



Development of Technical Recommendations

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Agenda Item 5



Upper Savannah RBC Vision Statement

A resilient Upper Savannah River Basin that collaboratively, sustainably, and equitably manages and balances human and ecological needs.

Upper Savannah RBC Goals

- 1. Within 24 months, develop water use strategies, policies, and legislative recommendations for the Upper Savannah River Basin in order to:*
 - a. Ensure water resources are maintained to support current and future human and ecosystem needs.*
 - b. Improve the resiliency of the water resources and help minimize disruptions within the basin.*
 - c. Promote balance between development, industry, and economic growth in areas with adequate water resources.*
 - d. Advocate for responsible land use practices.*
 - e. Identify funding sources.*
- 2. Develop and implement an education and communication plan to promote the strategies, policies, and recommendations developed for the Upper Savannah River Basin.*
- 3. Enhance collaboration between all stakeholders and water interest groups, including Georgia and the Lower Savannah-Salkehatchie River Basin.*

Green, Yellow, Red Bucket Approach

- Recommendation needing only minor revision(s)
- Clear RBC consensus



- Not full RBC support
- May revisit to see if consensus can be achieved with revisions



- Minimal RBC support
- No clear path to consensus
- Drop



Technical and Program Recommendations

Technical and program recommendations may include, but are not limited to:

- Need for more data (such as stream gages or monitoring wells)
- Model improvement (accuracy or functionality)
- Need for additional models to address specific issues
- Improved water use data, population data or estimates, water demand estimates, land use data, etc.
- Recommendations for technical studies to improve knowledge of specific issues
- Need for additional technical training for the RBC members
- Improved instream flow requirement information

Small Breakout Group Options for Developing Technical Recommendations

Group 1

Land Use and Sedimentation

Group 2

Water Quality and Data Gaps

Group 3

Growth and Development




Group 4

Everything Else

Group 1 – Land Use and Sedimentation

Potential recommendations previously discussed or identified by the Broad and/or Saluda RBCs



-  ■ Reducing sediment loading to reservoirs through:
 - The implementation of infiltration, riparian buffers, land use planning, setbacks, minimizing streambank erosion, scour, and sources of sedimentation to reservoirs.
 - Studies to better identify sources of sediment load to reservoirs
 - Further incentivize the establishment of riparian buffers, streambank restoration, and other practices that reduce sediment load to streams and reservoirs.
 - Develop and incentivize green infrastructure/stormwater ordinances
 - Strengthen penalties for non-compliance of stormwater ordinances
-  ■ Study impacts of changing land use on streamflow characteristics (magnitude of flows, timing of flows, flashiness, etc)
-  ■ Develop a strategy to identify and prioritize properties that could impact quantity and quality of water. Develop and fund county conservation and mitigation banks for land conservation. Collaborate with SC Conservation Bank and Land Trusts to conserve those properties.

Group 1 – Land Use and Sedimentation

Potential recommendations previously discussed or identified by the Broad and/or Saluda RBCs



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 [B].



The RBC recommends that as part of the comprehensive planning process that each local jurisdiction across the state 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. Encourage land use regulations and corresponding ordinances be adjusted to support the resilience element [S].



Advocate for the development of local ordinances such as riparian buffers and tree ordinances for new development.



Audit and update the State stormwater standards to reflect new storm scenarios and data, and consider regional differences. Mandate analysis of new development's impact in receiving water bodies on a watershed scale. [How would DES analyze it and approve plans?]



Group 1 – Land Use and Sedimentation


Council Developed Recommendations



Group 2 – Water Quality and Data Gaps

Potential recommendations previously discussed or identified by the Broad and/or Saluda RBCs


~~▪ Need for more data (such as stream gages or monitoring wells)~~


 ▪ Review recommendations from stream audit/studies and consider new locations, based on changing conditions to expand number of streamflow gages where it makes sense. [TONYA MADE HAVE HAD A RECOMMENDED LOCATION]

~~▪ SWAM model improvement (accuracy or functionality)~~

~~▪ Need for additional models to address specific issues~~

~~▪ Improved water use data, population data or estimates, water demand estimates, land use data, etc. [GROUP 4 touched on]~~

 ▪ Recommendations for technical studies to improve knowledge of specific issues. ARE THERE SPECIFIC STUDIES NEEDED? Improved instream flow requirement information?

 ▪ ~~Study impacts of drought on fishkills due to low dissolved oxygen. [TONYA B.]~~



Group 2 – Water Quality and Data Gaps






Potential recommendations previously discussed or identified by the Broad and/or Saluda RBCs

- ~~▪ Discuss and identify potential pollutants of concern to explore in the next phase of planning (e.g. bacteria, nutrients, and sediment)~~
- ~~▪ Add more sample sites in the Blue Ridge (or simply use less data, since less is available) for evaluating streamflow-ecology relationships.~~
- ~~▪ Encourage expansion of the ambient water quality monitoring network.~~
- ~~▪ Continue to consider ecological flow standards, including new and/or improved data, as it becomes available [B].~~
- While the RBC should maintain its focus on the assessment of water quantity, future planning efforts should include evaluation of surface water quality, including bacteria, nutrient loading and sedimentation, which is important to maintaining affordable public water supplies and the ecological health of the streams, rivers, and lakes [B].



Group 3 – Growth and Development



Potential recommendations previously discussed or identified by the Broad and/or Saluda RBCs

-  Use of the River Basin Plan to highlight areas where water is more abundant and amenable to growth.
-  Amend the building permitting process in counties and municipalities to require developers work with water utilities to ensure adequate water availability.
- ~~ Consider use of the River Basin Plan as a tool for local comprehensive plans and economic development.~~
- ~~ Provide more incentives to landowners to not sell their land to development and place them in permanent conservation easements.~~
-  In future planning phases, the RBC recommends understanding the potential impacts of private and community/commercial wells, and how they may affect surface water (especially during droughts) and/or better characterize growth potential [S].



Group 4 – Everything Else





Potential recommendations previously discussed or identified by the Broad and/or Saluda RBCs

- Need for additional technical training for the RBC members
- Encourage leveraging of USDA EQUIP programs for regenerative farming practices that minimize soil disturbance and soil loss and improve soil health.
- Consider incorporating future climate projections and/or historical long-term climate information such as dendroclimatology (tree ring data) to inform drought risk and or drought scenarios into modeling analyses to better address potential supply-side changes in hydrology [B].
- Identify funding mechanisms to support continued USGS efforts to maintain and expand streamflow gages [B].
-  ▪ Fund and establish of a mesoscale network of weather and climate monitoring stations [B].
-  ▪ Further investigation and potential piloting of low-tech, process-based approaches to stream restoration [B]. CONSIDER ADDING TO EXISTING BULLET.
- Completion of the Phase 2 Study on Drought Plan Update. [HARRY SUGGESTED AT END OF MEETING]



Group 4 – Everything Else

Council developed Recommendations

-  ■ Extend flood mapping in SC to include the 100 yr floodplain in all areas and expand with additional (200, 500, 1000) with the most recent, current, and up-to-date technology and data, to reflect current land-use patterns and recent weather patterns. The data should be made publicly accessible.
-  ■ Data Usage and Acquisition: compile the data obtained from established credible systems in alignment with RBC goals for utilization across the State before creating new systems, databases, or monitoring stations. Historic data, and new data when developed, needs to be publicly accessible and in a consistent, standardized, format that supports public comprehension. [Use existing data first!]
-  ■ Update models to consider future uncertainties (changing weather patterns, population growth, development scenarios, etc.).
-  ■ Fund and establish of a mesoscale network of weather and climate monitoring stations.





Policy, Legislative, or Regulatory Recommendations

Policy, legislative, or regulatory recommendations may include, but are not limited to:

- Modifications to existing state or local laws, regulations, or ordinances
- New state or local laws, regulations, or ordinances
- Ideas for recurring funding for water planning work
- Restructuring existing groups or agencies

River Basin Policy Recommendations

Proposed Recommendations based on the July RBC discussion about **funding**:



- **The South Carolina Legislature should authorize recurring funding for state water planning activities, including river basin planning.** Currently, nearly all the funding for the river basin planning process has come from the legislature.



- **A grant program should be established to help support the implementation of the actions and strategies identified 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. [include non-profit orgs as eligible entities]



AGRICULTURAL WATER RESOURCES ASSISTANCE PROGRAM

AgWRAP was established by the NC General Assembly in 2011 to help farmers and landowners in doing any one or more of the following:

- » identify opportunities to increase water use efficiency, availability, and storage;
- » implement best management practices (BMPs) to conserve and protect water resources;
- » increase water use efficiency; and
- » increase water storage and availability for agricultural purposes



North Carolina Department of Agriculture & Consumer Services

How does AgWRAP work?

The North Carolina Agricultural Water Resources Assistance Program is successful because of the grassroots efforts of your local soil and water conservation district. Your district works with agricultural landowners and producers to:

- » develop and approve individual conservation plans;
- » identify the best management practices best suited for your particular operation;
- » design BMPs and help ensure their longevity; and
- » acquire preliminary approval of a Cost Share contract

The division provides administrative and technical assistance to districts. The division gives final approval to cost share contracts and processes requests for payments to cooperators participating in the program.



Eligibility

If you are a landowner or renter of an existing agricultural operation that has been operating for more than one year, have a water quantity need, and make less than \$250,000 or have 75% or more of your AGI derived from farming, ranching or forestry operations, you are eligible to participate in the North Carolina Agricultural Water Resources Assistance Program.

To Learn More:

Contact your local soil and water conservation district.

A complete list of districts is available online through the N.C. Division of Soil and Water Conservation:

www.ncagr.gov/swc
or by calling: (919) 707-3770

North Carolina Division of Soil and Water Conservation

Agricultural Water Resources Assistance Program



Steve Troxler, Commissioner
David B. Williams, Division Director

Best Management Practices for AgWRAP

Best Management Practice (BMP) means a practice, or combination of practices, that is determined to be an effective and practicable (including technological, economic, and institutional considerations) means.

Agricultural Water Supply/Reuse Pond

Construct agricultural ponds for water supply for irrigation or livestock watering.

Agricultural Pond Repair/Retrofit

Repair or retrofit of existing agricultural pond systems.

Agricultural Pond Sediment Removal

Remove sediment from existing agricultural ponds to increase water storage capacity.

Agricultural Water Storage and/or Collection System

Construct an agricultural water management and/or collection system for water reuse or irrigation for agricultural operations.

Baseflow Interceptor

Improve springs seeps alongside a stream, near banks, but not in the channel by excavating, cleaning, capping to collect and store water for agricultural use.

Conservation Irrigation Conversion

Modify an existing irrigation system to increase the efficiency and uniformity of irrigation water application.

Livestock Water Storage

To construct a system of water storage for the purpose of watering livestock.

Water Supply Well

Construct a drilled, driven or dug well to supply water from an underground source for irrigation, livestock and poultry, aquaculture or on-farm processing.

Interested cooperators may apply to their local soil and water conservation district for financial and technical assistance for the installation of BMPs to increase water storage and efficiency. Applicants can be reimbursed up to 75 percent of a pre-established average cost or actual cost for each BMP installed. The applicant is responsible for 25 percent of the costs.



» Conservation Irrigation Conversion



» Agricultural Water Supply/Reuse Pond

Policy, Legislative, or Regulatory Recommendations

- 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 [B].
- Laws that allow for regulation of water use need to be enforceable to be effective. The current water law, which grandfathers most water users, can be improved to support effective management of the state's water resources [B].
- 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 [B].
- The Broad RBC or the PPAC should develop a model riparian buffer ordinance for local jurisdictions to consider [B].
- The water withdrawal permitting process should specifically assess the permit application's alignment with the current River Basin Plan, particularly regarding proposed withdrawals, returns, resource conservation, and drought response [B].

