



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

9/14/2010 Board Meeting

---

**7-6**

**Subject**

---

Appropriate \$790,000; and award \$358,196 contract to Abhe & Svoboda, Inc. for pipe rehabilitation at Eagle Mountain Pumping Plant (Approp. 15374)

**Description**

---

This action awards a construction contract for repair of leaking delivery pipe expansion joints at Eagle Mountain Pumping Plant on the Colorado River Aqueduct (CRA).

**Timing and Urgency**

Three above-ground steel pipes convey water discharged from the main pumps at Eagle Mountain Pumping Plant. These steel pipes are 10 feet in diameter, 600 feet in length, and have two expansion joints per pipe, for a total of six joints. These six expansion joints show significant signs of corrosion. Rehabilitation of these joints is needed to maintain reliable water deliveries from the CRA, and to avoid costly emergency repairs. Eagle Mountain is the second pumping plant to have its leaking expansion joints repaired; the three remaining pumping plants will be addressed in the future. Staff has assessed the urgency of this project, and recommends moving forward at this time so that rehabilitation work may take place during an upcoming February 2011 CRA shutdown.

This project has been reviewed with Metropolitan's updated Capital Investment Plan (CIP) prioritization criteria, and is categorized as Infrastructure Upgrade project. This project is budgeted within Metropolitan's CIP for fiscal year 2010/2011.

**Background**

Each of the five CRA pumping plants utilizes three aboveground steel discharge pipelines to convey water from the plant to the downstream aqueduct. These lines have been in continuous service for 50-70 years. Each delivery line is 10 feet in diameter and contains several expansion joints. These expansion joints allow for thermal expansion and contraction of the pipeline as a result of temperature changes. Over the last several years, leaks have been detected at the expansion joints due to normal wear and tear; and while the amount of leakage is low, the leakage is beginning to cause the pipe joints to corrode. These joints need to be rehabilitated to ensure that reliable deliveries of the CRA water can be maintained.

Due to the specialized requirements and scheduling complexity of the expansion joint repairs, a pilot project was initiated at Iron Mountain Pumping Plant. In October 2009, Metropolitan forces completed the repair of one expansion joint. This test repair validated the specialized process and coatings. In April 2010, the remaining five expansion joints at Iron Mountain Pumping Plant were completed under a construction contract. This work tested the repair process on a larger scale under time-constrained shutdown conditions, while utilizing a construction contract.

Staff has now validated the process planned for repairs to the expansion joints at the remaining four CRA pumping plants. Since this rehabilitation process is specialized, work at the four remaining plants has been planned over four future shutdowns, to allow the unique configurations and needs of each plant to be addressed individually. This approach will also increase competition by attracting specialized contractors with expertise in

the validated rehabilitation process, while increasing opportunities for participation by Small Business Enterprise (SBE) firms.

At this time, staff has completed final design for the second plant and recommends moving forward with rehabilitation of the six expansion joints at Eagle Mountain Pumping Plant. This work is planned to be completed during the upcoming CRA shutdown in February 2011. Staff will return to the Board at a later date to address the remaining work at the three other CRA pumping plants.

### **Eagle Mountain Pumping Plant Delivery Pipe Expansion Joint Repairs – Construction (\$790,000)**

Specification No. 1679 was advertised for bids on June 24, 2010. As shown in [Attachment 2](#), three bids were received and opened on August 3, 2010. The low bid from Abhe & Svoboda, Inc., in the amount of \$358,196, complies with the requirements of the specifications. The two higher bids were \$555,225 and \$597,000. The engineer's estimate was \$344,000. For this contract, Metropolitan established an SBE participation level of at least 20 percent of the bid amount. Abhe & Svoboda, Inc. has committed to meet this level of participation.

This action appropriates \$790,000 in budgeted funds and awards a \$358,196 contract to Abhe & Svoboda, Inc. for repair of leaky expansion joints on the delivery pipes at Eagle Mountain Pumping Plant. In addition to the amount of the contract, the appropriated funds include \$210,900 for Metropolitan force shutdown activities. The total cost of construction is \$569,096. Requested funds also include: \$77,600 for construction inspection; \$75,600 for environmental monitoring, project management and contract administration; \$38,500 for technical support by Metropolitan design staff; and \$29,204 for remaining budget.

Metropolitan staff will perform inspection of the construction contract. For this project, the anticipated cost of inspection is approximately 13.6 percent of the total construction cost. Engineering Services' goal for inspection of construction contracts less than \$3 million is 9 to 15 percent.

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 reliability of the existing conveyance and distribution system in order to maintain reliable water deliveries in the future.

#### ***Project Milestone***

March 2011 – Completion of construction

#### **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 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, 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 and Class 2 Categorical Exemptions (Sections 15301 and 15302 of the State CEQA Guidelines).

The CEQA determination is: Determine that pursuant to CEQA, the proposed action qualifies under two Categorical Exemptions (Class 1, Section 15301 and Class 2, Section 15302 of the State CEQA Guidelines).

CEQA determination for Option #2:

None required

### Board Options

---

#### Option #1

Adopt the CEQA determination and

- a. Appropriate \$790,000; and
- b. Award \$358,196 contract to Abhe & Svoboda for repair of the Eagle Mountain Pumping Plant delivery pipe expansion joints.

**Fiscal Impact:** \$790,000 in budgeted funds under Approp. 15374

**Business Analysis:** This option will enhance reliability and continued operation of the CRA.

#### Option #2

Do not award the construction contract and re-advertise in an attempt to receive more favorable bids.

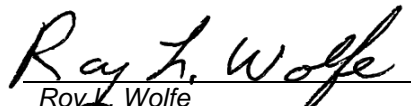
**Fiscal Impact:** None

**Business Analysis:** This option may or may not result in more favorable bids, and would defer the rehabilitation work to the 2011/12 shutdown season.

### Staff Recommendation

---

Option #1

  
\_\_\_\_\_  
Roy L. Wolfe  
Manager, Corporate Resources

8/24/2010  
Date

  
\_\_\_\_\_  
Jeffrey Knightlinger  
General Manager

8/31/2010  
Date

[Attachment 1 – Financial Statement](#)

[Attachment 2 – Abstract of Bids](#)

[Attachment 3 – Location Map](#)

Ref# cr12606735

### Financial Statement for CRA Pumping Plant Reliability Program

A breakdown of Board Action No. 10 for Appropriation No. 15374 for the Eagle Mountain Pumping Plant Delivery Pipe Expansion Joint Repairs project\* is as follows:

	<b>Previous Total Appropriated Amount (Dec. 2009)</b>	<b>Current Board Action No. 10 (Sept. 2010)</b>	<b>New Total Appropriated Amount</b>
Labor			
Studies and Investigations	\$ 889,000	\$ -	\$ 889,000
Final Design	1,129,800	-	1,129,800
Owner Costs (Program mgmt., envir. monitoring)	168,500	114,100	282,600
Construction Inspection and Support	813,400	77,600	891,000
Metropolitan Force Construction	3,022,700	180,000	3,202,700
Materials and Supplies	2,666,000	-	2,666,000
Incidental Expenses	76,300	30,900	107,200
Professional Services	763,000	-	763,000
Equipment Use	82,700	-	82,700
Contracts	437,000	358,196	795,196
Remaining Budget	1,662,100	29,204	1,691,304
<b>Total</b>	<b>\$ 11,710,500</b>	<b>\$ 790,000</b>	<b>\$ 12,500,500</b>

### Funding Request

<b>Program Name:</b>	CRA Pumping Plant Reliability Program		
<b>Source of Funds:</b>	Revenue Bonds, Replacement and Refurbishment or General Funds		
<b>Appropriation No.:</b>	15374	<b>Board Action No.:</b>	10
<b>Requested Amount:</b>	\$ 790,000	<b>Capital Program No.:</b>	15374
<b>Total Appropriated Amount:</b>	\$ 12,500,500	<b>Capital Program Page No.:</b>	281
<b>Total Program Estimate:</b>	\$ 39,700,000	<b>Program Goal:</b>	I-Infrastructure Reliability

\* The total amount expended to date on the Eagle Mountain Pumping Plant Delivery Pipe Expansion Joint Repairs project is approximately \$74,450.

**The Metropolitan Water District of Southern California**  
**Abstract of Bids Received on August 3, 2010 at 2:00 P.M.**  
**Specifications No. 1679**

**Eagle Mountain Pumping Plant Delivery Pipe  
Expansion Joint Repairs Project**

The Eagle Mountain Pumping Plant Delivery Pipe Expansion Joint Repairs project consists of rehabilitation of six mechanical expansion joints in the three 10-foot-diameter delivery lines. The work will include disassembly, unpacking, blast cleaning, recoating, repacking, and reassembly of each expansion joint.

**Engineer's Estimate: \$344,000**

<b>Bidder and Location</b>	<b>Total</b>	<b>SBE \$</b>	<b>SBE %</b>	<b>Met SBE**</b>
<b>Abhe &amp; Svoboda, Inc., Alpine, CA</b>	<b>\$ 358,196</b>	<b>\$71,640</b>	<b>20%</b>	<b>Yes</b>
Zusser Company, Inc., Los Angeles, CA	\$ 555,225	N/A	N/A	N/A
Hemet Mfg.Co., Inc. dba Genesis Construction	\$ 597,000	N/A	N/A	N/A

\*SBE (Small Business Enterprise) participation was established at 20% for this contract

Location Map

