

Pipeline

- **Diameter:** 16 inch
 - **Length:** ~6,360 ft
 - **Type:** Raw water transmission main
 - **Region:** North America
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Challenge

Client faced severe flow restrictions in its 70-year-old raw water main due to heavy sediment buildup, reducing internal diameter from approximately 16 inches to 12 inches. With growing municipal and industrial demand, the city needed a non-invasive, cost-effective method to restore flow and verify pipeline condition without full replacement.

i2i Solution

i2i Pipelines deployed its SmartFoam Pig, a flexible in-line inspection tool equipped with high-sensitivity eddy-current sensors designed for unpiggable or complex pipelines. Following the cleaning phase, the tool was run through the entire line to collect detailed information on wall thickness, corrosion, and internal features.

Results

Four anomalies were detected, including minor wall loss (less than 10%) and localized joint deflection. All findings were verified through targeted visual inspections, confirming both the accuracy of the tool and the overall pipeline integrity.

Following cleaning and inspection, the flow capacity was fully restored, and no leaks were identified.

The pipeline was assessed to be in good overall condition and suitable for continued operation, with an estimated remaining service life of 30 to 50 years.

By adopting a condition-based maintenance approach, the operator avoided the need for a full replacement, achieving significant cost savings of approximately \$40 million while ensuring long-term reliability and performance.