



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

4/11/2017 Board Meeting

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**7-2**

**Subject**

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Adopt CEQA determination and appropriate \$540,000; award \$325,000 procurement contract to Golden Empire Concrete Products, Inc. for a precast concrete building at Mile 12 on the Colorado River Aqueduct; and authorize installation of discharge line coupling at Gene Pumping Plant (Appropriations Nos. 15438 & 15481)

**Executive Summary**

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This action awards a procurement contract for a precast concrete building that will house a monitoring station at Mile 12 on the Colorado River Aqueduct (CRA). This action also authorizes procurement and installation of an isolation coupling assembly for one discharge line at Gene Pumping Plant. The procurement contract for the coupling assembly will be awarded by the General Manager under his Administrative Code authority.

**Timing and Urgency**

The monitoring station at Mile 12 measures flow rates within the aqueduct and chlorine levels downstream of Copper Basin Reservoir. Construction is currently underway to relocate the existing below-grade monitoring station to an above-ground building and replace the deteriorating monitoring equipment. This action awards a procurement contract for the new building.

The isolation coupling assembly will be installed on one of the nine pump discharge lines at Gene Pumping Plant. Under the major rehabilitation program for all 45 main CRA pumps and their support systems that was recently initiated, one pump unit will be refurbished as part of a demonstration project. This action authorizes procurement and installation of one coupling assembly to allow the single pump to be isolated and refurbished, while the other eight units remain in operation.

This work has been reviewed with Metropolitan's Capital Investment Plan (CIP) prioritization criteria and is included in the CRA Reliability Program. Funds for this action are available within Metropolitan's capital expenditure plan for fiscal year 2016/17.

**Details**

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**Background**

The CRA is a 242-mile-long conveyance system that transports water from the Colorado River to Lake Mathews in Riverside County. It consists of five pumping plants, 124 miles of tunnels, 63 miles of canals, and 55 miles of conduits, siphons and reservoirs. The aqueduct was constructed in the late 1930s and was placed into service in 1941.

**Project No. 1 – Mile 12 Monitoring Station Upgrades – Procurement (No funds required)**

The monitoring station at Mile 12 is located approximately five miles downstream of Copper Basin Reservoir. It includes a set of flow meters with instrumentation, chlorine analyzers, communication equipment, solar panels, and batteries. The equipment is presently located below-grade within a manhole structure, directly above a pipeline portion of the aqueduct. The information collected at the monitoring station is used to adjust flow rates

at each pumping plant and at reservoir outlet gates, and to adjust chlorine injection rates at Copper Basin Reservoir.

The addition of chlorine at Copper Basin commenced in 2007 in order to control quagga mussels. Due to the release of chlorine vapor residuals at Mile 12, the existing monitoring equipment has deteriorated. While the equipment has performed well over nearly 25 years of operation, it has begun to fail, which has led to unreliable readings and interruptions in data transmission. The equipment within the manhole needs to be replaced. In order to extend the life of the new equipment, enhance worker safety, and provide appropriate security at this remote location, the monitoring equipment is recommended to be relocated to an above-ground structure. Metropolitan's Board previously authorized the upgrades and appropriated funds for construction.

The planned upgrades include replacement of the flow meters, replacement of the analyzers and communication equipment, installation of a pre-assembled above-ground building, and installation of a solar power generating system.

Purchase Requisition RFB-AS-321641 for furnishing a pre-assembled precast concrete building for the Mile 12 site was advertised for bids on November 17, 2016. As shown in **Attachment 2**, two bids were received and opened on December 22, 2016. The low bid from Golden Empire Concrete Products, Inc. in the amount of \$325,000 complies with the requirements of the specifications. The second bid was \$337,000, while the budgetary cost estimate for the building, based on a survey of vendors, ranged from \$250,000 to \$350,000. For bid evaluation purposes, 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 based on the location of manufacture to reflect inspection travel costs. As a procurement contract, there are no subcontracting opportunities.

This action awards a \$325,000 procurement contract to Golden Empire Concrete Products, Inc. for a precast concrete building for the monitoring station at Mile 12. The contract amount includes all sales and use taxes imposed by the state of California. No funds are requested in this action, as sufficient funds were previously appropriated for the project. The total estimated cost to complete the monitoring station upgrades is approximately \$1.3 million.

**Project No. 2 – Discharge Line Isolation Coupling at Gene Pumping Plant – Procurement and Construction (\$540,000)**

Each of Metropolitan's five pumping plants has nine main pumps that were installed in four stages between 1941 and 1959. In the mid-1980s, a major rehabilitation effort was undertaken on the 45 main pumps. After 30 years of continuous operation since that rehabilitation effort, the pumps and their ancillary systems are showing signs of deterioration. Staff has initiated a long-term comprehensive program to rehabilitate this equipment in order to extend the service life of the pumps and maintain reliability. The work will be accomplished in four stages to minimize disruptions to CRA water deliveries. This approach will enable a single pump to be removed from service at one time at each pumping plant, allowing a full 8-pump flow to be maintained throughout the CRA system as the rehabilitation work progresses.

Installation of the discharge line couplings will allow isolation of any individual pump unit in order to perform regular maintenance or repairs. Prior to issuing a construction contract to install isolation couplings for all of the main pumps, a demonstration project will install a discharge line coupling at a single pump. The demonstration project will enable staff to evaluate design parameters of the coupling assembly, test for pressure transients in the discharge line, and confirm sequences and timing for the installation procedure. Once installed, the refurbishment of a single main pump will proceed. The initial coupling included in this action will be installed by Metropolitan forces at Gene Pumping Plant. The information gained from this initial installation will be incorporated into the upcoming construction contract that will procure and install the remaining 44 discharge couplings.

Specifications No. 1904 for furnishing a discharge line isolation coupling for Delivery Line No. 1 at Gene Pumping Plant was advertised for bids on January 25, 2017. Three bids were received and opened on

February 28, 2017. The low bid from Northwest Pipe Co. in the amount of \$218,780 complies with the requirements of the specifications. The two higher bids were \$245,175 and \$360,794. The budgetary cost estimate for the coupling, based on a survey of vendors, ranged from \$200,000 to \$250,000. For bid evaluation purposes, bidders who qualified as a SBE or DVBE received a five percent bid-price reduction credit. In addition, bidders who qualified as an 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 procurement contract is planned to be awarded under the General Manager's Administrative Code authority to award contracts of \$250,000 or less.

Planned construction activities by Metropolitan forces include isolation and dewatering of the single discharge line, removal of existing pipe and installation of the new coupling assembly, and installation and testing of the new isolation bulkhead to confirm functionality and fit.

This action appropriates \$540,000 for procurement and installation of an isolation coupling assembly at one discharge line at Gene Pumping Plant. The requested funds include \$218,780 for the procurement contract; \$103,000 for factory fabrication inspection and review of submittals; \$130,000 for installation by Metropolitan forces; \$34,000 for contract administration and project management; and \$54,220 for remaining budget.

The total estimated cost to complete installation of the 45 discharge line couplings at all five pumping plants, including the amount appropriated to date, current funds requested, and future construction costs, is anticipated to range from \$14.4 million to \$16.4 million.

### **Summary**

This action appropriates \$540,000, awards a procurement contract for the monitoring station building at Mile 12 on the CRA, and authorizes installation of a discharge line isolation coupling at Gene Pumping Plant. No funds are required for the precast concrete building at Mile 12. The isolation coupling is included within Appropriation No. 15481, the CRA Main Pump Reliability Appropriation. With the present action, the total funding for Appropriation No. 15481 will increase from \$11.55 million to \$12.09 million.

Both projects have been evaluated and recommended by Metropolitan's CIP Evaluation Team, and funds are available within the fiscal year 2016/17 capital expenditure plan. See [Attachment 1](#) for the Financial Statement, [Attachment 2](#) for the Abstract of Bids, and [Attachment 3](#) for the Location Map.

### **Project Milestones**

February 2018 – Delivery of precast concrete building

December 2017 – Delivery of discharge line isolation coupling

### **Policy**

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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 determination for Option #1:**

The proposed actions are categorically exempt under the provisions of CEQA and the State CEQA Guidelines. The proposed projects involve the replacement of existing public facilities with negligible or no expansion of use and no possibility of significantly impacting the physical environment. In addition, the proposed projects may include minor modifications in the condition of land, water, and/or vegetation which do not involve removal of healthy, mature, scenic trees. Accordingly, the proposed actions qualify for Class 1, Class 2, and Class 4 Categorical Exemptions (Sections 15301, 15302, and 15304 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed actions qualify under three Categorical Exemptions (Class 1, Section 15301; Class 2, Section 15302; and Class 4, Section 15304 of the State CEQA Guidelines).

**CEQA determination for Option #2:**

None required

**Board Options**

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**Option #1**

Adopt the CEQA determination that the proposed actions are categorically exempt from CEQA, and

- a. Appropriate \$540,000;
- b. Award \$325,000 procurement contract to Golden Empire Concrete Products, Inc. for a precast concrete building for Mile 12 on the CRA; and
- c. Authorize installation of a discharge line isolation coupling at Gene Pumping Plant.

**Fiscal Impact:** \$540,000 of capital funds under Appropriation No. 15481

**Business Analysis:** These projects will enhance CRA reliability, improve operational efficiency, and enhance workplace safety.

**Option #2**

Do not proceed with the two projects at this time.


**Fiscal Impact:** None

**Business Analysis:** This option would forego an opportunity to enhance reliability of the CRA and enhance workplace safety at the Mile 12 site.

**Staff Recommendation**

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Option #1



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3/20/2017  
Date

Gordon Johnson  
Manager/Chief Engineer,  
Engineering Services



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3/29/2017  
Date

Jeffrey Kightlinger  
General Manager

**Attachment 1 – Financial Statement**

**Attachment 2 – Abstracts of Bids**

**Attachment 3 – Location Map**

Ref# es12650030

### Financial Statement for CRA Main Pump Reliability Appropriation

A breakdown of Board Action No. 4 for Appropriation No. 15481 for the discharge line isolation coupling at Gene Pumping Plant<sup>1</sup> is as follows:

	<b>Previous Total Appropriated Amount (Oct. 2016)</b>	<b>Current Board Action No. 4 (Apr. 2017)</b>	<b>New Total Appropriated Amount</b>
Labor			
Studies & Investigations	\$ 4,576,000	\$ -	\$ 4,576,000
Final Design	1,550,000	-	1,550,000
Owner Costs (Program mgmt, envir. monitoring)	1,224,671	34,000	1,258,671
Submittals Review & Record Drwgs.	42,000	35,000	77,000
Construction Inspection & Support	-	68,000	68,000
Metropolitan Force Construction	524,000	130,000	654,000
Materials & Supplies	250,000	-	250,000
Incidental Expenses	37,329	-	37,329
Professional/Technical Services	1,280,000	-	1,280,000
Right of Way	-	-	-
Equipment Use	65,000	-	65,000
Contracts	-	-	-
Northwest Pipe Co.	-	218,780	218,780
Remaining Budget	2,001,000	54,220	2,055,220
<b>Total</b>	<b>\$ 11,550,000</b>	<b>\$ 540,000</b>	<b>\$ 12,090,000</b>

### Funding Request

<b>Appropriation Name:</b>	CRA Main Pump Reliability		
<b>Source of Funds:</b>	Revenue Bonds, Replacement and Refurbishment or General Funds		
<b>Appropriation No.:</b>	15481	<b>Board Action No.:</b>	4
<b>Requested Amount:</b>	\$ 540,000	<b>Budget Page No.:</b>	224
<b>Total Appropriated Amount:</b>	\$ 12,090,000	<b>Total Program Estimate:</b>	\$177,200,000

<sup>1</sup>The total amount expended to date on the discharge line isolation couplings is approximately \$474,505. The total cost to install the 45 couplings at all five pumping plants, including the amount expended to date, current funds requested, and future construction costs, is anticipated to range from \$14.4 million to \$16.4 million.

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received on December 22, 2016 at 2:00 P.M.**

**Purchase Requisition No. RFB-AS-321641  
Mile 12 Monitoring Station Upgrades**

The work consists of furnishing a precast concrete building for the monitoring station at Mile 12 on the Colorado River Aqueduct.

**Estimated Range of Cost: \$250,000 to \$350,000**

<b>Bidder and Location</b>	<b>Base Bid Price Total<sup>1</sup></b>	<b>Small Business Or Disabled Veteran Business (Y/N)</b>	<b>Regional Business (Y/N)</b>	<b>Bid Price Reduction for SBE/DVBE or RBE</b>	<b>Bid Price Increase for Inspection</b>	<b>Evaluated Bid Total<sup>2</sup></b>
<b>Golden Empire Concrete Products, Inc. Bakersfield, CA</b>	<b>\$325,000</b>	<b>Y</b>	<b>N</b>	<b>\$12,500</b>	<b>N/A</b>	<b>\$312,500</b>
Jensen Precast Fontana, CA	\$337,000	N	N	-	N/A	\$337,000

<sup>1</sup> Includes sales and use tax of 9.00 percent imposed by the State of California.

<sup>2</sup> For bid evaluation purposes, 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 based on the location of manufacture.

**The Metropolitan Water District of Southern California**

**Abstract of Bids Received on February 28, 2017 at 2:00 P.M.**

**Specifications No. 1904  
Furnishing Discharge Line Isolation Couplings for  
Delivery Line No. 1 at Gene Pumping Plant**

The work consists of furnishing a complete isolation coupling assembly for Delivery Line No. 1 at Gene Pumping Plant.

**Estimated Range of Cost: \$200,000 to \$250,000**

<b>Bidder and Location</b>	<b>Base Bid Price Total<sup>1</sup></b>	<b>Small Business Or Disabled Veteran Business (Y/N)</b>	<b>Regional Business (Y/N)</b>	<b>Bid Price Reduction for SBE/DVBE or RBE</b>	<b>Bid Price Increase for Inspection<sup>3</sup></b>	<b>Evaluated Bid Total<sup>2</sup></b>
<b>Northwest Pipe Co. Adelanto, CA</b>	<b>\$218,780</b>	<b>N</b>	<b>N</b>	<b>-</b>	<b>\$6,100</b>	<b>\$224,880</b>
Mehta Mechanical Co., Inc. La Palma, CA	\$245,175	Y	Y	\$24,517	-	N/A <sup>3</sup>
Ameron Water Transmission Group Rancho Cucamonga, CA	\$360,794	N	Y	\$18,040	-	N/A <sup>3</sup>

<sup>1</sup> Includes sales and use tax of 7.75 percent imposed by the State of California.

<sup>2</sup> For bid evaluation purposes, 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 based on the location of manufacture.

<sup>3</sup> Bids by Mehta Mechanical Co., Inc. and Ameron Water Transmission Group were deemed non-responsive because they did not include the Equalizing Factor Worksheet for Inspection.

### Location Map

