

EXECUTIVE SUMMARY

North Carolina is fortunate in having a generous natural supply of water. However, North Carolina is beginning to experience some problems in areas where somewhat limited natural availability of water is coupled with high demand or competition among water users. Some of these emerging pressure points are the Central Coastal Plain, where the Cretaceous aquifers have a relatively slow recharge rate; the headwater areas of our Piedmont river basins, where streamflows are greatly reduced during dry weather; and some areas near the coast and on the Outer Banks, where the natural availability of fresh water is limited. In cases such as these, residents, community leaders, and the economic development community need to recognize that water demands have to be managed and matched to available supplies to prevent water from becoming the limiting factor on economic growth.

Providing for North Carolina's future water supply needs will require a determined effort by local governments, water users, and state government working together to orchestrate the right combination of monitoring, planning, and regulation.

As our water supplies experience heavier demands, it becomes increasingly important to monitor the availability of our ground and surface water supplies. We also need good data on all types of water use. Taken together, the data on water availability and water use give us a foundation for planning for our future water needs.

Planning is necessary to work out the specific solutions to our future water supply needs. The North Carolina General Assembly has provided a good basis for water supply planning by requiring all local government water systems to prepare Local Water Supply Plans that assess their water supply needs and available supplies over at least a 20-year planning period. These local water supply plans, which are updated every 5 years, are the building blocks for the State Water Supply Plan. As each local government defines its future needs and preferences for additional supplies, regional planning may be necessary to coordinate cost-effective and reliable water supply solutions.

In some cases, regulation is needed to avoid depletion of our water supplies or to create a fair allocation of water among competing needs. The most important regulatory tool is the Water Use Act of 1967, which allows the Environmental Management Commission to declare a Capacity Use Area and regulate water withdrawals in areas where water resources are being depleted or damaging conflicts among water users are occurring. State statutes also regulate the transfer of surface water from one river basin to another to assure that resources in both basins are adequately protected.

Recommendations

' In areas of the Coastal Plain, overpumping of ground water is resulting in serious water level declines and encroachment of salt water into fresh water portions of the Black Creek and Upper Cape Fear aquifers. It is essential that water withdrawals be reduced in those areas to protect the aquifers and ensure that they remain a long-term, regional water supply. To address this issue, the Environmental

Management Commission has enacted a Central Coastal Plain Capacity Use Area for a 15-county area in eastern North Carolina. The rule, scheduled to become effective in August 2002, will require water use permits for ground water withdrawals above 100,000 gallons per day, along with phased-in pumping reductions in specific problem areas. Parallel to this regulatory response, water systems in the Central Coastal Plain need to begin planning for new sustainable water supplies and expanding their water conservation efforts to assure that water is available to support the region's economy.

' Water systems whose average daily water demands already exceed 80 percent of their available water supply should be actively managing their water demand and pursuing additional water supplies. These systems are at greater risk of experiencing water shortages during periods of peak water use and especially during drought. The Division of Water Resources can assist these systems with their water conservation and water supply development efforts to help assure that adequate water supplies are maintained.

' All water systems should develop a Water Shortage Response Plan. While drought is a common cause of water shortages, other events, such as mechanical failures, pipe breaks, or contamination of water sources, can also result in water shortages. Planning ahead for such occurrences minimizes the time needed to respond to emergencies and provides a strategy for communities to follow.

' Water is a regional resource, and some local governments will need to seek regional solutions to water supply issues. Regional water supply planning and management is critical to successful long-term protection of the quality and quantity of water available to citizens and businesses in North Carolina. The increasing costs and requirements for planning and permitting new facilities, treating water, and developing additional water sources will make it less practical for many communities to act independently to meet future water supply needs.

' A number of state programs and regulations affect water supply planning efforts by local governments, presenting challenges to and perhaps even discouraging innovative water supply solutions, such as aggressive water reuse, aquifer storage and recovery, or regional water supply projects involving multiple river basins. The General Assembly, state agencies, local governments, and consultants should work together to ensure that a regulatory framework exists that allows innovative water supply projects such as these to be reasonably developed without compromising health and environmental standards.