

USING SEASONAL CLIMATE FORECASTS TO IMPROVE SOURCE-ALLOCATION DECISIONS BY MEMBER UTILITIES OF THE FLORIDA WATER AND CLIMATE ALLIANCE

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Utilities in the state of Florida use hydrologic, climate, and water supply and demand models to different degrees and with different purposes; however, they share similar constraints on, and needs for, improved seasonal climate forecasts. While seasonal climate forecasts have been available for many years, their utility to the water management community has been relatively modest to-date. This is of particular importance as many utilities move away from using a single source of water (e.g. groundwater) to using multiple sources that can include groundwater, surface water, and desalinated water. In this project we work with two water utilities of the Florida Water and Climate Alliance (FloridaWCA), a stakeholder-scientist partnership aimed at increasing the relevance and usability of climate information in water resource decision making. One utility uses a combination of groundwater, surface water, and desalinated water to meet municipal demand, and the second uses surface water and an aquifer storage and recovery system. The questions we seek to answer is when to use the right water source at the right time in order to minimize cost while maintaining environmental flows, and to what degree can improved dry season forecasts improve source allocation decisions? To address this question we will develop a real-time monitoring tool to anticipate the onset and demise of the wet and dry seasons, develop high-resolution dry season forecasts, and integrate these forecasts into decision tools of the two utilities.

PRESENTER BIO: Dr. Martinez is an Associate Professor in the Department of Agricultural and Biological Engineering and a faculty member of the Center for Landuse Efficiency at the University of Florida. One of his main interests are the impacts of climate variability and change on human and natural systems.