



WATER LOSS AUDIT DISCUSSION

Water Resources

Water Committee
July 14, 2021

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BACKGROUND

1. October 9, 2015: Gov. Brown signs Water Loss management bill - SB 555
2. Senate Bill 555 requires all urban water suppliers in California to conduct validated annual Water Loss audits
3. First validated water loss due to Department of Water Resources Oct. 1, 2017; Annually by Oct. 1 thereafter

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AWWA WATER AUDIT

1. American Water Works Association (AWWA) Water Audit systemically accounts for known water volumes to estimate volumes of water loss.
2. Evaluate data source reliability
3. Communicate water distribution efficiency

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THE WATER BALANCE

WATER SUPPLIED	AUTHORIZED CONSUMPTION	BILLED AUTHORIZED CONSUMPTION	BILLED METERED CONSUMPTION	REVENUE WATER
			BILLED UNMETERED CONSUMPTION	
		UNBILLED AUTHORIZED CONSUMPTION	UNBILLED METERED CONSUMPTION	NONREVENUE WATER
			UNBILLED UNMETERED CONSUMPTION	
	WATER LOSSES	APPARENT LOSSES \$\$\$	CUSTOMER METER INACCURACIES	
			UNAUTHORIZED CONSUMPTION	
			DATA HANDLING ERRORS	
			REAL LOSSES	

1. Account for volumes by process of elimination
2. Account for all water
3. Accuracy is important

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WATER LOSSES

1. Estimate volumes of water loss – two types

Apparent Losses



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Real Losses



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DATA RELIABILITY

Evaluate Data Reliability - improve annually where feasible

- What is most accurate data source?
- What are the processes of review and/or maintenance?
- Are practices consistent across systems?

Sources of Error

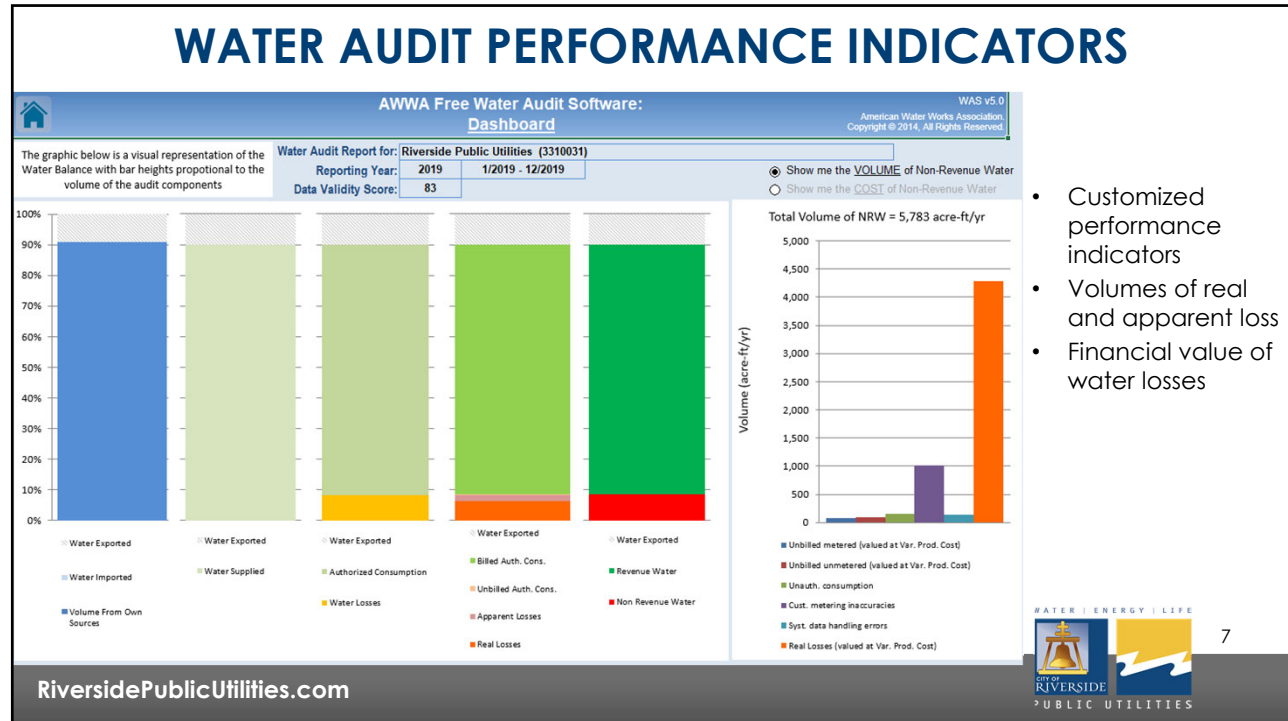
- Instruments
- Databases
- People
- Missing information

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PAST AUDIT RESULTS

Report Period	Volume of Real Loss (AF)	Volume of Apparent Loss (AF)
07 2014	1,850	905
01 2016	2,362	1,728
01 2017	6,296	1,767
01 2018	4,324	2,267
01 2019	4,810	787

2019 Real Loss - **61.24 gal/conn/day**

Acre Foot (AF) – one acre foot of water is around 326,000 gallons or enough water to cover an acre of land (size of football field), one foot deep.

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STRATEGIC PLAN: CROSS-CUTTING THREADS



**Fiscal
Responsibility**



Equity



**Sustainability
and Resiliency**

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RECOMMENDATION

That the Riverside Public Utilities Board review and discuss RPU's water auditing practices.

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