

## **Saluda RBC Meeting #4**

### **Minutes**

**RBC Members Present:** Rett Templeton, Jeff Boss, Charlie Timmons, Sharon Appell, Ed Bruce, David Coggins, Michael Waddell, KC Price, Kevin Miller, Larry Nates, Tate Davis, Eddie Owen, Rick Huffman, Robert Hanley, Rebecca Wade, Josie Newton, Patrick Jackson, Devin Orr, Jay Nicholson, Mark Farris, Melanie Ruhlman, Jason Davis, Thompson Smith, Paul Lewis, & Brandon Grooms

**RBC Members Absent:** Justin McGrady, Jim Moore, David Lawrence (David Gobbel, alternate, present), & Katherine Amidon (Brandon Bichler, alternate, present)

**Planning Team Present:** Kirk Westphal, Scott Harder, Tom Walker, Joe Koon, Leigh Anne Monroe, & Hannah Hartley

**Total Present:** 47

#### **1. Call the meeting to order ( Kirk Westphal)**

Kirk Westphal called to order the June 21, 2023, meeting of the Saluda RBC at 10:03 AM. He introduced the meeting structure and reviewed the meeting objectives, including selecting a chair and vice chair, learning about aquatic resources and fisheries management of the Saluda basin, learning about the relationships between aquatic health and streamflow, learning about agribusiness in the Saluda basin, and visiting the new Laurens County Water and Sewer Commission water treatment plant. Kirk requested motions to approve the agenda, minutes, and summary documents from the previous meeting. The Saluda RBC members unanimously approved the RBC meeting agenda – Michael Waddell made a motion to approve - 1<sup>st</sup> - and Tate Davis – 2<sup>nd</sup> – seconded the motion. The May meeting minutes required some small revisions and were approved unanimously as revised along with the May meeting summary – Robert Hanley – 1<sup>st</sup> – made a motion to approve which was seconded by Kevin Miller – 2<sup>nd</sup>.

There was discussion during the public comment period on the idea of continuing to use the same venue or trying a different facility for our meetings. Additional discussion regarding the meeting venue was the idea to bring in a microphone and speaker system to allow members to hear better. Kirk suggested that the planning team would explore other venues. Jeff Boss with Greenville Water offered the use of their facility for meetings if desired.

## **2. May RBC meeting Review :**

Kirk reviewed the May RBC meeting, which included developed land that has increased since 2000 slightly, 58% of the basin's 2,524sq. miles is considered prime farmland, the population has declined at the edges of the basin near its center, and most of the population growth since 2010 is around Greenville and Columbia for the Basin characteristics. The Climatology Highlights, which included annual average precipitation in the Saluda basin (1999-2020) ranged from 63+ inches in the upper portion to 42 - 45 inches in the lower portion, SC has warmed one degree Fahrenheit over the past 120 years, with no trend in annual precipitation even though extreme rainfall has increased lately, and from 2001 through 2020 included 4 of the 10 wettest years since 1902 and 3 of the 10 driest years. Drought Monitoring and management highlights that since 2000, the Saluda basin has experienced several periods of extreme and exceptional drought, and Palmer Drought Severity Index (PDSI) trends show droughts have been a common occurrence over the last 120+ years.

He also discussed SC Drought Response Act and Regulation and the South Carolina Drought Response Program's components, including extreme, severe, moderate, and incipient drought management mechanisms. Kirk encouraged water systems to update their drought plans and submit them to the SCO for review. He further talked about the Saluda RBC Vision Statement and Goals.

## **3. Selection of RBC Chair and Vice Chair. ( Kirk Westphal)**

Kirk started the process to elect the Chair and Vice-Chair positions for the Saluda RBC. Confirmed nominated members are given 2 minutes to speak. KC Price was nominated and accepted the nomination and ran for the chair position unopposed. The RBC members agreed

to close nominations - David Coggins - 1<sup>st</sup> and Thompson Smith - 2<sup>nd</sup> motioned to move to vote for KC Price as Chair. RBC members present elected KC Price as Saluda RBC Chair with a clear majority. Katherine Amidon was also nominated for the Chair position but chose not to run and ran for Vice-Chair unopposed. Patrick Jackson – 1<sup>st</sup> and Robert Hanley – 2<sup>nd</sup> motioned to move to vote for Katherine Amidon as Vice-Chair. Katherine was elected Vice-Chair of the Saluda RBC with a clear majority.

#### **4. Saluda Basin Aquatic Resources and SCDNR Fisheries Management. ( Kevin Kubach and Amy Chastain, SCDNR)**

Amy Chastain discussed Trout Management, including Brook Trout which is a specific strain native to South Carolina, about 500,000 trout stocked annually, a mix of Rainbow, Brook, and Brown Trout stocked in the Saluda River Basin. She highlighted some fisheries management processes, including Largemouth Bass Population Management, Black Crappie Population Management, Fish Habitat Enhancement projects, Hatchery Assistance, and Striped Bass Stocking. She further discussed Creel Surveys, which included Lake Greenwood Creel Surveys ( 2021-2022 creel surveys and economic impact, which is approximately \$2.8 million spent by anglers), Lake Greenwood Creel July 2022-June 2023, and Saluda River Creel from Buzzards Roost dam to the headwaters of Lake Murray (July 2023-June 2024). Other activities were; Review scientific collection permit applications, outreach (presentations to various user groups), Pond management, and Youth Fishing Events.

Question: The Alabama spotted bass is an invasive species. How did it get here?

Answer: Not entirely sure but there are ways. SCDNR encourages people who catch these invasive species to keep them and eat them.

Question: Can these fish get into farm ponds?

Answer: They would not do well in farm ponds so that would be unlikely. It is also illegal to move fish. They are now hybridized with Bartram's Bass (Redeye bass) which makes it more difficult to manage.

Question: the 500,000 fish you stock, how many of those are Brook trout?

Answer: We have stocked more Rainbow and Brown than Brook trout. It depends on the hatch. Greenville is stocking more Rainbow trout.

Question: Do you coordinate with NC/GA?

Answer: We do, we get stock from NC.

Question: IS DNR considering a new location for a hatchery in North Greenville County?

Answer: There has been some discussion but nothing firm at this time. DNR may get money to rehab/renovate the Walhalla hatchery.

### **Aquatic Biodiversity of the Saluda River Basin ( Kevin Kubach and Mark Scott)**

Kevin Kubach started this presentation with a broad view of fish diversity in the US. SE is the hotspot of temperate aquatic biodiversity. In SC, we catch the edge of this hotspot and have 120 native freshwater fish species. We have over 900 freshwater fish species in North America (north of Mexico). In the Saluda Basin, 84 species(71 natives), 60% of South Carolina's native freshwater fish diversity in just 8% of the State's areas, and 18 regional fish species are of greatest conservation need. He highlighted the spawning aggregation of the Greenhead shiners that happens every year and factors contributing to high Aquatic Biodiversity, which included a range of elevations from 3000 to 300 ft and unique species representing each set of conditions that help to define our streamscapes and riverscapes. The Saluda Basin has a conservation priority species, including a small range, unique habitat requirements, and specialized biological processes. Indicator species are considered specialized, and habitat alteration affects some species more than others. The Bio-assessment studies help monitor throughout the state and gather data and samples from all the sites. In addition, it allows us to identify the relationship between environmental factors (such as flow) and fish.

Question: The Saluda river stands out and it all starts at the Blue Ridge Mountains, what is special?

Answer: The HUC scale has something to do with it. There is some overlap between basins. Is it natural? Stream capture – streams can connect or there could possibly be a human connection.

Question: Could it be that the Upper Saluda river is protected?

Answer: Good point. Aquatic integrity is important as the headwaters. Development can have an impact.

Question: Will we have other presentations on mussels or other aquatic species?

Answer: We can look into it if desired. There are certain crayfish in the lower Saluda basin and the Carolina heelsplitter which might be of interest and we can look into it.

## 5. Flow-Ecology Relationships ( Luke Bower, Joe Mruzek, and Brandon Peoples).

Dr. Luke Bower talked about Bio-assessment using aquatic organisms to learn about river health (collecting fish and creating metrics). It also helped us establish a relationship between urban land use and fish index of biotic integrity score. This, in turn, will help us predict how healthy that stream will be. The flow ecology relationship enables us to predict the stream's output. However, the purpose is to provide insight into the potential response of organisms to the water demand projection scenario output from SWAM. The aim is to put the SWAM results into a biological context. He highlighted steps on how this will work, including **Step 1** using data to help us understand the relationship between diversity and flow. **Step 2** is the working group will let us know what statistics tell us about the best relationship regarding diversity and flow. **Step 3** will apply those selected relationships to these different water demand scenarios. Knowing that a lot of data gives us some robust results is important.

We have about 492 Fish sites (smaller streams and rivers (wadable)) and 8 biological response metrics. We also have hydrologic data, which includes the waterfall model (rainfall-runoff model 30-year period which accounts for withdrawal, discharges, and reservoirs within the river network, 24 hydrologic metrics, and flow regime, i.e., timing, magnitude, frequency, rate of change, and duration). Some of the relevance of flow regime components are **Magnitude:** including mean daily flow and base flow, alteration of habitat, reduced water quality, and higher mortality. **Duration:** alteration of connectivity and increased duration of low water quality. **Timing:** loss of access to habitats, disruption of life-cycle cues ( spawning, egg hatching, migration) and decreased recruitment, and invasion of exotics.

### The Framework:

- a. Build a hydrological foundation of streamflow and biological data

- b. Classify natural river types
- c. Model and select flow ecology relationships.

**Results summary:**

- a. We found >180 informative relationships across SC (predicting responses and defining biological response limits).
- b. Many of these differed among stream classes
- c. All components of the flow regime were important to aquatic organisms.

**Next steps:** Identify those relevant to the Saluda and present these proposed relationships to the RBC

Questions: What is a fish site?

Answer: Where the staff from DNR went and collected fish. Capture diversity and flows, as well.

Question: RTI model incorporates withdrawals, what withdrawal data does it have?

Answer: The same permitted or reported withdrawal data that SWAM has.

Question: Is the Waterfall model publicly available?

Answer: Not at this time.

Question: RTI model – has RTI compared to gaging stations to calibrate the model?

Answer: Yes by gages and by timing.

Question: Is integrity of the stream considered – if it is kept pristine then nothing changes?

Answer: SWAM scenarios use relationships to estimate potential impacts on species.

Question: Would more reservoirs help?

Answer: Not for streams/ivers as it hurts diversity.

Comment: Clarification that this reflects smaller streams and rivers. Only wadable streams and rivers and not reservoirs or large rivers.

Question: So it wouldn't include the main stem?

Answer: We have strategic nodes within the basin to help with this issue.

Question: How far down from the reservoir does this apply?

Answer: Won't use for larger reservoirs.

Question: So the Middle Saluda/Reedy River to the North Saluda?

Answer: SWAM results from CDM Smith, those should be in there.

Question: Isn't that critical information?

Answer: We don't have the data which is one of the limitations of the model/study.

Question: Most of the data – dams were in place?

Answer: Yes, we can't tell if its dam or land use impacting.

Question: How about the Rabon Creek Dam?

Answer: We may not have site there – there may be some data for Rabon sampled for the small river assessment.

Question: Above Lake Rabon?

Answer: Yes, North Rabon – South Rabon data. IS there another way to see if there are things we should be concerned about?

Question: Direct correlation between flow and quality?

Answer: This is more focused on quantity but can have an impact on quality. Difference between quality of water and quality of habitat.

## **6. Saluda River Basin Agriculture Overview: ( Dr. Nathan Smith & Trey Buckelew)**

Dr. Nathan Smith presented an overview of South Carolina Agriculture which include 24,600 farms on 4.8 million acres of farmland, poultry is the top commodity in cash value, and fruits and vegetables are a big part of the state agriculture production. SC's major crops by production value in 2022 include cotton, corn, soybeans, peaches, hay, peanuts, wheat, tobacco, and watermelon. The livestock inventory is the largest industry in SC. Forestry makes up nearly 70% of the state's total land area, and SC exports \$1.4 billion in forest products each year ( timber is the state's #1 renewable commodity at \$759 million annually). The major row crops irrigated in SC are corn, cotton, soybean, and peanut. Of the four-row crops, corn needs the most water, followed by peanut, soybean, and cotton.

Question: Is that overhead irrigated?

Answer: Yes, mostly center pivot.

Comment: We have some underground drip irrigation (about 200 acres).

Question: Can the presentation be sent out?

Answer: Yes

Question: Has there been a timber shift to pellet plants?

Answer: There's some bioenergy use increasing in SC. There's one pellet mill in Ninety-Six. Big forestry harvesting around/scrap up junk timber.

KC Price closed out the RBC meeting. KC asked for a motion to adjourn the meeting which Thompson Smith - 1<sup>st</sup> made and which was seconded by Michael Waddell – 2<sup>nd</sup> and was unanimous. The meeting concluded at 1:07 pm.

The next Saluda RBC Meeting will be on July 19, 2023- At the Ridge at Laurens (10:00-2:00). The informational topic includes water demand methodology, lower Saluda Scenic River, FERC licensing, and Reservoir Operation and Lake Management (Lake Greenwood, Lake Murray, Table Rock, and North Saluda Reservoir, and Saluda Lake). The field trip to the Laurens CWSC was postponed due to weather.

Minutes: Iffy Ogbekene and Tom Walker

Approved: 7/19/23

**RBC Chat:**

09:53:29 From Charlie Timmons to Everyone:

Good morning.

09:53:54 From Thomas Walker to Everyone:

good morning. getting things set up. may start a few mins late

09:56:10 From Charlie Timmons to Everyone:

No worries. Hope you've been well. Lovely week for surface water

09:58:30 From Thomas Walker to Everyone:

ah yes plenty of water

10:02:56 From Thomas Walker to Everyone:

going to start in a second

10:03:15 From Brandon Bichler to Everyone:

Reacted to "going to start in a ..." with 👍

10:03:22 From Thomas Walker to Everyone:

can everyone hear online

10:03:29 From Devin Orr to Everyone:

We can hear!

10:03:32 From Charlie Timmons to Everyone:



Yes sir

10:03:32 From Alexis Modzelesky to Everyone:  
Yes

10:04:36 From Jeff B to Everyone:  
yep

10:14:15 From Thomas Walker to Everyone:  
one of the tvs is down so we are rearranging tables quickly

10:15:04 From Jeff B to Everyone:  
better now

10:18:30 From Jeff B to Everyone:  
we will offer up our space.

10:19:06 From Thomas Walker to Everyone:  
thank you jeff

10:32:07 From Sharon Appell to Everyone:  
Who was the vice chair nominees? It was hard to hear.

10:32:28 From Thomas Walker to Everyone:  
so far only katherina Amidon for VC but we are doing Chair first

10:32:34 From Thomas Walker to Everyone:  
\*katherine

10:32:41 From Sharon Appell to Everyone:  
Thanks

10:32:45 From Brandon Bichler to Everyone:  
I am Katherine Amidon's alternate and she would like to run for Vice-Chair.  
Unfortunately she is in Yellowstone right now so she is unable to attend the meeting. I have a paragraph from her, but I do not have a mic. Can I send it to you for you to read to the group?  
To the RBC, I apologize for my absence at this meeting as I am in Yellowstone on a long planned trip. I would be honored to be the vice chair for the Saluda river basin Council for the following reasons. I find this work to be critical to the future of water planning in our state, and I do not take it lightly that I am representing all constituents in my at-large role. I feel that I drew four years out of the envelope for a reason and am enthusiastically willing to be a part of not only the planning, but the implementation of our plan over the next few years. I originally applied to be on the RBC, because I truly believe in participating in processes like these which are much bigger than the group that is sitting in this room today. Thank you

10:33:21 From Thomas Walker to Everyone:  
any issues with KC as chair - he is unopposed

10:34:01 From Devin Orr to Everyone:  
Congratulations  
KC! Well deserved

10:34:48 From Thomas Walker to Everyone:  
any other nominations for VC

10:35:06 From Thomas Walker to Everyone:  
Katherine Amidon is sole VC nom

10:37:47 From Thomas Walker to Everyone:  
josie is reading her bio for everyone

10:38:08 From Thomas Walker to Everyone:  
all in favor

10:39:39 From Thomas Walker to Everyone:  
KC Price - elected Chair  
Katherine Amidon - elected VC

10:41:12 From Thomas Walker to Everyone:  
one second IT issues

10:45:38 From Thomas Walker to Everyone:  
amy Chastain is presenting until kevin can fix his ppt

11:11:00 From Thomas Walker to Everyone:  
10 min break

11:20:40 From Thomas Walker to Everyone:  
the laptop for the presenters is acting up here. only way for everyone to see is by using  
this share approach. apologies for the split screen

11:26:55 From Rett Templeton to Everyone:  
no problem

11:57:02 From Devin Orr to Everyone:  
I have to hop off for another meeting. Thanks guys! See you next month

11:57:11 From Thomas Walker to Everyone:  
thanks devin

12:43:16 From Thomas Walker to Everyone:  
15 min break

12:43:32 From Thomas Walker to Everyone:  
not much to cover after the break of you need to leave

12:43:36 From Thomas Walker to Everyone:  
\*if

12:43:41 From Rett Templeton to Everyone:  
I also have to leave for another meeting. Thank you.

12:43:50 From Thomas Walker to Everyone:  
thanks rett

13:06:52 From Brandon Bichler to Everyone:  
thank you

13:07:09 From Thomas Walker to Everyone:  
thanks all mtg adjourned