

Interactive database allows utilities to upload and share valuable information about asset management technology and practice experiences

WATERiD and Synthesis Reports for Wastewater and Drinking Water (INFR9SG09/INFR10SG09)

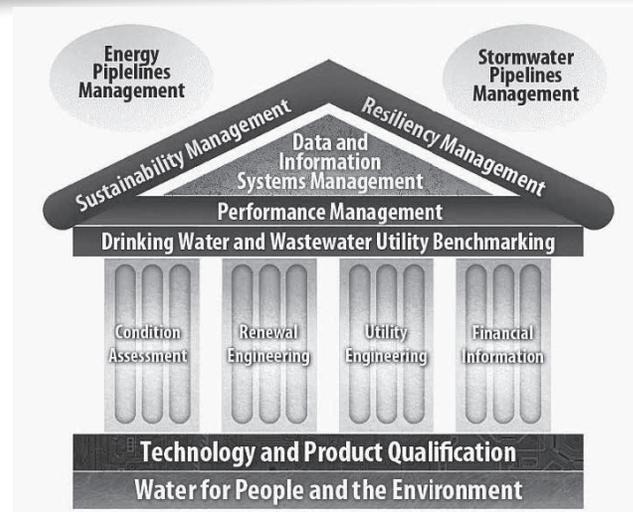


The Central Issue

A great amount of information exists within the institutional knowledge of individual utilities, but often this information is not readily shared or accessible from outside the utility. That includes information about condition assessment, renewal engineering, and underground infrastructure locating technologies including models and tools, best appropriate practices, experience with technologies (both positive and negative), cost of technologies, and available vendors and contractors.

Context and Background

Utility managers and decision makers currently struggle to find easy access to comprehensive information about condition assessment technologies and methodologies. Utilities often retain this information internally, yet access to this information could significantly help other utilities conduct their business. The purpose of this comprehensive research project was to provide a central repository to facilitate the transfer of useful and valuable knowledge directly to decision makers.



The house diagram on the WateriD (Water Infrastructure Database) home page represents the main topics covered in the database. Boxes are clickable and contain fundamental information about the main topics.

Findings and Conclusions

The research team developed a web-based, interactive, national, database for water infrastructure to provide a standard platform to share institutional knowledge. More than 100 utilities, consulting firms, municipalities, and vendors initially contributed over 300 case studies and technology reviews. Utilities and others will continually be adding new information, thus making this a living database/knowledge center. WATERiD includes primary information about individual condition assessment, subsurface utility engineering, renewal technology cost and performance, and case studies for their real-world applications, as well as providing multiple options for searching within the database. WATERiD also includes lists of vendors, consultants, and contractors available for a particular technology on a regional basis.

Management and Policy Implications

As a single-point information center, WATERiD will help expedite the selection of appropriate condition assessment, buried pipe location, and renewal engineering technologies. WATERiD provides security to protect sensitive data. This security feature of the database assures the integrity of sensitive data. The knowledge and experiences of various utilities exist, but are generally not shared or readily available. WATERiD's shared information will provide greater confidence in decision making.

A series of synthesis reports for various asset categories was developed as part of the WateriD initiative. The reports are described on page 2.

WATERiD Synthesis Reports	
Report Title	Description
Condition Assessment for Wastewater Pipelines (INFR9SG09/INFR10SG09CAWW) Condition Assessment for Drinking Water Pipelines (INFR9SG09/INFR10SG09CADW)	Describes technologies and methodologies currently in use for condition assessment of wastewater/drinking water pipelines and sources for additional information. Proposes a standard data structure that utilities can use for reporting purposes when performing condition assessment work on wastewater and drinking water pipelines.
Cost Information for Wastewater Pipelines (INFR9SG09/INFR10SG09CIWW) Cost Information for Drinking Water Pipelines (INFR9SG09/INFR10SG09CIDW)	Compiles information on total costs of common condition assessment and renewal engineering methods and technologies for wastewater/drinking water pipe. Presents trends in costs driven by pipeline diameter and project length. Summarizes supplemental direct costs and discusses social and environmental cost issues, and the gaps between current cost data capture practices and future needs. Includes case studies describing utility wastewater conveyance/drinking water distribution pipe condition assessment and renewal engineering project costs.
Management Practice for Wastewater Pipelines (INFR9SG09/INFR10SG09MPWW) Management Practice for Drinking Water Pipelines (INFR9SG09/INFR10SG09MPDW)	Presents a literature and current practice review of management practices for wastewater/drinking water pipelines. The practices focus on pipe condition evaluation and prediction, risk analysis, and renewal prioritization. Describes the basic concepts and algorithms of models and the linkage between this research and the asset management core questions.
Product Qualification for Water Utilities (INFR9SG09/INFR10SG09PQWW)	Investigates product qualification by studying the main validation verification and evaluation practices followed by wastewater and drinking water utilities, as well as other industries that perform product qualification.
Renewal Engineering for Wastewater Pipelines (INFR9SG09/INFR10SG09REWW) Renewal Engineering for Drinking Water Pipelines (INFR9SG09/INFR10SG09REDW)	Describes renewal engineering technologies and methodologies currently in use for wastewater and drinking water pipelines. Proposes a standard data structure for reporting condition assessment work on wastewater pipelines and provides sources for additional information.
Underground Utility Locating Technology (INFR9SG09/INFR10SG09UULT)	Investigates current utility engineering practices in other industries and synthesizes the best practices followed to locate underground utilities. Provides implementation recommendations to ensure application of the best practices followed by other industries.
Utility Benchmarking for Wastewater (INFR9SG09/INFR10SG09UBWW) Utility Benchmarking for Drinking Water (INFR9SG09/INFR10SG09UBDW)	Presents the results of web-based wastewater utility benchmarking and describes web-based benchmarking's two major parts – data collection and result visualization. Presents performance comparisons among multiple utilities for various areas.

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