



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

2/8/2011 Board Meeting

8-4

Subject

Appropriate \$2.18 million; and authorize: (1) rehabilitation of the Weymouth washwater reclamation facilities; and (2) construction of the Weymouth north perimeter security wall (Approp. 15369)

Description

This action authorizes construction by Metropolitan forces to rehabilitate the washwater reclamation facilities at the F. E. Weymouth Water Treatment Plant, and construction by a contractor of a concrete block wall along the northern perimeter of the plant for enhanced security. The Weymouth washwater reclamation plant (WWRP), which is located near the plant's northern boundary, treats spent filter backwash water before it returns to the plant's inlet line and blends with incoming untreated water.

Timing and Urgency

The WWRP project will replace worn-out equipment and make modifications to support reliable Weymouth plant operation. This work will take advantage of a planned March 2011 plant shutdown. Construction of a concrete block wall along the north perimeter of the Weymouth plant will enhance security; reduce noise from plant operation and from planned construction activities, which complies with mitigation requirements contained within environmental documentation for the plant's improvement program; and will screen construction activities at Weymouth from the adjacent neighborhood as requested by the city of La Verne.

Both projects have been reviewed with Metropolitan's updated Capital Investment Plan (CIP) prioritization criteria. The washwater reclamation rehabilitation is categorized as an Infrastructure Reliability project and the security wall is categorized as a Stewardship project. Both projects are budgeted within Metropolitan's CIP for fiscal year 2010/11.

Background

The Weymouth plant was placed into service in 1941 with an initial capacity of 100 million gallons per day (mgd), and was expanded twice to its current capacity of 520 mgd. The Weymouth plant delivers a blend of waters from the Colorado River Aqueduct and State Water Project to Metropolitan's Central Pool portion of the distribution system.

The 22-mgd Weymouth WWRP commenced operation in 1991. It handles waste flows generated by the plant's treatment processes including used filter backwash water, pressate from the filter belt presses, and supernatant from the gravity thickeners. This water is then returned to the Weymouth plant's inlet. Solids in the used filter backwash water are both corrosive and abrasive to submerged parts in the washwater reclamation system. The reclamation plant equipment has reached the end of its service life, requiring frequent repairs. Equipment replacements and/or modifications are necessary to provide continued reliable operation.

In March 2010, Metropolitan's Board authorized final design to rehabilitate the existing reclamation facilities. This project will address: (1) significant corrosion of backwash sump pumps, WWRP flocculator equipment, and sedimentation basin chain-and-flight equipment; and (2) an operational deficiency in the pipeline that receives decant from the gravity thickeners and coal separator, and receives pressate from the belt presses. This decant

line currently drains only to the Filter Building No. 2 sump, which requires that the thickeners and belt presses be shut down in order to clean the sump.

Final design has been completed, and staff recommends proceeding with equipment procurement and construction at this time.

During previous site planning efforts, staff identified the need to enhance security, screen the Weymouth plant, and continue positive relations with the city of La Verne and the local neighborhood by reducing offsite noise impacts from ongoing plant operations and from scheduled construction projects. The addition of a security wall on the northern boundary of the plant will address these issues. Since the WWRP is located within approximately 150 feet from that boundary, staff recommends proceeding with construction of the wall at this time.

Weymouth Washwater Reclamation Rehabilitation – Procurement and Construction (\$1,900,000)

This project will replace worn-out equipment in the washwater reclamation facilities to support reliable treatment plant operation. The project will include procurement of WWRP equipment and the following construction activities:

- Extension of decant piping to the Filter Building No. 1 backwash sump. This modification will improve reliability by allowing the reclamation facilities to continue to operate when the Filter Building No. 2 backwash sump needs to be shut down for cleaning. Installation of the 12-inch-diameter decant line will take place during the upcoming Weymouth plant shutdown scheduled for March 2011.
- Replacement of WWRP flocculation basin drive units, flocculation paddle arms, bull gears, drive chains, drive gears, gearboxes, gear shafts and pillow block bearings with corrosion-resistant materials; and replacement of the chain-and-flight equipment.
- Replacement of the coal removal system with two hydro-gritters, which will more effectively separate the coal and sand from the water, thereby reducing abrasive corrosion throughout the washwater reclamation facilities.

Use of Metropolitan forces to perform the construction will provide flexibility in scheduling the work while keeping the WWRP in continuous service, and will avoid significant contract delays and change orders originating from the start-stop nature of the work, vs. the alternate use of a construction contract.

This action appropriates \$1.9 million and authorizes equipment procurement and construction of the Weymouth WWRP rehabilitation project. The appropriated funds include \$900,000 for materials, supplies, and equipment; and \$715,600 for Metropolitan force activities, which includes construction of the rehabilitation, installation of equipment, and shutdown activities. The total cost of construction is \$1,615,600. The appropriated funds also include \$114,400 for project management, construction monitoring to ensure compliance with environmental mitigation monitoring measures, technical support during construction, and preparation of record drawings; and \$170,000 for remaining budget.

The final element of this project includes replacement of three significantly corroded backwash sump pumps with three new pumps. The new pumps will have upgraded materials to reduce erosion and corrosion, and will have variable speed capability to allow more stable flow control. Staff will return to the Board in mid-2011 for award of a procurement contract for the three backwash sump pumps. Overall project completion is scheduled for late 2012.

Weymouth North Perimeter Security Wall – Construction (\$280,000)

Along the Weymouth plant's northern boundary, a 6-foot-tall chain link fence separates the plant from an adjacent mobile home park. Recently, plant staff has received complaints from the mobile home park residents related to noise from the rehabilitation of the plant filters, which are located approximately 400 feet from the northern boundary. The Weymouth WWRP, which is discussed above, is located approximately 150 feet from the northern boundary. Staff recommends that a concrete block security wall be constructed in conjunction with the WWRP rehabilitation project, in order to enhance plant security and minimize impacts of noise, light, and dust on the neighbors from construction of the WWRP rehabilitation, and its long-term operation. The six-foot height of

the wall will comply with city of La Verne building codes. Both the local neighborhood and the city of La Verne support this project. The duration of construction is approximately four months.

Specifications No. 1682 for the Weymouth North Perimeter Security Wall was advertised for bids on December 9, 2010. The contract includes removal of existing chain link fencing between the mobile home park and the Weymouth plant, and construction of approximately 970 feet of six-foot-tall concrete block wall topped by barbed wire along the northern perimeter of the plant. As shown in [Attachment 2](#), 14 bids were received on January 11, 2011. The low bid from Granstrom Masonry, Inc., in the amount of \$219,000, complies with the requirements of the specifications. The 13 other bids ranged from \$224,000 to \$413,700. The engineer's estimate was \$300,000. For this contract, Metropolitan has established a Small Business Enterprise (SBE) participation level of at least 20 percent of the total bid amount. Granstrom Masonry Inc. is a registered SBE firm, and thus achieves 100 percent participation. This specification was previously advertised for bids on September 10, 2010; all bids were rejected on October 18, 2010.

This action appropriates \$280,000 to construct the Weymouth North Perimeter Security Wall. The construction contract is planned to be awarded under the General Manager's Administrative Code authority. The requested funds include \$219,000 for the construction contract; \$28,000 for construction inspection; \$10,000 for submittals review by Metropolitan staff and preparation of record drawings; and \$23,000 for project management, environmental monitoring, and city permitting.

Metropolitan staff will perform inspection of the construction contract. For this effort, the anticipated cost of inspection and support is approximately 12.5 percent of the total construction cost. Engineering Services' goal for inspection of projects with construction cost less than \$3 million is 9 to 15 percent.

Summary

This action appropriates \$2.18 million; authorizes Metropolitan force construction to rehabilitate the Weymouth wastewater reclamation facilities; and authorizes construction of the Weymouth North Perimeter Security Wall. This work will be performed under the Weymouth Improvements Program (Appropriation No. 15369), which was initiated in fiscal year 2001/02. Past work completed under Appropriation No. 15369 includes the new Solids Handling Facility; new Operations and Maintenance Building; rehabilitation of Basins Nos. 3 and 4; replacement of Surface Wash Header Pipelines in Filter Building No. 1; Finished Water Reservoir roof recoating; and West and East Wastewater Tanks recoating. The total appropriated amount for this program will increase from \$157,448,000 to \$159,628,000.

This work has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds have been included in the fiscal year 2010/11 capital budget. See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, and [Attachment 3](#) for the Location Map.

This project is consistent with Metropolitan's goals for sustainability by enhancing the reliability of existing treatment facilities in order to maintain reliable water deliveries in the future.

Project Milestones

July 2011 – Completion of construction of the Weymouth North Perimeter Security Wall

December 2012 – Completion of construction of the Weymouth wastewater reclamation rehabilitation

Policy

Metropolitan Water District Administrative Code Section 5108: Appropriations

Metropolitan Water District Administrative Code Section 8121: General Authority of the General Manager to Enter Contracts

California Environmental Quality Act (CEQA)

CEQA determinations for Option #1:

Weymouth Washwater Reclamation Rehabilitation – Procurement and Construction

The environmental effects of the Weymouth Washwater Reclamation Rehabilitation Project were evaluated in the F. E. Weymouth Filtration Plant Ozonation Facilities and Site Improvements Program Final Environmental Impact Report (Final EIR), which was certified by the Board on April 12, 2005. The Board also approved the Findings of Fact (Findings), the Statement of Overriding Considerations, the Mitigation Monitoring and Reporting Program (MMRP), and the project itself. The current board actions are solely based on authorization of procurement and construction and not on any changes to the approved project itself. Hence, the previous environmental documentation acted on by the Board in conjunction with the proposed action fully complies with CEQA and the State CEQA Guidelines. Accordingly, no further CEQA documentation is necessary for the Board to act on the proposed action.

The CEQA determination is: Determine that the proposed action has been previously addressed in the certified 2005 Final EIR, findings, SOC, and MMRP and that no further environmental analysis or documentation is required.

Weymouth North Perimeter Security Wall – Construction

The proposed project was determined to be categorically exempt pursuant to the provisions of CEQA and State CEQA Guidelines, under the General Manager's delegated authority. The project was found to be exempt under Class 1, Section 15301; Class 2, Section 15302; Class 3, Section 15303, and Class 4, Section 15304 of the State CEQA Guidelines on January 5, 2010. 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 original project since the 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 2010 NOE (Classes 1, 2, 3, and 4, Sections 15301, 15302, 15303, and 15304 of the State CEQA Guidelines) and that no further environmental analysis or documentation is required.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determinations and

- a. Appropriate \$2.18 million;
- b. Authorize Metropolitan force construction to rehabilitate the Weymouth washwater reclamation facilities; and
- c. Authorize construction of the Weymouth North Perimeter Security Wall.

Fiscal Impact: \$2.18 million in budgeted funds under Approp. 15369

Business Analysis: This option will enhance reliability and security of the Weymouth plant, and strengthen Metropolitan's relationship with the city of La Verne and the local neighborhood.

Option #2

Do not proceed with the projects at this time.

Fiscal Impact: None

Business Analysis: This option would forego an opportunity to enhance reliability and security of the Weymouth plant, and to take advantage of a planned shutdown. If the WWRP Rehabilitation is not constructed at this time, the work will be deferred until the next scheduled Weymouth plant shutdown in winter 2014/15, or unless an urgent repair becomes necessary. If the North Perimeter Security Wall is not

built, Metropolitan will not be able to screen operational and construction activities at Weymouth from the adjacent neighborhood, as requested by the city of La Verne.

Staff Recommendation

Option #1



Roy L. Wolfe
Manager, Corporate Resources

1/18/2011
Date



Jeffrey Kightlinger
General Manager

1/26/2011
Date

Attachment 1 – Financial Statement

Attachment 2 – Abstract of Bids

Attachment 3 – Location Map

Ref# cr12608724

Financial Statement for Weymouth Improvements Program

A breakdown of Board Action No. 34 for the Weymouth Washwater Reclamation Rehabilitation project* and the Weymouth North Perimeter Security Wall project** is as follows:

	Previous Total Appropriated Amount (May 2010)	Current Board Action No. 34 (Feb. 2011)	New Total Appropriated Amount
Labor			
Studies & Investigations	\$ 1,999,477	\$ -	\$ 1,999,477
Final Design	7,265,641	-	7,265,641
Owner Costs (Project mgmt, permitting, envir. monitoring)	6,898,524	95,400	6,993,924
Submittals Review, O&M Manuals & Record Drwgs	2,670,723	52,000	2,722,723
Construction Inspection & Support	11,470,704	28,000	11,498,704
Metropolitan Force Construction	6,200,680	705,600	6,906,280
Materials and Supplies	2,525,848	900,000	3,425,848
Incidental Expenses	355,400	10,000	365,400
Professional/Technical Services	12,401,032	-	12,401,032
Contracts	98,465,945 ***	219,000	98,684,945
Remaining Budget	7,194,026 ***	170,000	7,364,026
Total	\$ 157,448,000	\$ 2,180,000	\$ 159,628,000

Funding Request

Program Name:	Weymouth Improvements Program		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment, or General Funds		
Appropriation No.:	15369	Board Action No.:	34
Requested Amount:	\$ 2,180,000	Capital Program No.:	15369-I
Total Appropriated Amount:	\$ 159,628,000	Capital Program Page No.:	311
Total Program Estimate:	\$ 272,390,000	Program Goal:	I-Infrastructure & Reliability

* The total amount expended to date on the Weymouth Washwater Reclamation Rehabilitation project is approximately \$480,000.

** This action is the initial appropriation for the Weymouth North Perimeter Security Wall project.

*** Includes previous reallocation of \$1,093,890 from Remaining Budget to Contracts for additional SC Edison costs for the incoming electrical service.

**The Metropolitan Water District of Southern California
Abstract of Bids Received on January 11, 2011 at 2:00 P.M.**

**Specifications No. 1682
Weymouth North Perimeter Security Wall**

The project consists of removal of existing chain link fencing, and construction of approximately 970 feet of six-foot high concrete block wall topped by barbed wire along the northern perimeter of the plant.

Engineer's Estimate: \$300,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE*
Granstrom Masonry, Inc., Torrance, CA	\$ 219,000	\$ 219,000	100	YES
G Coast Construction, Inc., Encino, CA	\$ 224,000	N/A	N/A	N/A
Parsam Construction, Inc., Glendale, CA	\$ 240,450	N/A	N/A	N/A
Interlog Hym Engineering, Brea, CA	\$ 243,500	N/A	N/A	N/A
Griffith Company, Santa Fe Springs, CA	\$ 245,862	N/A	N/A	N/A
Unique Performance Construction, Inc., Costa Mesa, CA	\$ 247,000	N/A	N/A	N/A
Titanium Construction Group, Inc., Norwalk, CA	\$ 272,670	N/A	N/A	N/A
El Camino Construction & Engineering Corp., Long Beach, CA	\$ 273,850	N/A	N/A	N/A
Better Builders Construction, Inc. dba Nevada Better Builders Construction, Inc., Long Beach, CA	\$ 285,000	N/A	N/A	N/A
Industrial Coating & Restoration, Oceanside, CA	\$ 288,000	N/A	N/A	N/A
Coleman Construction, Inc., Los Angeles, CA	\$ 288,493	N/A	N/A	N/A
Moment Construction Co., Inc., Los Angeles, CA	\$ 297,000	N/A	N/A	N/A
Velarde Concrete Construction, Inc., San Fernando, CA	\$ 321,864	N/A	N/A	N/A
Sea West Enterprises, Inc., San Dimas, CA	\$ 413,700	N/A	N/A	N/A

*SBE (Small Business Enterprise) participation set at 20 percent

N/A – not applicable

F.E. Weymouth Water Treatment Plant

