MWD
METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

BOARD ACTION

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

January 9, 2001 Board Meeting

9-1

Subject

Certify the FEIR for the Diemer Plant Improvements Program, approve the program; and authorize funding for four Capital Investment Plan projects for the Diemer plant: (1) $915,000 for seismic retrofit of the finished water reservoir (Appn. 15362); (2) $1.995 million for design/construction of Phase 1 solids handling (Appn. 15363); (3) $430,000 for preliminary engineering for Basin 8 Spillway (Appn. 15331); and (4) $775,000 for relocation of the plant entrance (Appn. 15227)

Description

In 1996, a comprehensive planning effort was undertaken to identify the modifications and improvements that are necessary at the Robert B. Diemer Filtration Plant (Diemer plant) to ensure reliable plant operations and safety. Coincident with this planning effort, a Site Engineering Study was completed in early 1999 that recommended the location of future plant facilities. The combined results of these planning and engineering efforts identified the need for and made recommendations for a number of near-term and future projects at the Diemer plant.

Diemer Plant Improvements Program and Environmental Impact Report (EIR)

Collectively, the projects identified through this planning process have been consolidated into the Robert B. Diemer Filtration Plant Improvements Program (Program). The proposed projects within the Program will be brought to the Board, when appropriate, in an incremental manner between the years 2000 and 2013. The Program will address the following objectives: achieve and/or maintain compliance with federal and state drinking water quality regulations; increase the efficiency of the Diemer plant operations; enhance the safety and security of Diemer plant operations; and, maximize the developable space on the Diemer plant site. A total of nine projects have been identified in the Program. At this time, staff is recommending the authorization and funding of three of the projects included in the Program: 1) Finished Water Reservoir Seismic Retrofit, 2) Solids Handling and Water Reclamation, and 3) Sedimentation Basin Spillways. Staff would return to the Board for approval of the remaining six projects at a later date, as needed.

The Robert B. Diemer Filtration Plant Improvements Program EIR was prepared to address the environmental impacts associated with the Diemer Improvements Program. Since the Program includes a series of actions that can be characterized as one large improvement project, a Program EIR was prepared in compliance with the California Environmental Quality Act (CEQA). The EIR identified significant, non-mitigatable impacts to air quality and aesthetics. As such, the Board will need to consider adoption of a Statement of Overriding Consideration. The Final EIR, Findings of Fact and Statement of Overriding Consideration, and Mitigation Monitoring and Reporting Program are available for review in the Executive Secretary's office. At this time, it is requested that the Board certify and adopt the required CEQA documentation, approve the Program and the three aforementioned projects within the Program. See **Attachment 1** for the Detailed Report.

Staff also recommends approval of a fourth project, the Diemer plant Entrance Relocation, that was not included in the Program because it is exempt from the provisions of CEQA. All four projects were evaluated and recommended by the Capital Investment Plan (CIP) Evaluation Team, and are included in the Capital Budget for Fiscal Year 2000/01.

The four projects recommended for action at this time are as follows:

1) Finished Water Reservoir Seismic Retrofit. In 1997, Metropolitan's Facilities Seismic Evaluation Priority List was established to review and prioritize the seismic-related projects at Metropolitan. This list identified a potential safety issue resulting from a seismic event affecting the Diemer plant's Finished Water Reservoir (FWR). Following that identification, a more detailed FWR Seismic Assessment Study was conducted and indicated that it was necessary to modify the reservoir at the interface point between a box conduit and the reservoir near the Allen-McColloch Pipeline (AMP) turnout structure. Specifically, the project will provide a positive means to shut off reservoir flow in the event that either the interconnection conduit or the bypass pipeline is damaged. The FWR seismic retrofit project has been identified as a component of Metropolitan's Infrastructure Reliability and Protection Plan. See **Attachment 2** for the Detailed Report, **Attachment 3** for the Location Map and **Attachment 4** for the Financial Statement for this project.

2) Solids Handling and Water Reclamation. The Diemer plant needs improved solids handling facilities to ensure continued compliance with regulated wastewater discharges. The estimated capacity of the plant's six sludge lagoons is 70 percent of the design capacity of the Diemer plant. If the lagoon system becomes overloaded, treated water production may be limited at the Diemer plant. Improving the solids dewatering capabilities of the lagoon system will help alleviate plant flow restrictions. Staff recommends a phased approach to construction of the Diemer plant Solids Handling and Water Reclamation project. Approval of the following recommendations will authorize Phase 1 of the lagoon improvements, including the rehabilitation of Lagoon Nos. 5 and 6, and elimination of discharges from the plant rejection structure. Funding for additional improvements (installation of underdrain systems for Lagoon Nos. 3-5 and elimination of discharges from the north lagoons) will be requested in the future, as needed. The solids handling project has been identified as a component of Metropolitan's Infrastructure Reliability and Protection Plan. See **Attachment 5** for the Detailed Report and **Attachment 6** for the Financial Statement for this project.

3) Sedimentation Basin Spillways. The west- and east-side sedimentation basins at the Diemer plant were originally constructed with a rejection system that the California Department of Health Services now has classified as potential cross-connection. Since 1995, temporary modifications and operational changes have been implemented to prevent this type of cross-connection from occurring. However, the changes restrict the treatment capacity of the plant by 150 million gallons per day (mgd). In January 1999, the Board authorized Appropriation No. 15331 to provide permanent solutions for the east and west sedimentation basins. Funding was secured for the east basin (Basin No. 4) at that time. The permanent solution for Basin No. 4 is currently under construction as it was determined to be categorically exempt from the provisions of CEQA. Alternate alignments have been prepared for the Settling Basin No. 8 Spillway Conduit, which provides a permanent solution for the west sedimentation basins. The spillway conduit would intercept overflows from Settling Basin No. 8, and carry the flows down to Telegraph Creek, which is in Chino Hills State Park. At this time, staff recommends funding geological/geotechnical investigations, conceptual and preliminary design for the Settling Basin No. 8 Spillway Conduit such that a final pipeline alignment can be selected. See **Attachment 7** for the Detailed Report and **Attachment 8** for the Financial Statement for this project.

4) Entrance Relocation. A master-planned residential community consisting of more than 2,000 homes, golf course and an elementary school is currently being developed immediately adjacent to the plant's western and southern property. Staff completed a Memorandum of Understanding (MOU) with the property owner/developer to ensure that the ongoing construction activities will provide for Metropolitan's needs. As part of the MOU, the developer will provide Metropolitan with a widened entrance road, temporary entrance landscaping, perimeter fencing, a water line, electrical utilities, sanitary and residuals sewer main lines, a natural gas line, and storm drainage systems. In order to enhance security, safety, and efficiency considerations at the plant, it is proposed to

relocate the plant's entrance facilities to a location that is consistent with the improvements that have been made by the developer. Staff recommends construction of a new guard station with an automated entrance gate and security camera. This project is not part of the Program as it is exempt from CEQA because it consists of the minor alteration of existing public facilities, involving no expansion of use beyond that currently existing. See **Attachment 9** for the Detailed Report and **Attachment 10** for the Financial Statement for this project.

Policy

Metropolitan Water District Administrative Code Section 5108: Capital Project Appropriation, and
Metropolitan Water District Administrative Code Section 8113: Construction Contract Award.

Board Options/Fiscal Impacts

Option #1

a) Certify that the Board has reviewed and considered the information presented in the Diemer Improvements Program Final Environmental Impact Report (FEIR); certify that the FEIR has been completed in compliance with CEQA; and adopt the Findings of Fact and Statement of Overriding Considerations and the Mitigation Monitoring and Reporting Program.
b) Approve the Robert B. Diemer Filtration Plant Improvements Program.
c) Appropriate $4.115 million, authorize the General Manager to have all work performed and delegate to the General Manager the authority to award contracts for four CIP projects as described in this letter:
   - Design, procurement of equipment, and installation of seismic retrofit of the Finished Water Reservoir at the Diemer plant ($915,000),
   - Design and construction of Phase 1 solids handling and water reclamation facilities at the Diemer plant ($1.995 million),
   - Conceptual design and preliminary engineering for the Sedimentation Basin 8 Spillway at the Diemer plant ($430,000), and
   - Design and construction of relocation of the main entrance facilities at the Diemer plant ($775,000). Also, determine that pursuant to CEQA, the proposed action qualifies for a Categorical Exemption (Class 1, Section 15301 of the State CEQA Guidelines).

Fiscal Impact: $4.115 million of budgeted CIP funds under new appropriations 15362 ($915,000) and 15363 ($1.995 million), and existing appropriations 15331 ($430,000) and 15227 ($775,000).

Option #2

Do not authorize the General Manager to have all work performed as described in this letter. However, Metropolitan will not be in compliance with CEQA requirements and California Department of Health Services water treatment requirements.

Fiscal Impact: Increased costs if one or more projects are deferred.

Staff Recommendation

Option #1.

12/14/2000
Roy L. Wolfe *Date*
Manager, Corporate Resources

12/19/2000
General Manager *Date*

Attachment 1 – Detailed Report, Diemer Plant Improvements Program
Attachment 2 – Detailed Report, Finished Water Reservoir Seismic Retrofit
Attachment 3 – Location Map, Diemer Plant
Attachment 4 – Financial Statement, Finished Water Reservoir Seismic Retrofit
Attachment 5 – Detailed Report, Solids Handling and Water Reclamation
Attachment 6 – Financial Statement, Solids Handling and Water Reclamation
Attachment 7 – Detailed Report, Sedimentation Basin Spillways
Attachment 8 – Financial Statement, Sedimentation Basin Spillways
Attachment 9 – Detailed Report, Entrance Relocation
Attachment 10– Financial Statement, Entrance Relocation

BLA #592

The Diemer Plant Improvements Program

Detailed Report

Purpose/Background. The Diemer plant was brought into service in 1963 with an initial capacity of 200 million gallons per day (mgd). The Diemer plant was expanded in 1969 when the west basins were constructed. This expansion increased the plant's capacity to its current rating of 520 mgd.

In the more than 30 years since the plant was last expanded, the majority of the buildable areas at the plant site have been utilized by the construction of miscellaneous structures and facilities. Additionally, the remaining portions of the plant property are constrained by topographic features and environmental constraints. In anticipation of need for future facilities and structures at the Diemer plant, 36 acres of property adjacent to the west side of the plant were purchased from the Shell Oil Company in 1996.

In 1997, a coordinated planning effort was undertaken by Engineering Services, Water System Operations, and Water Resource Management to identify the need, and implementation schedule of new projects at the Diemer plant. This planning effort examined both the needs for implementing projects within the short-term, as well as potential projects that may be required over a longer planning horizon. The effort identified nine potential projects that could be required at the Diemer plant up through 2013. These nine potential projects included the following three facilities that would be required within a relatively short time at the plant: construction of the Basin No. 8 Spillway, Finished Water Reservoir Seismic Retrofit, and Solids Handling and Reclamation. Several projects that potentially could be required over a longer planning horizon included: a Plant Maintenance Building, Oxidation Retrofit Program facilities, Plant Service Center, and Fluoridation facilities. Tentative locations for these near-term and future projects were identified through a comprehensive Site Engineering Study that was completed in 1999.

Through the extensive Diemer plant-planning process described above, a number of potential projects were identified. Subsequently, the concept of establishing an overall program for collecting and evaluating the potential projects was developed and the Diemer Plant Improvements Program was initiated. Development of the Improvements Program necessitated preparation of a program-level Environmental Impact Report in 1998-2000.

CEQA Compliance / Environmental Documentation

In 1999, an Initial Study determined that the proposed Program could potentially have a significant effect on the environment. Consequently, a program environmental impact report was prepared to evaluate the potential impacts of the Program including potentially significant direct, indirect and cumulative impacts. The program environmental impact report also identifies alternatives and mitigation measures to avoid or substantially reduce potentially significant adverse impacts.

Consequently, in compliance with CEQA, a Notice Of Preparation (NOP) was prepared and circulated for public review on July 17, 1999. The NOP indicated that the Program had the potential to cause a significant effect on the environment and that Metropolitan would prepare an environmental impact report. The 30-day public review period for the NOP ended on August 19, 1999. During this public review period, comments and input were solicited from state and local government agencies as well as private organizations and individuals that may have an interest in the Program. The NOP is included as Appendix A to the Draft Environmental Impact Report (DEIR).

On September 11, 2000, Metropolitan issued the DEIR for public review for a period of 45 days. The Notice of Availability of a DEIR was published in the Orange County Register on September 8, 2000, and copies of the DEIR were provided to Metropolitan's Central Library, the Yorba Linda Public Library and the Brea Public Library. Moreover, Metropolitan distributed approximately 45 copies of the DEIR to responsible agencies, trustee agencies, affected public agencies, nearby property owners and residents, and other interested public groups. The public review period ended on October 23, 2000. Metropolitan received seven letters commenting on the Draft EIR. Comment letters and responses to comments are included in the Final EIR (FEIR).

CEQA requires that public agencies adopt monitoring and reporting programs when they approve projects that contain mitigation measures to reduce or avoid significant environmental impacts (Public Resources Code Section 21081.6). Consequently, Metropolitan prepared a Mitigation Monitoring and Reporting Program (MMRP) which details mitigation measures and monitoring and reporting activities for each of the significant environmental impacts associated with the Program. Metropolitan staff will be responsible for administering the MMRP.

According to the FEIR, the Program would cause significant and unavoidable impacts to aesthetic resources and air quality. These effects can be reduced by the adoption of feasible mitigation measures; however, because it was found that these impacts could not be feasibly mitigated to below a level of significance, the Board will need to consider adoption of the Statement of Overriding Considerations. The Statement of Overriding Considerations concludes that the benefits of the proposed Program substantially outweigh the unavoidable significant adverse impacts that would result from project implementation. The Board will also need to adopt the Findings of Fact and the Mitigation Monitoring and Reporting Program, and certify that the FEIR and associated documents were completed in compliance with CEQA and the State CEQA Guidelines.

A copy of the FEIR, including the Draft EIR and Technical Appendices, Responses to Comments, Mitigation Monitoring Program, and Findings of Fact and Statement of Overriding Considerations are available for review in the Executive Secretary's office. These actions satisfy the provisions of CEQA in regard to these matters; no further environmental review or documentation is necessary for the Board to act on this request.

Diemer Plant Finished Water Reservoir Seismic Retrofit

Requested Amount: $915,000

Detailed Report

Purpose/Background. Beginning in 1997, a comprehensive effort was initiated to identify and prioritize facilities within Metropolitan's system that could be damaged as a result of a significant seismic event. The result of this work was the development of Metropolitan's Facilities Seismic Evaluation Priority List. The list identified a potential safety issue resulting from a seismic event affecting the Diemer plant's Finished Water Reservoir (FWR). Following that identification, a more detailed FWR Seismic Assessment Study was conducted on this facility. The area of concern is associated with the interface point between pipelines that enter and leave the Diemer plant's FWR. The study found that the connection between the box conduit and the reservoir near the Allen-McColloch Pipeline (AMP) turnout structure, formally known as Service Connection OC-60, should be modified to provide a positive means to shut off reservoir flow in the event that either the interconnection conduit or the bypass pipeline is damaged.

FWR Seismic Assessment Study. The Diemer plant is located in the seismically active southern California region. No known active faults cross the main plant site. However, the closest regional fault, the Whittier fault, is located just one-half mile to the north. The Paralta Hills fault is approximately 3.6 miles to the south. Other significant faults close to the Diemer plant include the Chino fault, the Elsinore fault, and the Sierra Madre Fault system. Due to the plant's close proximity to a major fault capable of producing a moment magnitude (M_w) 7.0 earthquake or greater, the ground motions are anticipated to be strong, causing significant seismically-induced slope deformations.

With the exception of the reservoir's south wall which is underlain by engineered fill, the FWR lies primarily on bedrock materials. The As-Built geologic map for the plant site shows that the contact between engineered fill and colluvium/bedrock is near the edge of the turnout structure. Subsequent geotechnical analysis verified that the turnout structure is founded directly on bedrock materials. The differences in structure geometries, mass and stiffness properties, lead to the fact that both the FWR and the turnout structure will be under different relative displacements from one another during a seismic event.

The structure element connecting the reservoir to the turnout structure is a rectangular concrete conduit. The design of this conduit is such that it ties to both the reservoir and the turnout structure with an "expansion" joint. This means that there is no reinforcing steel running between the conduit and the two adjoining structures. Only a polyvinylchloride (PVC) waterstop at each end of the interconnection conduit connects the conduit to the adjacent structures. Significant differential displacements of these three related structures are considered likely to tear and displace the waterstop. If this damage occurs to the waterstop, water will leak out of the joint and quickly saturate the turnout structure subgrade and adjacent slope. It is likely that the looser soils will be washed away, aggravating the leakage and continuing to expel the reservoir's stored water.

Project Description. Based on the recommendations in the FWR Seismic Assessment Study, staff recommends the following actions:

- Install a roller gate inside the reservoir at the upstream side of the interconnection pipeline to provide a positive means to shut off water flows if the interconnection pipeline is damaged in an earthquake.
- Install a slide gate in the reservoir inlet control structure to control flows into the bypass pipeline from the reservoir influent to provide a positive means to control water flows into the turnout structure if the bypass pipeline were significantly damaged in an earthquake.

Under this program, Metropolitan will prepare the required design documents and procure and install the equipment. In order to streamline award of the equipment contracts, this letter seeks the Board's approval of a delegation of authority to the General Manager to award equipment contracts in accordance with Section 8113 of the Administrative Code.

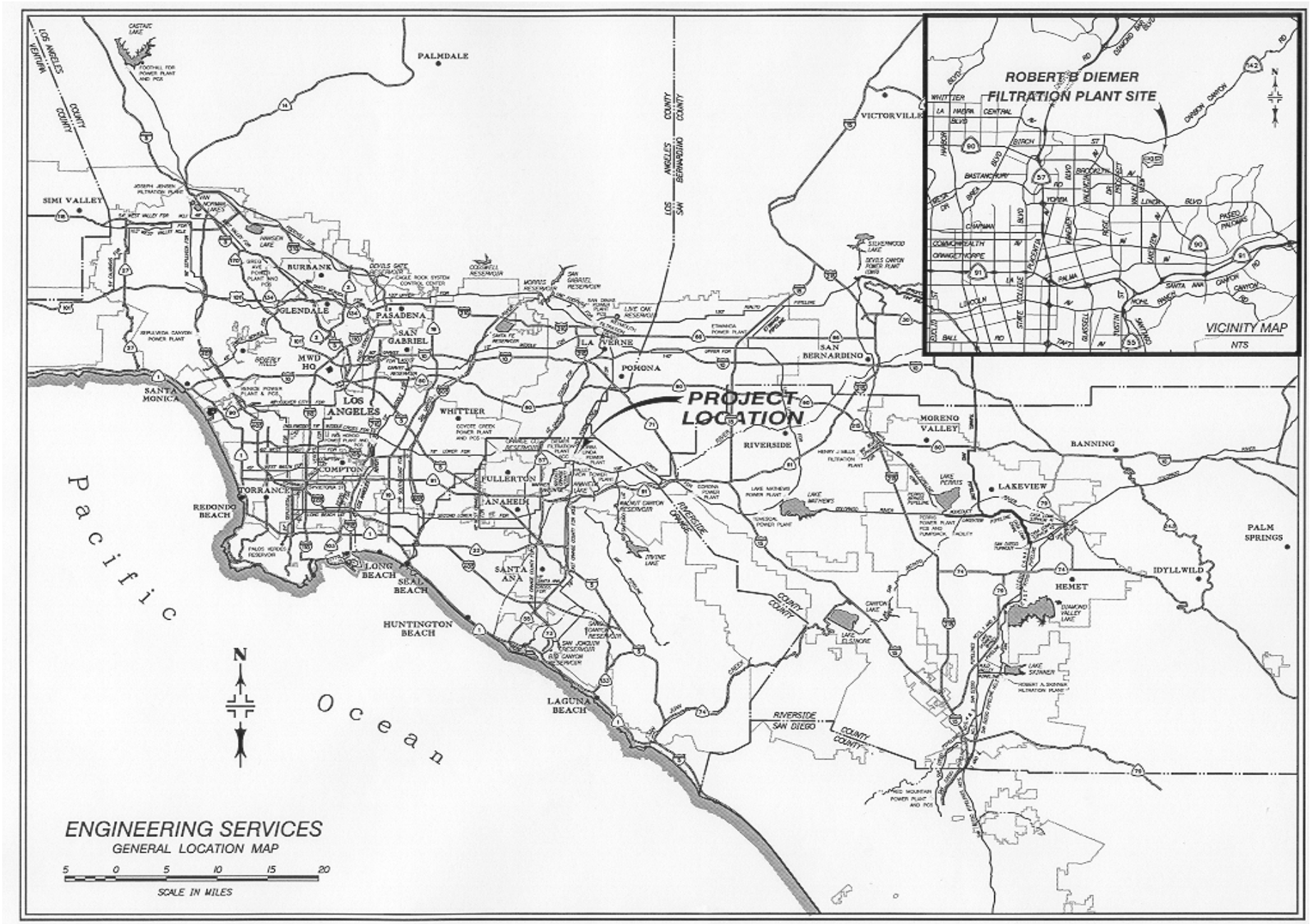
Cost Estimate. Attachment 4 shows the breakdown of the total estimated costs of $915,000.

CEQA Compliance / Environmental Documentation

The proposed project has been included in the Diemer Improvements Program EIR that was prepared to comply with the California Environmental Quality Act (CEQA).

Actions and Milestones

- ❒ January 2001 – Start final design work
- ❒ September 2001 – Complete final design, purchase requisition, and award equipment contract
- ❒ August 2002 – Begin construction
- ❒ December 2002 – Project completed


ROBERT B DIEMER
FILTRATION PLANT SITE
VICINITY MAP
NTS
PROJECT
LOCATION
PALMDALE
VICTORVILLE
SAN BERNARDINO
RIVERSIDE
SEMI VALLEY
BURBANK
GLENDALE
PASADENA
SAN GABRIEL
MWD HQ
POMONA
LA VERNE
SANTA MONICA
LOS ANGELES
WHITTIER
COMPTON
FULLERTON
TORRANCE
ANAHEIM
REDONDO BEACH
LONG BEACH
SEAL BEACH
SANTA ANA
HUNTINGTON BEACH
LAGUNA BEACH
MORENO VALLEY
BANNING
LAKEVIEW
PALM SPRINGS
IDYLLWILD
HEMET
Pacific
Ocean
N
ENGINEERING SERVICES
GENERAL LOCATION MAP
5 0 5 10 15 20
SCALE IN MILES

Financial Statement for Diemer Plant Finished Water Reservoir Seismic Retrofit

A breakdown of the Board Action No. 1 for Appropriation No. 15362 to finance design and construction to install one roller gate and one slide gate at the Diemer plant Finished Water Reservoir is:

	Board Action No. 1 (Jan. 2001)
Labor:	
Study Phase	$ 63,000
Owner Costs (Project Mgmt, Bidding Process)	42,500
Design and Preparation of Specifications	90,000
Construction Inspection and Support	51,500
Water System Operations (District Forces Constr.)	234,000
Materials and Supplies	287,000
Incidental Expenses	5,000
Operating Equipment	5,000
Contracts	10,000
Remaining Budget	127,000
Total	**$ 915,000**

Funding Request

Program Name:	Diemer Filtration Plant – Finished Water Reservoir Seismic Retrofit		
Source of Funds:	Construction Funds (possibly General Obligation, Revenue Bonds, Pay-As-You-Go Fund)		
Appropriation No.:	15362	**Board Action No.:**	1
Requested Amount:	$915,000	**Capital Program No.:**	99004-R
Total Appropriated Amount:	$915,000	**Capital Program Page No.:**	E-14
Total Program Estimate:	$915,000	**Project Goal:**	R- Reliability

Diemer Plant Solids Handling and Water Reclamation
Requested Amount: $1.995 million

Detailed Report

Purpose/Background. The Diemer plant was placed into service in 1963 with an initial capacity of 200 million gallons per day (mgd). The initial construction included Sludge Lagoon Nos. 1 and 2. The west side of the plant was placed into operation in 1969 increasing the total plant capacity to its currently rated 520 mgd. The plant expansion included the construction of Sludge Lagoon Nos. 3-6. All of the lagoons were constructed without underdrain systems. As such, the lagoons rely primarily on evaporation to remove liquids from the backwash solids.

Solids Handling and Water Reclamation Study. A Solids Handling and Water Reclamation Study was initiated to investigate existing issues with the plant's solids handling capacity and regulated wastewater discharges from the plant. Three areas for improvement were identified through the study: 1) insufficient solids handling capacity for maximum plant capacity, 2) regulatory issues associated with wastewater discharges and 3) non- regulatory issues associated with wastewater discharges.

The residuals handling capacity of the Diemer plant is inadequate to match the residuals that are produced if the plant were to operate above 70 percent of its design capacity. The north lagoons are limited by their size and design and may potentially cause flow restrictions for the Diemer plant. In addition, the south lagoons may only be used on an emergency basis since discharges from these lagoons are no longer acceptable due to development below the Diemer plant. As a result, the existing four north lagoons can only process the amount of treatment plant residuals associated with extended filter plant operation at or below 400 mgd. The insufficient solids handling capacity at Diemer represents a bottleneck in the treatment process, which has become more apparent in recent years as the water demand through the plant and chemical usage at the plant has increased.

The Diemer plant currently has four outfalls regulated by the California Regional Water Quality Control Board through a single National Pollutant Discharge Elimination System permit. The permit has to be periodically renewed through a submittal and review process and the restrictions placed on discharges have gradually increased over time. In recent years, Metropolitan has had more difficulty in meeting all of the requirements for these discharges and has incurred increased sampling, monitoring, and evaluation costs. Eliminating regular discharges from the north sludge lagoons, the plant rejection structure and the laboratory sinks will reduce sampling, testing, and reporting requirements; eliminate exposure to potential fines and/or restrictions on plant operations; and allow for the beneficial reuse of water currently wasted. To reduce discharges to the sanitary sewer, and to be consistent with Metropolitan's goals for water reuse, the process sample system should be modified to recover this water for beneficial reuse within the plant.

Project Description. Metropolitan staff will design, procure and install equipment associated with the following Phase 1 projects:

- Rehabilitation of Sludge Lagoon Nos. 5 and 6. This includes enlarging the lagoons and installing underdrain systems and gravel beds. This work is the first phase of a multi-phased project. Phase 1 will be implemented to verify the applicability of the underdrain system to achieve the desired results. Funding for additional lagoon rehabilitations will be requested at a future date.
- Construction of the Carbon Canyon Bridge. This bridge will reduce negative impacts from District construction and ongoing maintenance operations on the north lagoons and is identified as required mitigation within the Diemer EIR.

- Elimination of discharges from the north lagoons. This includes installation of a new decant collection line, storm drainage ditch, collection sump, and pump station at the north lagoons and a new return pipeline leading to the sludge thickeners.
- Elimination of discharges from the plant rejection structure. This involves modifying piping and adding a new sump within the plant rejection structure; installing new sump pumps and controls; and the replacement of two transfer pumps at tanks.
- Recovery of process sample flows. The installation of two new sample sinks, a utility sink, modification of countertops and cabinet face, modification of existing sample lines and installation of a new 1,000-gallon collection tank with two return pumps in the basement beneath the laboratory.

A modified design/build contract will be competitively bid for construction of the Carbon Canyon Creek Bridge. In order to streamline award of this contract, this letter seeks the Board's delegation of authority to the General Manager to award the contract immediately following competitive bids in accordance with Section 8113 of the Administrative Code.

Cost Estimate. Attachment 6 shows the breakdown of the total estimated costs of $1.995 million for Phase 1 of the Solids Handling and Water Reclamation program. An additional phase of the project is being developed as part of the Fiscal Year 2001/02 Capital Budget process. Staff anticipates returning to the Board for funding of Phase 2 in approximately January 2002.

CEQA Compliance / Environmental Documentation

The proposed project has been included in the Diemer Improvements Program EIR that was prepared to comply with the California Environmental Quality Act (CEQA).

Actions and Milestones

- ❒ Aug 2000- Preliminary Design Report approved
- ❒ September 2000 – Diemer Improvements Program EIR released for public review and comment
- ❒ May 2001 - Complete final design
- ❒ June 2001 – Complete recovery of laboratory sample flows
- ❒ July 2001- Complete construction of Carbon Canyon Bridge
- ❒ October 2001 – Complete rehabilitation of Lagoon Nos. 5 and 6
- ❒ November 2001 – Eliminate discharges from Outfall 3
- ❒ January 2002 – Request funding for Phase 2 of the project

Financial Statement for Diemer Plant Solids Handling and Water Reclamation

A breakdown of the Board Action No. 1 for Appropriation No. 15363 to finance design and construction of solids handling and water reclamation facilities for the Diemer plant is as follows:

	Board Action No. 1 (Jan. 2001)
Labor:	
Study Phase	$ 125,000
Owner Costs (Project Mgmt, Bidding Process)	40,000
Design and Specifications	210,000
Construction Support & Inspection	45,000
Water Systems Operations (District Force Constr.)	460,000
Materials and Supplies	530,000
Incidental Expenses	15,000
Operating Equipment	65,000
Contracts	310,000
Remaining Budget	195,000
Total	**$ 1,995,000**

Funding Request

Program Name:	Diemer Filtration Plant Solids Handling and Water Reclamation		
Source of Funds:	Construction Funds (possibly General Obligation, Revenue Bonds, Pay-As-You-Go Fund)		
Appropriation No.:	15363	**Board Action No.:**	1
Requested Amount:	$1,995,000	**Capital Program No.:**	99003-R
Total Appropriated Amount:	$1,995,000	**Capital Program Page No.:**	E-15
Total Program Estimate:	$2,200,000	**Project Goal:**	W- Water Quality

Basin 8 Spillway for the Diemer Plant
Requested Amount: $430,000

Detailed Report

Purpose/Background. The Diemer plant was constructed in two phases. The east side of the plant was placed into service in 1963, followed by the west side of the plant in 1969. As the plant was originally designed and constructed, in the event of a rejection in either the east or west side of the plant, water from the sedimentation basins would bypass the flitters, spill into their respective overflow conduits, and flow into a common filtered water effluent conduit before it enters the finished water reservoir. Since the plant's original construction, the California Department of Health Services has determined that this type of overflow or rejection capability is inappropriate as it causes potential cross-connection between partially treated and treated waters. As a result, temporary modifications have been made at both sides of the plant to prevent a cross-connection should an overflow commence. Additionally, Sedimentation Basin Nos. 4 and 8 have been taken out-of-service to provide operational-response time in the event an overflow seems imminent. These modifications have effectively reduced the treatment capabilities of the plant by 150 mgd. In January 1999 the Board authorized Appropriation No. 15331, a program with two projects, to provide permanent solutions for the east- and west-side basins, and to authorize construction of the first project. The Settling Basin No. 4 Spillway Conduit is currently under construction to isolate overflows from the filter effluent conduit, which will eliminate any east side cross-connection and allow Basin No. 4 to return to service. The second project is the proposed Settling Basin No. 8 Spillway Conduit.

Alternative Alignments: A study was prepared for the Settling Basin No. 8 Spillway Conduit to identify alternative alignments and impacts for use in the Diemer Plant Improvements Project Environmental Impact Report (EIR). Settling Basin No. 8 would be permanently modified to isolate the overflow conduit from the filter effluent conduit. The proposed spillway conduit would intercept flow from the Settling Basin No. 8 overflow conduit and direct the flows down the north slope of the Diemer plant and discharge to Telegraph Creek which is in Chino Hills State Park. Staff met with park personnel to understand restrictions and options available for discharging to Telegraph Creek. The studies identified three basic spillway conduit alignments: ridgeline, road, and ravine. Each basic alignment can have variations for terminating the conduit/energy dissipater at Telegraph Creek either in Metropolitan fee-property or existing easement-property. Metropolitan staff studies have shown that rejections discharging to Telegraph Creek could cause partial inundation of Telegraph Canyon Road. Metropolitan proposes to replace existing culverts in Telegraph Creek to mitigate for the partial inundations. Portions of the alternative alignments are in the U. S. Army Corps of Engineers and the California Department of Fish and Game jurisdictional areas, and appropriate environmental permits will be needed.

Project Description. Metropolitan staff will obtain consultant geological/geotechnical investigations and recommendations, and will prepare conceptual and preliminary designs for Basin No. 8 Spillways. Results from these studies will allow for the selection of a final alignment for the Settling Basin No. 8 Spillway Conduit. Staff will return to the Board at a future date to approve the alignment, to adopt CEQA clearance and to request funding and authorization for final design and construction.

Cost Estimate. Attachment 8 shows the breakdown of the total requested amount of $430,000.

CEQA Compliance / Environmental Documentation

The proposed project has been included in the Diemer Improvements Program EIR that was prepared to comply with the California Environmental Quality Act (CEQA).

Actions and Milestones

- ❒ December 2001- Complete preliminary design

Financial Statement for Diemer Plant Sedimentation Basin Spillways

A breakdown of Board Action No. 2 for Appropriation No. 15331 to finance conceptual and preliminary design of a sedimentation basin spillway for Basin 8 at the Diemer plant is as follows:

	Board Action No. 1 (Jan. 1999)	Board Action No. 2 (Jan. 2001)
Labor:		
Study Phase	$ 100,000	$ 200,000
Owner Costs (Project Mgmt, Bidding Process)	91,000	151,000
Conceptual and Preliminary Design (Basin No. 8)		120,000
Design and Specifications	158,000	158,000
Construction Support & Inspection	155,000	155,000
Water System Operations	45,000	65,000
Materials and Supplies	30,000	35,000
Incidental Expenses	5,000	10,000
Professional/Technical	0	60,000
Operating Equipment	10,000	20,000
Contracts	600,000	600,000
Remaining Budget	406,000	456,000
Total	**$1,600,000**	**$2,030,000**

Funding Request

Program Name:	Diemer Filtration Plant Construct Sedimentation Basin Spillways		
Source of Funds:	Construction Funds (possibly General Obligation, Revenue Bonds, Pay-As-You-Go Fund)		
Appropriation No.:	15331	**Board Action No.:**	2
Requested Amount:	$430,000	**Capital Program No.:**	15331-W
Total Appropriated Amount:	$2,030,000	**Capital Program Page No.:**	E-13
Total Program Estimate:	$4,300,000	**Project Goal:**	W- Water Quality

Entrance Relocation for the Diemer Plant
Requested Amount: $775,000

Detailed Report

Background. Since the original construction of the Diemer plant in 1963, vehicular access to the plant has been along an entrance road that was constructed on an easement across property owned by Shell Western E&P, Inc. (Shell). This portion of Shell's property is part of their 875 acres of land, immediately adjacent to the Diemer plant, that is currently under development as part of a residential and golf course master-planned community. To accommodate their project's required construction activities, Shell's developer (Toll Brothers) relocated the original Diemer plant entrance road, without impacting the existing guard enclosure. To ensure that the entrance road and appurtenant facilities provide for Metropolitan's changing needs, staff completed a Memorandum of Understanding (MOU) with Shell and Toll. As part of the MOU, the developer will provide Metropolitan with a widened entrance road, temporary entrance landscaping, perimeter fencing, a water line, electrical utilities, sanitary and residuals sewer main lines, a natural gas line, and storm drainage systems. Metropolitan will need to coordinate with and obtain approvals from the utilities providing these services. Facilities not provided by Shell and Toll under the MOU include relocating the security guard enclosure and related facilities, and providing an automated entrance gate. The relocation and upgrade of these facilities was determined to be beyond the scope of the MOU because it was determined to be solely in Metropolitan's best interest to have the chemical delivery trucks park within the plant's fenced and gated property.

Purpose. The primary goal of this project is to maintain security at the Diemer plant. The current location of the security guard enclosure is set back from the Diemer plant property line by approximately 1,000 feet and does not have a direct line-of-sight to the new entrance gate. This location was suitable and acceptable when the adjacent lands were unoccupied oil fields. However, the new golf course, elementary school and more-than-2000-home residential development will bring community development right up to the property line of the Diemer plant. With the community nearby, it is more likely that neighborhood residents may wander onto the Diemer plant where only a fence separates them from the south lagoons. Site security will be enhanced if the Diemer plant entrance facilities are relocated closer to the plant boundary. The new location for the security guard enclosure, immediately adjacent to the Diemer property line, provides a suitable line-of-sight and places additional security between the plant boundary and the south lagoons.

A second goal of this project is to reduce the risks associated with chemical deliveries at the plant. To date, chemical delivery trucks have been required to park outside the plant property. Without these improvements, chemical trucks would continue to park on public streets that have a steep grade, which is undesirable from a safety and security standpoint. The road relocation has provided a safe staging area that is relatively level and is off the public streets. However, the safe staging area is far from the existing guard enclosure. The proposed guard station location offers greater control over chemical deliveries and enhance safety and security while the chemical delivery trucks are parked within the Diemer plant. A new fire hydrant provides an additional safety improvement.

A third goal of this project is to improve operational efficiency by allowing chemical delivery trucks to enter the Diemer plant during non-working hours. Presently, the guard station is staffed during normal working hours only. Consequently, when chemical delivery trucks arrive at night they are required to park outside the gate,

where the drivers usually rest in their cabs until the following morning. The proposed guard station with remote acceptance equipment would allow plant operators to efficiently monitor and control access.

The security enclosure should be upgraded to be aesthetically compatible with the surrounding community and enhance the public image of the Diemer plant. Toll Brothers has requested this. As part of the Site Engineering Study, a consultant architect has prepared draft site-specific architectural design guidelines, which consider the adjacent development and future facilities at the Diemer plant. These guidelines will be incorporated in the design of the guard station structure.

Temporary landscaping, with a life expectancy of three to five years, will be installed by Toll Brothers on the cut slopes immediately adjacent to the relocated entrance gate. Under a future phase of this project staff will return to the Board to authorize funds for permanent landscaping. This phased approach to the project was reviewed and approved by the CIP Evaluation Team.

Previous Funding. In August 1996 the Board approved Action No. 3 to Appropriation No. 15227 to increase funding to $4.295 million to finance all of Metropolitan's estimated costs to acquire property from Shell Western E&P, Inc. and implement the Shell/Metropolitan Habitat Conservation Plan.

Project Description. Staff recommends relocating the entrance facilities by constructing a new security guard enclosure, installing an automated entrance gate, providing enhanced security features (cameras, and lighting), making necessary utility relocations and providing property and environmental coordination with lands adjacent to the property acquisition. The hardscape improvements installed would be consistent with the architectural design guidelines for the Diemer plant and the surrounding master-planned community while providing the functionality required by Metropolitan. This program was evaluated by the CIP Evaluation Team and is included in the Capital Budget for Fiscal Year 2000/01. Under this program, Metropolitan would prepare the required design documents, administer the contracts, and inspect the construction. In order to streamline award of the construction contracts, this letter seeks the Board's approval of a delegation of authority to the General Manager to award contracts for final design and construction immediately following competitive bids in accordance with Section 8113 of the Administrative Code.

Due to the complex nature of the negotiations concerning permitting portions of the Diemer plant Improvements Program as described in this letter, staff also recommends additional funding under Appropriation No. 15227 to coordinate the projects with the California Department of Parks and Recreation and other affected agencies. Required coordination will include such activities as negotiating necessary environmental permits, obtaining easements and entry permits to state park property, and conducting mitigation monitoring during the life of the project.

Cost Estimate. Attachment 10 shows the breakdown of the total estimated costs of $775,000.

CEQA Compliance / Environmental Documentation

The proposed project qualifies for Categorical Exemption under the California Environmental Quality Act (CEQA) as it consists of the minor alteration of existing public facilities, involving no expansion of use beyond that currently existing (CEQA Section 15301, Class 1 Exemption).

Actions and Milestones

- ❒ June 2001- Complete final design
- ❒ July 2002 - Complete construction

Financial Statement for Diemer Land Acquisition, Habitat Conservation Plan, and Site Grading

A breakdown of the Board Action No. 4 for Appropriation No. 15227 to finance design and construction to relocate the main entrance at the Diemer plant as part of the Diemer Land Acquisition, Habitat Conservation Plan, and Site Grading is as follows:

	Board Action No. 3 (Aug. 1996)	Board Action No. 4 (Jan. 2001)
Labor:		
Owner Costs (Project Mgmt, Bidding Process)	$ 341,400	$ 391,400
Design and Preparation of Specifications		120,000
Construction Inspection and Support		70,000
Water System Operations		20,000
Environmental Documentation/Coordination	20,000	120,000
Property Documentation/Coordination		75,000
Materials and Supplies	100	6,100
Incidental Expenses	2,200	4,200
Professional/Technical Services	1,258,800	1,268,800
Rights of Way	2,672,000	2,672,000
Operating Equipment	500	2,500
Contracts	0	255,000
Remaining Budget	0	65,000
Total	**$ 4,295,000**	**$5,070,000**

Funding Request

Program Name:	Diemer Filtration Plant –Land Acquisition, Habitat Conservation Plan, and Site Grading		
Source of Funds:	Construction Funds (possibly General Obligation, Revenue Bonds, Pay-As-You-Go Fund)		
Appropriation No.:	15227	**Board Action No.:**	4
Requested Amount:	$ 775,000	**Capital Program No.:**	15227-R
Total Appropriated Amount:	$ 5,070,000	**Capital Program Page No.:**	E-16
Total Program Estimate:	$ 9,700,000	**Project Goal:**	R- Reliability