

Groundwater Sustainability in the Augusta-Richmond County Area, Eastern Georgia

Gerard J. Gonthier

Affiliation: Hydrologist, U.S. Geological Survey South Atlantic Water Science Center, Norcross Georgia 30093

Reference: McDowell RJ, CA Pruitt, RA Bahn (eds.), *Proceedings of the 2015 Georgia Water Resources Conference*, April 28-29, 2015, University of Georgia, Athens.

Abstract. The U.S. Geological Survey, in cooperation with Augusta Utilities, is assessing groundwater sustainability of the Cretaceous aquifer system in the Augusta-Richmond County area, Georgia, where three well fields are operating. Unconsolidated sediments including the Cretaceous aquifers thicken southward at a rate of roughly 30 feet per mile from the Fall Line that trends east-west through Augusta. Well Fields 1, 2, and 3 are located about 3, 7, and 11 miles south of the Fall Line, respectively. Groundwater levels have been monitored for Augusta Utilities since 2007 using real-time continuous-recorders at four wells and annual synoptic water-level measurements at 56 wells. In addition, the Georgia Environmental Protection Division (GaEPD) has been monitoring groundwater levels at two wells located in Richmond County for a longer time period than since 2007. One well, 15 miles south of the Fall Line, provides a real-time continuous record of groundwater levels. Another well, 7 miles south of the Fall Line, contains a continuous-recorder, in which water-level data are downloaded about three times per year. Up-to-date groundwater levels are available on the groundwaterwatch.usgs.gov website at <http://groundwaterwatch.usgs.gov/GAR/StateMaps/GAR.html>. Since 2007, groundwater levels at Well Field 1 have responded to individual rain events while those at Well Fields 2 and 3 have responded to annual precipitation fluctuations. Water levels in the GaEPD well located about 15 miles south of the Fall Line have been declining since 1993. About 7 miles south of the Fall Line, groundwater levels in the other GaEPD well fluctuated about a constant level since 2000.