



USDA-CSREES 2007 National Water Quality Conference

[Geospatial Agricultural Mapping in the Lower Flint River Basin](#)

As work begins on crafting a comprehensive statewide water management plan, the desire to illuminate agriculture's impact on the water resources of Georgia transforms into more of a necessity. To aid in this discovery, a dynamic data management system is needed to transform enormous amounts of raw agricultural water use data into valuable information for policy makers and individual agricultural producers alike. Through a contractual arrangement with the Georgia Soil and Water Conservation Commission, the Flint River Water Planning and Policy Center (FRWPPC) at Albany State University built an initial geospatial database around 1,400 GPS locations of installed agricultural water meters in the state. The goal was to add variables to the existing data that could assist farmers in improving the management and conservation of land and water resources while simultaneously providing a solid foundation for agricultural, and statewide, water policy. Using a Geographic Information System (GIS) format data set, FRWPPC field technicians were able to locate each meter, map irrigation hardware, field boundaries, and water sources, and record additional observations impacting water use, including current crops and predominant soil textures. When possible, data was collected on end-gun shut-offs, irrigation efficiency tests, or any other measure pertinent to water use. To increase the significance of the data, meters, fields, and sources were linked together by identification codes, providing a way to analyze water use practically and efficiently based on given attributes. While this project was limited to meters installed prior to the 2005 growing season, it could easily be expanded to include other parts of Georgia as more meters are put into operation.

Author: Shelly S. Jones

University Affiliation: Albany State University

Co-Author(s): Mark H. Masters and James M. McKimmey