

Saluda River Basin Planning - Public Meeting #1



- 1. Welcome and Opening Remarks Dr. 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. Saluda River Basin Planning** Scott Harder, SCDNR, Hydrology Section Chief What is a River Basin Plan and how will the Saluda River Basin Plan be developed?
- 4. Next Steps for Saluda River Basin Planning Scott Harder, SCDNR

What is the schedule for planning activities in the Saluda basin? How can stakeholders apply to be on the Saluda River Basin Council? What are other ways stakeholders can be involved?

5. Comments on Broad River Basin Planning – Daniel Hanks, Vice-Chairman of the Broad River Basin Council (RBC)

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

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

PPAC members will share their perspectives on water planning and along with SCDNR address any comments or questions about the Planning Framework and Saluda basin planning activities.

Let us hear from you. We welcome your questions and feedback.



Saluda River Basin Planning - Public Meeting #1



- 1. Welcome and Opening Remarks Dr. 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.** Saluda River Basin Planning Scott Harder, SCDNR, Hydrology Section Chief What is a River Basin Plan and how will the Saluda River Basin Plan be developed?
- 4. Next Steps for Saluda River Basin Planning Scott Harder, SCDNR

 What is the schedule for planning activities in the Saluda basin?

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

 What are other ways stakeholders can be involved?
- 5. Comments on Broad River Basin Planning Daniel Hanks, Vice-Chairman of the Broad River Basin Council (RBC)

 The Broad RBC Vice-Chairman will share his perspective on State water planning and his experience with the Broad basin planning process.
- 6. Comments from the Planning Process Advisory Committee and Q&A Session moderated by Dr. Jeff Allen, Clemson University.

 PPAC members will share their perspectives on water planning and along with SCDNR address any comments or questions about the Planning Framework and Saluda basin planning activities.

 Let us hear from you. We welcome your questions and feedback.

SC State Water Planning

Ken Rentiers

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



Saluda River Basin Planning – Public Meeting #1
Columbia, SC
November 1st, 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)





Water Use in South Carolina





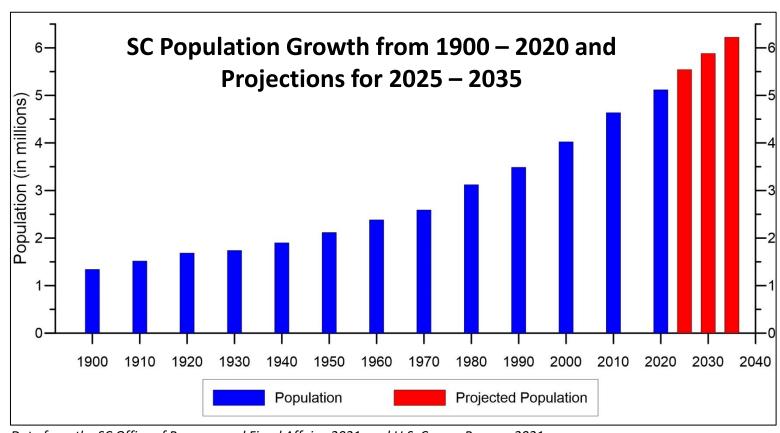


Why State Water Planning?



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.



Data from the SC Office of Revenue and Fiscal Affairs, 2021, and U.S. Census Bureau, 2021.

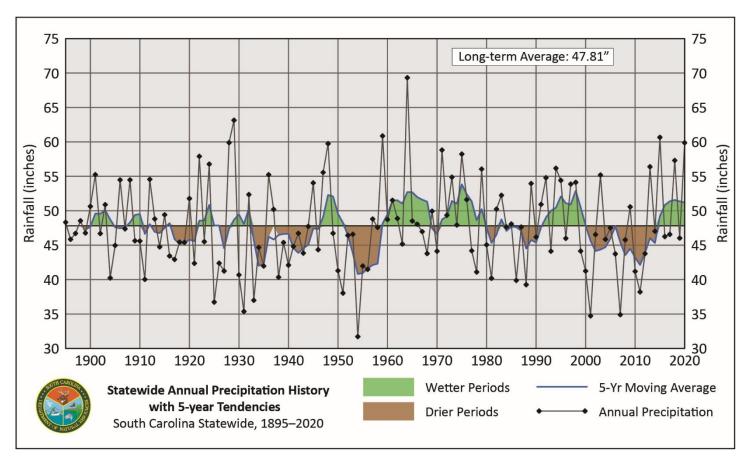


Why State Water Planning?



Drought

SC generally has an abundance of water, but recent droughts (1998-2002, 2007-2008, 2011-2012, 2016, 2019, 2021) have stressed the State's water resources.



Statewide Average Annual Rainfall (inches) and 5-year Running Average

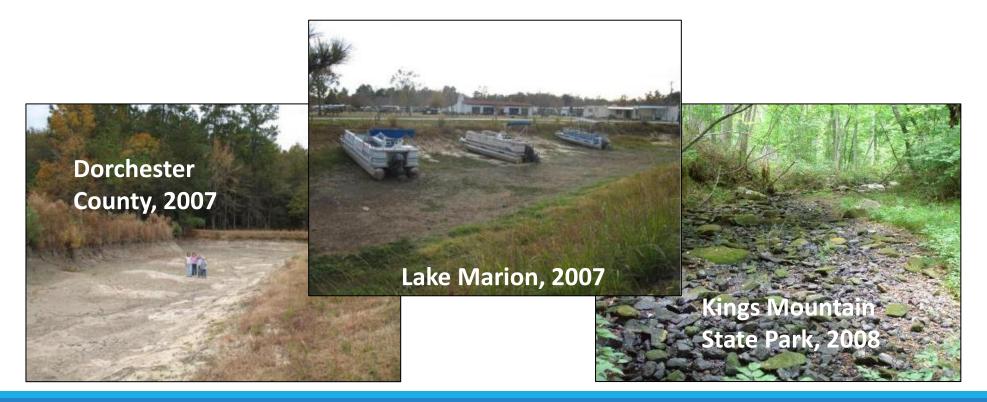


Why State Water Planning?



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

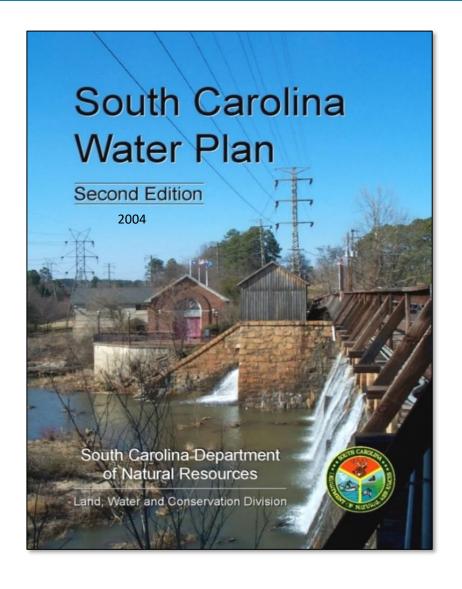
Uncertainty in future droughts + increased water demand = the need for comprehensive State and river basin planning.





A Brief History of State Water Planning





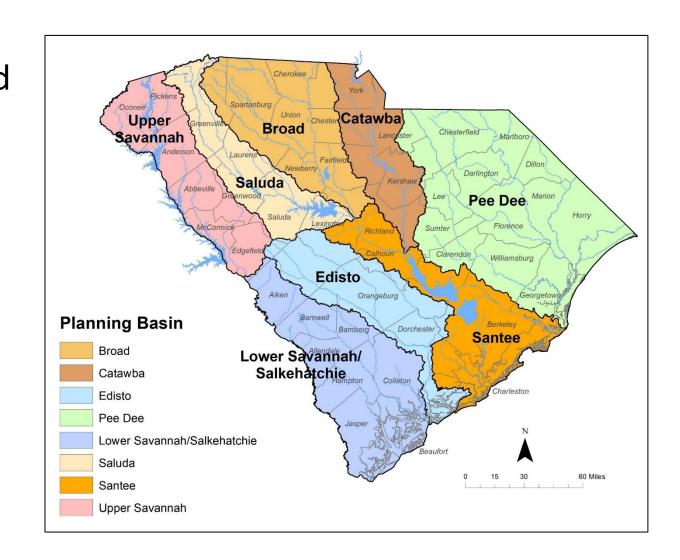
- SCDNR is legislatively mandated to develop a State Water Plan.
- SCDNR published the first edition of the State Water Plan in 1998.
- In 2004, SCDNR published the second edition of the South Carolina Water Plan incorporating lessons learned from the drought of 1998-2002.
- One recommendation was to develop a regional water plan for each major river basin in the State.
- In 2013, SCDNR 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.





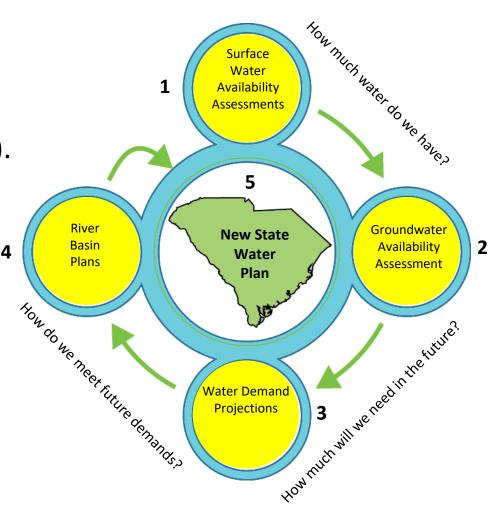
Five-step Process



- **1. Surface Water Assessments** completed in 2017 for each basin (CDM Smith, Inc).
 - Several models recently updated.
- **2. Groundwater Assessment** completed in 2021 (USGS).
- **3. Water Demand Projections** methodology report completed in October 2019.
 - Edisto basin projections completed in 2021.
 - Projections for Broad and Pee Dee basin in progress.

4. River Basin Plans

- Publication of South Carolina State Water Planning Framework.
- Edisto, Broad, and Pee Dee basin planning in progress.
- Saluda is the next basin to begin planning activities.
- **5. State Water Plan** River Basin Plans will form the foundation of a new State Water Plan.





















Stakeholder Participation















Planning Process Advisory Committee



- 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/water-assessment/
State Water Planning Process Advisory Committee.html



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





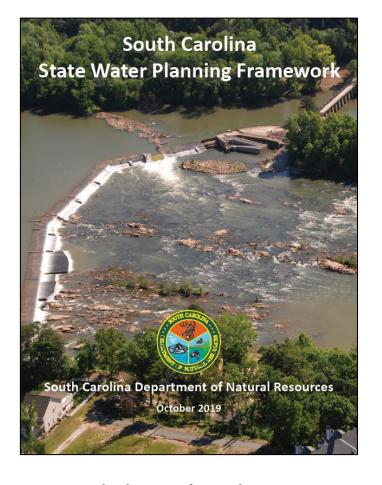
Contents of Planning Framework



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



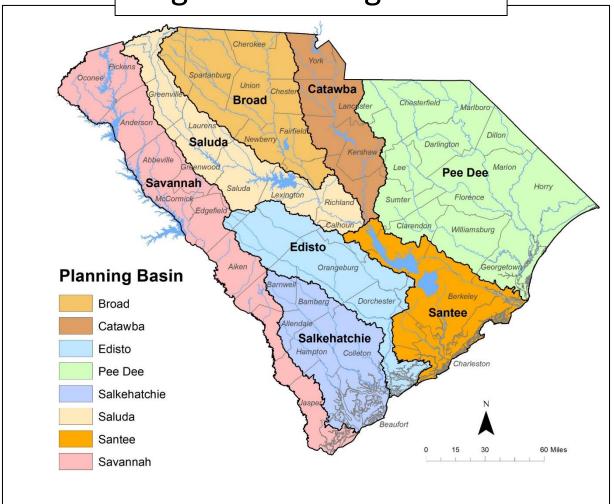
Planning Framework is available for review and download at: https://hydrology.dnr.sc.gov/water-planning-framework.html



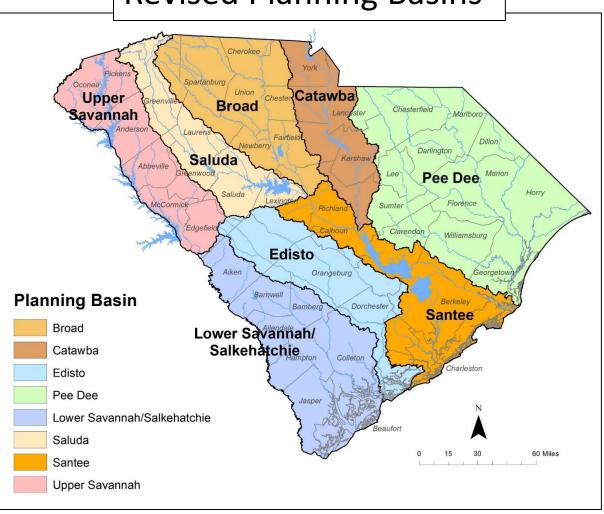
Recent Changes to Planning Basin Boundaries







Revised Planning Basins



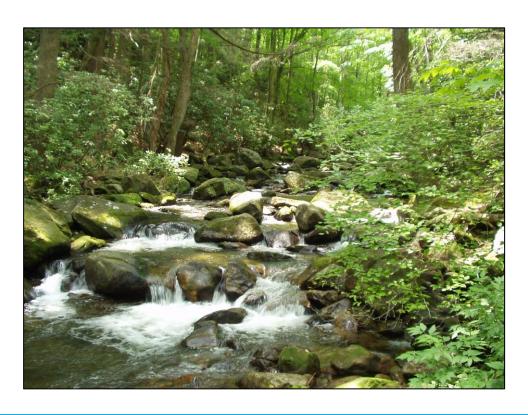
Impacted basins include the Salkehatchie, Saluda, Santee, and Savannah basins

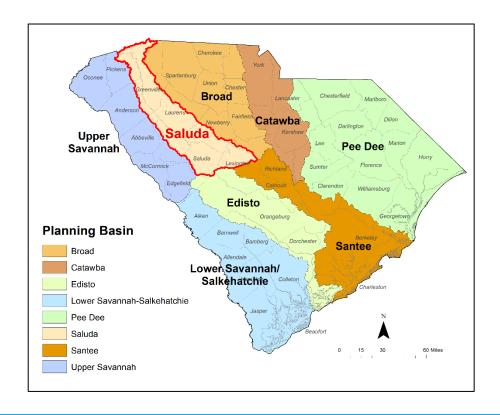


Where are we now?



Ready to start the Saluda River basin planning process under the guidance of the Planning Framework







Saluda River Basin Planning - Public Meeting #1



- 1. Welcome and Opening Remarks Dr. 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. Saluda River Basin Planning – Scott Harder, SCDNR, Hydrology Section Chief

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

4. Next Steps for Saluda River Basin Planning – Scott Harder, SCDNR

What is the schedule for planning activities in the Saluda basin? How can stakeholders apply to be on the Saluda River Basin Council? What are other ways stakeholders can be involved?

5. Comments on Broad River Basin Planning – Daniel Hanks, Vice-Chairman of the Broad River Basin Council (RBC)

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

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

PPAC members will share their perspectives on water planning and along with SCDNR address any comments or questions about the Planning Framework and Saluda basin planning activities.

Let us hear from you. We welcome your questions and feedback.

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?

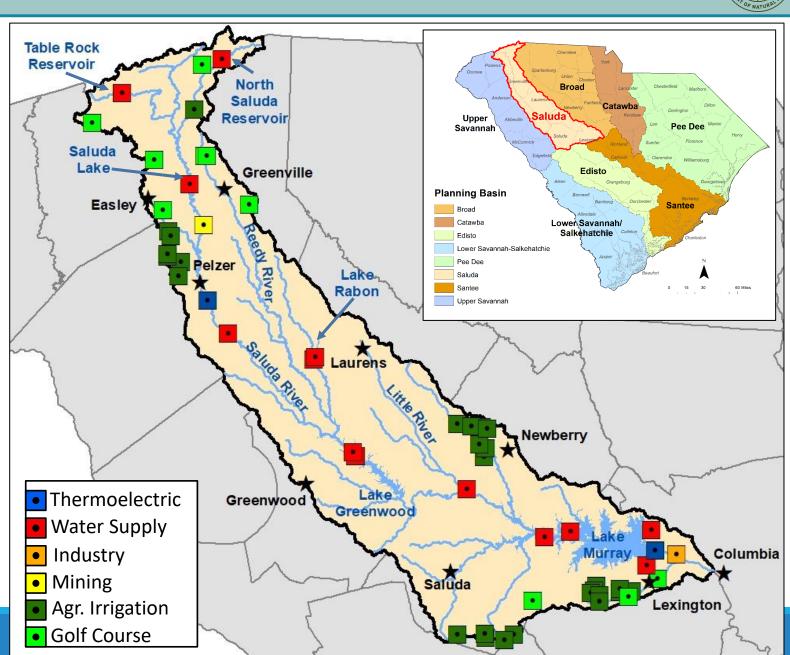
Proactive Water Management, not Reactive!



Saluda Basin Water Use



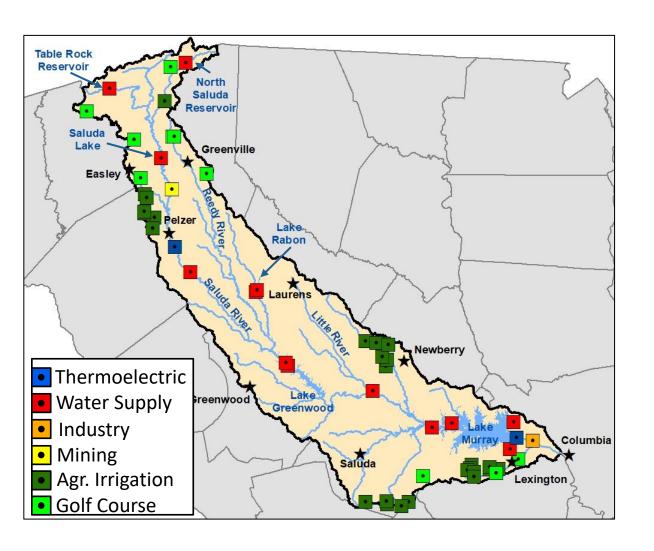
- Area = 2,523 sq. mi.
- Basin entirely within SC.
- Major subbasin of the greater Santee basin.
- More than 99% of withdrawals are from surface water.
- Planning will focus primarily on the basin's surface water resources.



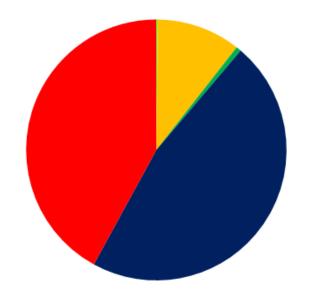


2021 Reported Water Withdrawals





Thermoelectric (47%)
Water Supply (42%)
Industry (10%)
Agr. Irrigation (< 1%)
Golf Course (< 1%)

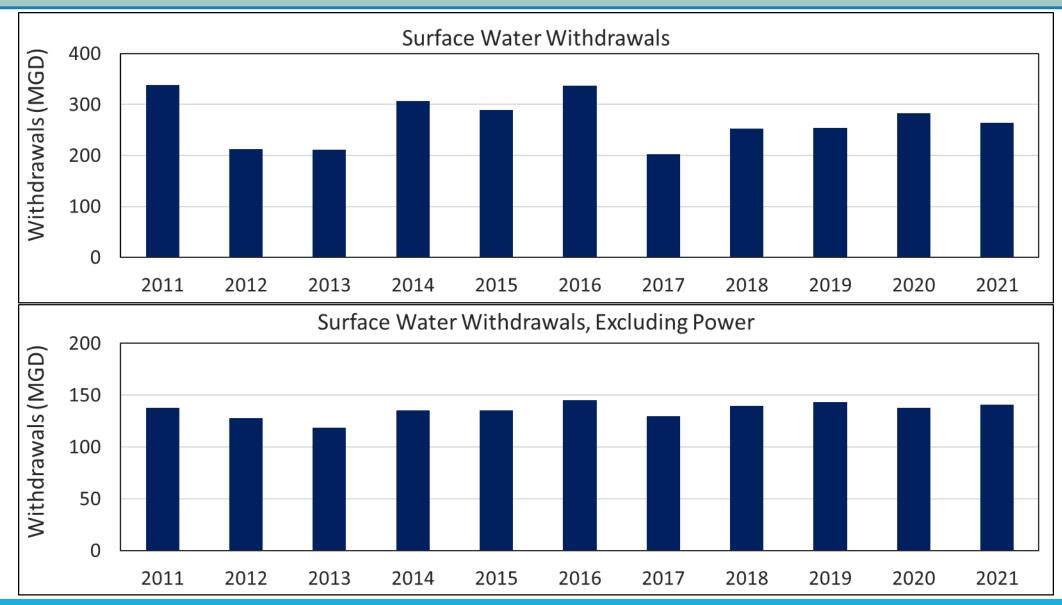


Source: SCDHEC Water Use Database



Reported Surface Water Withdrawals (2011-2021)







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.



Features of a River Basin Plan



- Covers a 50-year Planning Horizon.
- Considers both surface water and groundwater resources.
- Focuses 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, models, and 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
- 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

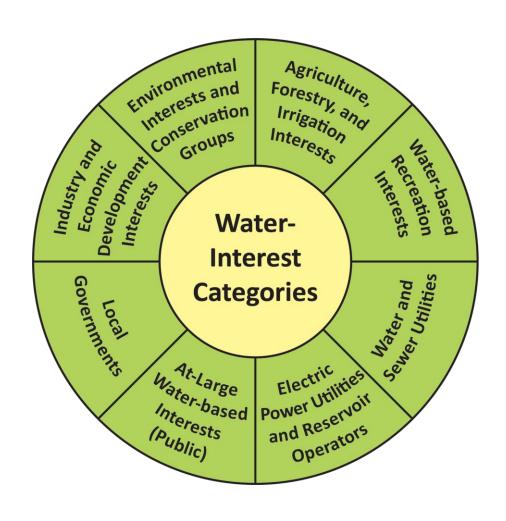
How will the Saluda River Basin Plan be Developed?



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.



River Basin Plans will be developed over a 2-year period



RBC Roles and Responsibilities



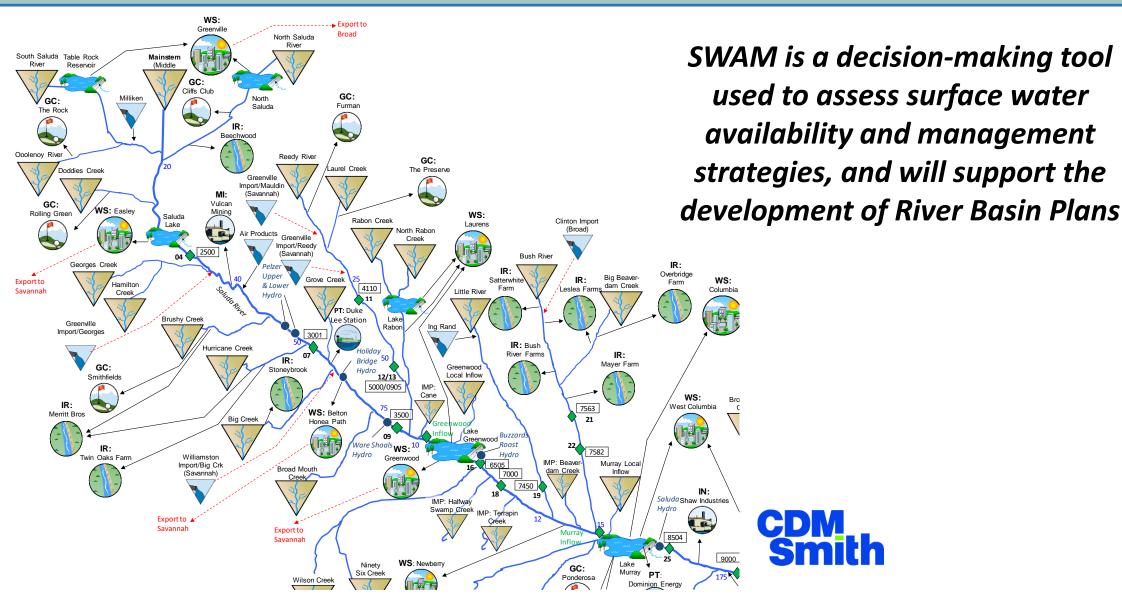
- Identify water shortages or conflicts using hydrologic models.
- Recommend strategies to mitigate or eliminate water use conflicts or water shortages.
- Help draft River Basin Plans.
- Communicate with stakeholders and the public on water planning activities.
- Coordinate with other formal water planning bodies.
- Recommend changes to water policy or legislation or to the water planning process.
- Update River Basin Plans every 5 years and amend the plans as needed.





Saluda Surface Water Model (SWAM)





https://hydrology.dnr.sc.gov/surface-water-models.html



Water Demand Projections – In Progress



- Water demand methodology report released in October 2019 at https://hydrology.dnr.sc.gov/water-demand.html.
- Water users will have the opportunity to provide feedback on their water-demand projections.
- Projections will be used in surface water model to assess future water availability and will support the development of the Saluda River Basin Plan.









RBC Support



- Contractors (solicited and hired by SCDNR):
 - Meeting facilitation
 - Meeting coordination (Clemson University) administrative and logistical support
 - Surface water (CDM Smith) and groundwater (USGS) modeling technical support
 - 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 other outside advisors

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



Saluda River Basin Planning - Public Meeting #1



- 1. Welcome and Opening Remarks Dr. 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.** Saluda River Basin Planning Scott Harder, SCDNR, Hydrology Section Chief What is a River Basin Plan and how will the Saluda River Basin Plan be developed?
- 4. Next Steps for Saluda River Basin Planning Scott Harder, SCDNR

What is the schedule for planning activities in the Saluda basin? How can stakeholders apply to be on the Saluda River Basin Council? What are other ways stakeholders can be involved?

- 5. Comments on Broad River Basin Planning Daniel Hanks, Vice-Chairman of the Broad River Basin Council (RBC)

 The Broad RBC Vice-Chairman will share his perspective on State water planning and his experience with the Broad basin planning process.
- 6. Comments from the Planning Process Advisory Committee and Q&A Session moderated by Dr. Jeff Allen, Clemson University.

 PPAC members will share their perspectives on water planning and along with SCDNR address any comments or questions about the Planning Framework and Saluda basin planning activities.

 Let us hear from you. We welcome your questions and feedback.



Saluda River Basin Planning Schedule



Nov – Dec 2022

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

Jan – Feb 2023

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

Feb - Mar 2023

First RBC meeting

Mar 2023 - Feb 2025

Monthly RBC meetings

Feb - Mar 2025

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



Saluda River Basin Council Application Process



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

Last Name:	First Nam	e:		NAT UNITED
Address:			Phone 1:	
			Phone 2:	
City:	State:		ZIP:	
Organization/Company:				
Position:	E-mail:			
Indicate which one Interest	Category you are requesting	g to repre	esent (requir	red):
O Local Governments O Water and Sewer U O Electric-Power Util Reservoir Oper. 1. How are you affiliated w	ilities ties and Non-Federal ttors	O Wat	Interests ter-based Re rironmental Large Water	-based Interests
	ualifications and background			

https://hydrology.dnr.sc.gov/saluda-basin-planning.html



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 (Held during normal business hours).
 - 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).



Saluda River Basin Council Application Process



- Application period: Nov 1st Dec 16th, 2022.
- Application forms available on SCDNR website:
 https://hydrology.dnr.sc.gov/saluda-basin-planning.html
- Application forms and recommendations should be sent to Ken Rentiers (see application for contact information).
- Application review period: Dec 17th, 2022 Jan 31st, 2023.
 - PPAC will review applications and make recommendations to SCDNR.
- Final selection and notification by Jan 31st, 2023.
- Applicants not appointed for membership may be placed on a waiting list.



Stakeholder/Public Participation Opportunities

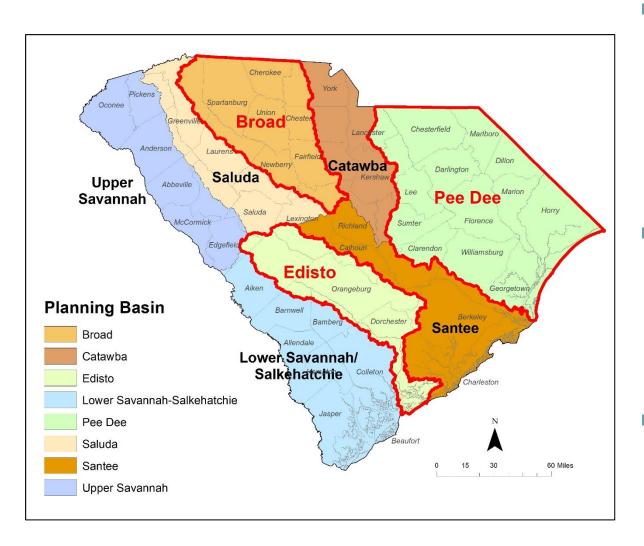


- Guidelines for stakeholder and public participation described in Section 3.7 of Planning Framework.
- Public meetings (3 to 4 per basin):
 - Prior to first RBC meeting "kickoff" meeting(s).
 - After draft River Basin Plan is released.
 - After final River Basin Plan is released.
- Draft River Basin Plan Public Review Period (30 days).
- RBC Meetings:
 - Open to the public.
 - Each meeting will include public comment period.



River Basin Planning





Edisto:

- First basin selected for implementing Planning Framework.
- Planning activities began in June 2020.
- River Basin Plan scheduled to be completed in early 2023.

Broad:

- Planning activities began in March 2022.
- Final River Basin Plan scheduled for February 2024.

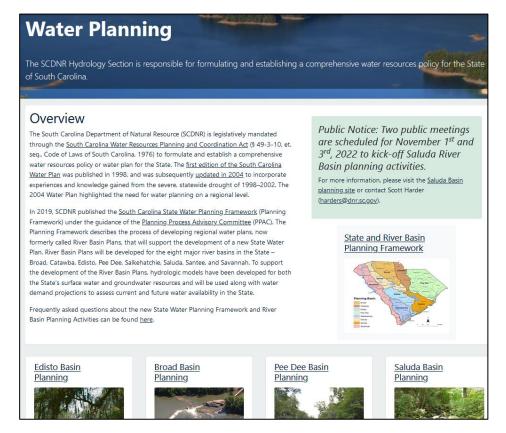
Pee Dee:

- Planning activities began in June 2022.
- Final River Basin Plan scheduled for May 2024.

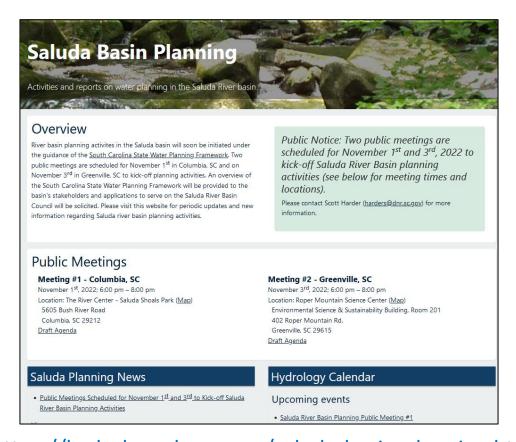


SCDNR Hydrology Section Website





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



https://hydrology.dnr.sc.gov/saluda-basin-planning.html

Site hosts:

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



Contact Information



Scott Harder

harders@dnr.sc.gov

864-986-6254





Saluda River Basin Planning - Public Meeting #1



- 1. Welcome and Opening Remarks Dr. 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.** Saluda River Basin Planning Scott Harder, SCDNR, Hydrology Section Chief What is a River Basin Plan and how will the Saluda River Basin Plan be developed?
- **4.** Next Steps for Saluda River Basin Planning Scott Harder, SCDNR

What is the schedule for planning activities in the Saluda basin? How can stakeholders apply to be on the Saluda River Basin Council? What are other ways stakeholders can be involved?

5. Comments on Broad River Basin Planning – Daniel Hanks, Vice-Chairman of the Broad River Basin Council (RBC)

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

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

PPAC members will share their perspectives on water planning and along with SCDNR address any comments or questions about the Planning Framework and Saluda basin planning activities.

Let us hear from you. We welcome your questions and feedback.



Saluda River Basin Planning - Public Meeting #1



- 1. Welcome and Opening Remarks Dr. 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.** Saluda River Basin Planning Scott Harder, SCDNR, Hydrology Section Chief What is a River Basin Plan and how will the Saluda River Basin Plan be developed?
- 4. Next Steps for Saluda River Basin Planning Scott Harder, SCDNR

 What is the schedule for planning activities in the Saluda basin?

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

 What are other ways stakeholders can be involved?
- 5. Comments on Broad River Basin Planning Daniel Hanks, Vice-Chairman of the Broad River Basin Council (RBC)

 The Broad RBC Vice-Chairman will share his perspective on State water planning and his experience with the Broad basin planning process.
- 6. Comments from the Planning Process Advisory Committee and Q&A Session moderated by Dr. Jeff Allen, Clemson University.

PPAC members will share their perspectives on water planning and along with SCDNR address any comments or questions about the Planning Framework and Saluda basin planning activities. Let us hear from you. We welcome your questions and feedback.