Integrated Planning for Wastewater and Stormwater Management

Water resources infrastructure in this country is under siege from all manner of natural and public policy-driven challenges. As evidenced by mega-storms such as Sandy and increasingly frequent extreme storm events, our historical design criteria and use of traditional piped infrastructure systems to meet minimum operational thresholds is not adequate. In addition, increasingly stringent water quality requirements under the Clean Water Act have driven costs up and affordability down. Wet weather programs that address combined sewer overflows (CSO) and storm drain discharges are significant cost drivers.

Our capabilities include:

- Hydraulic modeling
- Financial capacity analysis
- GIS and asset management database development
- Asset condition assessment
- Wastewater and stormwater infrastructure design
- Design standards development
- Regulatory and stakeholder engagement
- Non-structural controls development (policy, regulation)
- Life-cycle cost analysis

Our interdisciplinary team also includes climate change risk and resiliency specialists to ensure the final plan recognizes climate change impacts on critical infrastructure.

INTEGRATED PLANNING APPROACH

Kleinfelder's team of water resources professionals employs an integrated planning approach to help municipalities identify capital improvement and rehabilitation strategies that addresses water quality requirements, prioritizes projects through a risk-based analysis, promotes green infrastructure elements to enhance system adaptability, and can be implemented within a community's financial capacity to execute.

A FINANCIALLY SUSTAINABLE MODEL FOR WATER MANAGEMENT

This integrated approach incorporates a strong emphasis on sustainable practices and asset management tools to help quantify and characterize benefits. The framework encourages a broader array of alternatives outside of standard grey infrastructure, with a positive impact on cost reduction. Regulators recognized that a more financially sustainable model for water resource management is crucial to continued environmental protection. With progress towards water quality goals embedded in the integrated plan, and a risk-based asset management model to justify priorities, communities have greater latitude to employ innovative solutions to local conditions.

Benefits of the Integrated Approach:

- Prioritizes capital projects to ensure highest water quality benefits achieved first
- Recognizes affordability as a fundamental program basis
- Employs an adaptive/iterative approach to implementation
- Promotes risk-based enterprise asset management/long term operational improvement
- Showcases green infrastructure and innovative techniques with multiple benefits

KLEINFELDER
Bright People. Right Solutions.