

December 21, 2018

Max Gomberg
Climate and Conservation Manager
State Water Resource Control Board
1001 I Street
Sacramento, CA 95814

Subject: Water Loss Standards

Dear Mr. Gomberg:

Thank you for the opportunity to provide stakeholder input on the development of a statewide water loss standard for urban retail water suppliers as required by Senate Bill 555 – *Urban Retail Water Suppliers: Water Loss Management* (SB 555). SB 555 directs the State Water Resources Control Board (SWRCB) to employ full life cycle cost accounting to evaluate the costs of meeting the performance standards and allows the board to establish “a minimum allowable water loss threshold that, if reached and maintained by an urban water supplier, would exempt the urban water supplier from further water loss reduction requirements”.

We appreciate your efforts to investigate and evaluate options for detecting leaks and reducing water loss. Through the stakeholder process and from our own experiences with water loss, it is very clear that there is still much unknown about both the potential for leak loss reduction and about the costs and benefits associated with various methods of leak detection and water loss prevention. Water loss reduction is a worthy pursuit that must be completed efficiently and cost-effectively by utilities to avoid unnecessary financial impacts to water ratepayers.

The statewide water loss audit reporting completed over the past two years, and data from agencies that have been performing water loss audits for a much longer period of time, show that there is a need for continued improvements in the collection, management and understanding of the data informing the audit. Information presented at the stakeholder sessions illustrated that there is limited, if any, correlation between the implementation of water loss reduction methods and a predictable reduction in real water loss. Due to data quality issues and significant uncertainty over methods, costs and benefits, the initial water loss standards should be simple and flexible. Additional information that could inform and refine the initial water loss performance standards should be collected over multiple years. **To that end, we support the development of a minimum normalized volumetric allowable water loss threshold (performance standard) that would exempt the urban water supplier from further water loss reduction requirements once met and maintained.**

In addition, the water loss performance standard should be included in the urban retail supplier’s water use objective with any enforcement as detailed in Senate Bill 606 (SB 606) and Assembly Bill 1668 (AB 1668). There should be no enforcement outside of the limits of SB 606 and AB 1668.

Based on our collective experience and efforts to reduce water loss, and the information shared at the three stakeholder meetings held in 2018, we also offer the attached additional concerns and recommendations. Thank you again for considering our comments. We look forward to continuing to work with you to develop water loss standards in 2019.

Sincerely,

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Craig Miller
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Marc Marcantonio
General Manager
Yorba Linda Water District

Attachment

- c: Kartiki Naik, Water Resource Control Engineer, State Water Resources Control Board
Peter Brostrom, Water Efficiency Program Manager, Department of Water Resources
Todd Thompson, Senior Water Resources Engineer, Department of Water Resources

Comments and Concerns Regarding Water Loss Efforts

Target Setting Methodology

1. As provided in SB 555 (WC Section 10608.34 (i)), we support setting a minimum allowable normalized water loss volume threshold to allow water systems to be exempt from water loss reductions if they have already achieved an economically optimized volume of water loss. The threshold needs to result in an achievable volumetric standard to be included in a water use efficiency standard. In light of the issues concerning data quality and availability, and the need for a volumetric water loss standard in order to calculate water use objectives as required by SB 606 and AB 1668, **we support the implementation of a reasonable interim volumetric standard based on the water loss performance achieved by up to the 85th percentile of retail water systems.**

Data Quality Issues

2. Variability and uncertainty in data sources and water audit results should be accommodated. Water audit data accuracy can be improved in many cases, but utilities may not initially have the financial resources to make infrastructure, instrument, or database improvements in the near term. For suppliers with these challenges, it may take many years to fully understand inherent data anomalies and initiate corrective action to improve data accuracy. For example, production meter inaccuracies, and the associated master meter error adjustment(s), can have a significant impact on supply volume depending on the water supplier's annual supply portfolio and changes in supply sources year to year. Furthermore, many retail utilities are bound by the meter maintenance and testing practices of their wholesalers, which can introduce irremediable uncertainty into the water audit. Yet many wholesalers have meters with inherently high levels of accuracy. For example, venturi meters rely on hydraulics and are highly accurate if properly installed and maintained, even if the meters are not flow tested annually. Therefore, we recommend that you work directly with wholesalers to determine the best approach to ensuring accuracy of large source meters taking into consideration the cost effectiveness and feasibility of testing large size meters, and the overall reliability and accuracy of the meters. **We support efforts and assistance to improve data accuracy.**
3. An interim water loss standard should be adopted by July 1, 2020 to allow additional data collection to inform more permanent objectives. Two to three years of data is not sufficient to set a long-term water loss standard as demonstrated by the variability of validated water balance data seen to date. The statewide water loss audit reporting completed over the past two years, and data from agencies that have been performing water loss audits for a much longer period of time, show that there is a need for continued improvements in the collection, management and understanding of the data informing the audit. A final water loss standard should not be adopted until the variability of data is better understood. Additionally, target and goal setting is not recommended by the American Water Works Association (AWWA) M36- Water Audits and Loss Control Programs (M36) or the associated software until the data validity score, which provides the overall reliability of the results, is at least 50 or higher. **We support the adoption of a reasonable interim standard to allow additional**

data collection and improvement, and time to better understand what may be “normal” data variability.

Cost Effectiveness

4. Regulations should not financially harm a water supplier, should have minimal impact on existing ratepayers, and should consider the resources and timeframe necessary for implementation to achieve compliance. Investments in water loss recovery can be significant in many cases and should therefore be limited to what is locally cost effective. Suppliers should be given the option to provide an economic analysis to the state in lieu of implementation of water loss control measures, and should be given the option to pursue water loss monitoring and maintenance when further implementation of water loss measures is not locally cost effective. Currently reliable data on the cost and benefits of specific water loss detection and reduction methods is not available to feasibly complete an accurate cost benefit analysis for every supplier across the state. Significant time is needed for additional pilot projects and full scale implementation to occur under a variety of conditions throughout California to develop a comprehensive evaluation tool. **We support a standard that is based on economically recoverable real losses.**
5. Regulations should not mandate prescriptive solutions, since doing so could stifle innovation and negatively impact operations and water service. For example, while pressure management is a water loss control strategy, pressure management opportunities may be limited by significant elevation changes within the system and fire flow requirements. The SWRCB should develop the water loss standard and allow flexibility for agencies to manage the system for water quality, customer service, and fire flow demands, while maintaining compliance with other regulatory standards in the manner appropriate for each water supplier.

Reporting Requirements

6. As stated in AB 1668 (WC Sections 10609(c) (4) and 10609.15), the state agencies are required to streamline reporting requirements and avoid duplication where possible. Currently multiple reports (i.e. DWR Validated Water Loss Audit, Electronic Annual Report, Urban Water Management Plan, State Water Board monthly reporting, and reports to the Public Utilities Commission) obtained by different state agencies collect water loss data, often using contradictory definitions or time ranges, which adds to confusion on water loss monitoring and management. **We support collaboration and coordination among state agencies to streamline and eliminate duplicative reporting.**
7. The framework for objective calculation, lifecycle cost analysis etc., should not be complicated or require significant data collection and analysis beyond the annual water loss audit submittal. The state should provide technical assistance and funding to help suppliers improve data quality in the existing water loss audit to achieve a more accurate and thorough understanding of the levels of distribution system losses statewide, rather than create new data requests and metrics to meet.

8. The standard for real loss should be aligned with the normalized indicators in the AWWA water audit methodology. The basic real loss indicators within the M36 and the associated AWWA Free Water Audit Software are measured in gallons of real losses per service connection per day for systems with 32 or more service connections per mile of main. For water systems with a lower service connection density, the indicator of real losses is measured in gallons per mile of main per day. **We support a volumetric standard for real water loss in accordance with M36.**

Additional Recommendations

9. Allow for exemptions. Should an urban retail water supplier reasonably believe, after detailed analysis, that the interim standard exceeds its system-specific economic level of leakage, the urban retail water supplier may send a notice to the SWRCB no later than July 1, 2021, establishing a new interim standard specific to that water system.
10. Provide technical assistance to agencies which are reporting improbable losses or low data validity scores. The water audit is a bottom up approach to understanding water loss, which calculates real losses by first determining the volume of apparent losses. It is recognized that there are California water systems reporting negative or other improbable losses and data validity scores below the recommended actionable score of 50. M36 recommends water systems first improve the management and understanding of the data informing the audit.