Condition Assessment for Drinking Water Pipelines: Synthesis Report

The research presented in this report was performed in order to compile and better understand the state of the technology for drinking water pipeline condition assessment methodologies and technologies, focusing primarily on the geographic regions of the U.S.A. An extensive literature review was performed, covering conference papers, journal articles, vendor literature, and major reports. Additionally, approximately 50 detailed case studies describing utility drinking water pipeline condition assessment practices were created using information data mined directly from participating utilities.

The information gathered through literature review and through data mining was compiled and synthesized, resulting in the presentation of conclusions regarding the state of condition assessment of domestic drinking water pipelines, recommendations for further research and industry needs, and a description of trends found. Trends in technology use and practices were summarized, cost issues were discussed, and the gaps between needs and available technologies were presented.

Furthermore, this report proposes a standard data structure for utilities to use for reporting purposes when performing condition assessment work on drinking water pipelines. The collection of the information presented in the proposed standard data structure for utility reporting would provide the data needed to greatly improve utility operating processes and to more easily direct research toward industry needs.

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