INTRODUCTION

Water resources data for the 2005 water year for South Carolina consist of records of stage, discharge, and water quality of streams, stage and contents of lakes and reservoirs, ground-water levels, and precipitation. This report contains discharge records for 92 gaging stations; stage-only records for 35 gaging stations; stage and contents for 11 lakes and reservoirs; water quality for 45 gaging stations; water levels for 28 observation wells; and precipitation for 27 stations. Also included are data for 65 crest-stage partial-record stations and discharge measurements at 8 miscellaneous sites. Additional water data were collected at various sites, not part of the systematic data collection program, and are published as miscellaneous investigations of water quality. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in South Carolina.

Records of discharge and stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey water-supply papers entitled, "Surface Water Supply of the United States." Through September 30, 1960, these water-supply papers were in an annual series and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperatures, and suspended sediment were published from 1941 to 1970 in an annual series of water-supply papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of water-supply papers entitled "Ground-Water Levels in the United States." Water-supply papers may be consulted in the libraries of the principal cities in the United States or may be purchased from Branch of Distribution, U.S. Geological Survey, 604 South Pickett Street, Arlington, VA 22304.

For water years 1961 through 1970, streamflow data were released by the Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1970 were similarly released either in separate reports or in conjunction with streamflow records.

Beginning with the 1971 water year, water data for streamflow, water quality, and ground water are published as an official Survey report on a State-boundary basis. These official Survey reports carry an identification number consisting of the two letter State Abbreviation, the last two digits of the water year, and the volume number. For example, this report is identified as "U.S. Geological Survey Water-Data Report SC-05-1." For archiving and general distribution, the reports for water years 1971-74 are also identified as water-data reports. These water-data reports are for sale, in paper copy or in microfiche, by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

COOPERATION

The U.S. Geological Survey (USGS) and organizations of the State of South Carolina have had cooperative agreements for the systematic collection of water records since 1930. Organizations that supplied data are acknowledged in station manuscripts. Organizations that assisted in collecting data through cooperative agreement with the USGS are:

Beaufort-Jasper Sewer and Water Authority
Berkeley, Charleston, Dorchester Counties Council of Governments
Charleston Water Systems
City of Augusta
City of Anderson
City of Charleston
City of Mount Pleasant, Waterworks and Sewer Commission
City of Myrtle Beach
City of Newberry
College of Charleston
Georgetown County Water and Sewer Authority
Horry County
Laurens County Water and Sewer Commission
South Carolina Department of Health and Environmental Control
South Carolina Department of Natural Resources
South Carolina Public Service Authority
South Carolina Department of Transportation
Spartanburg Water Works
Startex, Jackson, Wellford, and Duncan Water District
Town of Lyman
Town of Timmonsville
Waccamaw Regional Planning and Development Council
Western Carolina Regional Sewer Authority

The following Federal agencies assisted in the data collection by furnishing funds or services:

National Park Service
U.S. Army Corps of Engineers
U.S. Department of Energy

The following corporations aided in collecting records:

Bowater-Carolina Corporation
Duke Energy Corporation
International Paper Corporation
Milliken Chemical Corporation
Progress Energy Corporation
South Carolina Electric and Gas Company
Smurfit-Stone Container Corporation
Weyerhauser Industries

SUMMARY OF HYDROLOGIC CONDITIONS

Precipitation and streamflow

Rainfall totals and streamflows were below normal throughout South Carolina during the 2005 water year. Rainfall in the Piedmont, as indicated by the National Weather Service (NWS) station at the Greenville-Spartanburg Airport, was about 9 percent below normal for the year. Rainfall recorded near Columbia and Charleston by the NWS was about 8 percent and about 16 percent below normal, respectively, for the year. Hurricane Ophelia (Sep. 7-18) affected the northeast coastal region of South Carolina during the month of September. Rainfall for the North Myrtle Beach station totalled 6.34 inches during this period. Rainfall associated with Hurricane Dennis (July 4-12) resulted in flooding in many parts of the upstate. Rainfall total at Greenville-Spartanburg Airport during this time was 4.9 inches

A comparison of monthly and yearly mean discharges during the 2005 water year and the monthly and yearly mean discharges for the period of record for two of the long-term index stations are shown in figure 1. Monthly mean discharges for the 2005 water year for the South Fork Edisto River near Denmark station and the Lynches River at Effingham station were near average of those observed for the period of record during the water year.

Ground Water

Ground-water levels reflect both the climatic conditions of the region and ground-water withdrawals. In the Piedmont ground water occurs in the fault and fracture systems of the crystalline rocks and in the shallow unconsolidated material overlying the rock. Water levels in the shallow water table aquifer in the Piedmont, which is not heavily pumped, decreased slightly during the 2005 water year at an observation well near Anderson. Water levels in an unused 75-foot deep water table well, AND-326, decreased from about 3.24 feet below land surface on October 1, 2004, to about 3.50 feet below land surface on Sept. 30, 2005.

In the Coastal Plain, ground water occurs in multiple aquifer systems, mostly under artesian or confined conditions. Ground water is used extensively in this part of the State. At Charleston, levels in well CHN-14 decreased about 11 feet from October 1, 2004, to mid-May. However, the water level at the end of the 2005 water year remained about 7 feet lower than the beginning of the year.

Figure 1.--Monthly and yearly mean discharges at two long-term representative gaging stations during 2005 water year with the median discharges for the period of record.