



RIVERSIDE PUBLIC UTILITIES

Water Committee

BOARD OF PUBLIC UTILITIES - WATER COMMITTEE

DATE: AUGUST 11, 2021

SUBJECT: RECYCLED WATER SYSTEM OVERVIEW AND SITE CONVERSIONS UPDATE

ISSUE:

Receive an update on the recycled water system and site conversions.

RECOMMENDATION:

That the Riverside Board of Public Utilities Water Committee receive the update on the recycled water system and site conversions.

BACKGROUND:

As part of upcoming Water Committee meetings, Riverside Public Utilities (RPU) staff was requested to prioritize the topic of recycled water and prepare a presentation for discussion.

Recycled water is suitable for a direct beneficial use or a controlled use that would not otherwise occur and is therefore considered a valuable resource. The use of recycled water is a strategy to improve resiliency and achieve a sustainable and long-term water supply. Since our region is experiencing a period of more frequent, longer, and increasingly severe droughts that continue to affect the State and its ability to access water, California encourages the development of recycled water facilities so that recycled water may be made available for use. Recycled Water will help meet existing and growing water requirements of the Southern California region and throughout the State. The use of recycled water also helps to preserve groundwater resources so that they can be efficiently and effectively managed to ensure that they are maintained in a sustainable way.

DISCUSSION:

On June 12, 2017, the RPU Board authorized the Jackson St. Recycled Water Pipeline Project, Phase I to expand RPU's purple pipe system. This project consisted of construction of approximately 3.5 miles of recycled water pipeline to extend the existing recycled water system from the intersection of Van Buren Boulevard and Jackson Street southeasterly along Jackson Street, Magnolia Avenue, and Monroe Street to Don Derr Park as shown in the attached Figure 1. This project was to serve as a recycled water backbone for future expansion of RPU's recycled water system with the option of being able to provide wholesale recycled water sales to Western Municipal Water District, or at a future time, direct potable reuse into RPU's potable system at Mockingbird Reservoir. As part of this project, approximately 17 potential Commercial,

Institutional, and Industrial (CI&I) customers were identified that could receive recycled water service.

Initially, it was conceptualized that RPU would incentivize the switch from potable water to recycled water by paying for the customer site conversion work. On March 11, 2019, the Board declined to approve payment for such recycled water site conversions. The Board requested additional options for incentivizing customer site conversions.

Recycled water provides the following benefits to both RPU and the customer: 1) As a drought-proof resource of water, it helps offset the use of limited potable water resources, and it helps to diversify and supplement RPU's water supply portfolio; 2) For the customer, it is not subjected to drought restrictions for landscape watering and the customer is able to maintain their landscaping during times of mandatory watering restrictions; 3) Recycled water use helps customers meet green goals, LEED requirements, etc. In general, implementation of recycled water use takes advantage of a currently under-utilized resource, as currently unused recycled water is discharged into the Santa Ana River and lost to RPU's service area.

Without incentives for recycled water site conversions, however, CI&I customers won't be inclined to incur the additional costs needed to switch from potable water to recycled water for landscape irrigation use. RPU staff spoke with Eastern Municipal Water District (EMWD) staff to discuss their recycled water program and their role in the site conversion process. Conversion of an existing potable water landscape irrigation system for recycled water use involves several hurdles for the customer. These include the following: installation of an additional service and meter along with the associated monthly service charge; design and construction of the on-site irrigation system in compliance with the California State Division of Drinking Water's (DDW)'s requirements to avoid the potential for cross-contaminating the potable water system with recycled water; procuring and meeting the necessary permitting and reporting requirements to DDW; and ensuring that a designated trained site supervisor is responsible for the adequate operation and maintenance of the on-site recycled water irrigation system.

In terms of incentives, a discount in the recycled water rate (over potable water rates) offers customers on-going savings which can provide the most significant incentive. In comparing RPU's rates with local agencies, along with members of the Los Angeles County Sanitation Districts, the discount between recycled water vs. potable water ranged from 0% to 70%. Currently RPU's WA-10 recycled water rate is lower than the WA-6 commercial water rate by 7% and lower than the WA-11 landscape irrigation water rate by 16%. However, RPU's relatively low potable water rates make it difficult for customers to get to an acceptable breakeven point in relation to the amount of capital that needs to be invested into a site conversion and the additional recycled water monthly meter charges unless there is a greater dollar level of savings. As an example, there is a difference of approximately 16% between RPU's WA-10 recycled water rate vs. the WA-11 landscape irrigation rate, with a savings of \$0.30 per centum cubic feet (ccf), or \$128.87 per acre-foot (AF) of water. For an EMWD customer, there is a difference of approximately 64% between their recycled water rate and potable water rate, with a savings of \$2.40/ccf or \$1,046/AF of water. The effect of EMWD's higher potable rate makes converting over to recycled water much more attractive for their customers.

Staff had a discussion with EMWD to gain a better understanding of how they would incentivize recycled water conversions; in comparison to other local agencies, they provide a generous suite of incentives. Possible options for RPU consideration include:

- Outside funding available to customers through Metropolitan Water District of Southern

California’s (MWD)’s On-Site Retrofit Program, which offers a rebate of up to \$195/AF for 5 years of estimated water use;

- Providing a recycled water meter connection at no cost to the customer;
- Providing customer support to perform the initial site survey, as-built reviews, preparation of DDW exhibits and coordination with DDW on the customer’s behalf through the permitting process;
- Providing additional funding up to \$5,000/AF per year of potable water usage based on the customer’s average use over the past three years – once the on-site work has been completed, the customer would receive a reduced rate of 75% of the current potable rate, after 8 years, the rate transitions to the applicable recycled water rate; and
- Handling the DDW annual reporting for all customers under a master NPDES (National Pollutant Discharge Elimination System) permit.

Each of these are potential incentives that RPU may want to consider providing to its customers to incentivize recycled water site conversions. Actual amounts of the incentives and calculated payback periods can be further explored in more detail upon direction by the Water Committee. Incentives for recycled water site conversions will need to be vetted to ensure compliance with Proposition 218 and other applicable regulations.

As reported in the 2020 Urban Water Management Plan, RPU’s current recycled water use for 2020 was 141 AF, with a projected recycled water use of 13,420 AF by 2045. Aside from CI&I uses of recycled water for landscape irrigation and potentially industrial usages, other future usages of recycled water include the Riverside Habitat Parks and Water Project (see attached Figure 2), which will utilize recycled water for environmental uses to restore native vegetation, support open green space within the City of Riverside (Riverside), and restore Santa Ana Sucker habitat, as well as service to potential CI&I customers along the pipeline alignment; potential wholesale opportunities of recycled water to WMWD; groundwater recharge and potential direct potable reuse into RPU’s potable distribution system; and the continued discharge of recycled water into the Santa Ana River at Riverside’s current treatment plant outfall.

STRATEGIC PLAN ALIGNMENT:

Recycled water site conversions support the City Council Strategic Plan 2025 Priorities and Goals for:

Environmental Stewardship:

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.

High Performing Government:

Goal 5.5. Foster a culture of safety, well-being, resilience and sustainability across the City Organization.

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.

Recycled water site conversions align with the City Council’s Strategic Plan 2025 Cross-Cutting Thread themes as follows:

1. **Community Trust** –Public discussion of recycled water conversion incentives allows for customers to be engaged and provide feedback as to what level of incentives will effectively promote the implementation of recycled water by RPU customers, thereby enhancing community trust.
2. **Equity** – Although recycled water service is only initially available to commercial, industrial, and institutional customers, as the program matures, consideration will be given to expand and grow the use of recycled water within the RPU service area and make it more equitably available to all RPU customers. Initial program benefits include the use of recycled water to help keep parks, schools and open spaces greener for all of Riverside’s residents to benefit from during times of drought and mandatory water conservation restrictions.
3. **Fiscal** - Determining the right balance of incentives for customer site conversions ensures that the benefits of implementing recycled water at a customer’s site can be realized by both RPU and the customer in a financially responsible manner.
4. **Innovation** –The implementation of recycled water is part of the ‘One Water One Riverside’ concept is 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 is a creative solution that frees up potable water for others.
5. **Sustainability & Resiliency** –The implementation of a currently under-utilized resource helps benefit all of RPU’s customers by freeing up precious and limited potable water resources while also providing additional resiliency to the landscaping of Riverside’s CI&I customers during periods of drought. Recycled water is part of RPU’s overall strategy for protecting regional water supplies.

FISCAL IMPACT:

There is no fiscal impact for the update on the Recycled Water Site Conversions Update.

Prepared by: Michael L. Plinski, Engineering Manager
Approved by: Todd M. Corbin, Utilities General Manager
Approved by: Al Zelinka, FAICP, City Manager
Approved as to form: Phaedra A. Norton, City Attorney
Certifies availability of funds: Edward Enriquez, Chief Financial Officer/City Treasurer

- Attachments:
1. Figure 1 – RPU's Existing Recycled Water Infrastructure
 2. Figure 2 – Riverside Habitat Parks and Water Project
 3. Presentation