



2022 NON-POTABLE AND RECYCLED WATER MASTER PLAN PROJECT

Riverside Public Utilities/Water

Board of Public Utilities
June 13, 2022

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BACKGROUND

The Changing Landscape of Recycled Water

- Drought



- State-Mandated Water Use Efficiency Targets



**MAKING WATER CONSERVATION
A CALIFORNIA WAY OF LIFE**

Primer of 2018 Legislation on Water Conservation and Drought Planning
Senate Bill 606 (Hertzberg) and Assembly Bill 1601 (Hickman)

PREPARED BY



California Department of Water Resources

AND



Water Boards
State Water Resources Control Board

NOVEMBER 2018

- Grow RIVERSIDE



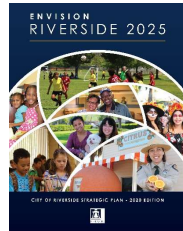
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BACKGROUND (CONT'D)

The Changing Landscape of Recycled Water

- Ag Task Force Workshops
- Strategic Plan 2025, Strategic Priority 4 – Environmental Stewardship
- Environmental Uses to Support Nature-Based Assets and Tributary Restoration



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BACKGROUND (CONT'D)

1. RPU has investigated opportunities to implement a recycled water (RW) system for 30 years

1992
Recycling Master Plan,
by MWH



1997 to 2010
Small Recycled Water System
Implementation
~ 260 AFY

2006
First Distribution Permit
(Public Works)

Recycled Water Service To:

- Van Buren Golf Course
- Van Buren Urban Forest
- Riverside Energy Resource Center (RERC)
- Toro Company



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BACKGROUND (CONT'D)

2011 Recycled Water Facilities Plan by HDR

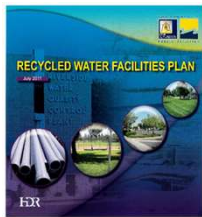
• \$544 Million for
20,000 AFY



2015

Three-Phase Alternative

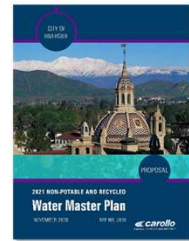
- Jackson Street Alignment Phase I
- Jackson Street Alignment Phase II
- Arlington Avenue Alignment
- \$26.8 Million for 4,970 AFY



2012

Two-Phase Alternative

- Phase 1: Arlington-Central Avenue Pipeline
- Phase 2: Santa Ana River Pipeline to Pellissier Ranch
- \$138 Million for 15,000 AFY
- Presented to City Council July 2012



2022

Non-Potable and Recycled Water Master Plan



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BACKGROUND (CONT'D)

2. City Ordinance 14.28.040 Requires that the Recycled Water Master Plan be Updated Every 5-years.

14.28.040 - Water Recycling Master Plan.



- A. *General.* Upon adoption of this ordinance, the City's Public Utilities Department shall prepare and adopt a Water Recycling Master Plan to define, encourage, and develop the use of recycled water within its boundaries. The Master Plan shall be updated not less often than every five years.
- B. *Contents of Master Plan.* The Master Plan shall include, but not be limited to, the following:
1. *Plants and facilities.* Evaluation of the location and size of present and future reclamation treatment plants, distribution pipelines, pump stations, reservoirs, and other facilities related to recycled water, including cost estimates and potential financing methods.
 2. *Recycled water service areas.* Designation, based on the criteria set forth in [Section 14.24.020](#) and the information derived from [Section 14.24.040\(B\)\(1\)](#) and this section, of the areas within the boundaries of City that can or may in the future use recycled water in lieu of potable water. Recycled water uses may include, but are not limited to, the irrigation of greenbelt and agricultural areas, filling of artificial lakes, and appropriate industrial and commercial uses.
 3. *Mandatory recycled water use.* For each recycled water service area:
 - a. An evaluation of whether greenbelt irrigation, agricultural irrigation, commercial office buildings landscape irrigation, the filling of artificial lakes, or industrial processes shall be limited to the use of recycled water.



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BACKGROUND (CONT'D)

3. Only a handful of RW projects implemented; Master planning of RW has been sporadic (high cost of implementing RW)



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BACKGROUND (CONT'D)

Changes to RW priority

- Water supplies limited
- Envision Riverside 2025 Strategic Plan, Strategic Priority 4
- Expansion of water supply portfolio including non-potable sources – recycled water, stormwater, non-potable groundwater



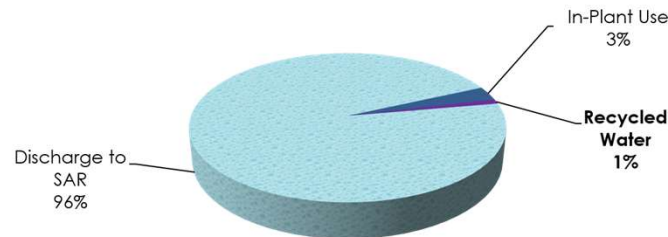
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BACKGROUND (CONT'D)

Current Recycled Water Operation

- 29,600 AFY Total Water Quality Control Plant Influent (2019)
 - 900 AFY In-Plant Use
 - 200 AFY Recycled Water Use (Area Businesses and WQCP)
 - 28,500 AFY discharged to SAR



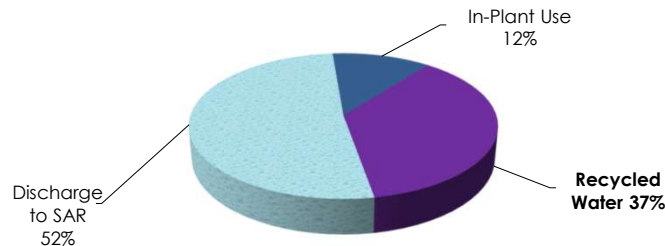
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BACKGROUND (CONT'D)

Proposed Recycled Water Operation

- 29,600 AFY Total Water Quality Control Plant Influent (2019)
 - 3,500 AFY In-Plant Use
 - 10,850 AFY Recycled Water Use (Area Businesses, WQCP, RPU RW Customers and HCP Environmental Uses)
 - 15,250 AFY proposed discharge to SAR



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BACKGROUND (CONT'D)

Water Committee Meeting

- Presented on February 9, 2022 - Chair Cherney and Members Crohn, Melendez and Wohlgemuth present
- Recommendation: Receive this update on the 2021 Non-Potable and Recycled Water Master Plan; provide feedback on the proposed Master Plan; and staff finalize award of contract recommendation and present to the Board of Public Utilities
- Committee unanimously voted to request staff finalize award of contract recommendation and present to the Board of Public Utilities



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DISCUSSION

1. October 5, 2020 – RFP No. 2030 issued
2. November 12, 2020 – Proposals were received from: Carollo Engineers, Inc. (Carollo), Geosyntec Consultants, Inc., and Kennedy Jenks Consultants, Inc.
3. Staff evaluated the proposals and ranked Carollo as the most qualified consultant
4. Staff negotiated a total not-to-exceed fee of \$378,312 with Carollo (base scope plus five optional tasks)
5. Early 2021 - Project was placed on hold due to changes in RPU executive management
6. January 2022 - RPU staff adjusted the Engineer's Estimate to \$250,000 based on current needs. Subsequently, City Purchasing and RPU staff negotiated a reduced fee of \$239,212 with Carollo Engineers Inc. (reduced base scope plus three optional tasks)



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DISCUSSION (CONT'D)

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
➤ Engineer's Estimate: \$300,000 (base scope of work)							



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DISCUSSION (CONT'D)

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



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DISCUSSION (CONT'D)

1. Updated plan which accounts for recent changes to the City's water needs
2. Increased water supply
3. Diversification of the City of Riverside's water portfolio
4. Expanded use of resources to benefit RPU customers
5. Increased water use efficiency to meet state's new conservation framework
6. Drought-proof water source for public sites (schools, median landscapes and parks)
7. Maximized use of an underutilized resource
8. A sustainable water supply to support the City's Nature-Based Assets



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STRATEGIC PLAN ALIGNMENT



Strategic Priority No. 4 – Environmental Stewardship

Goal 4.2 – Sustainably manage local water resources to maximize reliability and advance water reuse to our community.



Strategic Priority No. 5 – High Performing Government

Goal 5.5 – Foster a culture of safety, well-being, resilience and sustainability across the city organization.



Strategic Priority No. 6 – Infrastructure, Mobility & Connectivity

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;

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.

Cross-Cutting Threads



Community Trust



Fiscal Responsibility



Sustainability & Resiliency



Equity



Innovation



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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.



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