

WATER RESOURCES MANAGEMENT AND OPERATIONAL DECISIONS IN THE CONTEXT OF EVOLVING CONDITIONS

John Mitnik, Ana Carolina Coelho Maran

South Florida Water Management District, West Palm Beach, FL, USA

Presented by: ***Asif Mohamed***

In the context of managing around-the-clock water control operations and monitoring of one of the largest and most complex regional water management system in the United States – the Central and Southern Florida (C&SF) Project, decision-making is anchored in real time information and the expertise required to operate a system of such magnitude. Furthermore, critical investments are strategically allocated by South Florida Water Management District (SFWMD), addressing structure inspection report recommendations and refurbishment needs of essential system components as part of ongoing Operations and Maintenance (O&M) efforts, alongside the design and construction of new projects and system components. While this approach addresses immediate needs, it does pose challenges in the face of evolving conditions, such as land development, sea level rise and climate change.

This discussion delves into the intricacies of navigating the balance between addressing immediate needs and preparing for the long term, especially in the context of climate change and funding limitations. The SFWMD's continuous response and system operation incorporates climate projections and risk assessments into its decision-making processes, integrating resilience considerations into a spectrum of priorities. Day-to-day operations and infrastructure investments ensures the response to immediate needs also accommodates the implications of shifting conditions and deviations from historical norms.

In essence, an adaptive planning strategy is in place, ensuring that infrastructure investments are made not just as a response to pressing concerns, but with the goal of achieving long-term sustainability and resilience and ensuring overall system reliability. In summary, this abstract illustrates the multifaceted nature of decision-making in the context of water control operations and urgency of addressing immediate system maintenance needs, with the vision to build community resilience into the future.

PRESENTER BIO: Asif Mohamed is a supervising Principal Engineer - Water Manager in the Office of Operations at SFWMD. Asif and his team of engineers actively manage the District's vast network of lakes, canals and control structures supporting the mission of providing flood control for our communities, meeting the regional water supply needs and safeguarding the water resources of South Florida.