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Report of a Capacity-Use Investigation for Hampton County, South Carolina

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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.

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