



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

2/13/2018 Board Meeting

8-2

Subject

Adopt CEQA determination and appropriate \$3.8 million; and award \$2,591,576 contract to Canyon Springs Enterprises (dba RSH Construction) for seismic upgrades to the west washwater tank at the F. E. Weymouth Water Treatment Plant (Appropriation No. 15369)

Executive Summary

This action awards a construction contract to strengthen and refurbish the west washwater tank at the F. E. Weymouth Water Treatment Plant. This tank stores water used to backwash filters, which is a critical step in the plant's filtration process.

Timing and Urgency

Metropolitan has an ongoing program to evaluate the seismic stability of its facilities in order to maintain reliable operation and to meet current seismic design practices and code requirements. While Metropolitan facilities have always been designed to meet up-to-date codes that were in place at the time of their construction, industry practices and code requirements are periodically updated, particularly following a major earthquake.

Structural assessments of the two washwater tanks at the Weymouth plant concluded that they should be upgraded to reduce the risk of damage from a major seismic event. In addition, field inspections identified that the tanks' interior coatings were deteriorating. The upgrades to the east washwater tank were completed in 2016. Staff recommends proceeding with upgrades to the west tank at this time.

This project has been reviewed with Metropolitan's Capital Investment Plan (CIP) prioritization criteria and is included in the Treatment Plant Reliability Program. Funds for this action are available within Metropolitan's capital expenditure plan for fiscal year 2017/18.

Details

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 plant delivers a blend of waters from the Colorado River Aqueduct and the State Water Project to Metropolitan's Central Pool portion of the distribution system, and to an exclusive service area. The Weymouth plant is located in the city of La Verne.

The La Verne site is located approximately 1.5 miles from the Sierra Madre-Cucamonga Fault, which is capable of generating a 7.0 magnitude earthquake. Under Metropolitan's seismic assessment program, 33 structures and major conduits at the La Verne site have been analyzed. A total of 21 were found to be structurally adequate or have previously been upgraded. Of the remaining 12 structures, design of seismic upgrades is presently underway for seven, including the west washwater tank. The remaining facilities will be addressed in future board actions.

The Weymouth plant utilizes two above-ground welded steel tanks to store filtered water for use in backwashing filters. Backwashing cleans the filters after they have been on-line for 20 to 80 hours in active filtration service.

A small portion of the plant's filtered water is pumped into the washwater tanks, from which it is released by gravity to backwash dirty filters when needed.

The Weymouth plant's west and east washwater tanks have storage capacities of 1 million and 1.3 million gallons, respectively. The west tank measures 48 feet in diameter by 71 feet high, and was placed into service in 1941. The east tank measures 60 feet in diameter by 63 feet high, and was erected in the early 1960s. Both tanks were designed and constructed in accordance with applicable codes of their time.

As part of Metropolitan's seismic assessment program, staff conducted detailed structural evaluations of the two washwater tanks. The evaluations were based on current building codes and updated site-specific geotechnical information. These evaluations concluded that both tanks needed to be strengthened.

In September 2011, Metropolitan's Board authorized final design of upgrades to the two washwater tanks. The work was staged so that one tank would remain in service at all times. The east tank upgrades were completed in 2016. Final design of the west tank upgrades is now complete, and staff recommends proceeding with construction at this time.

Weymouth West Washwater Tank Seismic Upgrades – Construction (\$3,800,000)

The planned work includes installation of a new anchorage system for the tank, including a concrete ring footing; installation of tension straps to prevent uplift during an earthquake; installation of a flexible coupling at the 42-inch-diameter outlet pipe; replacement of the tank isolation valve; interior and exterior coating; relocation of the tank drain line, conduits, and cables to accommodate the structural work; and relocation of an electrical ductbank.

Specifications No. 1788 for the Weymouth West Washwater Tank Seismic Upgrades was advertised for bids on November 17, 2017. As shown in **Attachment 2**, five bids were received and opened on January 9, 2018. The low bid from Canyon Enterprises in the amount of \$2,591,576 complies with the requirements of the specifications. The four higher bids ranged from approximately \$3.1 million to \$3.6 million, while the engineer's estimate was \$2.45 million. For this contract, Metropolitan established a Small Business Enterprise (SBE) participation level of at least 25 percent of the total bid amount. Canyon Enterprises is a certified SBE and thus meets this level of participation.

This action appropriates \$3.8 million and awards a \$2,591,576 contract to Canyon Enterprises for seismic upgrades to the west washwater tank at the Weymouth plant. In addition to the amount of the contract, the requested funds include \$245,000 for construction support by Metropolitan forces. That support includes updates to the plant's Supervisory Control and Data Acquisition (SCADA) system associated with the tank's instrumentation; installation of cathodic protection; dewatering; and final disinfection. The requested funds also include \$365,500 for construction inspection; \$164,000 for review of submittals and record drawing preparation by Metropolitan staff; \$150,000 for hazardous materials management, contract administration, and project management; and \$283,924 for remaining budget.

Metropolitan staff will perform inspection of the construction. For this project, the anticipated cost of inspection is approximately 12.9 percent of the total construction cost. Engineering Services' goal for inspection of projects with construction less than \$3 million is 9 to 15 percent. For this project, the total cost of construction is \$2,836,576, which includes the amount of the contract (\$2,591,576) and Metropolitan force activities (\$245,000).

This project has been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2017/18 capital expenditure plan. See **Attachment 1** for the Financial Statement, **Attachment 2** for the Abstract of Bids, **Attachment 3** for the listing of Subcontractors for Low Bidder, and **Attachment 4** for the Location Map.

This project is included within capital Appropriation No. 15369, the Weymouth Improvements Appropriation, which was initiated in fiscal year 2001/02. With the present action, the total funding for Appropriation No. 15369 will increase from \$187,109,802 to \$190,909,802.

The total estimated cost to complete the upgrades to the two washwater tanks, including the amount appropriated to date and current funds requested, is approximately \$6.5 million.

Project Milestones

May 2019 – Completion of construction of seismic upgrades to the west washwater tank at the Weymouth plant

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

By Minute Item 48799, dated September 13, 2011, the Board authorized final design of seismic upgrades to the washwater tanks at the Weymouth plant.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The environmental effects from the Washwater Tank Seismic Upgrades 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 (SOC), the Mitigation Monitoring and Reporting Program (MMRP), and the project itself. The current action is solely based on award of a construction contract for the Washwater Tank Seismic Upgrades project, and not on any changes to the approved program 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.

CEQA determination for Option #2:

None required

Board Options

Option #1

Adopt the CEQA determination 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, and

- a. Appropriate \$3.8 million; and
- b. Award \$2,591,576 contract to Canyon Enterprises (dba RSH Construction) for seismic upgrades to the west washwater tank at the Weymouth plant.

Fiscal Impact: \$3.8 million in capital funds under Appropriation No. 15369

Business Analysis: This option will enhance reliability and continued operation of the Weymouth plant in the event of a significant earthquake.

Option #2

Do not proceed with the project at this time.

Fiscal Impact: None

Business Analysis: This option would forego an opportunity to reduce the risk of delivery interruptions from the Weymouth plant following a major seismic event.

Staff Recommendation

Option #1



Gordon Johnson
Manager/Chief Engineer,
Engineering Services

1/22/2018
Date



Jeffrey Kightlinger
General Manager

1/24/2018
Date

Attachment 1 – Financial Statement

Attachment 2 – Abstract of Bids

Attachment 3 – Subcontractors for Low Bidder

Attachment 4 – Location Map

Ref# es12656455

Financial Statement for Weymouth Improvements Appropriation

A breakdown of Board Action No. 47 for Appropriation No. 15369¹ is as follows:

	Previous Total Appropriated Amount (Jan. 2018)	Current Board Action No. 47 (Feb. 2018)	New Total Appropriated Amount
Labor			
Studies & Investigations	\$ 2,821,477	\$ -	\$ 2,821,477
Final Design	11,247,141	-	11,247,141
Owner Costs (Contract admin., haz. material mgmt., & program mgmt.)	8,623,984	150,000	8,773,984
Submittals Review & Record Drwgs	3,512,723	162,000	3,674,723
Construction Inspection & Support	14,713,690	365,500	15,079,190
Metropolitan Force Construction	8,215,780	240,000	8,455,780
Materials & Supplies	8,326,577	-	8,326,577
Incidental Expenses	1,040,341	7,000	1,047,341
Professional/Technical Services	14,483,100	-	14,483,100
Equipment Use	-	-	-
Contracts	111,602,433	-	111,602,433
Canyon Springs Enterprises (dba RSH Construction)	-	2,591,576	2,591,576
Remaining Budget	2,522,556	283,924	2,806,480
Total	\$ 187,109,802	\$ 3,800,000	\$ 190,909,802

Funding Request

Appropriation Name:	Weymouth Improvements		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15369	Board Action No.:	47
Requested Amount:	\$3,800,000	Budget Page No.:	262
Total Appropriated Amount:	\$190,909,802	Total Appropriation Estimate:	\$240,700,000

¹ The total amount expended to date to upgrade the two washwater tanks at the Weymouth plant is approximately \$2.96 million. The total estimated cost to complete the upgrades to the tanks, including the amount appropriated to date and current funds requested, is approximately \$6.5 million.

The Metropolitan Water District of Southern California
Abstract of Bids Received on January 9, 2018 at 2:00 P.M.
Specifications No. 1788
Weymouth West Washwater Tank Seismic Upgrades

The project consists of installation of a new anchorage system for the tank, including a concrete ring footing and tension straps; replacement of the tank's steel roof; installation of a flexible coupling at the 42-inch-diameter outlet pipe; replacement of the tank isolation valve; interior and exterior coating; relocation of tank drain line, conduits, and cables to accommodate the structural work; and relocation of an electrical ductbank.

Engineer's estimate: \$2,450,000

Bidder and Location	Total	SBE \$	SBE %	Met SBE¹
Canyon Springs Enterprises (dba RSH Construction) Hemet, CA	\$2,591,576	\$2,591,576	100%	Yes
Environmental Construction, Inc. Woodland Hills, CA	\$3,136,185	-	-	-
Minako America Corporation (dba Minco Construction) Gardena, CA	\$3,437,700	-	-	-
J. F. Shea Construction, Inc. Walnut, CA	\$3,518,000	-	-	-
Kiewit Infrastructure West Co. Santa Fe Springs, CA	\$3,559,719	-	-	-

¹ Small Business Enterprise (SBE) participation level was established at 25% for this contract.

The Metropolitan Water District of Southern California

Subcontractors for Low Bidder

**Specifications No. 1788
Weymouth West Washwater Tank Seismic Upgrades**

Low bidder: Canyon Springs Enterprises (dba RSH Construction)

Subcontractor and Location
Magnolia Environmental, Loma Linda, CA
Paso Robles Tank, Paso Robles, CA
LEED Electric, Santa Fe Springs, CA

