



# Santa Clara Valley Water District

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**File No.:** 17-0282

**Agenda Date:** 6/13/2017

**Item No.:** 3.3.

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## BOARD AGENDA MEMORANDUM

### **SUBJECT:**

Adopt Plans and Specifications and Authorize Advertisement for Bids for Pacheco Conduit Inspection and Rehabilitation Project, Project Nos. 91214001 and 91221006 Contract No. 0629 (Unincorporated County), (District 1).

### **RECOMMENDATION:**

- A. Adopt the plans and specifications and authorize advertisement for bids for inspection and rehabilitation of the Pacheco Conduit per the Notice to Bidders;
- B. Authorize the Designated Engineer to issue addenda, as necessary, during the bidding process, and
- C. Find that the Pacheco Conduit Inspection and Rehabilitation Project is substantially complex and, therefore, requires a construction contract retention of 10 percent.

### **SUMMARY:**

The proposed Project involves inspection, maintenance, and rehabilitative work on the Pacheco Conduit and a ½ mile portion of the Santa Clara Conduit as part of the Pipeline Maintenance Program (PMP).

The Pacheco Conduit consists of approximately 7.9 miles of 120-inch diameter Prestressed Concrete Cylinder Pipeline (PCCP) constructed in the 1980's. The Pacheco Conduit is an integral part of the U.S. Bureau of Reclamation (Reclamation) Central Valley Project San Felipe Division, which conveys raw water from the San Luis Reservoir to Santa Clara and San Benito counties. The District is responsible for inspecting the Pacheco conduit every five (5) years in accordance with the maintenance and operation agreement with Reclamation.

In FY06, staff completed an inspection and rehabilitation project on a portion of the Pacheco Conduit. Approximately 2/3 of the Pacheco Conduit was inspected, with 12 (0.85%) pipe sections found to have wire break damage. Reclamation requested a full re-inspection of the Pacheco Conduit in 2012; however, the threat posed by the presence of zebra mussels in the Hollister conduit delayed this inspection at that time. The primary objective of this Project is to gather condition assessment information on pre-stressed concrete cylinder pipe (PCCP), perform necessary repairs to

appurtenances, strengthen PCCP segments found to be in poor condition, and install acoustic fiber optic cable monitoring technology to mitigate catastrophic failure of PCCP.

The Project also includes work on a ½ mile portion of the Santa Clara Conduit and rehabilitation activities at the bifurcation structure. The 96-inch diameter Santa Clara Conduit was constructed by Reclamation in the 1980's. A pipe segment on this portion of the conduit failed catastrophically on August 1, 2015.

The proposed work on the Pacheco Conduit and Santa Clara Conduit involves:

- i. Shutdown of the San Felipe System from October 2017 to January 2018 and complete dewatering of the Pacheco Conduit and portions of the Santa Clara Conduit to facilitate internal inspection and rehabilitation efforts;
- ii. Internal visual, sounding, and electromagnetic inspections of the PCCP for condition assessment;
- iii. Internal maintenance, repair, and installation of carbon fiber reinforced polymer (CFRP) structural lining, of the PCCP for the remediation of deficiencies identified during inspections;
- iv. Installation of acoustic fiber optic cables for real-time wire break monitoring;
- v. Sectionalizing valve replacement for improved system isolation and operation capabilities;
- vi. Bypass piping and valve replacement for the remediation of previously identified assembly deficiencies;
- vii. Bypass assembly support installation for the remediation of previously identified structural support deficiencies;
- viii. Pipeline appurtenance assemblies and piping maintenance and rehabilitation for the remediation of previously identified deficiencies and improved operational performance;
- ix. Installation of an additional sectionalizing valve for improved system isolation in an effort to mitigate the intrusion of zebra mussel-laden water for the Hollister Conduit during shutdown conditions;
- x. Installation of additional bypass pumping piping to facilitate future pipeline dewatering; and
- xi. Installation of additional maintenance platforms and ladders to facilitate the safe maintenance and operation of the existing facilities.

Completion of the proposed Project will help improve the long term reliable delivery of raw water to Santa Clara and San Benito Counties and allow the District to meet the requirements of its maintenance and operation agreement with Reclamation.

Construction of the proposed Project is scheduled to begin in October 2017 and end in February

2018, with the shutdown of the pipeline limited to the first twelve (12) weeks of the Project schedule in order to minimize the impacts to the Santa Clara and San Benito County water supply. Coordination and planning efforts with local, State, and Federal water supply and regulatory agencies have been completed. Contingency planning for potential conflicts with concurrent District operations has been done, and the ability to move the proposed Project construction dates is addressed in the Project specifications.

Staff is also working on an agreement to have a Reclamation maintenance team conduct grouting and repairs on the Santa Clara tunnel during the shutdown window to reduce leakage from the tunnel.

### ***Construction Contract Retention***

Public Contract Code (PCC) Section 7201 limits retention amounts for public works construction contracts to five percent (5%) of the total contract price. PCC section 7201(b)(4) provides that retention proceeds on a project may exceed 5% where the governing body of the public entity makes a finding that the proposed project is “substantially complex” and therefore requires a retention amount greater than 5%.

To comply with the PCC in regard to increasing the retention to 10%, staff recommends the Board find that the Pacheco Conduit and Santa Clara Tunnel Rehabilitation Project is substantially complex based on the need for this critical work and shutdown schedule constraints necessary to minimize unplanned disruption in the delivery of raw water to Santa Clara and San Benito Counties.

### ***Previous Board Actions Related to this Project***

Attachment 2 provides a summary of Board actions related to the Project Delivery Process for the Project.

On March 9, 2010, the Board approved the Resolution to Consider Undertaking a Work of Improvement and set the Public Hearing on the Engineer's Report that covers all the pipeline rehabilitation projects in the PMP. On April 13, 2010, the Board held a Public Hearing and adopted a resolution approving the Engineer's Report.

On September 27, 2016, the Board of Directors adopted the plans and specifications and authorized advertisement for bids for the construction of the Pacheco Conduit and Santa Clara Tunnel Rehabilitation Project, with the intent to start construction in January 2017. Staff later determined that the environmental permits and clearances required for Project construction could not be obtained by the scheduled bid award date.

During the bid process, Staff issued five (5) addenda to respond to contractor inquiries, extend the bidding period, and ultimately, to cancel the bidding process due to the lack of environmental permits for the Project. On December 13, 2016, the Board of Directors ratified addenda Nos. 1 through 5 to the Contract Documents. The Specifications and Drawings have been updated to reflect the information included in the previous addenda.

**Next Steps**

If the Board approves the recommendations, staff will proceed to advertise the Project for bids for the construction and the next Board action would be for award of the construction contract, tentatively scheduled for August 8, 2017.

Staff plans to submit a future agenda item to recommend the Board approve an agreement with Reclamation for them to complete repairs on the Santa Clara tunnel while this Project is underway.

**FINANCIAL IMPACT:**

The total cost of the Project is estimated at \$8.9 million. The funds needed for the planned Project work for this fiscal year are included in the fiscal year 2018 budget. Project No. 91214001 will be used to fund the work on the Pacheco Conduit, while Project No. 91221006 will be used to fund work on the ½ mile portion of the Santa Clara Conduit.

The estimated cost of the construction contract for the Project is in the range of \$2.4 to \$3 million. Additional budgeted funds are for other contracted and non-contracted Project activities such as confined space support; high-angle rope access support; electromagnetic inspection; acoustic fiber optic monitoring system installation; Project planning, design, administration, and construction, biological and regulatory oversight and monitoring; part and material procurement, and facility isolation and restoration.

Costs for additional pipeline work (approximately \$2 million dollars which is included in the \$8.9 million estimate) will also be expended during the fiscal year 2018. This includes the costs for leak detection, electromagnetic inspection, installation of an acoustic fiber optic (AFO) monitoring system, and real-time wire break monitoring for 1 year on the Pacheco Conduit.

Annual costs for real-time wire break monitoring on the Pacheco Conduit will be \$110,000.

Table 1 provides a breakdown of the estimated cost of all Project activities.

**Table 1 - Estimated Project Costs for Pacheco Conduit Inspection and Rehabilitation Project**

<b>Estimated Project Costs</b>	
Project Development, Planning and Design	\$500,000
Long Lead Time Parts and Material Procure	\$1,300,000
Construction Contract	\$2.4 million to \$3 million
Supplemental Contract Work	\$1,000,000
Construction Management, Inspection, and	\$1,000,000
Electromagnetic Pipeline Inspection	\$300,000

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AFO Monitoring System	\$1,590,000
Annual AFO Monitoring	\$110,000
Project Close-out	\$100,000
<b>TOTAL</b>	<b>\$8,900,000</b>

**CEQA:**

As the lead agency under the California Environmental Quality Act (CEQA) the District certified the PMP Environmental Impact Report Program (PMP PEIR) in November 2007. The PMP provides for the maintenance of the District's 14 raw water pipelines and 9 treated water pipelines. Potential impacts related to all components of the Project were evaluated in the PMP PEIR. The District and the contractor will comply with all applicable best management practices (BMPs) and mitigation measures specified in the PMP PEIR during Project implementation.

In addition, since the Pacheco Conduit is a federally owned facility and thus implementation of the Project would require approval from the Bureau of Reclamation, the project is also subject to National Environmental Policy Act (NEPA) review. As a result, the Bureau of Reclamation prepared an Environmental Assessment (EA) for the Project and a Finding of No Significant Impact (FONSI).

**ATTACHMENTS:**

- Attachment 1: Notice to Bidders
- Attachment 2: Project Delivery Process
- Attachment 3: Map

**UNCLASSIFIED MANAGER:**

Christopher Hakes, 408-630-3796