

When the iModel is applied to water management systems, it has the capacity to expedite restoration of natural systems, improve reservoir management and help manage the severity of flooding and drought conditions. By simulating water flow in real-time based on how much it is raining, it provides input to water managers on how to move water through a complex network of canals and pumps to reflect the natural flow and water level.

The iModel will be used to help managers make better decisions in designing, implementing and operating major restoration projects. This potentially will result in more efficient operations and could set a precedent that may be duplicated at other agencies for water resource management.

Ali's initial paper describing the iModel was published in the prestigious "Journal of Hydrology" in 2009 and his second paper is anticipated to be published in a peer-reviewed journal later this year. The iModel has now completed the main development phase and is in the implementation stage at the District.

Ali has worked for the SFWMD as an engineer for almost 15 years. He was chosen as the Employee of the Month in July 2011 and was later honored as 2011 Employee of the Year at the March Governing Board meeting. He has a PhD from Utah State University in stochastic modeling/optimization and earned his undergraduate degree from Cairo University.

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About the South Florida Water Management District

The South Florida Water Management District is a regional, governmental agency that oversees the water resources in the southern half of the state – 16 counties from Orlando to the Keys. It is the oldest and largest of the state's five water management districts. The agency mission is to manage and protect water resources of the region by balancing and improving water quality, flood control, natural systems and water supply. A key initiative is cleanup and restoration of the Everglades.