

Water Distribution Infrastructure Management

The biggest investment that most water utilities will make is in their distribution system that they operate and maintain. Maintaining and upgrading this infrastructure is a required focus of the water utility, albeit an expensive proposition, since all water customers expect a safe, reliable and sustainable potable water supply and our water utilities are obliged to meet this expectation. Therefore, all water utilities must develop programs to track the performance of, manage and replace infrastructure as it is needed and ages. Insomuch as all infrastructure has a useful life, water loss control links directly to the timely, efficient management of infrastructure rehabilitation and renewable as a continuous process.

Infrastructure management involves the tracking of current and repaired pipelines, appurtenances, and customer service lines (on the utility side of the customer meter), as well as the expected repair and replacement schedule. This includes four key areas of activity:

- Data collection and management
- Leak detection and repair
- Budgeting for capital improvements (and maintaining appropriate levels of reserves to support projects and/or project co-financing (e.g., low-interest loans, grants, etc.))
- Implementing improvements

Some specific improvements that water utilities should assess for implementation, especially those small organizations that are not required to provide distribution capacity for fire flows, include those in the following list. The chief purpose of these improvements is to assist the utility in detecting and isolating leaks, supporting leak repair without disrupting customer water use, and improving the overall reliability of the water distribution system.

[Looping](#)

[Isolation Valving](#)

[Use of District Metered Areas](#)

Resources

[Water Utility Infrastructure Management](#) (joint industry organization)

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