



RIVERSIDE PUBLIC UTILITIES

BOARD OF PUBLIC UTILITIES

DATE: JUNE 13, 2022

SUBJECT: 2022 NON-POTABLE AND RECYCLED WATER MASTER PLAN PROJECT - APPROVE A PROFESSIONAL SERVICES AGREEMENT FROM RFP 2030 WITH CAROLLO ENGINEERS, INC. IN THE AMOUNT OF \$239,212 AND APPROVE WORK ORDER NO. 2115050 FOR THE 2022 NON-POTABLE AND RECYCLED WATER MASTER PLAN FOR A TOTAL PROJECT COST OF \$300,000

ISSUE:

Consider approving a Professional Services Agreement from Request For Proposals (RFP), No. 2030 with Carollo Engineers, Inc., of Riverside, California, in a not-to-exceed amount of \$239,212 for the 2022 Non-Potable and Recycled Water Master Plan; and approving the capital expenditure for Work Order No. 2115050 for a total project cost of \$300,000.

RECOMMENDATIONS:

That the Board of Public Utilities:

1. Approve a Professional Services Agreement from RFP No. 2030 for the 2022 Non-Potable and Recycled Water Master Plan with Carollo Engineers, Inc., of Riverside, California, in a not-to-exceed amount of \$239,212;
2. Approve the capital expenditure for Work Order No. 2115050 in the amount of \$300,000 which includes all costs for the preparation of the 2022 Non-Potable and Recycled Water Master Plan; and
3. Authorize the City Manager, or designee, to execute the Professional Services Agreement with Carollo Engineers, Inc., including making minor and non-substantive changes in accordance with all purchasing policies.

COMMITTEE RECOMMENDATION:

The Water Committee met on February 9, 2022, with Chair Cherney and Members Crohn, Melendez and Wohlgemuth present, to consider receiving an update on the proposed 2021 Non-Potable and Recycled Water Master Plan and recommend staff finalize award of contract recommendation and present to the Board of Public Utilities. After discussion the Committee unanimously voted to request staff finalize award of contract recommendation and present to the Board of Public Utilities.

BACKGROUND:

The Importance of Recycled Water, City Ordinance and State Regulations

Recycled water is a local, drought-proof resource that offers near- and long-term benefits in diversifying water supplies and offsetting the use of potable water. Tertiary-treated recycled water is produced by the City of Riverside Public Works Department's Regional Water Quality Control Plant (RWQCP), and most of this recycled water is required by the 1969 Orange County Judgment to be discharged into the Santa Ana River. A small portion of the remaining water is currently distributed through the City of Riverside Public Utilities' (RPU)'s existing recycled water system for irrigation use. Currently, recycled water uses account for less than 0.2% of RPU's total water supply portfolio. The City's existing recycled water system includes recycled water distribution pipelines in Jurupa Avenue and Van Buren Boulevard, and pipelines within Jackson Street, Magnolia Avenue, and Monroe Street, north of Lincoln Avenue.

Under the Recycled Water Irrigation Plumbing Ordinance (Ordinance 14.28.040), which was adopted by City Council on September 16, 2008, RPU is required to update its Water Recycling Master Plan not less often than every five years. While RPU has investigated opportunities to implement a recycled water system for over 25 years, only a handful of recycled water projects have been realized due in large part to the relatively high cost of recycled water projects compared to other water resource projects. Consequently, the master planning of the recycled water system has been done on a sporadic basis and has consisted of consultant-performed master plans along with in-house, staff-prepared planning reports to evaluate short-term capital recycled water projects.

In the past decade, however, water supplies have grown more limited and more expensive, as seen in the changes within the context of water supply at the local and statewide level: the Drought State of Emergency (Executive Order B-17-2014), State legislation enacted in 2018 implementing the Governor's Executive Order on Making Water Conservation a California Way of Life (Executive Order B-37-16), decreasing water levels in the Bunker Hill groundwater basin that RPU produces the majority of its water from, and the increased state regulation of chemical contaminants. Furthermore, California Senate Bill No. 555 (approved by the Governor on October 9, 2015) requires that all retail water suppliers reduce water use while developing water loss management, and California Assembly Bill No. 574 (approved by the Governor on October 6, 2017) sets a goal of doubling the amount of recycled water production in the state from years 2020 to 2030. In this new environment, recycled water has emerged as one of four key components to ensuring stability, resiliency, and future sustainability of the City of Riverside's water supply, with the other three components being conservation, protection of local water quality and supplies, and investment in stormwater capture.

In addition to being a water supply resource, recycled water over the past years has been increasingly valued for its role in environmental stewardship and in supporting the City's 2012 Green Action Plan and City Council's priorities as identified in past workshops and summarized in the Envision Riverside 2025 Strategic Plan adopted by the City Council on October 20, 2020. Under Strategic Priority 4 – Environmental Stewardship, Goal 4.2 promotes the advancement of water reuse to ensure safe, reliable, and affordable water to the community.

With these changes RPU needs to reconceptualize and comprehensively evaluate the potential opportunities for expanding the use of its recycled water resources in addition to non-potable sources of water, such as recycled water and non-potable groundwater to augment the City's water supply portfolio and support the environment. Completion of a non-potable and recycled

water master plan will establish direction for future non-potable and recycled water infrastructure development for both the near- and long-term planning horizons. While some of the past recycled water planning studies have been performed by staff, RPU is seeking a comprehensive evaluation of its non-potable and recycled water resources and plans to expand the opportunities beyond what has already been studied. The independent consultant to prepare the 2022 Non-Potable and Recycled Water Master Plan will be responsible to do that.

Recycled Water’s Role in RPU’s Future Water Supply

RPU has developed estimates of the future beneficial uses of recycled water from the RWQCP. Recycled water is an ideal resource that can be utilized to support environmental uses such as the City’s nature-based assets including trees in City parkways and medians; landscaping at parks, and academic and commercial institutions; other urban forest resources; and local tributaries in the development of new riparian habitat for endangered species native to the Santa Ana River, such as the Santa Ana Sucker.

Achieving these uses will depend on developing future projects to expand the recycled water distribution infrastructure. Some of these recycled water infrastructure projects include the Jackson Street and Arlington Avenue Pipelines as well as the Riverside Habitat, Parks, and Water Project (RHPWP). The projected values for future beneficial use are dependent on the completion of these infrastructure projects.

Assuming these projects will be implemented by the year 2030, future anticipated recycled water use is projected to increase by about 13,000 acre-feet per year, comprising approximately 12% of the City’s future water supply portfolio, as shown in the table on the next page taken from the City’s 2020 Urban Water Management Plan.

Resource	2020	2025	2030	2035	2040	2045
Potable Water	81,197	85,012	87,383	89,840	92,387	95,027
Recycled Water	141	5,700	13,420	13,420	13,420	13,420
Total Water	81,338	90,712	100,803	103,260	105,807	108,447

Recycled Water’s Role in Sustainability and the One Water Concept

With existing traditional potable water supplies growing more limited due to changes in climate, new regulations, increased demands and reductions in local and imported water direct use or groundwater recharge, the City of Riverside, along with other municipalities, must look to other previously overlooked resources to augment their water supply portfolios. Such resources include recycled water and non-potable water supplies such as non-potable groundwater. Incorporation of these resources into the City’s water supply portfolio provides a holistic approach in utilizing and managing all potential sources of water from a ‘One Water’ perspective, with the premise that all water has great intrinsic value and must be managed in an integrated, sustainable, and inclusive way in order to meet current and future needs (residential, commercial, industrial, agricultural, and environmental) while also being able to provide the multiple benefits (economic, environmental, and social) desired by civic leaders and customers. Historically, recycled water and non-potable water has been overlooked due to the abundance and low cost of producing groundwater. However, in order to navigate through the changing landscape of California’s water resources and to meet the needs of the future, RPU will need to adopt a sustainable ‘One Water’ approach that values water in all its forms and includes these resources within the City’s water supply portfolio.

DISCUSSION:

RFP No. 2030 - Solicitation

On October 5, 2020, Request for Proposal No. 2030 (RFP) was solicited by the City’s Purchasing Division to all interested consultants for professional consultant services for the *2021 Non-Potable and Recycled Water Master Plan*. On November 12, 2020, the solicitation was closed, and proposals were received from the following three firms: Carollo Engineers, Inc., Geosyntec Consultants, Inc., and Kennedy Jenks Consultants, Inc. Staff evaluated the proposals and ranked Carollo Engineers, Inc. as the most qualified consultant based on the criteria outlined in the RFP.

RFP No. 2030 - Proposal Evaluations

The base fee, which did not include any optional tasks, submitted by Carollo Engineers, Inc. was below the Engineer’s Estimate of \$300,000 for the base scope of work; base scope of work fees from the three consultants ranged from \$275,842 to \$359,600.

A summary of the proposal evaluations is shown in the table below:

Consultant	Weighted Score Evaluations						
	Approach & Methodology (30%)	Experience (20%)	Professional References (5%)	Qualifications (20%)	Cost – Base Fee (25%)	Total Score	Rank
Carollo Engineers, Inc. Riverside, CA	270	185	41	188	250 \$275,842	933	1
Kennedy Jenks Consultants Inc. Pasadena, CA	281	190	47	185	198 \$348,075	901	2
Geosyntec Consultants, Inc. Huntington Beach, CA	248	160	39	173	191 \$359,600	810	3
➤ <i>Engineer's Estimate: \$300,000 (base scope of work)</i>							

Scores have been rounded as shown

In collaboration with the City’s Purchasing Division, the Selection Committee for RFP No. 2030 (Committee), consisting of key staff members of the RPU Water Division, scored the proposals based on the criterion described in the RFP. The criteria and percentages were based on staff’s requirement to select a Consultant based on performance, while having a Cost Based Fee percentage (25%), that allows for the fees of the top two candidates to heavily influence the overall ranking – this is a good example, because the top performance based Consultant (Kennedy Jenks Consultants, Inc.) ended up ranked number 2, after the Cost Based Fee was factored-in. The following is a list of the criteria and percentages:

- a. Approach and Methodology (30%)
- b. Experience (Projects of similar size and scope) (20%)
- c. Professional References (5%)
- d. Qualifications (20%)
- e. Cost (25%)

Each member of the Committee reviewed and scored the proposals independently and submitted their scores in the online evaluation portal to the City’s Purchasing Division. The scores were

reviewed by staff of the City’s Purchasing Division, who then tabulated the results and released the final scores. Some of the key elements contributing to Carollo Engineer’s, Inc.’s., ranking are high qualifications of their proposed team, extensive recycled water master planning experience with local agencies, detailed approach and methodology, and ability to provide the best value to the City.

Upon identifying Carollo Engineers, Inc., as the highest ranked consultant, staff worked with the City’s Purchasing Division to negotiate a total not-to-exceed fee of \$378,312 with Carollo Engineers, Inc., which included the base scope of work in addition to five optional tasks. These tasks are optional and provide RPU with the flexibility of eliminating a prescribed task if it is later deemed unnecessary as the planning study progresses.

Due to changes at the Executive Management level in early 2021, staff was directed to put the RFP on hold. In January 2022, staff was directed to resume the effort to update the Non-Potable and Recycled Water Master Plan, and based on current needs, reductions to the budget and scope of work were identified and staff adjusted the Engineer’s Estimate to \$250,000. Subsequently, staff negotiated with Carollo Engineers, Inc., the deletion of two of the base tasks, and two optional tasks, along with a reduction in scope of five other tasks, resulting in a total negotiated fee of \$239,212; the negotiated total consultant fee is attached to the Professional Services Agreement, as Exhibit B. Staff asked the Consultant if they would voluntarily hold the expired pricing through the completion date of mid-2023, and the Consultant confirmed in writing that they would hold the price for this period. Additionally, the project title year was changed from 2021 to 2022 to reflect the anticipated study year, hence the modified title, *2022 Non-Potable and Recycled Water Master Plan*.

The project/fiscal breakdown is as follows:

Work Type	Performed By:	Amount
2022 Non-Potable and Recycled Water Master Plan	Carollo Engineers, Inc.	\$239,212
Public Outreach	City Staff	\$60,000
WO#2115050 Total (rounded):		\$300,000
Reimbursements		None
Anticipated Start Date:		July 2022
Anticipated Duration:		12 Months

The Purchasing Manager concurs that the recommended actions are compliant with Purchasing Resolution No. 23812.

Base Scope of Work

The Scope of Work presented in the RFP was broken down into eleven tasks to be completed by the consultant. These eleven tasks comprised the base scope of work and represent the minimum level of effort needed to satisfactorily update RPU’s Water Recycling Master Plan. These tasks include the following items listed below. Due to the amount of time that has elapsed since the advertisement of the original RFP, some minor adjustments to the task items have been made and are noted in parentheses.

1. Data Collection and Review of RPU’s past planning documents and system information;

2. Non-Potable and Recycled Water Supply Assessment to identify potential non-potable and recycled water users (including environmental uses);
3. Characterization of Non-Potable and Recycled Water Quality to assess current and future water quality (this task was deleted from the scope and opted to be completed in-house);
4. Demand and Market Assessment to also include a market analysis of recycled/non-potable water users (including environmental uses);
5. Infrastructure Design Criteria to establish the criteria to be utilized as the basis for planning RPU's proposed non-potable and recycled water infrastructure;
6. Hydraulic Model Development to create a computer model of RPU's proposed non-potable and recycled water system to evaluate the consultant's proposed near-term and long-term capital infrastructure (a portion of this task will be completed in house);
7. Alternatives Development which includes the development of three distinctly different alternatives that will cost-effectively serve the maximum amount of non-potable/recycled water customers (a portion of this task will be completed in-house and reduced the scope of work);
8. Development of a CIP Implementation Plan and Phasing which will outline the budgeting requirements to build the facilities identified in the selected non-potable recycled water alternative;
9. Support for Cost-of-Service Analysis to prepare support materials for a Cost-of-Service Analysis for the non-potable recycled water system (this task was deleted from the scope of work; to be completed as part of the forthcoming Cost of Services Analysis);
10. Project Management efforts on the consultant's side, including meeting coordination and quality assurance and quality control of their deliverables; and
11. Preparation of the Master Plan Report to summarize and document the study and all work tasks.

Optional Tasks

The following additional optional tasks were included in Carollo's proposal and, except for Task 3, allow for different options for the Master Plan to branch out and explore in further depth other non-potable water resources and uses. The tasks below can be added to or removed from the base scope based on feedback received on RPU's recycled and non-potable water program; RPU staff's comments are noted in parentheses:

1. RPU Customer Outreach Campaign to assist RPU with public outreach and workshops to receive public input on future non-potable and recycled water projects in the City (this task was deleted from the scope and opted to be completed in house);
2. Rapid Infiltration and Extraction (RIX) Facility Wastewater Study which includes engineering support in assessing the feasibility of utilizing this wastewater resource for the Camp Evans Wilderness Area;

3. Knowledge Transfer Workshop to present a summary of the findings, outcomes and lessons learned from the master plan study to City staff;
4. Review of Hydraulics and Design Criteria for the RHPWP (Riverside Habitat Parks and Water Project) Planning Report which includes engineering support to review and develop design criteria to be incorporated into the RHPWP planning report; and
5. City Focused Workshops with Public Works Department’s Sewer Division in which the consultant will coordinate two workshops between RPU and Public Works to examine potential near- and long-term supply and cost-sharing opportunities (this task was deleted from the scope and opted to be completed in-house).

Master Plan Benefits

The updated master plan will provide RPU with direction and guidance to select the best path forward in the City’s use and implementation of its non-potable and recycled water resources to meet the near-term and long-term objectives set forth by both City Council and the Board of Public Utilities.

More specifically, the master plan will allow RPU to develop additional water resources that are currently underutilized or overlooked to expand its water supply portfolio. These additional water resources will allow RPU to meet the water needs of the future which include support for locally grown agriculture; environmental water needs to protect wildlife species and habitats; drought-proofed facilities for education, recreation, and commerce; and overall utility-wide improvements in water use efficiencies which will help RPU meet state-mandated water use targets as part of the state’s new conservation framework.

STRATEGIC PLAN ALIGNMENT:

This item contributes to **Strategic Priority No. 4 – Environmental Stewardship** and **Goal 4.2 - Sustainably manage local water resources to maximize reliability and advance water reuse to ensure safe, reliable, and affordable water to our community;** and **Strategic Priority No. 5 – High Performing Government** and **Goal 5.5 - Foster a culture of safety, well-being, resilience, and sustainability across the city organization;** and **Strategic Priority No. 6 – Infrastructure, Mobility & Connectivity** and **Goal 6.2 - Maintain, protect and improve assets and infrastructure within the City’s built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity, along with Goal 6.3 - Identify and pursue new and unique funding opportunities to develop, operate, maintain, and renew infrastructure and programs that meet the community’s needs.**

This item aligns with each of the five Cross-Cutting Threads as follows:

1. **Community Trust** – Discussion of completing a Master Plan and requesting input for the completion of optional tasks, allows for feedback to be received as to what level of planning will effectively promote the implementation of recycled water for the City’s needs.
2. **Equity** – Planning for the use of recycled water will ultimately help keep parks, schools, and nature-based assets greener for all the City’s residents to use during times of drought and mandatory water conservation restrictions.
3. **Fiscal Responsibility** – Determining the proper balance of recycled water improvements

will help ensure that the benefits of implementing recycled water can be realized by both RPU and the customer in a financially responsible manner.

4. **Innovation** – Planning for the implementation of recycled water is part of the ‘One Water One Riverside’ concept of an integrated approach to community-based water management and provides another kind of water which can be utilized by some customers to meet their needs; the use of recycled water for some customers frees up potable water for others.
5. **Sustainability & Resiliency** – The implementation of a currently under-utilized resource helps benefit all RPU’s customers by freeing up precious and limited potable water resources while also providing additional resiliency to the landscaping of City of Riverside commercial, institutional, and industrial customers during periods of drought.

FISCAL IMPACT:

The total project cost is estimated at \$300,000. Sufficient funds are available in the Public Utilities Water Recycled Water Account No. 6230000-470811.

Prepared by: Michael L. Plinski, Engineering Manager
Approved by: Todd M. Corbin, Utilities General Manager
Approved by: Kris Martinez, Assistant City Manager
Approved as to form: Phaedra A. Norton, City Attorney

Certifies availability of funds: Edward Enriquez, Interim Assistant City Manager/Chief Financial Officer/City Treasurer

- Attachments:
1. Professional Services Agreement
 2. Award Recommendation (RFP-2030)
 3. Presentation