

## Hydrology - SCWRC Report 157

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### Potentiometric Surface of the Floridan Aquifer in South Carolina, July 1986

By

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**NOTE:** This Report is published on one folded 40-inch by 26-inch sheet of paper, rather than as a bound book. The sheet contains primarily one large map with accompanying text.

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#### INTRODUCTION

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The Floridan aquifer is the collective name for a series of Tertiary carbonate aquifers underlying parts of Alabama, Georgia, and South Carolina, and all of Florida. The aquifer is composed of Paleocene to early Miocene rocks that are hydraulically connected in varying degree (Johnston and others, 1981).

The map shows the configuration of the potentiometric surface of the Floridan aquifer in South Carolina, as of July 1986. The contours indicate the elevation to which water would rise in wells tapping the Floridan aquifer, and they are presented as an aid for evaluation of regional ground water occurrence. A potentiometric map indicates the direction of ground water flow and, in conjunction with other information, the rate of flow.

Previous investigators have published maps of the potentiometric surface of the Floridan aquifer on local and regional scales. Hayes (1979) presented a map of Beaufort, Jasper, Colleton, and Hampton Counties representing 1976 water levels for the Ocala and Santee aquifers. Park (1985) published a potentiometric map of the Trident area (Berkeley, Dorchester, and Charleston Counties) for 1982 that represents water levels in the Santee Limestone and the upper 50 feet of the Black Mingo Formation. Aucott and Speiran (1985) constructed a more general potentiometric map of the Floridan aquifer and its hydraulically connected updip clastic equivalent in South Carolina for 1982. A regional map showing the entire Floridan aquifer's potentiometric surface in 1980 was presented by Johnston and others (1981). Other maps have been published by Mundorff (1944), Siple (1960), and Counts and Donsky (1963).

The map herein is limited to the Floridan aquifer where it occurs in South Carolina. The counties underlain are Allendale, Bamberg, Barnwell, Beaufort, Berkeley, Charleston, Colleton, Dorchester, Hampton, Jasper, and Orangeburg, an area of 7,900 square miles.

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