Status of the South Carolina Water Plan

DNR

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August 2011

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…"

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.

- Many of the 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.

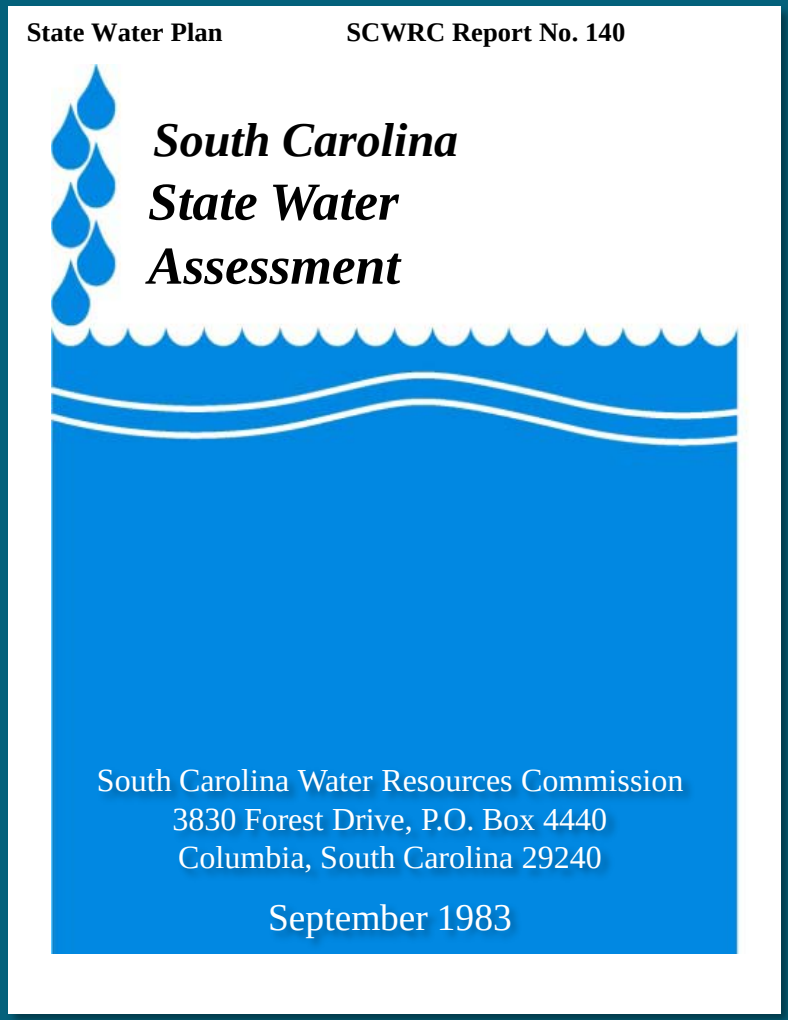
Two parts to the State Water Resources Plan:

1. South Carolina State Water Assessment
2. South Carolina Water Plan

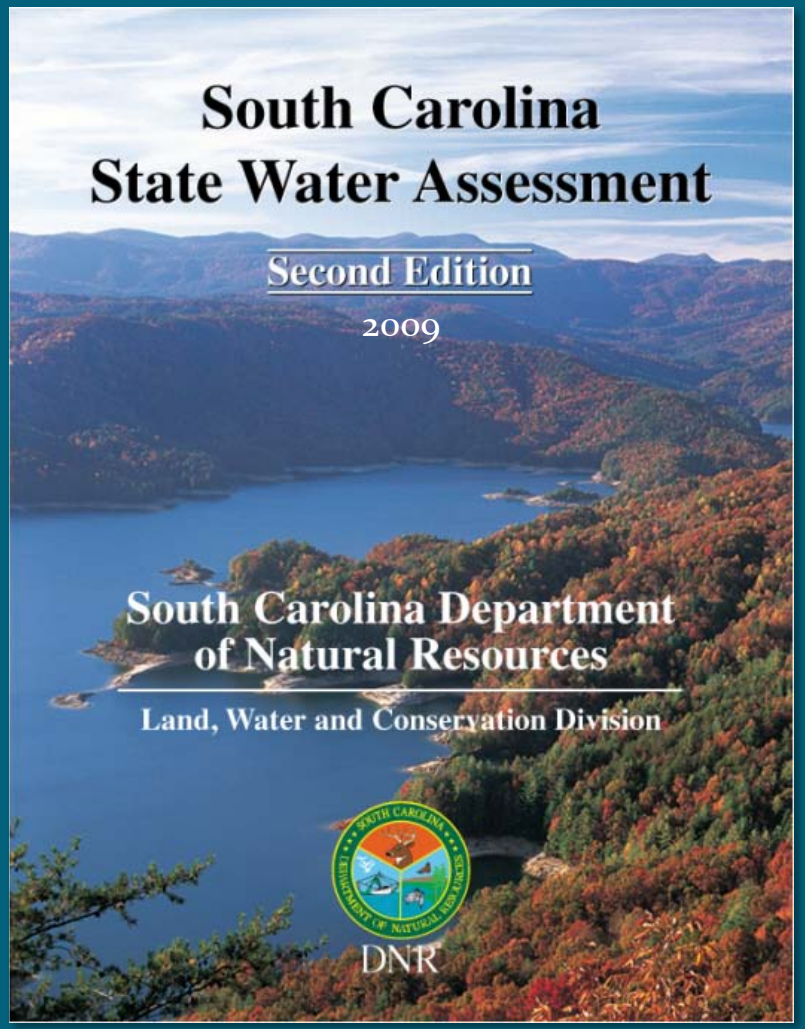
The South Carolina State Water Assessment is an assessment of the State's water resources.

- South Carolina Water Law
- Overview of S.C. hydrology
- Water use, by basin
- Surface- and ground-water supply and quality, by basin
- Special topics chapter about hydropower, scenic rivers, aquatic weeds, ASR, water conservation, sedimentation, FERC projects, and others.

Part 1: South Carolina State Water Assessment

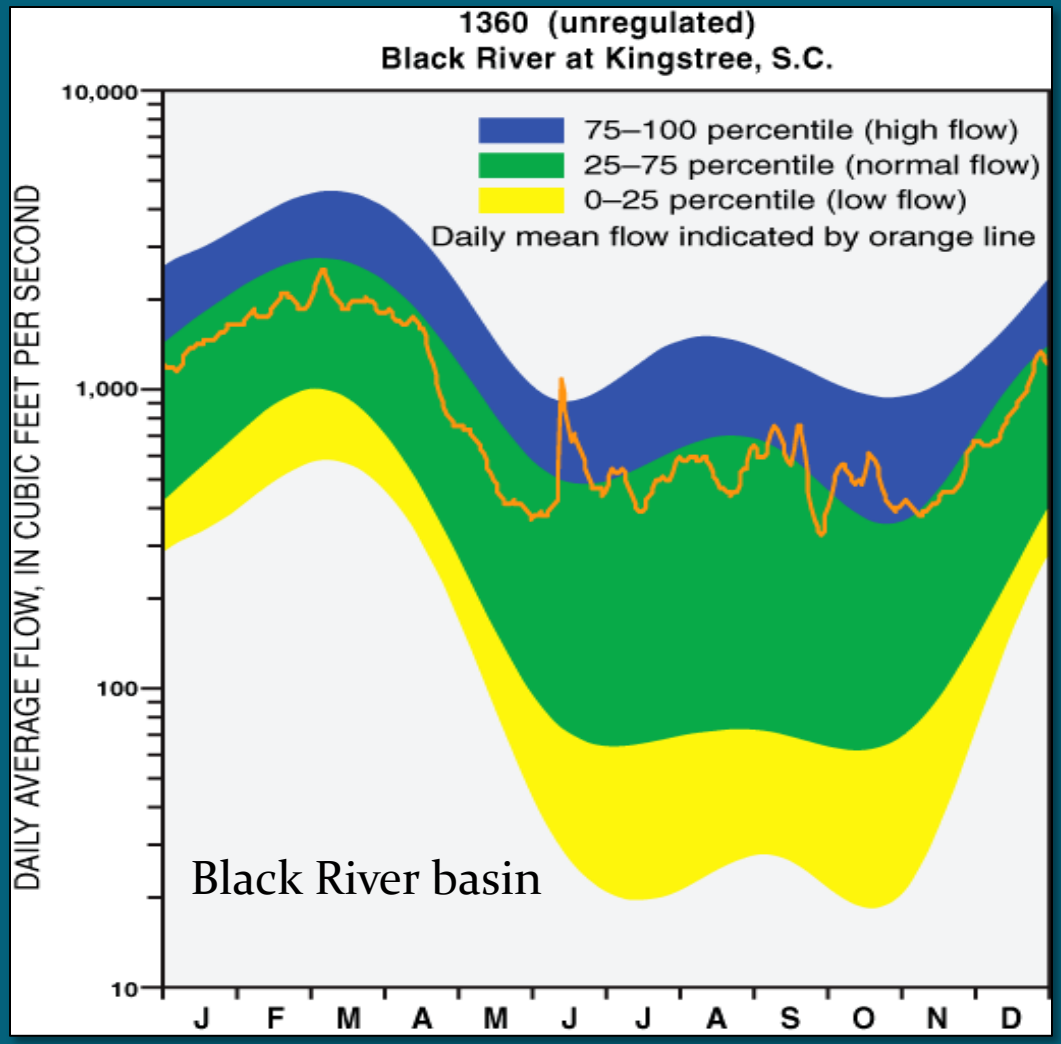


1st Edition – 1983



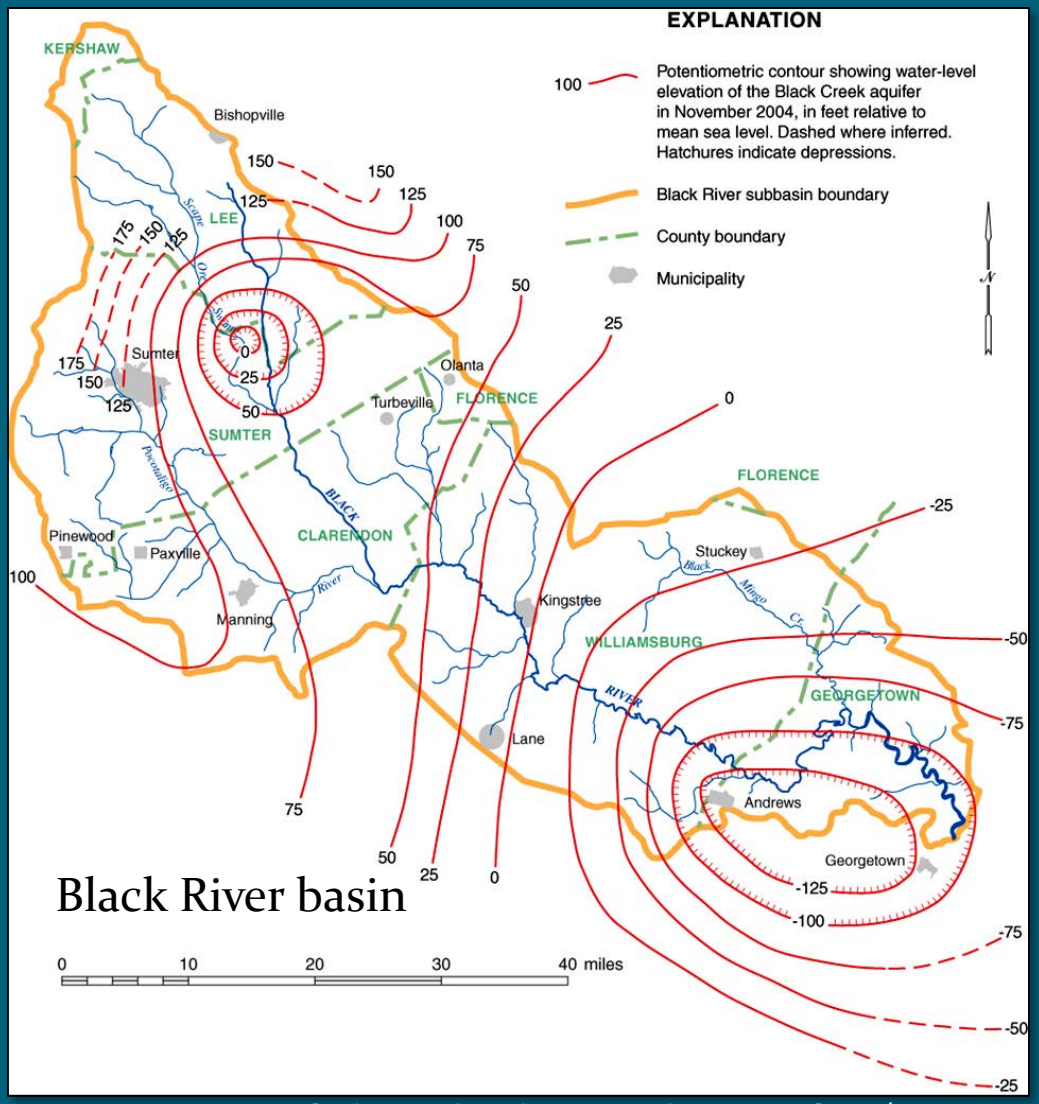
2nd Edition – 2009

Surface-water hydrographs



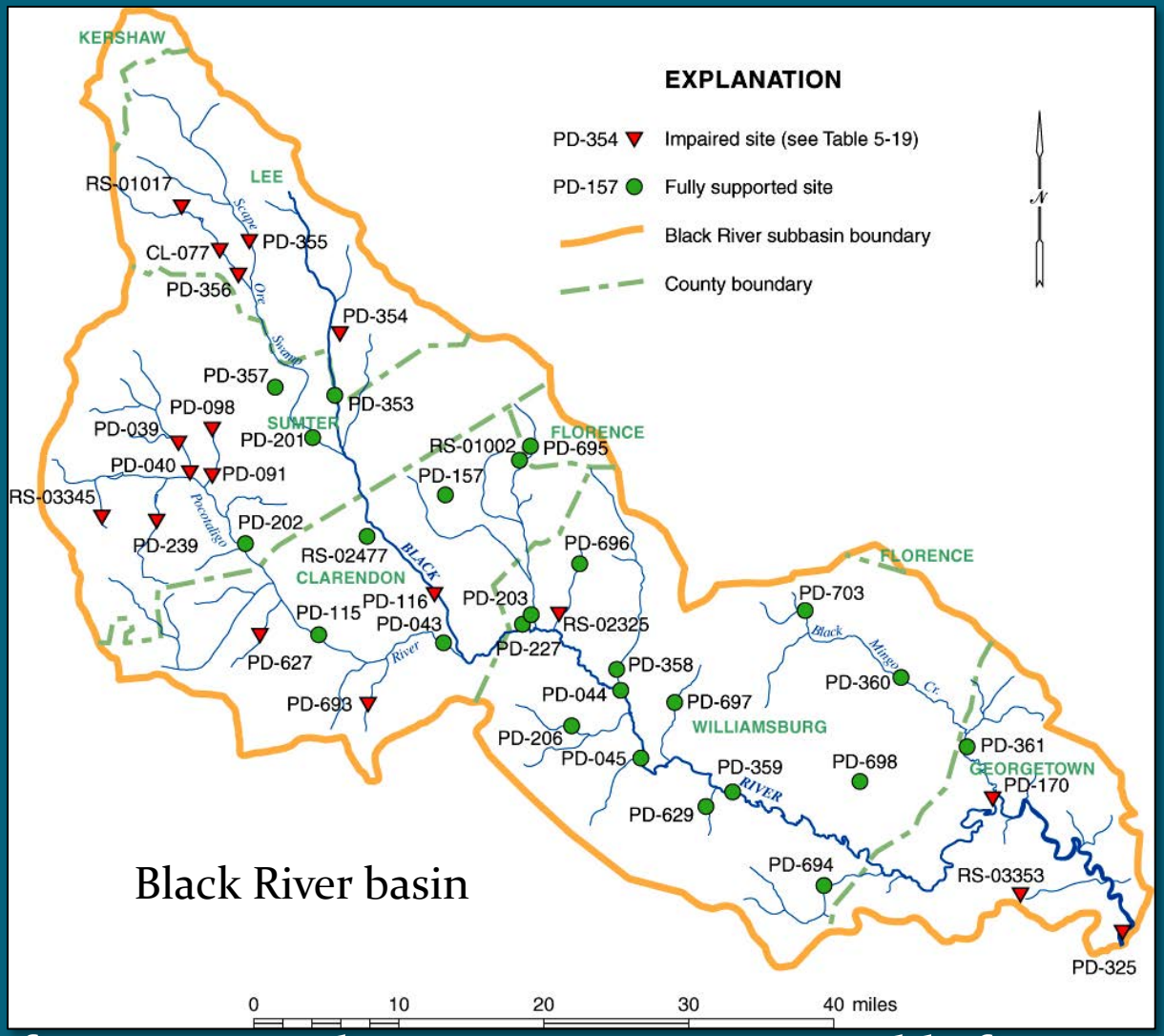
Streamflow of the Black River at Kingstree
Period of record: 1929-present

Potentiometric maps.



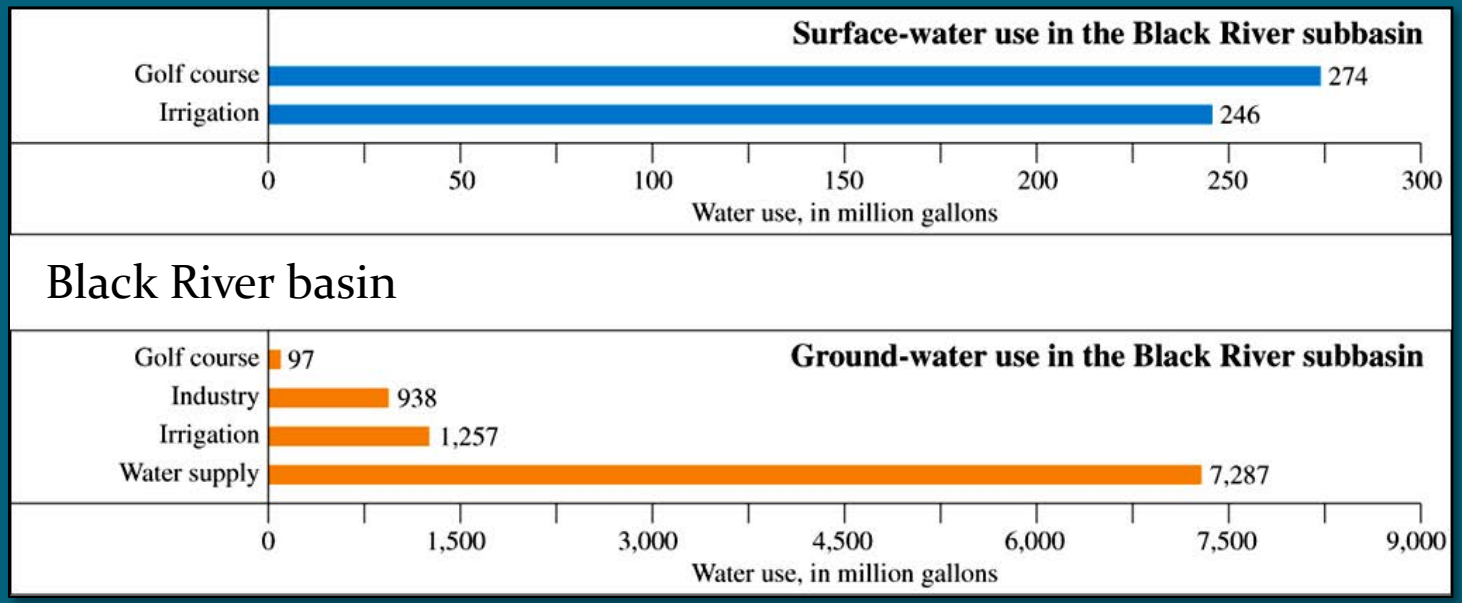
Potentiometric map of the Black Creek aquifer (November 2004).

Surface and ground-water quality



Surface-water quality monitoring sites suitable for aquatic life and recreational uses (DHEC, 2007)

Water-use information

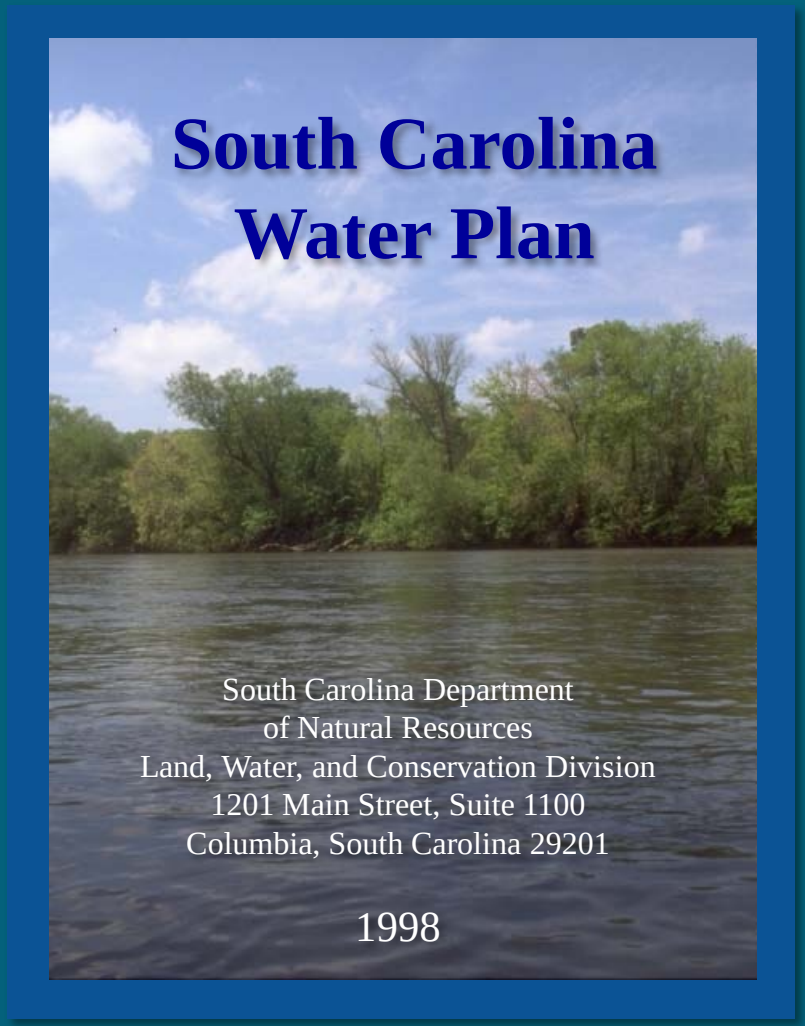


http://www.dnr.sc.gov/water/hydro/publications.html

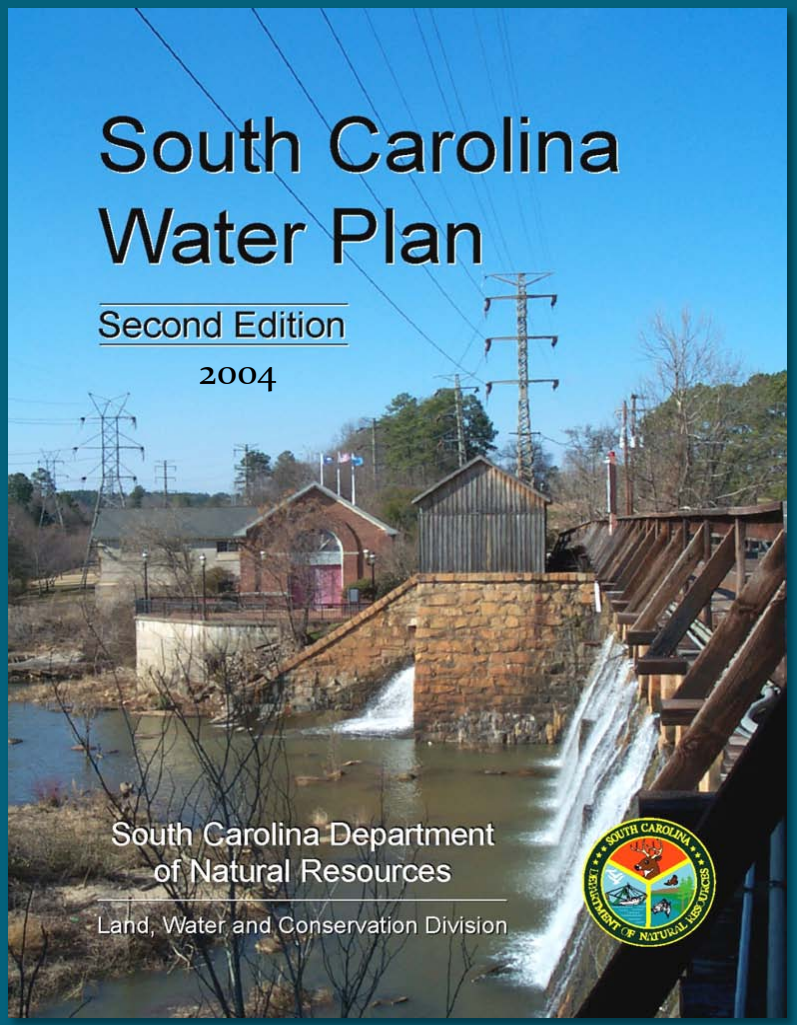
The South Carolina Water Plan offers guidelines for the effective management of the State's water resources in order to sustain the availability of water for present and future use.

- Surface and ground water allocation
- Management practices
- Drought and flood mitigation
- Reservoir management
- Interstate issues
- Monitoring networks
- Minimum flow requirements

Part 2: South Carolina Water Plan



1st Edition – 1998



2nd Edition – 2004

The 2004 Water Plan offers 81 policy and management recommendations.

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

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.

- The State should provide adequate funding to support the ground water and surface water monitoring programs and to prevent loss of existing gages.

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.

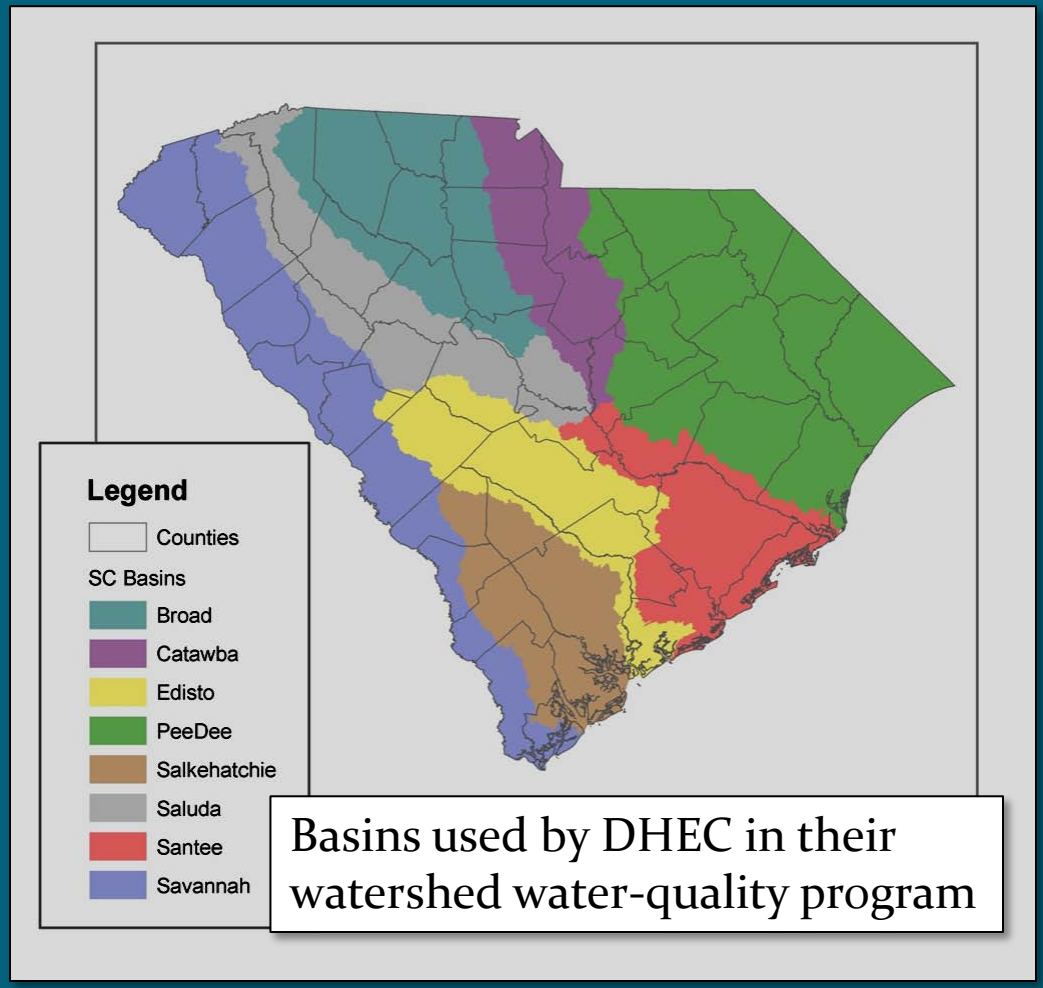
- The State should work to establish a river basin advisory committee for each of its four major basins. Each committee…would provide a basinwide comprehensive water resources plan to optimize water use throughout that basin.

Basinwide water resources plans are needed because:

1. Each basin has unique water needs and resources. Plans should be developed that are tailored to the specific needs and resources of the basin.
2. Water is a finite resource. Competition and demand for water will continue to increase as the population and economy grow. We need to plan for the future.
3. Droughts have increased in frequency, severity, and duration over the past several decades resulting in water shortages and water disputes within specific basins.
4. As competition for water resources increases, interstate and intrastate water conflicts will increase.

Basinwide Water Planning

A water plan for each basin.



Basins used by DHEC in their watershed water-quality program

Components of basinwide water plans…

1. Assessment of water use (our current demand)

- How much water is currently being used in each basin?
- What are the primary uses of water in the basin?
- Consumptive use versus total withdrawals.

Ground Water Use and Reporting Act (1969)

Surface Water Withdrawal and Reporting Act (1982)

Components of basinwide water plans…

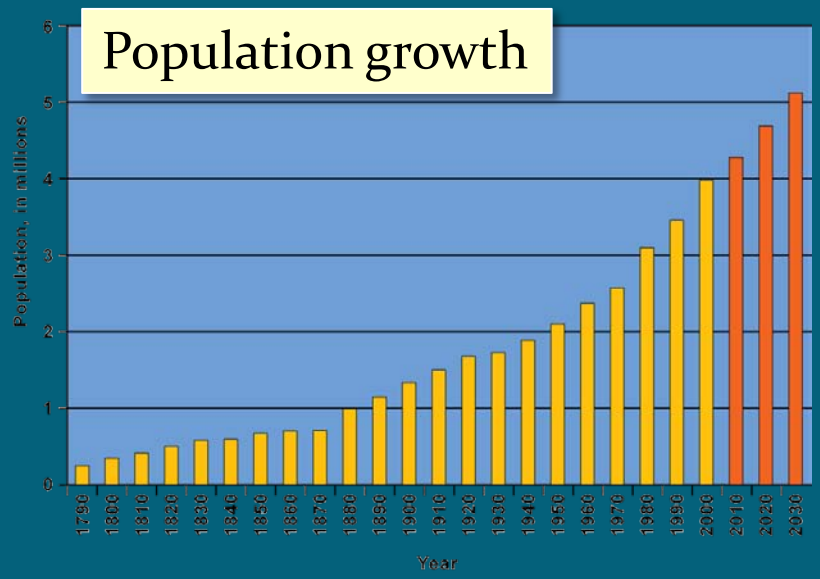
1. Assessment of water use (our current demand)
2. Assessment of water availability (our supply)

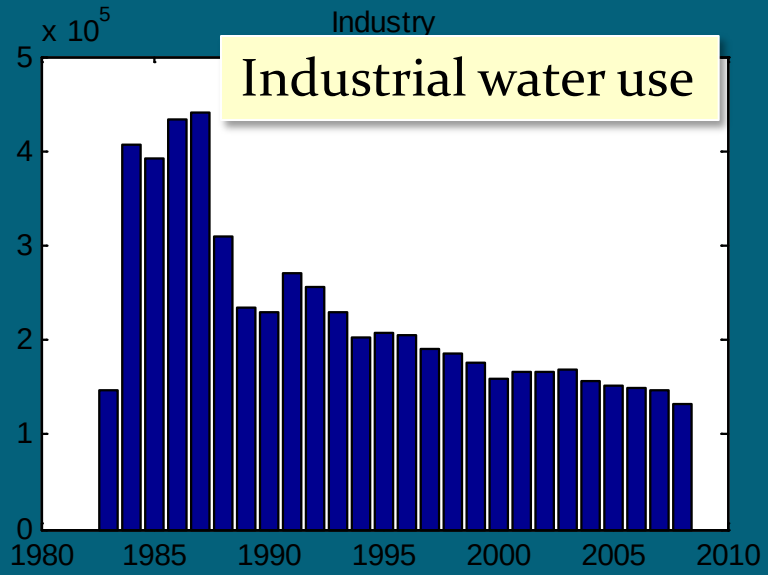
Monitoring wells (≈170)

Stream and lake gages (≈115)

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)

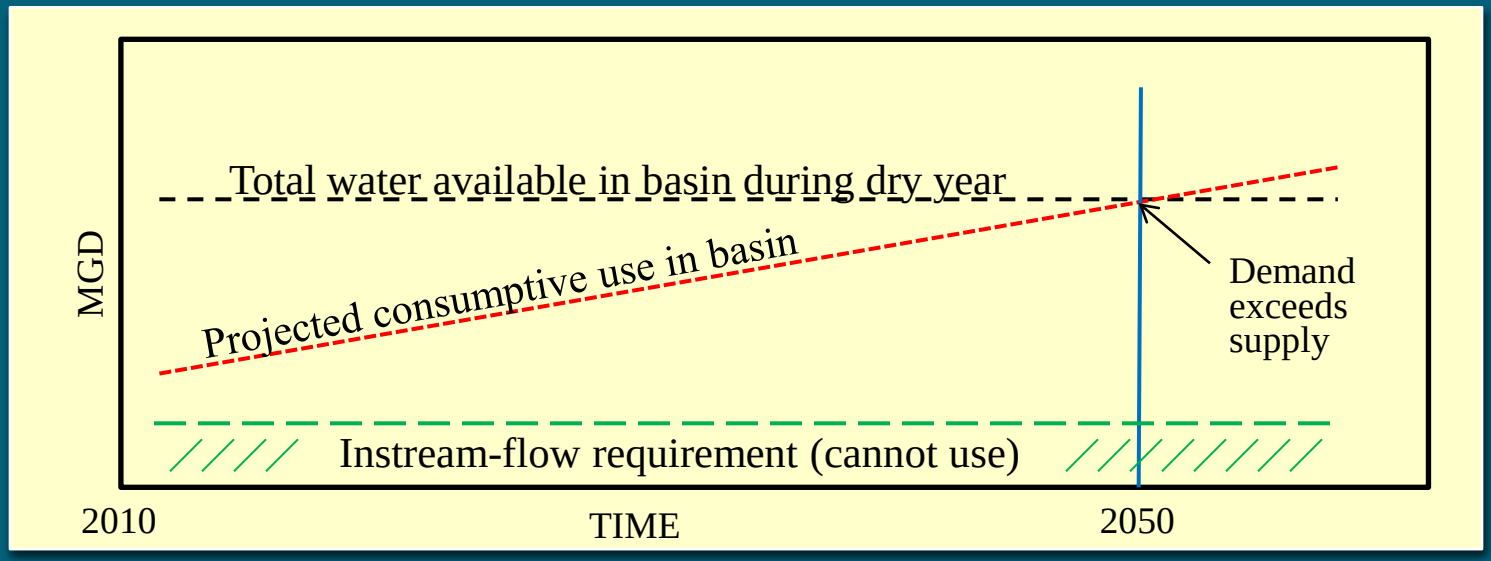




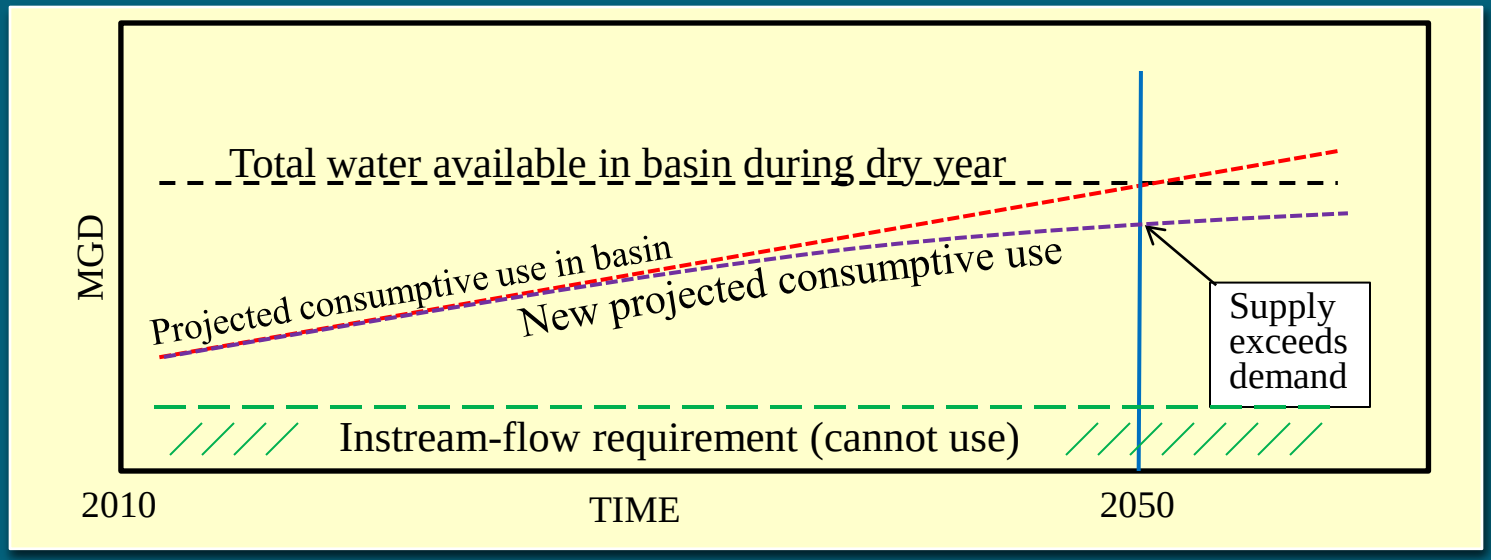
Components of basinwide water plans…

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 (predict future availability)
5. Develop water-supply management plans to meet future demands of all users and uses in the basin

Resource assessments, hydrologic models, and water-demand projections are used to determine if, when, and where water shortages will occur in the basin over a forty-year planning horizon.



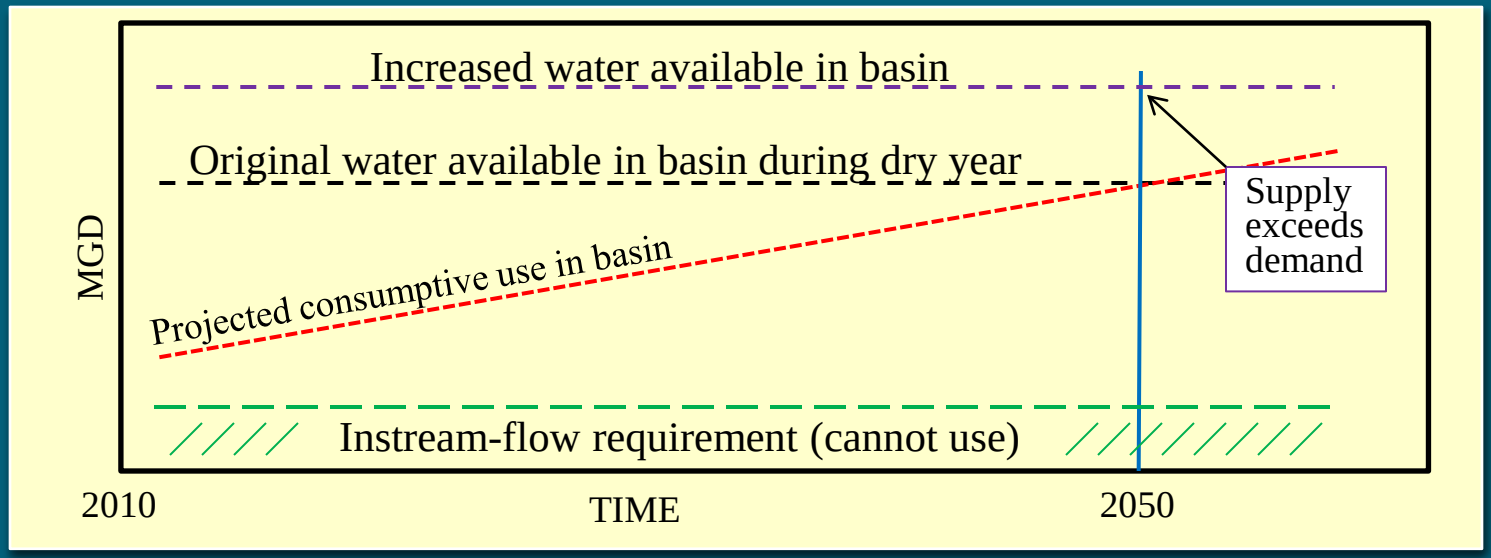
Reduce water demands



Development of management strategies to reduce demands for water.

- Conservation
- Efficiency
- Pricing structures
- Reclaimed water
- Smart growth

Increase water supplies



Development of management strategies to increase supplies of water.

1. Interbasin transfers
2. New reservoirs
3. Expansion of reservoirs
4. Reverse osmosis/desalination
5. Aquifer storage and recovery
6. Reclaimed water

Who does what and how does this get funded?

- In Georgia, ten councils, each comprised of 25 members appointed by the Governor, Lieutenant Governor, and Speaker of the House, oversee the development of the regional (basinwide) water plans.

- In North Carolina, the Division of Water Resources will work in partnership with local governments and other water users to develop fifty-year water supply plans.

What happens in a basin stays in a basin.

The State's long-term goal should be to integrate basinwide water supply planning with basinwide wastewater, stormwater, and land use planning.

A stakeholders meeting was held in Columbia in May.

Consensus that an overarching state water plan is needed that articulates state water policies and priorities, roles and responsibilities, and addresses statewide water-related issues of importance.

Consensus that the overarching state water plan should provide guidance and a framework for developing the basinwide water plans.

- What are the other critical water resources issues and challenges facing the State?
- What water resources policies should be adopted to help us improve the management and help to sustain our water?
- Is new legislation needed?
- What are our research needs?
- What are our data needs?

A steering committee is being organized to help in the development of the Water Plan.

Questions?

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