

ASSESSING AND MITIGATING THE IMPACTS OF SEA LEVEL RISE ON FLOODING IN SOUTH FLORIDA

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The South Florida Water Management District (SFWMD) is a regional agency in the state of Florida responsible for managing the water resources of a 16-county service area stretching from Orlando to the Florida Keys. Within this region SFWMD operates and maintains the primary flood control system, the Central and Southern Florida (C&SF) Project, authorized by Congress in 1948 following the great flood of 1947. The project was built by the US Army Corps of Engineers in the 1950s and 60s several of the assets are approaching the end of their design life. In addition, these flood control assets including canals and structures are experiencing conditions such as higher sea level and denser and more spatially extensive urbanization than were assumed at the time of their design.

SFWMD has embarked on an effort, the Flood Protection Level Of Service (FPLOS) Program to assess the ability of these assets to continue to meet their flood protection objectives and to identify what adaptations are necessary to ensure a resilient flood control system into the future considering the effects of continued urbanization, climate change and sea level rise.

This presentation will highlight the key aspects of the FPLOS program including innovative approaches for assessing flood risk at coastal gravity structures, coastal and inland basins, from extreme rainfall, tides, and storm surge. We will describe a collaborative approach to identifying and evaluating regional and local mitigation strategies, present opportunities, challenges, and scale of potential infrastructure investments and adaptations necessary over the next decade. The FPLOS Program approach and findings will be illustrated with examples from ongoing and recently completed studies in South East Florida.

PRESENTER BIO: Akin Owosina is Chief of Hydrology and Hydraulics at the South Florida Water Management District. He is a certified professional engineer with over 30 years' experience in water resources and modeling. He has led multidisciplinary teams responsible for flood control studies and restoration projects across South Florida.