



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

5/9/2023 Board Meeting

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7-5

**Subject**

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Award a \$1,466,665 procurement contract to B&K Valves & Equipment Inc. for 72 combination air release/vacuum valves to be installed on San Diego Pipeline Nos. 3 and 5; the General Manager has determined that the proposed action is exempt or otherwise not subject to CEQA

**Executive Summary**

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The existing air release/vacuum valves located on San Diego Pipeline Nos. 3 and 5 have deteriorated beyond repair and need to be replaced. Air release/vacuum valves release air from the pipeline or admit air into the pipeline to improve hydraulic efficiency, prevent water hammer under hydraulic surge conditions, or prevent collapse of the pipeline under potential vacuum conditions. Replacement of the valves is needed to ensure normal operation of the pipelines. This action awards a procurement contract for 72 replacement air release/vacuum valves. The valves will be installed by Metropolitan forces.

**Details**

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**Background**

San Diego Pipeline No. 3 begins at Lake Skinner and extends southward into San Diego County. The pipeline is 75 inches in diameter and is comprised of precast concrete and welded steel sections. It was completed in 1960 and supplies up to 280 cubic feet per second (cfs) of untreated water to Western Municipal Water District and San Diego County Water Authority. San Diego Pipeline No. 5 also begins at Lake Skinner and extends approximately 18 miles south to the delivery point in San Diego County. The pipeline is 96 inches in diameter with both prestressed concrete and welded steel pipe sections. It was completed in 1982 and supplies up to 500 cfs of untreated water to the San Diego County Water Authority.

Both pipelines use combination air release/vacuum valves located at high points along the pipeline to protect the pipeline and maintain its efficiency. During operation or filling of the pipeline, air must be released when it builds up at high points or flow will be impeded. When the pipeline is dewatered, air must be introduced into the pipeline, or a vacuum condition can develop inside the pipe which could cause collapse or buckling.

The existing air release/vacuum valves on San Diego Pipeline Nos. 3 and 5 are original equipment and have been in service for approximately 60 years and 40 years, respectively. There are a total of 72 valves that range in size from 8 inches in diameter to 10 inches in diameter. Air release/vacuum valves are normally open to release air or prevent a vacuum within the pipe. As water level rises, a float shuts off the valve. Failure of an aging float mechanism could lead to an unplanned water discharge.

Staff recommends proceeding with the procurement of replacement air release/vacuum valves at this time. Once delivered, the valves will be replaced by Metropolitan staff.

**Budget Impact**

Based on the current Capital Investment Plan (CIP) expenditure forecast, funds for the procurement are available within the CIP Appropriation for Fiscal Years 2022/23 and 2023/24 (Appropriation No. 15525). This project anticipates an expenditure of \$1,700,000 in capital funds. Approximately \$1.0 million will be incurred in the current biennium and have been previously authorized. The remaining funds from this action will be accounted for and appropriated under the next biennial budget. This project has been reviewed in accordance with

Metropolitan's CIP prioritization criteria and was approved by Metropolitan's CIP evaluation team to be included in the Distribution System Reliability Program.

### **San Diego Pipeline Nos. 3 and 5 Air Release/Vacuum Valve Replacement – Procurement and Installation**

The San Diego Pipeline Nos. 3 and 5 Air Release/Vacuum Valve Replacement project will replace all 72 existing valves in kind. The valves will be delivered to the Skinner plant where they will be stored in a controlled environment until they are scheduled for installation. A total of \$1,700,000 has been allocated for the work associated with the valve procurement. In addition to the amount of the contract described below, other funds to be allocated include \$62,000 for inspections; \$18,000 for submittals review; \$68,000 for project management, project controls, and contract administration; and \$85,335 for remaining budget.

**Attachment 1** provides the allocation of the required funds. The total estimated cost of the replacement including the amount allocated to date, and funds allocated for the work described in this action is approximately \$2,165,000.

### **Award of Procurement Contract (B&K Valves & Equipment Inc.)**

Request for Bids No. 401784 for the procurement of 72 air release and vacuum valves was advertised on November 30, 2022. As shown in **Attachment 2**, one bid was received and opened on December 13, 2022. The low bid from B&K Valves & Equipment Inc., in the amount of \$1,466,665, complies with the requirements of the specifications. This amount includes all sales and use taxes imposed by the state of California. Staff investigated why only one bid was received and determined that there are a limited number of valve manufacturers that routinely manufacture valves that meet the specifications required for this project. The budgetary estimate for this material, based on a survey of vendors, ranged from \$1.2 million to \$1.5 million. As a procurement contract, there are no subcontracting opportunities.

This action awards a \$1,466,665 procurement contract to B&K Valves & Equipment Inc. for 72 air release and vacuum valves to be installed on San Diego Pipeline Nos. 3 and 5.

### **Alternative Considered**

Staff initially considered bidding out the installation of air release and vacuum valves. Although this alternative may have expedited the replacement of the valves, it would have been more expensive because it would have required multiple construction crews, advertisement for bids, and additional construction inspection. The selected alternative in which Metropolitan forces replace the valves during planned maintenance activities will reduce costs and improve efficiencies.

### **Summary**

This action awards a \$1,466,665 contract to B&K Valves & Equipment Inc. for procurement of 72 air release and vacuum valves for San Diego Pipeline Nos. 3 and 5. See **Attachment 1** for the Allocation of Funds, **Attachment 2** for the Abstract of Bids, and **Attachment 3** for the Location Map.

### ***Project Milestone***

June 2024 – Delivery of valves to the Skinner plant

### **Policy**

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

Metropolitan Water District Administrative Code Section 8140: Competitive Procurement

Metropolitan Water District Administrative Code Section 11104: Delegation of Responsibilities

By Minute Item 52778, dated April 12, 2022, the Board appropriated a total of \$600 million for projects identified in the Capital Investment Plan for Fiscal Years 2022/2023 and 2023/2024.

**California Environmental Quality Act (CEQA)**

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**CEQA determination for Option #1:**

The proposed action is categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The overall activities involve the funding, design, inspection, 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, Class 2, and Class 6 Categorical Exemptions (Sections 15301, 15302, and 15306 of the State CEQA Guidelines).

**CEQA determination for Option #2:**

None required

**Board Options**

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**Option #1**

Award a \$1,466,665 contract to B&K Valves & Equipment Inc. for procurement of 72 replacement air release and vacuum valves for San Diego Pipeline Nos. 3 and 5.

**Fiscal Impact:** Expenditure of \$1,700,000 in capital funds. Approximately \$1.0 million will be incurred in the current biennium and have been previously authorized. The remaining funds from this action will be accounted for and appropriated under the next biennial budget.

**Business Analysis:** This option will improve the operational reliability of water deliveries to member agencies with connections to San Diego Pipeline Nos. 3 and 5.

**Option #2**

Do not proceed with this project at this time.


Fiscal Impact: None

**Business Analysis:** This option would forego improving the reliability of service to those member agencies with connections to San Diego Pipeline Nos. 3 and 5 and may result in costly urgent repairs to the pipelines.


**Staff Recommendation**

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Option #1

  
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John V. Bednarski  
Chief Engineer/Group Manager  
Engineering Services

4/19/2023  
Date

  
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Adel Hagekhalil  
General Manager

4/25/2023  
Date

**Attachment 1 – Allocation of Funds**

**Attachment 2 – Abstract of Bids**

**Attachment 3 – Location Map**

### Allocation of Funds for San Diego Pipeline Nos. 3 & 5 Air Release/Vacuum Valve Replacement

	<b>Current Board Action (May 2023)</b>
Labor	
Studies & Investigations	\$ -
Final Design	-
Owner Costs (Program mgmt., contract admin.)	68,000
Submittals Review & Record Drwgs.	18,000
Fabrication Inspections	50,000
Materials & Supplies	-
Incidental Expenses	12,000
Professional/Technical Services	-
Right-of-Way	-
Equipment Use	-
Contracts	-
B&K Valves & Equipment, Inc.	1,466,665
Remaining Budget	85,335
<b>Total</b>	<b>\$ 1,700,000</b>

The total amount expended to date for the San Diego Pipeline Nos. 3 and 5 Air Release and Vacuum Valve Replacement is approximately \$465,000. The total estimated cost to complete the project, including the amount appropriated to date and funds allocated for the work described in this action, is \$2.17 million.

**The Metropolitan Water District of Southern California****Abstract of Bids Received on December 13, 2022****RFB No. 401784****Furnishing Air Release/Vacuum Valves for San Diego Pipeline Nos. 3 & 5**

The work consists of furnishing and delivering 72 combination air release/vacuum valves in 8-inch and 10-inch diameters.

Engineer's estimate: \$1.2 million to \$1.5 million

<b>Bidder and Location</b>	<b>Base Bid Price Total <sup>1,2</sup></b>
B&K Valves & Equipment Inc. Carlsbad, CA	\$1,466,665

<sup>1</sup> As a procurement contract, there are no subcontracting opportunities.

<sup>2</sup> Includes sales and use taxes of 10.25 percent imposed by the state of California

# Distribution System

