

# PUBLIC MEETING #1 – EDISTO BASIN WATER PLANNING

## Agenda



### 1. **Welcome and Why We Are Here** – Ken Rentiers, SCDNR, Deputy Director of the Land, Water, & Conservation Division

*Why is Water Planning Important to all South Carolina citizens?*

*Where are we in the planning process, how did we get here, and where are we going?*

### 2. **Comments from State Water Planning Process Advisory Committee (PPAC) Members**

Myra Reece, SCDHEC – Director of Environmental Affairs

Jeff Allen, Clemson University – Director of South Carolina Water Resources Center

*PPAC members share their perspectives on why we need water planning.*

### 3. **Edisto River Basin Planning** – Scott Harder, SCDNR, Hydrology Section Chief

*What is a River Basin Plan and how will the Edisto River Basin Plan be developed?*

### 4. **Next Steps for Edisto River Basin Planning** – Scott Harder, SCDNR

*What is the schedule for Edisto planning activities?*

*How can stakeholders apply to be on a River Basin Council?*

*What are other ways stakeholders can be involved?*

### 5. **Comments and Questions**

*Let us hear from you. We will address any comments or questions about the Planning Framework and Edisto basin planning activities.*

# South Carolina State Water Planning

Ken Rentiers

Deputy Director

S.C. Department of Natural Resources  
Land, Water and Conservation Division



Edisto Basin Planning – Public Meeting #1  
Blackville, SC  
November 18<sup>th</sup>, 2019



# Why Are We Here?

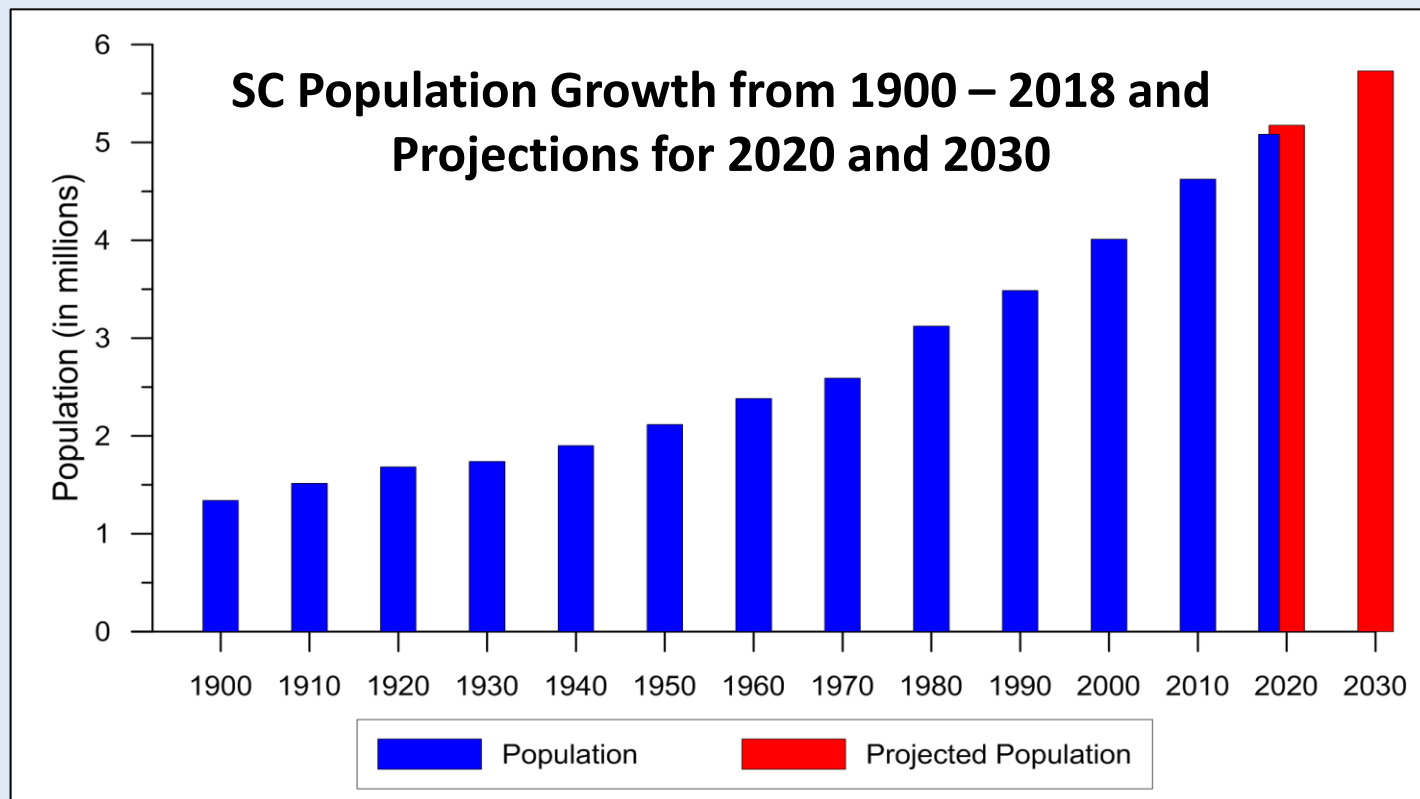


# Why State Water Planning?

## Population Growth → Increased Water Demand



- From 1990 – 2018, SC population increased from **3.5** to **5.1** million and is forecasted to increase to **5.7** million by 2030.
- Our growing population may increase future water demands and may increase competition for our water supplies.



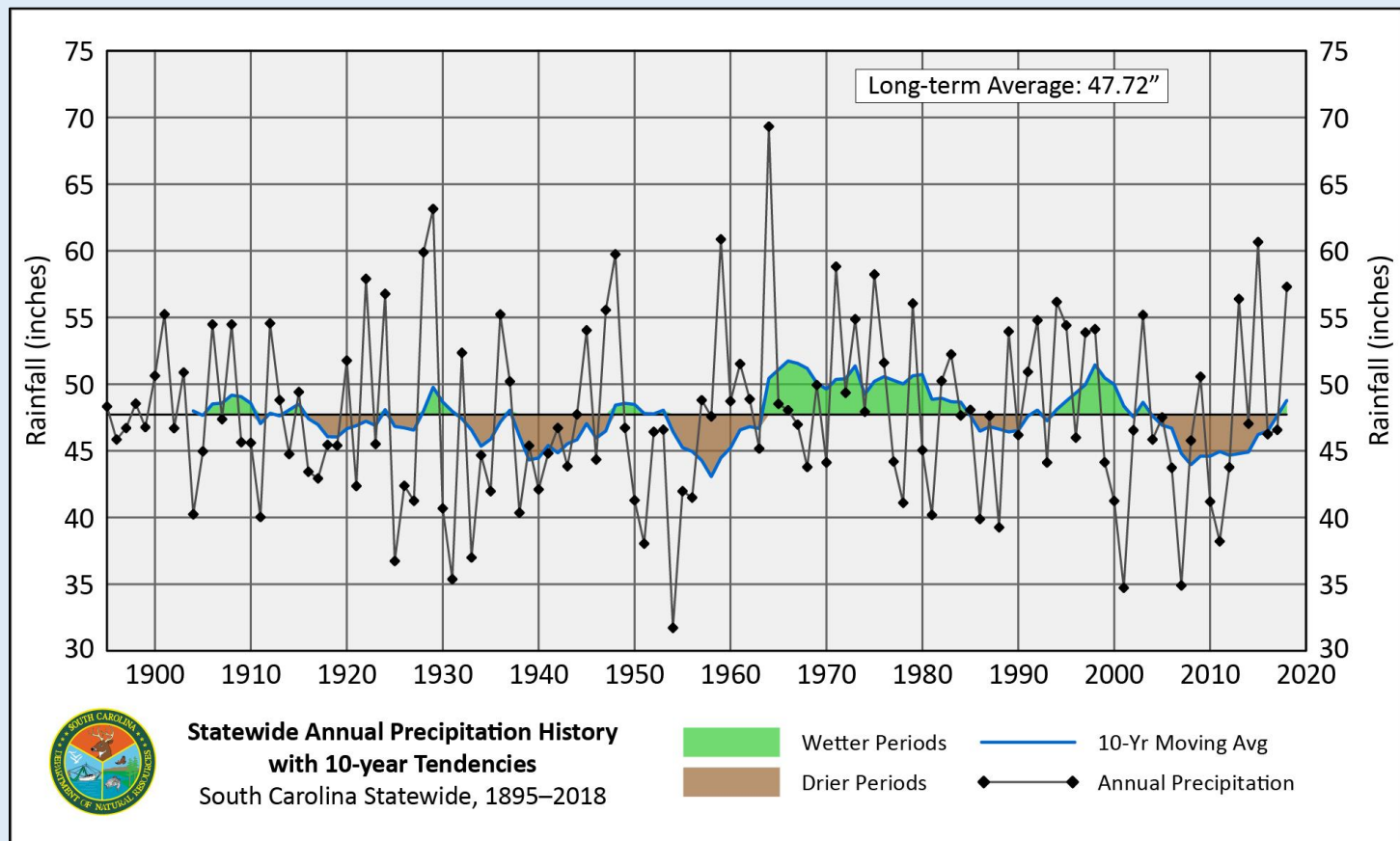


# Why State Water Planning?

## Drought



SC *generally* has an abundance of water, but recent droughts (**1998-2002, 2007-2008, 2011-2012, 2016, 2019**) have stressed the State's water resources.



Statewide Average Annual Rainfall (inches) and 10-year Running Average

# Why State Water Planning?

## Drought

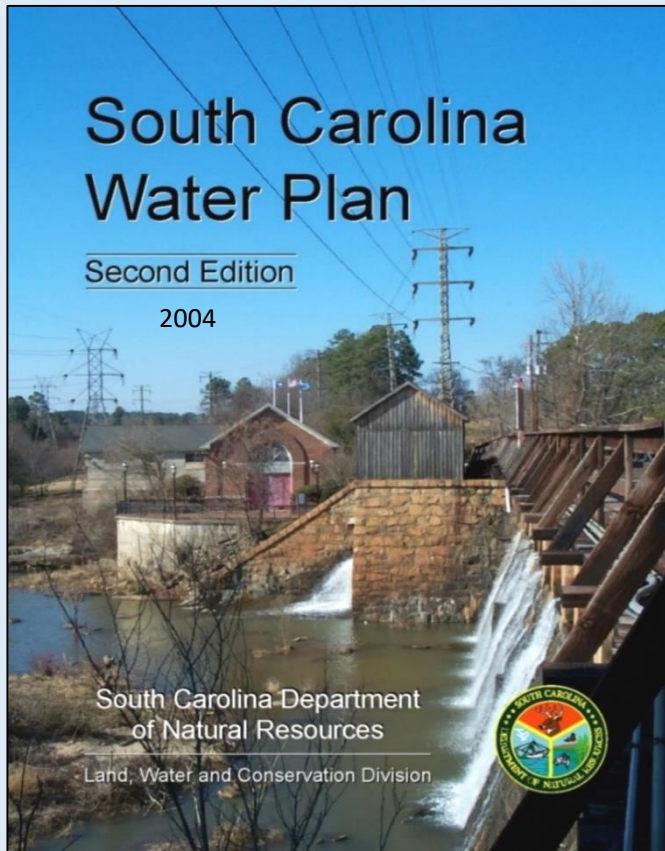


Tree-ring studies indicate the occurrence of more severe and longer-term droughts (Mega-droughts) over the past 400 years

*Uncertainty in the nature of future droughts combined with the potential for increasing water demands highlights the importance of comprehensive State and river basin planning*



# A Brief History of State Water Planning...



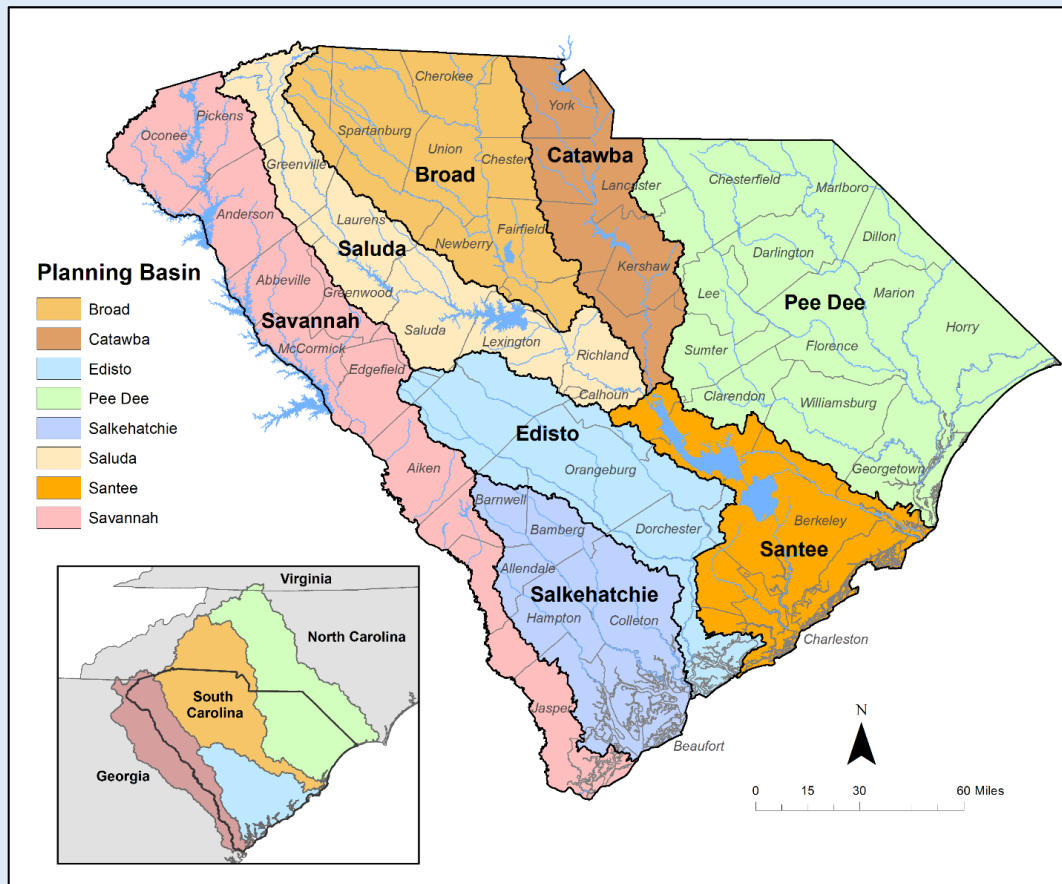
- SCDNR published the first edition of the State Water Plan in **1998**.
- In **2004**, SCDNR published the second edition of the South Carolina Water Plan incorporating lessons learned from the drought of 1998-2002.
- One recommendation was to develop a regional water plan for each major river basin in the State.
- **10 years later** – SCDNR and SCDHEC initiated the first step towards these regional water plans, now formally called *River Basin Plans*.



# South Carolina's Eight Planning Basins



- River Basin Plans will be developed for the State's 8 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.

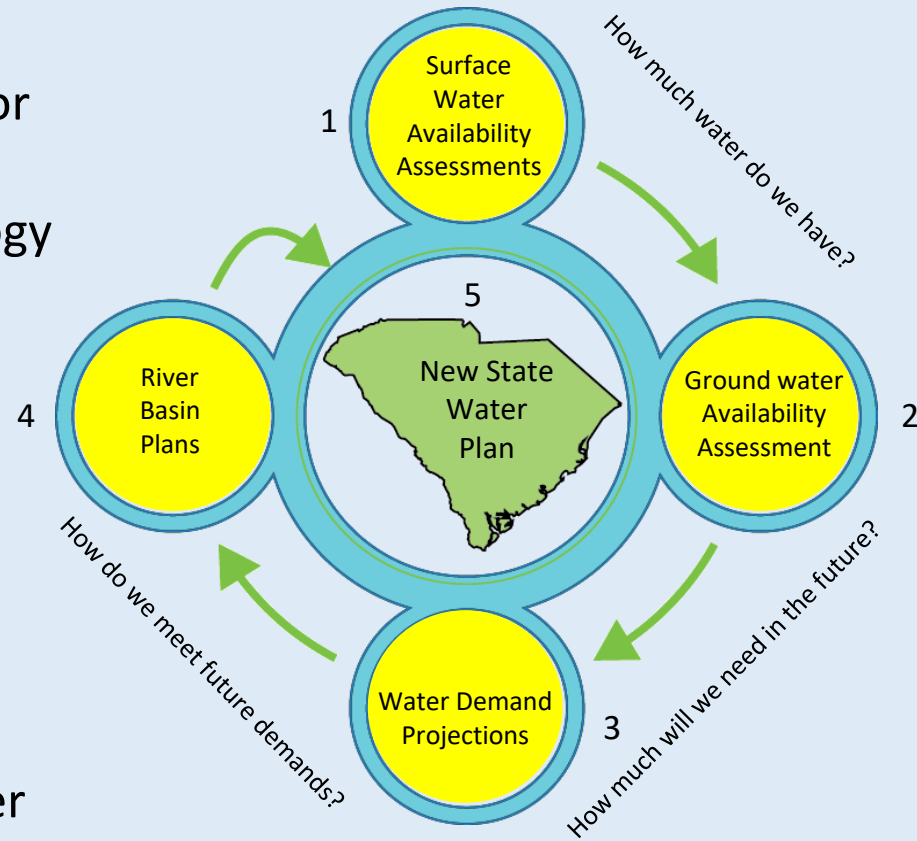




# Five-step Process...



- 1. Surface Water Assessments** – completed in 2017 (CDM Smith, Inc).
- 2. Groundwater Assessment** – scheduled for completion by the end of 2019 (USGS).
- 3. Water Demand Projections** – methodology report completed in October 2019.
  - Projections for Edisto basin in progress.
- 4. River Basin Plans**
  - Publication of South Carolina State Water Planning Framework .
  - Initiation of Edisto basin planning activities.
- 5. State Water Plan** – River Basin Plans will form the foundation of a new State Water Plan.



## Cooperators:



US Army Corps  
of Engineers



# Planning Process Advisory Committee (PPAC)



- Convened by SCDNR in March 2018.
- Purpose - develop a guidance document (Planning Framework) for developing River Basin Plans (Step 4) and for updating the State Water Plan (Step 5).
- South Carolina State Water Planning Framework (Planning Framework) was published in October 2019.
- PPAC will continue to have a long-term role in overseeing the State and river basin planning process.

## **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  
**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.** – Citizen, formerly of Beaufort Jasper WSA  
**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_Water_Planning_Process_Advisory_Committee.html)

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



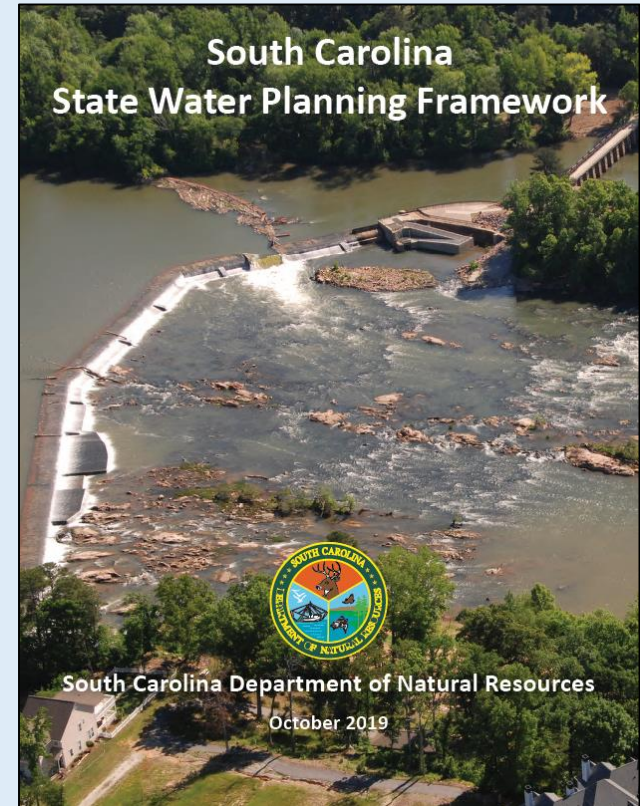


# Contents of Planning Framework



## Sections:

1. Executive Summary
  2. Introduction
  3. River Basin Planning Process
  4. Methodologies for Evaluating Water Availability
  5. River Basin Plan Table of Contents
  6. River Basin Planning Process Implementation
  7. River Basin Plan Implementation
  8. State Water Plan
- Appendix: River Basin Council Bylaws



Planning Framework is available for review and download at:  
<http://hydrology.dnr.sc.gov/state-and-river-basin-planning.html>.



# Where are we now?



*Ready to start the Edisto River basin planning process under the guidance of the new Planning Framework.*



# Edisto River Basin Planning



**Scott Harder**

Hydrology Section Chief

S.C. Department of Natural Resources  
Land, Water and Conservation Division

# What is a River Basin Plan?



# What is a River Basin Plan?



A River Basin Plan answers four questions:

1. What is the basin's current available water supply and demand?
2. What are the current permitted and registered water uses?
3. What will be the basin's water demand over the Planning Horizon, and will the water supply meet the demand?
4. What water management strategies will be employed to ensure the supply meets or exceeds the projected demand over the Planning Horizon?

**Proactive Water Management, not Reactive!**



# Water Management Strategies



- Water management strategies mitigate/eliminate water shortages or increase water supply
  - Demand side (water conservation measures)
  - Supply side (new water sources)
- Example strategies
  - Water conservation
  - Water utility interconnections
  - New wells
  - Desalination
  - Aquifer, storage and recovery
  - Conjunctive water use



# Guiding Principles

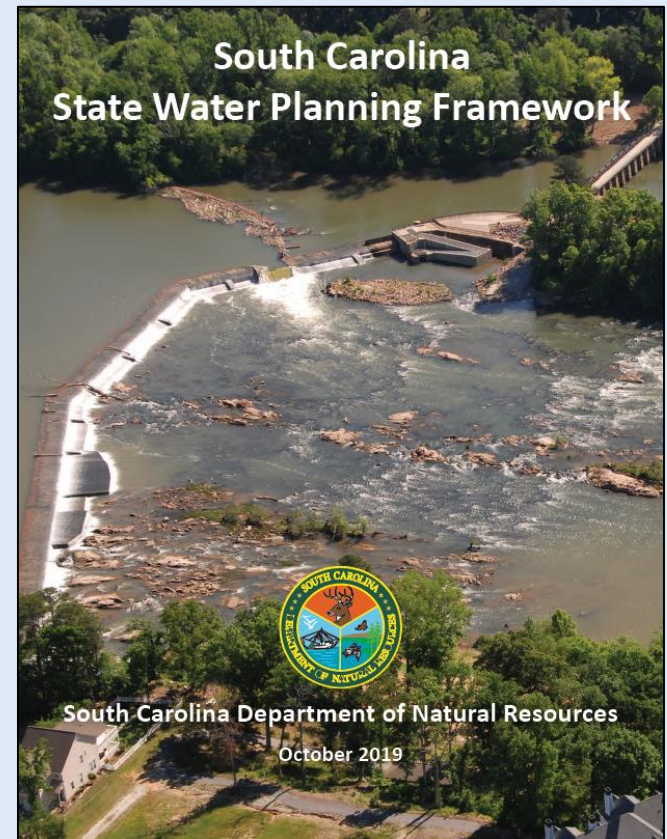


- Water is a limited natural resource and is a major factor for economic development and environmental protection.
- River Basin Plans should strive for the equitable use of water resources with the goal of ensuring water is available for all uses, when and where needed, throughout the Planning Horizon and under drought conditions.
- River Basin Plans should protect the public's health and well-being and should balance social, economic, and environmental needs.

# Other Features of a River Basin Plan



- Covers a **50-year** Planning Horizon.
- Considers both surface water and groundwater resources.
- Current focus is on water *quantity* not *quality*.
- Not a regulatory document but may include recommendations regarding State water policy, law and regulations.
- Updated every 5-years – *water planning will be an ongoing process*.
- Supported by hydrologic data and models along with water demand projections.



# River Basin Plan Table of Contents



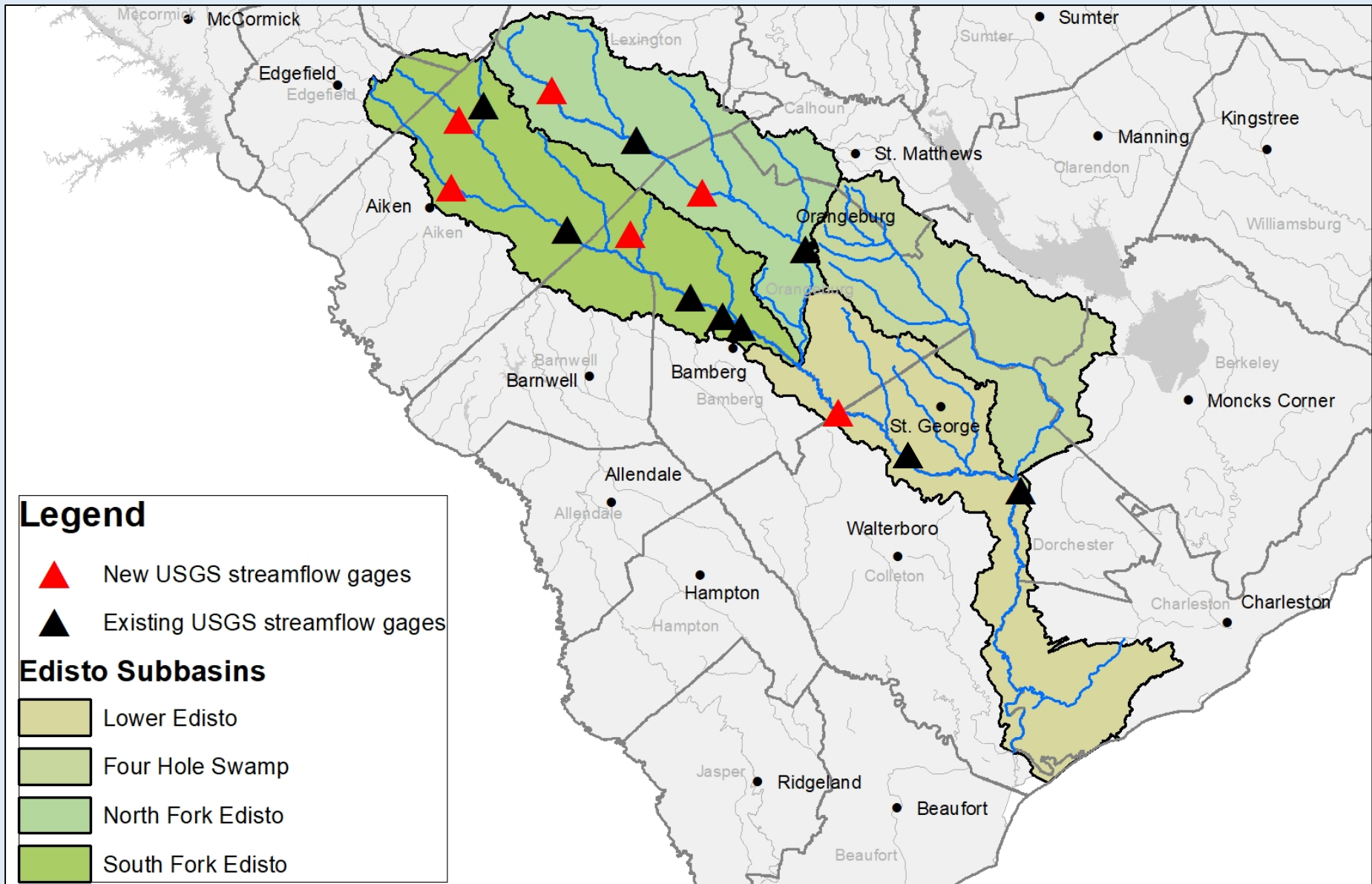
1. Introduction
2. Description of the Basin
3. Water Resources of the Basin
4. Current and Projected Water Demand
5. Comparison of Water Resource Availability and Water Demand
6. Water Management Strategies
7. Water Management Strategy Recommendations
8. Drought Response
9. Policy, Legislative, Regulatory, Technical and Planning Process Recommendations
10. Implementation Plan



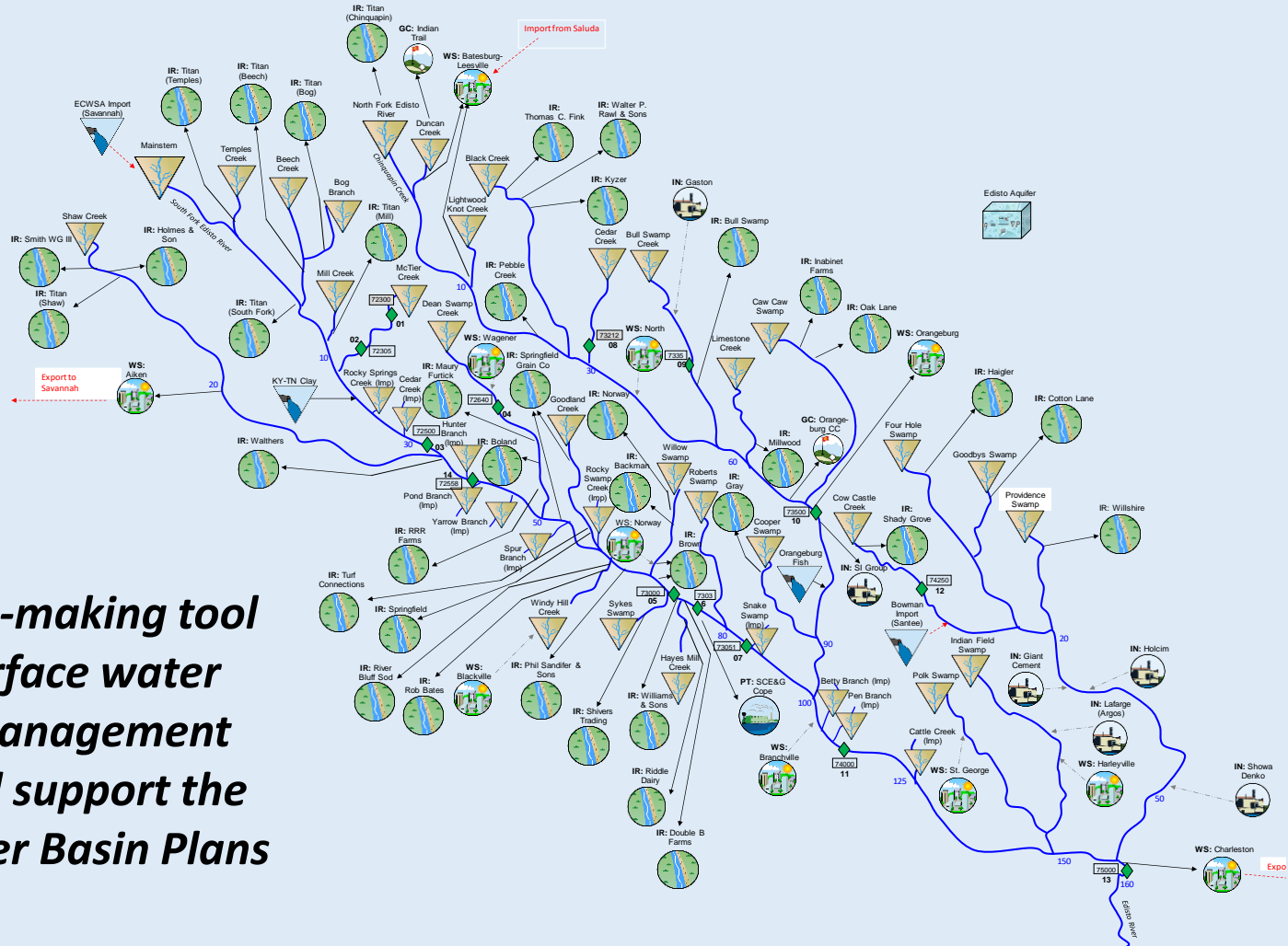
# What Data and Decision-making Tools Are Available to Support Plans?



# Surface Water Monitoring Network



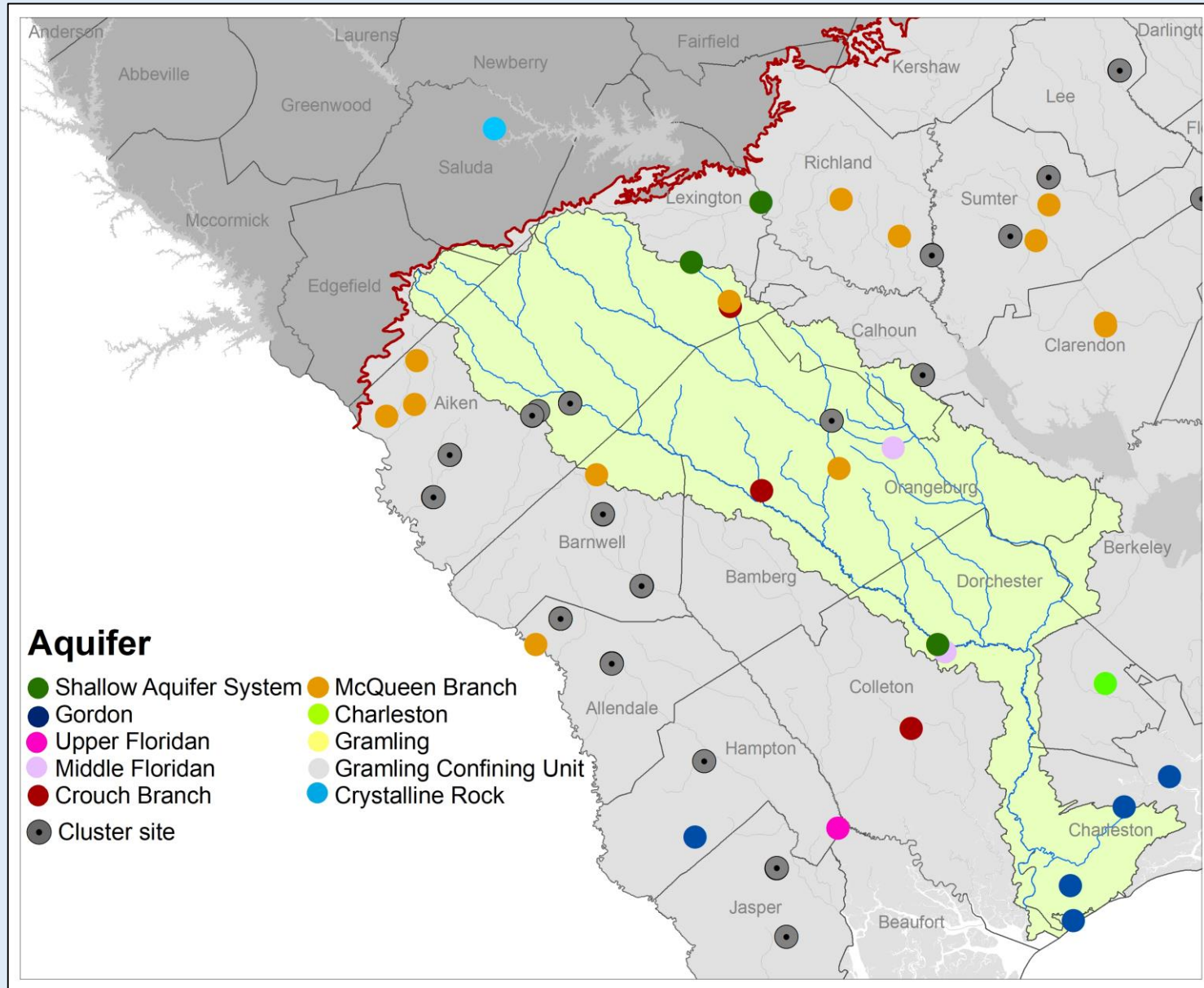
# Edisto Surface Water Model (SWAM)



***SWAM is a decision-making tool used to assess surface water availability and management strategies, and will support the development of River Basin Plans***

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

# Groundwater Monitoring

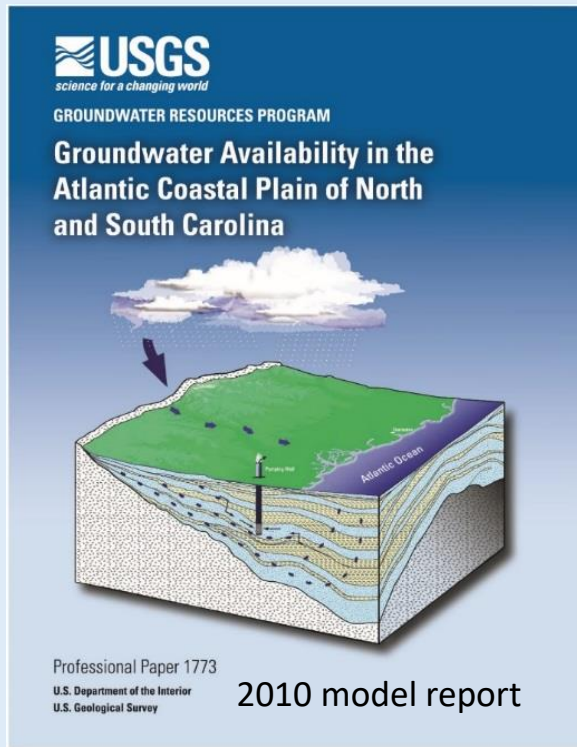




# Groundwater Models



- Developed by the USGS, 4-year project (2016-2019).
- Final report/model due by end of year.
- ***Model is a decision-making tool used to assess groundwater availability and management strategies and will support the development of River Basin Plans.***
- More information can be found at <http://hydrology.dnr.sc.gov/groundwater-models.html>.



# Water Demand Projections – In Progress



- Water demand *methodology* report released in October 2019 at <http://hydrology.dnr.sc.gov/water-demand.html>.
- *Edisto water demand projections* – stakeholder meeting to review draft projections scheduled for December or January.
- ***Projections will be used in Surface and Groundwater models to assess future water availability and will support the development of River Basin Plans.***



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# How will the Edisto River Basin Plan Be Developed?



# River Basin Council (RBC)



- **Stakeholder-led team** responsible for developing the River Basin Plan.
- Up to **25** members representing 8 interest categories.
- Governed by a set of Bylaws.
- Consensus based decision-making process.
- Chair and Vice Chair elected by RBC.

## **Water-Interest Categories:**

1. Agriculture, forestry and irrigation interests
2. Local governments
3. Water and sewer utilities
4. Electric-power utilities and non-federal reservoir operators
5. Industry and economic development interests
6. Water-based recreational interests
7. Environmental Interests (conservation groups)
8. At-large water-based interests

***RBC will develop the River Basin Plan over a 2-year period with meetings on a monthly basis***

# RBC Roles and Responsibilities



- Identify water shortages or conflicts using hydrologic models.
- Recommend strategies to mitigate or eliminate water use conflicts or water shortages.
- Form subcommittees to address specific issues or topics.
- Help draft River Basin Plans.
- Update River Basin Plans every 5-years and amend River Basin Plans as needed.
- Communicate with stakeholders and the public on planning activities.
- Coordinate with other formal planning bodies.
- Make policy, legislative/regulatory, technical or planning process recommendations.



# RBC Support



*The Edisto RBC will develop the plan with support from:*

- **Contractors** (solicited and hired by SCDNR):
  - Meeting Facilitation
  - Meeting Coordination – administrative and logistical support
  - Technical support – surface and groundwater modeling
  - Public Outreach
  - River Basin Plan report writing
- **Other State and Federal Agencies:**
  - RBCs can request agencies to serve as Advisors
  - Participate in RBC meetings and subcommittee meetings as requested
- **RBCs can request input from other outside Advisors**

*PPAC and SCDNR will continue to provide oversight of the river basin planning process.*



# State Water Plan

- Contingent upon completion of 8 River Basin Plans.
- Major content includes:
  - A summary of legislative, policy, process, and program recommendations regarding the State's water resources documented in the River Basin Plans.
  - A summary of each River Basin Plan's water availability analyses and conclusions.
  - An evaluation of statewide trends in water use and availability.

## Table of Contents:

1. Introduction
2. Policy and Legislative Recommendations
3. Planning Process and Program Recommendations
4. Financing Needs
5. Current and Future Water Demand
6. Water Availability Assessment
7. Water Management Strategies
8. Drought and Drought Response in South Carolina
9. Implementation
10. Special Topics

# Edisto River Basin Planning Schedule and RBC Application Process



# Edisto River Basin Planning



- **Schedule:**

**Nov 2019:** Public kick-off meetings

- Introduce planning process
- Solicit RBC membership applications

**Nov – Dec 2019:** SCDNR accepts RBC membership applications

**Nov 2019 – Feb 2020:** Solicitation of Contractors (*in progress*)

- Facilitator
- Technical work

**Jan 2020:** RBC members appointed

**Feb/Mar 2020:** RBC kick-off meeting

- Clemson University will serve as meeting *Coordinator* and *Public Outreach Coordinator*

# River Basin Council Membership Qualifications and Considerations



SCDNR appointments based on the following criteria:

- Applicant's credentials
  - Knowledgeable and experienced in their interest category.
  - Must either reside, work or officially represent an entity having a significant water resource interest in the basin.
  - Additional qualifiers – membership on the State Drought Response Committee or recognized Groundwater Management Group.
- Recommendations and endorsements submitted by various interest groups or organizations
- Other considerations:
  - Geographic diversity.
  - For basins with large groundwater use, will seek members who are knowledgeable of local groundwater resources.
- RBC membership recommendations made by the PPAC

***SCDNR appointments will strive  
for a balanced representation***




# Edisto River Basin Council Application Process



***Applicants should carefully consider the time commitment and workload required to an RBC member***

**EDISTO RIVER BASIN COUNCIL  
MEMBERSHIP APPLICATION FORM**



Last Name: \_\_\_\_\_ First Name: \_\_\_\_\_  
Address: \_\_\_\_\_ Phone 1: \_\_\_\_\_  
\_\_\_\_\_ Phone 2: \_\_\_\_\_  
City: \_\_\_\_\_ State: \_\_\_\_\_ ZIP: \_\_\_\_\_  
Organization/Company: \_\_\_\_\_  
Position: \_\_\_\_\_ E-mail: \_\_\_\_\_

Indicate which one Interest Category you are requesting to represent (required):

- Agriculture, Forestry, and Irrigation Interests
- Local Governments
- Water and Sewer Utilities
- Electric-Power Utilities and Non-Federal Reservoir Operators
- Industry and Economic Development Interests
- Water-based Recreation Interests
- Environmental Interests
- At-Large Water-based Interests

1. How are you affiliated with this Interest Category?  
\_\_\_\_\_

2. Explain what makes you an appropriate representative of your selected Interest Category:  
\_\_\_\_\_

3. Describe your relevant qualifications and background or experience with water resources:  
\_\_\_\_\_

4. Explain how you would apply your skills and experience to assure successful water planning for the Edisto River Basin:  
\_\_\_\_\_

The completed application and any supporting documentation (such as a resume) should be submitted to Ken Rentiers, SCDNR Deputy Director. Applications may be e-mailed to Mr. Rentiers at [RentiersK@dnr.sc.gov](mailto:RentiersK@dnr.sc.gov) or mailed to SCDNR at the following address:

**Ken Rentiers, Deputy Director  
Land, Water & Conservation Division  
SC Department of Natural Resources  
PO Box 167  
Columbia, SC 29202**

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

# River Basin Council Membership Terms and Commitment Considerations



- Initial terms are either **2, 3 and 4 years**.
- Subsequent terms of **3-years** (each additional term subject to SCDNR approval).
- RBC members can serve up to **3** consecutive terms.
- **Considerations for RBC applicants:**
  - Multi-year commitment
  - Monthly meetings
  - Subcommittee meetings
  - Review of various technical reports and other documents during process
  - Help write and review River Basin Plan
  - Annual meetings between iterations of River Basin Plan (possibly higher frequency)

# Edisto River Basin Council Application Process



- Application period: **November 18<sup>th</sup> – December 31<sup>st</sup>**
- Application forms available on SCDNR website:  
<http://hydrology.dnr.sc.gov/edisto-basin-planning.html>
- Application forms and recommendations should be sent to *Ken Rentiers* (see application for contact information)
- Application review period: **January 2<sup>nd</sup> – January 31<sup>st</sup>**
  - **PPAC will review applications and make recommendations to SCDNR**
- Final selection and notification by **January 31<sup>st</sup>**

# Stakeholder and Public Participation Opportunities



- Guidelines for stakeholder and public participation described in Section 3.7 of Planning Framework
- Public meetings (3 to 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
  - Meeting schedule/announcements posted on SCDNR website
  - Approved meeting minutes/summaries posted on SCDNR website





# New 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, and in 2014, SCDNR began the process of developing regional water plans that will ultimately support the development of a new State Water Plan. Regional water plans, or 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.

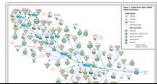
### New State and River Basin Planning Framework



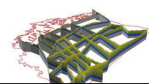
### Edisto Basin Planning



### Surface Water Models



### Groundwater Models



### Water Demand Projections



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

## Contact Information:

**Scott Harder, [harders@dnr.sc.gov](mailto:harders@dnr.sc.gov)**

- Site will host:
  - Calendar of Events
  - Access to water planning documents (Planning Framework/technical reports)
  - RBC meeting materials/agendas

## Edisto Basin Planning

Activities and reports on water planning in the Edisto River basin.

### Overview

The new South Carolina State Water Planning Framework (available [here](#)) will be first applied to the Edisto Basin. Two public meetings, scheduled for November 18<sup>th</sup> and November 21<sup>st</sup>, 2019, will be held in the basin to introduce the new Planning Framework to stakeholders and to solicit River Basin Council Membership applications. Meeting locations and times for the public meetings can be found below. River Basin Council activities are tentatively scheduled to begin in 2020. Please visit this website for periodic updates and new information regarding Edisto river basin planning activities.



Photo Credit: Ted Borg, SC Wildlife Magazine

### Edisto Public Meeting Locations & Times:

Blackville, S.C., November 18, 2019; 6 pm – 8 pm  
Clemson University's Edisto Research and Education Center  
64 Research Rd  
Blackville, SC 29817  
[Map](#)

St. George, S.C., November 21, 2019; 6 pm – 8 pm  
Lovely Hill Convention Center  
5905 W Jim Bilton Blvd  
St. George, SC 29477  
[Map](#)

[Edisto Planning News](#)

[Hydrology Calendar](#)

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