

## Hydrology - USGS/SCWRC Report 14

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### Low-Flow Characteristics of Ungaged Streams in the Piedmont and Lower Coastal Plain of South Carolina

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1981

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#### ABSTRACT

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Estimates of two low-flow characteristics were developed for 113 partial-record sites from a correlation of discharge measurements with gaging station records. Unit values for 7Q2 ranged from 0.72 to 0.01 cubic feet per second per square mile and for 7Q10 from 0.46 to 0 cubic feet per second per square mile. Accuracy of the partial-record estimates was assessed on the basis of reliability of the index station estimates, reliability of the base-flow relationships, and extent to which those relations had to be extrapolated.

Multiple regression was applied to regionalize low-flow estimates in the Piedmont. The most significant characteristics in the regression equations were drainage area, mean basin elevation, and flow at 95 percent duration. Standard error or estimate was 27 percent for 7Q2 and 34 percent for 7Q10. Satisfactory relationships were not derived for Lower Coastal Plain streams.

Field determinations of specific conductance, dissolved oxygen, and pH were examined for areal variation with no significant indications.

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