



# RIVERSIDE PUBLIC UTILITIES

## Water Committee

**BOARD OF PUBLIC UTILITIES – WATER COMMITTEE**

**DATE: JANUARY 12, 2022**

**SUBJECT: WATER LOSS DISCUSSION UPDATES**

**ISSUE:**

Consider receiving an update on the Water Loss Discussion.

**RECOMMENDATION:**

That the Riverside Public Utilities Water Committee receive the updates on the Water Loss Discussion and direct RPU staff to bring an enhanced water loss program with associated budget to the Board of Public Utilities.

**BACKGROUND:**

As part of the ongoing Water Committee meetings, Riverside Public Utilities (RPU) staff was requested to present a Water Loss Discussion and update the Water Committee on the Water Loss Control Program.

RPU's Water Loss Control Program is important to ensure water produced by the Utility is put to beneficial use, to adhere to California's water conservation policies, and reduce lost revenue for the City of Riverside. Reducing water loss can help build drought resilience, save energy, and delay or avoid the need for new supplies and infrastructure, if deemed economically feasible.

**DISCUSSION:**

The water loss in RPU's system from production to end-user can be disaggregated into three categories. Non-potable losses, losses in the transmission mains and the distribution system. For example, in 2020, the water loss in the transmission mains (known as the water loss above Linden/Evans Reservoirs) was estimated at 318 Acre-Feet (AF), the non-potable losses were about 600 AF, and the distribution system losses were about 7,380 AF (i.e. prior to adjustments made for the 2020 Validated Water Loss Audit per Senate Bill 555).

The signature of Senate Bill 555 (SB 555) Water Loss Management by the Governor on October 9, 2015 required all retail urban water suppliers to submit an annual validated water loss audit report to the Department of Water Resources (DWR) starting on October 1, 2017. SB 555 directed the State Water Resources Control Board (SWRCB) to adopt performance standards for the

volume of water loss by 2020. However, these standards are still being developed by the State, and as of November 2021 have not been adopted. SB 555 also requires water retailers to report to the State on their progress to meet their water loss performance standards by 2028.

The Water Audit, following the industry standards detailed in the American Water Works Association's M36 Water Audits and Loss Control Programs Manual, focus on the distribution system water loss which is the major loss component in RPU's overall system. The goal is to identify and quantify real losses (i.e., leaks, main breaks) and apparent losses (i.e., meter inaccuracies, data handling errors, unauthorized consumption) to improve and inform a utility's water loss control practices in order to reduce and allow the utility to identify economically recoverable water losses. It needs to be mentioned that performing a water audit alone will not result in savings, but rather it is the corrective actions following the audits that yield the savings.

Although RPU has implemented water loss control efforts, and continues to expand its program, further actions should be developed and evaluated to recover as much water loss as economically feasible. There will be a point at which it could cost more to control leakage than is economically justifiable or the cost of water itself. However, other non-economical considerations must be evaluated during these discussions. A balance must be maintained by considering all other non-economical factors between water loss reduction and costs associated with water loss reducing measures.

As noted, RPU's Water Loss Program starts by analyzing the water audit performance, then applies appropriate techniques or interventions based on the water audit results. After the corrective measures are put in place, an evaluation of the results is analyzed through the Water audit. This cycle continues, part of an iterative process, until the water loss reduction goals are achieved.

### Benchmarks and Comparison

The 2020 validated water audit calculation showed that RPU's water loss was about 6,851 AF or about 10% in volume which resulted in a value loss of \$1,376,000 or 3% between the real and apparent losses. As a comparison to three other agencies, including San Bernardino Municipal Water District (SBMWD), Western Municipal Water District (WMWD), and Anaheim Public Utilities (APU) the following table provides a benchmark for RPU as compared to these agencies:

Table 1: Water Loss by Volume (AF)

Agency	Real Loss	Apparent Loss	Total Water Loss	Water Loss %	Total Water Supplied (AF)
Riverside	6,130	722	6,851	10%	65,657
Anaheim	1,829	1,563	3,392	6%	56,418
SBMWD	2,804	1,302	4,106	10%	40,159
WMWD	924	285	1,209	6%	19,903

Table 2: Water Loss by Value (Dollars)

Agency	Real Loss	Apparent Loss	Total Value Loss	Value Loss %	Total Cost
Riverside	\$832,506	\$543,718	\$1,376,224	3%	\$46,065,683
Anaheim	\$1,612,451	\$2,273,639	\$3,886,090	4%	\$97,565,860
SBMWD	\$442,210	\$850,869	\$1,293,079	4%	\$32,685,822
WMWD	\$1,155,958	\$414,253	\$1,570,211	2%	\$71,140,053

As part of the Water Loss discussion, RPU staff will provide an informational overview of RPU's current and ongoing efforts to reduce water loss and propose other efforts to further reduce water loss, help comply with upcoming State compliance requirements and to identify recoverable losses if economically feasible. The following steps will also include comparing what RPU is currently doing compared to best practices in the industry.

### **STRATEGIC PLAN ALIGNMENT:**

The Water Loss Discussion supports the priorities of the City of Riverside's Envision Riverside 2025 Strategic Plan:

#### *Environmental Stewardship*

Goal No. 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 5.2. –Utilize technology, data, and process improvement strategies to increase efficiencies, guide decision making, and improve access to and delivery of financially sustainable City services.

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

1. Community Trust – The water loss control efforts aim to identify and reduce water loss throughout the City, thereby enhancing community trust.
2. Equity – All people within RPU's service area will benefit from reduced water loss.
3. Fiscal Responsibility – The water loss control efforts will improve the City's financial strength and minimize its needs for additional water resources.
4. Innovation – The water loss control efforts will utilize innovative technologies and services to reduce RPU's water loss and improve water use efficiency.
5. Sustainability & Resiliency – The water loss control efforts will help preserve vital resources and assist with long-term water sustainability.

**FISCAL IMPACT:**

There is no fiscal impact associated with this update.

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Attachment:	Presentation
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