



# RIVERSIDE PUBLIC UTILITIES

## Memorandum

**BOARD OF PUBLIC UTILITIES – WATER COMMITTEE**

**DATE: DECEMBER 8, 2021**

**SUBJECT: CITY OF RIVERSIDE'S CROSS CONNECTION CONTROL PROGRAM**

**ISSUE:**

Receive an update on the City of Riverside's Cross Connection Control Program.

**RECOMMENDATION:**

That the Board of Public Utilities Water Committee receive an update on the City of Riverside's Cross Connection Control Program

**BACKGROUND:**

In 1973, the U.S. Environmental Protection Agency (EPA) released the first cross connection control manual. In 1974, the Safe Drinking Water Act was passed. Title 17 of the California Code of Regulations, adopted in 1987, requires a cross connection control program to protect the potable water supply from contamination. Title 17 will be replaced by the Cross Connection Control Policy Handbook (CCCPH), upon its adoption. The CCCPH is available in draft form and will undergo two public comment periods prior to being adopted. The State Water Resources Control Board website has the adoption meeting date listed as TBD.

**DISCUSSION:**

Water Systems are required to maintain a cross connection control program. Backflow is the undesired or unintended reversal of flow of water, liquids, gasses, or other substances into a public water system. Cross Connection is an interconnection between the water system and any actual or potential connection to a system containing an unapproved liquid, gas or water source. In 1933, two hotels in the City of Chicago that hosted visitors of the World Fair had cross connections that contaminated the water supply resulting in over 1,700 cases of amoebic dysentery and 100 deaths. In 2020, 1,000 liters of red wine flowed from the taps of twenty residences in Italy due to a broken valve at a local winery that had cross connections.

Hazard assessments and plan checks assess the need for backflow prevention. Backflow prevention assemblies are installed to protect the water system from backpressure or back siphonage events. Backflow prevention assemblies are required to be tested annually. RPU has over 6,200 backflow prevention assemblies in its service area. RPU Cross Connection Control (XCC) staff send out notices to customers to have their backflow prevention assemblies tested annually; if they do not respond, a second notice is sent out with an extension. RPU Water Rule

13 allows RPU XCC staff to apply a \$500 fine and test and repair, as needed, any backflow prevention assemblies that have not been tested within the allowable time frame. RPU XCC staff also tests and maintains 107 backflow prevention assemblies located at RPU Water sites.

RPU XCC staff also inspect new services with backflow prevention assemblies for proper installation prior to the contractor backfilling the line. This ensures there are no T's prior to the backflow prevention assembly and that the assembly is installed correctly. Contractors often need water prior to the service being installed. RPU XCC staff installs, relocates, and removes hydrant meters with built in backflow prevention assemblies on nearby hydrants for construction water.

Recycled water use sites have additional requirements for XCC specialists to follow. RPU has 11 recycled water use sites. Each site is required to have an annual inspection to ensure proper signage is in place, irrigation stations are run to ensure there is no overspray, poling, ponding, or water leaving the use site. Every four years, dual plumbed sites are required to be tested for cross connections by dye testing or shutdown testing.

Recordkeeping and reporting is a large portion of this group's workload. In addition to backflow prevention assembly testing, repair, and replacement data, our XCC staff also must maintain tester certifications, gage calibrations, City business licensees, records of recycled water annual and every four-year inspection, recycled water plans, recycled water site supervisors, and other related documentation.

With the future adoption of the CCCPH pending, RPU will need to update some of its water rules, as well as adopt a Recycled Water User's Manual and a Recycled Water Operations and Maintenance Manual. RPU XCC staff is drafting changes which will be brought to the Board at a later date. Tokay, the current software system, is planned to be upgraded in a few years, converting the system from being hosted onsite to cloud based. As RPU's recycled water use sites grow, a new software system that tracks both Backflow testing, as well as recycled water use sites may be necessary and will require further investigation to available programs and pricing. Additionally, as RPU's recycled water users and backflow prevention assemblies increase, there may need to be an increase in staffing to provide services in the future.

### **STRATEGIC PLAN ALIGNMENT:**

This item contributes to 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.

This item aligns with each of the cross-cutting threads as follows:

1. **Community Trust** – RPU implements a Cross Connection Control Program to safeguard our potable water, which helps ensure our customers have safe drinking water and maintains community trust.
2. **Equity** – RPU Customers benefit equally by maintaining the water quality in its distribution system.
3. **Fiscal Responsibility** –Maintaining our Cross Connection Program offsets the costs for flushing, disinfection and testing in the event of a Cross Connection.

4. **Innovation** – RPU is implementing paperless adobe sign documents for annual reporting, as well as looking to the future with our software needs.
5. **Sustainability & Resiliency** – Protecting our potable water via this program helps to ensure our water resources are maintained in a sustainable manner.

**FISCAL IMPACT:**

There is no fiscal impact associated with this informational report.

Prepared by: Greg Snyder, Utilities Water Systems Operations Manager  
Approved by: Todd M. Corbin, Utilities General Manager  
Approved by: Kris Martinez, Interim Assistant City Manager  
Approved as to form: Phaedra A. Norton, City Attorney

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

Attachment: Presentation