Upper Savannah River Basin Council

April 10, 2024 Meeting Minutes

RBC Members Present: Scott Willett, Mark Warner, Alan Stuart, Reagan Osbon, Mack Beaty, Daniel Milam, Harry Shelley, Jill Miller, John Hains, Melisa Ramey, Cheryl Daniels, Jon Batson, Katie Hottel, Tonya Winbush, Jeff Phillips, Tim Hall, Chuck Connolly, Dan Murph, & Tonya Bonitatibus

RBC Members Absent: Billy Owens (Don Todd, alternate, present), Carl Price, Cole Rogers, & Will Williams

Planning Team Present: Ashley Reid, John Boyer, Scott Harder, Tom Walker, Joe Koon, Leigh Anne Monroe, Hannah Hartley, Andy Wachob, & Joe Gellici

Total Present: 41

1. Call the Meeting to Order (Jill Miller, RBC Chair) 10:00–10:10
    a. Review of Meeting Objectives
    b. Approval of Agenda
        i. Agenda approved.
        ii. Harry Shelley – 1st and Reagan Osbon – 2nd
    c. Approval of March 13th Minutes and Summary
        i. Minutes approved.
        ii. Scott Willett – 1st and Mark Warner – 2nd
    d. Announcements and Housekeeping Items
        i. Read Upstate drought article.

2. Public Comment (Ashley Reid) 10:10–10:15
    a. Public Comment Period
        i. none
    b. Agency Comment Period
        i. none

3. March RBC Meeting Review (Ashley Reid and John Boyer) 10:15–10:25
    a. 4 phases of the planning process
        i. Moving to phase 3
            1. Started writing chapters 1-3.
            2. Difference between recommendations and water management strategies
    b. Surface water scenarios
        i. US summary of average annual surface water demands by scenario.
        ii. Current use scenario- no shortages
        iii. Permitted and registered scenario- some shortages
        iv. 2070 moderate demand scenario- no shortages
        v. 2070 high demand scenario- small shortages

vi. Q: what are the uncertainties of these projections (climate change)?
vii. A: will talk about that later, assume stationary climate right now, past hydrology used for future projections, etc.

4. Additional Surface Water Analyses (John Boyer) 10:25–10:55
   a. Daily Timestep Scenario Results
      i. Current use: small shortages
      ii. 2070 moderate demand scenario: small shortages
      iii. 2070 high demand scenario: same shortages as monthly plus one
      iv. Permitted and registered: same as monthly
      v. Q: what are the creeks where these shortages appear?
      vi. A: 18 Mile Creek, Turkey Creek, Beaver Creek, Tributary to 12 Mile Creek
   b. Comparison to Minimum Instream Flows
      i. 2009 SCDNR Instream Flow Policy
      ii. Minimum instream flows in the SW regulations
      iii. Comparison to minimum instream flows
   c. Ecological flow nodes
      i. Next month Dr. Peoples coming to present results of ecological flow relationship analysis.
      ii. Only do it for wadable streams, only do it for spots with upstream withdrawals?
      iii. Initial points
   d. Lower Savannah Basin Scenario Results
      i. LS summary of average annual surface water demands by scenario.
      ii. Q: Who's on public water supply side of SC?
      iii. A: Not many (see slides)
      iv. Q: Is that part of GA aggregate or broken out? (North Augusta)
      v. A: Broken out
      vi. Q: Is that consumptive use?
      vii. A: Vogtle is broken out, aggregated some but not all. City of Savannah not included in the model. (so low in the basin)
      viii. Q: City of Augusta uses pumps to pump water, is that included?
      ix. A: No, not included I don't think
      x. Current use: no shortage
      xi. Permitted and registered: some shortages
      xii. Breezy Hill Q: They have access to groundwater?
      xiii. A: Not sure but we're looking at surface water here
      xiv. C: Could be tied to gw permit. GW deals with population served
      xv. Q: Would saltwater intrusion be a quality issue and, therefore, not show up on the model?
      xvi. A: Yes, it wouldn't be in the model. Hard to quantify.
      xvii. Q: Does firefighting have an impact on the model?
      xviii. A: no, water utilities account for peak demands and firefighting flows.
      xix. C: Depends on insurance for firefighting ponds. Industry does it themselves.
      xx. Big picture: we have a lot of water in the basin. One thing we want you to start thinking about is whether we will have a lot of water 30 years from

now. Cones of uncertainty. Think about strategies from risk reduction plan.

Break *10:55–11:10*

5. Strategic Statewide Resilience and Risk Reduction Plan (Hope Warren, SCOR) 11:10–11:45
    a. History
    b. What is resilience? The ability of communities, economies, and ecosystems to anticipate, absorb, recover, and thrive when presented with environmental change and natural hazards.
    c. What we do
        i. Disaster recovery
            1. HUD funds to repair homes impacted by hurricanes.
        ii. Mitigation
            1. Charleston Medical District: Ehrhardt Tunnel
            2. Horry County Buyout
                a. Q: How do people in the area that floods that often get a FEMA rating that allows them to get a mortgage?
                b. A: A lot of these areas aren't in FEMA flood zones. More future looking flood model
            3. American Rescue Plan Act Programs
        iii. Resilience planning
            1. Legislative guidance
            2. Floodwater commission principles
            3. Resilience planning assumptions
            4. Resilience definition
            5. Planning conditions
            6. Risk and vulnerability assessment.
            7. Types of flooding
                a. Flood model.
            8. First Street data now available
            9. Current process contents
            10. Federal funding
            11. Recommendation themes
        iv. Statewide watershed-based resilience planning process
            1. Q: is it focused on flooding?
            2. A: primarily yes but keep an eye out for other hazards that communities are facing
            3. From need to plan to implementation
            4. SC Resilient Coastal Communities Collaborative program
            5. Grant administration
            6. Q: Are you putting the DOT road elevations in the model too?

7. A: Yes, in the Dillon area
8. Q: Are you using road elevations from counties and cities?
9. A: No, we haven't done that, would like to do
10. Q: Is there LIDAR data available?
11. A: Yes
12. Q: Are these maps easily available?
13. A: Will be available soon
14. Q: Is this data only available to government entities or would nonprofits be able to access it?
15. A: Data agreement only allows them to share with state government. Some not for profits are buying it themselves
16. Q: Any communication with FEMA? Are they revising their model based on this data?
17. A: Not that I know of
18. Q: Can we get a map just for our area?
19. A: Would like to have the maps broken up by basin, the map person could help get that map
20. Q: Workforce, training programs?
21. A: Trying to figure out best workforce trainings
22. Q: What is your organization (SCOR) doing to involve more at-risk/lower communities, so they are aware of the assistance that's for them (grants)?
23. A: Want to help those communities most in need. Engage the whole basin but also provide extra assistance to specific communities. Watershed coordinators very important and will be doing a lot of this work (case managers). Data: watershed resilience atlas and looking at it with communities
24. Q: Property buyout – who retains the land?
25. A: Greenspace - work with local government or sometimes it is given to the neighbor with no development understanding.
26. C: Important to go through traditional channel of local government but also have coordinators go to existing community groups and events. Listen first.
27. Look at executive summary recommendations.

Lunch *11:45–12:15*

6. Further discussion and selection of water management strategies (Ashley Reid and John Boyer) 12:15–1:50
    a. Planning framework definitions
        i. Surface water management strategy
        ii. River basin plan

1. Q: We don't have a lot of surface water challenges so what does that mean for the plan?
2. A: Up to you. Where are there uncertainties? Where should we build resilience?

b. Group reports.
   i. Q1: existing strategies in the basin
   ii. Q2: effectiveness of existing strategies
   iii. Q3: can existing strategies be expanded?
   iv. Q4: what strategies are relevant in US and should be further evaluated?
      1. Q: what does "not encourage tie in of private wells" mean?
      2. A: Some areas there is a tie-in with public utilities. If well is over a certain size, they have the right to take excess water. Bullet not phrased correctly.
      3. C: Drought – private wells encourage tie-in for private wells – landowners to water utility if well runs dry
      4. C: Not tie into public works system
      5. C: Tie-in the home and not the well
      6. Q: Do we need interbasin transfers and can we bring the water back if so?
      7. A: RBC discussion needed
      8. C: Messaging of our plan should be we don't have a problem, but we don't want one. We want to support economic growth but how much and where.
      9. C: 2009 there was issues in the reservoirs
      10. C: storage left in Lake Thurman important to consider
      11. C: What we do in our basin has an impact on how they operate in Hilton Head, Savannah and Bluffton (saltwater intrusion)
      12. C: It is a little disconnected saying we don't have water problems but LSS is impacted by our decisions
      13. C: Murray Dodd is a part of a new water reuse association
      14. C: Very new – our charge is messaging to constituents and development of a regulation to allow reuse
      15. C: Industry considering using gray water – water reuse
      16. C: BJWSA – golf courses can use reuse but not yet for potable reuse

c. Demand side strategies.
   i. Important considerations
   ii. Adaptive management

d. Potential uncertainties
   i. USRBC identified.
      1. Population growth
      2. Climate change
      3. Dam failure.
      4. Routine maintenance
      5. Have industries consume significantly more water, increase demand.

6. Cyber warfare
7. PFAS
8. Land use changes.
9. 500-year flood
10. Uncertainty in the model itself
11. GA
12. Energy uncertainty

ii. Additional uncertainties
1. Agricultural
2. Municipal water use
3. Regulations
4. Disasters
5. Water treatment

e. What strategies were considered and supported in the Saluda River Basin?
i. Agricultural water conservation and efficiency strategies
1. C: Very little center pivot irrigation in this basin
2. Q: Are these recommendations or mandates?
3. A: Not mandates, just strategies that we think are a good idea, may lead to funding.
4. Q: if it's not in the plan, will it not be eligible for funding in the future?
5. A: no
6. C: Loan program, grant program if its not in their criteria they won't fund it. (eligible practice)
7. C: Most of the funding for these things comes from federal funding not state – NRCS or USDA
8. C: Clemson studies the majority of those
9. C: Future technology is an unknown
10. Q: Are we going to put numbers on anything (quantifying the impacts)?
11. A: Limited info in memo
12. C: Some are site specific
13. C: Cover cropping project on my farm – no impact on my farm but cover cropping could be very meaningful on another farm
14. C: Prioritized in Edisto
15. Q: Adaptive management how does it play into strategy development? Have any RBCs talked about what stages they might change their idea?
16. A: Broad RBC identified they (Gaffney) will have water shortage by 2025, looked at how they could adjust water usage. Had short/ medium/ long term plans. Reassess in 5 years to see if shortages come about. Example of adaptive management. Higher climate might allow soil to lose ability to hold water and may need more irrigation
17. Q: Better real – time data?
18. A: Keep that in mind

19. C: Crop science for drought tolerant species
20. C: Be careful and don't dilute the critical strategies by listing a lot that aren't germane. What will have the most impact?
21. C: BMPs – follow Clemson or USDA
22. C: In this basin these aren't really important
23. C: If we don't do a lot of irrigation, do we need irrigation stuff?
24. Q: How many irrigators do we have?
25. A: 4-5 surface water users
26. C: Might not matter how many people irrigate, they all should be doing sustainably measures to the extent that they can afford it
27. Q: Are we talking about here and now or the future?
28. A: Both – We may get a larger farm / water user
29. Catch all phrase is "follow BMPs". Industry will give us best info
30. Farming will use BMPs
31. C: For me crop variety, type, soil management and cover cropping
32. C: Phrase it as "incentivize conservation and irrigation best management practices" and stay in tune with those from industry leaders
33. C: Keep conservation in the phrase
34. C: Water conservation is important to end users too. Ag and Golf courses seen as water abusers, not necessarily true. The end users have BMPs in mind. We have BMP in the Carolinas. We aren't profitable if we waste water. More in-tune environmentally. Do it unconsciously – be good water stewards
35. Q: Keeping some language for granting purposes? Grants for ag or nonprofits?
36. A: 319 grant that would help with this work – impaired waterways. Lots of ag money and other conservation money.
37. Q: For grass crop, would irrigation scheduling and technology be more important for golf?
38. A: We are already there really. New technology is already pushing the envelope. Have weather stations, moisture meter monitoring.
39. C: Could we nest irrigation under future technologies?
40. C: Should we skew towards those who have projected shortages? Create a top 10 or something?
41. C: Smart systems – moisture meters have developed significantly. Drone technology – 100 ft in air to see drought stress. Precision ag – variable rate irrigation
42. C: AI has been used to help with irrigation. Falls under future technologies.
43. C: ag uses very little water, so we don't want to overthink it
44. C: How to word this for grants?
45. C: Not all about grants – making sure water is available for all

ii. Municipal
    1. Saluda said it's not relevant to them.

2. Q: Did they discuss individual metering for apartments? GA requires individual metering. It's in the recommendations.
3. C: unclear about the purpose of recommendations.
4. C: Recommendations are to get support for grants. What are other purposes? They're not going to be real ordinances. We're in planning framework to identify strategies to reduce/ eliminate shortages but we don't have shortages. Increasing surface water availability.
5. Q: Are these recommendations to users within municipal/ public systems or to cities?
6. A: Geared towards utilities, cities, towns that provide water
7. C: Tell municipalities to water the streetscape and not the street (bricks) efficient / effective watering
8. Q: All of this is the basis for the state water plan to be adopted as the official document by the General Assembly?
9. A: Will present to the State Legislature.
10. Q: Will the state use the info to adjust regulations?
11. A: We'll see, 140 stakeholders saying something would be hard not to consider. Goal is to get the plan accepted by the State.
12. C: Trying to ensure this planning process doesn't fallow past plans – try to get the GA to use it to refine, develop regulations and policies. Want to set up a method or ethic.
13. C: We should prioritize public education. Want people to know about it so they advocate for it.
14. C: One thing we didn't include is general best practices – updating drought management planning. Next meeting talk about drought management planning
15. Q: Where would stormwater management fall in this? Infiltration
16. A: Might be a strategy not a recommendation
17. C: Natural mechanisms
18. C: Fair game if you want to develop a recommendation
19. C: Anyway to give the public education a top priority emphasis but not prioritize?
20. C: Put it at the top of list to stand out
21. C: "Highest priorities" – with low priority people may see it as unimportant but it made the list
22. C: General public is the biggest abuser – so need education on BMPs for homeowners, etc
23. C: Education about water abuse
24. C: Be proactive and not reactive
25. C: Salt Lake City is the single largest user of water in the US. Water efficiency standards for new construction should stay
26. C: Can't buy the water wasting appliances anymore
27. Conservation pricing structures
    a. C: Drought surcharge might scare people away and is scary for low income people

b. C: Can tailor fees to not impact low-income people
c. C: Phoenix example – "demand charge" on the upper block. In the event regardless of cost and we can't meet demand the staff was authorized to increase rate on 3rd block so demand met supply. Disincentivize heavy water use
d. C: City of Aiken is doing the opposite
e. C: Decreasing block rate helps bulk sales
f. Q: Behind each strategy will there be an explanation?
g. A: Yes, similar to memo
h. Q: Can drought surcharge be specific to industry and not residential?
i. A: No. Rates wouldn't affect the average person
j. C: We should discourage declining block rates
k. C: Drought surcharge may make cutbacks
l. C: Industry increasing rate structure – they'll move the industry
m. C: Rate structure is different for industry
n. C: Declining block rates encourage waste
o. C: Decrease demand replaces revenue
p. Q: Drought surcharge affect residential pocketbook? Most people in my community are penny pinchers. For those who can't afford it, how will it affect them? Emphasis about where the surcharge goes to
q. A: Need clarity on block rates. No one has a goal of restricting essential water use. Those who are using multiples of normal use- they get the increasing price. Minimal water bills don't see that charge
r. Q: Normal water use during drought there would be a drawback of water use. What if unintended circumstance does affect low income people? Is there a way to surcharge the largest users?
s. C: Middle of page 2 of memo. Inman – Campobello is trying to discourage highest users not impact normal water user
t. C: So it is not for regular every day person. So just for industry?
u. A: No, just want to disincentivize heavy water users
v. Circulate an article about equity in drought surcharges for next meeting.
w. C: We start talking practices people get very defensive at RBC meetings and think that they shouldn't have to change. Everyone needs to give up a bit for the best outcome. Work together and don't retreat to corners
x. C: Who has authority to limit declining block rates?
y. C: It's a recommendation

z. C: Keep conservation pricing structures
aa. C: 1994 was the cutoff date (houses built after 1994 have high efficiency toilets)
bb. Q: Don't we get to score the plan?
cc. A: Yes, 1-5 rank for draft plan. Final plan up or down

28. Toilet rebate program
    a. Short-term benefit
    b. Utility gives a rebate to someone who wants to replace a nonefficient toilet with an efficient one.
    c. Not useful
    d. C: Toilet rebate?
    e. A: Not at a basin scale
    f. C: Probably outlived its usefulness
29. Landscape irrigation programs and codes.
    a. C: If you go to inclining block rate people use less to irrigate. Don't want to start growing landscapes that are water intensive – with increasing blocks and drought surcharges
    b. Q: We allow residents to have a water tap and separate irrigation tap. Eliminate that?
    c. A: No, better to keep it. Two meters charge different rate for irrigation as it isn't essential
    d. Q: When drought triggers only?
    e. A: Meeting max drought needs requires more capacity which is cost prohibitive. Drought surcharge saves people money
    f. C: Suggest communities with fixed resources, would you ask folks to eliminate essential or non-essential. More focused during drought
    g. C: Educate people and then impose more stringent standards when you have to
    h. C: I would be surprised if most utilities have two meters. No requirement to do it. Some allow it to reduce wastewater charges on lawn irrigation
    i. C: Is there a reason to recommend landscape irrigation programs or just tackle it through set rate structures?
    j. C: Can add programs and codes but then need stuff to enforce
30. Leak detection and water loss control programs.
    a. GA has a statewide program.
    b. C: A lot of these things are included in sanitary surveys. Might be good to include there – should be included
    c. C: Increased focus and guidance and transparency of loss 30-40-50% loss in a lot of smaller utilities. Focus on DES sanitary survey A-Z of quantity and quality water loss falls into a checkbox

d. C: Put a number on it not just check the box
e. C: We don't have a target number
f. C: AWWA software gives us a score nowadays
g. C: Supposed to show improvement up to a certain point
h. Q: Do people actually read the surveys?
i. A: Yes they do read them but doesn't drive as much as other topics to get an unsatisfactory score
j. Q: Is there an economic impact?
k. A: Yes, you pay for all the water and if you lose water, you still have to pay

31. Next meeting will go through all of the strategies.

7. Upcoming Meeting Schedule and Topics (Ashley Reid) 1:50–2:00
    a. Flow ecology relationships.
    b. Not many more presentations
    c. Q: Have a chance to take a look at extending your hydraulic record?
    d. A: Monte Carlo runs are not built into the model to be able to do that. If you have 50-70 years of hydrology, can create random sample.
    e. Questions and considerations for RBC
    f. C: Pick a drought, repeat it and show results. Do we have problems at the 4th year of drought? Haven't seen a fifth year or sixth year. What does it look like then? How long can we sustain a drought we have seen?
    g. C: We did that in Saluda
    h. C: Let's run it until it breaks in the Savannah
    i. Q: What does it mean to establish a surface water condition or reach of interest? A: Planning framework defines surface water condition and reaches of interest. Reach of interest- currently not a shortage but you want to protect it. Example of below Saluda Lake Dam
    j. C: Flow-ecology could be informative for that conversation
    k. C: Opportunity to be proactive have future opportunities to degrade

Meeting adjourned: 2:06 pm

Minutes: Taylor Le Moal and Tom Walker

Approved: 5/8/2024