DATE: July 17, 2018

TO: Mayor and City Council

FROM: Director of Utilities & Environmental Services

SUBJECT: Recycled Water Storage and Distribution System Project: Authorization to Execute an Amendment to Professional Services for Recycled Water Customer Retrofit Conversions to Increase the Contracted Amount for Additional Services

RECOMMENDATION

That Council adopts the attached resolution authorizing the City Manager to amend the professional services agreement with HydroScience Engineers, Inc., to increase the contract amount by $118,000, to a not to exceed amount of $978,000, to provide additional recycled water support services.

SUMMARY

The City is implementing 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 Recycled Water Project includes the permitting, design, and construction of irrigation system retrofits necessary to convert customers from the City's potable drinking water system to the new recycled water system. This specialized work requires extensive knowledge and experience with recycled water regulations and customer irrigation systems. On March 20, 2017, the City and HydroScience, Inc. (HydroScience) entered into a professional services agreement (PSA) for HydroScience to provide engineering, design, and construction support services to retrofit customer sites to use recycled water. Staff is requesting Council approval to increase the contract amount with HydroScience by $118,000, to a not to exceed amount of $978,000, to provide additional recycled water support services.

BACKGROUND

The City's Recycled Water Storage and Distribution System Project (Recycled Water 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 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. 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 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 for Phase I of the Recycled Water Project is included as a separate project in the ten-year Capital Improvement Program.

The Recycled Water Project includes the permitting and design of irrigation system retrofits necessary to convert customers from the City's potable drinking water system to the new recycled water system. There are a significant number of supporting tasks that must also be completed to comply with State regulations for use of recycled water, including conducting site visits, properly training site supervisors on the use of recycled water, and testing and inspecting the installed customer retrofits to ensure complete separation of the recycled water and potable drinking water systems. The field work includes retrofitting the piping on a customer's property for the site to be able to use recycled water. This specialized work requires extensive knowledge and experience with recycled water regulations and customer irrigation systems.

On January 6, 2017, a request for proposals was issued to qualified consulting firms to assist with the permitting, design, and other related tasks required to convert customers to recycled water. On February 28, 2017, Council approved execution of an agreement with HydroScience in an amount not to exceed $710,000. On March 20, 2017, the City and HydroScience entered into a PSA for HydroScience to provide engineering, design, and construction support services to retrofit customer sites to use recycled water.

On September 19, 2017, Council approved an amendment to increase the contract amount with HydroScience by $150,000 to a not to exceed amount of $860,000, to provide additional recycled water support services. These additional services were not anticipated when the PSA was negotiated and include developing the City's guidelines for permitting recycled water customers, performing additional customer outreach, design review and coordination with the storage and pump station design team, and preparation of a grant application. The City and HydroScience executed an amendment to the PSA on October 11, 2017.

DISCUSSION

The site retrofit work requires close coordination with customers, regulatory agencies, and the consultant designing the storage and distribution system. Staff is finding that the level of effort required to work with regulatory agencies and customers to convert sites from drinking water to recycled water is higher than originally anticipated because the program and process

is new both for staff and potential recycled water customers.

Staff has requested that HydroScience provide additional related support services, not anticipated or included when the PSA and the October 11, 2017 amendment were executed, including:

- **Updates to the Title 22 Engineering Report**. As previously discussed, 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. Staff is currently working with regulatory agencies to revise the City's permitting application to include the City-owned recycled water treatment facility as an additional source of supply for the project. This effort requires updating the City's Engineering Report in compliance with Title 22 of the California Code of Regulations (Title 22). Title 22 requirements are stringent water quality standards set by the State to ensure the safe production, distribution and use of recycled water in California.

- **Retrofit agreement support**. Prior to the start of construction, the City requires customers to sign an agreement allowing the City's contractor to retrofit the site to use recycled water in exchange for the customer committing to use recycled water in accordance with the City's guidelines for recycled water use. Staff has asked HydroScience to assist with obtaining signed retrofit agreements from customers since HydroScience is already working directly with customers on site surveys and designs.

- **Additional Site Retrofit Designs**. The PSA with HydroScience was negotiated assuming that site retrofit designs would be prepared for approximately 35 customer sites. There are currently thirty customer sites that have been determined as feasible to use recycled water. However, many of these sites have multiple irrigation systems, which have resulted in multiple retrofit designs per site. HydroScience has currently completed approximately forty site retrofit designs within the current budget. The additional budget would be for an additional two retrofit site designs that may be needed.

- **Additional construction support services**. This additional budget would cover the construction services associated with the additional site retrofit designs. The budget also includes a ten percent increase in the construction support services to account for the additional customer support that is anticipated to be needed during construction. Based on the site surveys completed, staff has learned that a number of customers have irrigation systems that need repair. By signing the retrofit agreement, the customer agrees to repair their irrigation system prior to being connected to the recycled water system. Staff anticipates that multiple site visits and tests may be required to ensure compliance with regulatory requirements before certain customers can be connected to the recycled water system.

- **Extended contract duration.** The PSA for this project assumed that retrofit design would occur during 2017, and that retrofit construction would occur in 2018. Construction of the distribution system pipelines is currently scheduled to be complete in January 2020. Construction of customer retrofits cannot begin until after the pipelines are constructed. Therefore, the construction schedule for customer retrofits will need to be pushed out to early 2020, or approximately 1.5 years past the original schedule. A budget adjustment to account for the increase in HydroScience's hourly rates due to the extended contract duration is proposed.

- **Future customer evaluations**. HydroScience would provide support to staff, as-needed, to address questions from customers on the requirements for designing sites to accommodate future recycled water use.

A breakdown of the recommended increase in budget is shown in Table 1. Staff is requesting a total budget increase of $118,000 for additional support services and a total not to exceed contract amount of $978,000.

Table 1. Proposed HydroScience Contract Increase

Additional Support Services	Estimated Cost
Updates to Title 22 Engineers Report	$15,000
Retrofit agreement support	$12,000
Additional site retrofit designs	$13,000
Additional construction support services	$47,000
Extended contract duration	$21,000
Future customer evaluations	$10,000
TOTAL	**$118,000**

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 system, 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 proposed increase to the HydroScience contract will have a very small impact on the future recycled water rate. 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 Recycled Water Project, which includes the work being performed by HydroScience, is included in the current Ten-Year Capital Improvement Program (CIP) with total funding of $27.8 million. The CIP also includes an additional $2.3 million in funding for the installation of a City-owned recycled water treatment facility for Phase I of the Recycled Water Project as a separate project. The total cost of the Recycled Water Project and City-owned recycled water treatment facility is estimated to be approximately $30 million.

The City has secured $5.8 million in California Proposition 1 grant funding and is currently working with the State to increase the amount of the low-interest Clean Water State Revolving Fund loan from $13.5 million to $21.2 million to help finance the project. The Recycled Water Project will not utilize any General Fund monies.

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 residual pollutants discharged to San Francisco Bay, which is required to meet increasingly stringent discharge regulations.

PUBLIC CONTACT

The City and HydroScience are working closely with potential recycled water customers, including the Hayward Area Parks and Recreation District (HARD) and the Hayward Unified

School District (HUSD), to complete site surveys and prepare retrofit designs. As discussed previously, this close coordination with customers will continue throughout the construction, testing, and permitting phase. HydroScience will also be implementing educational efforts to train site supervisors, including City staff, on the use of recycled water to ensure a smooth transition.

NEXT STEPS

If Council approves the $118,000 increase in the contract amount with HydroScience, staff will increase the budget with HydroScience to a not to exceed amount of $978,000 for additional recycled water support services.

Prepared by: Jan Lee, Water Resources Manager

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

Approved by:

Kelly McAdoo, City Manager