

- **Board of Directors**
Engineering and Capital Programs Committee

September 11, 2007 Board Meeting

7-2

Subject

Appropriate \$588,000; and authorize seven rehabilitation projects within Metropolitan's distribution system (Approps. 15377 and 15441)

Description

The backbone of Metropolitan's conveyance and distribution system was initially constructed in the 1940s and has been in continuous service ever since. This system consists of approximately 800 miles of pipelines, 300 miles of aqueducts and canals, 16 hydroelectric plants, 45 pressure control structures, 5 water treatment plants and nearly 5,000 related structures. Metropolitan staff conducts regular maintenance of the system's structures, mechanical components, and electrical equipment. Although the conveyance and distribution system continues to perform reliably today, portions of the system are exhibiting signs of normal wear and tear, as may be expected from over 60 years of operation.

Seven rehabilitation projects are recommended to move forward at this time. The recommended projects will protect Metropolitan's assets, increase the reliability of service to our customers, and reduce the risk of costly emergency repairs. The seven projects are described in detail in [Attachment 1](#).

Construction and Final Design – 1 Project

Olinda Pressure Control Facility Pavement Repair (\$270,000) – This action authorizes final design and construction for repair of asphalt paving. Construction will be performed by a contractor following receipt of competitive bids. The contract is estimated to be approximately \$180,000, which is within the General Manager's delegated authority under Metropolitan's Administrative Code. The Federal Emergency Management Agency (FEMA) is expected to reimburse Metropolitan for a portion of the final design and rehabilitation of the asphalt pavement, which was damaged during the heavy rains of 2005.

Final Design – 3 Projects

The scope of work for these three projects includes field investigations, final design, environmental monitoring, acquisition of permits and all other activities in advance of award of a contract.

Temescal Power Plant Access Road Paving (\$94,000) – This action authorizes final design of an all-weather access road to the power plant. The total cost for this project is estimated to range from \$300,000 to \$350,000.

San Diego Canal East Bypass Screening Structures Rehabilitation (\$860,000) – This action authorizes field investigations and final design to rehabilitate the east screening structure on the canal. The total cost for this project is estimated to range from \$6.5 million to \$7.5 million.

Upper Feeder Cathodic Protection (\$144,000) – This action authorizes final design and permit acquisition for a cathodic protection system at four locations to protect the pipeline from corrosion. The total cost for this project is estimated to range from \$460,000 to \$500,000.

Preliminary Design – 3 Projects

San Diego Canal West Bypass Screening Structures Rehabilitation (\$270,000) – This action authorizes preliminary design and preparation of environmental documentation to rehabilitate the west screening structure on the canal. As part of this effort, a construction cost estimate will be developed for the work.

West Valley Feeder No. 2 Cathodic Protection (\$80,000) – This action authorizes preliminary design and preparation of environmental documentation for a cathodic protection system at 26 locations to protect the pipeline from corrosion.

Box Springs Feeder Repairs (\$336,000) – This action authorizes preliminary design and preparation of environmental documentation for repair of six “broken back” pipe segments. As part of this effort, a construction cost estimate will be developed for the work.

Summary

This action appropriates \$588,000 in budgeted funds and authorizes seven rehabilitation projects in Metropolitan’s distribution system. The total cost of the work authorized in this action is \$2,054,000. Four projects will use \$588,000 in new funds, while three projects will use \$1,466,000 of previously appropriated funds. These previously appropriated funds were authorized by the Board in February 2005 for repairs to the West Valley Feeder No.1. Costs for this project were subsequently reimbursed by the Los Angeles Department of Water and Power under terms of that feeder’s lease.

The \$2,054,000 in total cost includes: \$481,000 for preliminary design; \$679,500 for final design; \$180,000 for construction; \$672,500 for all other project support; and \$41,000 for remaining budget. Support activities include project management, permitting, preparation of environmental documentation and environmental monitoring, field investigations, and construction inspection. All preliminary design, final design and construction inspection will be performed by Metropolitan staff.

For the Temescal Power Plant Access Road Paving, San Diego Canal East Bypass Screening Structures Rehabilitation, and Upper Feeder Cathodic Protection projects, the cost of final design is approximately 11 percent of the estimated total construction cost for these projects. Engineering Services’ goal for design of projects with construction cost less than \$3 million is 9 to 15 percent.

Each of these projects has been evaluated and recommended by Metropolitan’s Capital Investment Plan Evaluation Team and funds have been included in the fiscal year 2007/08 capital budget. The total program estimate to complete all seven projects is \$23 million. See [Attachment 2](#) for the Financial Statement, and [Attachment 3](#) for a Location Map.

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations
Metropolitan Water District Administrative Code Section 8113: Construction Contract Award

California Environmental Quality Act (CEQA)

Olinda Pressure Control Facility Pavement Repair

CEQA determination for Options #1, #2 and #3:

The proposed action is 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 action qualifies 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 action qualifies under two Categorical Exemptions (Class 1, Section 15301 and Class 2, Section 15302 of the State CEQA Guidelines).

Temescal Power Plant Access Road Paving

CEQA determination for Option #1:

Pursuant to the provisions of CEQA, the State CEQA Guidelines, and the National Environmental Policy Act, the United States Fish and Wildlife Service and Riverside County Habitat Conservation Agency, acting as Lead Agencies, prepared and processed a Final Joint Environmental Impact Statement and Environmental Impact

Report (Final EIS/EIR) for Authorization for Incidental Take and Implementation of a Long-Term Habitat Conservation Plan (HCP) for the Stephens Kangaroo Rat (SKR) in Western Riverside County, California. The Final EIS/EIR evaluated the environmental impacts associated with implementation of a long-term HCP, which provides authorization for incidental take of SKR within the plan area and describes the conservation, mitigation, and monitoring measures which will be implemented. Metropolitan's activities necessary to operate and maintain its public facilities within the HCP area are among the actions evaluated and mitigated for in the Final EIS/EIR and associated HCP. The Final EIS/EIR was certified and the HCP was approved by the lead agencies on March 21, 1996. The lead agencies also approved the Findings of Fact (findings), Statement of Overriding Considerations (SOC), and Mitigation Monitoring and Reporting Program (MMRP). The current board action is solely based on authorization of final design for the Temescal Power Plant Access Road. No new impacts or mitigations were identified resulting from the proposed projects. Metropolitan certifies that it has reviewed and considered the information in the certified Final EIR/EIS and adopted the Lead Agency's findings, SOC, and MMRP prior to approval of these projects. Therefore, no further environmental analysis or documentation is required. The environmental documentation is available in the Board Executive Secretary's Office for review.

The CEQA determination is: Determine that the proposed action has been previously addressed in the certified 1996 Final EIS/EIR along with the adopted findings, SOC, and MMRP and that no further environmental analysis or documentation is required.

CEQA determination for Options #2 and #3:

None required

San Diego Canal East Bypass Screening Structures Rehabilitation

CEQA determination for Options #1 and #2:

Pursuant to the provisions of CEQA, the State CEQA Guidelines, and the National Environmental Policy Act, the United States Fish and Wildlife Service and Riverside County Habitat Conservation Agency, acting as Lead Agencies, prepared and processed a Final Joint Environmental Impact Statement and Environmental Impact Report (Final EIS/EIR) for Authorization for Incidental Take and Implementation of a Long-Term HCP for the SKR in Western Riverside County, California. The Final EIS/EIR evaluated the environmental impacts associated with implementation of a long-term HCP, which provides authorization for incidental take of SKR within the plan area and describes the conservation, mitigation, and monitoring measures which will be implemented. Metropolitan's activities necessary to operate and maintain its public facilities within the HCP area are among the actions evaluated and mitigated for in the Final EIS/EIR and associated HCP. The Final EIS/EIR was certified and the HCP was approved by the lead agencies on March 21, 1996. The lead agencies also approved the Findings of Fact (findings), Statement of Overriding Considerations (SOC), and MMRP. The current board action is solely based on authorization of final design for the San Diego Canal East Bypass Screening Structures Rehabilitation project. No new impacts or mitigations were identified resulting from the proposed projects. Metropolitan certifies that it has reviewed and considered the information in the certified Final EIR/EIS and adopted the Lead Agency's findings, SOC, and MMRP prior to approval of these projects. Therefore, no further environmental analysis or documentation is required. The environmental documentation is available in the Board Executive Secretary's Office for review.

The CEQA determination is: Determine that the proposed action has been previously addressed in the certified 1996 Final EIS/EIR along with the adopted findings, SOC, and MMRP and that no further environmental analysis or documentation is required.

CEQA determination for Option #3:

None required

Upper Feeder Cathodic Protection

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. In particular, the proposed action consists of the repair, maintenance, and operating of existing equipment and facilities with negligible or no expansion of use beyond that existing at the time of the lead agency's determination. In addition, it will not have a significant effect on the environment. Accordingly, this proposed action qualifies as a Class 1 Categorical Exemption (Section 15301 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed action qualifies under a Categorical Exemption (Class 1, Section 15301 of the State CEQA Guidelines).

CEQA determination for Options #2 and #3:

None required

San Diego Canal West Bypass Screening Structure Rehabilitation

CEQA determination for Options #1 and #2:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action consists 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 action qualifies as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

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

CEQA determination for Option #3:

None required

West Valley Feeder No. 2 Cathodic Protection

CEQA determination for Option #1:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action consists 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 action qualifies as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

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

CEQA determination for Options #2 and #3:

None required

Box Springs Feeder Repairs

CEQA determination for Options #1 and #2:

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed action consists 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 action qualifies as a Class 6 Categorical Exemption (Section 15306 of the State CEQA Guidelines).

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

CEQA determination for Option #3:

None required

Board Options

Option #1

Adopt the CEQA determinations and

- a. Appropriate \$588,000 in budgeted funds; and
- b. Authorize seven distribution system rehabilitation projects:
 - Final design and construction of pavement repair at Olinda Pressure Control Facility.
 - Final design of an access road to the Temescal Power Plant.
 - Final design to rehabilitate the east screening structure on the San Diego Canal.
 - Preliminary design to rehabilitate the west screening structure on the San Diego Canal.
 - Final design of a cathodic protection system for the Upper Feeder.
 - Preliminary design of a cathodic protection system for the West Valley Feeder No. 2.
 - Preliminary design for the repair of six pipe segments on the Box Springs Feeder.

Fiscal Impact: \$2,054,000 of budgeted funds; including \$588,000 of new funds under Approp. 15441 and \$1,466,000 of previously appropriated funds under Approp. 15377

Business Analysis: These projects will protect Metropolitan's assets, increase service reliability to member agencies, and reduce the risk of costly emergency repairs.

Option #2

Adopt the CEQA determinations and

- a. Appropriate \$270,000 in budgeted funds; and
- b. Authorize four distribution system rehabilitation projects:
 - Final design and construction of pavement repair at Olinda Pressure Control Facility.
 - Final design to rehabilitate the east screening structure on the San Diego Canal.
 - Preliminary design to rehabilitate the west screening structure on the San Diego Canal.
 - Preliminary design for the repair of six pipe segments on the Box Springs Feeder.
- c. Do not authorize three projects:
 - Final design of an access road to the Temescal Power Plant.
 - Final design of a cathodic protection system for the Upper Feeder.
 - Preliminary design of a cathodic protection system for the West Valley Feeder No. 2.

Fiscal Impact: \$1,736,000 of budgeted funds; including \$270,000 of new funds under Approp. 15441 and \$1,466,000 of previously appropriated funds under Approp. 15377

Business Analysis: Under this option, projects that result in an immediate improvement to water delivery reliability are recommended to move forward. The Olinda Pressure Control Facility project is recommended to move forward as much of the work is reimbursable from FEMA. For the remaining projects, staff will continue to monitor the facilities and incur increased maintenance costs. The Upper Feeder and West Valley Feeder No. 2 are over 70 and 30 years old, respectively, and deferral of the cathodic protection projects will result in increased risk of failure, which would result in higher repair costs. Temescal Power Plant Access road is impassable during rainy seasons and deferral of this project will result in limited operation and deferred maintenance of the power plant.

Option #3

Adopt the CEQA determinations and

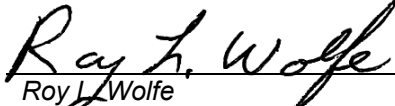
- a. Appropriate \$270,000 in budgeted funds;
- b. Authorize final design and construction of pavement repair at Olinda Pressure Control Facility; and
- c. Do not authorize the remaining six projects.

Fiscal Impact: \$270,000 of budgeted funds under Approp. 15441

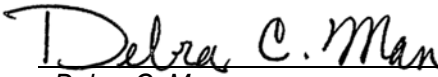
Business Analysis: Under this option, the Olinda Pressure Control Facility project is recommended to move forward since much of the work is reimbursable from FEMA. For the remaining projects, staff will continue to monitor the facilities and incur increased maintenance costs. The Upper Feeder is over 70 years old, while the San Diego Canal Bypass Screening Structures, Box Springs Feeder, and West Valley Feeder No. 2 range from 30-40 years old. Deferral of the repair projects and cathodic protection projects will result in increased risk of failure, which would result in higher repair costs. Temescal Power Plant Access road is impassable during rainy seasons and deferral of this project will result in limited operation and deferred maintenance of the power plant.

Staff Recommendation

Option #1


Roy L. Wolfe
Manager, Corporate Resources

8/22/2007
Date


Debra C. Man
for Jeffrey Kightlinger
General Manager

8/24/2007
Date

Attachment 1 – Detailed Report

Attachment 2 – Financial Statement

Attachment 3 – Location Map

BLA #5479

Detailed Report

Purpose/Background

Metropolitan initiated the Conveyance and Distribution System Rehabilitation Program in October 2001. The program's objective is to evaluate risks and vulnerabilities of Metropolitan facilities, and to identify cost-effective options to address those risks through rehabilitation, repair or replacement. The recommended repairs will protect Metropolitan's invested assets, increase reliability of service to our customers and reduce the risk of costly emergency repairs.

Staff recommends that seven distribution system rehabilitation projects proceed at this time. The projects are: (1) Olinda Pressure Control Facility Pavement Repair; (2) Temescal Power Plant Access Road Paving; (3) San Diego Canal East Bypass Screening Structure Rehabilitation; (4) Upper Feeder Cathodic Protection; (5) San Diego Canal West Bypass Screening Structure Rehabilitation; (6) West Valley Feeder No.2 Cathodic Protection; and (7) Box Springs Feeder Repair.

Olinda Pressure Control Facility Pavement Repair – Final Design and Construction (\$270,000)

The Olinda Pressure Control Facility regulates pressure on the Lower Feeder between the Santiago Control Tower and the Diemer Treatment Plant. The facility was constructed in the 1970s and is located in the city of Yorba Linda.

Heavy rains and storm runoff in the winter of 2005 damaged portions of the Olinda Pressure Control Facility's asphalt paving and access road. Storm runoff created voids underneath the pavement and caused the asphalt to buckle and separate from the subgrade. Staff recommends that approximately 12,000 square feet of the existing asphalt be removed and repaired. The subgrade will be excavated and replaced to a maximum depth of three feet, under approximately 7,500 square feet of severely damaged pavement. In addition, to improve drainage and direct flows away from the facility, staff recommends additional drainage features at the site. Upgraded drainage features include a concrete drain and cross gutter. The Federal Emergency Management Agency (FEMA) Public Assistance program will reimburse Metropolitan for final design and rehabilitation of the asphalt pavement. FEMA funding will expire on March 31, 2008, at which time the project will be reimbursed for all or portions thereof of the \$270,000, contingent upon completion of the project. Based on a grant-funded amount of \$210,000, Metropolitan's total funding commitment for the project is estimated to be \$60,000.

This action authorizes final design and construction for repair of asphalt paving at the Olinda Pressure Control Facility. Construction will be performed by a contractor following receipt of competitive bids, and Metropolitan staff will perform inspection of the contract. The contract will be awarded by the General Manager under his Administrative Code authority. The requested funds include \$180,000 for a construction contract, \$21,500 for final design, \$28,500 for construction inspection, and \$40,000 for all other staff support including FEMA coordination.

Actions and Milestones

October 2007 – Complete final design

December 2007 – Complete construction

Temescal Power Plant Access Road Paving – Final Design (\$94,000)

The Lower Feeder originates at Lake Mathews and extends 46 miles westerly to the city of South Gate, where it connects to the Middle Feeder. The Lower Feeder was constructed in the mid 1950s and delivers untreated water to the western portions of Riverside and San Bernardino Counties, the northern portion of Orange County, and the southern and western portions of Los Angeles County. The Temescal Power Plant generates electricity from excess pressure in the Lower Feeder. It is located west of Lake Mathews near the city of Corona.

The unpaved access road to the power plant is steep and becomes impassable during inclement weather. During the rainy season, the soil becomes saturated and vehicles have difficulty accessing the site for routine maintenance and operations. Staff recommends that approximately 1,700 linear feet of the existing dirt road be upgraded to provide an all-weather access road.

This action authorizes final design by Metropolitan staff for paving of an access road to the Temescal Power Plant. The requested funds include \$23,700 for final design, \$12,000 for remaining budget, and \$58,300 for all other staff support including field surveying, environmental monitoring, coordination with the Riverside County Transportation Commission, project management, and procurement of bids. The total cost for this project is estimated to range from \$300,000 to \$350,000.

Actions and Milestones

October 2007 – Complete final design

April 2008 – Complete construction

San Diego Canal East Bypass Screening Structure Rehabilitation – Final Design (\$860,000)
San Diego Canal West Bypass Screening Structure Rehabilitation – Preliminary Design (\$270,000)

The San Diego Canal East and West Bypass Screening Structures are located at the terminus of the San Diego Canal and are the starting points for water which bypasses Lake Skinner to downstream users. Each bypass screening structure is fitted with an electrically powered revolving screen extending across the channel, which dips into the channel to intercept and collect algae mats and other floating debris. The collected material is then discharged to a concrete drying pad, where it is allowed to dry. This system prevents algae mats and other debris from entering the treatment plant or member agency water systems via the bypass pipelines.

The screening equipment was installed in the 1960s and has reached the end of its useful life. The screens' rotating components are currently inoperable, so they function as stationary screens; material collects on the screens until the debris is manually removed. Clogged screens may reduce deliveries to downstream users. Flowrates may be increased by removing the screens; however, algae mats and other debris would then enter the pipelines. Due to the limited discharge capacity of the Lake Skinner outlet tower, the bypass pipelines will be used more frequently in the future to meet increasing water demands in San Diego and Riverside Counties. Staff recommends that the San Diego Canal east and west bypass screening systems be rehabilitated to protect downstream facilities and to convey full design flows through the Lake Skinner bypass pipelines.

This action authorizes final design to rehabilitate the San Diego Canal east bypass screening system, and preliminary design and preparation of environmental documentation to rehabilitate the San Diego Canal west bypass screening system. The schedule for the East Bypass Screening Structure is being accelerated to take advantage of a canal shutdown planned for April 2008, which coincides with planned repairs to the Colorado River Aqueduct. The East Bypass schedule coincides with increased raw water demands anticipated with the construction of a new treatment plant by the San Diego County Water Authority. The total cost for the East Bypass Screening Rehabilitation project is estimated to range from \$6.5 million to \$7.5 million. For the West Bypass Screening Rehabilitation project, a construction cost estimate will be developed under the scope of this work.

Actions and Milestones

March 2008 – Complete final design of the East Bypass Screening Structure rehabilitation and preliminary design of the West Bypass Screening Structure rehabilitation

December 2008 - Complete final design of the West Bypass Screening System rehabilitation

March 2009 – Complete rehabilitation of the East Bypass Screening Structure

January 2010 – Complete rehabilitation of the West Bypass Screening Structure

Upper Feeder Cathodic Protection – Final Design (\$144,000)

The Upper Feeder delivers untreated water from Lake Mathews to the Weymouth Treatment Plant, after which it provides treated water to the Eagle Rock Control Facility located in the city of Los Angeles. Constructed in 1936, the Upper Feeder serves the Three Valleys Municipal Water District, the cities of Pasadena and San Marino, and Foothill Municipal Water District.

A recent corrosion survey revealed that the pipeline may be experiencing corrosion damage along an approximately ten-mile stretch. The installation of an impressed current cathodic protection system will protect

the feeder from the current rate of corrosion and extend its life span. This project includes installation of approximately four 400-foot deep anode wells, rectifiers, and remote monitoring equipment spaced at approximately two-mile intervals along the pipeline.

This action authorizes final design of a cathodic protection system and acquisition of permits from local agencies for the Upper Feeder. Staff will return to the Board for award of a construction contract at a later date.

Actions and Milestones

April 2008 – Complete final design

June 2008 – Complete cathodic protection installation

Box Springs Feeder Repairs Phase II – Preliminary Design (\$336,000)

Metropolitan's Box Springs Feeder conveys State project water from the California Department of Water Resources' Santa Ana Valley Pipeline to Metropolitan's Mills treatment plant. Installed in 1975, the Box Springs Feeder is 96 inches in diameter and 2.26 miles in length. The Box Springs Feeder is a prestressed concrete cylinder pipeline (PCCP).

In 2005, electromagnetic inspections revealed sixteen 20-foot-long pipe sections with anomalous readings as to the integrity of the prestressing wires. The extent of damage, if any, at these locations could not be interpreted due to the presence of internal steel bands within the pipeline. The internal bands were installed in 1989 in an attempt to repair "broken back" cracks, which were discovered during a routine inspection. Circumferential cracking in "broken backs", which is caused by differential settlement of the pipeline at or near structures, compromises the structural integrity of the pipe section and exposes the pipe to accelerated rates of corrosion and eventual leakage.

In order to maintain reliable deliveries of source water to the Mills plant in the future, staff recommends that all 16 pipe sections be removed and replaced with welded steel pipe sections. The repairs are being executed in four phases. The first phase was completed in February 2007 and included repair of one pipe segment, which needed to be completed prior to construction of a commercial building. The second phase will repair six distressed pipe segments located in urban or commercial areas where a leak would have a greater impact to the surrounding area. The third phase will include pipe segments located in a park area with fewer liability concerns. Lastly, the fourth phase will repair pipe segments within the Mills plant.

This action authorizes preliminary design and preparation of environmental documentation for Phase 2 repairs of six PCCP segments located in the city of Riverside. The repair duration of all the pipe sections will be dependent on the length and frequency of pipeline shutdowns that can be accommodated by the downstream member agencies. Staff will return to the Board at a later date for authorization of final design.

Actions and Milestones

June 2008 – Complete Phase 2 preliminary design

October 2008 – Complete Phase 2 final design

January 2009 – Complete Phase 2 construction

West Valley Feeder No. 2 Cathodic Protection – Preliminary Design (\$80,000)

The West Valley Feeder No. 2 delivers treated water from the Jensen treatment plant to Ventura County, serving Las Virgenes Municipal Water District, Calleguas Municipal Water District, and the city of Los Angeles. Constructed in 1974, the feeder consists of six miles of 103-inch diameter steel pipe and approximately three miles of 96-inch diameter prestressed concrete cylinder pipe.

A corrosion survey completed in August 2005 indicated that the existing cathodic protection system on the steel pipe reach may be adversely affecting the adjacent PCCP reaches. Installing sacrificial anodes will provide effective corrosion protection to the steel portion of the pipeline and will protect the PCCP. This project includes installation of approximately 30 sacrificial anodes at several locations along the feeder to provide cathodic protection. An environmental assessment will be required due to the multiple installation sites.

This action authorizes preliminary design and preparation of environmental documentation for a cathodic protection system for West Valley Feeder No. 2. Staff will return to the Board for authorization of final design.

Actions and Milestones

June 2008 – Complete preliminary design

December 2008 – Complete cathodic protection installation

Financial Statement for Conveyance and Distribution System Rehabilitation Program

A breakdown of Board Action No. 22 for Appropriation No. 15377 for the San Diego Canal East & West Bypass Structures Screening Rehabilitation and Box Spring Feeder Repair projects is as follows:

	Previous Total Appropriated Amount (Mar. 2007)	Current Board Action No. 22 (Sept. 2007)	New Total Appropriated Amount
Labor			
Studies & Investigations	\$ 2,810,700	\$ 394,000	\$ 3,204,700
Final Design	2,581,920	591,000	3,172,920
Owners Costs (Program mgmt. permitting & environ. doc.)	3,434,550	276,000	3,710,550
Construction Inspection & Support	1,540,050	-	1,540,050
Metropolitan Force Construction	9,807,330	-	9,807,330
Materials and Supplies	4,545,075	-	4,545,075
Incidental Expenses	1,087,620	5,000	1,092,620
Professional/Technical Services	636,500	200,000	836,500
Equipment Use	759,350	-	759,350
Contracts	15,008,955	-	15,008,955
Remaining Budget	2,151,650	392,000	2,543,650
Unallocated Budget*	1,858,000	(1,858,000)	-
Total	\$ 46,221,700	\$ -	\$ 46,221,700

* Unallocated funds consists of previously appropriated funds for repairs of the West Valley Feeder No. 1. These funds were reimbursed by the Los Angeles Department of Water and Power under terms of the existing feeder lease.

Funding Request

Program Name:	Conveyance and Distribution System Rehabilitation Program		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15377	Board Action No.:	22
Requested Amount:	\$ 0	Capital Program No.:	15377-I
Total Appropriated Amount:	\$ \$46,221,700	Capital Program Page No.:	E-14
Total Program Estimate:	\$ 63,790,000	Program Goal:	R-Reliability

Financial Statement for Conveyance and Distribution System Rehabilitation Program Phase II

A breakdown of Board Action No. 4 for Appropriation No. 15441 for the Olinda Pressure Control Facility Pavement Repair, Temescal Power Plant Access Road Paving, Upper Feeder Cathodic Protection and West Valley Feeder No. 2 Cathodic Protection projects is as follows:

	Previous Total Appropriated Amount (May 2007)	Current Board Action No. 4 (Sept. 2007)	New Total Appropriated Amount
Labor			
Studies & Investigations	\$ 130,000	\$ 87,000	\$ 217,000
Final Design	134,000	88,500	222,500
Owners Costs (Program mgmt, permitting & environ. doc.)	228,500	163,000	391,500
Construction Inspection & Support	-	28,500	28,500
Metropolitan Force Construction	1,342,000	-	1,342,000
Materials and Supplies	157,500	-	157,500
Incidental Expenses	82,500	-	82,500
Professional/Technical Services	373,500	-	373,500
Equipment Use	68,000	-	68,000
Contracts	161,000	180,000	341,000
Remaining Budget	453,000	41,000	494,000
Total	\$ 3,130,000	\$ 588,000	\$ 3,718,000

Funding Request

Program Name:	Conveyance and Distribution System Rehabilitation Program Phase II		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15441	Board Action No.:	4
Requested Amount:	\$ 588,000	Capital Program No.:	16704-I
Total Appropriated Amount:	\$ 3,718,000	Capital Program Page No.:	E-15
Total Program Estimate:	\$ 19,200,000	Program Goal:	R-Reliability

