

South Carolina Department of Health and Environmental Control An Overview of the Groundwater Use and Capacity Use Program

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Access to clean, affordable, and readily attainable water is a fundamental necessity for life. For most South Carolinians water has always been readily available, easily attained, and until recently, seemingly limitless. Natural and human induced changes and degradation have significantly increased demands and pressures on our water supplies. The vulnerability of this finite resource readily demonstrates the need to monitor, manage, and preserve the resource in South Carolina for current and future generations.

Before the late 1970's, South Carolina had no reporting mechanism for monitoring water use and water use trends across the state. Although some water use data was reported to the U.S. Geological Survey for inclusion in National Water-Use Program reports, data provided was strictly voluntary, limited in coverage statewide, and lacking any measure of quality assurance/quality control. Recognizing the need for a more systematic approach to water monitoring and future management requirements, the South Carolina General Assembly passed the South Carolina Groundwater Use Act of 1969, effective July of that year. The Act declares the general welfare and public interest require the water resources of the State be put to beneficial use, to the fullest extent to which they are capable, subject to reasonable regulation in order to conserve these resources and to provide and maintain conditions which are conducive to the development and use of water resources.

The initial Act required groundwater withdrawers in designated Capacity Use Areas to report water use if withdrawals exceeded one hundred thousand gallons per day, one million gallons per month, and/or ten million gallons per year. Groundwater withdrawals outside of a designated Capacity Use Area remained unregulated and reporting was voluntary. The Waccamaw Capacity Use Area (Georgetown county, Horry county, and Britton's Neck of Marion county) was designated in 1979 by the Water Resources Commission (WRC) and the Low Country Capacity Use Area (Beaufort county, Colleton county, and Jasper county) in 1981. Reported groundwater withdrawals for the period 1980 through 1991 (statewide), averaged sixty billion gallons per year, with a high of seventy-five billion gallons in 1980 and a low of forty-two billion gallons in 1985.

In 1994, government restructuring reassigned the permitting activities of the WRC to the Department of Health and Environmental Control (DHEC). DHEC began oversight of the water use reporting programs (surface and groundwater) during fiscal year 1995/1996. Prior to 2001, water use data collection was inconsistent and limited quality assurance/quality control for reported usage exercised. The water use reporting Programs were permanently assigned to the Water Monitoring, Assessment, and Protection Division within the Bureau of Water. The Division proposed changes to the Groundwater Use and Reporting Act by requiring mandatory registration, permitting (in

Capacity Use Areas), and reporting of all groundwater withdrawals exceeding three million gallons per month in the state. The amendments were approved during the 2000 legislative session becoming effective January 1, 2001. The major focus of the Division initially was to register all existing, former, and new groundwater withdrawers in the State, as necessary. For the period 2002 through 2009, reported groundwater withdrawals statewide averaged seventy-three billion gallons per year, with a high of eighty billion gallons in 2002 and a low of sixty-five billion gallons in 2003.

Reported groundwater withdrawal information provides DHEC tools to better evaluate the demand on the groundwater resource across the State and communicate with users on managing their withdrawals. By evaluating this data through time with other variables such as precipitation/climatic events, population and industrial shifts, and potentiometric data, groundwater usage trends are developed and evaluated for effects on the viability of local and regional aquifer systems. In areas where groundwater withdrawals present potential threat to the long-term viability of a groundwater source, or pose a threat to public health, the Department may initiate investigation for declaration of a Capacity Use Area. With available information and data, the Department investigated and designated the Trident Capacity Use Area (Berkeley county, Charleston county, and Dorchester county) in 2002 and the Pee Dee Capacity Use Area (Darlington county, Dillon county, Florence county, Marion county, Marlboro county, and Williamsburg county) in 2004. Hampton county was incorporated with Low Country Capacity Use Area in 2007.

Within Capacity Use Areas, applicants for groundwater withdrawals in excess of three (3) million gallons in any month must demonstrate a reasonable need and requirement for the withdrawal and the withdrawal will not adversely affect the aquifer or other groundwater withdrawers utilizing the source. Permits for groundwater withdrawal developed by the Department are negotiated with each applicant and are written under a "Reasonable Use/Reasonable Need" doctrine. Permit withdrawal limits are authorization to withdraw groundwater for uses and applications as described in the permit (and application) and are not water allocations. Withdrawals may be modified based on necessity, demonstrated need, and viability of the aquifer system over time.

As South Carolina moves forward in developing and implementing a comprehensive water management strategy, evaluations of available approaches depend on collection, interpretation and analysis, and storage of varying data streams, foremost being accurate water use data. The Bureau of Water is committed to continuing acquisition of accurate and timely water use and other appropriate data to provide DHEC, other State or federal agencies, and other interested parties the means to evaluate and promote effective *sustainable development water management* strategies in South Carolina.