

Division of Water Resources 2008 Accomplishments

Water Supply Planning

The Division is now receiving 2007 Local Water Supply Plans (LWSP) that were due on July 1, 2008. The Division held four LWSP workshops this spring for local communities to provide technical assistance with updating their plans. As of November 13, 2008, we received 482 plans through our online streamline reporting program for local communities. Of the 482 plans, we have received 439 Water Shortage Response Plans.

The Drought Management Advisory Council issued its fourth drought advisory under new statutory authority, Drought Advisory #4-08, on October 1, 2008. The North Carolina Drought Management Advisory Council met on Dec. 20, 2007, Mar. 6, May 29, and Aug. 14, 2008.

Ground Water Management

DWR staff continues to deal with the Central Coastal Plain Capacity Use Area (CCPCUA) permitting program issues, including several compliance and enforcement cases and allocation transfers between permit holders to meet reduction requirements. DWR currently has 214 water use facilities permitted in the CCPCUA. The Division has issued permits to the 54 applicants 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. We recently published an assessment of the aquifer system which is available on our web site. Follow the link to the CCPCUA from www.ncwater.org.

The Division continued monitoring and maintenance of the state-wide network of 555 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 182 monitoring sites are visited at least quarterly. Approximately 58% of the wells have automatic recording equipment installed, allowing the staff to collect over 100,000 measurements each year. Eight new monitoring wells were constructed in 2008. In collaboration with the United States Geological Survey, DWR continues to track 46 drought indicator wells which give us the best available measure of how drought is impacting North Carolina's water supplies. A report published in July 2008 on the status of the network is available on the Division's web site.

River Basin Management

After an extensive public review, the highly controversial Concord-Kannapolis Interbasin Certificate was approved by the Environmental Management Commission on January 10,

2008. The original 2004 request was for a 36 MGD. A transfer was approved for 20 MGD with 7 certificate conditions. Conditions include drought management requirements and 20 year review of the certificate.

As a result of the Environmental Management Commission issuing the Concord-Kannapolis Interbasin Transfer Certificate, South Carolina sued North Carolina in the US Supreme Court. South Carolina feels North Carolina is over using the Catawba. DWR is providing technical support to the Attorney General's Office for the South Carolina vs. North Carolina US Supreme Court case.

One of the concerns raised in the Concord-Kannapolis Interbasin Transfer Certification process was that South Carolina felt they were not adequately notified. In response, DWR has worked with the General Assembly to define river basin boundaries for Interbasin Transfer out-of-state notification.

In the Cape Fear River Basin, there were concerns about the impacts of three expanding withdrawals (Harnett County, City of Wilmington, and Lower Cape Fear Sewer & Water Authority) and a new withdrawal at Bland Bluffs. Also, there was interest in the impact of the Corps of Engineers proposed new drought operations for Jordan Lake. DWR is working with local governments and other water users in the Cape Fear River Basin to do an assessment of current and future water demands (2030 & 2050). The completed water supply assessment is being expanded into a Cape Fear River Basin Water Supply Plan and scheduled to be completed January 2009.

The water systems in the Neuse River Basin have been severely impacted in both 2005 and 2007 by drought. DWR has started a Neuse River Basin Hydrologic Modeling project, scheduled to be completed December 2009, to assess the current and projected resources in the basin. The model is the first step towards a water supply plan for the Neuse Basin.

2008 Accomplishments of the Water Projects Section

The Division continued to work closely with the Wilmington District, Corps of Engineers on the final phases of the Wilmington Harbor Deepening Project. During 2008, work continued on the purchase of 700+ acres of mitigation lands, completing evaluations of the best methods to provide fish passage at the three locks and dams on the Cape Fear River, and relocation of an existing turning basin on the Northeast Cape Fear River.

The Division provided \$15,300,000 in State cost-sharing funds for 13 Corps of Engineers projects and 85 state-local projects in 2008. A portion of these funds, matched by local government project beneficiaries, paid the Corps of Engineers to perform maintenance of four Atlantic Intracoastal Waterway Inlet Crossing channels. The value of the 35 grants issued in 2008 to local government entities through the Divisions Water Resources Development Grant program totaled \$3,900,000 that will be matched by approximately \$1,300,000 in local funds.

Staff worked with Sec. Ross, Duke Energy, Crescent Resources, Inc., South Carolina DNR, and the Johns River Advisory Group to negotiate the Upper Catawba Public Access, Open Space and Trails Agreement (the Agreement is on DWR's website) as an additional Agreement to the Catawba-Wateree Comprehensive Relicensing Agreement. The Upper Catawba Agreement provides the opportunity for NCDENR to acquire approximately 2,600 acres of conservation land on the Johns River and Wilson Creek. This will provide public recreational lands and a functional ecological corridor from the Catawba River/Lake Rhodhiss up the Johns and Wilson Creek to the US Forest Service lands and the Blue Ridge Mountains.

Staff continued work on the licensing and 401 Water Quality Certification development for Alcoa Power Generation, Inc.'s (APGI) Yadkin Hydroelectric Project, Duke Energy's Catawba-Wateree Hydroelectric Project as well as Duke-Nantahala Area's Nantahala, East Fork and West Fork Hydroelectric Projects and their four small run of river hydroelectric projects.

On the Kerr 216 study, staff oversaw completion of a contract study that relates the extent of downstream flooding to quantified damages to agriculture, timber, road access and structures. A new contract was put in place to evaluate the administrative policies and procedures that affect the operation of J.H. Kerr reservoir. DWR staff was also heavily involved in developing an interim deviation request for J.H. Kerr operations that was reviewed using a stakeholder process.

Water supply instream flow staff began work with consultants to design an instream flow study for the proposed Little River Reservoir in eastern Wake County. We also worked with Wildlife Resources Commission staff and consultants to complete aquatic habitat modeling and develop a recommended flow regime for a proposed water supply reservoir for Cleveland County on the First Broad River.

DWR served as the fiduciary and contract administrator for the Cheoah River Resource Management and Enhancement Fund. It implemented contracts for mussel genetics, Spiraea monitoring and management, river restoration ecology, and supplemental gravel additions to the Cheoah River. It also continued work with APGI on the implementation of the Tapoco license.

DWR continued to administer water project grants to Western North Carolina local governments so that they could repair stream banks damaged by Hurricanes Francis and Ivan. Since the fall of 2005, 86 stream bank stabilization projects have been evaluated and 67 of them have been funded using \$5,200,000 provided by the N.C. Legislature. A total of 38 projects, repairing 20,216 linear feet of stream bank, have been completed to date and the remaining 29 projects are expected to be completed in FY 2008-09.

The Division continued to manage 12 contracts for priority projects identified in the three flood damage reduction studies completed in 2006 under the auspices of the Hurricane Recovery Act of 2004. The three studies covered four areas of Western North Carolina: Biltmore Village (City of Asheville), Towns of Canton and Clyde (Haywood County)

and the Town of Newland (Avery County). Local government entities have been contracted with to complete sixteen of the nineteen projects, three projects (the abandoned bridge removal project in Clyde, the off-channel flood storage project in Clyde, and the flood by-pass project in Newland) are being managed by DWR at the request of the local governments. Local governments have completed 7 of the original 19 projects.

DWR was involved in four dam removal projects in 2008. The projects are located on Hitchcock Creek in Richmond County, the North Toe River in Mitchell County, the Cane River in Yancey County, and the Henry Fork River in Catawba County. The Hitchcock Creek dam will be removed during the winter of 2008. Feasibility studies were funded for the North Toe River and Cane River projects in the fall of 2008. The North Toe River dam is expected to be removed in the spring of 2009 and Cane River dam is expected to be removed in the fall of 2009. The Henry Fork River dam removal project is in the initial stages of development and deconstruction will occur after 2009.

DWR also continued its administration of a \$15,000,000 effort to implement innovative technology to clean up storm water being discharged via nine DOT ocean and estuarine outfalls in Dare County. This year there is a contract for a \$1,000,000 filter system on one of the outfalls to serve as a pilot BMP for the entire effort.

DWR worked in partnership with the Division of Coastal Management to direct development of the North Carolina Beach and Inlet Management Plan (BIMP). This plan will assist the State to better understand beach erosion processes along the coast and to prioritize the State's support of projects to protect the State's developed shorelines. In 2008, the effort has focused on the development of a GIS data system and the establishment of regions and sub-regions for planning. The first draft of the BIMP will be completed by April 2009.

Staff (Fred Tarver) participated in the final reviews and publication in September 2008, of the Department's document entitled *Guidance for Preparing SEPA Documents and Addressing Secondary and Cumulative Impacts*. The process to publish a document of this nature began in 2003. Staff also participated in the multi-agency action of final review and publication for public notice in February 2008, of the guidance document entitled *Determining Appropriate Compensatory Mitigation Credit for Dam Removal Projects in North Carolina*.

During the 2008 calendar year, DWR's Aquatic Weed Control Program performed aquatic weed control activities at approximately 50 sites throughout the State. These weed control activities were supported by some 37 cooperators, consisting mainly of local governments. Total State expenditures for aquatic weed control were approximately \$350,000, of which \$200,000 went to assist Halifax, Warren, and Northampton Counties in the control of hydrilla in Lake Gaston; \$131,000 went to assist the City of Rocky Mount in the control of hydrilla in its water supply reservoir on the Tar River; and the remaining amount went to N.C. Division of Parks and Recreation, local governments, and utilities to manage infestations of hydrilla, alligatorweed, parrotfeather,

water milfoil, and Giant salvinia in various lakes, rivers, swamps, and canals. All of these State funds were matched dollar for dollar by contributions from local cooperators. The Lake Gaston hydrilla project also received additional funding from the City of Virginia Beach and the Commonwealth of Virginia. The program also continued with a public awareness campaign by producing signs that were posted at boat ramps throughout the Piedmont with assistance from the Wildlife Resources Commission.

The Project WET and It's Our Water State Coordinators and their facilitator networks conducted 26 water resources-based environmental education workshops for a total of 316 participants. The combined estimate of students and members of the general public reached annually is 337,309. DWR staff also organized the aquatics station and wrote the aquatics test for the State Envirothon, a state-wide, science competition for high school students.