

Revised Draft Proposal: Inclusion of Asset Management in Water Loss Control Regulation

Asset Management as a Water Loss Control Approach

Systematic, priority-based pipe replacement and other forms of asset management reduce leaks. Asset management is one of the four industry-established approaches for water loss control.

In the State Water Board's September 2019 workshop, the Board sought stakeholder input and public comment on incorporating asset management in the economic model that will calculate volumetric water loss standards. Several public comments highlighted that multiple factors affect the prioritization of pipes replaced, and that water loss control is typically not the only motivation behind asset management. Though capital investment for asset management is planned based on several potential benefits and factors, a number of suppliers rely on asset management for their system to reduce water loss, and asset management remains a recommended and established approach for water loss control.

Due to the system-specific nature of planning asset management, the State Water Board proposes to obtain data on assessing the potential of prioritizing the replacement, rehabilitation or corrosion protection of distribution infrastructure that is more susceptible to failure, as determined by historical break rates, environmental factors, or a combination of both.

The Board proposes that urban water suppliers complete Board-created questionnaires by 2024 and provide updated responses to the data submission by 2027.

Proposed regulatory requirements

Urban water suppliers shall provide responses to the following questions by 2024 and provide updated responses in 2027 as indicated¹:

1. Does your agency maintain records of distribution infrastructure failures?
 - Agency maintains break history records
 - Agency plans to begin maintaining break history records by the year _____.
 - Agency does *not* plan to maintain break history records. (skip question 2)

2. Which data fields pertaining to the distribution infrastructure components (for example, pipe sections, valves, fire hydrants, meters, etc.) does/will your agency include in the break history record?
 - Geographical location
 - Material or type as applicable
 - Size

¹ Suppliers meeting proposed criteria for low real loss and high data quality would be exempted from the requirement to respond to this questionnaire.

- Year installed
 - Average operational pressure
 - Soil conditions
 - Installation conditions
 - Type of break (for example, longitudinal, circular, etc.)
 - Date and time of report of the failure of the distribution infrastructure component
 - Date and time of shutdown of the leak due to the failure of the distribution infrastructure component by agency repair crews
3. Does your agency have an approach to identify and prioritize the replacement, rehabilitation, or protection of water distribution infrastructure components that break or leak frequently based on break history or consequence of failure?
- Agency uses a prioritization approach for asset management.
 - Agency plans to have a prioritization approach for asset management by the year ____.
 - Agency does *not* plan to have a prioritization approach for asset management. (Skip question 4)
4. On which system and environmental factors does/will your agency's approach rely?
- Risk assessment where risk is equivalent to the product of likelihood of failure and consequence of failure.
 - Break/failure/leak history of distribution infrastructure component
 - Distribution infrastructure component material
 - Distribution infrastructure component age
 - Maximum operating pressure
 - Occurrence of pressure transients
 - Local soil conditions
 - Insufficient hydraulic capacity to meet routine and/or emergency water demands
 - Poor water quality
 - Other factors: _____

Questions 5 through 8 - For 2027 update only:

5. Provide the total projected length of water distribution pipe in miles to be replaced in each year from 2028 through 2035 using your agency's asset management approach.
6. Provide the actual length of water distribution pipe in miles replaced on an average basis annually between 2024 and 2027 using your agency's asset management approach.

7. Provide an estimated proportion of the total number of distribution infrastructure components that will be replaced, rehabilitated, or provided enhanced protection using your agency's asset management approach, projected through 2035.
8. Provide the total estimated feasible water loss reduction (acre-feet per year) due to your agency's asset management approach, projected through 2035.