approved one project, the Hayfield Groundwater Storage Project. The Hayfield Project has an estimated storage capacity of 800,000 acre-feet. The anticipated annual "put and take" capacity of the Hayfield Project is 150,000 acre-feet per year.

In June 1998, the Board authorized funding of \$2.2 million for feasibility studies and demonstration project(s) for the Hayfield/Chuckwalla Basins Storage Programs (Appropriation No. 15325). The Board adopted the Mitigated Negative Declaration for the Hayfield Groundwater Storage Project in April 1999. In June 2000, the Board authorized the Hayfield Project and appropriated an additional \$7.375 million for preliminary design, land acquisition, environmental permitting, water quality monitoring, and other miscellaneous efforts. In March 2001, the Board authorized entering into an agreement with Kennedy/Jenks Consultants to construct a single aquifer test well and perform aquifer pumping tests to determine aquifer properties, water yields, groundwater basin characteristics and obtain water quality data. The agreement with Kennedy/Jenks Consultants was amended in February 2002 to drill a second aquifer test well and perform additional aquifer pumping tests. The results of the two aquifer-pumping tests performed to date indicate the need to perform additional investigations to further characterize the groundwater basin and provide information crucial to the definition and design of the Hayfield Project. The proposed Board action will authorize amending existing Agreement No. 40443 for an additional \$2.5 million to perform additional investigations and basin characterization.

In October 2001, Metropolitan executed a \$35 million reimbursement agreement with the Department of Water Resources for implementation of the Hayfield Project (DWR Agreement No. 4600001910). Metropolitan is currently submitting monthly invoices for eligible project expenses for reimbursement from DWR in accordance with the terms of the agreement.

In accordance with board direction, surplus CRA water has been stored in the Hayfield aquifer beginning in 1999. To date, approximately 67,000 acre-feet of CRA water has been stored in the Hayfield aquifer. Design activities are underway and the Hayfield Project is currently on schedule to be completed in 2006 or later. However, due to recent critical hydrological conditions on the Colorado River system, Metropolitan may be required to use the previously stored CRA water in the Hayfield aquifer prior to 2006. The proposed board action will appropriate the necessary funds to complete final design and allow for construction of Phase 1 extraction facilities on an accelerated schedule. This will allow partial extraction of previously stored CRA water to be returned to Metropolitan's service area by the end of 2004, with full extraction capability by 2006 or later.

Design activities will be performed by both Metropolitan staff and design consultants. Metropolitan issued a Request for Statements of Qualifications No. 528 for design and construction support services in June 2002. Eleven responses were received. A qualifications-based selection process was conducted in accordance with Metropolitan's policies and procedures and those respondents qualified to perform the work were identified and are eligible for future agreements. All of the shortlisted firms met Metropolitan's Regional and Small Business Enterprise requirements. The Small Business Enterprise requirement for RFQ No. 528 is 30 percent. Metropolitan will enter into several professional service agreements with firms selected through the RFQ for the design of facilities associated with Phase 1 of the project. The proposed board action will authorize entering into agreements for the following services:

- Project Hydrogeologist and Groundwater Modeling – Maximum Agreement Amount = \$800,000
- Design of Phase 1 Wells – Maximum Agreement Amount = \$400,000
- Design of equipping of Phase 1 Wells – Maximum Agreement Amount = \$500,000
- Conveyance Facilities – Maximum Agreement Amount = \$3,500,000

Additional authorization to enter into agreements for completion of Phase 2 design activities will be requested at a later date.

The requested funds of \$18.14 million were budgeted in the fiscal year 2002/2003 Capital Budget and are part of the original program estimate. The previously appropriated amount of \$7,575,000 and all project expenditures to date will be transferred from the Hayfield/Chuckwalla Basins Storage Program – Technical Studies and Demonstration Banking Project Appropriation (Approp. 15325) to the new Hayfield Groundwater Storage Program Appropriation (Approp. 15402). Staff will return to the Board for additional appropriations as required by the Hayfield Project schedule.

Actions and Milestones

Phase 1

- January 2003 – Issuance of Preliminary Design Report
- March 2003 – Completion of final design of Phase 1 Wellfield
- May 2003 – Board authorization of funding and award of construction contracts for Phase 1 facilities
- Fall 2004 – Completion of Phase 1 facilities

Phase 2

- November 2003 – Commencement of Phase 2 design activities
- August 2004 – Board authorization of funding and award of construction contracts for Phase 2 facilities
- End 2006 – Completion of all construction activities for full project implementation

Financial Statement for the Hayfield Groundwater Storage Program

The breakdown of Board Action No. 1 for Approp. No. 15402 for the Hayfield Groundwater Storage Program is as follows:

	Previous Board Actions Under Approp. 15325	Current Board Action No. 1 (Dec. 2002)	Total Appropriated Amount
Labor			
Studies and Investigations	\$ 500,000	\$ 0	\$ 500,000
Design	1,025,000	1,015,000	2,040,000
Owner Costs (Program Management, Environmental Docs, Real Estate, Water Quality)	1,400,000	2,290,000	3,690,000
Metropolitan Force Construction	1,000,000	0	1,000,000
Materials and Supplies	75,000	75,000	150,000
Incidental Expenses	20,000	20,000	40,000
Professional/Technical Services	1,425,000	10,355,000	11,780,000
Land Purchase	1,125,000	2,025,000	3,150,000
Equipment Use	5,000	0	5,000
Contracts	0	0	0
Remaining Budget	<u>1,000,000</u>	<u>2,360,000</u>	<u>3,360,000</u>
Total	<u>\$ 7,575,000</u>	<u>\$ 18,140,000</u>	<u>\$ 25,715,000</u>

Funding Request

Program Name:	Hayfield Groundwater Storage Program		
Source of Funds:	Construction Funds (General Obligation, Revenue Bonds, Pay-Go Fund)		
Appropriation No.:	15402	Board Action No.:	1
Requested Amount:	\$ 18,140,000	Capital Program No.:	15402-S (New*)
Total Appropriated Amount:	\$ 25,715,000*	Capital Program Page No.:	N/A
Total Program Estimate:		Program Goal:	Supply Reliability
Metropolitan Portion	\$ 38,000,000		
DWR Reimbursement	\$ 35,000,000		
Total	\$ 73,000,000		

* Funds originally appropriated under Approp. 15235 and all expenditures to date will be transferred to new Approp. 15402