

Santee River Basin Council Meeting No. 5 (Hybrid Format)

Date:	April 8th, 2025
Time:	9:00 AM
Location:	Old Santee Canal Park
	(900 Stoney Landing Rd, Moncks Corner, SC 29461)
Prepared by:	CDM Smith
RBC Members Present:	Todd Biegger, Sarah Wiggins, Mike Wooten, Alicia Wilson, Michael Melchers, Brooke Blosser (alternate for Riley Egger), John Grego*, Hixon Copp*, Jason Thompson, Hunter James (alternate for David Wielicki), Tony Hill (alternate for Allan Clum)
RBC Members Absent:	Jeff Ruble, W.E. Mickey Johnson, Jr., Brandon Stutts
Planning Team Present:	John Boyer, Kirk Westphal*, Scott Harder, Brooke Czwartacki, Leigh Anne Monroe*, Hannah Hartley*, Andrew Wachob*, Joseph Koon*, Sam Quinney, Melissa Griffin, Amy Shaw*, Megan Marini
	*Attended virtually

1.0 Call To Order and Welcome

The meeting was called to order at 9 am, with Michael Melchers welcoming the RBC members. Michael stated the meeting objectives and invited the RBC members for approval of the previous minutes and the agenda. Minor changes and additions were requested to the prior draft minutes and meeting summary by Michael Melchers. The previous meeting minutes were approved by Sarah Wiggins with a second by Todd Biegger. The agenda was also approved by RBC motion.

John Boyer informed the team that recordings of the three recent webinars are now available on the basins planning website, along with other meeting materials. He noted the Water SC listening sessions coming up and encouraged RBC members to attend these sessions, noting that several members from each council would try to attend.

2.0 Public and Agency Comments

Public comments: There were no public comments.

Agency comments: There were no Agency comments.

3.0 Review of February RBC Meeting

John reviewed the March meeting, offering a quiz to recap the presentations given on water demand projection methodologies, Charleston Water System, and Santee Cooper operations. John reviewed how the water demand projection methodologies use different driver variables for different water use sectors. He also reviewed portions of Jason Thompson's presentation on Charleston Water System, including details about the size of the source watershed and the primary and secondary sources of water, and posed a question about Santee Coopers timeline for reservoir construction.



4.0 Surface Water and Groundwater Demand Projections with Scott Harder, SCDES

Scott presented the demand projection methodologies, explaining the difference between forecasts and projections, and the various scenarios used for baseline demand and growth rates. He detailed the three projection scenarios: moderate, high demand, and high growth, each based on different combinations of baseline demand and growth rate assumptions. Scott highlighted that surface water accounts for 94 percent of the total water use in the basin, with energy use included, while groundwater accounts for 6 percent. A breakdown of water use by sector showed water supply and industry dominate surface water use, while agriculture is the top sector for groundwater use.

Projections for surface water demand under moderate and high demand scenarios show significant increases in water supply and industrial use. The total water demand from groundwater and surface water, excluding power, is expected to grow from 171 MGD to 314 MGD under the moderate scenario and up to 566 MGD under the high demand scenario. Scott explained the assumptions and projections for thermoelectric power plants, noting the potential range of net withdrawals based on plant closures and new plants. He provided a range of future net withdrawals for thermoelectric power plants (2065-2075), estimating between 225 MGD and 272 MGD based on different scenarios. He noted that Duke Energy, and likely other power producers, may convert to less consumptive use technologies so their water use may go down in the future.

5.0 Capacity Use Areas and Groundwater Management Plans with Ashley Pritchett, SCDES

Ashley explained that the capacity use program (CUA) aims to manage and protect groundwater resources in areas where excessive withdrawals could have adverse effects. The areas covered by the CUA program, include the Waccamaw, Lowcountry, Trident, PeeDee, Western, and Santee-Lynches regions. Every 5 years a CUA gets reevaluated for permitting. During the review, the list of all permitted withdrawers, permitted withdrawal limits, and average groundwater withdrawal are reviewed. An evaluation of withdrawals by aquifer is conducted and a review is performed to identify potential areas of aquifer stress.

Ashley emphasized the importance of good communication between registered and permitted withdrawers. She noted that notifying SCDES as soon as possible about planned wells and future withdraws is important.

The Santee basin overlaps five out of six of the capacity use areas. Most of the Santee River planning basin falls within the Trident CUA. Withdrawal limitations for the Trident CUA have remained in place since 2018. These limitations require applicants looking to increase their withdrawal and applicants of new permits to include a groundwater model assessment. There are additional limitations for the other CUAs that focus on the impacts to the groundwater sources and stress on the different aquifers.

Q: Is the work group used to develop the Groundwater Management Plans internal to SCDES or open to stakeholders?

A: If we know the area is interested then stakeholders will be included in the workgroup for the plan but if there is not interest then the department will take action to develop the plan.

Q: Why are the Groundwater Management Plans updated every five years?

A: It is in the regulation to be reviewed every five years.

Q: What is considered a permitted withdrawer?

A: Any entity that withdraws from a single well or collection of wells that exceeds 3 MGD in any month of the year. Generally, if there are common ownership of wells they can be permitted together.

6.0 Groundwater Demand and Projected Use in the Santee Basin with Brooke Czwartacki, SCDES

Brooke presented groundwater use data over the last 20 years showing a consistent use pattern of higher surface water use than groundwater. She reiterated the recommended strategies for capacity use areas such as pumping reductions, no new increases in specific aquifers, drilling to deeper aquifers, and increased monitoring. She presented maps of the Santee River basin showing the location of the largest groundwater withdrawals and the corresponding aquifers. Population projections and public water supply trends were provided to show potential demand increases at moderate, high growth, and high demand scenarios for both Dorchester and Charleston counties. Charts were provided by county showing the aquifer levels over time which show relatively stable levels. Brooke presented data from the Crouch Branch and McQueen Branch aquifers to show the agricultural influence on the aquifer levels and how the water level falls during the growing season and recovers during the non-growing season.

Brooke noted that the Charleston aquifer shows a steep decline since 1989 at the Berkley 431 monitoring well. It is speculated that the well screen is partially blocked and that the observed decline may not represent actual conditions in the aquifer. Brooke noted that public water demand from the aquifer has decreased over the last 20 years. Tony Hill of Mount Pleasant Waterworks (MPW) noted that MPW started purchasing surface water from Charleston Water in the 1990's and reduced withdrawals from there wells.

The RBC discussed the lack of wells in the Berkley area and asked if another well could be funded or what efforts could be made to get another well. It was determined that networking could benefit finding an additional well in the area.

Q: The water level is essentially a pressure, right?

A: Yes, the amount of water pressure is measured and that is why we make potentiometric maps to determine that water surface level.

Q: Is this well representative of the aquifer levels in the whole area or likely influenced by close-by irrigation?

A: This graph does seem like it is closer to more intense agricultural pumping.

Q: The water level for the Charleston Aquifer says 1850 ft, but this is really negative 1850 ft with regard to mean sea level, correct?

A: Yes this should show negative, so 1850 ft below mean sea level.

Q: Do each of these aquifers have different fluoride levels?

A: Yes the water chemistry differs between aquifers.

Q: Does the USGS have a program where they construct monitoring wells?

A: No, the USGS gives grant money for groundwater monitoring to drill wells to fill gaps, but there is no funding this year. DES has some money to expand well monitoring.

Q: Are all groundwater wells strictly paid through USGS or do they sometimes recruit organizations to help subsidize the cost?

A: USGS and DES have paid for them, but there haven't been many new wells installed in recent years.

7.0 Discussion and Selection of Drought Management Recommendations

John Boyer led a discussion of drought management and provided some articles as reference materials for consideration. The first article focused on drought in urban water systems, looking at 19 different water systems and how they responded to droughts. Example policies cited in the article included watering schedules, prohibiting certain uses, customer education, and water reuse. Effective drought responses were measured by per capita overall water use, the ability to avoid mandatory restrictions, public implementation of strategies, being able to discontinue policies that limit use, and getting positive responses to communication efforts. The article suggested that, based on their survey results, community education was much better received than mandatory water restrictions. Other observations from survey results indicated that drought surcharges were rarely utilized, being a part of the regional plan provided a sense of solidarity, and most utilities are not weighing the tradeoffs of dealing with drought risk in the near term and climate change in the long term. Restrictions were found to be more effective than pricing policies and more equitable across income groups. It was noted by the RBC that our region is fortunate enough to have a surplus of water resources compared to some other parts of the country so the public may not be as well versed in drought response strategies. It was recommended that public education opportunities be pursued.

Q: Some restrictive measures appear to backfire such as making every other day watering, some people end up watering more, or surcharges for water use some people are willing to pay any price to keep watering their lawn or filling their pool. So, it seems mandatory restrictions need some thought if you want them to be effective.

A: I agree, there has been discussion in other RBCs with utilities experience with what level of rate increase is needed to disincentivize water use.

Per the planning framework, the specific obligations of the RBC are collecting and evaluating hydrologic information for drought assessment, providing local drought information and recommendations to the DRC, communication drought conditions and declarations to the rest of the RBC, stakeholders, and public, advocating for coordinated basin-wide responses by entities, and coordinating with other drought management groups in the basin.

The RBC needs to summarize existing drought plans and drought advisory groups. The State Climate Office (SCO) maintains drought plans that all utilities of a certain size are required to maintain. John asked that the RBC review the table summarizing drought plans of water providers in the Santee River basin and let him know if they see anything that seems incorrect or not up-to-date.

John explained that drought response initiatives developed by the RBC need to be summarized and recommendations on drought management strategies need to be included in chapter 9 of the RBC's River Basin Plan. He noted that Santee Cooper has a current low inflow and drought contingency plan in place and several of the upstream basins or reservoirs have drought protocols they are required to follow.

One of the drought response recommendations that the RBC agreed to is that the RBC recommends that water utilities review and update their drought management plan and response every 5 years or more frequently if conditions change. The RBC recommends that the water utilities coordinate their drought response messaging, to the extent that is practical. The last couple of recommendations will be reviewed in the next meeting.

Q: Does the committee think there is a need for a basin-wide drought plan outside of what already exists?

A: We feel like the Santee Cooper drought plan is pretty well done and we don't need any additional document or plan development.

Q: A sense of fairness plays a big part in people taking voluntary measures so coordination of drought response messaging would play to that fairness.

A: Yes, I agree that the equity is important.

A communication plan to inform stakeholders and the public on current drought conditions must be developed. It was decided that a designated RBC liaison will be chosen to communicate drought conditions and responses to the rest of the RBCs, public, and stakeholders.

8.0 Conclusions and Upcoming Schedule

The next meeting will be held on May 13th, 2025. The agenda for next month's meeting will include finishing the drought management discussion, preliminary surface water model results (if available) and/or review of water law and regulation, and discussion of policy, regulative, and legislative recommendations. We will also determine if there is the opportunity for another field trip sometime in the future.