

WITHDRAWN FROM AGENDA



MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

7-2

September 19, 1995

To: Board of Directors (Engineering and Operations Committee--Action)
(Finance and Insurance Committee--Action)

From: General Manager

Subject: Appropriation No. 719 to Expend Budgeted Funds in the Amount of \$1,246,000 to Finance All Estimated Costs of Conducting a Detailed Site Study and Geotechnical and Environmental Investigations for a Second Finished-Water Reservoir at the Robert B. Diemer Filtration Plant

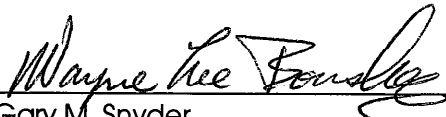
RECOMMENDATION:

It is recommended that your Board authorize a detailed site study and geotechnical and environmental investigations for a second finished-water reservoir at the Robert B. Diemer Filtration Plant.

It is recommended that your Board authorize Appropriation No. 719 in the amount of \$1,246,000 from the Pay-As-You-Go Fund, for a detailed site study and geotechnical and environmental investigations.

John R. Wodraska
General Manager

Submitted by:


 For Gary M. Snyder
 Chief Engineer

Concur:


 John R. Wodraska
 General Manager

DWC:mg
(719-apr)
Attachment

| CAPITAL FUNDING REQUEST | | |
|------------------------------------------------------------------------|---------------------------------------------------------------------------------|-------------------------------------------------------------|
| PROJECT NAME: DIEMER FILTRATION SECOND FINISHED-WATER RESERVOIR | | |
| APPROPRIATION No.: 719 | FUNDING REQUEST No. NEW | AMOUNT: \$ 1,246,000 |
| SOURCE OF FUNDS: PAY-AS-YOU-GO FUND | | |
| FY 95/96 BUDGET: | No <input type="checkbox"/> Yes <input checked="" type="checkbox"/> \$3,516,100 | CAPITAL PROGRAM 5-0501-31 PAGE NO. REFERENCE: 28 |
| <u>PROJECT JUSTIFICATION AND TYPE:</u> | | |
| <input checked="" type="checkbox"/> MEET WATER DEMANDS | <input checked="" type="checkbox"/> NEW FACILITY | <input type="checkbox"/> REPLACEMENT |
| <input type="checkbox"/> MANDATED BY LAW | <input checked="" type="checkbox"/> IMPROVEMENT | <input type="checkbox"/> EXPANSION |
| <input type="checkbox"/> ASSET PROTECTION/RISK MGT. | | |
| <input type="checkbox"/> COST AVOIDANCE | | |
| <input type="checkbox"/> OTHER _____ | | |

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| <p><u>PROJECT DESCRIPTION:</u></p> <p>The primary function of a finished-water reservoir at a treatment plant is to provide emergency water storage, ensure adequate disinfectant contact time to inactivate bacteria that slough off the filters and to provide operational flexibility and "safety net" in the event of a process failure.</p> <p>The tables on Attachment B are comparisons of the finished-water reservoirs at Metropolitan's filtration plants for design capacities and emergency storage utilizing design or nameplate flows. As these comparisons illustrate, the existing finished-water reservoir at the Diemer filtration plant is considerably undersized.</p> <p>Metropolitan has adopted a goal of at least 120 minutes of detention contact time for inactivation by chloramines of bacteria that slough off filters, and regulatory storage. In May 1990, CH₂M Hill completed an up-rating design report for the R. B. Diemer Filtration Plant, which recommended an additional 22 million gallons of finished-water storage in order to provide adequate disinfectant contact time. The report also indicated an increase in plant capacity may be possible in the future with increased finished-water storage.</p> <p>The Surface Water Treatment Rule (SWTR), which became effective June 29, 1993, includes very stringent requirements, which, if not met, require public notification. The addition of a second 22-25 million gallon finished water reservoir at the Diemer filtration plant would provide a margin of safety in the event of a process failure by providing additional disinfectant contact time by allowing continuation of water service from the proposed reservoir while problems are diagnosed and corrected, or by providing storage for inadequately treated water until the problems are corrected. This would minimize the potential of releasing improperly treated water into the distribution system and avoid public notification as required by the SWTR.</p> |
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Finished water storage at the Diemer plant is becoming a critical operational concern for Metropolitan, since the Diemer plant regularly operates at 80 to 100 percent of present capacity of 520 million-gallon-per-day (MGD) during the summer months. Even during the winter months the plant's flows rarely drop below 60 percent or 312 MGD. The Diemer plant is also a significant contributor to the central pool, and is increasingly relied upon to provide the majority of water to Orange County. The delay of the Central Pool Augmentation and Water Quality Project is possible by increasing the capacity of the Diemer plant.

With the impetus growing for an already critically needed second finished-water reservoir at Diemer, Metropolitan completed a conceptual site investigation and geotechnical reconnaissance in late 1994. The investigation and reconnaissance identified six possible locations for a second finished-water reservoir at or nearby the Diemer plant.

The Diemer filtration plant has limited area available for expansion of new facilities, therefore additional land will be required for development of a new second finished-water reservoir. Additional land is needed for the oxidation retrofit program facilities, to provide a buffer from impending adjacent residential development, and to mitigate impact to sensitive species. Steps toward land acquisition and implementation of mitigation measures through a Habitat Conservation Plan (HCP) have been underway and will be presented to the Board for consideration separately.

It is hereby proposed to proceed with a detailed site study by District personnel and to conduct geotechnical and environmental investigations by consultants, including documentation required under the California Environmental Quality Act (CEQA) for a second finished-water reservoir at the Robert B. Diemer Filtration Plant. The estimated cost for the detailed site study and investigations is \$ 1,246,000. A breakdown of the costs for Appropriation No. 719 is contained in the Financial Statement on Attachment A. The total estimated cost of a second finished-water reservoir at the Diemer filtration plant is \$61,519,800.

BENEFITS:

- Improve water quality by increasing disinfectant contact time.
- Increase emergency storage, thereby providing a more secure supply to the Diemer service area.
- Improve operational flexibility and safety margin in the event of process failure.
- Potential for increased plant capacity.

| PROJECT PLAN: CAPITAL PROGRAM NO. 5-0501-31 | | | | | | | | |
|----------------------------------------------------|-----------------------|------------|----------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|------------|--------------------------|
| PHASE | ESTIMATED COSTS | % COMPLETE | COSTS THRU FY 1995/96 | FY 1996/97 | FY 1997/98 | FY 1998/99 | FY 1999/00 | FY 2000/01 |
| DETAILED SITE | | | | | | | | |
| STUDY | \$ 507,400 | 0% | <input type="checkbox"/> | | | | | |
| GEOTECHNICAL & ENVIRONMENTAL | \$ 628,000 | 0% | | <input type="checkbox"/> | | | | |
| LAND PURCHASE | \$ *1,995,000 | 0% | | <input type="checkbox"/> | | | | |
| PRELIM DESIGN | \$ 700,000 | 0% | | <input type="checkbox"/> | | | | |
| FINAL DESIGN | \$ 3,160,000 | 0% | | | <input type="checkbox"/> | | | |
| CONSTRUCTION | \$44,555,400 | 0% | | | | <input type="checkbox"/> | | |
| TEST & STARTUP | \$ 2,000,000 | 0% | | | | | | <input type="checkbox"/> |
| CONTINGENCY | \$ 7,974,000 | | | | | | | |
| TOTAL | * \$61,519,800 | | * Land purchase is estimated and independent of a specific reservoir site. | | | | | |

ALTERNATIVES TO PROPOSED ACTION:

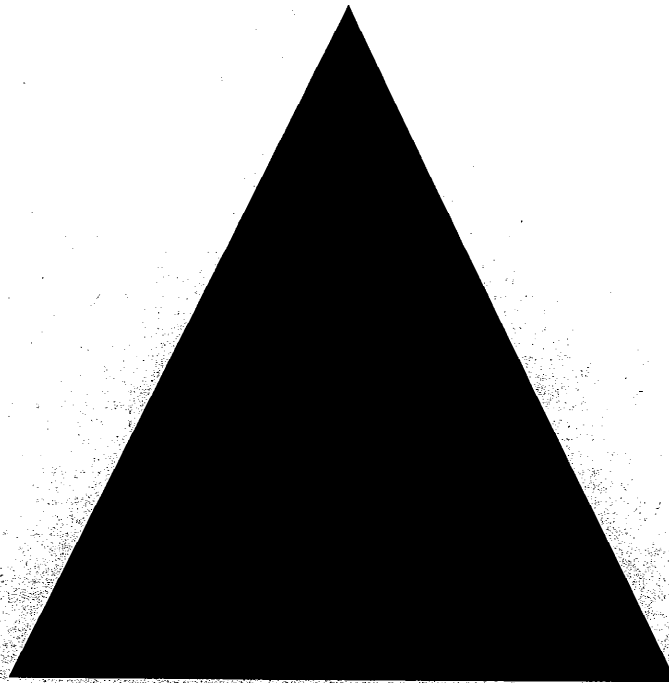
Not defer the design, construction and implementation of the Central Pool Augmentation and Water Quality Project to ensure continued quality water supplies to the Diemer service area.

CEQA COMPLIANCE / ENVIRONMENTAL DOCUMENTATION:

Actions requested by this letter are only for funding site feasibility studies and the preparation of environmental documentation in compliance with CEQA. Completion of appropriate CEQA documentation will be necessary for your Board to act on any future recommendation to implement this project.

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