

North Carolina Water Allocation Study

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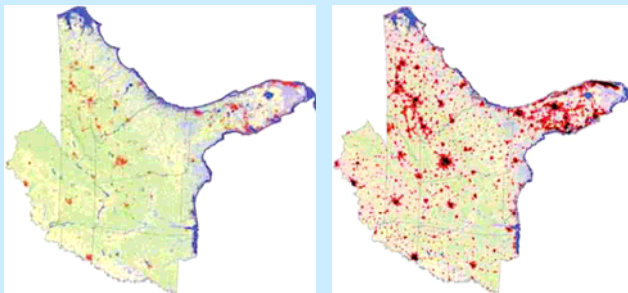
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Population Growth

Water consumption in the Southeast grew 15% from 1990 to 2000, compared with 2% nationwide.

The population rose by 20% from 1990 to 2000 vs. 13% in the rest of the country.

By 2030, daily water use in NC will increase by 35%.



Projected growth in the Southeast from 1990 to the near future.

US EPA



SL 2007 – 518: Section 1(a)

- Six study elements:
 - Allocation of surface water and groundwater resources and their availability and maintenance in the State
 - Issues related to the transfer of water from one river basin to another
 - Withdrawal of water for consumptive and non-consumptive use
 - Whether the purposes of the Regional Water Supply Planning Act of 1971 (GS 162A-21) are being fulfilled and if not how they can be fulfilled
 - Options that provide for a comprehensive system for regulating surface water withdrawals for consumptive and non-consumptive uses
 - Governance, organization, operation, and funding of, and services provided by, publicly-owned and privately-operated public water systems



Current Policy

- Riparian Rights
- Reasonable Use Limits for Surface Water and Groundwater
- Federal Agencies: US Army Corps of Engineers, Federal Energy Regulatory Commission & Tennessee Valley Authority
- Capacity Use Act of 1967



Current Policy Continued

- Water Supply Planning Act of 1989
- NC Utilities Commission Regulates Private Water Systems
- Instream Flow Needs
- Surface Water & Groundwater Managed Separately
- Water Quantity and Water Quality Not Integrated



Current Policy Continued

- 2002 Drought Legislation
- 2007 Interbasin Transfer Legislation
- 2008 Drought Response Legislation
- Div of Water Resources' River Basin Models/Budgets for Catawba/Wateree, Yadkin/Pee Dee and Cape Fear Rivers



Scenarios

- Private firm buys old surface water intake and consumers or exports water, even while downstream industries and water systems are going dry.
- Private firm pumps groundwater and uses or exports it, even while adjoining farmer's wells dry up.



Scenarios

- City is unaware of its precarious water supply and leaky pipes until it fails to deliver on promises to serve new development.
- Strong population and commercial growth in the headwaters leaves a water system with no or few options for additional supplies.



Improve Existing Laws

- Clearly State Policy Goals
- Establish a permit for large water withdrawals
- Conform existing laws to each other and to policy goals



Improve Our Knowledge

- River Basin Water Supply Planning
 - Which rivers are or will be over-allocated?
 - Where is groundwater over-allocated?
- Local Water Supply Plans
- Research



Supply & Demand

- Maintain water infrastructure
 - Local Government Commission
 - State Water Infrastructure Commission
- What is the potential for water efficiency and the linkage between water and energy efficiency?
 - Credit for water efficiency



More Supply & Demand

- Protect & Maintain Existing Reservoirs
- Encourage Interconnections
- Develop “new” supplies by harvesting rainwater and reusing reclaimed water and stormwater
- Create More Storage



Policy Options for Water Allocation

- Status Quo
 - React to problems using ‘Capacity Use Area’ tool
- River Basin Water Budget
 - Is the water budget in balance?
 - Proactive and adaptive
 - Regional planning



More Allocation Options

- Adopt Regulated Riparian Model Code developed by Assoc of Civil Engineers
 - State Water Plan
- Transferable Permits
 - Water Markets



Interstate Management Issues

- Water use data – who is using what, how much and where?
- Depleted coastal aquifers
- Balancing demands for water and energy
- Planning for and adapting to climate change
- Integrating water quantity and quality management
- Integrating ground water and surface water management
- River basin modeling – sharing basin data, addressing model limitations
- Role of Federal Agencies: Corps, FERC & TVA



Water Allocation Study Team

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