

# UPDATING THE SOUTH CAROLINA WATER PLAN



SCDNR

Joe Gellici

Land, Water and Conservation Division  
South Carolina Department of Natural Resources

May 2011

# ***Water Resources Planning and Coordination Act (1967)***

Created the S.C. Water Resources Commission in 1969

State agencies and institutions with water responsibilities in the 1960s.

1. Department of Agriculture
2. Clemson University (Water Resources Research Institute)
3. State Development Board
4. Forestry Commission
5. Department of Health and Environmental Control
6. Department of Highways and Public Transportation
7. Land Resources Conservation Commission
8. Department of Wildlife and Marine Resources



## ***Water Resources Planning and Coordination Act (1967)***

Created the S.C. Water Resources Commission in 1969

The Commission “shall advise and assist the Governor and the General Assembly in: (1) formulating and establishing a comprehensive water resources policy for the State, including coordination of policies and activities among the state departments and agencies...”



*South Carolina  
State Water Assessment*

South Carolina Water Resources Commission  
3830 Forest Drive, P.O. Box 4440  
Columbia, South Carolina 29240

September 1983

The ***South Carolina State Water Assessment (1983)*** is a comprehensive assessment of the State's water resources.

Chapter

1. Overview of socio-economics and physical environment
2. South Carolina Water Law
3. Statewide overview of water availability and water use
4. Detailed description of water supply of 15 subbasins.
5. Special water-resource topics including hydropower, scenic rivers, aquatic weeds and others.

## Programs administered by the Water Resources Commission:

### Ground Water Use Act (1969)

Regulate ground-water withdrawals in Capacity Use Areas

### State Scenic Rivers Act (1974)

Designate and protect scenic rivers

### Water Use Reporting Act (1982)

Develop a system of reporting water use

### Drought Response Act (1985)

Develop drought response plan for the State

### Interbasin Transfer Act (1985)

Regulate interbasin transfers of water

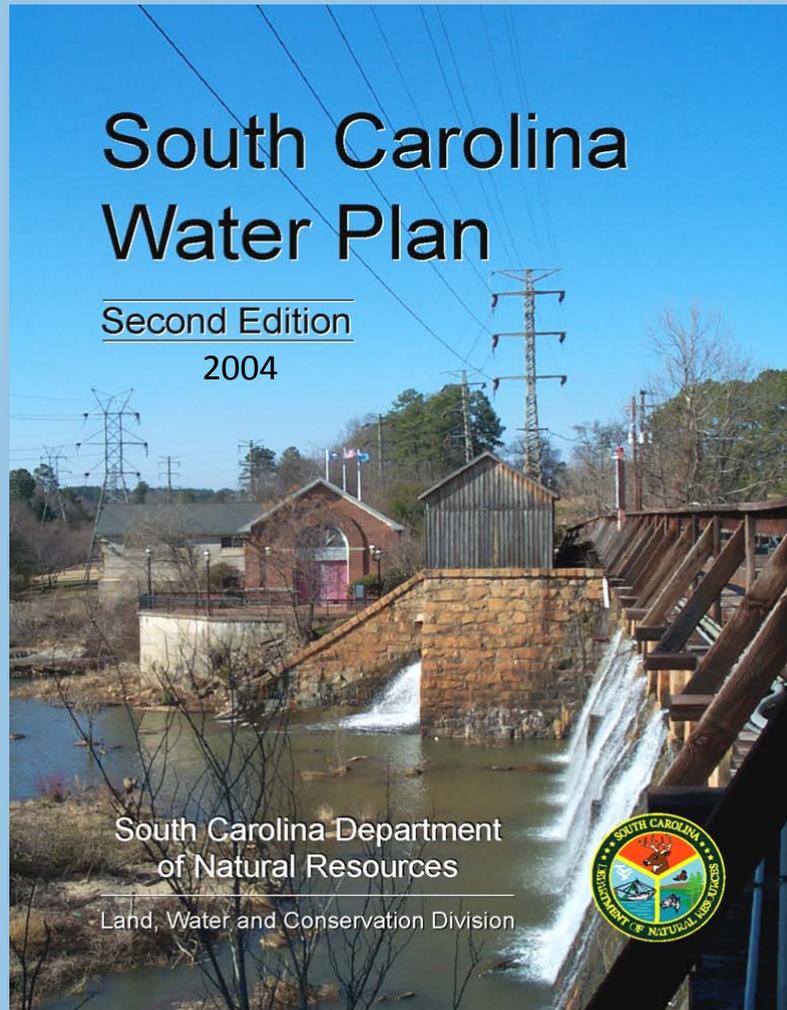
- ❑ In 1993, the Water Resources Planning and Coordination Act was amended.
- ❑ Regulatory functions of the Commission were transferred to SCDHEC.
- ❑ Planning and coordinating functions of the Commission were transferred to the Land, Water and Conservation Division of SCDNR.
- ❑ The Water Resources Commission was dissolved.

# South Carolina Water Plan

South Carolina Department  
of Natural Resources  
Land, Water, and Conservation Division  
1201 Main Street, Suite 1100  
Columbia, South Carolina 29201

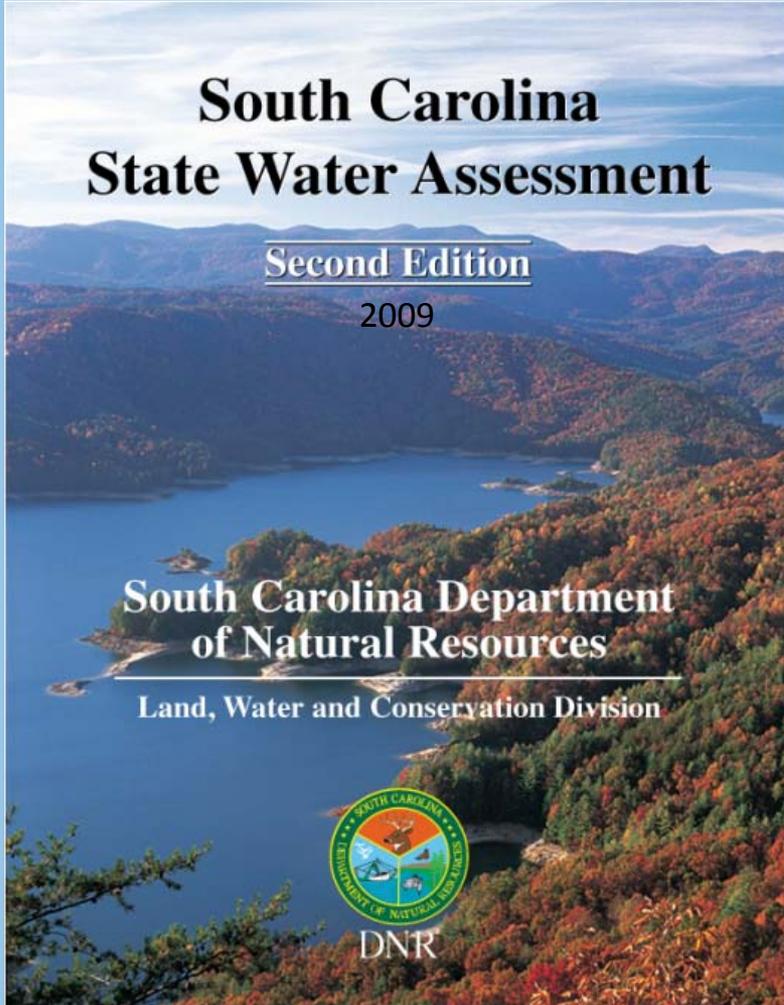
1998

In 1998, the Hydrology Section at DNR published the first edition of the Water Plan.



In 2004, the Hydrology Section at DNR published the second edition of the Water Plan incorporating experience and knowledge gained from the drought of 1998-2002.

2004



2009

In 2009, the Hydrology Section at DNR published the second edition of the South Carolina State Water Assessment.

# South Carolina Water Plan

Second Edition

2004

South Carolina Department  
of Natural Resources

Land, Water and Conservation Division



Purpose of the Water Plan:  
To establish guidelines for the effective management of the State's water resources to sustain the availability of water for present and future use, to protect public health and natural systems, and to enhance the quality of life for all citizens.

# Partial List of Management Goals:

- To ensure that water of suitable quality and quantity is available for use when and where needed.
- To manage the quantity and quality of both surface and ground water in an integrated manner.
- To develop interstate agreements with North Carolina and Georgia...for the equitable allocation of surface and ground water.
- To manage water shortages so that all users would share the burden.
- To protect freshwater and estuarine ecological functions and habitats.
- To develop a water-conservation ethic...

The 2004 Water Plan offered 81 policy and management recommendations.

Some of the recommendations that were implemented:

- Regulation of surface water withdrawals
- Instream flow protection
- Establishment of interstate river basin committees
- Ground water flow model of the Coastal Plain

The 2004 Water Plan offered 81 policy and management recommendations.

Some of the recommendations that were not fully implemented:

- ❑ Formal mechanisms such as interstate compacts...should be developed with Georgia and North Carolina to provide equitable water apportionment.
- ❑ Having an adequate number of properly located stream gages is vital to the effectiveness of the surface-water monitoring network. The State should provide adequate funding to support this monitoring program and to prevent loss of existing gages.

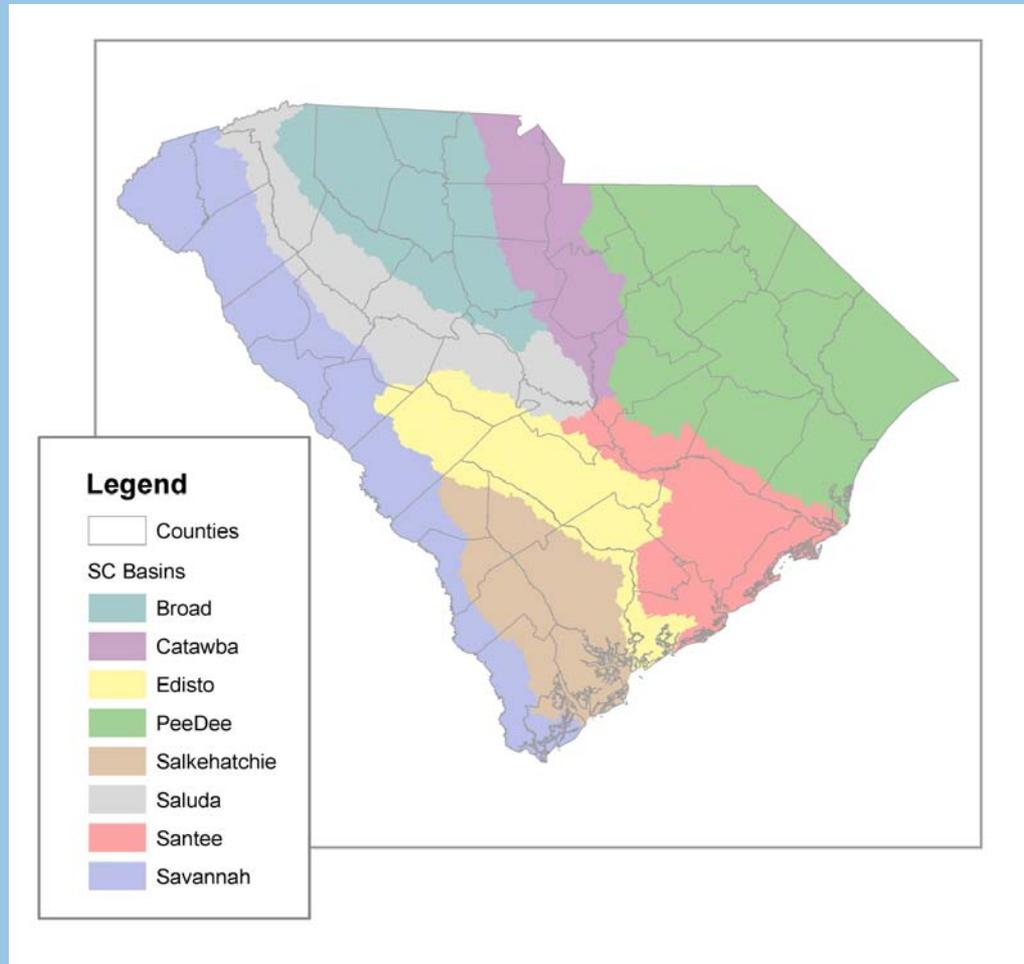
The 2004 Water Plan offered 81 policy and management recommendations.

Some of the recommendations that were not fully implemented:

- ❑ To protect aquifer systems and to ensure the long-term sustainability of the ground water resources, the entire Coastal Plain province should be designated a Capacity Use Area.
- ❑ The State should work to establish a river basin advisory committee for each of its four major basins. Each committee...would provide a basinwide comprehensive water resources plan to optimize water use throughout that basin.

# Basinwide Water Planning

Development of water-supply management plans at the basin level.



## Components of basinwide water plans...

1. Assessment of water use (our current demand)
2. Assessment of water availability (our supply)
3. Water-use forecasts (our future demand)
4. Hydrologic models (to predict water shortages)
5. Develop water-supply management plans to meet future demands of all users and uses in the basin

## Management strategies to reduce demands for water.

1. Conservation
2. Efficiency
3. Restrictions
4. Pricing structures
5. Reclaimed/gray water

## Management strategies to increase water supplies.

1. Interbasin transfers
2. New reservoirs
3. Expansion of reservoirs
4. Reverse osmosis/desalination
5. Reauthorization of COE projects
6. Aquifer storage and recovery
7. Conjunctive use

## Other considerations...

Establishment of river basin planning organizations.

- How are they structured?
- What are their roles and responsibilities?
- What authority do they have?

Provisions for allowing stakeholders and the general public to directly participate in the development of plans.

Technical, managerial, and financial capacity to develop and implement water plans.

Enforceability of plan.

Should the plans be comprehensive in scope by integrating surface and ground water, water quality and quantity, wastewater and land-use management?

# What are other states doing about water planning?

## GEORGIA

- ❑ The 2004 Comprehensive Statewide Water Management Planning Act mandated that the Georgia Environmental Protection Division (GaEPD) develop the State Water Plan, with oversight provided by a coordinating committee (the State Water Council).
- ❑ The State Water Plan was adopted by the General Assembly in 2008 and it called for the development of regional water plans.
- ❑ Ten councils, each comprised of 25 members appointed by the Governor, Lieutenant Governor, and Speaker of the House, oversee the development of the regional water plans.
- ❑ **Development of regional water plans began in 2009.**
- ❑ The regional water plans must be submitted to GaEPD in initial form by the end of January 2011 and final form by the end of June 2011.

# What are other states doing about water planning?

## NORTH CAROLINA

- ❑ The North Carolina General Statute [G.S. 143-355\(l\)](#) (1989) mandates the N.C. DENR to develop a state water supply plan.
- ❑ The North Carolina State Water Supply Plan was completed in 2001 and provides a statewide assessment of water supply needs, water use, and water availability and identifies the major water supply issues facing the citizens of North Carolina.
- ❑ Much of the plan is derived of over 500 Local Water Supply Plans developed by local government water systems to assess their water supply needs over a twenty-year period.
- ❑ In 2001, the Division of Water Resources **started the process of developing river basin water supply plans for each major basin in the state.**

# Questions