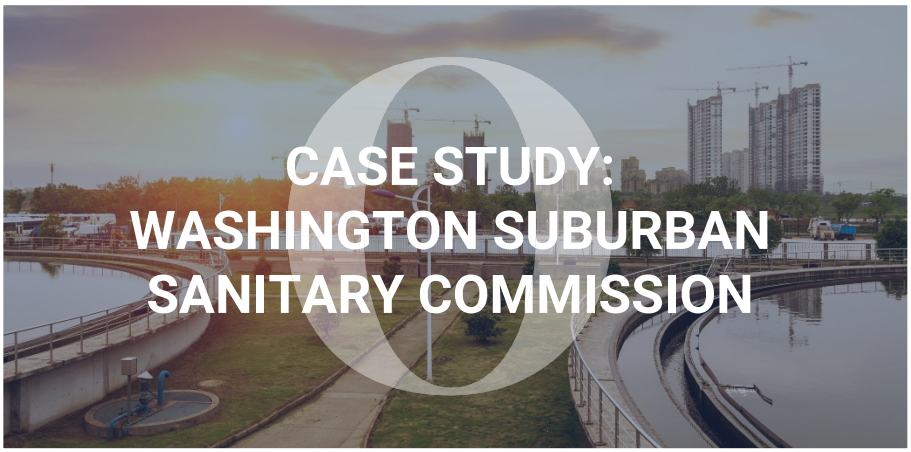
Optimatics
PLAN SMARTER



CASE STUDY: WASHINGTON SUBURBAN SANITARY COMMISSION

The Washington Suburban Sanitary Commission (WSSC) has adopted the use of Optimatics' Optimizer™ platform in its Asset Management Program decision making process. WSSC is leveraging algorithms, intelligent automation, and the computational cloud provided by Optimizer™ to simultaneously balance risk, cost, and hydraulic performance objectives for mains renewal alternative options.

WSSC is one of the largest water and wastewater utilities in the United States, serving over 1.8 million residents across a 1,000 square mile area. WSSC is responsible for over 5,700 miles of water distribution pipes and 5,500 miles of sewer collection pipes.

WSSC's Asset Management Program (AMP) decision-making process has traditionally been heavily influenced by risks related to pipe mortality but not as much by factors related to hydraulic performance. WSSC needed a solution to streamline its asset management process by balancing the capital cost of pipe replacement, business risk exposure, and level of service.

Optimal Asset Decisions

Holistic Assessment

Multi-objective Analysis

Information from WSSC's asset management system was used to provide detail on the cost of replacement and existing business risk exposure for each buried asset, whilst the InfoWorks ICM hydraulic model was used to understand level of service. Optimizer™ was used to integrate this data and provide a basis for making informed decisions about how to prioritize and size replacement of its assets.

Flooding\Overflows

Business Risk Exposure

Cost

ANALYSIS OUTCOMES

Optimizer™ empowered WSSC to integrate their hydraulic model with asset management data for the first time, which has provided valuable insights on how to prioritize their investment. The resulting analysis revealed that replacement strategies can be significantly different when considering hydraulic impacts.

Enhanced Optimized Capital & Operational Decision Making

Assessment & Validation of Capital Needs

Development of Business Case Alternatives & Corresponding Risk Data

Validation & Calibration of Risk Components, Including an Assessment of True Mitigation

Identification of Performance Standards & Operating Performance at Basin & Asset Levels

Integration of Physical Condition Attributes with Hydraulic Capacity, Operational Costs, & Level of Service Performance

CONCLUSION

The Optimizer™ platform allows System Asset Strategy Managers at WSSC to identify system needs and develop solutions that fully leverage their asset data and hydraulic models for both asset management and strategic planning. Assets are now prioritized for maintenance, replacement, or upsizing on a comprehensive multi-objective, multi-criteria basis. These analyses provide a transparent, unified approach to asset management and capital and operational planning, ultimately providing more confidence in the decisions being made by WSSC.

ABOUT US

Optimatics is changing the trajectory of public utility economics, powering outcome-driven analytics strategies that achieve new levels of operational and community impact. With Optimatics, infrastructure leaders leverage an intelligent platform combined with their engineering judgment to explore the full range of options and tackle complex decision-making with confidence.