



**DATE:** March 20, 2018

**TO:** Mayor and City Council

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

**SUBJECT** Recycled Water Storage and Distribution System Project, Project No. 07507: Approval of Addendum Nos. 1 through 3 and Award of Pump Station and Storage Tank Construction Contract; Approval of Addendum Nos. 1 through 4 and Award of Distribution Pipelines System Construction Contract; Adoption of Resolutions to apply for Increased Funding through the State Revolving Fund Loan Program; and Appropriation of Additional Funds

**RECOMMENDATION**

That Council adopts the attached resolutions:

1. Approving Addendum Nos. 1 through 3 to the plans and specifications and awarding a contract to Myers and Sons Construction, LP to construct the recycled water pump station and storage tank, in an amount not to exceed \$4,793,000; and
2. Approving Addendum Nos. 1 through 4 to the plans and specifications and awarding a contract to Mountain Cascade, Inc., to construct the recycled water pipelines distribution system, in an amount not to exceed \$15,963,000; and
3. Authorizing the City Manager to apply to the State Water Resources Control Board to increase the amount of funding for the Recycled Water Storage and Distribution System Project through the Clean Water State Revolving Fund (SRF) loan program; and
4. Approving a reimbursement resolution in support of a revised SRF loan application; and
5. Appropriating additional funds from the Sewer Improvement Fund for the Recycled Water Storage and Distribution System Project.

## **SUMMARY**

The City's Recycled Water Storage and Distribution System Project consists of constructing a storage tank and pump station at the City's Water Pollution Control Facility (WPCF) and installing distribution pipelines and customer connections to deliver recycled water to customers for irrigation and industrial uses. The project is being constructed under multiple contracts. On December 12, 2017, Council approved the plans and specifications for 1) the pump station and storage tank and 2) approximately eight miles of pipelines, and called for separate bids to be received on February 15, 2018.

Staff is requesting Council approval to award two construction contracts. The construction contract for the recycled water pump station and storage tank will be \$4,793,000, which includes the low bid of \$4,543,000 and a \$250,000 administrative change order contingency for unforeseen changes during construction. The construction contract for the distribution pipelines will be \$15,963,000, which includes the low bid of \$14,642,217.50 and an administrative change order contingency budget of \$1,320,782.50.

## **BACKGROUND**

The City's current Capital Improvement Program includes the Recycled Water Storage and Distribution System Project (Recycled Water Project), which would provide a locally sustainable and drought-proof supply of recycled water to customers for irrigation and industrial uses. The project includes construction of a one-million-gallon storage tank and pump station at the City's WPCF and installing up to a total of ten miles of distribution pipelines and customer connections. The initial phase of the project includes installation of approximately nine miles of distribution pipelines and 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. Construction of an additional one-mile of pipeline down West Winton Avenue is being deferred until additional recycled water customers can be identified. Once the initial storage and distribution pipelines are constructed, there may be opportunities to expand the system and include more customers in future phases.

Until recently, the provision for a recycled water treatment facility had not been included in the project planning 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 concerns that a supply agreement cannot be implemented with RCEC in a timely manner, on December 12, 2017, Council authorized staff to move forward, in parallel, 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. Funding for the installation of a City-owned recycled water treatment facility is included as a separate project in the Ten-year Capital Improvement Program. Staff anticipates completing final design of the City-owned recycled water treatment facility by fall 2018 and asking Council to make a final decision on whether to implement the City-owned recycled water supply option in late 2018.

The Recycled Water Storage and Distribution Project will be constructed under multiple contracts, as described below:

- Whitesell pipeline: Approximately one mile of 8-inch diameter pipeline was installed in Whitesell Street in 2015, between Route 92 and Depot Road, as part of the 880/92 Route Reliever Route Project that realigned Whitesell Street.
- Pump station and storage tank and pipelines: Separate bid documents were prepared for 1) the pump station and storage tank, and 2) approximately eight miles of the distribution pipelines system. The work was separated into two bid packages since each portion of the project was substantial enough to be bid separately and the construction work requires different expertise. Staff believed that separating the work into two contracts would allow more contractors to bid on the contracts, which could result in more competitive bids for the project.
- Customer retrofits: Staff is currently working with customers on the design of customer retrofits. Customer retrofits involve making modifications to a customer's on-site piping to connect the customer to the new recycled water distribution pipelines system and maintain complete separation of the recycled water and drinking water systems at all times. Staff anticipates requesting Council approval of bid documents for customer retrofits in late 2018 or early 2019, after a substantial portion of the distribution pipelines system has been constructed.

Design of the pump station and storage tank and approximately eight miles of distribution pipelines was completed in December 2017. On December 12, 2017, Council approved the plans and specifications and called for bids to be received on February 15, 2018.

## **DISCUSSION**

### Pump Station and Storage Tank

Following Council approval of the plans and specifications, the recycled water pump station and storage tank was advertised for construction. During the bidding phase, three addenda were issued to provide minor clarifications to the plans and specifications. On February 15, 2018, the City received six (6) bids ranging from \$4,543,000 to \$5,925,800 for the construction of the pump station and storage tank. A summary of the bids received is attached. Myers and Sons Construction, LP submitted the low bid in the amount of \$4,543,000, which is approximately 7% above the Engineer's estimate of \$4,247,000. Given that there were six bids received and the low bid is reasonably close to the Engineer's estimate, staff considers the low bid submitted by Myers and Sons Construction, LP to be a fair and competitive bid.

## Distribution Pipelines System

Following Council approval of the plans and specifications, approximately eight miles of the distribution pipelines system was advertised for construction. During the bidding phase, four addenda were issued to provide minor clarifications to the plans and specifications. On February 15, 2018, the City received six (6) bids ranging from \$14,642,217.50 to \$18,280,000. A summary of the bids received is attached. Mountain Cascade, Inc., submitted the low bid in the amount of \$14,642,217.50, which is approximately 12% below the Engineer's estimate of \$16,680,000.

### **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 pipelines, and the cost to either obtain recycled water from RCEC, or construct, operate, and maintain a City-owned recycled water treatment facility. To the extent that the project is partially funded by grants, the overall cost impact to customers will be reduced. Once the costs are finalized and funding sources are in place, staff will recommend a rate structure that would provide a balance between recovering costs over the life the project and offering an incentive to customers who are able to receive recycled water. The community 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 Storage and Distribution System Project are shown in Table 1. The total project cost includes the two separate contracts to construct (1) the recycled water pump station and storage tank and (2) approximately eight miles of the distribution pipelines system. The construction contract for the recycled water pump station and storage tank will be \$4,793,000, which includes Myers and Sons Construction, LP's low bid of \$4,543,000, and a \$250,000 administrative change order contingency for unforeseen changes during construction. The construction contract for the distribution pipelines will be \$15,963,000, which includes Mountain Cascade, Inc.'s low bid of \$14,642,217.50 and an administrative change order contingency budget of \$1,320,782.50.

**Table 1. Recycled Water Storage and Distribution System Project Capital Cost Estimate**

| Task  | Estimated Cost       |
|---|----------------------|
| Administrative (City staff)   | \$ 500,000           |
| Planning and Design (Consultant)  | \$ 2,320,191         |
| Construction  |                      |
| Whitesell Pipeline <i>(construction completed in 2015)</i>                | \$ 513,648           |
| <b>Storage Tank and Pump Station</b>                                      |                      |
| Construction contract   | \$ 4,793,000         |
| Construction management and inspection (City Staff)                       | \$ 243,000           |
| Specialty inspection (Consultant)   | \$ 120,000           |
| Engineering services during construction (Consultant)                     | \$ 108,700           |
| <b>Distribution Pipelines System</b>                                      |                      |
| Construction Contract   | \$ 15,963,000.00     |
| Construction management and inspection (City Staff)                       | \$ 700,000           |
| Specialty inspection and testing (Consultant)                             | \$ 300,000           |
| Biological resources monitoring   | \$ 20,000            |
| Traffic control plans and traffic loop repairs                            | \$ 150,000           |
| Engineering services during construction (Consultant)                     | \$ 54,400            |
| Customer Retrofit Construction <i>(to be advertised late 2018)</i>        |                      |
| Customer conversions (estimated)  | \$ 1,000,000         |
| Backflow prevention upgrade (estimated)                                   | \$ 750,000           |
| Construction management, inspection, and training (Consultant)            | \$ 275,000           |
| Subtotal Construction   | \$ 24,990,748        |
| <b>Total Estimated Capital Project Cost (rounded to nearest thousand)</b> | <b>\$ 27,811,000</b> |

As shown in Table 1, the current total estimated capital cost for planning, design, and construction of the project is \$27,811,000. The current Ten-Year Capital Improvement Program (CIP) includes a budget of \$19,330,000 for the Recycled Water Storage and Distribution System Project. The CIP budget was based on a preliminary design estimate prepared for the City’s application for State funding, which did not include prior costs that are ineligible for financing, such as grant-funded planning studies and the installed pipeline in Whitesell Street. The current total estimated capital cost exceeds the preliminary design estimate by \$8,481,000. Expected accuracy for a preliminary design stage estimate typically ranges from 30% below or above the actual cost. The current estimate in this case is approximately 44% higher than the amount budgeted in the CIP.

The December 12, 2017, Council staff report identified the potential shortfall in budget and included a discussion of the increased project costs. As described in the December 12 report, certain added costs were not previously identified or adequately defined in the preliminary design estimate. These additional costs included accounting for the one-mile pipeline that has

already been installed in Whitesell Street, refinements in the project design to address seismic concerns and avoid utility conflicts, costs for biological surveys and cultural resources monitoring to comply with the Mitigation Monitoring and Reporting Program, and traffic restrictions, which limit the contractor's work hours and construction methods. In addition, staff identified that the current bidding climate has been affected by local and national disasters that have increased the demand for raw materials and labor, which has resulted in higher bids for public works projects.

Staff is requesting that adequate funds be appropriated from the Sewer Capital Improvement Fund balance in an amount of \$8,481,000 to cover the increased project costs. There will be no impact to the General Fund. Sufficient funds are available in the fund balance.

The City has secured \$19,365,000 in financial assistance from the State Water Resources Control Board, of which \$5,831,350 is being provided in the form of a grant (principal forgiveness) funded by California Proposition 1 (Water Bond of 2014) and the remaining \$13,533,650 is in the form of a low interest loan from the Clean Water State Revolving Fund program. Staff plans to apply to increase the amount of financial assistance to cover the increased project costs. The State has indicated that there is no additional grant funding available, but the City can apply to increase the amount of the low interest loan, provided that the City submits the necessary assurances and commitments to pay back the higher loan amount. The State is also requiring that the City adopt revised authorizing and reimbursement resolutions to reflect the increased funding the City is requesting from the State to finance the project.

Staff anticipates revising the total financial assistance request from the State from \$19,365,000 to an estimated \$27,100,000, which would increase the amount of the low interest loan from \$13,533,650 to \$21,268,650. Certain project costs, such as prior construction costs and planning costs that were grant funded, are not eligible to be included in the revised application for financial assistance. The debt service is estimated to be in the range of \$824,000 annually and will be obligated to the Wastewater Enterprise Fund.

The City is also continuing to pursue federal grant funding through the Bureau of Reclamation's Title XVI Water Recycling and Reuse Program. Any additional grant funding received would be used to reduce the loan amount from the State.

## **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 and increase 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 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 the Council adopted an Initial Study/Mitigated Negative Declaration on December 16, 2014, incorporating all comments received. The Recycled Water Ordinance, that includes mandatory provisions for use of recycled water for appropriate irrigation and industrial uses, was introduced at a public hearing of the City Council on December 1, 2015 and adopted on December 15, 2015. Prior to the adoption of the Recycled Water Ordinance, a customer meeting was held on November 20, 2015, at City Hall to inform customers about the project.

Prior to and during construction of the distribution pipelines, notices will be provided to affected residents, property, and business owners to inform them of the nature and purpose of the work, potential impacts, work schedule and City contact for additional information. In addition, staff will separately contact any large employers and schools that may be affected by the project and coordinate work to minimize impact.

Staff is also working with potential customers to answer questions on the use of recycled water and to assist with design of on-site piping modifications that would be required to connect a customer to the new recycled water distribution system.

## **NEXT STEPS**

If Council approves the award of contracts, staff would proceed with executing and issuing notice to proceed for both contracts. The following schedule has been developed for this project:

|                               |                |
|-------------------------------|----------------|
| Award Construction Contracts  | March 20, 2018 |
| Notice to Proceed             | April 13, 2018 |
| Construction Completion       |                |
| Storage Tank and Pump Station | April 2019     |
| Distribution Pipelines System | December 2019  |

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*Approved by:*



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Kelly McAdoo, City Manager