ABSTRACT

On December 17, 1990 the County Council of Hampton County requested the South Carolina Water Resources Commission to declare Hampton County a Capacity Use Area. The request stemmed from complaints of domestic well interference.

Approximately 45 Floridan-aquifer wells in southern Hampton County experienced loss of yield as the result of extensive water level declines. Ground-water levels in the county declined as much as 20 feet prior to 1976, and as much 8 feet between 1976 and 1990. The declines were caused by increased ground-water use by agriculture and aquaculture in Hampton County and by public-supply, industrial, and irrigation use in areas to the south.

The most severe water-level declines have occurred near new high-capacity wells. Implementing conservation measures, including use of aquifers other than the upper Floridan, redistribution of withdrawals spatially and through time, can mitigate well-interference problems and modification of the public-notice procedure employed in the ground-water use-permitting program. Various drawdown experiments are illustrated to demonstrate the effects of each type of pumping scheme.

It is the authors’ conclusion that planning and coordination of ground-water use can diminish the number of well-interference problems. They recommend the inclusion of Hampton County in the Lowcountry Capacity Use Area and the promulgation of policies and regulations to address water conservation and well interference.

Copies of this report are available in the SCDNR’s Columbia office.