



● Board of Directors
Engineering and Operations Committee

11/14/2017 Board Meeting

8-2

Subject

Adopt CEQA determination and appropriate \$7.17 million; award \$4,866,067 procurement contract to Crispin Valve, LLC for rubber-lined butterfly valves; and award \$771,984 procurement contract to DeZURIK, Inc. for high-performance butterfly valves for the F. E. Weymouth Water Treatment Plant (Appropriation No. 15369)

Executive Summary

This action awards two procurement contracts to provide a total of 236 butterfly valves with actuators to replace the existing filter valves and actuators at the F. E. Weymouth Water Treatment Plant. This project will enhance reliability and performance of the filtration process at the Weymouth plant.

Timing and Urgency

The existing filter valves at the Weymouth plant have been in continuous service for 45 to 55 years. Despite receiving regular maintenance, these valves have gradually deteriorated over time. Their rubber seats are worn, and many valves leak. In addition, the actuators have deteriorated and cannot be refurbished. Due to the long lead-time required for fabrication of new valves and actuators, and the importance of the Weymouth plant in delivering treated water to Metropolitan's Central Pool, staff recommends award of the two procurement contracts 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 and the State Water Project to Metropolitan's Central Pool portion of the distribution system, and to an exclusive service area. The plant is located in the city of La Verne.

In a typical filtration cycle, filters are operated by opening and closing a series of valves which allow water to flow in and out of the filter beds during filtration and backwashing. The Weymouth plant has 48 filters grouped in two filter buildings. The filters in Building No. 1 contain one 54-inch wide by 54-inch high drain gate and four butterfly valves, while the filters in Building No. 2 contain five butterfly valves. The valves range in diameter from 16 to 48 inches. Each filter's valves operate in conjunction with several large-diameter isolation valves in the backwash and surface wash systems to control and clean a filter. The filter valves are designed to close tightly to prevent mixing of filtered and unfiltered water, or leakage into the washwater reclamation system.

The original filter valves in Building No. 1 were installed in two stages in 1941 and 1949, and were replaced in the early 1970s with similar valves. These valves are not consistent with modern American Water Works Association (AWWA) standards. The filter valves in Building No. 2 were installed during the second plant

expansion in 1962, and are similar in dimension to the valves in Building No. 1. Direct replacement units that feature the same body dimensions as the existing valves in both buildings are no longer available.

The existing filter valves have deteriorated following 45 to 55 years of continuous operation. The valve bodies exhibit corrosion, the rubber seats are worn, and many valves leak. In addition, the frequency of repairs to the actuators is increasing, while spare parts are difficult to obtain. Due to their outdated design, the actuators cannot be refurbished. As a result, both the filter valves and their actuators need to be replaced. A staged project is underway to replace the valves with new units that conform to modern AWWA standards.

In May 2014, Metropolitan's Board authorized final design to replace the filter valves and actuators at the Weymouth plant. Under this effort, staff developed procurement specifications for integrated units that combine valves, gear boxes, valve shafts, and electric actuators. The existing filter valves and actuators will be replaced in stages so that half of the plant's filters are available for service at all times. An initial construction contract for the replacement work in Filter Building No. 2 is planned for late 2019, followed by a second contract to replace the valves in Filter Building No. 1. The valves and actuators provided under the subject procurement contracts will be furnished to the two contractors for installation.

This action awards two procurement contracts for a total of 236 filter valves and actuators for the Weymouth plant. Staff will return to the Board to award the two installation/construction contracts in 2019 and 2021.

Weymouth Filter Valve Replacement – Procurement (\$7,170,000)

Specifications No. 1817 to furnish a total of 236 butterfly valves for the Weymouth plant was advertised for bids on May 10, 2017. The specifications included 179 rubber-lined butterfly valves and actuators under Schedule 1, and 57 high-performance butterfly valves and actuators under Schedule 2. As shown in **Attachment 2**, the bids were received and opened on July 13, 2017. Seven bids were submitted for Schedule 1 and six bids for Schedule 2. The lowest bid for Schedule 1 was based on terms and conditions that deviated from the specifications, and as a result, the bid was deemed to be non-responsive. The next two lowest bids did not meet the minimum experience requirements detailed in the specifications, and were also deemed to be non-responsive. The experience requirements included manufacture of valves similar in size and duty to the needed valves, whose design conforms to AWWA Standard C504, and which have been in successful operation for a period of not less than five years in the United States or other specified countries. The lowest responsive bid for Schedule 1 was submitted by Crispin Valve, LLC, with a base bid amount of \$4,866,067. This bid complies with the requirements of the specifications. For Schedule 2, the low bid from DeZURIK, Inc., with a base bid amount of \$771,984, also complies with the requirements of the specifications. Based on a survey of vendors, the budgetary cost estimate for this equipment ranged from \$4.5 million to \$5.1 million for Schedule 1, and from \$1.2 million to \$1.6 million for Schedule 2.

Due to the specialized nature of the equipment provided, no Small Business Enterprise (SBE) participation level was established for these contracts. For bid evaluation purposes, bidders who qualified as an SBE or Disabled Veteran Business Enterprise (DVBE) received a five percent bid-price reduction credit. In addition, bidders who qualified as a Regional Business Enterprise (RBE) received a five percent bid-price reduction credit. A maximum of \$25,000 or 10 percent in bid-price reduction credit was available for a business that meets SBE or DVBE criteria, and the RBE criteria. An additional bid-price adjustment was included based on the location of manufacture to reflect inspection travel costs. As a procurement contract, there are no subcontracting opportunities.

This action appropriates \$7.17 million, awards a \$4,866,067 contract to Crispin Valve, LLC to furnish 179 rubber-lined butterfly valves with actuators, and awards a \$771,984 contract to DeZURIK, Inc. to furnish 57 high-performance butterfly valves with actuators. The contract amounts include all sales and use taxes imposed by the state of California. In addition to the amount of the contracts, the appropriated funds include \$415,000 for fabrication inspection; \$160,000 for functional testing; \$150,000 for storage of the valves in a bonded warehouse near the Weymouth plant for a duration of up to two years; \$220,000 for review of submittals and responding to technical requests for information; \$190,000 for contract administration and project management; and \$396,949 for remaining budget. All activities will be performed by Metropolitan staff.

The total estimated cost to replace the filter valves and actuators at the Weymouth plant, including the amount appropriated to date, current funds requested, and future construction costs, is anticipated to range from \$22 million to \$25 million.

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, and **Attachment 3** 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 \$178,039,802 to \$185,209,802.

Project Milestone

December 2019 – Delivery of filter valves for 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 49764, dated May 13, 2014, the Board authorized final design to replace filter valves at the Weymouth plant.

California Environmental Quality Act (CEQA)

CEQA determination for Option #1:

The environmental effects of funding, design, procurement of materials, construction, and operation of the Weymouth Filter Valve Replacement Project (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 appropriation and authorization of procurement of materials for the approved Project, and not on any changes to the approved Project. 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 \$7.17 million;
- b. Award \$4,866,067 procurement contract to Crispin Valve, LLC for rubber-lined butterfly valves and actuators for the Weymouth plant; and
- c. Award \$771,984 procurement contract to DeZURIK, Inc. for high-performance butterfly valves and actuators.

Fiscal Impact: \$7.17 million in capital funds under Appropriation No. 15369

Business Analysis: This option will enhance reliability and performance of the filtration process at the Weymouth plant.

Option #2

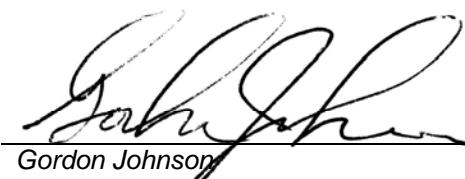
Do not award the procurement contracts at this time.

Fiscal Impact: None

Business Analysis: Under this option, staff would replace the existing valves and actuators individually as they fail. Overall costs would increase, as the equipment would be replaced individually rather than through a comprehensive program. There would be an increased risk of reduced plant capacity if filters are taken out of service as a result of equipment failure.

Staff Recommendation

Option #1


10/24/2017
Gordon Johnson
Manager/Chief Engineer,
Engineering Services


10/30/2017
Jeffrey Kightlinger
General Manager

Attachment 1 – Financial Statement

Attachment 2 – Abstract of Bids

Attachment 3 – Location Map

Ref# es12658602

Financial Statement for Weymouth Improvements Appropriation

A breakdown of Board Action No. 45 for Appropriation No. 15369¹ is as follows:

	Previous Total Appropriated Amount (July 2015)	Current Board Action No. 45 (Nov. 2017)	New Total Appropriated Amount
Labor			
Studies & Investigations	\$ 2,801,477	\$ -	\$ 2,801,477
Final Design	10,648,141	-	10,648,141
Owner Costs (Contract admin. & program mgmt.)	8,068,984	190,000	8,258,984
Submittals Review & Record Drwgs	3,292,723	220,000	3,512,723
Construction Inspection & Support	14,298,690	415,000	14,713,690
Metropolitan Force Construction	8,215,780	-	8,215,780
Materials & Supplies	2,688,526	-	2,688,526
Crispin Valve, LLC	-	4,866,067	4,866,067
DeZURIK, Inc.	-	771,984	771,984
Incidental Expenses (Valve storage & equipment testing)	723,341	310,000	1,033,341
Professional/Technical Services	13,748,100	-	13,748,100
Equipment Use	-	-	-
Contracts	111,602,433	-	111,602,433
Remaining Budget	1,951,607 ²	396,949	2,348,556
Total	\$ 178,039,802	\$ 7,170,000	\$ 185,209,802

Funding Request

Appropriation Name:	Weymouth Improvements		
Source of Funds:	Revenue Bonds, Replacement and Refurbishment or General Funds		
Appropriation No.:	15369	Board Action No.:	45
Requested Amount:	\$7,170,000	Budget Page No.:	262
Total Appropriated Amount:	\$185,209,802	Total Appropriation Estimate:	\$240,700,000

¹The total amount expended to date to replace filter valves and actuators at the Weymouth plant is approximately \$1.97 million. The total estimated cost to complete this project, including the amount appropriated to date, current funds requested, and future construction costs, is anticipated to range from \$22 million to \$25 million.

²Includes previous reallocation of \$637,021 from Remaining Budget for extra work during construction on three projects at the Weymouth plant: (1) Incoming electrical service; (2) Filter building upgrades; and (3) East wastewater tank seismic upgrades.

The Metropolitan Water District of Southern California

Abstract of Bids Received on July 13, 2017 at 2:00 P.M.

**Specifications No. 1817
Furnishing Butterfly Valves for the
F. E. Weymouth Water Treatment Plant**

Schedule 1 – Rubber-Lined Butterfly Valves

This contract includes furnishing the following:

1. Twenty-five 48-inch-diameter rubber-lined valves with electric actuators
2. Twenty-nine 36-inch-diameter rubber-lined valves with electric actuators
3. Seventy-four 30-inch-diameter rubber-lined valves with electric actuators
4. Forty-nine 24-inch-diameter rubber-lined valves with electric actuators
5. Two 42-inch-diameter rubber-lined valves with electric actuators

Estimated range of cost: \$4,500,000 to \$5,500,000

Bidder and Location	Base Bid Price Total²	Small Business or Disabled Veteran Business (Y/N)	Regional Business (Y/N)	Bid Price Reduction for SBE/DVBE and/or RBE³	Equalization Factor for Inspection³	Total Evaluated Bid Price
VAG USA, LLC ¹ Cranberry Township, PA	\$3,734,668	Y	N	(\$12,500)	\$428,600	\$4,150,768
ABCO Trading Company ¹ Los Angeles, CA	\$4,185,217	Y	Y	(\$25,000)	\$500,000	\$4,660,217
Water Technology Resources ¹ Bloomington, MN	\$4,188,796	N	N	\$0	\$500,000	\$4,688,796
Crispin Valve, LLC Berwick, PA	\$4,866,067	Y	N	(\$12,500)	\$285,800	\$5,139,367
Integrated Process Technologies Tempe, AZ	\$5,212,706	Y	N	(\$12,500)	\$418,200	\$5,618,406
Val-Matic Elmhurst, IL	\$5,410,750	N	N	\$0	\$252,200	\$5,662,950
Henry Pratt Company Aurora, IL	\$6,946,332	N	N	\$0	\$252,200	\$7,198,532

Note: Footnotes appear on Page 2.

Schedule 2 – High-Perfomance Butterfly Valves

This contract includes furnishing the following:

1. Fifty-one 16-inch-diameter high-performance valves with electric actuators
2. Two 30-inch-diameter high-performance valves with electric actuators
3. Four 16-inch-diameter high-performance valves with manual actuators

Estimated range of cost: \$1,200,000 to \$1,600,000

Bidder and Location	Base Bid Price Total ²	Small Business or Disabled Veteran Business (Y/N)	Regional Business (Y/N)	Bid Price Reduction for SBE/DVBE and/or RBE ³	Equalization Factor for Inspection ³	Total Evaluated Bid Price
DeZURIK, Inc. Sartell, MN	\$771,984	N	N	\$0	\$71,000	\$842,984
KPR Consulting, Inc. Irvine, CA	\$999,548	N	Y	(\$12,500)	\$59,000	\$1,046,048
Bray International, Inc. Houston, TX	\$1,121,236	Y	N	(\$12,500)	\$75,200	\$1,183,936
Integrated Process Technologies Tempe, AZ	\$1,225,578	Y	N	(\$12,500)	\$117,200	\$1,330,278
ABCO Trading Company Los Angeles, CA	\$1,675,370	Y	Y	(\$25,000)	\$141,000	\$1,791,370
Water Technology Resources Bloomington, MN	\$1,676,970	N	N	\$0	\$141,000	\$1,817,970

¹ Non-responsive bid.

² Includes sales and use taxes of 7.75 percent imposed by the state of California.

³ For bid evaluation proposes, bidders who qualified as a Small Business Enterprise (SBE) or Disabled Veteran Business Enterprise (DVBE) received a five percent bid-price reduction credit. In addition, bidders who qualified as a Regional Business Enterprise (RBE) received a five percent bid-price reduction credit. A maximum of \$25,000 or 10 percent in bid-price reduction credit was available for a business that meets SBE or DVBE criteria, and the RBE criteria. An additional bid-price adjustment was included for inspection costs based on the location of manufacture.

Distribution System

