

# Pee Dee River Basin Planning Public Meeting #2



- 1. Welcome and Opening Remarks Jeff Allen, Clemson University
- 2. 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?

- **3. Pee Dee River Basin Planning** Scott Harder, SCDNR, Hydrology Section Chief What is a River Basin Plan and how will the Pee Dee River Basin Plan be developed?
- 4. Next Steps for Pee Dee River Basin Planning Scott Harder, SCDNR

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  How can stakeholders apply to be on the Pee Dee River Basin Council?

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The Edisto RBC Chairman will share his perspective on State water planning and his experience with the Edisto basin planning process.

**6. Comments from the Planning Process Advisory Committee and Q&A Session** – moderated by Dr. Jeff Allen, Clemson University

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# South Carolina State Water Planning

#### Ken Rentiers

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



Pee Dee River Basin Planning – Public Meeting #2
Pee Dee Research and Education CenterClemson University
Florence, SC
March 22<sup>nd</sup>, 2022



# Why Are We Here?



"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."
- South Carolina Water Plan (2004)





# Why Are We Here?





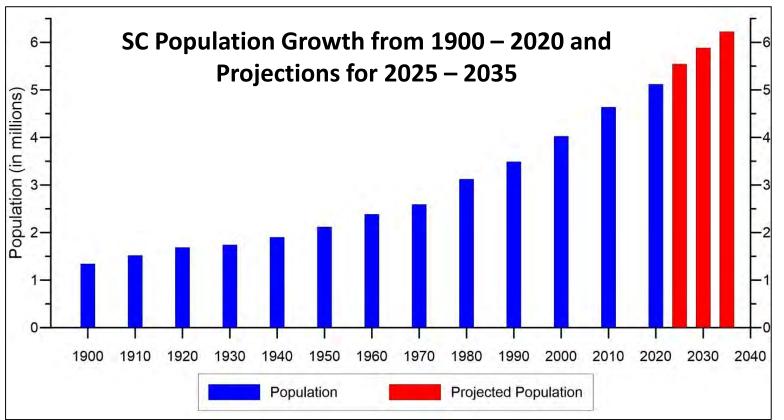


# Why State Water Planning?



### Population Growth → Increased Water Demand

- From 1990 2020, SC population increased from 3.5 to 5.1 million and is forecasted to increase to 6.2 million by 2035.
- Our growing population may increase future water demands and may increase competition for our water supplies.



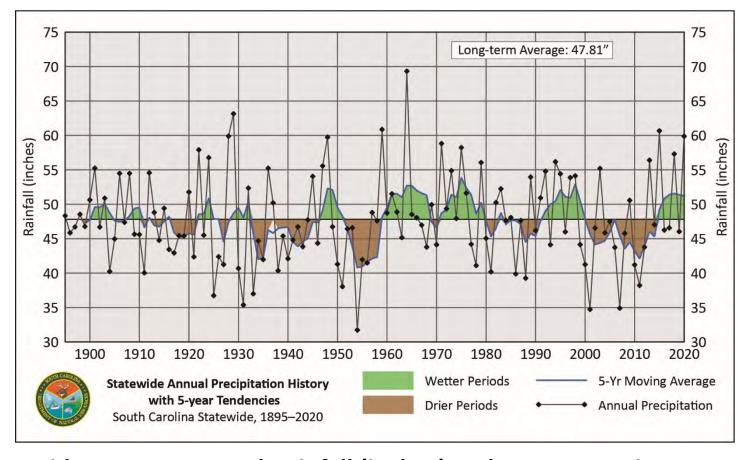


# Why State Water Planning?



# **Drought**

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





# Why State Water Planning?



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

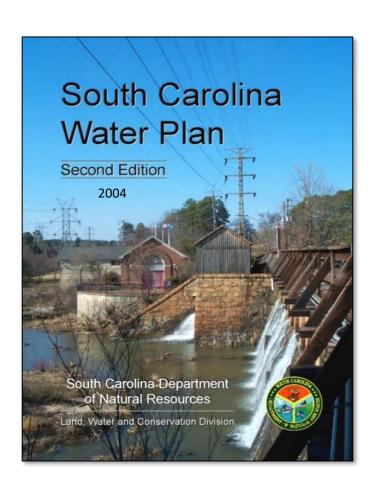
Uncertainty in future droughts + increased water demand = the need for comprehensive State and river basin planning.





# A Brief History of State Water Planning





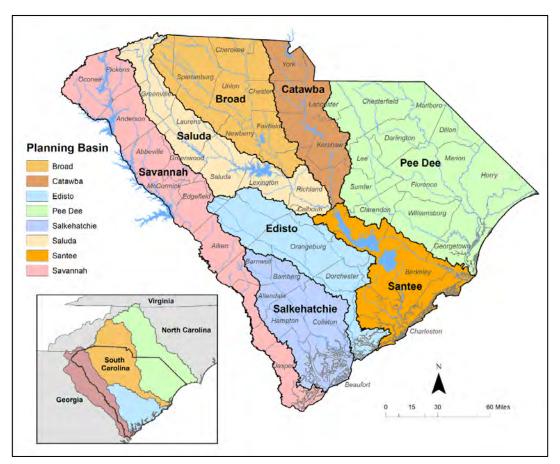
- SCDNR published the first edition of the State Water Plan in 1998.
- In 2004, SCDNR published the second edition of the South Carolina Water Plan incorporating lessons learned from the drought of 1998-2002.
- One recommendation was to develop a regional water plan for each major river basin in the State.
- In 2014, 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.





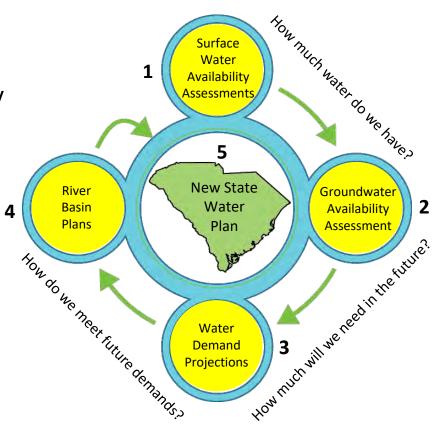
# Five-step Process...



- 1. Surface Water Assessments completed in 2017 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.



















# Stakeholder Participation







# 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 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/waterassessment/State\_Water\_Planning\_Process\_ Advisory\_Committee.html



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





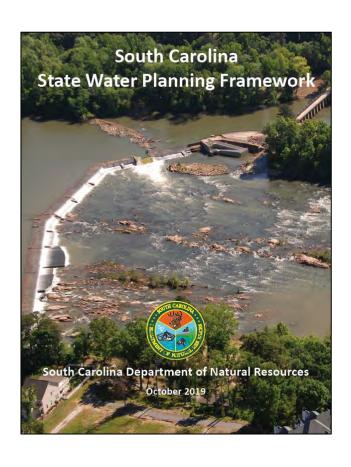
# Contents of Planning Framework



#### Sections:

- 1. Executive Summary
- 2. Introduction
- 3. River Basin Planning Process
- 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



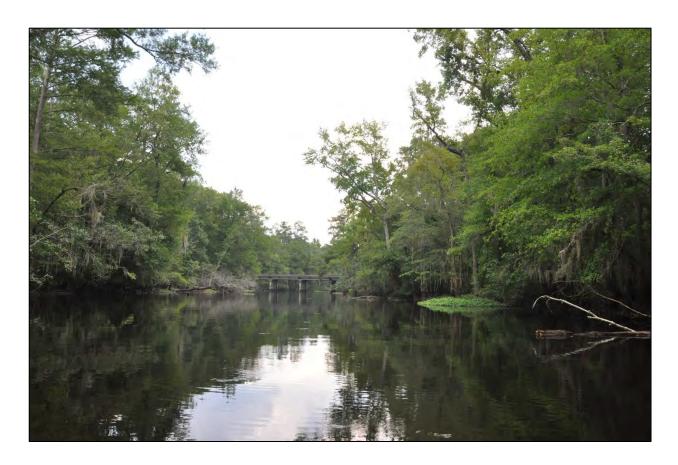
Planning Framework is available for review and download at: <a href="http://hydrology.dnr.sc.gov/water-planning-framework.html">http://hydrology.dnr.sc.gov/water-planning-framework.html</a>.



# Where are we now?



Ready to start the Pee Dee River basin planning process under the guidance of the Planning Framework.





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# What is a River Basin Plan?





#### What is a River Basin Plan?



### A River Basin Plan answers four questions:

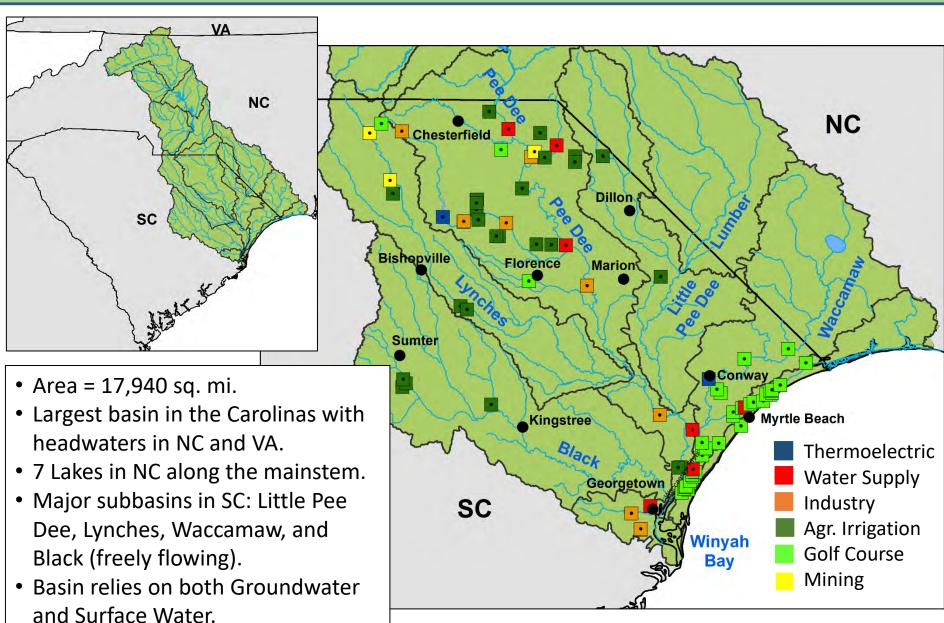
- 1. What is the basin's current available water supply and demand?
- 2. What are the current permitted and registered water uses?
- 3. What will be the basin's water demand over the Planning Horizon, and will the water supply meet the demand?
- 4. What water management strategies will be employed to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

# Proactive Water Management, not Reactive!



# 2020 Reported Surface Water Withdrawals



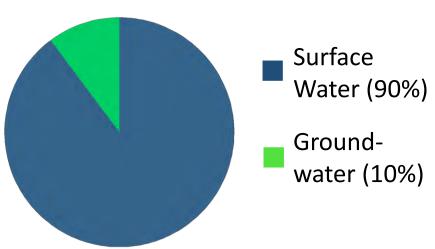


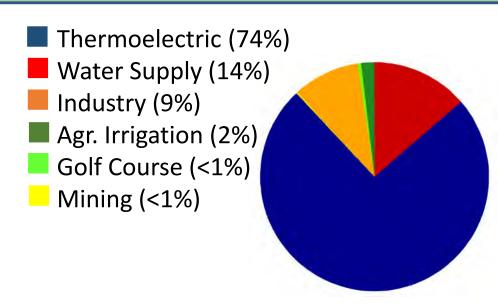


# 2020 Reported Water Withdrawals

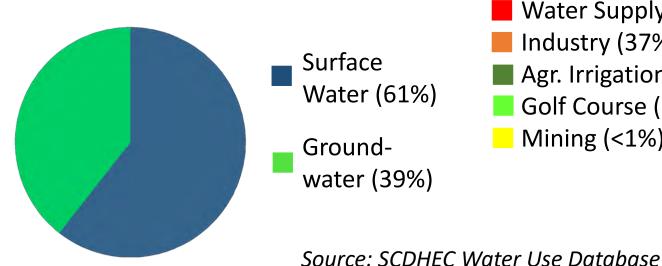


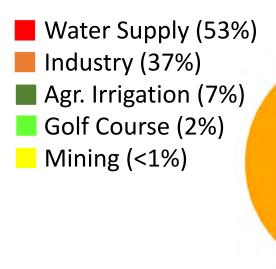






#### Excluding Energy Withdrawals:



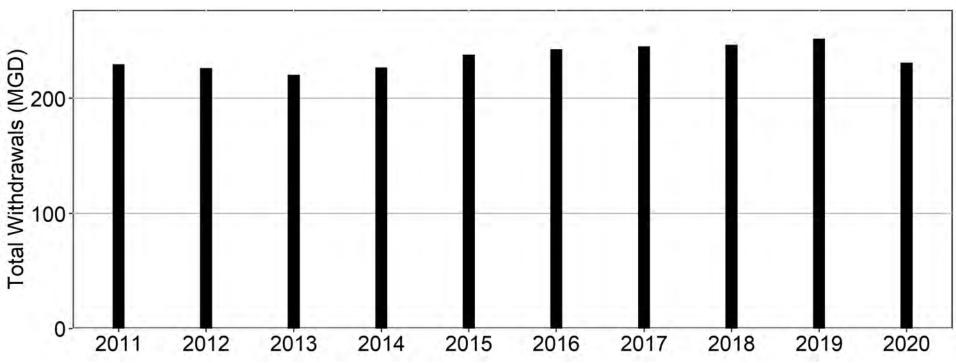




# Reported Water Withdrawals (2011-2020)



# Total Water Withdrawals – Surface Water and Groundwater (Excluding Energy)





# **Guiding Principles**



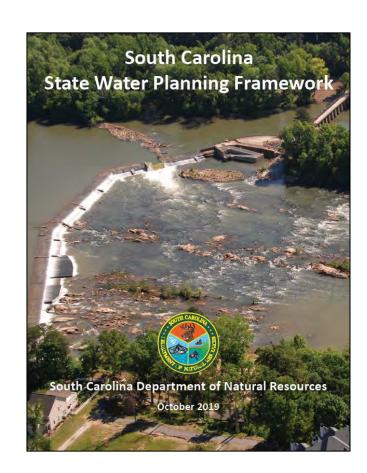
- Water is a limited natural resource and is a major factor for economic development and environmental protection.
- River Basin Plans should strive for the equitable use of water resources with the goal of ensuring water is available for all uses, when and where needed, throughout the Planning Horizon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



# 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 water *quality*.
  - Emphasis is on drought conditions.
- 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
- Water Resources of the Basin
- Current and Projected Water Demand
- Comparison of Water Resource Availability and Water Demand
- 6. Water Management Strategies
- 7. Water Management Strategy Recommendations
- 8. Drought Response
- Policy, Legislative, Regulatory, Technical and Planning Process Recommendations
- 10. Implementation Plan

# How Will the Pee Dee River Basin Plan be Developed?

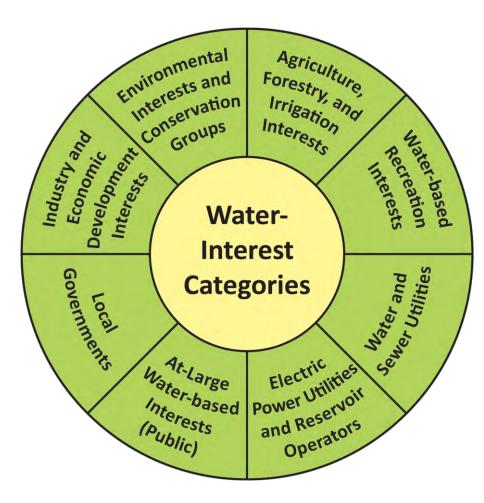




# River Basin Council (RBC)



- 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 decisionmaking process.
- Chair and Vice Chair elected by RBC.



RBC will develop the River Basin Plan over a 2-year period with meetings on a monthly basis 27



# **RBC** Roles and Responsibilities



- Identify water shortages or conflicts using hydrologic models.
- Recommend strategies to mitigate or eliminate water use conflicts or water shortages.
- Help draft River Basin Plans.
- Communicate with stakeholders and the public on planning activities.
- Coordinate with other formal planning bodies (including those in

North Carolina).

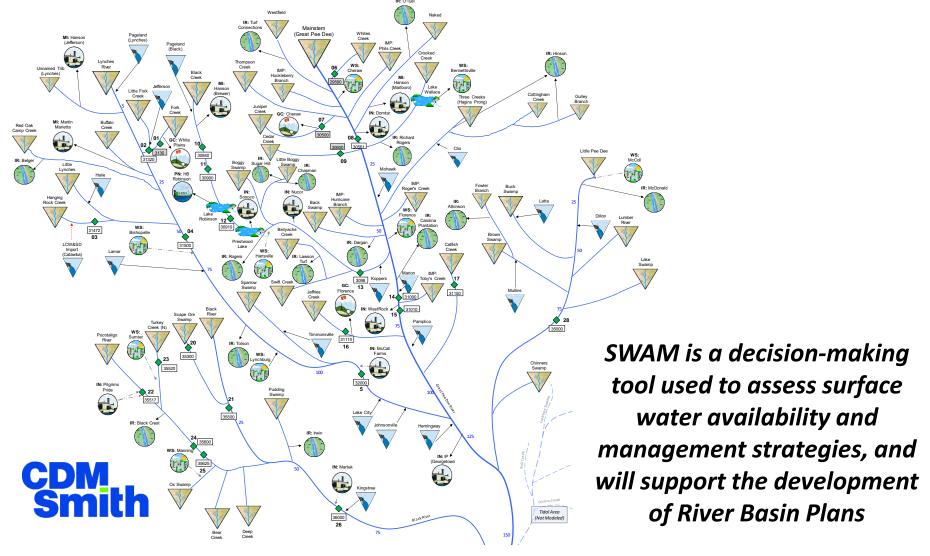
- Recommend changes to water policy or legislation or to the water planning process.
- Update River Basin Plans every
   5-years and amend River Basin
   Plans as needed.





# Pee Dee Surface Water Model (SWAM)

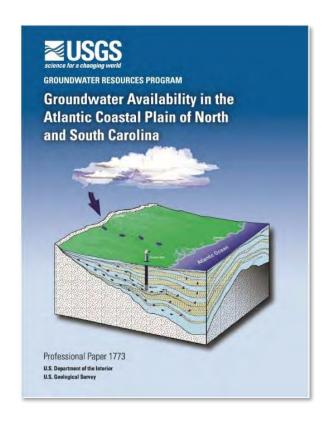






### **Groundwater Model**







- Developed by the USGS with support from SCDNR and SCDHEC.
- Completed in 2021 and currently supporting Edisto river basin planning.
- 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 <u>http://hydrology.dnr.sc.gov/groundwater-models.html.</u>



# Water Demand Projections – In Progress



- Water demand methodology report released in October 2019 at http://hydrology.dnr.sc.gov/water-demand.html.
- Stakeholder meetings to review draft projections scheduled for Spring/Summer 2022.
- Projections will be used in surface water and groundwater models to assess future water availability and will support the development of the Pee Dee River Basin Plan.









# **RBC Support**



### The Pee Dee RBC will develop the plan with support from:

- Contractors (solicited and hired by SCDNR):
  - Meeting Facilitation
  - Meeting Coordination (Clemson University) administrative and logistical support
  - Technical support surface water modeling
  - Public Outreach (Clemson University)
  - 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 outside Advisors

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



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# Pee Dee River Basin Planning Schedule and RBC Application Process





# Pee Dee River Basin Planning Schedule



### Feb – Apr 2022

- Public kick-off meetings
- Solicit RBC applications
- Solicit Contractors (in progress)

# Apr – May 2022

- Appoint RBC members
- Finalize contractors
- Planning Team
   (SCDNR, SCDHEC,
   Clemson, contractors)
   begins to meet

#### **June 2022**

First RBC meeting

### Jun 2022 - May 2024

Monthly RBC meetings

### May - June 2024

Completed River
 Basin Plan



# RBC 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, for example.
- Recommendations and endorsements submitted by various interest groups or organizations.
- Geographic Diversity.
- PPAC recommendations.

# SCDNR appointments will strive for a balanced representation



# Pee Dee River Basin Council **Application Process**



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

	MEMBERSHIP APPLIC	
Last Name:	First Name:	
Address:		Phone 1:
		Phone 2:
City:	State:	ZIP:
Organization/Compan		
Position:	E-mail:	
Indicate which one Int	erest Category you are requestin	g to represent (required):
Agriculture, Forestry, and Irrigation Interests Local Governments		Industry and Economic Developmen Interests
Water and Sewer Utilities		Water-based Recreation Interests
Electric-Power Utilities and Non-Federal		Environmental Interests
Reservoir Operators		At-Large Water-based Interests
Describe your releva	nt qualifications and backgrour	d or experience with water resources:
4. Explain how you wo the Pee Dee River Ba		nce to assure successful water planning for

http://hydrology.dnr.sc.gov/peedeebasin-planning.html



# RBC Membership Terms and Commitment Considerations



- Initial terms are 2, 3 or 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 in-person meetings.
  - Subcommittee meetings.
  - Review of various technical reports and other documents.
  - Help write and review the River Basin Plan.
  - Annual meetings between iterations of the River Basin Plan (possibly higher frequency).



# Pee Dee River Basin Council Application Process



- Application period: March 21<sup>st</sup> April 30<sup>th</sup>.
- Application forms available on SCDNR website:

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

- Application forms and recommendations should be sent to Ken Rentiers (see application for contact information).
- Application review period: May 1<sup>st</sup> May 31<sup>st</sup>.
  - PPAC will review applications and make recommendations to SCDNR.
- Final selection and notification by May 31<sup>st</sup>.
- Applicants not appointed for membership may be placed on a waiting list.



# 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

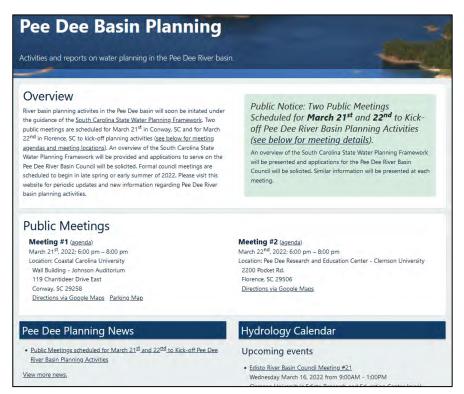


# SCDNR Hydrology Section Website





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



http://hydrology.dnr.sc.gov/peedeebasin-planning.html

#### Site will host:

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



# **Edisto Basin Planning**



- First basin selected for implementing Planning Framework.
- Public kick-off meetings held in November 2019.
- First RBC meeting June 2020.
- Completed 21 meetings due to Covid, first 11 meetings were held virtually, in-person meetings began in May 2021.
- River Basin Plan scheduled for completion in summer 2022.







# **Edisto 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 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)



First RBC meeting held March 3<sup>rd</sup>, 2022

#### **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**

**CDM Smith**Facilitation



Meeting Coordination and Public Outreach





Oversight and Education

Surface Water Technical Support (to be determined)



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Contact Information: Scott Harder harders@dnr.sc.gov

