

## HOW MUCH WOULD IT COST TO MEET FLORIDA'S FUTURE WATER DEMAND? ANALYSIS OF PROPOSED PROJECT OPTIONS

*Tatiana Borisova*<sup>1</sup>, *Matthew Cutillo*<sup>2</sup>, *Krystle Hoenstine*<sup>2</sup> and *Kate Beggs*<sup>2</sup>

<sup>1</sup>University of Florida, Gainesville, FL, USA

<sup>2</sup>Economic and Demographic Research, Tallahassee, FL USA

Regional water supply plans developed by Florida's water management districts (WMDs) identify the need to expand water supplies by 0.5 billion gallons per day in the next 20 years. It is expected that water conservation can partially offset the water supply expansion needs. The objective of this study is to estimate the expenditure needed to implement water supply and water conservation projects to meet future demand in the state. To achieve this objective, we utilize a dataset of the completed water projects and proposed future water supply and conservation project options assembled by the Florida Department of Environmental Protection. First, the average costs of developing new water supplies and implementing conservation initiatives are estimated. An econometric model relates the average costs to the project size, type, and WMD region. Secondly, the information about future project options is used to identify water supply sources that can be capable of meeting a large share of the water demand increase in various regions. Finally, combining the average cost estimates with project size and type assumptions, we assess the total expenditure that will be needed to meet the future water demand in Florida. Limitations of this study are also noted. Specifically, the study focuses on the "average" water demand projections (as opposed to a drought scenario). The analysis does not explicitly account for the expenditure to meet the goals of the minimum flows and water levels for the natural systems in recovery or prevention status. Finally, the analysis is based on assumptions regarding the likely water supply sources for various planning regions, as well as the funding needs for completed projects, which may not accurately reflect the future cost. The expenditure forecast will continue to be revised as better information on the water sources, funding needs, project sizes, and other relevant parameters becomes available.

**PRESENTER BIO:** Dr. Borisova is associate professor and extension specialist in Food and Resource Economics Department, University of Florida. For the past 3 years, she has been collaborating with the Economic and Demographic Research (EDR), Florida Legislature, on EDR's annual assessment of Florida's Water Resources and Conservation Lands.