



# CITY OF HAYWARD

Hayward City Hall  
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## Cover Memo

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**DATE:** May 3, 2016

**TO:** Mayor and City Council

**FROM:** Director of Utilities & Environmental Services

### **SUBJECT**

Water Pollution Control Facility (WPCF) Headworks Rehabilitation Project: Approval of Plans and Specifications, and Call for Bids

### **RECOMMENDATION**

That Council adopts the attached resolution (Attachment I) approving the plans and specifications for the WPCF Headworks Rehabilitation Project and calling for bids to be received on June 7, 2016.

### **BACKGROUND**

The City's WPCF provides treatment for wastewater collected from the City's residential and business communities. The facility treats an annual average flow of eleven million gallons per day (MGD) and meets current requirements to discharge treated effluent to the deep waters of the San Francisco Bay. All of the flow coming to the WPCF passes through the headworks and is conveyed through influent channels with grinders designed to break down large debris prior to pumping to downstream treatment processes. The Headworks Building was originally constructed in 1996 and is an essential facility at the WPCF. Given the location and the function of the headworks, the facility is expected to require major maintenance and overhaul more frequently than other facilities. Funding is approved in FY 2016 and FY 2017 Capital Improvement Program for Headworks Rehabilitation.

A recent structural inspection revealed substantial deterioration of the concrete on the interior deck of the influent channels located in the lower level of the Headworks Building caused by exposure to hydrogen sulfide, a corrosive gas and a common byproduct of sewer collection and conveyance. The protective coatings originally installed in the headworks had deteriorated over the years and in some areas had completely failed leading to substantial corrosion including loss of the cement covering the reinforcing steel in some areas. The Headworks Rehabilitation Project is intended to repair concrete areas that have deteriorated, as well as provide for new concrete coatings and improved ventilation inside the building. In February 2016, staff selected and entered into a professional services agreement with Carollo Engineers for design and engineering services during construction for the Headworks Rehabilitation Project.

### **DISCUSSION**

The Headworks is an essential facility at the WPCF, and periodic repair and maintenance of coating systems in the highly corrosive wet areas of the structure is expected and necessary to extend the life of the facility. Because this project will require both concrete and coating repairs, bypass pumping of all the influent flows around the headworks is required for access to the wet areas. This necessitates the project be completed during the dry season when flows to the WPCF are lower and more predictable. In addition to bypass pumping and structural/coatings repairs, other reliability and safety upgrades are included. These additional elements include replacement of existing corroded piping, improvements to the ventilation system, repair of existing grating and hatch area embedded steel support angles, and replacement of hatches.

The current deterioration is largely related to the location and the confluence of wastewater streams as well as the function of the headworks which produces hydrogen sulfide gas (toxic, odorous, and very corrosive). The existing deck has lasted for approximately twenty years. This project will include design features that will help to extend the useful life of the newly constructed deck.

### ECONOMIC IMPACT

Hayward has both a robust industrial area and a firm commitment to the protection of the environment and to sustainability. Rehabilitating the Headworks is essential to maintaining the ability to treat the City's waste water appropriately. Without a functioning Headworks facility, we not only risk potential sewer overflows in the City, but jeopardize the ability to convey the wastewater to treatment processes downstream. Retrofitting and maintaining existing facilities is essential for environmental protection of the San Francisco Bay and continued economic development in the City.

### FISCAL IMPACT

The estimated project costs are as follows:

<u>Total Project Cost</u>	
Design and Engineering Services During Construction (Consultant)	\$ 275,000
Design Administration - City Staff	25,000
Construction Contract (Estimated)	1,900,000
Administrative Change Orders (Estimated)	150,000
Inspection and Testing (Estimated)	<u>50,000</u>
Total	\$2,400,000

The FY 2016 and FY 2017 Capital Improvement Program (CIP) includes funding for the projects described in the Sewer Replacement Fund (Fund 611). The projects are described in the approved CIP as follows:

Fund	Project No.	Description	Budget
611	TBD	FY17 WPCF Headworks Renewal and Replacement Project	\$1,880,000
611	07660	WPCF Headworks Wetwell Concrete	500,000

611	07661	Evaluation, Repair & Interior Coating	
		WPCF Headworks Ventilation Modifications	<u>150,000</u>
		Total	\$2,530,000

The CIP includes sufficient funds for the WPCF Headworks Rehabilitation Project. Given that the project is scheduled to be awarded in June, ahead of FY 2017, staff will request that funds be appropriated from the fund balance at the time of the request to award the construction project.

**SUSTAINABILITY FEATURES**

*Purchasing:* Consistent with the City’s Environmentally Preferred Purchasing Policy.

The project bidding and award will comply with the City’s Policy.

**PUBLIC CONTACT**

All work will be within the WPCF plant boundary; therefore no public contact is necessary for this project.

**SCHEDULE**

The following schedule has been developed for this project:

Approval of Plans and Specifications and Call for Bids	May 3, 2016
Receive Bids	June 7, 2016
Award of Construction Contract	June 14, 2016
Construction Completion	December 2016

**NEXT STEPS**

If Council approves this request, staff will advertise the project for public bidding. Staff will return to the City Council for award of the construction contract after bids have been received and reviewed.

*Prepared by:* Suzan England, Senior Utilities Engineer

*Recommended by:* Alex Ameri, Director of Utilities & Environmental Services

Approved by:



Fran David, City Manager

Attachments:

Attachment I

Resolution