



DATE: December 18, 2018

TO: Mayor and City Council

FROM: Director of Utilities & Environmental Services

SUBJECT: Adopt a Resolution Approving the Plans and Specifications for Phase I of the Recycled Water Treatment Facility Project and Call for Bids

RECOMMENDATION

That Council adopts the attached resolution approving the plans and specifications for the Recycled Water Treatment Facility Project – Phase I and calling for bids to be received on February 5, 2019.

SUMMARY

The City is implementing the Recycled Water Project, which will provide a locally sustainable and drought-proof supply of recycled water to customers for irrigation and industrial uses. In December 2017, Council authorized staff to proceed with design of a City-owned recycled water treatment facility to meet the initial demand for the City's Recycled Water Project. The proposed City-owned recycled water treatment facility would be a package membrane treatment system capable of producing up to 500,000 gallons per day of disinfected tertiary treated recycled water. Design of the treatment facility is almost complete, and the contract documents will be ready to advertise for public bidding on January 3, 2019. Staff is requesting Council's approval of plans and specifications, and to call for bids to be received on February 5, 2019.

BACKGROUND

Construction of the City's Recycled Water Storage and Distribution System Project (Recycled Water Project) is well underway. The project includes construction of a storage tank and pump station at the City's Water Pollution Control Facility (WPCF) and installation of approximately nine miles of distribution pipelines. The initial phase of the project is anticipated to deliver an estimated 290 acre-feet per year, or about 260,000 gallons per day (gpd), of disinfected tertiary treated recycled water for parks, schools, businesses, and industrial parks within a three-mile radius of the WPCF. Once the initial distribution pipelines and storage system are constructed, there may be opportunities to expand the system and include more customers in future phases.

Until last year, provisions for a City-owned recycled water treatment facility were not included in the project, as staff anticipated obtaining recycled water from the Russell City

Energy Corporation, LLC's (RCEC) Recycled Water Facility, located adjacent to the WPCF. However, due to lack of timely responses from RCEC and concerns that a supply agreement could not be implemented with RCEC in a timely manner, on December 12, 2017, Council authorized staff to move forward with design of a City-owned, 500,000 gpd recycled water treatment facility to meet the demand of the first phase of the City's project, in parallel with continuing efforts to reach agreement with RCEC. Both the RCEC and City-owned supply options were previously analyzed and considered in the environmental documentation prepared for the Recycled Water Project. Funding for the treatment facility is included as a separate project in the Ten-year Capital Improvement Program.

The Phase I recycled water treatment facility would be a package membrane treatment system, capable of further treating the WPCF's secondary effluent to meet disinfected tertiary recycled water treatment standards set by the State for unrestricted irrigation uses. The treatment facility would be sited at the WPCF, adjacent to the future recycled water storage tank and pump station, currently under construction. The facility would consist of a feed pump station, a containerized membrane treatment system, and chlorine disinfection utilizing the recycled water storage tank to meet disinfection requirements.

On July 17, 2018, Council awarded a contract for procurement of the membrane treatment system equipment so final design documents can be prepared for installing the pre-selected equipment. This approach reduces time and the risk of change orders during construction. The procurement contract requires work to be completed in two stages. The first stage requires the membrane system supplier to provide technical information and drawings needed for the City to complete final design of the recycled water treatment facility. The second stage includes fabrication and furnishing of the membrane treatment system equipment. The procurement contract provisions require the membrane system supplier to become a subcontractor or supplier to the construction General Contractor designated by the City to purchase and install the membrane treatment system equipment.

DISCUSSION

Preparation of construction plans and specifications for the recycled water treatment facility are scheduled to be completed and ready to advertise by January 3, 2019. The bid documents include the civil, mechanical, electrical, and instrumentation work needed to install the membrane treatment equipment. The procurement contract for the membrane treatment equipment will be included in the construction plans and specifications and assigned to the construction General Contractor, who will be required to purchase and install the membrane treatment system equipment as part of the construction contract.

Since last December, there has been no progress with RCEC on a recycled water supply agreement. On November 26, 2018, staff provided the Council Sustainability Committee with an update on the Recycled Water Project. The Committee concurred with staff's recommendation to proceed with construction of the City-owned recycled water treatment facility option to ensure a supply for the initial phase of the City's Recycled Water Project.

Construction of the recycled water treatment facility is on the critical path for implementing the Recycled Water Project. The current schedule anticipates that notice to proceed for construction of the recycled water treatment facility would be issued in March 2019. Construction is anticipated to take nine months and be completed by December 2019. Recycled water deliveries to customers are anticipated to begin in spring 2020.

ECONOMIC IMPACT

The economic impact of the Recycled Water Project on customers will, to some extent, depend on the total costs to implement the City’s Recycled Water Project, which includes the capital and operating costs for the storage and distribution system and recycled water treatment facility. To the extent that the project is partially funded by grants, the overall cost impact to customers will be reduced. As part of the City’s upcoming budget and rate setting process, staff will recommend a rate structure that would provide a balance between recovering costs over the life of the project and offering an incentive to customers who are able to receive recycled water. The community as a whole will benefit from this project through greater diversity and reliability of water supplies, especially during periods of drought.

FISCAL IMPACT

The total estimated costs for the Recycled Water Treatment Facility Project – Phase I are as follows:

Design and Engineering Services		
Construction Plans and Specifications		\$296,000
Equipment Drawings (Stage I)		\$85,575
	Subtotal	\$381,575
Construction Contract		
Equipment Fabrication (Stage II)		\$882,000
Construction/Installation (estimate)		\$856,000
	Subtotal	\$1,738,000
Construction Management and Inspection		\$100,000
Total Project Cost (estimate)		\$2,219,575

The adopted FY 2019 Capital Improvement Program includes \$2,300,000 for the Recycled Water Treatment Facility Project – Phase I. The City-owned recycled water treatment facility will not utilize any General Fund monies.

Total Phase I Recycled Water Project Cost

The total estimated capital cost to construct all facilities needed for Phase I of the Recycled Water Project, including the City-owned treatment facility, is shown in Table 1. The total cost for treatment, storage, and distribution facilities is currently estimated at \$28,860,128.

**Table 1. Phase I Recycled Water Project Capital Cost Estimate
(with City-owned Treatment option)**

Facility	Estimated Cost
Recycled Water Storage and Distribution System Project (Project No. 07507)	
Administration, Planning and Design	\$ 2,820,190
Construction	
Whitesell Pipeline <i>(completed in 2015)</i>	\$ 513,648
Storage Tank and Pump Station <i>(currently under construction)</i>	\$ 5,281,715
Distribution System <i>(currently under construction) [estimated]</i>	\$ 16,000,000
Customer Retrofits <i>(scheduled to be advertised in 2019)</i>	\$ <u>2,025,000</u>
Total (rounded to nearest thousand)	\$ 26,640,553
Recycled Water Treatment Facility Project – Phase I (Project No. 07710)	\$ 2,219,575
Total Estimated Phase I Recycled Water Project Cost	\$ 28,860,128

The Ten-Year Capital Improvement Program (CIP) includes \$27,811,000 for the Recycled Water Storage and Distribution System Project and \$2,300,000 for the Recycled Water Treatment Facility Project, for a total funding amount of \$30,111,000 for Phase I of the Recycled Water Project. The CIP budget for the Recycled Water Storage and Distribution System Project is sufficient and the cost to construct the distribution system is currently anticipated to come in under budget due to the substantial acceleration in completion date. (A lower, but still conservative figure is shown for the distribution system in Table 1.) The current estimate for the Recycled Water Treatment Facility Project of \$2,219,575 is below the CIP budgeted amount of \$2,300,000. The Recycled Water Project will not utilize any General Fund monies.

The City has also secured outside grant funding and low interest loans to help finance the Recycled Water Storage and Distribution System Project. In May 2017, the City executed a financing agreement with the State Water Resources Control Board for \$5.8 million in California Proposition 1 grant funding and \$13.5 million in the form of a low-interest Clean Water State Revolving Fund loan. The City and the State are in the process of executing an amendment to the financing agreement to increase the amount of the low-interest loan from \$13.5 million, which had been previously secured for the project, to \$21.2 million, for a total financial assistance package of \$27 million.

STRATEGIC INITIATIVES

Implementation of the Recycled Water Project supports the Tennyson Corridor Strategic Initiative. The purpose of this initiative is to develop an attractive, cohesive, thriving Tennyson Corridor through thoughtful engagement with residents, businesses and community partnerships. There are two sites located in the Tennyson Corridor that are proposed to be connected to the recycled water system, and would therefore support the following goal and objectives:

Goal 3: Improve Community Appearance

Objective 1: Enhance landscaping

Objective 3: Decrease blight

The use of recycled water will help create attractive outdoor spaces in the Tennyson Corridor. Since recycled water is a sustainable and drought-proof source of supply, customers will be able to maintain their landscaping during water supply shortages when drinking water supplies are limited.

SUSTAINABILITY FEATURES

The use of recycled water will reduce the demand for drinking water and improve the reliability and availability of drinking water, while providing a sustainable and drought-proof water supply for some irrigation uses. It will also reduce the volume of wastewater and associated nutrients and residual pollutants discharged to San Francisco Bay, which is required to meet increasingly stringent discharge regulations.

PUBLIC CONTACT

The City completed an environmental review of the Recycled Water Project in October 2014 and a draft Initial Study/Mitigated Negative Declaration (IS/MND) was circulated for a thirty-day public review from October 24, 2014 through November 24, 2014. Considering the potential uncertainties with the RCEC option, the IS/MND included environmental review of both obtaining a recycled water supply from RCEC and construction of a City-owned recycled water treatment facility. The IS/MND was adopted on December 16, 2014, incorporating all the comments that were received.

On November 26, 2018, staff provided the Council Sustainability Committee with an update on the Recycled Water Project. The Committee concurred with staff's recommendation to proceed with construction of the City-owned recycled water treatment facility option to ensure a supply for the initial phase of the City's Recycled Water Project.

NEXT STEPS

Following Council approval, 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. The following schedule has been developed for this project:

Receive Bids	February 5, 2019
Award Construction Contract	March 12, 2019
Construction Completion	December 31, 2019

Prepared by: Feng Chang, Senior Utilities Engineer

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

Approved by:



Kelly McAdoo, City Manager