



WATER LOSS PROGRAM PROJECTS

Public Utilities Department

Board of Public Utilities

December 12, 2022

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BACKGROUND

Senate Bill 555 Water Loss Management

1. By 2017, Requires a submittal of annual validated water loss audit report to DWR on October 1 going forward.
2. By 2020, Requires SWRCB to adopt water loss performance standards (adopted October 2022).
3. By 2028, Retailers must report their progress in meeting water loss performance standard.
4. The goal is to identify and quantify real losses (i.e., leaks, main breaks) and apparent losses (i.e., meter inaccuracies).
5. Perform corrective actions based on the information derived from the audits.



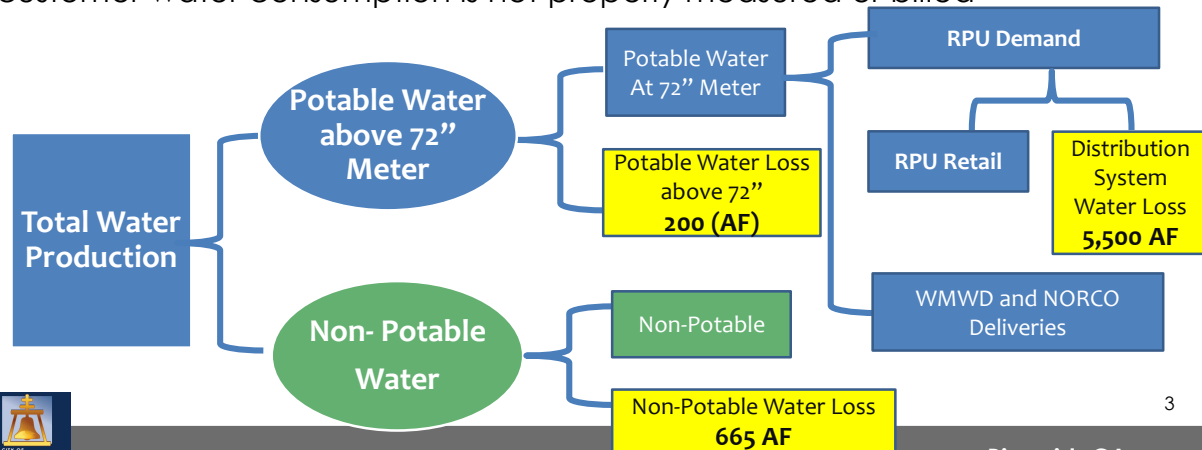
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BACKGROUND

2021 Water Loss Figures: 7.5% of Non-revenue water from Total Production

RPU incurs real losses from pipeline leakage and apparent losses when customer water consumption is not properly measured or billed



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DISCUSSION

RPU's Water Loss Control Program

1. Beneficial use of water produced by RPU.
2. Minimize lost revenue to the City.
3. Adhere to California's water conservation policies and compliance requirements.
4. Delay or avoid the need for new water supplies and infrastructure.
5. Help improve drought resilience.



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DISCUSSION

6. Several efforts to reduce Non-revenue water were presented to Water Committee on January 12, 2022.
7. An Ordinance to prohibit and enforce water theft and unauthorized water use was introduced to by CC for adoption on October 4, 2022.
8. Three more efforts are proposed:
 - a. Preemptive Service Lateral Replacement program.
 - b. Leak Detection Equipment Pilot Program (LDEPP).
 - c. Expand Meter Replacement Program.



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DISCUSSION

Preemptive Service Lateral Replacement program

1. Program introduced in December 2020 to RPU Board to address the increase in emergency service lateral leaks.
2. Program budget was \$750,000 for FY 2019-2020 to 2022-2023.
3. Address aging copper service laterals (30 to 40 years life span) and overtime burden in a systematic basis vs. emergency response basis.
4. Can replace five service laterals under planned event vs. one service lateral under an emergency response.
5. Recommend to continue the program for an additional three fiscal years.



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DISCUSSION

Leak Detection Equipment Pilot Program

1. 90-day Leak Detection Equipment Pilot Program (LDEPP) is to assist with water loss control on the distribution system
2. The program will involve the lease and deployment of four active leak detection units.
3. located on RPU's distribution infrastructure (valve cans / fire hydrants) and will actively collect acoustical data to identify specific leak locations (7.5 miles of pipeline coverage).

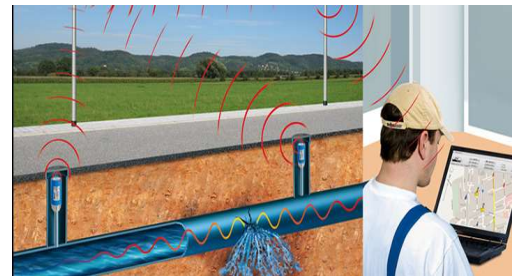


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DISCUSSION

Leak Detection Equipment Pilot Program

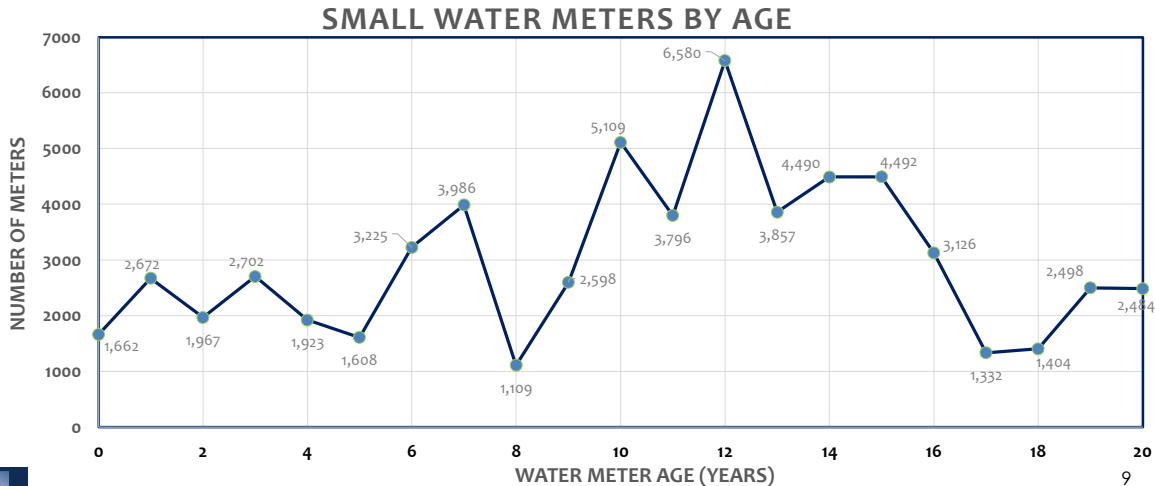
4. Assist RPU Field Forces to proactively repair minor leaks before they escalate into larger emergency repairs.
5. Will include training of RPU staff, labor, installation and removal of equipment at a designated study area for a not-to-exceed cost of \$49,999.
6. If successful, RPU staff would recommend a larger-scale implementation of the leak detection program, requiring the purchase of leak detection equipment.



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DISCUSSION

Expand Meter Replacement Program



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DISCUSSION

Expand Meter Replacement Program

1. As meters age, their ability to accurately read water flows diminishes around 20 years in service.
2. The program uses this age metric to designate which meters are replaced each year.
3. Increase replacement from 2,500 to 4,000 meters to ensure all 65,000 meters are replaced before their accuracy diminishes on an ongoing basis.
4. The proposed expansion will establish a realistic and repeatable approach and further RPU's water loss (apparent loss) control efforts.



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DISCUSSION

The capital project expenditure breakdown is estimated as follows:

Project Expenses Breakdown		
Work Type	Performed By:	Amount (\$)
Preemptive Service Lateral Replacement (Capital Expense)	City Forces	\$750,000
Expanded Meter Replacement Program (Capital Expense)	City Forces	\$153,000
Leak Detection Equipment Pilot Program (Operational Expense)	Outside Vendor (To be selected through a competitive RFP process)	\$49,999
Work Order Total:		\$952,999
Reimbursements		None
Anticipated Start Date:		January 2023
Anticipated Duration:		Continuous



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STRATEGIC PLAN ALIGNMENT



Strategic Priority 4 - 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.



Strategic Priority 5 - 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.

Cross-Cutting Threads



Community Trust



Fiscal Responsibility



Sustainability & Resiliency



Equity



Innovation



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RECOMMENDATIONS

That the Board of Public Utilities:

1. Approve Work Order No. 2307729 to extend the Preemptive Service Lateral Replacement program in the amount of \$750,000;
2. Approve Work Order No. 2301783 to authorize staff to seek a services agreement for Leak Detection Equipment to perform an active leak detection pilot program for a not-to-exceed amount of \$49,999; and
3. Approve Work Order No. 2308512 to authorize field staff to expand the Meter Replacement program in the amount of \$153,000.

