

Lower Savannah-Salkehatchie River Basin  
Council

**January 4, 2024 Meeting Minutes**

**RBC Members Present:** Larry Hayden, Pete Nardi, Dean Moss, Courtney Kimmel, Sara O’Connor, Joseph Oswald, Brian Chemsak, Lynn McEwen, Tommy Paradise, Kari Foy, John Carman, Brad Young, Bill Wabbersen, Jeff Hynds, Ken Caldwell, Brad O’Neal, Reid Pollard, Brandon Stutts, Taylor Brewer, Samuel Grubbs, Will Williams, & Heyward Horton

**RBC Members Absent:** Danny Black (Kathy Rhoad, alternate, present), Leslie Dickerson (Tonya Bonitatibus, alternate, present), & Austin Connelly (Angel Brabham, alternate, present)

**Planning Team Present:** John Boyer, Scott Harder, Brooke Czwartacki, Andy Wachob, Tom Walker, Alexis Modzelesky, Joe Koon, Leigh Anne Monroe, Hannah Hartley, Kirk Westphal, & Jeff Allen

**Total Present: 52**

1. Call the Meeting to Order (John Boyer) 10:00–10:10
  - a. Review of Meeting Objectives
  - b. Approval of Agenda
    - Agenda approved
    - Sara O’ Connor – 1<sup>st</sup> and Dean Moss – 2<sup>nd</sup>
  - c. Approval of December 7<sup>th</sup> Minutes and Summary
    - Minutes/ summary approved
    - Kari Foy – 1<sup>st</sup> and Dean Moss – 2<sup>nd</sup>
  - d. Housekeeping Items
    - Lack of paper products in restroom
    - Jeff Jones (at-large) resigned
    - Alternates in attendance
    - Online attendees
    - Email Tom/ John to identify an alternate
  
2. Public Comment (John Boyer) 10:10–10:15
  - a. Public Comment Period
    - none
  - b. Agency Comment Period

- Evan Patrohay - ACE Basin & North Inlet-Winyah Bay National Estuarine Research Reserves, DNR. Decisions made by RBC affect their conservation/ restoration efforts. DNR is doing a marsh migration and mapping effort in Beaufort.

### 3. December Meeting Highlights 10:15–10:30

- Selected 11 process metrics
- Developed vision statement
- Discussed goals
- Reviewed state water planning framework
- Learned about surface/ groundwater resources
  - Salkehatchie streamflow
  - SC surface and groundwater withdrawals
    - Q: Does this include both sides?
    - A: Just the SC side but when we get into the modeling we'll use data from both sides.
    - C: We'll have a better presentation on water use further down the road.

### 4. Review RBC Vision and Finalize Goals (John Boyer) 10:30–11:00

- LSS Vision Statement: Shared water resources are managed to sustainably meet the needs of all stakeholders in the LSS basins now and into the future.
  - Q: Are there water resources that aren't shared?
  - A: No, I tend to think that there aren't.
  - C: Current framing implies that there are not shared resources, could also emphasize that sharing is important.
  - C: Could change shared to all
  - Left vision statement as is
- RBC identified issues
- USRBC goals
- LSS RBC draft goals
  - Develop water use strategies...
    - Q: What does US mean by minimize disruptions?
    - A: Water supplier can't serve their customers because of drought or infrastructure failures, water quality issue, not enough water to run electricity. Generally not enough water for their needs.
    - C: Except for extreme drought that would be controlled by the USACE.
      - Provide for accurate accounting
      - Promote stability of water allocations
      - Allow for residential and industrial growth
      - Maintain water availability
      - Prevent saltwater intrusion.

- Q: What we don't have on there is prevent saltwater intrusion (GW issue). What about where freshwater flows (Salkehatchie R) interact with the Combahee R? Also how flows interact with Port Royal Sound? Cut freshwater flow back pushes saltwater upstream. Need to keep the points of interaction stable. Don't have a goal for that.
- A: Can talk about that as we go through the process.
- C: I can see it in F.
- C: I can live with that but needs to be addressed head on.
- Maintain adequate flows
- C: Resilience isn't included.
- C: It should be included for federal funding. SC has a resilience office. Also water supply is in a crisis situation as GA is pulling water which is greatly impacting the Savannah R. Everything they do impacts us. Maybe move 4 up?
- Q: Does list order imply importance?
- A: We didn't prioritize the goals.
- C: I like it how it is. We did discuss resilience. #1 is our charter/vision statement.
- C: Human nature is to assign value to numbers move to #2.
- Q: Does anyone work with grants so we have buzzwords for funding?
- C: We're putting together a plan to sell to stakeholders and to get funding.
- C: Funders do like to see keywords and do target plans that emphasize resilience.
- C: "sustainability, climate change, resilience"
- C: Into the future is synonymous with resilience.
- C: Respond to an impact (system)
- C: Come back to a normal state.
- C: Not going to focus on flooding as much (SCOR).
- C: Resilient whether drought or flood it returns to normal.
- C: Wouldn't B cover that?
- C: It should go in B.
- C: Water allocation speaks to permits or registrations?
- C: Resiliency- system can meet all needs for all people. Conditions change but system can still handle it
- Change 1 to develop resilient water use strategies...
- Move "enhance collaboration..." to below 1
- Q: Do we want to move it up (#4 to #2)?
- C: It would be good to get water supply in that list under #1D
- C: Incorporate public water supply.

- Q: Keep it to various sectors on the councils?
- C: Food and fiber production.
- Change 1c to allow for public water supply, residential, and industrial growth
- Change 1 to “develop water use strategies, policies, and legislative recommendations so that the LSS River Basins are resilient and:”
- Change 1c to “maintain water availability to support public water supply, industrial, golf courses, energy production, food and fiber, and other legitimate needs”
- Change 1d to “allow for growth”

*Break*

*11:00–11:10*

5. State and Lower Savannah-Salkehatchie River Basin Climatology (Hope Mizell, SCDNR) 11:10–11:35

- SC Statewide Resilience Plan definition of resilience: “the ability of communities, economies, and ecosystems within SC to anticipate, absorb, recover, and thrive when presented with environmental change and natural hazards”
- SC State Climatology Office
  - Promote climate and weather awareness
  - Coordinate and collect weather observations, summarize and disseminate weather and climate info, perform climate and weather impact assessments, demonstrate value of climate info in decision-making, conduct applied climate research
- SC annual average temperature
  - SC warmed 1° F over past 120 years, less than Earth as a whole
- SC Monthly average temperature
- Blackville 3W and Beaufort MCAS airport average annual temperature
  - Missing data
  - SC 1 of 12 states that don’t have automatic weather monitoring
  - Q: Uncertainty in measurements?
  - A: Don’t include a month if missing 10%< of data, therefore not included in annual. Not meeting a monthly threshold better to have missing data instead of skewed data. Stations are calibrated. Co-op observers. Mesonet would be automated and take more frequent observed data and would include additional data categories this is just temperature and rain.
  - Q: What are the boundaries?
  - A: Modeled historical.
- Climate normal for LSS
- No statistically significant trends for max temperature in LSS
- Summer is the only statistically significant trend for min temperature in LSS
- Currently increasing trend for number of days max temp above 95°F, not largest increase
- Number of days min temp above 75°F largest trend currently

- Observed and projected temp change
  - Lower emissions: 2-4°F
  - Higher emissions: 8-12°F
  - C: Measuring temperature since the 1800's, how do we know we aren't on some cycle, how do we know that temps won't go back down?
    - A: We do have 100+ years but yes they are modeled projections. There are updates that do occur – this was updated in 2022 and the next national update is in 2026.
  - Q: What are parameters of high/ low emissions?
    - A: In 2-3 pager which Hope will distribute to the RBC later.
  - C: IS it possible to get data on slide to match up better? (5 days vs 1 days on some slides)
  - C: Different y-axis increments for min and max temps number of days.
  - A: good point
- Precipitation
  - Q: All volunteer data?
  - C: Yes
  - Q: Cocorahs?
  - A: No, Cocorahs is to help supplement the stations (co-op network) and Cocorahs only goes back to 2008.
  - A: Volunteer weather observers go back to the 1800's.
  - Q: What is the island there?
  - A: Government agencies created grid data which is what's happening here. Use your station data if possible. IF you live in a data hole use this which is the best available.
  - Annual precipitation
    - No trend
  - Monthly precipitation
  - Blackville and Beaufort
    - Decreasing trend annually
    - Months differ
    - Driest/ wettest years
  - statistically significant increasing trend in summer
- extreme precipitation events
  - 100/ 100 year events
  - C: We had two 100 year events in one month in 1994 one was an hourly and one was daily and it wrecked my stormwater system.
  - C: These are 4-day total rainfall events only and not an hourly total.
  - C: The multi-day rainfall events are the ones that stand out.
  - C: Not as concerned with flood as I am drought.
  - Timeline maximum rainfall events in Pee Dee and Savannah River
- Tornadoes
  - Doppler radar allowed for increased measurement of lower intensity tornadoes
  - 157 tornadoes in the basin

- Coastal cyclones
  - Questions
    - Q: Hurricanes – if you compute impact on the part of the coast for the LSS compared to other parts, we seem to be less impacted than areas north of Charleston over time?
    - A: True, consider yourself lucky – climatologically this basin is as susceptible but just not recently.
    - C: Lower basin here needs data from the Upper Savannah basin – is critical for this process in LSS. USACE needs to be a big part of the conversation.
    - C: Very flat area, slow to recede. In the Upstate flooding could be increased including loss of life and structure.
    - Severe event listserv
6. South Carolina Drought Response Act (Elliot Wickham, SCDNR) 11:35–12:00
- Drought definition
    - C: Significantly lower rainfall over time.
    - C: Lower than average.
    - C: The state has a definition under the Drought Response Act.
  - Palmer Drought Severity Index
    - Q: Can you give us a minute on the Palmer Severity Index?
    - Q: What is the definition of severe drought? Time? Persistence seems to be the issue.
    - A: Depends on sector, time component, hydrology.
    - 9 month average. Compare where you should be to where you are, standard deviation.
  - US Drought Monitor
    - Severe drought- time aspect, flow
    - Q: We also looking at smooth data too?
    - A: Updated weekly
    - Q: Would you see that high/low step?
    - A: If you see a quick change it is usually a drought buster situation (hurricane example)
    - Q: SC data here? Makes distinctions?
    - A: Yes we'll get to it in a second.
  - Climate divisions
    - Mostly in 7<sup>th</sup> climate division
    - Q: Can you remove the other half of CD7? That isn't in our basin?
    - A: Not with this data set.
    - PDSI for division similar to state
  - Drought Monitoring and Response in SC
    - SC Drought Response program
    - SC Drought Response Act
    - Drought Response Committee and DNR- includes statewide and local members

- C: Relating to Upper Savannah – We (LSS) aren't in a drought down here but we are facing an artificial drought down here due to the drought in the Upper Savannah.
- Use multiple indices to monitor drought
- 4 levels of drought- incipient, moderate, severe, extreme. As drought conditions become more extreme, responses increase accordingly
- Components of SC drought response program
  - Where do RBCs fall in this? Consult with stakeholders
- Local-level drought plans
  - Many plans not updated since 2003
  - Updating plans can be implementation item in RB plan
  - Mount Pleasant drought plan updated
    - Triggers, goals, actions for each phase
  - Drought plans in other river basins
  - Updating local-level drought plans
  - Q: Local area?
  - A: Local public water suppliers.
  - Q: Are you certain they aren't being updated or not being reported?
  - A: Column A and B but there are a lot that haven't been updated.
  - Q: I think there's a problem with what you're calling it – we have an emergency response plan which includes our drought plan in it.
  - A: The legislation requires it address A, B, C and if the emergency plan addresses these that's good.
  - C: We're looking at all emergency issues not just drought.
- Tabletop exercise
  - Breaking points- lack of info
- USDM vs SCDRC
  - USDM national agencies, SCDRC state agencies
  - Mostly similar missions, indicators
- SCdrought.com
- Q: The data you showed us with spikes (drought) – any way to project drought into the future (50 years)?
- A: USC did a frequency analysis but no projections going forward.
- C: How do we anticipate water availability based on precipitation “crystal ball” for next drought?

*Lunch*

*12:00–12:30*

## 7. Review of Existing Drought Management Plans

*12:30–12:45*

- Typical drought ordinance
  - Moderate- some voluntary conservation measures
  - Severe- increase voluntary measures, some mandatory restrictions
  - Extreme- more mandatory restrictions, impose excessive use rate schedule
- Common drought plan triggers

- Summary of drought plans in LSS
    - Customer- utility specific
  - Q: How many have enacted voluntary or mandatory restrictions?
  - A: Irrigation restrictions – haven't really had to use them since 2000s.
  - Q: Definition of customer?
  - A: Some say taps some say customers (accounts).
  - SRS
  - What is SRS's lowest #?
  - A: 77 feet when it kicks in.
  - C: North Augusta 1500 is not possible.
  - C: We need to know the #'s they report to the Feds.
  - C: SRS info would be helpful as their intake is huge.
  - A: None of the nuclear processes are running. Most of the water is for cooling and other GW is used for drinking water and chillers.
  - C: Another category is purchased.
  - A: Purchased by another utility (purchased).
  - USACE Savannah River Drought Management Plan
  - C: We're in stage 2 – 3600 currently but their plan wasn't completed.
  - Q: Upper Savannah considering it?
  - A: Haven't discussed yet but they will.
  - C: Lake people have a large voice in the Upper Savannah.
8. SC DHEC's Role in Surface Water Quantity Permitting (Leigh Anne Monroe, SCDHEC)  
12:45–1:15
- Water quantity programs
    - Capacity use program
    - Water use reporting
    - Surface water withdrawal program
  - Surface water withdrawals
    - LSS: active permits: 20 w/ 25 intakes, active agricultural registrations: 15 w/ 22 intakes
  - Surface water regulation
    - Existing permits: 1/1/11, mostly based on designed capacity of intake structure, required to submit operation and contingency plans
    - Agricultural registration- report their water use
      - New or expanding ag withdrawals
    - Comparison between existing, agricultural and new/ expanding withdrawers
    - Water conservation measures
    - Exemptions
  - Q: Do you have data for our planning area which you could show over time for surface water/ groundwater usage/trends?
  - A: Yes, our water use reports have that data. We can get that info separately too.
  - C: Our trend in planning area?
  - A: We'll (DNR) do that by sector.



- A: For GW we do trend analysis – last update was 2020-2021.
- Q: Exemptions - Dewatering operations?
- A: Mining operations
- Q: Ponds size limit?
- A: Ponds completely contained within property with no inflow/outflow. Farm ponds, golf ponds are exempt.
- Q: Do permits require reporting?
- A: Yes, every year they report withdrawals and are due at the end of January for 2023. Annually but also monthly numbers.
- Q: Can you discuss Edisto registration issues?
- A: Ag withdrawers can essentially request whatever they want to request within the safe yield at the point of withdrawal and it has been an issue there as there is no intent to use the water with some recent registrations. No requirement to use the water.
- C: A lot of stakeholder discussions around surface water regulations. A lot lead to regulatory changes (DHEC) or statutory changes (stakeholder feedback).
- C: RBCs have been meeting and want to look at the Surface Water law and regulations.
- C: Also moving from DHEC to DES on July 1. Trying to get a blue ribbon committee together legislatively.
- C: Don't have a formal answer on this yet.
- C: Additional comments contact DHEC or send to Tom.
- Q: 7Q10 issue?
- A: The people that registered for larger registrations were to protect the resource but it inhibits others from using the resource. The basin is fully allocated for farmers – people hurt the most are small farmers.
- Q: What changes are being considered because the Salkehatchie could be a similar issue with it being a smaller river.
- A: Can't speak to the motivations. There are ongoing conversations not just due to ag but also other drivers such as population and economic growth.
- C: We'll focus on recommendations in phase 4 for regulation and law.
- C: Some things we do with GW program some would like to see in the SW program such as "reasonable use".
- Q: The potato farm – outside ag operation move into SC for the water. Is DHEC getting any sense of more out of state use of ag land and water?
- C: RBC member – If you shut down a farm in America you aren't relocating it. When it shuts down here we are going overseas for that food. If we can mechanize it we can survive. The California ag mentality would not work here we have major labor constraints but awesome land and resources though.

9. Land Use, Population Growth, and Other Characteristics of the Lower Savannah and Salkehatchie River Basins (John Boyer) 1:15–1:30

Savannah and Salkehatchie River Basins (John Boyer)

- Chapter 2 of RBP
- Land use

- Similar for lower Savannah and Salkehatchie: Developed space increased from 2019, open water declined
  - Prime farmland
    - Land very conducive to farming
    - LS: 18.5% prime farmland, S: 19.3% prime farmland
  - County level
    - USDA Census of Agriculture- self reported data
    - Dr. Nathan Smith from Clemson will talk about agribusiness in March
    - Livestock operations
    - Commodity sales
    - Timber value
    - Population change/ density
    - Q: Population data from US Census?
    - A: Yes, US census
    - C: A lot of growth.
10. Upcoming Meeting Schedule, Topics, and Field Trips (John Boyer) 1:30–1:45
- Potential joint meeting with USRBC and USACE – Feb 14<sup>th</sup>
  - Topics?
    - Communication plan
    - Harbor deepening
    - Section 10 – give \$ to municipalities it would be nice to hear about that too.
    - 2/14, North Augusta, can go online, should try to go in person to meet USRBC
    - Select representatives for IRBC, meets 4 times either a year or total?
    - Select chair and vice chair in March- have to be different water interest categories
  - Potential SWAM training 2/28 or 2/29, 10-2 free lunch
  - LSS groundwater model

Meeting concluded at 1:55 pm.

Motion – Dean – 1<sup>st</sup> and Kari – 2<sup>nd</sup>

Minutes: Taylor Le Moal and Tom Walker

Approved: 2/14/24

RBC Chat:

10:05:11 From Thomas Walker to Everyone:

public comment period

10:05:18 From Thomas Walker to Everyone:

agency comment period

10:05:22 From Sam Grubbs to Everyone:

good morning

10:05:32 From Thomas Walker to Everyone:

good morning

10:41:24 From Ken Caldwell to Everyone:

Short

10:46:04 From Thomas Walker to Everyone:

short break - 10 mins

11:11:43 From Ken Caldwell to Everyone:

I have a questions on this slide. Ken

11:11:57 From Thomas Walker to Everyone:

ok one second and i'll get you in

12:21:39 From Thomas Walker to Everyone:

pause until 12:40

13:48:52 From Kirk Westphal to Everyone:

I believe that the Interbasin Council would meet ~6 times over 2 years, in a pattern that would be most advantageous to sharing lessons, recommendations, and information requests between the Upper and Lower.

13:49:35 From Thomas Walker to Everyone:

thanks kirk

13:55:33 From Thomas Walker to Everyone:

meeting adjourned