

Division of Water Resources 2005 Accomplishments

River Basin Management

The Division is developing river basin plans for each major basin in partnership with water users. In 2005, the plans for the Catawba and Yadkin Basins have been almost completed in parallel with hydroelectric project relicensing. The purpose of the plans is to assure long-range (50 years) sustainable water supplies to support a healthy economy.

2005 Drought-Central NC has been in a drought since September 2005. DWR has been working closely with other agencies to manage reservoir operations to conserve water in Falls Lake and Jordan Lake. The updated Cape Fear hydrologic model has been used for the first time as an operational tool to help guide decisions during this current drought period. The joint DWR DEH-PWS public water supply drought impact monitoring system is being used for the first time and has proved to be a valuable tool for tracking drought impacts.

Water Supply Planning

DWR has received updated Local Water Supply Plans from 517 community water systems. DWR engineers have reviewed the plans and put the information in an on-line database for use by water users.

The Environmental Management Commission as mandated by Section 3 of HB1215, gave DWR permission to take draft rules governing water conservation and water reuse during droughts and water supply emergencies out for public hearing. The rules were developed through consultation with water users and other stakeholders.

Drought Management Advisory Council issued its first drought advisory under new statutory authority on October 13, 2005. This advisory, Drought Advisory #1-05, provided objective quantitative information about drought conditions in the fall of 2005.

Water Resources Development Projects

The Division worked as lead DENR agency to secure a new Federal Energy Regulatory Commission (FERC) hydropower license on the Tapoco Project that provides streamflow for aquatic habitat and recreation on the Cheoah River downstream of Santeetlah dam-operated by Alcoa Power Generating Inc. (APGI). Normal flow releases for habitat and high flow releases for recreation in the Cheoah River began in September, 2005.

The Division led DENR's efforts with FERC and other parties to arrive at a new revised license for the Gaston and Roanoke Rapids hydropower facilities operated by Dominion Energy on the Roanoke River. This license was issued in March, 2005 and will provide minimum and spawning flows to the bypassed reach below Roanoke Rapids dam, increase minimum flows in the lower Roanoke River during some months, further stabilize flows during March, and enhance

recreational use around the impoundments and downstream. The Division continues to be involved in post-licensing studies that are required by new license.

The Division continued to work closely with the Wilmington District, Corps of Engineers, on the final phases of the Wilmington Harbor Deepening Project. Deep water (-42 feet) was obtained to the State Port in January 2004; planning and engineering on the Northeast Cape Fear River channel portion of the project is currently underway.

The Division is managing grants for 19 counties in northeastern NC for the cleanup of stream debris as a result of Hurricane Isabel. Over \$3,400,000 in funding has been granted to these counties to pay for this cleanup, which should be completed in 2006.

The Division has prepared to award contracts to consultants to prepare three flood hazard mitigation plans for the four areas of Western North Carolina that were the most severely damaged by Hurricane Frances and Ivan: Biltmore Village (City of Asheville), Towns of Canton and Clyde (Haywood County) and the Town of Newland (Avery County). These studies should begin in 2005 and completed in July 2006. The Division also mapped areas of significant stream bank erosion from Hurricane Frances and Ivan and awarded \$2,000,000 in grants to six counties in Western NC to pay for the stabilization of some of those areas.

Environmental Education

The Division partnered with the Environmental Education Fund to produce and disseminate the North Carolina-specific Earth/Environmental Science curriculum, "It's Our Water". This curriculum consists of a five module DVD and corresponding classroom and field activities that center around our state's water resources. Launched in the fall of 2005, It's Our Water is currently being distributed throughout North Carolina through ten-hour teacher workshops.

Ground Water Management

Following the August 1, 2002 effective date of the Central Coastal Plain Capacity Use Area rules, DWR has permitted 199 water use facilities in the CCPCUA. In 2005, the Division issued permits to the 52 applications requiring the permit holder to reduce their withdrawals from the overused Black Creek and Upper Cape Fear aquifers by up to 75% between present day and 2018. These permits will eliminate damage to the aquifer from overuse and require investment in sustainable water supplies in this region.

Continued monitoring and maintenance of the state-wide network of 529 wells. These monitoring wells provide valuable information about how ground water levels are influenced by changes in rainfall and rates of withdrawal by water users. The 178 monitoring sites are visited at least quarterly. Just over half of the wells have automatic recording equipment installed, allowing the staff to collect over 80,000 measurements each year. Eleven new monitoring wells were constructed in 2005.