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A Reconnaissance of the Water Resources of Pickens County, South Carolina

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ABSTRACT

The magnitude and frequency of low flows in Pickens County, S.C., have been estimated from gaging station records and from a reconnaissance investigation conducted during August, September and October 1967. Average flows and 7-day low flows having recurrence intervals of 2 and 10 years have been computed for 26 stream locations. The 2-year (median), 7-day low flows range from about 0.3 cubic foot per second per square mile in the southern part of the county to about 0.9 cubic foot per second per square mile in the mountainous north. Storage requirements based on low-flow recurrence intervals of 5 and 10 years have been computed also. At most locations surface water in Pickens County has a low dissolved-solids content and is generally suitable for most uses.

Generally, wells drilled to a depth of less than 250 feet in rocks of the Inner Piedmont and Brevard Belts of Pickens County yield from one-half to 500 gallons per minute. The highest average yields were obtained from wells drilled in biotite granite gneiss whereas the lowest average yields were from wells in hornblende gneiss. Wells drilled in biotite schist, and biotite gneiss and migmatite had intermediate yields of about 14 gallons per minute. The average yield of all wells inventoried was 21 gallons per minute; the average for the highest 3 percent was 112 gallons per minute. Wells drilled through 15 to 90 feet of saprolite produce the highest average yields. Records obtained on the base flow of streams (2-year, 7-day low flow) throughout the county indicate that approximately 0.3 to 0.7 million gallons of water per square mile are discharged daily. This amount is the minimum potentially available for ground-water withdrawal.

The ground water of Pickens County is of good to excellent quality for most domestic, municipal and industrial uses. Most of the waters sampled were soft, slightly acidic, and low in dissolved solids.

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