

# Evolution of Better Decision-Making in SC

Ken Rentiers

Deputy Director

Land, Water and Conservation Division

S.C. Department of Natural Resources



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# 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 formulating and establishing a comprehensive water resources policy [State Water Plan] for the State...”.
- First State Water Plan published in 1998 – Why did it take 30 years to develop the plan?
  - Lack of sufficient hydrologic data – Commission staff devoted much of their time doing technical and scientific studies and on expanding hydrologic monitoring networks.
  - New regulatory programs – Staff were also focused on administering new regulatory programs such as the Groundwater Use Act (1969) and the Water Use Reporting Act (1982).

*In 1994, government restructuring transferred most of the regulatory programs to SCDHEC. Water planning responsibilities went to the Hydrology Section of the newly formed S.C. Department of Natural Resources.*

# Expansion of Surface Water and Groundwater Monitoring Networks

Decision making has been greatly improved over the years owing to improvements in our hydrologic monitoring networks – more data results in better decisions.



In 1980, the USGS maintained 67 continuous-recording streamflow gages in South Carolina. Today, they maintain over 130.



In 1980, the USGS maintained 45 water-level monitoring wells in South Carolina. Today, SCDNR and the USGS together maintain 200 wells.

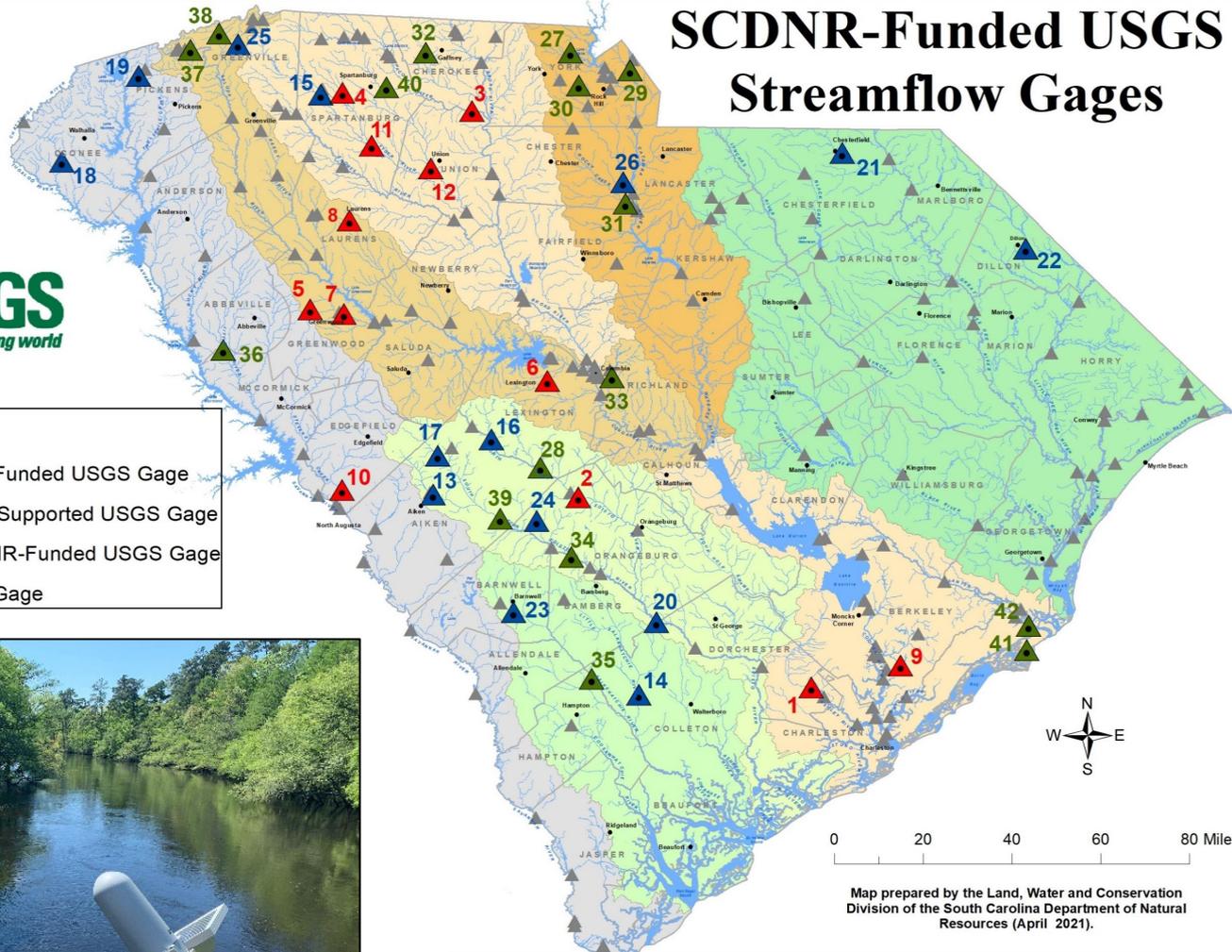
# Surface Water Monitoring – New Gages



## SCDNR-Funded USGS Streamflow Gages

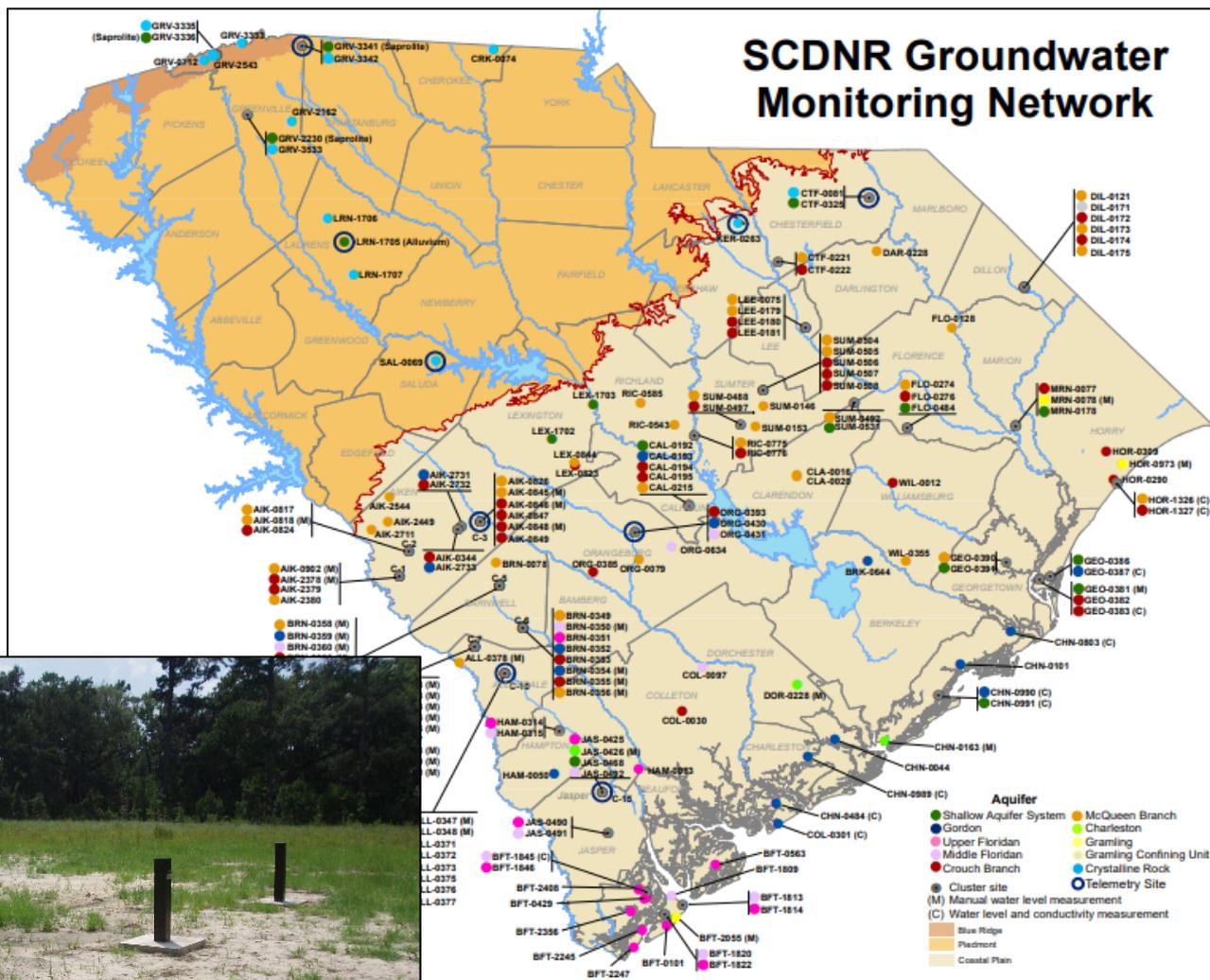
### Legend

- ▲ New SCDNR-Funded USGS Gage
- ▲ FEMA HMGP-Supported USGS Gage
- ▲ Existing SCDNR-Funded USGS Gage
- ▲ Active USGS Gage



- SCDNR currently funds 42 gages.
- 26 new sites were recently funded and instrumented.

# Groundwater Monitoring Network Expansion



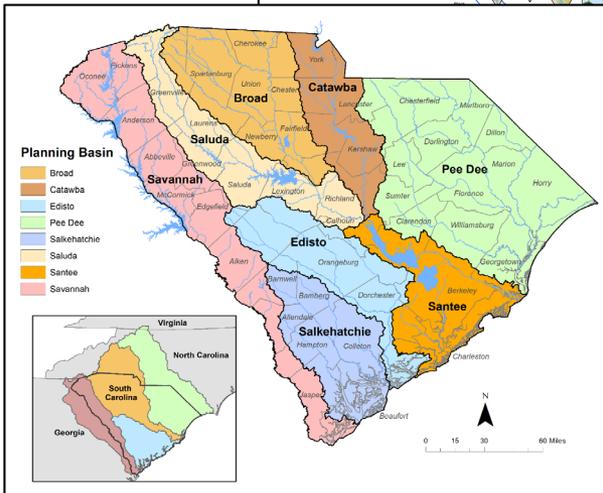
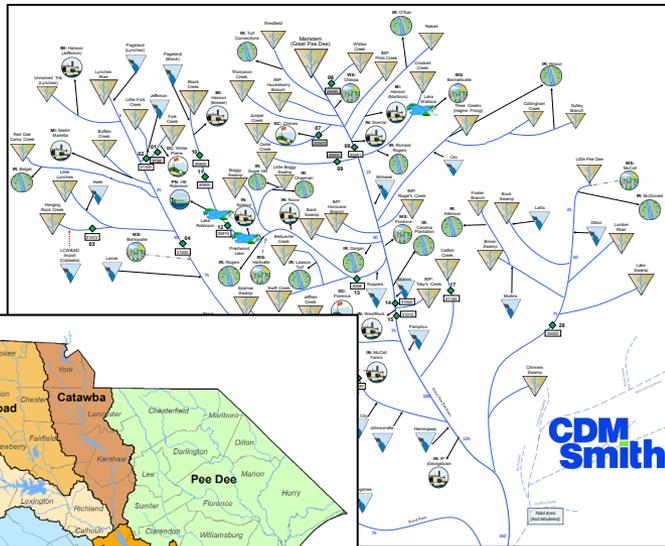
- SCDNR monitors water levels in 180 wells.
- Nearly 50 wells have been added since 2014.

# Development of Hydrologic Models

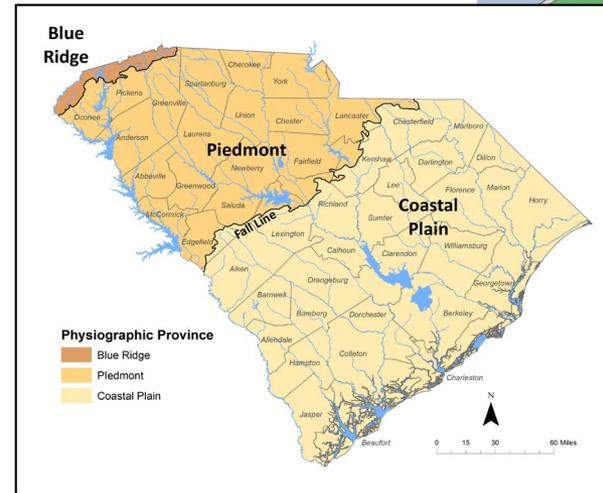
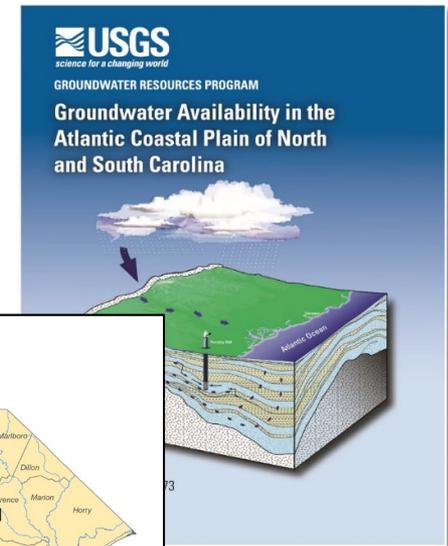


The expansion of our monitoring networks has led to improvements in our hydrologic models. Decision making will be greatly improved through the application of these models.

## Surface Water Models (SWAM) for 8 planning basins



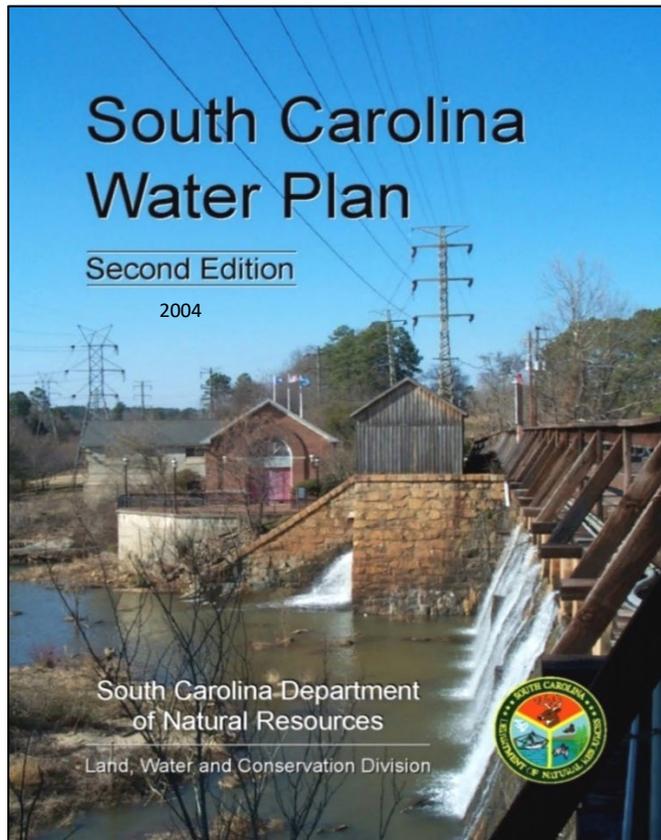
## Updated Coastal Plain Groundwater Model



# Water Planning in South Carolina



The water planning approach in South Carolina is evolving from a top-down, agency-driven approach to a bottom-up, stakeholder-driven approach, and from State-level planning to regional planning. It is anticipated that decision-making will be vastly improved.

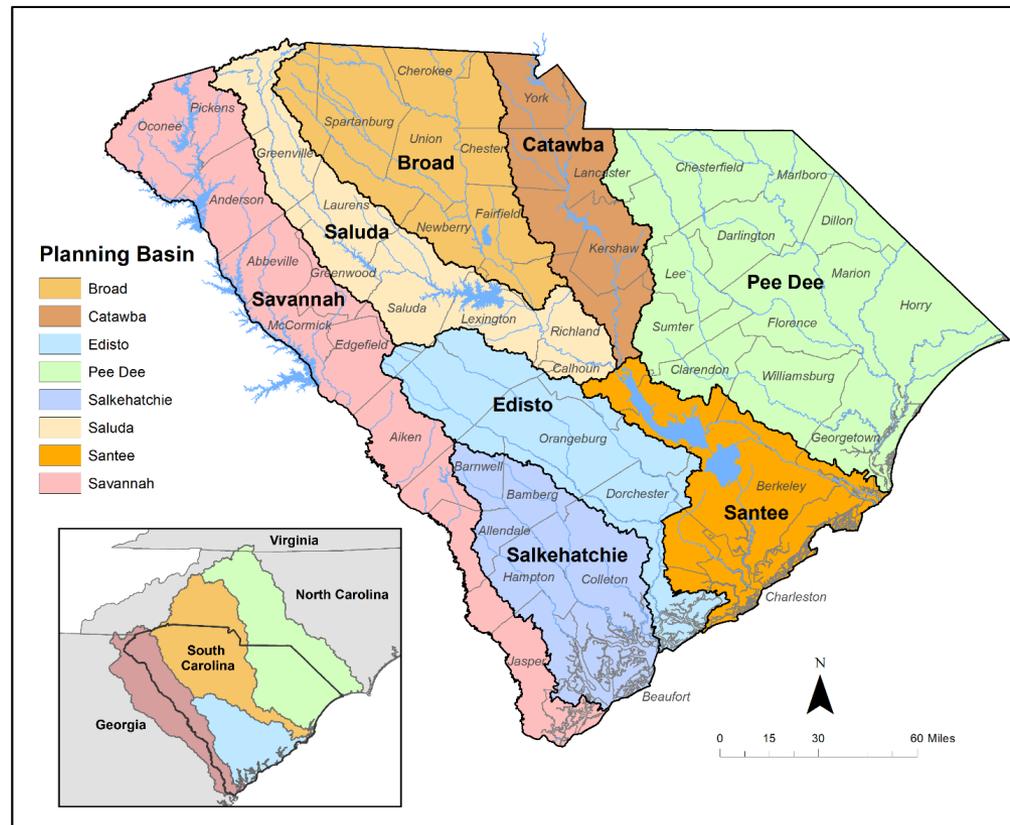


- In 1998, SCDNR published the first edition of the South Carolina Water Plan (updated in 2004).
- Primarily a top-down approach (SCDNR led).
- However, the plan recognized that *“The effective management of South Carolina’s water resources is beyond the scope of any one agency or organization and will require cooperation and shared responsibility among federal, state, and local agencies, as well as public and private parties.”*
- The plan strongly recommended the development of regional water plans for each of the major river basins in the State.

# Regional Water Planning in South Carolina



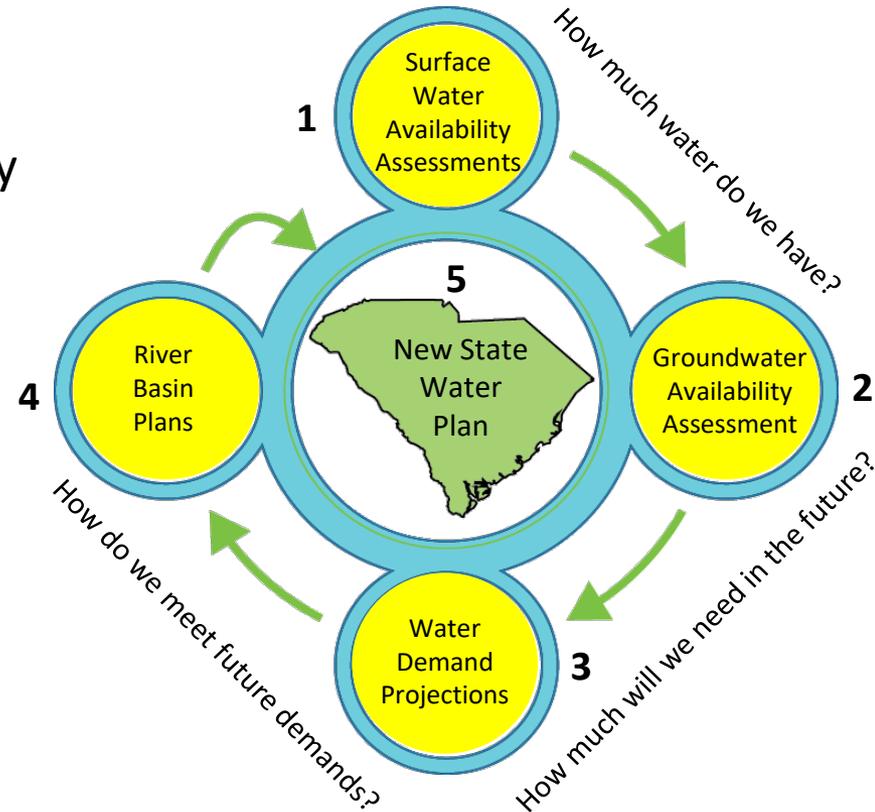
- River Basin Plans will be developed for the State's eight major river basins using a "**bottom-up**" approach where stakeholders in each basin lead the development of their basin plan.
- Collectively, the River Basin Plans will form the foundation of a new State Water Plan.



# Five-step Process...



- 1. Surface Water Assessments** – completed in 2017 for each basin (CDM Smith, Inc).
- 2. Groundwater Assessment** – completed in 2021 (USGS).
- 3. Water Demand Projections** – methodology report completed in October 2019.
  - Edisto projections completed in 2021.
  - Broad projections in progress.
  - Pee Dee projections slated for spring 2022.
- 4. River Basin Plans**
  - South Carolina State Water Planning Framework published in October 2019.
  - Edisto and Broad basin planning in progress.
  - Pee Dee basin planning is now initiated.
- 5. State Water Plan** – River Basin Plans will form the foundation of a new State Water Plan.



## Cooperators:



# Planning Process Advisory Committee (PPAC)



- A stakeholder team convened by SCDNR in March 2018.
- Purpose - develop a guidance document for developing River Basin Plans and for updating the State Water Plan.
- *South Carolina State Water Planning Framework* (Planning Framework) was published in October 2019 after an 18-month process.
- PPAC continues to meet quarterly for planning oversight purposes.

## **PPAC Vision Statement:**

*“Reflecting our values of water as a shared resource with a shared responsibility, we will work together to develop and maintain an actionable State Water Plan balancing economic, environmental and social needs of South Carolina for generations to come.”*



# PPAC Committee Members



**Jeffery Allen** – Clemson University  
**David Baize** – SCAWWA/WEASC  
**David Bereskin** – Greenville Water  
**Jesse Cannon** – Santee Cooper  
**Fred Castles, III** – Catawba-Wateree Water Management Group  
**Clay Duffie** – Mt. Pleasant Waterworks (retired)  
**Steve Hamilton** – The Dunes Golf and Beach Club  
**Erika Hollis** – Upstate Forever  
**J.J. Jowers, Jr.** – Bamberg County citizen, Edisto Engineers and Surveyors, Inc.  
**Eric Krueger** – The Nature Conservancy  
**Jeff Lineberger** – Duke Energy  
**Jill Miller** – South Carolina Rural Water Association  
**Dean Moss, Jr.** – Beaufort Jasper WSA (retired)  
**Myra Reece** – South Carolina Department of Health and Environmental Control  
**Ken Rentiers** – South Carolina Department of Natural Resources  
**Bill Stangler** – Congaree Riverkeeper  
**Landrum Weathers** – Farmer  
**Scott Willett** – Anderson Regional Joint Water System  
**Charles Wingard** – Walter P. Rawl and Sons, Inc.



**For more information, visit:**

[https://www.clemson.edu/public/water-assessment/State Water Planning Process Advisory Committee.html](https://www.clemson.edu/public/water-assessment/State%20Water%20Planning%20Process%20Advisory%20Committee.html)



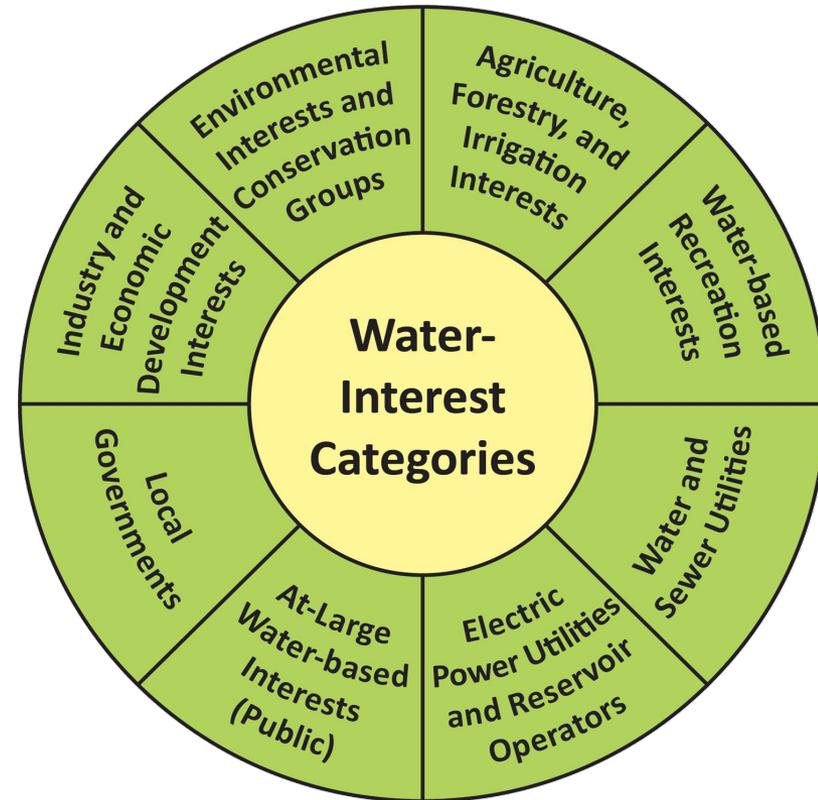
<http://hydrology.dnr.sc.gov/ppac.html>



# River Basin Council (RBC)



- Key feature of Planning Framework.
- Stakeholder-led team responsible for developing the River Basin Plan.
- Consists of up to 25 members representing 8 interest categories.
- Governed by a set of bylaws and uses a consensus-based decision-making process.
- Responsible for developing water management strategies to address future water needs in the basin.
- Can make recommendations regarding water policy and legislation.



# Edisto River RBC Representation



## Interest Categories

- Agriculture, Forestry, and Irrigation (4)
- At-Large (5)
- Electric-Power Utilities (1)
- Environmental (3)
- Industry/Economic Development (2)
- Local Governments (3)
- Water and Sewer Utilities (3)
- Water-based Recreational (2)



## Organizations Represented

- Aiken County Government
- Aiken Soil & Water Conservation District
- Bamberg Board of Public Works
- Bamberg Soil and Water District
- Charleston Water System
- Dominion Energy South Carolina
- Dorchester County Government
- Edisto River Canoe and Kayak Trail Comm.
- Friends of the Edisto & Edisto Riverkeeper
- Lowcountry Oyster Company, LCC
- Orangeburg Country Club
- Orangeburg County Government
- Orangeburg Department of Public Utilities
- Palmetto Realty and Land Co.
- RBM Forestry LLC
- General Public
- The Nature Conservancy
- Town of Edisto Beach
- Walther Farms
- Weathers Farms/ Circle W Farms
- Western SC Economic Development Council

## Planning Team



Facilitation and  
Surface Water  
Technical Support



Meeting Coordination  
and Public Outreach



Groundwater  
Technical Support



Oversight and  
Education

# Broad River RBC Representation



## Interest Categories

Agriculture, Forestry, and Irrigation (5)  
At-Large (3)  
Electric-Power Utilities (2)  
Environmental (3)  
Industry/Economic Development (2)  
Local Governments (1)  
Water and Sewer Utilities (5)  
Water-based Recreational (2)



## Organizations Represented

Black's Peaches  
Cherokee County Development Board  
City of Clinton  
City of Columbia  
City of Columbia Parks  
Congaree Riverkeeper  
Dominion Energy SC, Inc.  
Duke Energy  
Gaffney Board of Public Works  
His Harvest Partners LLC  
Inman-Campobello Water District  
Milliken & Company  
Public  
SC Farm Bureau  
SC Rural Water Association  
Caroland Farms NPA  
Spartanburg Water  
The Nature Conservancy  
The SC River Guide  
Upstate Forever  
Weyerhaeuser Company  
York County

## Planning Team



Facilitation



Meeting Coordination  
and Public Outreach



Oversight and  
Education

Surface Water  
Technical Support  
(to be determined)

# Stakeholder and Public Participation Opportunities



- Guidelines for stakeholder and public participation described in Section 3.7 of Planning Framework.
- Public meetings (4 per basin):
  - Prior to first RBC meeting – “kickoff” meeting(s)
  - After draft River Basin Plan is released
  - After final River Basin Plan is released
- Draft River Basin Plan Public Review Period (30 days).
- RBC Meetings:
  - Open to the public
  - Each meeting will include public comment period

# Stakeholder Participation



**Broad Basin SWAM Model Stakeholder Meeting**



**Edisto River Basin Council Field Trip**



**Edisto Basin Water Demand Projection Stakeholder Meeting**



**PPAC Meeting**

# SCDNR Hydrology Section Website



## Water Planning

The SCDNR Hydrology Section is responsible for formulating and establishing a comprehensive water resources policy for the State of South Carolina.

### Overview

The South Carolina Department of Natural Resources (SCDNR) is legislatively mandated through the [South Carolina Water Resources Planning and Coordination Act](#) (§ 49-3-10, et. seq., Code of Laws of South Carolina, 1976) to formulate and establish a comprehensive water resources policy or water plan for the State. The [first edition of the South Carolina Water Plan](#) was published in 1998, and was subsequently [updated in 2004](#) to incorporate experiences and knowledge gained from the severe, statewide drought of 1998–2002. The 2004 Water Plan highlighted the need for water planning on a regional level.

In 2019, SCDNR published the [South Carolina State Water Planning Framework](#) (Planning Framework) under the guidance of the [Planning Process Advisory Committee](#) (PPAC). The Planning Framework describes the process of developing regional water plans, now formerly called River Basin Plans, that will support the development of a new State Water Plan. River Basin Plans will be developed for the eight major river basins in the State – Broad, Catawba, Edisto, Pee Dee, Salkehatchie, Saluda, Santee, and Savannah. To support the development of the River Basin Plans, hydrologic models have been developed for both the State's surface water and groundwater resources and will be used along with water demand projections to assess current and future water availability in the State.

**Public Notice: Two Public Meetings Have Been Scheduled for March 21<sup>st</sup> and 22<sup>nd</sup> to Kick-off Pee Dee River Basin Planning Activities.**

For more information including times and locations visit the [Pee Dee Basin Planning](#) page.

### State and River Basin Planning Framework



### Edisto Basin Planning



### Broad Basin Planning



### Pee Dee Basin Planning



### Water Demand Projections



<http://hydrology.dnr.sc.gov/water-planning.html>

## Pee Dee Basin Planning

Activities and reports on water planning in the Pee Dee River basin.

### Overview

River basin planning activities in the Pee Dee basin will soon be initiated under the guidance of the [South Carolina State Water Planning Framework](#). Two public meetings are scheduled for March 21<sup>st</sup> in Conway, SC and for March 22<sup>nd</sup> in Florence, SC to kick-off planning activities ([see below for meeting agendas and meeting locations](#)). An overview of the South Carolina State Water Planning Framework will be provided and applications to serve on the Pee Dee River Basin Council will be solicited. Formal council meetings are scheduled to begin in late spring or early summer of 2022. Please visit this website for periodic updates and new information regarding Pee Dee River basin planning activities.

**Public Notice: Two Public Meetings Scheduled for March 21<sup>st</sup> and 22<sup>nd</sup> to Kick-off Pee Dee River Basin Planning Activities ([see below for meeting details](#)).**

An overview of the South Carolina State Water Planning Framework will be presented and applications for the Pee Dee River Basin Council will be solicited. Similar information will be presented at each meeting.

### Public Meetings

#### Meeting #1 (agenda)

March 21<sup>st</sup>, 2022: 6:00 pm – 8:00 pm  
Location: Coastal Carolina University  
Wall Building - Johnson Auditorium  
119 Chanticleer Drive East  
Conway, SC 29258  
[Directions via Google Maps](#) [Parking Map](#)

#### Meeting #2 (agenda)

March 22<sup>nd</sup>, 2022: 6:00 pm – 8:00 pm  
Location: Pee Dee Research and Education Center - Clemson University  
2200 Pocket Rd.  
Florence, SC 29506  
[Directions via Google Maps](#)

### Pee Dee Planning News

- [Public Meetings scheduled for March 21<sup>st</sup> and 22<sup>nd</sup> to Kick-off Pee Dee River Basin Planning Activities](#)

[View more news.](#)

### Hydrology Calendar

#### Upcoming events

- [Edisto River Basin Council Meeting #21](#)  
Wednesday March 16, 2022 from 9:00AM - 1:00PM  
[Clemson University File Repository | Planning Calendar](#)

<http://hydrology.dnr.sc.gov/peedee-basin-planning.html>

## Site will host:

- Announcements/Calendar of Events
- Access to water planning documents – Planning Framework, technical reports
- RBC meeting materials – agendas, presentations, recordings

# Summary



The decision-making process in South Carolina has evolved over the years by:

- Providing more reliable information for decision-makers through the expansion of the State's surface water and groundwater monitoring networks.
- Developing better hydrologic models to assess current and future water availability.
- Shifting from state to regional water planning, which integrates local knowledge into the decision-making process.
- Shifting from a top-down to a bottom-up water planning approach and using a consensus-driven decision-making process.