



CHAPTER 8

*Lake Hartwell dam
spillway test*

River Basin Council Recommendations

During the development of their River Basin Plans, the River Basin Councils (RBCs) considered four principal categories of recommendations as outlined in the existing Planning Framework developed by the Planning Process Advisory Committee and SCDNR. Following the formation of SCDES, this process continued as the final two RBCs, the Lower Savannah-Salkehatchie and Santee, met to discuss and develop recommendations. The categories included:

- **Planning Process Recommendations:** Ways in which the planning process can evolve or improve in future years.
- **Technical Recommendations:** Activities that can help improve technical confidence in water data, tools, projections, or plausible scenarios.
- **Policy, Regulatory, and Legislative Recommendations:** Suggested improvements to state policies, water laws, or regulations.
- **Drought Management Recommendations:** Recommendations intended to improve how local and state organizations plan, mitigate, and respond to drought. These are presented in Chapter 3.

The RBC recommendations presented in this chapter constitute recommendations that garnered either full consensus or majority support from individual RBCs. Their collective recommendations, along with those of WaterSC, served as a guide for the development of SCDES's next steps and considerations presented in Chapter 9 and will continue to serve as a guide to sustain water planning efforts into the future resulting in improved water resource management and increased resilience.

SUMMARY

The RBCs planning process recommendations emphasized the need for more inclusive and representative RBC membership, better communication among councils and agencies, sustained funding from the legislature, and stronger public outreach. They also advocated for formalizing the implementation of River Basin Plans and increasing engagement with stakeholders, including legislative delegations and regional councils.

On the technical front, the RBCs identified critical data gaps and called for expanded monitoring networks, improved modeling tools, and targeted technical studies. These included recommendations to integrate water quality analysis into the planning process, incorporate climate projections into water models, complete groundwater modeling efforts, and study the impacts of land use changes and sedimentation. The RBCs also stressed the importance of aligning water planning with other state and local resilience and hazard mitigation plans.

The RBCs developed numerous policy, legislative, and regulatory recommendations, which included applying reasonable use criteria to all surface water withdrawals, improving the enforceability of water laws, and establishing grant programs to support plan implementation. The RBCs also recommended enhancing water education efforts and revising regulations to better protect instream flows and water quality. Several region-specific suggestions were made, such as developing riparian buffer ordinances and coordinating with neighboring states on shared water resources.

The RBC's recommendations reflect a unified vision for advancing water resource management in South Carolina—one that is inclusive, data-driven, and responsive to both current and future challenges.

Lake Moultrie

8.1 Planning Process Recommendations

During the development of the River Basin Plans, the RBCs participated in facilitated discussions to identify any deficiencies in the river basin planning process and develop recommendations to improve or enhance the process. RBCs identified and considered planning process recommendations that included:





- Changes to RBC membership, bylaws, meeting schedules, or procedures.
- Ideas to improve communication among the RBCs and other groups.
- Identifying funding needs and sources of funding.
- Improvements to the public outreach process.
- Formalizing the River Basin Plan implementation process.

Because the Saluda, Upper Savannah, Lower Savannah-Salkehatchie, and Santee RBCs finalized their River Basin Plans in 2025, they had the opportunity to include recommendations that arose during the WaterSC sessions related to updating the State Water Plan. The full list of the RBC’s planning process recommendations is included in Table C-1 of Appendix C. The recommendations in this section and in Appendix C may be used to help guide future water planning efforts in South Carolina. The Catawba-Wateree Water Management Group (CWWMG) did not explicitly consider or develop planning process recommendations as part of developing their Integrated Water Resources Plan (IWRP).

Planning Process Recommendations with Strong RBC Support

The planning process recommendations summarized in **Table 8-1** garnered consensus support from three or more RBCs, and should be considered for prioritizing planning process improvements in future phases.

Table 8-1. Planning process recommendations with strong RBC support. (The number in parentheses reflects the number of RBCs making the recommendation.)

TOPIC	RECOMMENDATION
 Membership, Bylaws, Meeting Schedules, and Preferences	SCDES should review RBC membership regularly to make sure all interest categories are adequately represented. (5)
 Communication	SCDES should coordinate regular, statewide meetings of RBCs and state agencies. (6)
 Funding	The state legislature should continue to fund state water planning activities , including river basin planning. (5)
 Public Outreach	The RBCs should support public outreach and education to increase awareness within the general public by coordinating with groups that have existing education and outreach efforts focused on water conservation , such as Clemson University and South Carolina State Extension Services. (4)
	RBC members should present observations and outcomes of the river basin planning process to committees, boards, professional organizations, economic development groups, and others. (3)

Other Planning Process Recommendations

Table 8-2 includes examples of additional planning process recommendations made by one or more RBCs that offer insight into potential improvements to the planning process. The full list of planning process recommendations made by each RBC is included in Table C-1 of Appendix C and can be found in Chapter 9 of each River Basin Plan.

Table 8-2. Representative examples of other RBC planning process recommendations. (The number in parentheses reflects the number of RBCs making the recommendation.)

Topic	Recommendation
Membership, Bylaws, Meeting Schedules, and Preferences	Incorporate into the RBC bylaws a preference for in-person attendance with a hybrid option as needed , recognizing that it is not always feasible to travel to monthly meetings. (1)
	The RBCs (in conjunction with SCDES) should develop guidance and guidelines for processes to replace RBC members if current members resign, and to adjust member terms if necessary. They should develop best practices for recruiting new members. (1)
Communication	RBC members should communicate with legislative delegations throughout the river basin planning process to promote their familiarity with the process and its goals and to generate buy-in on its recommendations. (2)
	The Savannah RBCs, with the support of SCDES, should coordinate and communicate with the Coastal Georgia Regional Council . (1)
Funding	Following development of the initial River Basin Plans, the RBCs should work with SCDES to identify the scope of future RBC activities and help develop funding needs and requests. (1)
	SCDES should designate staff to continue to coordinate and support ongoing RBC activities. (2)
Public Outreach	Public relations and communication strategies should be developed to educate the public on who the RBCs are, what they do, and the benefits of participation. Strategies should focus on the role of RBCs in planning and implementation. (1)
Implementation Process	SCDES should form an Upstate Interbasin River Council (IRC) . (1)
	RBCs should develop and implement an engagement plan to improve awareness and build support for the recommendations, actions, and strategies identified in the River Basin Plan. (1)



8.2 Technical Recommendations

The RBCs developed recommendations that address data gaps or information needs during the river basin planning process. Examples of this type of recommendation include:





- Model improvement (accuracy or functionality).
- Need for additional models to address specific issues.
- Need for more data (e.g., flow from stream gages; water levels from monitoring wells; precipitation, temperature, soil moisture from weather stations).
- Improved data or estimates (e.g., water use data, population data/estimates, water demand estimates, land use data).
- Improve public access to online data and information.
- Recommendations for technical studies to improve knowledge of specific issues.
- Improved instream flow requirement information.

The full list of the RBCs’ technical recommendations is included in Table C-2 of Appendix C. The recommendations in this section and in Appendix C may be considered to help guide future water planning efforts in South Carolina.

Technical Recommendations with Strong RBC Support

The technical recommendations summarized in **Table 8-3** garnered consensus support from three or more RBCs and should receive priority consideration. Technical recommendations developed by the CWWMG as part of their IWRP development were not finalized prior to the development of the State Water Plan and are therefore not included.

Table 8-3. RBC technical recommendations with strong support. (The number in parentheses reflects the number of RBCs making the recommendation.)

TOPIC	RECOMMENDATION
 Water Quality Planning	Address water quality , including bacteria, nutrients, and sedimentation, in future RBC planning efforts. (7)
 Need for Additional Data	Fund and establish an automated monitoring network of weather and climate monitoring stations (also called a mesoscale network). (5) Support continued efforts to maintain and expand streamflow gages . The RBCs recognize that comprehensive, reliable, and long-term hydrologic data are critical to water planning and management. (5)
 Modeling Tools and Efforts	Incorporate future climate projections into modeling analyses. (4) Complete the groundwater model developed by the U.S. Geological Survey (USGS). (3)
 Technical Studies	Incorporate lessons learned from other basins in future River Basin Plan updates. (3) Continue to evaluate and discuss ecological flow standards and flow-ecology relationships. (3) Study the impacts of land use changes on water resources. (5)

Other Technical Recommendations

Table 8-4 includes examples of additional technical recommendations made by one or two RBCs. The full list of technical recommendations made by each RBC are included Table C-2 of Appendix C and can be found in Chapter 9 of each River Basin Plan.

Table 8-4. Examples of other RBC technical recommendations. (The number in parentheses reflects the number of RBCs making the recommendation.)

Topic	Recommendation
Need for Additional Data	SCDES should work with USGS and other partners (e.g., property owners, well owners, stakeholders representing Capacity Use Areas [CUAs]) to enhance groundwater monitoring capabilities in areas where model simulations indicate the potential for water levels to drop below the top of the aquifer. (2)
	Compile the data obtained from established credible systems in alignment with RBC goals for use across the state before creating new systems, databases, or monitoring stations. (1)
Modeling Tools and Efforts	SCDES and USGS should develop a regional groundwater model(s) covering potential Groundwater Areas of Concern and use them to further calibrate to local land conditions, including seasonal drawdowns, and evaluate seasonal drawdowns through the planning horizon under each planning scenario. (1)
	Surface water modeling should incorporate scenarios that further examine future uncertainties , such as changes in rainfall and hydrology, alternative population growth scenarios, and the potential impacts of future development on runoff. (2)
Technical Studies	The RBCs should identify the financial impacts of increased sedimentation on reservoirs and water resources and communicate the results to local governments to demonstrate the value of riparian buffers, sedimentation and erosion control measures, and other policies and controls that reduce sediment generation and transport. (2)
	RBCs should identify potential “pinch points” where current and projected low flows may lower the assimilative capacity of the streams. Strategies may need to be identified to mitigate low flows at these potential pinch points. (1)
	SCDES should perform studies and analyses in support of a recycled water statute in South Carolina. (2)
Technical Training	SCDES should develop and provide a handout of groundwater and surface water concepts to establish a common knowledge base among RBC members. (1)
	USGS and/or SCDES should offer additional demonstration and discussion of the groundwater model , focusing on input parameters and the sensitivity of results to various parameters. (1)
Alignment with Other Water-Related Planning Efforts	As part of the comprehensive planning process, each local government should consult the Resilience Plan developed by the South Carolina Office of Resilience, local Hazard Mitigation Plans, and the associated River Basin Plan(s) developed by the RBCs for inclusion within the resilience element as required by the South Carolina Local Government Comprehensive Planning Enabling Act, as amended in 2020. (2)
	The River Basin Plans should be used as tools for local comprehensive plans and economic development. (1)







8.3 Policy, Regulatory, and Legislative Recommendations

The Planning Framework provided the RBCs the opportunity to develop recommendations for new or revised policies, legislation, and regulations regarding the state's water resources. The RBCs thoughtfully discussed and debated a variety of ideas to improve the management of water resources through changes to policies, regulations, and water law.

Recommendations with Strong RBC Support

Table 8-5 summarizes the common policy, regulatory, and legislative recommendations discussed and adopted by at least four of the RBCs. Additional details are included in Table C-3 of Appendix C and can be found in Chapter 9 of each River Basin Plan.

Table 8-5. RBC policy, regulatory, and legislative recommendations with strong support. (The number in parentheses reflects the number of RBCs making the recommendation.)

TOPIC	RECOMMENDATION*
 Reasonable Use Criteria	The South Carolina Surface Water Withdrawal, Permitting, Use, and Reporting Act should allow for reasonable use criteria to be applied to all surface water withdrawals , like those that currently exist for groundwater withdrawals. (7)
 Improve Effectiveness of Water Laws	Improve current laws that allow for water use regulation so they are enforceable and effective . The current water law, which grandfathers most water users, needs to be improved to support the effective management of the state's water resources. (6)
 Planning, Implementation, and Funding	<p>The South Carolina Legislature should authorize recurring funding for state water planning activities, including river basin planning. Currently, nearly all funding for river basin planning comes from the legislature. (5)</p> <p>The South Carolina Legislature should establish a grant program to help support the implementation of the actions and strategies identified in each RBC's River Basin Plan. One example is Georgia's Regional Water Plan Seed Grant Program, which supports and incentivizes local governments and other water users as they undertake their regional water plan implementation responsibilities. (6)</p>
 Permits and Registrations	Water law and implementing regulations should not distinguish between registrations and permits. All water users that withdraw above the identified threshold should be required to apply for a water withdrawal permit . Current law allows for agricultural surface water users and all groundwater users withdrawing water outside of CUAs to register their water use rather than apply for permits. (4)
 Regulatory Alignment with State Water Plan	The water withdrawal permitting process should specifically assess the permit application's alignment with the River Basin Plan and/or the legislatively approved State Water Plan . (4)
 Water Education	The state should support and fund RBC-led and statewide water education programs that include all sectors of water use, and promote the types of water management strategies recommended in River Basin Plans. (5)

* Some RBCs developed variations of these recommendations but maintained similar intent. In several instances, the recommendations were approved by a simple majority, not a consensus. Table C-3 in Appendix C provides further detail.

Additional Policy, Regulatory, and Legislative and Recommendations

In addition to the recommendations presented in **Table 8-5**, the RBCs also discussed and developed additional policy, regulatory, and legislative recommendations. Examples of these recommendations are presented in **Table 8-6**, organized by RBC. Some of these are regionally relevant while others apply statewide. Additional justification for these recommendations, and in some cases, their prioritization, can be found in Chapter 9 of each River Basin Plan.

Table 8-6. Examples of other RBC policy, regulatory, and legislative recommendations.

RBC	Recommendation
Broad 	<p>The Broad RBC (or other water planning body) should develop a model riparian buffer ordinance for local jurisdictions to consider. Such an ordinance would need to consider to what size of stream the ordinance applies, and how that is determined.</p>
Edisto 	<p>The South Carolina Surface Water Withdrawal, Permitting, Use, and Reporting Act regulations should use 80 percent of median annual daily flows instead of 80 percent of mean annual daily flows (MADFs) to determine safe yield at a withdrawal point. This recommendation, which was approved by a majority of the Edisto RBC members, recognizes that median of a non-normally distributed flow series is more reflective of both typical conditions in a stream and typical availability. The use of the mean to describe available water may result in an overallocation of water under normal conditions, which may lead both to future shortages and an increased frequency of flows below the designated minimum instream flow. This recommendation was shared by the Santee RBC.</p> <p>A user's actual water use and water needs, accounting for growth, should be periodically reviewed to prevent locking up water that is not needed. This recommendation, which was approved by a majority of the Edisto RBC members, recognizes that existing regulations that only allow for applying reasonable use criteria for groundwater withdrawals and new, non-agricultural surface water withdrawals have resulted in an overallocation of water (on paper) to permittees or registrants that will never use the quantity of water allocated to them. This may prevent new growth in the basin.</p>
Lower Savannah/ Salkehatchie 	<p>Recognizing that the resources of the Savannah River Basin are finite and shared between South Carolina and Georgia, the Governor of South Carolina should communicate with the Governor of Georgia to establish a coordinated, state-level planning and water management process for the Savannah River Basin and the states' shared groundwater aquifers. The RBC noted the significance of this recommendation, given the impacts of Georgia's growing demands and the potential impacts to South Carolina's water users and the overall health of the basin.</p> <p>The South Carolina Legislature should support matching or incentivizing County Green Space Sales and Use Tax programs to establish balance among water and land uses (e.g., agricultural, residential, industrial, recreational, instream requirements). The County Green Space Tax, passed by legislation in 2022, can be used within a county area for preservation procurements. The tax, if approved by county resident voters, may be up to 1 percent. Preservation of open space is one approach to maintain balance between growth, which is important to economic development of the state, and the character of the basin that draws growth. Governor Henry McMaster has set the goal to conserve 10 million acres across South Carolina.</p> <p>Towns and counties should develop stormwater design manuals that promote responsible development, protect water resources, and prioritize redevelopment over new development. The Southern Low Country Design Manual, which was developed with stakeholder representatives from the region's jurisdictions, is one example of a post-construction stormwater management design manual developed that can be considered for adoption at a regional level.</p>

RBC	Recommendation
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Pee Dee



A joint compact or water management group should be established and funded that would focus on segments of the Yadkin-Pee Dee River basin that span North Carolina and South Carolina. The RBC recognized that many of the same water resources are shared by both states and effective management must cross state lines.

Coastal community and tidal issues should be analyzed and considered in river basin planning. This type of analysis was not part of the initial round of river basin planning.

Support the protection of habitat in perpetuity, particularly in the riparian corridors of the Pee Dee River basin. Priority sites contributing significantly to water quantity or quality, and/or having the potential to enhance water quality, should be identified, and, where possible, protected by voluntary or purchased conservation easements or fee-title acquisition.

SCDNR/SCDES should review the science behind minimum instream flow (MIF) standards to ensure they are based on best available science to adequately protect designated uses and recognize regional differences. SCDNR/SCDES should routinely review the MIF methodology because best practices for determining MIF may change in the future.

Saluda



Regulation 61-119, Surface Water Withdrawal, Permitting, Use, and Reporting, should be reviewed to ensure consistency with the South Carolina Surface Water Withdrawal, Permitting, Use, and Reporting Act, including a review of the existing definition of safe yield in the implementing regulations. Safe yield should be redefined to be consistent with the law and be protective of MIF requirements that safeguard the integrity and designated uses of state waters. For example, Regulation 61-119 states that for stream segments not impacted by impoundment, safe yield is calculated at the point of withdrawal as 80 percent of the MADF. Since MIF is calculated as 20, 30, or 40 percent of the MADF, depending on the month, by definition, in months where MIF is 30 or 40 percent of MADF, MIF will not be achieved if the full safe yield is withdrawn.

State and local governments should develop, review, update, adopt, and enforce laws, regulations, policies, and/or ordinances that improve the management of stormwater runoff, encourage infiltration, minimize streambank erosion, reduce sedimentation, and protect water resources. The following are RBC-recommended best management practices:

- Protecting riparian buffers
- Protecting open spaces
- Strengthening stormwater regulations to minimize stormwater runoff volume from construction sites
- Incentivizing green infrastructure in development designs
- Allocating local funding sources for land conservation

Santee



State and local governments should continue to develop, review, update, adopt, and enforce laws, regulations, policies, and/or ordinances that improve the management of stormwater runoff, encourage infiltration, minimize streambank erosion, reduce sedimentation, and protect water resources. Infiltration helps replenish groundwater aquifers, remove pollutants, and minimize erosion that causes sediment to appear in streams. Sedimentation is considered a threat to the water resources of the Santee River basin. Small impoundments (i.e., farm ponds) can become filled with sediment and lose their ability to store enough water to maintain irrigation during dry periods. Sediment loading also impacts water quality and habitats. The RBC encourages local governments and land managers to identify solutions specific to their needs and location.

Review periods for groundwater and surface water permit renewal should be reevaluated to facilitate long-term planning efforts; support bond issuance; protect withdrawers' investments in infrastructure; and protect the biological, physical, and chemical integrity of the source.

Existing regulations should be amended to align users' renewal periods and permit requirements for surface water and groundwater withdrawals as much as reasonably possible. Review periods of at least 10 years, and potentially up to 20 years, should be considered.

SCDES should require high-use industrial water users (those who use greater than 3 million gallons per month) purchasing from a municipal supply to report their monthly water usage, aligning with existing SCDES water use reporting requirements. To support effective management of the resource, more transparency in water use is needed for large water users that purchase from water utilities.

Upper Savannah



Increase coordination and planning with the Georgia Environmental Protection Division on Savannah River water resources issues. Through collaboration and planning, Georgia and South Carolina have generally avoided interstate water disputes with each other. Increased coordination between the Upper Savannah RBC, the Lower Savannah-Salkehatchie RBC, the Coastal Georgia Council, and the Savannah-Upper Ogeechee Council would help continue that trend and better leverage the planning and technical analyses that both states have completed over the past decade.

Identify and prioritize properties for conservation to protect quantity and quality of water.

The state and local governments should develop and fund county conservation and mitigation banks and collaborate with South Carolina Conservation Bank and Land Trusts to conserve priority properties.

The state should request for and cost-share in the completion of Phase 2 of the USACE Comprehensive Study and Drought Plan Update.