



## Water Conveyance

**Client**  
Philadelphia Water Department

**Location**  
Philadelphia, PA, USA

## Water Transmission and Distribution Pressure Pipelines

### Project Highlights

- Comprehensive assessment of all utilities and assets on-site
- Development of 20-year capital improvement program
- Successful collaboration among a variety of stakeholders

### Project Description

The Philadelphia Industrial Development Corporation (PIDC) owns the land and utilities for the Navy Yard in Philadelphia. The 1,200-acre site was initially developed in the 1870s and was further developed during war-times in the 1900's until official closure by the government in 1996, when the property was transferred to PIDC. The utility systems on the site reflect years of booming growth and periods of minimal activity.

PIDC is in the process of transferring the water, wastewater, and stormwater utilities to the Philadelphia Water Department (PWD). The project entailed completing the due diligence on the utility assets that are being transferred to PWD including a condition assessment, modeling, financial analysis, legal and billing review and development of a master plan for the systems. The condition assessment utilized extensive field inspections, operation and investigation. The modeling of the water system was conducted using H2OMap for hydraulic and water quality models. The water system posed numerous challenges as it was designed to provide water to 60,000 occupants but currently only serves a tenth of that design customer base. The water quality model was used extensively to address these challenges and develop cost-effective solutions. Aging infrastructure added to the challenges, including regulatory compliance, however, using a database driven condition assessment and modeling, a plan was developed to address near- and long-term challenges faced by PWD as they assume responsibility for the water utility. This plan included recommendations for main replacement and abandonment, water quality improvements, and a flushing program. Because of the numerous stakeholders in the project, successful completion of the project required extensive collaboration and communication between CH2M HILL project team members and the stakeholders through focus group and steering committee meetings.