



CITY OF HAYWARD

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Cover Memo

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DATE: September 10, 2015

TO: Council Sustainability Committee

FROM: Director of Utilities and Environmental Services

SUBJECT

Water Pollution Control Facility (WPCF) Reclaimed Water Project Update

RECOMMENDATION

That the Committee reviews and comments on this report.

BACKGROUND AND DISCUSSION

Staff is planning on constructing a new Recycled Water Treatment and Distribution Facility Project that will provide tertiary treated wastewater for irrigation and other industrial uses. Tertiary recycled water is the highest level of wastewater treatment defined by the State of California (referred to as Title 22). Tertiary treatment requires secondary effluent, which is what the WPCF is currently producing, to go through additional treatment processes including coagulation and filtration followed by a high level of disinfection that results in clean safe water that will allow unrestricted irrigation and industrial use for the City's customers. The City is currently working on obtaining funding from the California State Revolving Fund (SRF) program, and will be hiring a consultant to start the design process in the next few months.

Aside from the Recycled Water Treatment and Distribution Facility Project, the City has an existing reclaimed water system at the WPCF. The reclaimed water system provides filtration and disinfection of the secondary effluent for various uses at the plant. Because of the recent drought, and the need to reduce potable water use this year, staff is working on modifying and expanding the reclaimed water system to provide additional capacity for other City uses such as street sweeping, dust control, and for cleaning sanitary sewers. In addition, additional capacity will be provided for private contractor use upon request. The system was originally installed during the 2006 WPCF Facility Improvements - Phase 1 Project and was designed to supply up to 300 gallons per minute of reclaimed water for various plant uses including supply water for process, wash down, and other general uses. Although there is some spare capacity to deliver reclaimed water to City trucks for such uses as street sweeping and dust control, the system cannot reliably provide excess water on days when heavy maintenance activities are planned and the system is in full demand for cleaning basins and/or tanks. In addition, reliability improvements are needed to ensure the water meets regulatory requirements for hauling and use of reclaimed water by commercial or private entities in accordance with the State requirements.

The existing reclaimed water system consists of a packaged filtration system with three pressure filters

with mixed media, a sodium hypochlorite bleach dosing system which provides disinfection for the filtered water, followed by storage and distribution pumps (Attachment 1 shows the existing facility).

In addition to purchasing a new set of pressure filters to double the system capacity, the project includes installing alarms and monitoring to ensure the system reliably meets disinfection requirements for recycled water. This includes installing a turbidimeter to ensure the filtered water is of high quality, and a chlorine residual analyzer to ensure disinfection is maintained at all times. A truck fill station will be constructed as part of the project.

It is important to note that this system will supply water exclusively for the City's use and limited use by contractors as it is designed to meet the treatment standards required that allow for certain restricted uses only (i.e., where exposure to the public is minimized). The facility is not designed for residential uses like the Dublin San Ramon recycled water facility which has been in the news because that requires a much higher level of treatment that results in tertiary recycled water for unrestricted use. The City's future Recycled Water System will produce that kind of water. That project has completed feasibility and planning stages, and environmental documentation. Staff is in the process of securing funding for the project. It is anticipated that the project could go on-line within the next few years.

FISCAL AND ECONOMIC IMPACTS

The estimated cost of this project is approximately \$250,000. There are adequate funds in the Wastewater Fund working capital balance to pay for the project. There will be no impact on the General Fund. Some or all of the cost may be recovered through pricing of reclaimed water. There will be no immediate impact on sewer rates related to this project. Contractors working on projects in the City could benefit from lower water cost for construction water when using the reclaimed water.

Prepared by: Suzan England, Senior Utilities Engineer

Recommended by: Alex Ameri, Director of Utilities and Environmental Services

Approved by:



Fran David, City Manager

Attachments:

Attachment I

Reclaimed Water System Pictures