



## **USDA-CSREES 2007 National Water Quality Conference**

### **The Feasibility of Using Aquifer Storage and Recovery to Manage Water Supplies in Georgia**

In Georgia, growing concerns about water scarcity have increased interest in policies and technologies that conserve, manage, and enhance water supplies. This paper focuses on the potential use of aquifer storage and recovery (ASR) to manage and enhance water supplies, particularly in the Flint River Basin where water scarcity is a substantial management concern. Our ASR research included an economic assessment and a technical feasibility analysis. Our economic assessment considered whether ASR could be used to supply or offset new water uses in the Flint Basin. Our findings suggest considerable promise for this technology as a means to enhance water supplies for new municipal and industrial uses in the watershed. The results were less promising, in strict economic terms, regarding the use of ASR to offset or supply agricultural water use. The technical feasibility analysis demonstrated that ASR could be used in the Flint River Basin to store large volumes of treated water at times when surface water discharge rates or Floridan aquifer levels are high. Stored water could be recovered during dry periods. Our analysis demonstrated the feasibility of an ASR system that could provide seasonal storage of approximately 1.5 billion gallons of water. Development of ASR facilities on even a larger scale might ultimately be feasible. The results of this analysis suggest that ASR could be used to support economic development in the region by supplying or offsetting water users in order to mitigate drought season use of the ground and surface water systems. In Georgia, ASR has been viewed somewhat skeptically by policy makers. Until recently, it was prohibited in the coastal region. However, given current water resource concerns and potential benefits of ASR, it deserves serious consideration, especially as policy makers develop a new statewide plan for water resources management in Georgia.

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