

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

November 18, 2003 Board Meeting

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8-2

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**Subject**

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Authorize \$3.713 million to fund Capital Investment Plan projects as part of the Conveyance and Distribution System Rehabilitation Program (Approp. 15377); award a \$316,000 construction contract to Fibwrap Construction, Inc. for the San Diego Pipeline No. 4 and Auld Valley Pipeline Repairs; and award a \$253,240 procurement contract to Nissho Iwai American Corp. for the Santiago Lateral Valve Replacement

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**Description**

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Metropolitan staff initiated the Infrastructure Reliability and Protection Plan (IRPP) in July 2000 to maintain the reliability and regulatory compliance of Metropolitan's distribution system. The plan's objective is to evaluate risks and vulnerabilities of Metropolitan facilities, and to identify cost-effective options to address those risks. One component of the IRPP has been to conduct reconnaissance surveys of Metropolitan's conveyance, treatment and distribution system. As a result of these continuing surveys, several components of the distribution system have been identified as needing repairs, refurbishment or replacement. The recommended projects will protect Metropolitan's invested assets, increase the reliability of service to our customers, and reduce the risk of costly emergency repairs.

Each of the recommended projects has been evaluated and recommended by Metropolitan's Capital Investment Plan Evaluation Team, and all are included within the Conveyance and Distribution System Rehabilitation Program. Twelve of the thirteen projects have been included in the fiscal year 2003/04 capital budget. The twelve budgeted projects are:

- (1) Foothill Hydroelectric Runner Replacement Project (\$95,000) – This action authorizes design to replace damaged turbine components.
- (2) San Joaquin Relief Structure for East Orange County Feeder No. 2 (\$1,016,000) – This action authorizes design, construction inspection services, and entering into an agreement with Irvine Ranch Water District to construct the facility.
- (3) Garvey Reservoir Hypochlorite Feed System Project (\$218,000) – This action authorizes design and construction by Metropolitan forces.
- (4) Foothill Feeder Cathodic Protection (\$96,000) – This action authorizes design and construction by Metropolitan forces.
- (5) Electrical Current Drain Stations Project (\$427,000) – This action authorizes design, construction via a competitively bid construction contract, and construction inspection services, along the Second Lower Feeder and Sepulveda Feeder.
- (6) Upgrade Cathodic Protection Rectifiers (\$419,000) – This action authorizes procurement and installation by Metropolitan forces along multiple Metropolitan pipelines.
- (7) Casa Loma and San Diego Canals Lining Study (\$114,000) – This action authorizes a study to determine possible repair methods for cracked lining on the canals.
- (8) San Diego Canal East and West Bypass Screening Study (\$98,000) – This action authorizes a study to determine the viability of renovating the screening structures on the canal.

- (9) San Diego Canal Sodium Bisulfite Tank (\$157,000) – This action authorizes design, procurement and installation by Metropolitan forces of new sodium bisulfite tanks.
- (10) Upper Feeder Air Entrainment Study (\$85,000) – This action authorizes a study to investigate methods to eliminate entrained air from the Upper Feeder.
- (11) Discharge Elimination Project (\$384,000) – This action authorizes design and construction by Metropolitan forces to eliminate the discharge of water from five hydroelectric plants.
- (12) Santiago Lateral Valve Replacement – This action awards a procurement contract to Nissho Iwai American Corp. for \$253,240 to fabricate 48-inch and 42-inch butterfly valves. This project was previously authorized and funded by Metropolitan's Board. No additional funding is required at this time.

One recommended project within this program was not included in the fiscal year 2003/04 capital budget. This unbudgeted project is recommended at this time because a previously unexpected Skinner filtration plant shutdown in February 2004 will provide an opportunity to perform the work, eliminating the need for a future shutdown. This new project is:

- (13) San Diego Pipeline No. 4 and Auld Valley Pipeline Repairs Project (\$604,000) – This action awards a contract to Fibrwrap Construction, Inc. for \$316,000 to perform carbon fiber repairs, and authorizes construction inspection activities.

See [Attachment 1](#) for the Detailed Report of each project, [Attachment 2](#) for Abstracts of Bids for projects (12) and (13) above, and [Attachment 3](#) for the Financial Statement.

For the above projects involving design, the final design cost, as a percentage of the estimated total construction cost is approximately 13 percent. The Engineering Services goal for design of projects with construction costs less than \$10 million is 9 to 15 percent.

## **Policy**

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Metropolitan Water District Administrative Code § 5108: Capital Projects Appropriation

Metropolitan Water District Administrative Code § 8113: Construction Contract Award

## **California Environmental Quality Act (CEQA)**

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CEQA determinations for Option #1:

All thirteen proposed projects have been evaluated in terms of compliance with CEQA and the State CEQA Guidelines. They are combined below, as appropriate, when the CEQA determination is the same.

*(1) Foothill Hydroelectric Runner Replacement Project, (6) Upgrade Cathodic Protection Rectifiers, and (13) San Diego Pipeline No. 4 and Auld Valley Pipeline Repairs Project*

The proposed actions are categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The overall activities involve the funding, design, minor alterations and replacement of existing public facilities with negligible or no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed actions qualify under Class 1 and Class 2 Categorical Exemptions (Sections 15301 and 15302 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed actions qualify under two Categorical Exemptions (Class 1, Section 15301 and Class 2, Section 15302 of the State CEQA Guidelines).

*(2) San Joaquin Relief Structure for East Orange County Feeder No. 2*

Pursuant to the provisions of CEQA and the State CEQA Guidelines, the Irvine Ranch Water District, acting as Lead Agency, prepared and processed a Final Environmental Impact Report (Final EIR) for the San Joaquin Reservoir Conversion Project (project). The Final EIR also evaluated the environmental impacts associated with the implementation of the San Joaquin Relief Structure for East Orange County Feeder No. 2 Project. The Final

EIR was certified and the overall project was approved by the Lead Agency on June 9, 2003. Metropolitan, as Responsible Agency under CEQA, is required to certify that it has reviewed and considered the information in the certified Final EIR, the adopted Findings of Fact (Findings), the adopted Statement of Overriding Considerations (SOC), and the adopted Mitigation Monitoring and Reporting Program (MMRP), and adopt the Lead Agency's Findings and SOC prior to approval of the proposed action. The environmental documentation is available in the Executive Secretary's Office for review (i.e., Draft and Final EIR, Findings, SOC, and MMRP).

The CEQA determination is: Review and consider information provided in the 2003 certified Final EIR, Findings, SOC, and MMRP and adopt the Lead Agency's Findings and SOC related to the proposed action.

*(3) Garvey Reservoir Hypochlorite Feed System Project and (9) San Diego Canal Sodium Bisulfite Tank*

The proposed actions are categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed actions involve the funding, design, and minor alterations, reconstruction or replacement of existing public facilities, along with the construction of minor appurtenant structures with negligible or no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed actions qualify under Class 1, Class 2, and Class 3 Categorical Exemptions (Sections 15301, 15302, and 15303 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed actions qualify under three Categorical Exemptions (Class 1, Section 15301; Class 2, Section 15302; and Class 3, Section 15303 of the State CEQA Guidelines).

*(4) Foothill Feeder Cathodic Protection and (11) Discharge Elimination Project*

The proposed actions are categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed actions involve the funding, design, and installation of equipment within existing public facilities; the construction of minor appurtenant structures; along with minor modifications in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees, with negligible or no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed actions qualify under Class 1, Class 3, and Class 4 Categorical Exemptions (Sections 15301, 15303, and 15304 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed actions qualify under three Categorical Exemptions (Class 1, Section 15301; Class 3, Section 15303; and Class 4, Section 15304 of the State CEQA Guidelines).

*(5) Electrical Current Drain Stations Project*

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The activity involves the funding, design, minor alterations and replacement of existing public facilities, along with minor modifications in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees, with negligible or no expansion of use and no possibility of significantly impacting the physical environment. Accordingly, the proposed action qualifies under Class 1, Class 2, and Class 4 Categorical Exemptions (Sections 15301, 15302, and 15304 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed action qualifies under three Categorical Exemptions (Class 1, Section 15301; Class 2, Section 15302; and Class 4, Section 15304 of the State CEQA Guidelines).

*(7) Casa Loma and San Diego Canals Lining Study, (8) San Diego Canal East and West Bypass Screening Study, and (10) Upper Feeder Air Entrainment Study*

The proposed actions are categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed actions consist of basic data collection and resource evaluation activities, which do not result in a serious or major disturbance to an environmental resource. This may be strictly for information gathering purposes, or as part of a study leading to an action, which a public agency has not yet approved, adopted, or

funded. Accordingly, the proposed actions qualify as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed actions qualify under a Categorical Exemption (Class 6, Section 15306 of the State CEQA Guidelines).

*(12) Santiago Lateral Valve Replacement*

The project was previously determined to be categorically exempt by the Board under the provisions of CEQA and State CEQA Guidelines on September 10, 2002. The maintenance activity was found to be exempt under Class 1, Section 15301 of the State CEQA Guidelines. A Notice of Exemption (NOE) was filed on the project at that time and the statute of limitations has ended. With the current board action, there is no substantial change proposed to the project since the original NOE was filed. Hence, the previous environmental documentation in conjunction with the project fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act with regards to the proposed action.

The CEQA determination is: Determine that the proposed action has been previously addressed in the 2002 NOE (Class 1, Section 15301 of the State CEQA Guidelines) and that no further environmental analysis or documentation is required.

CEQA determination for Option #2:

None required

## **Board Options/Fiscal Impacts**

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### **Option #1**

Adopt the CEQA determination for all thirteen projects and

- a. Appropriate \$3.713 million;
- b. Award a competitively bid contract to Fibrwrap Construction, Inc. for \$316,000 for the San Diego Pipeline No. 4 and Auld Valley Pipeline Repairs;
- c. Award a competitively bid contract to Nissho Iwai American Corp. for \$253,240 for the Santiago Lateral Valve Replacement; and
- d. Authorize thirteen Conveyance and Distribution System Rehabilitation Program projects as described in this letter:
  - Perform design of the replacement of turbine runners at the Foothill Hydroelectric Plant
  - Perform design, authorize an agreement with IRWD, and perform construction inspection of the East Orange County Feeder No. 2 pressure relief facility
  - Perform design and construction to automate the sodium hypochlorite feed system at Garvey Reservoir
  - Perform design and construction of a cathodic protection system on the Foothill Feeder
  - Perform design, construction, and construction inspection of electrical current drain stations along the Second Lower and Sepulveda Feeders
  - Purchase equipment and install upgraded cathodic protection rectifiers
  - Perform studies to determine repair methods for repair of the Casa Loma and San Diego Canals
  - Perform studies to determine the viability of renovating the east and west screening structures on the San Diego Canal
  - Perform design, equipment procurement and installation to replace leaking sodium bisulfite tank
  - Investigate methods to eliminate entrained air in the Upper Feeder
  - Perform design and construction to eliminate water discharges into local storm drains at five hydroelectric plants
  - Perform equipment procurement and installation to replace leaking Santiago Lateral valves
  - Perform construction inspection of repair to the San Diego Pipeline No. 4 and Auld Valley Pipeline

**Fiscal Impact:** \$3.109 million of budgeted and \$604,000 of non-budgeted CIP funds under Appropriation 15377. Upon approval of this recommendation, the fiscal year 2003/04 CIP expenditure plan will be adjusted to reflect the new work.

**Option #2**

Take no action at this time regarding repairs to the conveyance and distribution system under this program. The existing conditions will continue to be monitored, and repairs will be made when problems occur.

**Fiscal Impact:** None

**Staff Recommendation**

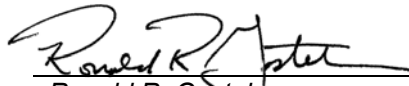
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Option #1

  
\_\_\_\_\_  
Roy L. Wolfe  
Manager, Corporate Resources

10/28/2003

*Date*

  
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Ronald R. Gastelum  
Chief Executive Officer

10/28/2003

*Date***Attachment 1 – Detailed Report****Attachment 2 – Abstracts of Bids****Attachment 3 – Financial Statement for Conveyance and Distribution Rehabilitation Program**

BLA #1471

## **Detailed Report**

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### ***Purpose/Background***

In 2001 and 2002, Metropolitan's Board authorized funding for 14 projects under the Conveyance and Distribution System Rehabilitation Program. Metropolitan's distribution system is comprised of hundreds of miles of pipelines, as well as reservoirs, pressure control structures, flow meters, sectionalizing valves, and hydroelectric power plants. As part of the rehabilitation program, staff is conducting reconnaissance surveys of Metropolitan's entire conveyance, treatment and distribution system. The surveys are ongoing and are intended to be completed by early 2005. To date, staff has identified numerous elements of the distribution system in need of repair, refurbishment or replacement, and are recommending that 12 new projects proceed at this time.

### ***Project Description***

The new projects are: (1) the Foothill Hydroelectric Runner Replacement Project; (2) the San Joaquin Pressure Relief Structure for the East Orange County Feeder No. 2; (3) the Garvey Reservoir Sodium Hypochlorite Feed System Project, (4) the Foothill Feeder Cathodic Protection Project; (5) the Electrical Current Drain Station Project; (6) The Cathodic Protection Rectifiers Upgrade Project; (7) the San Diego Canal Sodium Bisulfite Tank Project; (8) The Casa Loma and San Diego Canals Lining Study; (9) the San Diego Canal East and West Bypass Screening Study; (10) the Upper Feeder Air Entrainment Study; (11) the Discharge Elimination Project; and (13) the San Diego Pipeline No. 4 and Auld Valley Pipeline Carbon Fiber Repairs Project. For project (12), the Santiago Lateral Valve Replacement Project, this action awards a procurement contract for butterfly valves. This project was previously authorized by the Board and funded in September 2002.

### **Foothill Hydroelectric Runner Replacement (\$95,000)**

The Foothill Hydroelectric Plant, which is located downstream of Castaic Reservoir, generates electricity and revenues for Metropolitan while reducing water pressure in the Foothill Feeder. The two turbine runners of the hydroelectric plant, installed in 1980, have suffered several cracks over the past thirteen years. Metropolitan personnel periodically inspect the runners and repair the cracks as they are detected. Although repairs could continue to extend the life of the runners, it would be less expensive to replace the runners. New runners will also increase the plant's reliability and reduce operating costs.

In this phase, staff will prepare design documents and equipment specifications to purchase the necessary equipment. Staff will return to the Board at a later date to authorize funding for purchase of the equipment and for installation.

### ***Actions and Milestones***

December 2003 – Complete design

March 2004 –Board authorization and funding for procurement and construction

### **San Joaquin Pressure Relief Structure for the East Orange County Feeder No. 2 (\$1,016,000)**

Metropolitan's East Orange County Feeder No. 2 (EOCF No. 2) is a 54-inch diameter pipeline that previously delivered treated water to the San Joaquin Reservoir (SJR), which served as a pressure relief facility. Conversion of the SJR to a reclaimed water reservoir by Irvine Ranch Water District (IRWD) requires that the EOCF No. 2 inlet into the reservoir be modified. In order to meet Department of Health Services standards for prevention of cross-contamination of treated and reclaimed water, the existing inlet needs to be converted into an air-gap structure.

Metropolitan is finalizing an agreement with IRWD to permit Metropolitan's use of the San Joaquin Reservoir as a pressure relief facility. This action provides funds for IRWD's construction of an air gap structure, and for Metropolitan's design, construction inspection and support. IRWD will transfer ownership to Metropolitan of the

existing 54-inch pipeline, which connects the EOCF No. 2 to the reservoir, plus the appurtenant facilities, air gap structure, and associated rights-of-way.

*Actions and Milestones*

February 2005 – Construction of air gap structure completed

**Garvey Reservoir Hypochlorite Feed System (\$218,000)**

The existing sodium hypochlorite feed system at Garvey Reservoir is cumbersome to operate, because it requires manipulation both from the Eagle Rock Control Center (ECC) and by local staff at Garvey Reservoir. The hypochlorite system feeds sodium hypochlorite at the reservoir effluent pipeline so that chloramine residual levels are maintained. Under the current operating procedure, Garvey Reservoir staff need to coordinate flows and pump operation with the ECC to deliver the appropriate levels of sodium hypochlorite into the system. This procedure is inefficient and increases the possibility of operator error.

It is recommended that the sodium hypochlorite feed system be automated by adding position indicators to valves, installing in-line ammonia analyzers, and by revising the chemical feed control logic. In this phase, Metropolitan forces will procure and install the equipment required for the modifications.

*Actions and Milestones*

June 2004 – Purchase equipment

October 2004 – Metropolitan forces complete the modifications

**Cathodic Protection of the Foothill Feeder (\$96,000)**

The existing cathodic protection system on the Foothill Feeder at Lake Castaic was installed under a 1969 agreement with the Department of Water Resources (DWR) to provide protection to DWR structures in lieu of installing insulating couplings to electrically isolate those structures. Recent testing by Metropolitan staff indicates that the existing anode well is not providing adequate protection to the DWR structures and may be detrimental to the Foothill Feeder. This project would install new shallow anode wells near DWR piping to provide protection in accordance with the agreement.

In this project, drawings and an encroachment permit will be forwarded to DWR for approval and new anode wells will be installed.

*Actions and Milestones*

April 2004 – Drawings and encroachment permit approved

July 2004 – Metropolitan forces complete the construction

**Electrical Current Drain Station Installations (\$427,000)**

The Second Lower Feeder and Sepulveda Feeder are experiencing a significant amount of stray current interference. Interference results from direct current being impressed onto a buried structure from an outside source, usually another operator's cathodic protection system. Interference mitigation is extremely important since direct current discharge can consume significant amounts of metal in one year. Left uncontrolled, direct current discharges will result in pipeline failure. Installation of stray drain current stations at six locations will allow the damaging current to discharge through sacrificial anodes.

In this project, design drawings will be prepared and advertised for bids. It is expected that a construction contract will be awarded under the Chief Executive Officer's authority. Metropolitan staff will perform construction inspection and support.

*Actions and Milestones*

March 2004 – Complete contract drawings

August 2004 – Construction completed by contractor

**Upgrade Cathodic Protection Rectifiers (\$419,000)**

Metropolitan's cathodic protection rectifiers are manually monitored each month to ensure that they are operating effectively and controlling corrosion on their associated pipelines. Annual tests are also performed which require that the rectifiers on a pipeline be synchronously cycled on and off. In the past few years, the corrosion control industry has developed equipment to simplify and automate these tasks. This rectifier equipment provides a cost-effective way to increase the reliability of the cathodic protection systems and increase staff efficiency.

In this project, staff will purchase and install new rectifiers at approximately 100 locations throughout Metropolitan's pipelines.

*Actions and Milestones*

January 2004 – Purchase necessary equipment

January 2005 – Metropolitan forces complete the installation

**Casa Loma and San Diego Canals Lining Study (\$114,000)**

In October 2002, as part of the Colorado River Aqueduct inspection, Metropolitan staff inspected the San Diego and Casa Loma Canals to document damaged areas along the concrete canal lining. The inspection staff identified abnormalities in the concrete liner such as exposed reinforcing steel, spalled concrete, separation cracks, differential settlement, moist areas, and stress-relief cracks.

In this phase, staff will determine the type and magnitude of repairs, prioritize the work, perform preliminary design, and develop a cost estimate for future project phases.

*Actions and Milestones*

March 2004 – Perform inspection of canal

August 2004 – Complete preliminary design

**San Diego Canal East and West Bypass Screening Study (\$98,000)**

The San Diego Canal ends at the east and west bypass screening structures near Lake Skinner. Deliveries can be made through the screening structures to either or both of the two Lake Skinner Bypass pipelines. Water that does not flow through the screening structures continues along the Auld Valley Canal into Lake Skinner. These structures have electrically powered revolving screens which are designed to remove plant growth from the water prior to its entering the bypass pipelines. The screens are currently inoperable and create an area of stagnation that encourages algae growth and reduces the amount of water that can be delivered through the bypass pipelines.

In this phase, a study will be completed to determine if the screening structures should be renovated, removed or replaced. This study will include an assessment of the bypass pipeline's role in delivery of Lake Skinner water, cost estimates, and schedules for all options.

*Actions and Milestones*

June 2004 – Complete study



**San Diego Canal Sodium Bisulfite Tank (\$157,000)**

A tank filled with sodium bisulfite is located on the San Diego Canal as it empties into Lake Skinner. Metropolitan staff manually discharge sodium bisulfite into the canal to remove chlorine from the canal water so that it will not harm wildlife in the lake. The chlorine is added upstream of Lake Skinner to prevent algae growth on the canal that can limit flows. The existing tank is old, dilapidated, and is currently leaking into its secondary containment.

In this project, two tanks will be purchased and installed by Metropolitan forces. The purchase of two tanks will allow staff to pay a cheaper bulk rate for the sodium bisulfite and provide redundancy to the system.

*Actions and Milestones*

January 2004 – Purchase tanks and appurtenant equipment

June 2004 – Metropolitan forces complete the installation

**Upper Feeder Air Entrainment Study (\$85,000)**

The Weymouth filtration plant encounters a significant increase in air entrainment when Upper Feeder flows range between 450 cfs and 600 cfs. Air entrainment results when water turbulently cascades in the Upper Feeder between Lake Mathews and the Weymouth filtration plant. As the water transitions from a pressurized pipeline to an open atmospheric condition at the treatment plant, some of the entrained air combines with the ferric chloride chemical floc causing it to float, and creating a significant foam build-up in the treatment basins. Ultimately, the entrained air results in reduced plant capacity as well as increased filter effluent turbidities, and thus impacts both water quality and plant reliability.

In this phase, a study will be conducted to determine options to reduce the amount of entrained air. This study will include flow, pressure and entrained air tests of the Upper Feeder.

*Actions and Milestones*

Spring 2004 – Complete flow and field tests

July 2004 – Complete study

**Power Plant Discharge Elimination (\$384,000)**

Current operation of the Foothill, Gregg Avenue, Rio Hondo and Venice Power Plants involves the use of a cooling water stream to prevent overheating of the turbine shaft seals. This water is then discharged into local storm drains, which require permits from the Regional Water Control Board. Increasing regulations have mandated tighter controls and more costly sampling and monitoring of the discharged water. By installing a water recycling system, Metropolitan will eliminate the need to discharge water and will be able to recycle the cooling water. Recycle systems have been previously installed effectively at Corona, Coyote Creek, Red Mountain and Temescal Power Plants.

In this project, staff will prepare the design and purchase equipment. Construction will be by Metropolitan forces.

*Actions and Milestones*

July 2004 – Complete design and purchase equipment

April 2006 – Metropolitan forces complete construction over two shutdown seasons

### **Santiago Lateral Valve Replacement**

In September 2002, Metropolitan's Board authorized and funded the development of specifications for the procurement and Metropolitan force installation of two valves on the Santiago Lateral. This action awards a competitively bid contract to Nissho Iwai American Corp. for \$253,240 for these valves. All work was previously authorized by the Board, and all funds appropriated, in September 2002. No additional funding is required.

Replacement of these valves will permit Metropolitan forces to safely shut down the Santiago Lateral for routine maintenance or in the event of an emergency. Due to excessive leakage of the existing valves of up to 1,000 gallons per minute, the feeder cannot currently be isolated completely from the system. In the event of a shutdown, the leakage water needs to be continuously pumped to allow personnel to access the pipeline.

Specifications No. 1475 was advertised on September 18, 2003. One bid was received, from Nissho Iwai American Corp., in the amount of \$253,240, which complies with the requirements of the specifications. The engineer's estimate was \$229,850. For this procurement, Metropolitan did not require Small Business Enterprise (SBE) participation.

#### *Actions and Milestones*

November 2003 – Award purchase requisition

November 2004 – Metropolitan forces install valves and complete project

### **San Diego Pipeline No. 4 and Auld Valley Pipeline Carbon Fiber Repairs (\$604,000)**

Remote field eddy current inspections performed in February 2002 on the San Diego Pipeline No. 4 and the Auld Valley Pipeline revealed three distressed pipe sections on the San Diego Pipeline No. 4 and one distressed pipe section on the Auld Valley Pipeline. These pipelines are scheduled to be shut down in a recently planned February 2004 Skinner Plant shutdown. Repair of the pipelines at this time will reduce the amount of future monitoring required for these pipelines and will combine multiple projects in one shutdown.

This action awards a competitively bid construction contract to Fibrwrap Construction, Inc. for \$316,000 and authorizes construction inspection and support activities. Metropolitan staff will perform construction inspection of this project. The cost of inspection and support as a percentage of the construction cost is approximately 15 percent. The Engineering Services goal for inspection of construction contracts of less than \$10 million is 12 to 15 percent.

Specifications No. 1486, San Diego Pipeline and Auld Valley Pipeline Repair, was advertised on September 25, 2003. The low bid from Fibrwrap Construction, Inc. of Duarte, in the amount of \$316,000, complies with the requirements of the specifications. The engineer's estimate was \$278,000. For this project, Metropolitan required Small Business Enterprise (SBE) participation of at least 20 percent of the total construction bid. Fibrwrap Construction, Inc. has met this requirement.

In this project phase, Metropolitan forces will perform final design and advertise for competitive bids. Because of the recent determination of the shutdown date for the Skinner filtration plant, this project was not included in the FY 2003/04 capital budget. Hence, this project will require the use of unbudgeted CIP funds. Upon approval, the FY 2003/04 CIP expenditure plan for this program will be adjusted to reflect this new project.

#### *Actions and Milestones*

December 2003 – Issue Notice to Proceed and begin construction

February 2004 – Complete construction

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received October 21, 2003, at 2:00 P.M.**

**Specifications No. 1471**

**San Diego Pipeline No. 4 and Auld Valley Pipeline Carbon Fiber Liner Repairs**

The project consists of applying layers of carbon fiber reinforcing to the interior surfaces of San Diego Pipeline No. 4 at three locations and the Auld Valley Pipeline at one location during a 4.5-day shutdown. San Diego Pipeline No. 4 and the Auld Valley Pipeline are both prestressed concrete cylinder pipe having an inside diameter of 99 inches and 97 inches, respectively.

**Engineer's Estimate: \$ 278,000**

<b>Bidder and Location</b>	<b>Total</b>	<b>SBE % Participation</b>	<b>Met SBE (20% Minimum)</b>
Fiberwrap Construction, Inc. Duarte, CA	\$316,000	100	Yes
Shaker Waterproofing, Inc. Montclair, CA	\$341,000	N/A	N/A

N/A – Not applicable

**The Metropolitan Water District of Southern California****Abstract of Bids Received October 14, 2003, at 2:00 P.M.****Specifications No. 1475****Santiago Lateral Valves**

The project consists of procurement of one 42-inch electric motor operated butterfly valve and one 48-inch electric motor operated butterfly valve. Valves are to be delivered to Metropolitan facilities for testing and installation by Metropolitan forces.

**Engineer's Estimate: \$ 229,850**

<b>Bidder and Location</b>	<b>Total</b>	<b>SBE % Participation</b>	<b>Met SBE</b>
Nissho Iwai American Corp., Los Angeles, CA	\$ 253,240	N/A	N/A

N/A – Not applicable

**Financial Statement for Distribution System Rehabilitation Program**

A breakdown of Board Action No. 5 for Approp. 15377 for twelve Capital Investment Plan projects, as part of the Distribution System Rehabilitation Program, is as follows:

	<b>Previous Board Action No. 4 (Mar. 2003)</b>	<b>Current Board Action No. 5 (Nov. 2003)</b>	<b>New Total Appropriated Amount</b>
Labor			
Studies and Investigations	484,000	386,000	870,000
Design and Specifications	1,276,500	286,000	1,562,500
Owner Costs (Program management)	1,370,500	283,000	1,653,500
Construction Inspection and Support	238,300	195,000	433,300
Water System Operations	4,407,000	571,000	4,978,000
Materials and Supplies	1,733,000	613,000	2,346,000
Incidental Expenses	702,000	80,000	782,000
Professional/Technical Services	402,000	0	402,000
Equipment Use	517,000	51,000	568,000
Contracts	3,287,400	790,000	4,077,400
Remaining Budget	1,660,000	485,000	2,145,000
<b>Total</b>	<b>\$ 16,077,700</b>	<b>\$ 3,713,000</b>	<b>\$ 19,790,700</b>

**Funding Request**

<b>Program Name:</b>	Distribution System Rehabilitation Program		
<b>Source of Funds:</b>	Construction Funds (Possibly General Obligation, Revenue Bonds, or Pay-As-You-Go Fund)		
<b>Appropriation No.:</b>	15377	<b>Board Action No.:</b>	5
<b>Requested Amount</b>	\$3,713,000	<b>Capital Program No.:</b>	15377-I
<b>Total Appropriated Amount:</b>	\$19,790,700	<b>Capital Program Page No.:</b>	E-35
<b>Total Program Estimate:</b>	\$21,127,000	<b>Program Goal:</b>	R-Reliability