

waterSC

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SC DEPARTMENT of
**ENVIRONMENTAL
SERVICES**



SOUTH CAROLINA DEPT. OF
COMMERCE



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DEPARTMENT OF
PARKS, RECREATION
& TOURISM



WaterSC Guiding Principles

- "Water is a *shared resource* with *shared responsibility*"
- A *collaborative approach* to develop and implement a *science-based actionable plan*
- A plan that *balances economic, environmental and community needs*
- A plan that secures *reliable and resilient* water resources for the *future*



The Charge for WaterSC

Executive Order No. 2024-22

- Balance the State's ***economic, environmental, and social needs***;
- Ensure the ***reliability, resiliency, sustainability, and sufficiency*** of the State's water resources ***for all existing and future uses***, while simultaneously ***protecting the environment***; and
- Support and facilitate additional ***collaboration*** with ongoing efforts and existing initiatives.



The Charge for WaterSC

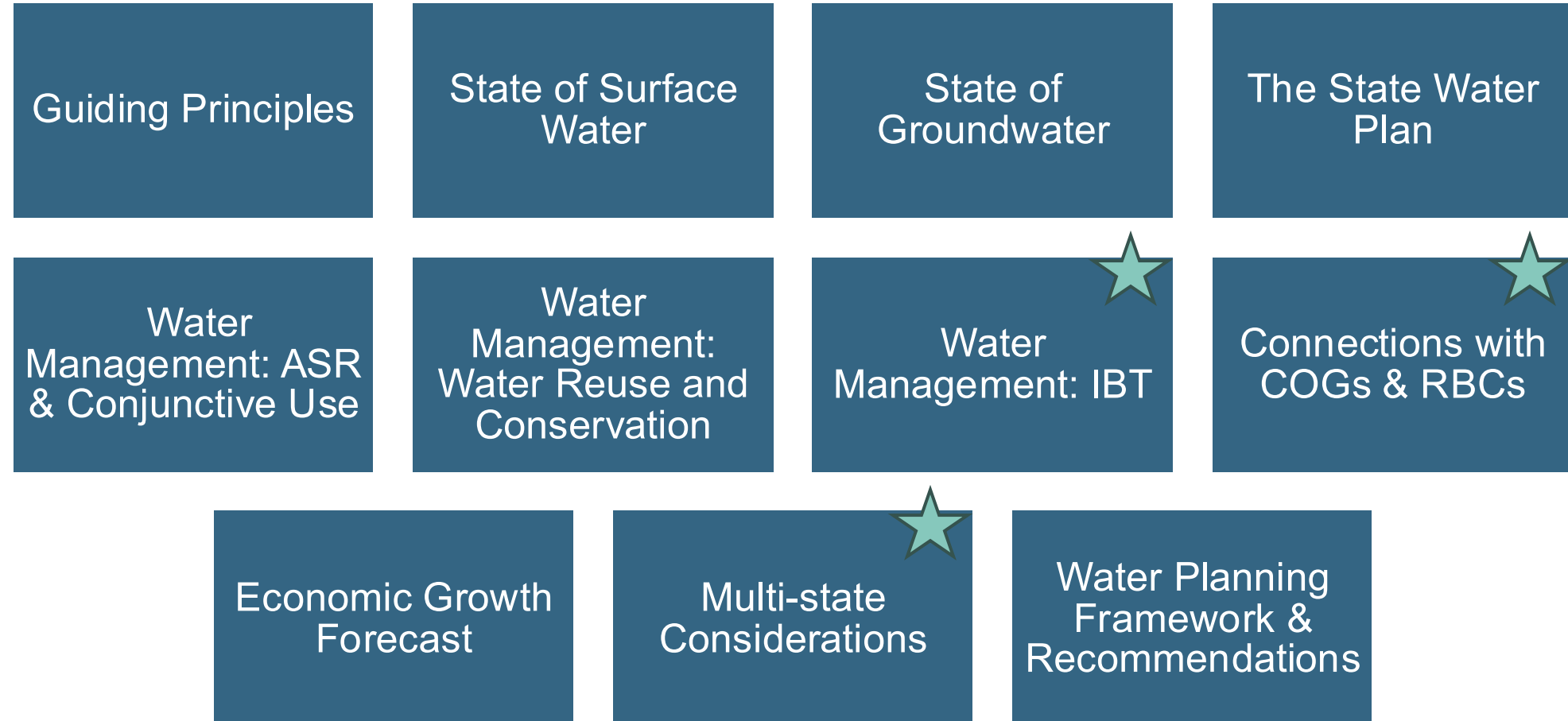
Executive Order No. 2024-22

Stakeholder Engagement Plan
October 31, 2024

Quarterly updates to the Surface Water
Study Committee

Advise on updated State Water Plan
December 31, 2025

WaterSC Full Scope



**Today's Focus:
Interbasin
Transfers (IBTs)
and Multi-state
Water
Management**

Time	Agenda
1:00 pm	Welcome & Leading the Charge for WaterSC
1:15 pm	Interbasin Transfer (IBT) and Multi-State Water Management Overview
	Catawba-Wateree Water Management Group
2:05 pm	Councils of Government (COG) Panel Discussion
2:45 pm	Break
3:00 pm	Tabletop Discussion: Multi-State Water Management Coordination
3:45 pm	Next Steps
4:00 pm	Adjourn & Networking



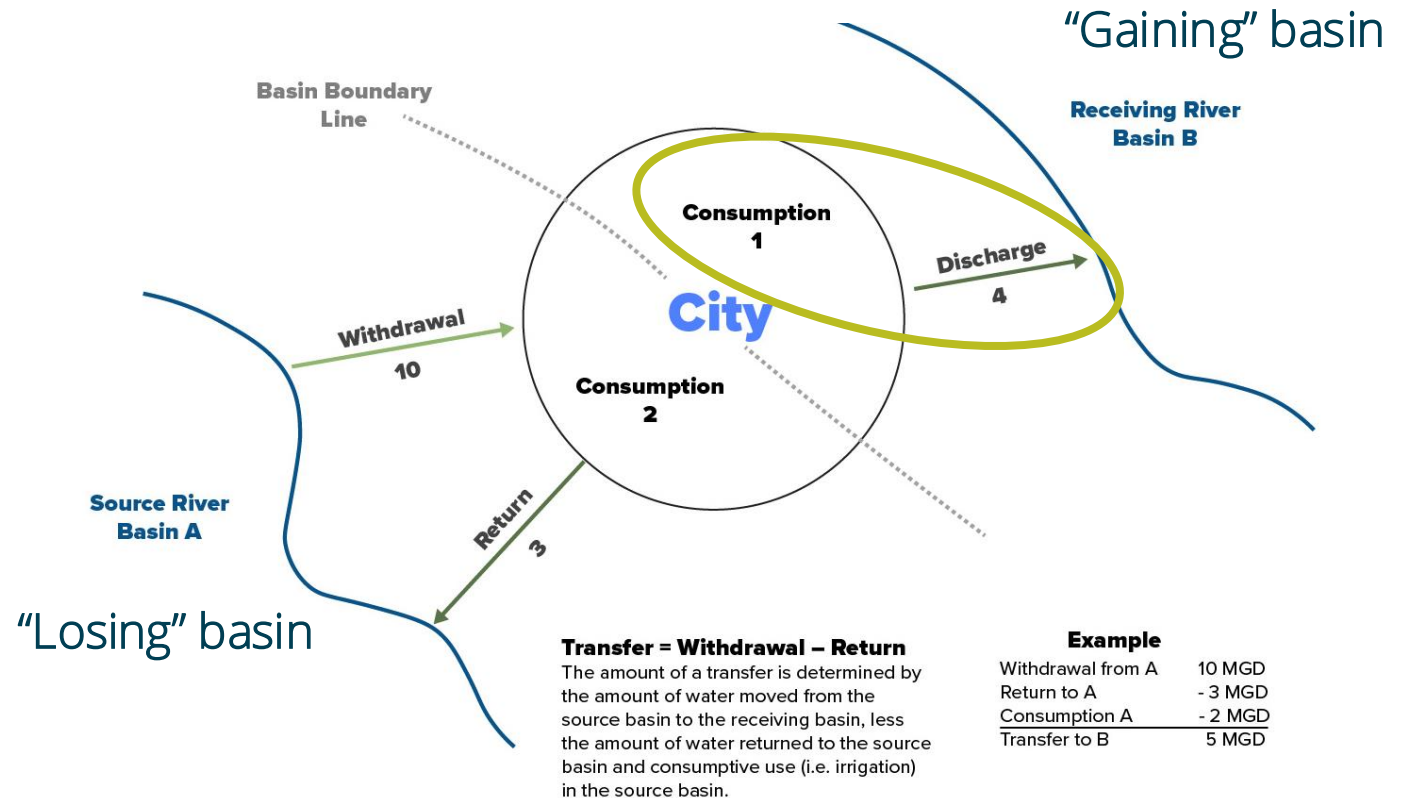
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Interbasin Transfers (IBT)

May 15, 2025

What is an interbasin transfer?

- From R. 61-119: "Interbasin transfer' means the withdrawal of surface water from a river basin and the movement of that water to a river basin different from the source of the withdrawal"



<https://www.charlottenc.gov/water/Water-Quality/Charlotte-Water-IBT>

How IBTs work: Reasons for IBTs

IBTs can be necessary when: A surface water permit with an IBT can

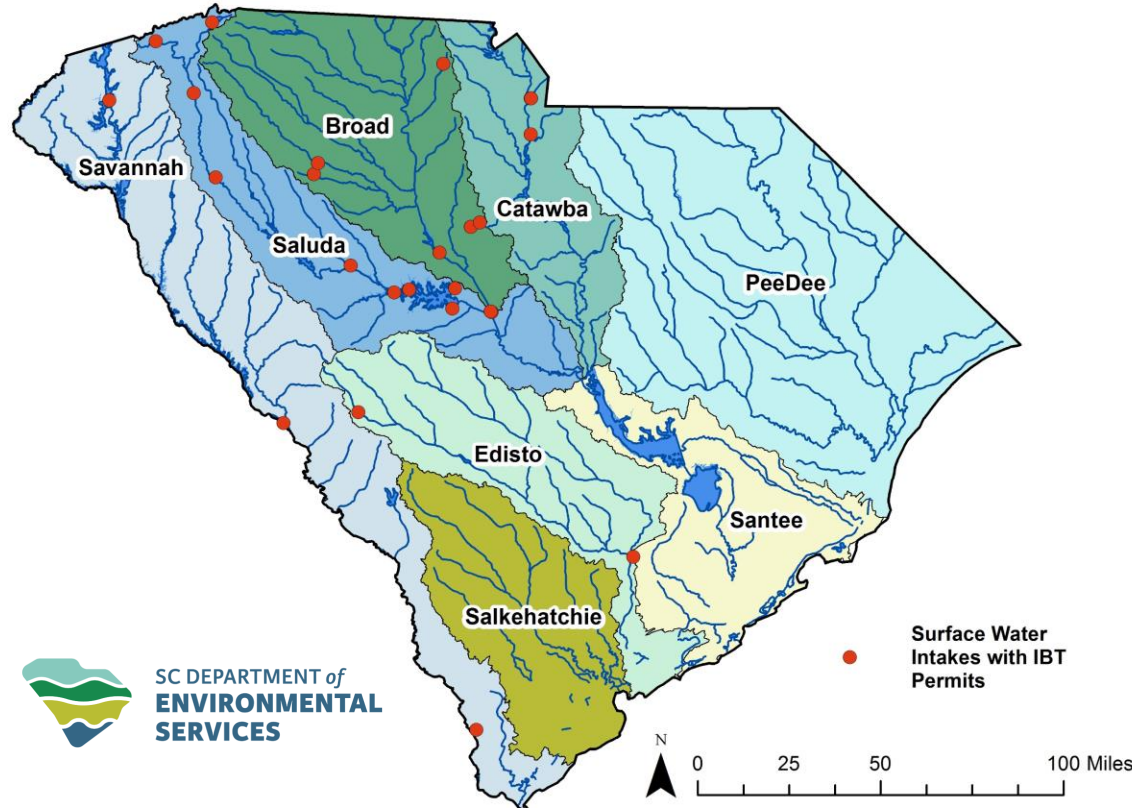
- Needed water resources are not available in a basin
- Part of a service area lies in an adjacent basin
- A city sits on a ridgeline and is inherently in two basins
- Transfer *all* of their withdrawn water to the gaining basin
- Transfer *some* of their withdrawn water to the gaining basin or
- *Return* some of their water to the losing basin

How IBTs work: Considerations

- IBTs are part of surface water withdrawal permits and have maximum transfer limits
- If losing basin can still support existing users within basin
- Impacts of removing water to the assimilative capacity of receiving waterbody in the losing basin
- Economic factors, including existing infrastructure

IBTs in South Carolina

Interbasin Transfers by River Basin



- “IBT” is between major river basins
- 20 users with IBT permits
- All are water suppliers
- Some supply certain service areas in a gaining basin
- Some use a losing basin for their primary water source
- Some are on ridgeline

IBTs in South Carolina

Facility Name	Losing Basin	Gaining Basin	Max transferred (MGD)
City of Aiken	Edisto	Savannah	8.2
Belton-Honea Path	Saluda	Savannah	4.1
Anderson Regional Joint Water System	Savannah	Saluda	4.1
Beaufort-Jasper	Savannah	Salkehatchie	61.2
Charleston CPW	Edisto	Santee	101.9
Chester Metropolitan District	Catawba	Broad	9.4
Edgefield County	Savannah	Edisto	11.2
Greenville WS	Saluda	Broad	129.4
Greenville WS	Savannah	Broad	152.9
Greenwood CPW	Saluda	Savannah	33.6
Lancaster County	Catawba	PeeDee	20.4
City of Clinton	Broad	Saluda	6.1
Laurens County	Saluda	Broad	3.0
City of West Columbia	Saluda	Edisto	0.7
City of Newberry	Saluda	Broad and Savannah	2.3
Newberry County	Saluda	Broad	5.8
Easley Combined Utilities	Saluda	Savannah	9.7
City of Columbia	Saluda	Broad and Catawba	127.4
City of Columbia	Broad	Catawba and Saluda	127.4
Saluda County	Saluda	Edisto and Savannah	4.1
City of York	Broad	Catawba	3.1
Town of Winnsboro	Broad	Catawba	3.2

How we work with other states: Georgia

- Savannah River is the border between SC and GA
- Previous attempts to convene interstate caucuses or partnerships to discuss the Savannah River have not been sustained
 - 2005 Savannah River Basin Partnership
 - 2013 Savannah River Basin Water Caucus
- No framework for resolving water disputes, including potential IBTs
- Have attended and spoken at GA planning meetings

How we work with other states: North Carolina

- The Broad, Catawba, and Pee Dee Rivers flow into SC from NC
- In the Catawba-Wateree River Basin NC and SC cooperate in an advisory role through the Catawba-Wateree Water Management Group (CWWMG)
- SCDES are members of the Catawba-Wateree Stakeholder Advisory team as part of the CWWMG
- SCDES are part of the Yadkin-Pee Dee drought management advisory group (DMAGs)

Interstate Cooperation

- **Water is a shared resource...** not just for different stakeholder groups, but with other states as well. There is a need for cooperation between SC, NC, and GA to manage our shared water resources.
- River Basin Councils have recommended cooperation with NC and GA on shared basins.



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Get in touch

Rob Devlin // Assistant Bureau Chief, BOW

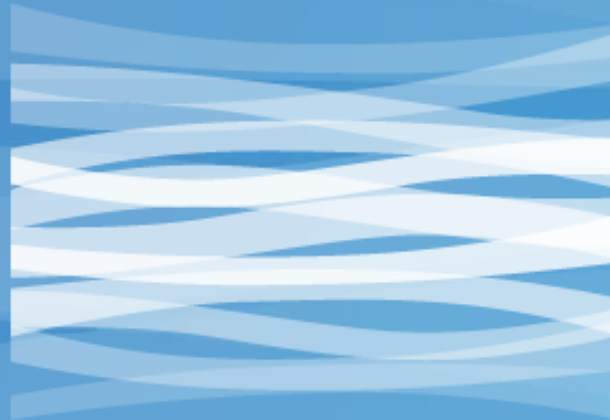
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CATAWBA
WATEREE
WATER MANAGEMENT GROUP

Mission

CWWMG's Mission is to identify, fund, and manage projects that will help preserve, extend, and enhance the capabilities of the Catawba-Wataeree River Basin to provide water resources for human needs while maintaining the ecological integrity of the waterway.



Our Basin

About the River

The Catawba-Wateree River Basin is crucial, providing water for about two million people and generating enough energy to power over four million homes. It is also a biodiverse environment, offering essential habitats for numerous species of animals and plants, as well as recreational amenities for residents and visitors.

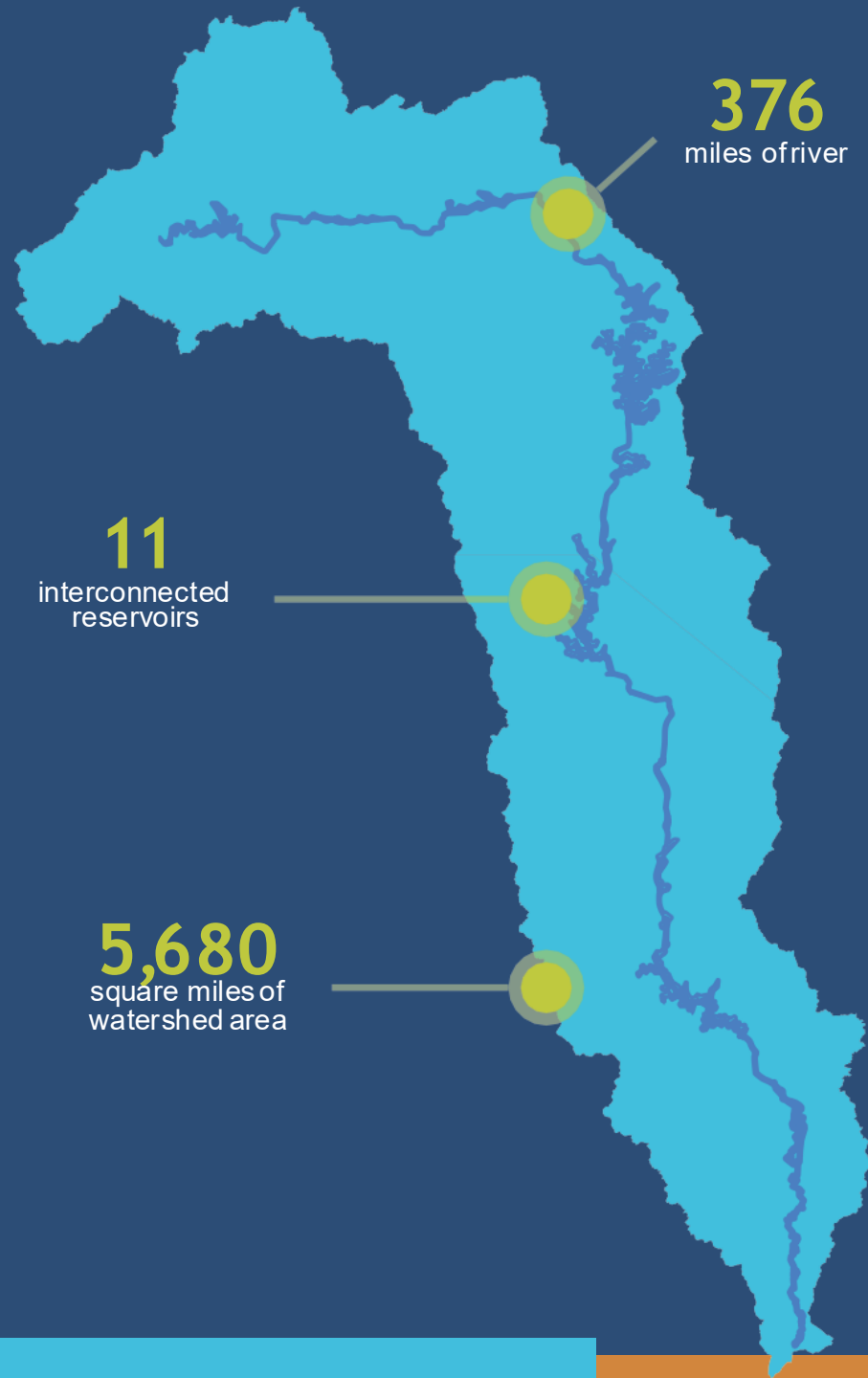
Length: 376 miles of river

Reservoirs: 11 interconnected

Watershed Area: 5,680 square miles

Drainage: All land areas inside the Basin boundary drain to the river.

Size: The Basin is relatively narrow (30 miles wide) and small, the 6th largest of 17 Basins in NC and the smallest of 8 in SC.



Hardest Working River in America?

Approximately 2 million people get water from the mainstem river/lake system.



Dozens of public water suppliers



12 hydropower stations



Nuclear & fossil power stations



Waste assimilation



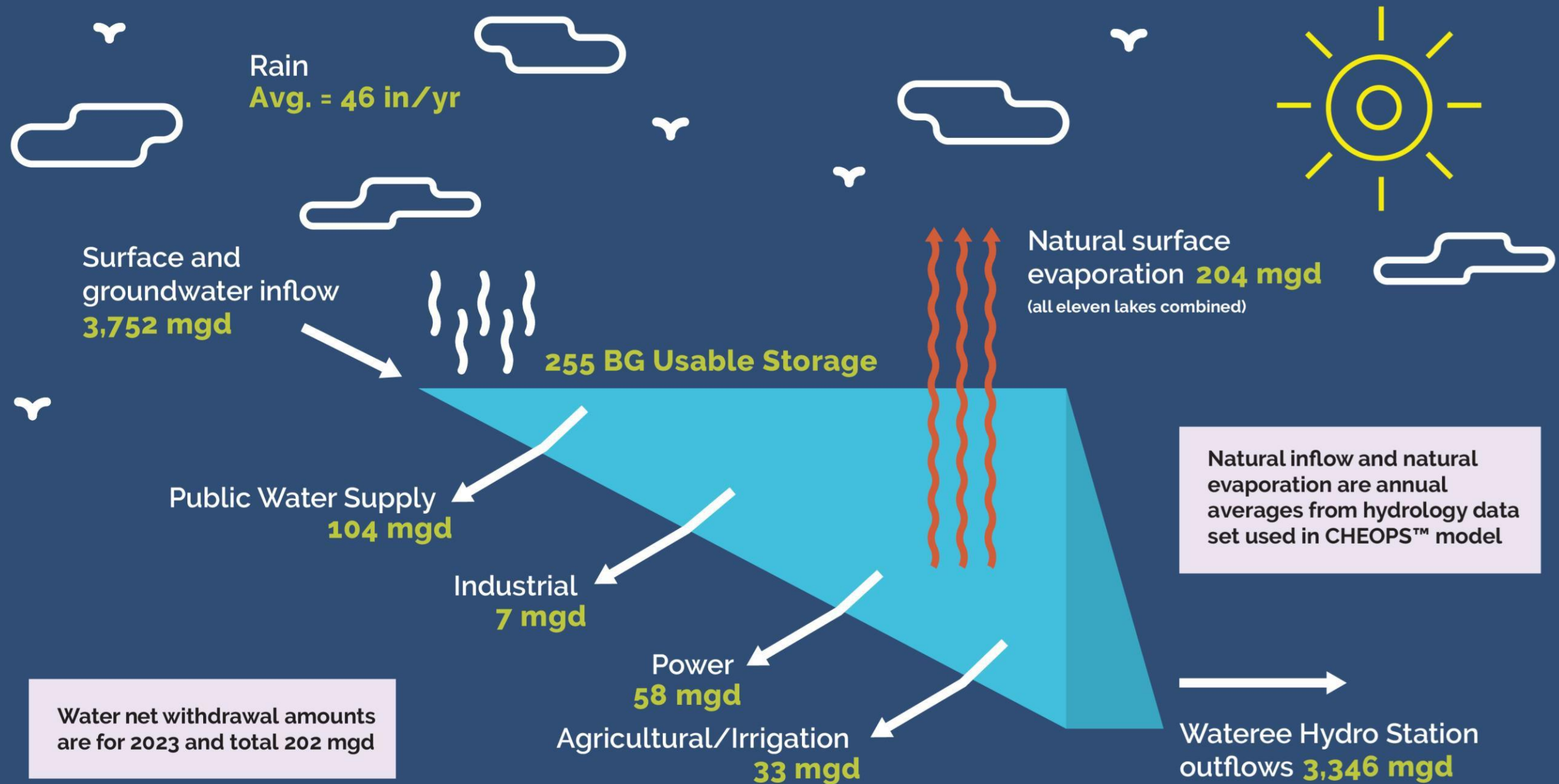
Agriculture



Recreation



Environment



Organizations Eligible to Join CWWMG

- Licensee of the Catawba Project (Duke Energy)
- **Water utilities operating** anywhere in the Catawba-Wataeree River Basin
 - Includes the South Fork and other tributaries
 - Includes private utility companies
- **Water utilities using water** from the Catawba-Wataeree River Basin to serve customers in other river basins
- **Members of the Catawba-Wataeree Drought Management Advisory Group including commercial entities that...**
 - Own a water intake within the Catawba-Wataeree River Basin OR
 - Own a water treatment plant or distribution system within the Catawba-Wataeree River Basin

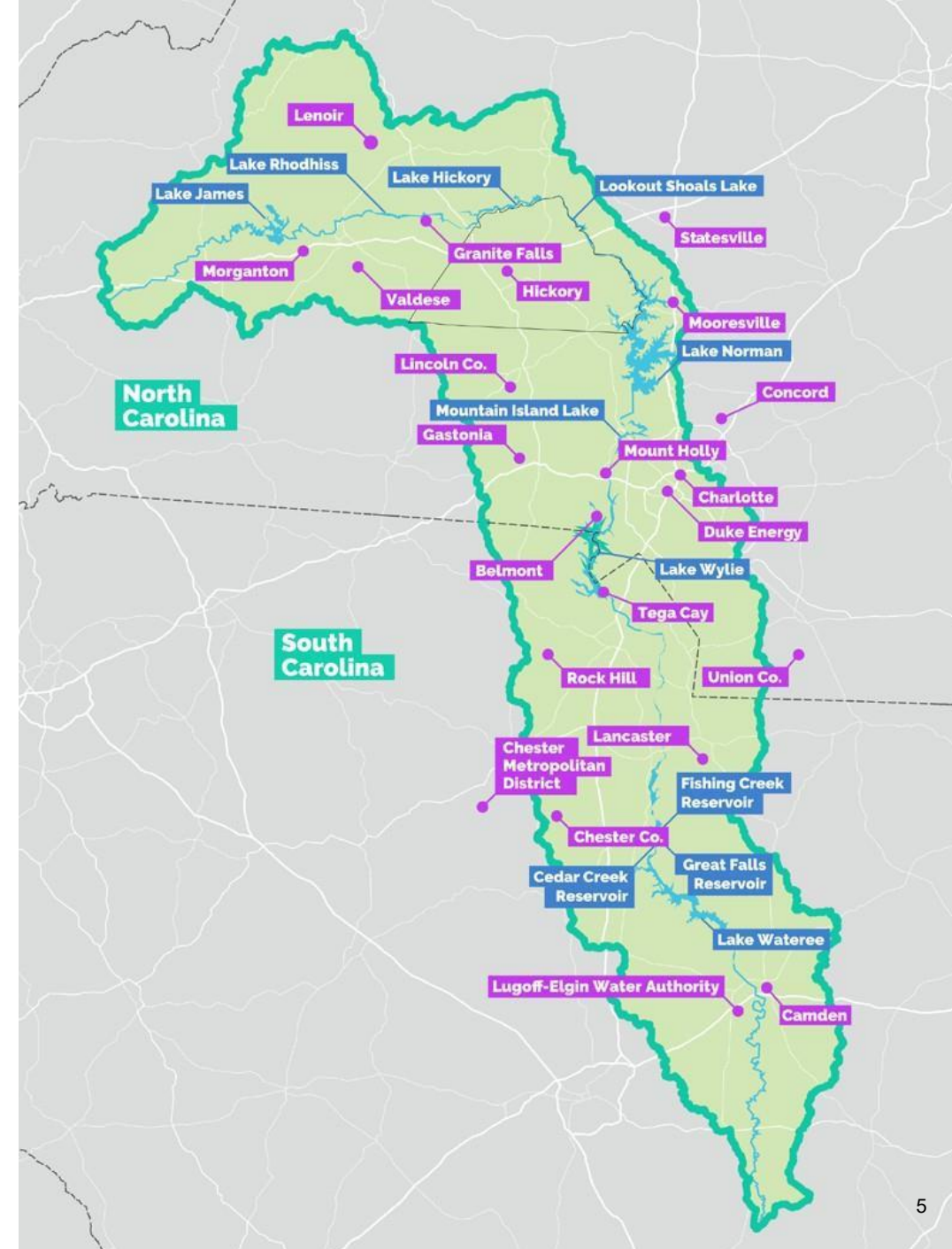
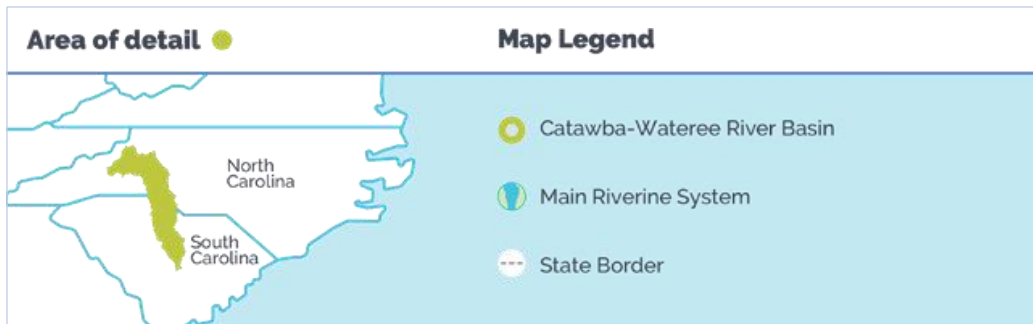
Our Members

The Catawba-Wataree Water Management Group (CWWMG) plays a vital role in managing the water resources that support over two million residents in the Catawba-Wataree River Basin. With a focus on sustainability and collaboration, the CWWMG includes 20 member organizations, comprised of public water utilities from North Carolina and South Carolina, as well as Duke Energy Carolinas.

These member organizations work together to address water resource and water quality challenges within the Basin. By meeting regularly, they develop and implement innovative strategies to ensure a sustainable water future for the Catawba-Wataree River.

Newest Members: Concord and Tega Cay

We are excited to announce the expansion of our membership with the inclusion of the cities of Concord and Tega Cay. These cities are the first to join under the expanded membership option of Utility Member. Their participation will further enhance our collective efforts to preserve, extend, and enhance the capabilities of the Catawba-Wataree River Basin.



Eligibility for CWWMG Membership

Organizations eligible to join the CWWMG include:

- Water utilities operating anywhere in the Catawba-Wateree River Basin, including the South Fork and other tributaries, as well as private utility companies.
- Water utilities using water from the Catawba-Wateree River Basin to serve customers in other river Basins.
- Members of the Catawba-Wateree Drought Management Advisory Group, including commercial entities that own a water intake within the Catawba-Wateree River Basin or own a water treatment plant or distribution system within the Basin.

Commitment to a Sustainable Future

The addition of Concord and Tega Cay underscores the growing commitment to collaborative water management. The CWWMG continues to prioritize water sustainability amidst challenges such as climate change and population growth. Our collective efforts aim to mitigate the impacts of these challenges, ensuring that the Catawba-Wateree River Basin remains a resilient resource for generations to come.

Through regular collaboration, innovative strategies, and an expanded membership, the CWWMG is well-positioned to continue its mission of managing the water resources of the Catawba-Wateree River Basin effectively and sustainably. We welcome our new members and look forward to achieving remarkable outcomes together.

Current Member Organizations

North Carolina

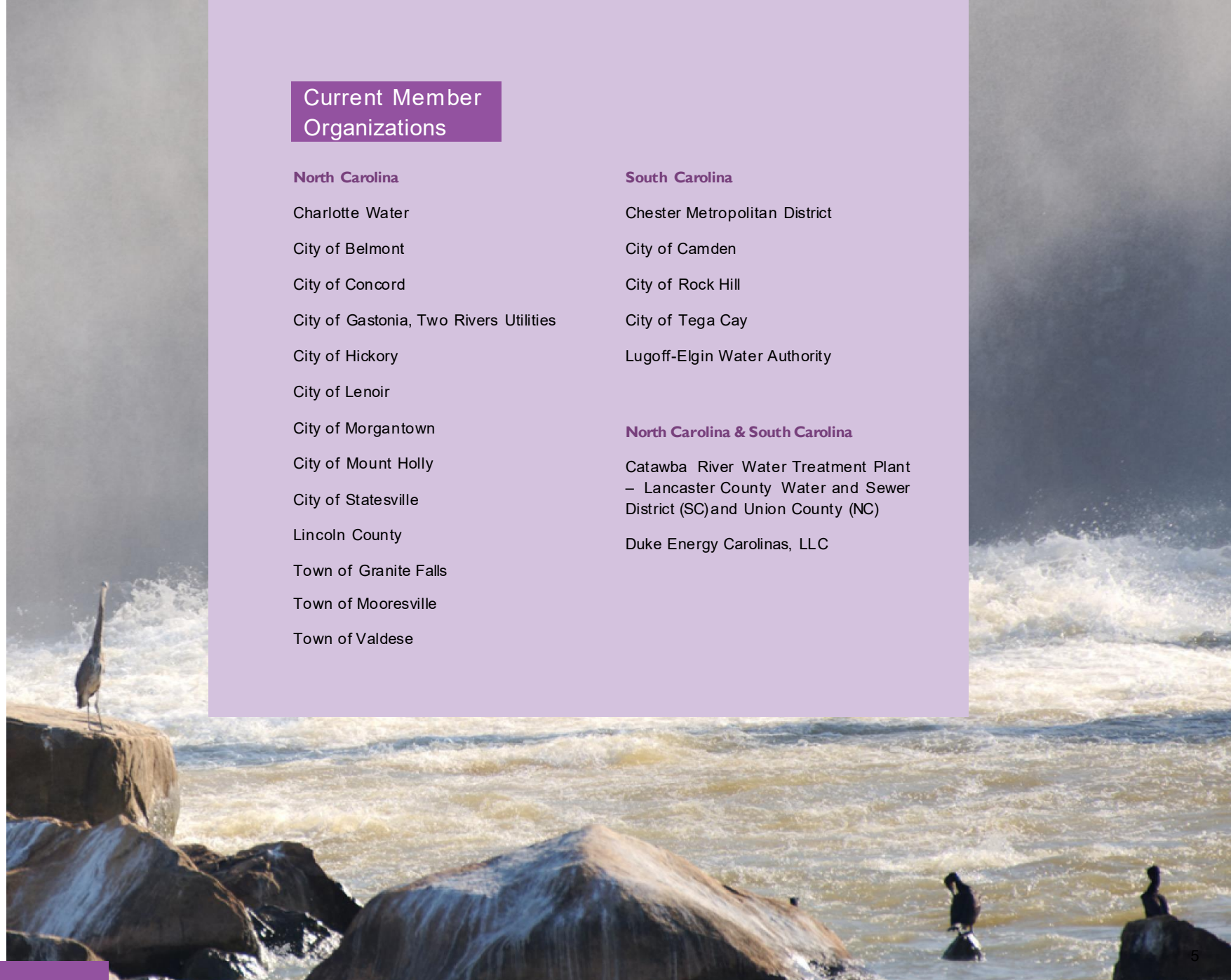
Charlotte Water
City of Belmont
City of Concord
City of Gastonia, Two Rivers Utilities
City of Hickory
City of Lenoir
City of Morgantown
City of Mount Holly
City of Statesville
Lincoln County
Town of Granite Falls
Town of Mooresville
Town of Valdese

South Carolina

Chester Metropolitan District
City of Camden
City of Rock Hill
City of Tega Cay
Lugoff-Elgin Water Authority

North Carolina & South Carolina

Catawba River Water Treatment Plant
– Lancaster County Water and Sewer District (SC) and Union County (NC)
Duke Energy Carolinas, LLC



Our Board



Chair

Jimmy Bagley, PE
City of Rock Hill, SC



Vice Chair

Jeff Lineberger, PE
Duke Energy
Carolinas, LLC



Secretary/Treasurer

Ron Hargrove
City of Charlotte, NC



NC At-Large Director

Allison Kraft, PE
Town of Mooresville, NC



SC At-Large Director

Brad Bucy, PE
Lancaster County Water
& Sewer District, SC

Advisory Committee



Environment

Vicki Taylor (*Chair*)



Academic / Research

Calvin Sawyer, PhD



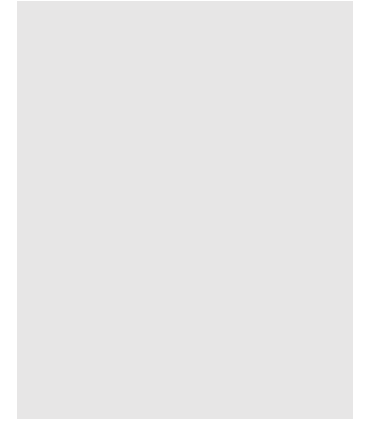
Residential Landowner

Shirley Greene



Economic Development

Robert Long, CEC



Regulatory
/ State Government

Ryan Carter



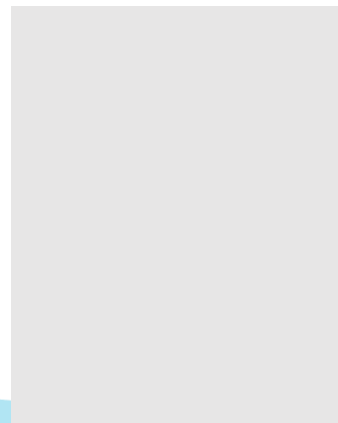
Industrial/Business

Wesley Wightman, PE



Recreation

Tim Gestwicki



Local Government

Eleanor Mixon



Agricultural/Forestry

Mitch Peele



Agricultural/Forestry

Keith Larick



We envision a future with a sustainable water source achieved through proactive planning, cutting edge research, and water shortage preparedness.



**Integrated Water
Resources Plan**



**Research and
Technical**



**Education and
Awareness**

How We're Putting Water First

Transformational changes in the Catawba-Wataree River Basin are actively underway, demonstrating our commitment to prioritizing water in all aspects of regional planning and development. These initiatives involve numerous stakeholders, all working together to ensure a sustainable water future. However, we need even more hands to join this crucial effort. There are countless opportunities to make a difference, and all our efforts can benefit from additional support.

CWWMG, our members, and many others are working throughout our Basin to put Water First.

Integrated Water Resources Plan

We are collaborating with HDR, the University of Pennsylvania Water Center, and RTI to develop and implement a comprehensive Integrated Water Resources Plan. This effort involves a Stakeholder Advisory Team and key agencies like the North Carolina Department of Environmental Quality (NCDEQ), South Carolina Department of Environmental Services (SCDES), and South Carolina Department of Natural Resources (SCDNR).

Public Recreation Improvements

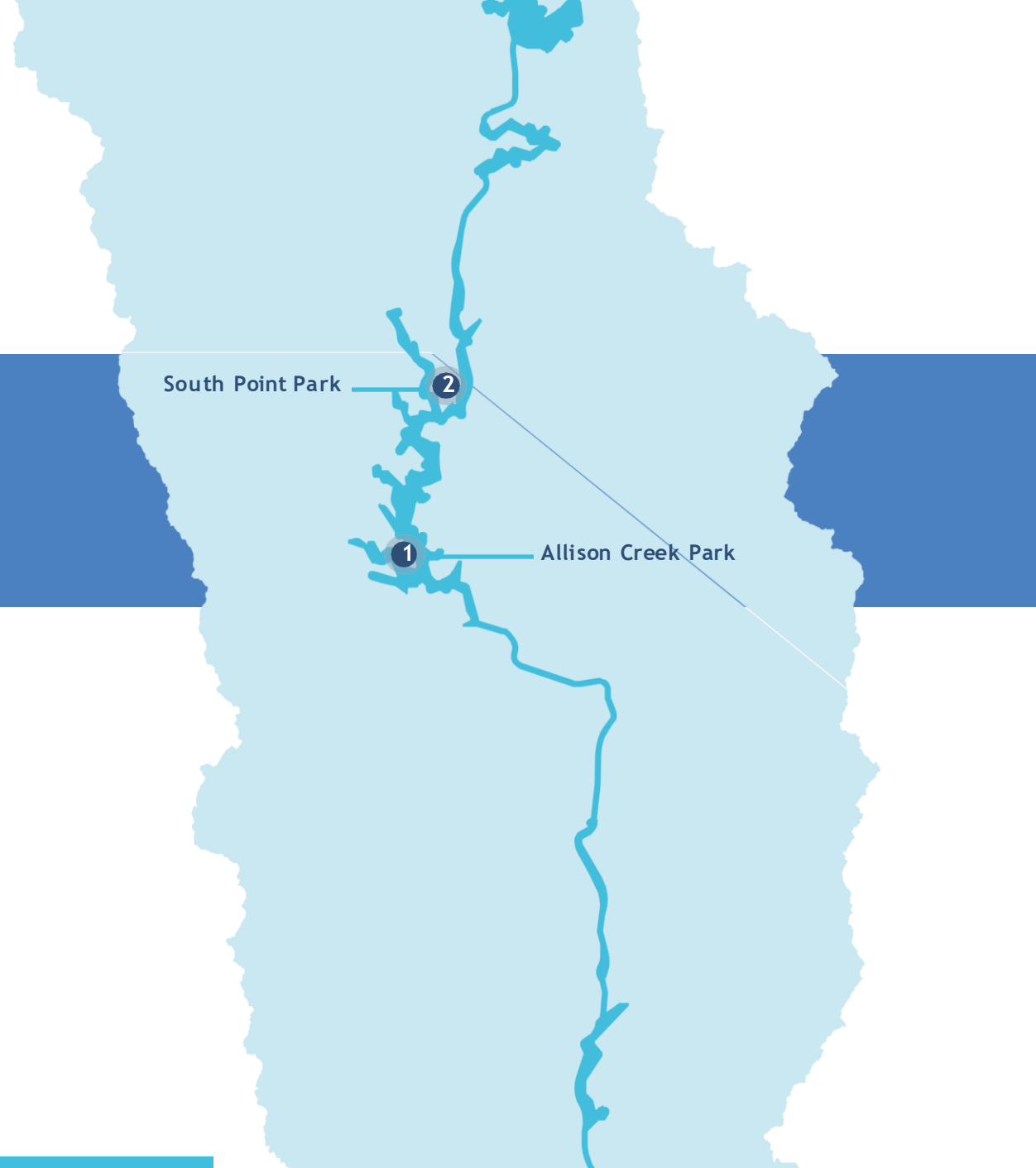
Enhancing public access to recreational opportunities is a priority. Initiatives include improvements to parks in York County and Tega Cay, providing residents and visitors with better facilities to enjoy the river and its surroundings.

South Point Park

2

Allison Creek Park

1



Lake Wylie Improvements

1 Allison Creek Park



Allison Creek Park, situated on Lake Wylie, is a prime example of a successful public recreation investment. This project involved intensive site development with construction costs shared between Duke Energy and York County, while the land was provided at no cost. York County manages the park, which stands as the largest Duke Energy investment to date in a single recreation area.

FEATURES:

- Boat ramps
- Courtesy docks
- RV Park
- Canoeing
- Playground
- Picnicking
- Walking trail
- Fishing pier
- Restrooms
- Bathhouse
- Lighted parking

PARTNERS:

- Duke Energy
- York County

2 South Point Park



South Point Park on Lake Wylie is another heavily utilized public recreation area, showcasing an excellent partnership with the North Carolina Wildlife Resources Commission (NCWRC). The facilities, all newly developed, highlight the first Duke Energy access area leased to Gaston County. A key focus of the relicensing effort was to provide more opportunities for non-boaters to enjoy the lakes, fostering a deeper connection to the river.

FEATURES:

- Boat ramps
- Courtesy docks
- Walking trail
- Swim beach
- Picnicking
- Fishing piers
- Restrooms
- Lighted parking
- Kayak launch

PARTNERS:

- Duke Energy
- Gaston County
- NC Wildlife Resources Commission

South Point Park

Allison Creek Park

Other Projects from CWMMG members throughout the basin.

Coordinated Efforts Against Invasive Species

We are working with the Lake Norman Marine Commission, NC State, and various funding partners to combat invasive species that threaten the health of our waterways, particularly Lake Norman, Wylie, and Mountain Island.

Regional Wastewater Treatment Facility at Lake Wylie

Charlotte Water, Mount Holly, and Belmont are collaborating on a regional wastewater treatment facility to better manage and treat wastewater, improving water quality and quantity in Lake Wylie.

Water Loss Management Initiatives

Member organizations like Chester Metropolitan District are working to drive efforts to manage and reduce water loss, ensuring more efficient use of our water resources.

Updated Shoreline Management Requirements

The Shoreline Management Work Group is updating requirements to ensure the sustainable use and protection of our shoreline areas.

Source Water Protection Partnerships

Our partnerships with the Catawba Lands Conservancy, Catawba Riverkeeper, Foothills Conservancy, and Catawba Valley Land Trust are crucial for protecting the quality and availability of source water in the Basin.

Inflatable Gates at Wateree Dam

Duke Energy installed inflatable gates at Wateree Dam to enhance water management capabilities, especially during high-water events.

Our Work



INTEGRATED WATER RESOURCES PLAN

Practical Solutions for a Sustainable Future

01

January - December 2021

Basis of Planning

02

January - December 2022

Model Updates &
Stakeholder
Communications

03

January - December 2023

Evaluations,
Recommendations &
Communications

04

January - December 2024

Final
Recommendations

05

January - December 2025

IWRP Production
and Rollout

Source Water Protection Investments



Water Resources Planning

- It's a *process* - not an event!
- Undertaken voluntarily - no regulatory mandate
- Voluntary implementation
- Multiple phases/components
 - **Safe Yield Research Project** - Establish credibility of modeling & assumptions
 - **Water Quantity** - Extend safe yield capacity beyond year 2100
 - **Water Quality** - Understand future of source as drinking water supply
 - **Source Water Protection** - Identify and participate in protection of priority watersheds
 - **Economics** - Document value of the water supply, role in the economy
 - **Communication and implementation**
- Update at regular intervals
 - Water Supply Master Plan Update (Integrated Water Resources Plan) currently underway

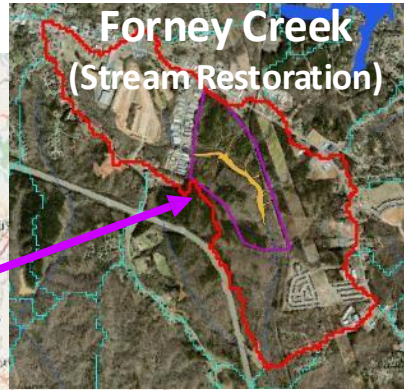
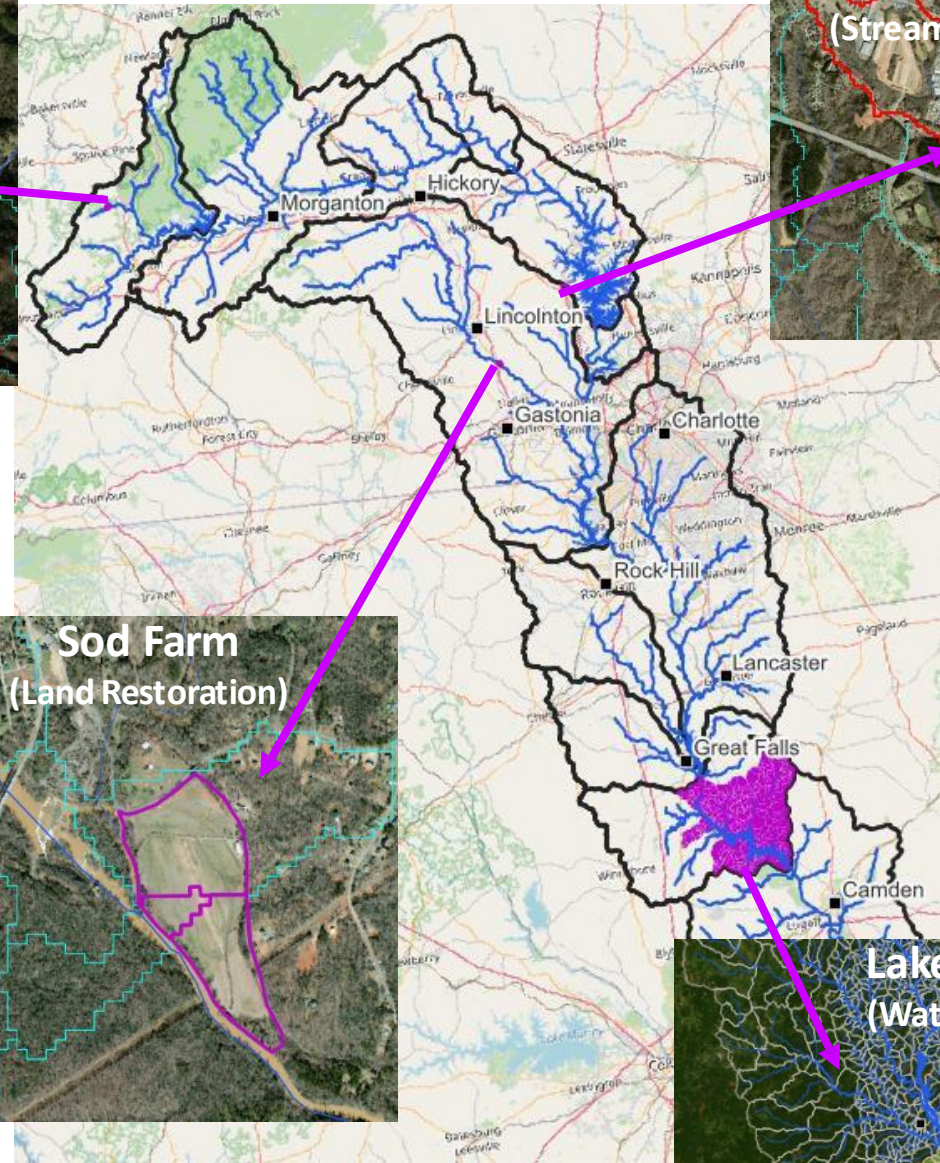


How it's Going: Integrated Water Resources Plan

1. Conducting basin-wide scenarios focused on **conservation, riparian buffer preservation, and agricultural conservation practices** implementation
2. Using modeling to evaluate the benefits of specific project actions underway by local conservation groups and supported by the CWWMG Source Water Protection Committee



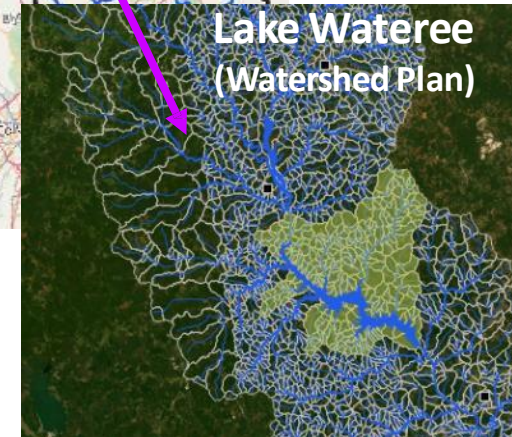
Armstrong Creek
(Conservation)



Forney Creek
(Stream Restoration)



Sod Farm
(Land Restoration)



Lake Wateree
(Watershed Plan)

*Picture insets not on same scale

Proactive Planning for Water Supply Shortages

Raw Water Intake Contingency Planning

- Vulnerabilities, partnerships, alternatives, options

Lakefront Smart Irrigation Study

- Potential water savings through technology

Benchmark Conservation Practices

- Build toolbox of options for effective conservation

Low-inflow Protocol Response Evaluation

- Document effectiveness of drought response

Reducing Water Loss

Regional Water Audit Workshop (Complete) 

- Introduce principles and practices of water audit
- Discuss regional implementation

Regional Water Audit/Revenue Loss Project (On-going)

- Assist water systems with planning & implementing water audit
- Develop consistency and confidence in understanding regional water loss
- Identify and implement cost-effective water loss reduction measures

Understand Issues That Impact Water Supply

Future water supply quality impacts on drinking water

- Identify trends and concerns of changes to raw water quality relevant to producing safe drinking water

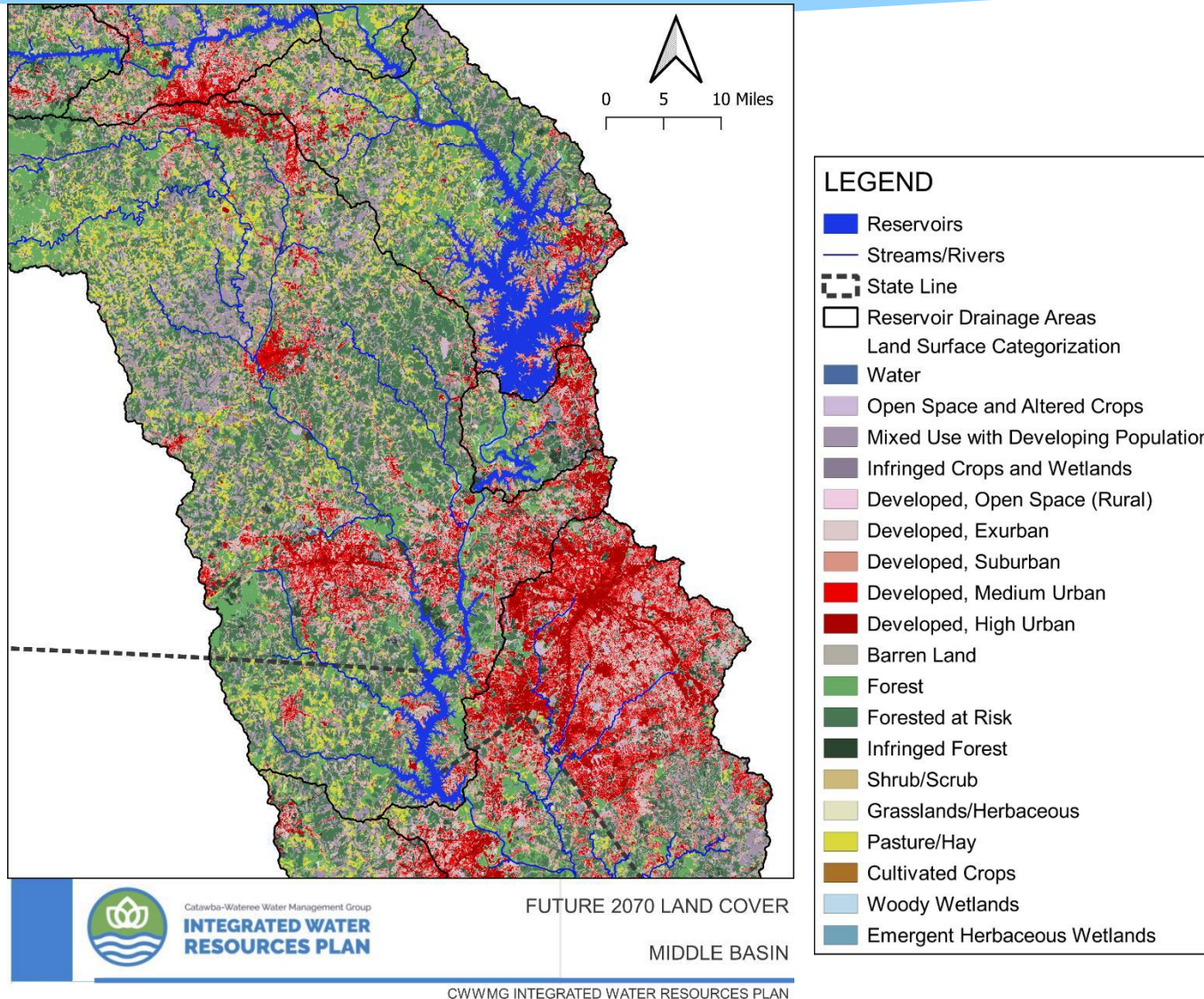
Extending safe yield (Integrated Water Resource Plan)

- Plan how to extend capacity of supply beyond 2100

Lake Rhodhiss Tailrace Nutrient Study

- Examine nutrient levels from Lake Rhodhiss

Looking Forward in the Catawba (and elsewhere)....



- Where are you seeing changes?
- What programs already exist?
- What are the opportunities for NBS in your area?
- Who are the partners needed to take action?
- And don't forget maintenance and public outreach!

Establish Communications Network

Basin Wide Advisory Committee Established

- Diverse interests and input on CWWMG projects and priorities
- Communication linkage to other constituencies

Strategic Communication Plan

- Framework and tactics for members and CWWMG to use for consistent messaging
- Social Media presence

Annual Summit

- Regional, themed conference focused on current water resources issues
- Target audience includes policy/decision makers & influencers

Citizens Water Academy

- Provide more in-depth background for policy/decision makers and influencers about water resources operations and issues

Branding materials, website, videos

- Provide tools for members, recognition for CWWMG

Partner with Other Water Organizations

- Leverages member dues and experience
- Expands boundaries of CWWMG influence and results
- Supported creation of Yadkin-Pee Dee Water Management Group
- Coordinate with other Basin Planning Organizations
- Understand and collaborate on common issues and goals

SC Water Planning Process Advisory Committee

- Adopted the CWWMG IWRP for the Catawba - Wateree basin
- CWWMG will act as the River Basin Council in SC
- Stakeholder group includes same areas of interest as the other seven PPAC basins

Thank You to Our Stakeholder Advisory Committee

Bill Holman
NC Conservation Fund

Jon Greider
SC Department of Parks,
Recreation & Tourism

Sean McElhone
NC Division of Parks
and Recreation

Stein Edwards
Gallo

Gregory Sprouse
(SC) Central
Midlands COG

Ray Webber
Lake Wylie
Marine Commission

Kari Raburn, PhD
Regional Stormwater
Partnership of the Carolinas

Morris Sample & David Scott
Lake Norman
Marine Commission

Vann Stancil
NC Wildlife
Resources Commission

Brandon Jones
Catawba
Riverkeeper

Wenonah Haire & Scott Hansen
Catawba
Nation

Jeff Parke
(SC) Santee
Lynches COG

John Wear
(NC) Western Piedmont
Regional COG

Reggie Butler
Dominion
Resources

Leigh Anne Monroe
SC DHEC

Scott Harder
SCDNR

Joe Ghent
(SC) Soil & Water
Conservation District

Klaus Albertin & Forest Shepherd
NC DEQ Division of
Water Resources

Funding Partners & Projects

- **USGS** - Ground water level monitoring network
- **NCDEQ, SCDNR, Duke Energy Foundation** - Basin-wide hydrologic modeling
- **Water Research Foundation** - Improving safe yield; prioritizing land conservation
- **US Forestry Endowment** - prioritizing land conservation
- **Duke Energy Carolina** - Smart irrigation project, water audit workshop
- **South Fork Catawba Water Quality Alliance** - transferred funds upon dissolution
- **Carolina Land and Lakes Resource Conservation and Development Council** - Lake Rhodhiss nutrient study
- **SC Rural Water Association** - training workshops
- **SC DHEC** - Integrated Water Resource Plan

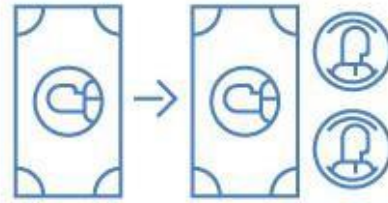
Consulting / Research Partners

- Kearns & West
- McKim & Creed
- HDR Engineering
- Black & Veatch
- Cavanaugh & Associates
- Lee Institute
- Jacobs Engineering
- Maddaus Water Management*
- Jon Knight, PhD*
- UNC Charlotte*
- Clemson University*
- Corona Environmental Consulting*
- Tamco-BV* Jordan, Jones, and Goulding
- RTI International
- United States Geological Survey (USGS)
- North Carolina State University (NCSU)
- Centralina Council of Governments
- Western Piedmont Council of Governments
- Catawba Consulting, PLLC
- Satelytics*
- Tedderfarm Consulting*

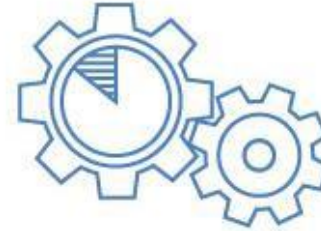
*Subconsultant

Show Me the Money!

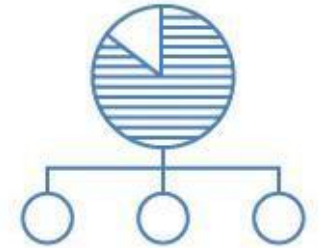
- Funded by member dues and grants
- Total annual dues \$700,000
- Dues apportioned based on water withdrawals



Over the recent past, for every \$1.00 provided in dues from each member, approximately \$1.50 was provided in return by leveraging research and funding support from others.



Administration costs are only fourteen percent of total organizational expenditures.



Eighty-six percent of organizational expenditures go directly to projects that benefit the entire Basin.

Keys to Success

- Compelling reason to convene and continue
- Corporate entity allows contracting, grants receipt
- Consistent funding plan
- Relevant and meaningful projects
- Mutual benefits
- Trust
- Shared leadership

Looking Ahead - Issues on the Horizon

Succession planning for organization leadership

Potential new members based on 2020 bylaws revision

Evaluate financial needs, opportunities

Priority initiatives

- More engagement in source water protection planning and actions
- Next phase(s) of Integrated Water Resources Planning process
- Updates to Master Planning
- Implementation of projects
- Education and communication

Awards

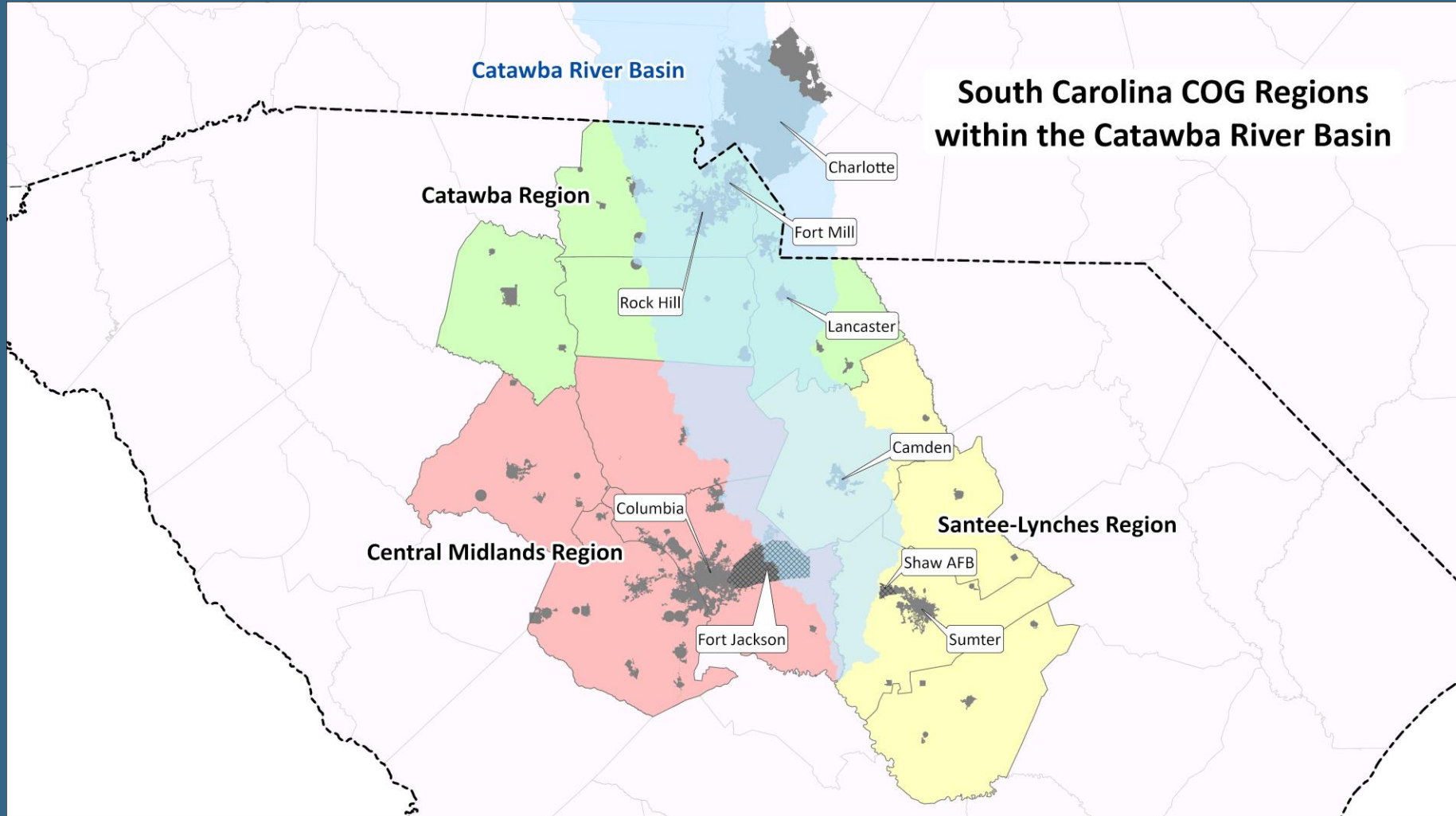
- American Council of Engineering Companies of North Carolina (ACEC)
 - 2015 Honors Award for Water Supply Master Plan
- NC Source Water Collaborative
 - 2017 Surface Water Planning award for the Water Supply Master Plan
 - 2023 Education award for CWA and Water for All Summit





Questions

Councils of Government Panel Discussion



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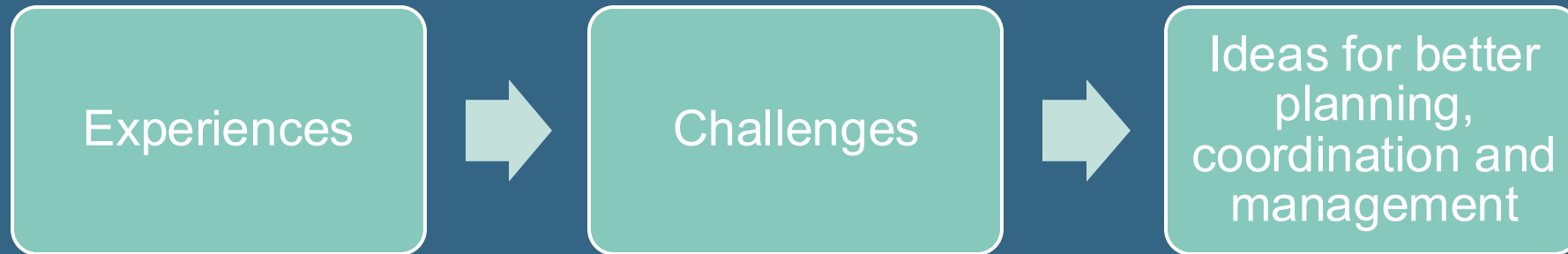
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Tabletop Discussions



Next Steps

Working Group Proposed Schedule

June 19

**Retreat Aug
6-7**

**September
(TBD)**

October 9

**Listening
Sessions
TBD**

**November
13**

December 11

WaterSC Full Scope

Guiding Principles

State of Surface
Water

State of
Groundwater

The State Water
Plan

Water
Management: ASR
& Conjunctive Use

Water
Management:
Water Reuse and
Conservation



Water
Management: IBT

Connections with
COGs & RBCs

Economic Growth
Forecast

Multi-state
Considerations

Water Planning
Framework &
Recommendations

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