

RECYCLED WATER SITE CONVERSIONS

Water Resources and Planning Division

Water Committee
August 11, 2021

RiversidePublicUtilities.com



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BACKGROUND

1. On June 12, 2017, RPU Board authorized the Jackson St. Recycled Water Pipeline Project, Phase I to expand RPU's purple pipe system.
 - a) Serve Commercial, Industrial and Institutional (CI&I) customers along pipeline alignment
 - b) Serve as a backbone for potential expansion of RPU's RW system in the future:
 - i. RW sales to Western Municipal Water District
 - ii. Direct Potable Reuse (DPR)

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BACKGROUND

2. Initially it was the intent that the City would pay for customer site conversions as an incentive to switch from potable to RW.

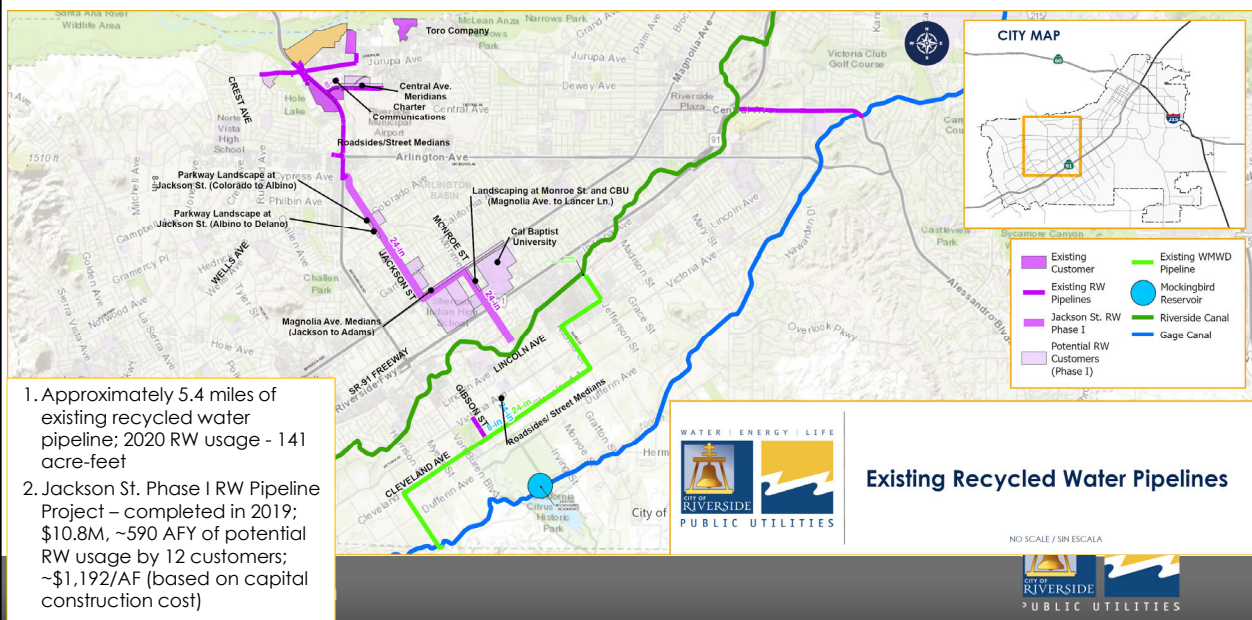
3. On March 11, 2019, RW Site Conversions was brought to Board, but not approved; Board requested additional options to incentivize customer site conversions.

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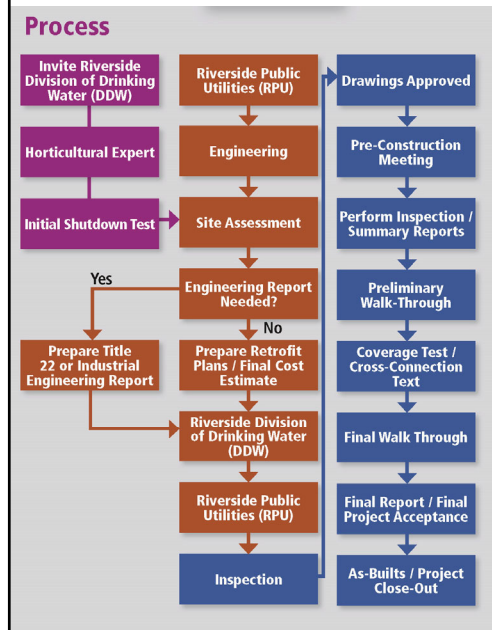


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EXISTING RECYCLED WATER PIPELINES



DISCUSSION



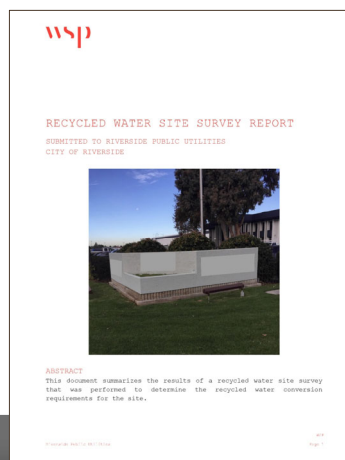
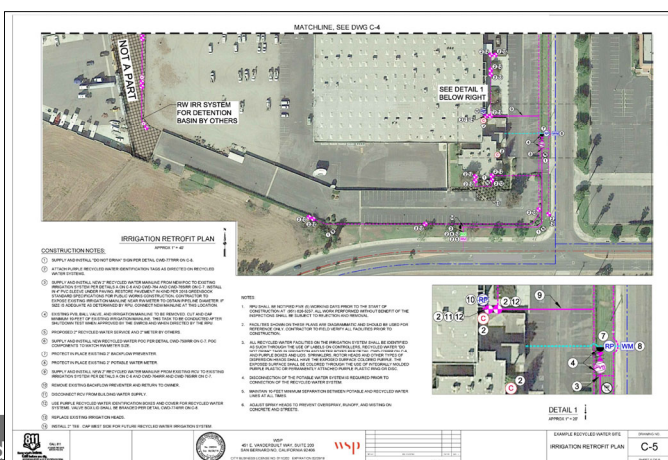
1. Without incentives, customers won't be inclined to pay for the additional costs incurred to switch from potable to RW:

a) Navigating the DDW regulatory process



DISCUSSION

- b) Design/construction of on-site irrigation system
- c) On-going permitting and reporting requirements



DISCUSSION

- d) Trained Site Supervisor
- e) Additional maintenance
- f) Additional service required with on-going monthly meter charges

Recycled Water Program
Recycled Water Site Supervisor Certification Training
 The City of San Diego • Public Utilities Department

Class Information:
 Thurs. Jan 28, 2016
 Thurs. Feb 25, 2016
 Thurs. Mar 24, 2016
 Thurs. May 26, 2016
 Thurs. June 23, 2016
 Thurs. July 21, 2016
 Thurs. Aug 18, 2016
 Thurs. Sept 15, 2016
 Thurs. Nov 17, 2016
 Thurs. Dec. 8, 2016

This course runs from 8:00 a.m. – 12:00 p.m.

Cost:
 \$60 per person
 No on-site registration
 No refunds
 Payable by check only
 Checks payable to "City Treasurer"

Enrollment deadline:
 Classes typically achieve maximum enrollment at least one month prior to the class date.

Send registration form and payment to:
 RWSS Course Manager
 Public Utilities Department
 9101 Camino del Rio South
 La Mesa, CA 91942

Recycled Water Site Supervisor Registration Form

First Name: _____ Email: _____
 Last Name: (fill in) or on the certification card: _____ Date Site Registered-First Class: _____
 Organization/Company Name: _____ Date Site Registered-Second Class: _____
 Street Address: _____ For more information, please contact
 City, State, Zip: _____ Eusebio S. Rodriguez
 619.695.2015
 ERodriguez@san-diego.gov
 Phone: _____



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SITE CONVERSION SCENARIO (example based on actual data)

1. Identified usage: 3,352 ccf (11/16 – 11/17)
2. Estimated Outdoor Usage (60%): 2,011 ccf
3. 2-inch Service, WA-6 rate (\$1.69/ccf – blended rate)

Current Usage – Potable Water Service Only

Item	Monthly	Annual
Meter Charge - 2-inch Potable	\$ 110.68	\$ 1,328.16
Avg. Monthly Commodity Charge (WA-6, blended rate) 3,352 ccf/yr x \$1.69/ccf	\$ 472.07	\$ 5,664.88
	\$ 582.75	\$ 6,993.04

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SITE CONVERSION SCENARIO

(continued)

Potable and Recycled Water Service

Item	Monthly	Annual
Meter Charge - 2-inch Potable	\$ 110.68	\$ 1,328.16
Meter Charge - 2-inch RW	\$ 110.68	\$ 1,328.16
Avg. Monthly Commodity Charge - Potable (WA-6, blended rate) 1,341 ccf/yr x \$1.69/ccf	\$ 188.86	\$ 2,266.29
Avg. Monthly Commodity Charge - RW (WA-10) 2,011 ccf/yr x \$1.57/ccf	\$ 263.11	\$ 3,157.27
	\$ 673.32	\$ 8,079.88

Additional Annual Cost to Utilize Recycled Water:

\$1,086.84



SITE CONVERSION SCENARIO

(continued)

On-Site Conversion Cost

Item	Estimated Cost
Site Irrigation Retrofit Plans ¹	\$26,000
Irrigation Retrofit Construction ²	\$38,200
2-inch Svc./Mtr. Installation ³	\$17,000
2-inch Backflow	\$5,000
DDW/RPU Coordination ⁴	\$3,200
	\$89,400

Cost per AF (20 yr amortization, 2,000 ccf/month) = \$89 per AF

Notes:

1. Per 4/24/2017 Board memo for PB/WSP contract - \$434,370 for 17 customers
2. Aegis Engineering Management's Engineer's Estimate, July 2018
3. 2-inch service per WSP's Initial Site Assessment in 2017
4. Assumes 80 hours of Site Supervisor's work at \$40/hour



DISCUSSION

2. Main incentive is significantly discounted recycled water rate (~64% of Potable Water for EMWD customers)
3. Comparison with local agencies
 - a) Potable vs. RW rates; (0% to 64% discount)
 - b) Los Angeles County Sanitation Districts Jurisdictions – Purveyor's Potable vs. RW rates (14% to 70% discount)
 - c) Reflection of the heavy reliance and high cost of imported water supplies

POTABLE VS. RECYCLED WATER RATES COMPARISON

Agency	Potable Water (\$/AF)	Recycled Water (\$/AF)	Discount (%)
RPU (WA-6 vs. WA-10)¹	\$735.49	\$683.94	7%
RPU (WA-11 vs. WA-10)¹	\$812.81	\$683.94	16%
Eastern MWD ²	\$1,642.32	\$595.52	64%
WMWD ³	\$1,228.04	\$1,043.33	15%
Ontario ⁴	\$1,062.94	\$744.93	30%
IRWD ⁵	\$871.26	\$518.40	41%
Anaheim ⁶	\$1,568.27	\$1,568.27	0%
Corona ⁷	\$1,036.80	\$779.78	25%
Torrance	\$2,279.21	\$1,116.95	51%
San Juan Capistrano ⁸	\$2,522.30	\$1,537.77	39%
San Gabriel Valley Water Co.	\$1,521.22	\$1,293.04	15%

Notes:

1. 2021 Blended Rates
2. Tier 1 Potable Rate; Non-Ag Tertiary Treated Rate
3. Tier 2 Outdoor Potable Rate
4. Potable – Up to 15 HCF Potable Rate
5. Commercial/Industrial/Public Agency/Non-Res. Rate, 0-100% of Base Index Percent Usage
6. Currently there is no recycled water rate; rate used for billing is equivalent to the normal potable water rate
7. Potable Water Budget Rate
8. Commercial Potable Rate

LOS ANGELES COUNTY SANITATION DISTRICT POTABLE VS. RECYCLED WATER RATES COMPARISON

Purveyor	Potable Water (\$/AF)	Recycled Water (\$/AF)	Discount (%)
Long Beach Water Department	1,488.88	821.98 – 968.34	35 – 45
City of Cerritos	1,089.00	326.70	70
City of Lakewood	1,524.60	958.32	37
Central Basin MWD	1,268.00	759.00	40
Pomona Water Department	1,271.95	589.42	47
Walnut Valley Water District	1,550.74	814.57	43
Rowland Water District	1,441.84	906.04	42
San Gabriel Valley Water Co.	1,552.65	1,065.74 – 1,319.74	15 – 31
Suburban Water Systems	1,423.98 – 1,546.38	1,210.10 – 1,297.65	15
Valencia Heights Water Co.	1,287.20 – 1,716.26	1,019.30	20 – 40
Valencia Water District	801.07	686.94	14

DISCUSSION

4. To make RW attractive to RPU customers, RW will need to be incentivized
5. Range of potential options other agencies are utilizing:
 - a) Discounted RW Rates
 - b) MWD On-Site Retrofit Program – Up to \$195/AF for 5 years of estimated water use
 - c) Provide RW meter connection at no cost to customer; and/or discounted monthly meter charges for recycled water service

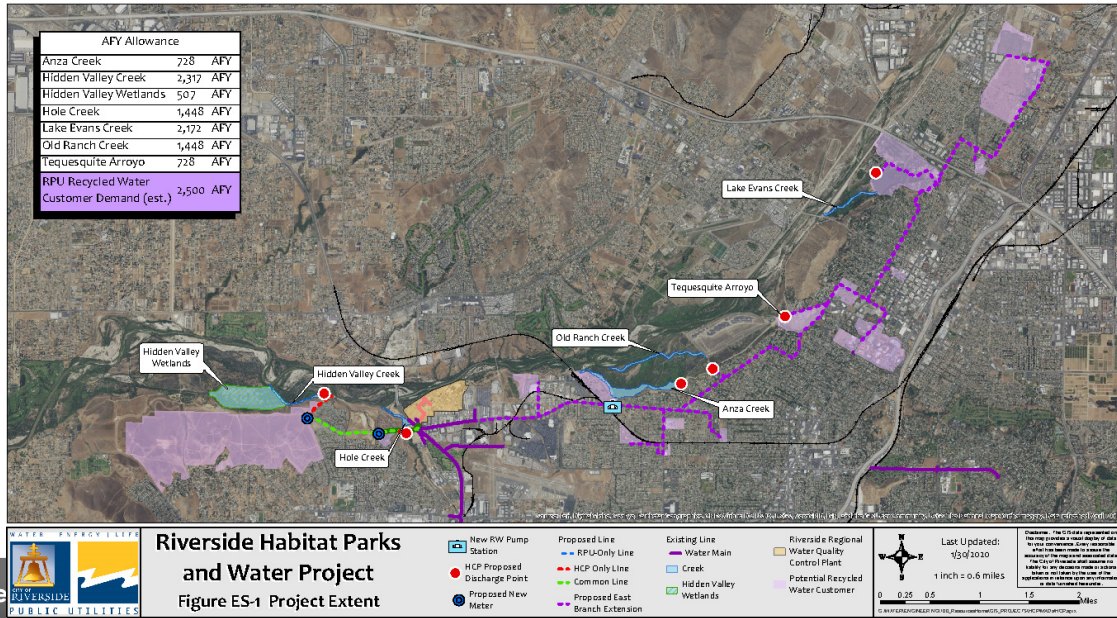
DISCUSSION

- d) Customer support – Initial site survey, as-built review, customer staff support, preparation of DDW exhibits and coordination with DDW
- e) Provide funding up to \$5,000/AF per year of potable water usage based on average use over past three years (covers cost associated with retrofitting on-site landscape and irrigation systems)
- f) Once on-site work complete, customers receive a reduced rate of 75% of current potable rates. After 8 years, rate transitions to applicable water rate
- g) Handle DDW reporting for all customers under a master NPDES Permit

FUTURE DIRECTION OF RECYCLED WATER

1. Current and projected RW usage from 2020 UWMP: 141 AF (2020); 13,420 AF (2045)
2. Riverside Habitat Parks and Water Project – Environmental uses (~9,300 AFY) and CI&I customers (2,400 AFY)
3. Wholesale opportunities – WMWD (2,550 AFY)
4. Commercial and Industrial uses
5. Groundwater Recharge
6. Direct Potable Reuse (DPR)
7. Santa Ana River discharge (15,250 AFY Minimum)

Riverside Habitat Parks and Water Project



SUMMARY

1. Options of possible incentives include:
 - a) Discounted Recycled Water Rates
 - b) Outside funding (MWD On-site Retrofit Program)
 - c) No cost recycled water meter connection
 - d) Discounted monthly meter charge for recycled water service
 - e) Customer support
 - f) RPU funding
 - g) RW transition rate for up to certain number of years
 - h) RPU to handle DDW reporting

STRATEGIC PLAN ALIGNMENT

1. Environmental Stewardship; High Performing Government; and Infrastructure, Mobility & Connectivity
2. Cross-Cutting Threads include:
 - a) **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.
 - b) **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 the City’s residents to benefit from during times of drought and mandatory water conservation restrictions.

STRATEGIC PLAN ALIGNMENT

1. **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.
2. **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.
3. **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 City of Riverside commercial, institutional and industrial customers during periods of drought.

RECOMMENDATION

That the Water Committee receive the update on recycled water site conversions.