

Broad River Basin Council

September 14, 2023, Meeting Minutes

RBC Members Present: Ken Tuck, Frank Eskridge, Mark Boland, Angus Lafaye, Jim Cook, Paul Pruitt, Daniel Hanks, John Alexander, Kristen Austin, Bill Stangler, James Kilgo, Jeff Walker, Justin McGrady, & Jeff Lineberger

RBC Members Absent: Amy Bresnahan (Ram Ammarell, alternate, present), Brison Taylor, Karen Kustafik, Jason Wright, Erika Hollis, & Bryant Fleming (Cory Cox, alternate, present)

Planning Team Present: John Boyer, Tom Walker, Joe Koon, Alexis Modzelesky, & Hannah Hartley

Total Present: 34

1. Call the Meeting to Order (Ken Tuck, RBC Chair) 10:00–10:10
 - a. Review of Meeting Objectives
 - b. Approval of Agenda – Motion to approve the agenda – 1st – Jeff Walker and 2nd – Frank Eskridge – unanimous approval
 - c. Approval of August 10th Minutes and Summary – Motion to approve the August meeting minutes and summary documents – 1st – Ray Ammarell and 2nd – Frank Eskridge – unanimous approval
 - d. Housekeeping Items

2. Public Comment (John Boyer) 10:10–10:15
 - a. Public Comment Period - none
 - b. Agency Comment Period - none

3. August RBC Meeting Review (John Boyer) 10:15–10:20
 - a. John Boyer reviewed the August meeting highlights

4. RBC and Agency Comments and Edits to Draft Chapters (John Boyer) 10:20–11:00
 - a. Full Plan
 - i. Response Log – Ch 10 – 10-6 and 10-15

Discussion:

C: Enforcing drought – water districts? We are good

C: Law allows for appeal process

A: We have an appeal process and variance process but a great shutoff process

C: Terms of service dictate a lot

C: Education – voluntary – mandatory – emergency process for low inflow protocol

C: There needs to be an ordinance in place

C: Some systems have invested in resilience while other systems maybe have not

C: Messaging is important

C: Worth checking on smaller systems

C: With the technology we have today we can pull up people's account

- ii. Ch 9 – Meso-net – system of weather stations “grid system” – everyone is good with the language
- iii. Ch 9 – Drought Plan Update recommendation – Appendix 10 – Drought Plan

5. Review of Draft Executive Summary (John Boyer) 11:00–11:20
- a. Executive Summary – possible to get a brief-style handout or trifold summary of the Executive Summary?

Discussion:

C: Pay attention to the process with a diverse group of stakeholders

C: Focus on the What – What it is and what the BRBC produced

C: Develop like an info-graphic – teaser

C: Worth looking into a graphic company to produce these?

C: Identify 4-5 things we learned through the process

C: Basin is in pretty good shape but is a high growth/development basin

C: Our margin for error in SC is much smaller

C: Alignment with Surface Water permitting and the resource

C: 2 part withdrawal limit recommendation?

Part 1 - Max instantaneous rate for intakes – what if they all withdrew that amount?

Part 2 – Max annual average rate – real

*Surface Water law conceptual changes * - resource centered approach

C: Permitted vs how things actually operate “on paper” – we are over-papered and over-permitted

Sample – Handout discussion – maybe add two figures

Connecticut State example from Kirk Westphal

Break 11:20–11:30

6. Low Tech Process-based Stream Restoration (Alex Pellett, SCDNR) 11:30–11:45

Discussion:

C: Lawsuits could be possible “illegal dumping”

C: Headwater streams? Not near or with impervious surfaces

C: Could become scalable

C: Head cutting and ephemeral streams

C: Could be beneficial for a lot of wildlife

C: Support low-tech low-cost approach to stream restoration

C: Support research projects / pilot projects but they are not cheap and do cost \$

C: EPA priority on headwater streams

Recommendation:

Support further investigation of low-cost approaches to stream restoration. Encourage other RBCs to consider this. Support pilot projects. Help identify funding for further research.

Communications Plan: present at a conference (ex: SCEC) – Ken Tuck and/or Daniel Hanks to present

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| 7. Discussion and Coordination for the Public Meeting Presenting the Draft Plan (over Lunch) (John Boyer) | 11:45–12:45 |
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Broad River Basin Plan Public Meeting:

The plan framework requires two public meetings at the end to get public comments. However, prior to this first meeting, we will release the draft plan and post it on the website. We will do a second public meeting to address the issue with contact and then release the final plan a month and a half later. Proposed slides will be sent where we expect to get feedback regardless of members' skills or experiences; all input is significant. The public meeting agenda includes:

- Welcome and introduction,
- Overview of the Planning Process,
- Draft Broad River Basin Plan Highlights,
- Public Comments and Q&A with the RBC and
- Submitting Comments on the Draft Plan.

Broad River Basin Plan 2023:

What is a River Basin Plan:

Key Outcomes:

- Assesses current water supply and demand
- Identifies future water demand scenarios
- Identifies water management strategies to ensure supply meets or exceeds demand over the Planning Horizon

Features:

- Stakeholders-developed
- Covers a 50-year Planning Horizon
- Considers both surface water and groundwater
- Emphasis on drought conditions

The Four Phases of the Planning Process:

Phase 1 includes

- Develop a vision statement and goals,
- Learn about the basin's resources and modeling tools and
- Evaluate water demand projections.

In Phase2 includes:

- Evaluate current and future water availability issues,
- Identify and quantify potential water shortages through 2070 for several water demand scenarios.

Phase 3 includes:

- Develop and evaluate water management strategies and
- Recommend and prioritize strategies.

Phase 4:

- Develop legislative, policy, technical, and planning process recommendations,
- Prepare the River Basin Plan that includes an implementation plan, identifies drought response initiatives, and considers public input.

Draft Broad River Basin Plan Highlights:

Some of the things we will review include:

- Current and projected water demands in the basin
- Results of current and future water availability assessment
- Streamflow-ecology relationships
- Recommended water management strategies
- Other plan recommendations and implementation approach
- Issues and challenges

Broad RBC Vision Statement:

“Empowered stakeholders taking coordinated actions to conserve and enhance the resilience of the Broad River Basin to provide water resources for quality of life while accounting for the ecological integrity of our shared water resources.”

Broad RBC Goals:

1. Enhance the understanding of regional water issues and the need to support policies and behaviors to protect resources through promotion and education.
2. Use sound science and data-driven practices to support collaboration for all entities to effectively and efficiently manage the basin.
3. Provide legislative recommendations.

Current Water Demands in the Basin:

A quick summary of the water demand includes 1.1% Gulf Course, Agriculture 0.3%, Mining 3.4%, Manufacturing 0.1%, and water supply 95.1%. Also, these statistics do not include thermoelectric water use, which is largely returned to the river.

The key finding: only 52% of the permitted and registered surface water is currently being used in the basin.

Future Water Demand Scenarios for the Basin:

Moderate Demand Scenario demands increase from 809 MGD currently used to 932 MGD by 2070. 2070 surface water demands for this scenario are 60% of Registered and Permitted amounts. **High Demand Scenario** demands increase from 809 MGD (currently used) to 1,113 MGD by 2070. 2070 surface water demands for this scenario are 72% of Registered and Permitted amounts. Surface Water increased by 38%, and Groundwater increased by 0%.

Current and Future Water Availability Assessment:

A surface water model was used to compare available supply to current and water demands. This model explains using the surface water model to evaluate these projections and examine availability.

Surface Water Key Findings:

- Surface water resources of the Broad River basin are generally sufficient to meet current needs. Modest to moderate increases in low flows occur due to current withdrawals.
- Potential shortages seen in the high-demand scenario for nearly all water supply users can generally be avoided by optimizing the operation of existing water supply reservoirs.
- Gaffney's existing supplies may be insufficient to meet projected 2025 high demands during conditions. A variety of surface water strategies assessed in the plan may reduce this risk.
- While unlikely to occur, if fully permitted and registered amounts were withdrawn, the basin would be more sustainable with frequent shortages and more severe low flows.

Streamflow-Ecology Relationships:

The objective is to identify relationships between river flow and aquatic habitat suitability to inform water flow standards throughout the state better and serve as a tool supporting informed decision-making in the river basin planning process.

Key Finding: (Ecological risk was only assessed in primary and secondary tributaries of the Broad River basin.)

- Simulated flow regimes of the **Current Use** and **Moderate Demand 2070 Scenarios** demonstrate low-risk **aquatic ecology**. Simulated flow regimes of the **Permitted & Registered and High Demand 2070 Scenarios** suggest greater reductions in mean daily flow, **which may lead to reduced fish species richness**.
- The evaluation suggests low risk in other aquatic ecology metrics (besides fish species richness for all four planning scenarios.

Surface Water Management Strategies: (Portfolio of Demand Side Strategies)

Municipal Strategies include updating and implementing drought management plans, public education about water conservation, conservation pricing structures, reclaimed water

programs, residential water audits, leak detection and water loss control programs, and car wash recycling ordinances.

Agricultural Strategies include water audits and nozzle retrofits, irrigation scheduling, soil management, crop variety, type and conversion, and irrigation equipment changes.

Supply Side Strategies:

Public Water Suppliers with Reservoirs:

- Adjust reservoir operations for higher demands as needed.

Gaffney:

- Seasonal distribution of Gaston Shoals allocation
- Renegotiated allowance from Gaston Shoals
- Raise Lake Whelchel dam
- New quarry storage
- New Broad River intake
- Connection to SWS
- New reservoir on King's Creek
- New regional reservoir.

Recommended Supply Side Strategies for Gaffney:

Short-Term Strategies:

- Distribute Gaston Shoals allocation seasonal to be proportional to demand
- Explore feasibility of a new intake on the Broad River
- Develop adaptive management plan for mid-and long-term strategies

Mid-and Long-Term Strategies:

- Raise dam height of Lake Whelchel
- Further, evaluate feasibility of converting a quarry to a supply reservoir
- Explore an interconnection with SWS
- Explore the option of a new local or regional reservoir

Broad RBC Recommendations:

Example Technical and Program Recommendations:

- Consider incorporating future climate projections into modeling analyses (e.g., projected temperature, evapotranspiration, and precipitation trends) to address potential supply-side changes in hydrology better.
- Consider incorporating historical climate information such as dendroclimatology (tree ring data) to inform drought risk and/ or drought scenarios.
- Identify the financial impacts of increased sedimentation on reservoir and water resources and communicate the results to local government to demonstrate the value of riparian buffers, sedimentation, erosion control measures, and other policies and controls that reduce sediment generation and transport.

Example Policy, legislative, and Regulatory Recommendations:

- Reasonable use criteria should be applied to surface water withdrawal like they currently are for groundwater withdrawal when considering permit applications.

- Laws that allow for regulation of water use need to be enforceable to be effective (current water law) and can be improved to support effective management of the state’s water resources.
- 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.

Discussion:

C: Intro – Ken Tuck – 4 phases modify – two words per phase and trim out the excessive language

C: Demand Scenarios – Jeff Lineberger

C: Zoom in on SWAM schematic or modeling slide (SWAM Slide)

C: Surface Water key findings – avoid increases in low flow – bullet 1

C: Stream-flow Relationships slide – Daniel Hanks

C: Surface Water management strategies

 C: Municipal strategies – Frank Eskridge

 C: Gaffney-specific strategies – Bryant or Cory

8. October 19th RBC Meeting and Logistics (John Boyer)

12:45–1:00

The meeting will be a virtual meeting on October 19

John Boyer to send test balloon slide for the test of consensus

The meeting concluded at 12:57 PM

Minutes: Iffy Ogbekene and Tom Walker

Approved: 10/19/23

RBC Chat:

09:59:40 From Paul Pruitt To Everyone:

 This is Paul Pruitt, logged in twice, also showing at ES-1

09:59:52 From Thomas Walker To Everyone:

 ok thanks paul

10:00:14 From Thomas Walker To Everyone:

 we'll get started in a few minutes. folks getting coffee and then getting seated

10:03:14 From iPhone To Everyone:

Mcgrady

10:03:28 From Thomas Walker To Everyone:

thanks justin

10:03:49 From James Kilgo_SC Rural Water Association To Thomas Walker(Privately):

I'm here Tom.

10:03:56 From Thomas Walker To James Kilgo_SC Rural Water Association(Privately):

thanks James!

10:05:08 From James Kilgo_SC Rural Water Association To Thomas Walker(Privately):

Aye

10:06:28 From Paul Pruitt To Everyone:

Absolutely

10:06:55 From John Alexander To Everyone:



10:08:33 From Thomas Walker To Everyone:

can everyone hear ok?

10:08:45 From Kristen Austin To Everyone:

Yes, very clear.

10:08:58 From Thomas Walker To Everyone:

ok, thanks!

10:09:05 From Paul Pruitt To Everyone:

Loud and Clear

10:28:26 From Bill S. - Congaree Riverkeeper To Everyone:

Executive summary, page 3 - fix SCDHEC name.

10:31:02 From Kristen Austin To Everyone:

Same- I would prefer more time to review.

10:31:21 From Paul Pruitt To Everyone:

nothing specific

10:31:24 From James Kilgo_SC Rural Water Association To Thomas Walker(Privately):

not from me

10:31:27 From John Alexander To Everyone:

Nothing as of now

10:31:28 From Kristen Austin To Everyone:

Nothing specific.

10:31:40 From Thomas Walker To Everyone:

thanks all

10:32:05 From Kristen Austin To Everyone:

2 weeks review time is more realistic based on my workload.

10:38:29 From James Kilgo_SC Rural Water Association To Thomas Walker(Privately):

YES!

10:38:45 From James Kilgo_SC Rural Water Association To Thomas Walker(Privately):

What John just said. Very direct messaging if your speaking to decisionmakers

10:39:20 From James Kilgo_SC Rural Water Association To Thomas Walker(Privately):

That will trigger follow up when you can get into further detail not included in the fact sheet

10:42:01 From Kirk Westphal To Everyone:

Happy to help with a 2-page summary. If people would like, we could share the 2-page summary we drafted for the Connecticut State Water Plan, which outlined the process, participants, and key recommendations (for feedback on this as a template and level of detail).

10:43:16 From James Kilgo_SC Rural Water Association To Everyone:

Kirk, was the summary targeted to various audiences?

10:43:24 From Kirk Westphal To Everyone:

Here's a link. Not suggesting this is the most appropriate template, but it's an example.

10:43:26 From Kirk Westphal To Everyone:

<https://www.dropbox.com/s/ld6jed78dt3xyuw/CT%20Water%20Plan%202-pg%20Summary%20%28Jan%202018%29.pdf?dl=1>

10:43:54 From Thomas Walker To Everyone:

thanks kirk!

10:44:05 From Kirk Westphal To Everyone:

The summary for CT was aimed at both the public and the state legislature.

10:57:53 From Kristen Austin To Everyone:

Reacted to "The summary for CT w..." with 

11:01:57 From Bill S. - Congaree Riverkeeper To Everyone:

I'll send some spider lily photos

11:02:03 From Kristen Austin To Everyone:

Reacted to "I'll send some spide..." with 👍

11:02:05 From Thomas Walker To Everyone:

thanks bill

11:05:31 From Paul Pruitt To Everyone:

thanks

11:05:32 From Thomas Walker To Everyone:

10 minute break - be back at 11:15

11:36:05 From Kristen Austin To Everyone:

Okay, it's back!

11:36:13 From Kirk Westphal To Everyone:

I am having the same issue, Kristen. Ah, there we go. Everyone else online ok again?

11:36:14 From Paul Pruitt To Everyone:

just got it back

11:36:15 From Thomas Walker To Everyone:

we got dropped

11:36:20 From Thomas Walker To Everyone:

sorry folks

11:37:15 From Thomas Walker To Everyone:

john will get his computer back up after the discussion

11:39:48 From Kristen Austin To Everyone:

+1 on what Daniel noted.

11:40:50 From Kristen Austin To Everyone:

Recommend to assess further this method of stream restoration.

11:50:05 From Thomas Walker To Everyone:

we are breaking for lunch - 12:05 we'll meet back

11:50:07 From Paul Pruitt To Everyone:

Thanks

11:50:19 From Thomas Walker To Everyone:

sorry about the wifi issue all

12:50:43 From Thomas Walker To Everyone:

we're through the presentation. the wifi dropped again unfortunately. wrapping up
12:57:34 From Thomas Walker To Everyone:
meeting adjourned