

Saluda River Basin Council

Meeting Minutes

May 15, 2024

RBC Members Present: KC Price, Michael Waddell, Eddie Owen, Kaleigh Sims, Tate Davis, Rick Huffman, Thompson Smith, Jeff Boss, Rebecca Wade, Robert Hanley, Kevin Miller, Paul Lewis, Devin Orr, Jason Davis, Katherine Amidon, Josie Newton, Charlie Timmons, Rett Templeton, Larry Nates, Melanie Ruhlman, Phil Fragapane, Brandon Grooms, & David Coggins

RBC Members Absent: Patrick Jackson, David Lawrence, Jay Nicholson, & Justin McGrady

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

Total Present: 42

K.C. Price called the May 15th, 2024, meeting to order. The Saluda RBC's May 15th meeting objectives included learning about the RBC's obligations for drought planning and response, reviewing existing utility drought plans and learning about the new Drought Planning Guidebook developed by the State Climatology Office, reviewing and discussing drought response strategies and recommendations developed by other River Basin Councils and discussing and developing drought response strategies and recommendations for the Saluda River Basin.

K.C. Price called for approval of the meeting agenda. Paul Lewis – 1st made a motion to approve the meeting agenda with Tate Davis – 2nd, which was approved unanimously.

Approval of the April meeting minutes and summary were tabled until the June meeting due to errors in one of the presentations. Also, KC called for those who will not attend the June 19th meeting. The June 19th meeting will be held in Greenville at the Greenville Water Community Room. KC introduced a guest in attendance to the RBC.

Housekeeping:

- Engagement of the public with this process-what, when, how, who- (Status- Ongoing)

- Engagement of public officials (pertinent municipalities) to promote the plan when we get to the public comment period and beyond- (Status-Not started)
- Identify and engage stakeholders that are not involved in the basin council but have an overlapping or adjacent connection to our efforts. For example, NRCS, SC Forestry, SCEMD, etc. (SCDNR emails state and federal agencies ahead of each council meeting)- (Status-Ongoing)
- Development and maintenance of a public facing data clearinghouse for all things water with Saluda Basin-(Status-Not Started)
- Funding for implementation- (Status-Not started)
- We have discussed some data gaps-making sure we acknowledge those in our final report and determine how to mitigate those in the future- (Status-Started, e.g., fish data in Blue Ridge)
- If we want to request additional surface water demand scenarios we need to decide when?- (Status-Last call)
- Determine how and when we will coordinate with other basin councils- (Status-Ongoing)
- What recommendations do we need to consider for non-FERC regulated dams and how they impact recreation- (Status-Discussing today)
- Keep apprised of the Surface Water Withdrawal Act- (Status-Ongoing)
- John to share general PPT with RBC for council member customization and sharing with networks
- Idea for public engagement, create a ppt that is student-friendly (need age groups desired and a better understanding of who would have use for this)
- Optional idea for a talk-Ask our state representative to speak to us about current policies? Maybe with Megan Chase from Upstate Forever (Rebecca Wade’s suggestion regarding policies)?
- Legal petition for safe yield conversation-add to discussion with policy and legislature
- EnerSys is coming to Greenville-New industry.

Discussion during this section:

*Technical Recommendation discussion - Reminder to add to the parking lot ideas for additional USGS gages that would help us in the future.

C: Bit ironic about what type of industry coming into the river basin. GVL water didn’t encourage high water users but a battery plant is coming to GVL.

C: Half revenue is coming from a chicken plant.

C: Location of the plant is the issue.

Beginning to Consider Plans Recommendations:

- When updating Drought Management Plans, encourage water utilities to use the SWAM model to evaluate the potential effectiveness of drought triggers.
- Consider use of the River Basin Plan as a tool for smart growth and economic development. The Plan can highlight areas where water resources are abundant and are more amenable to growth.
- Encourage more fish and macroinvertebrate data collection in Blue Ridge province to support development of flow-ecology relationships.

However, there were no public or agency comments.

Review of the April Meeting Highlights:

John facilitated this session by highlighting the review of the previous meeting.

The Proposal for Negotiations of Northbrook Hydroelectric Operations: it is proposed that the Saluda RBC seek to work with Northbrook Hydroelectric to obtain operations meeting the below criteria at its hydroelectric operation facilities at Saluda Lake, Holiday Dam and Boyd Mill Pond. The criteria for a minimum release shall be maintained at the lesser of 30% of MADF.

Proposal for Negotiations of Northbrook Hydroelectric Operations: it is requested that Northbrook add these facilities to its website, including the following information:

1. Planned 3-day release schedule
2. Recent reservoir level
3. Recent release amounts
4. 30-day notice of planned lake level drawdowns for maintenance.

However, it may be reasonable to allow a minimum release up to 20% less than the above criteria to allow the reservoir to return to its target level following a drawdown in which proper public notice is given.

C: Median vs Mean comment from April – 20% of a difference.

We also heard from Alex Pellett about Low-Tech Process-Based Stream Restoration, where he showed us photos of what he has been doing regarding stream restoration from his property. In addition, Melanie Ruhlman discussed Upper Saluda Watershed Programs for Sediment, where she highlighted Sediment

Impacts, including effects on drinking water sources, loss of water supply storage, degrades aquatic habitat, effective pollutant carrier, impairs water quality, impacts recreation and loss of land.

C: Some changes to the slides need to be reflected in the minutes for approval.

C: Discussions with team about stream restoration and streambank stabilization. Maybe getting into semantics but the new slides use streambank stabilization label instead.

However, in February 2024, remember we discussed what is the impact on reservoirs if the drought of 2007-2008 were repeated? We took the hydrology in the model from those 2 years and created a pseudo-hydrologic time series by repeating those drought years examples, including Lake Greenwood. In other words, Lake Greenwood levels repeat the hydrology of 2007-2008. i.e., 2009-2010 hydrology was replaced with 2007-2008 hydrology, indicating the lake had no problem refilling even with lower inflows. Resequencing Historical Flows to Investigate Potential Future Droughts in the Upper Savannah Basin;

Methods- Three constructed scenarios:

1. Repeating 5-year drought constructed by splicing together the five driest water years in the hydrologic period of record with respect to mainstream total annual flow. These were 2001, 2008, 1981, 1988, and 2017.
2. Repeating single year drought corresponding to the second driest water year (2008) and identified as the critical single-year drought with respect to Lake Thurmond water supply availability.
3. Repeating synthetic drought year constructed by splicing together the twelve driest calendar month flows in the hydrologic period of record.

Resequencing Historical Flows to Investigate Potential Future Droughts: here, we used ranking data based on mainstem headwater flows. 5 driest years in terms of mainstem flow resulted in a median flow of 79 CFS.

Lake Thurmond Storage (MG): using 10 years of normal hydrology and applying the 2070 high-demand scenarios, we see it follows a guide per lake levels go up and down seasonally. But when we applied the 5 driest scenarios, we saw lake levels not able to recover each year. In month 49, shortages appear for Lake Thurmond water users in Scenario 1. Scenario 2, where we just ran 2008 over and over, and over 37 months, we started to see a shortage for those water users. Scenario 3, over month 17- shortages appear for Lake Thurmond water users.

Discussion:

C: Suggest Lake Greenwood determine if it is worthy – merit investigation.

C: Interesting exercise – willing to look at it in SWAM. Unless there is a desire to do it basinwide. Would like to know since I'm on Lake Greenwood.

C: Give public a reason to be concerned? Up here we are supposed to get more rainfall. Unreasonable.

C: Our system is managed differently than the Upper Savannah.

C: Generally agree – in our recommendations (droughts occur).

Q: What was happening in Jocassee and Keowee?

A: Not much of an issue I recall.

Q: How to treat hydro use? Hartwell and Thurmond – water discharged from lake

A: Non-consumptive /pass through in our model this is included. Minimum releases / guide curves etc in the model. We didn't adjust operating rules in our analysis.

Q: Saluda Lake and run analysis on that?

A: 2007-2008 it was brought to Deadpool so we saw it would be impacted already.

C: Drought – “drought of record”. 100 year – 50 year droughts statistical likelihood of these scenarios.

Check with Kirk W.

C: 200-300 year drought might be outside.

Drought Management and Response Part 1: John Boyer anchored this session with;

Per the Planning Framework, the Specific Obligations of the RBC, with Support from the SCDNR, are:

- Collecting and evaluating local hydrologic information for drought assessment
- Providing local drought information and recommendations to the DRC regarding drought declarations.
- Communicating drought conditions and drought declarations to the rest of the RBC, stakeholders, and the public.
- Advocating for a coordinated, basin-wide response by entities with drought management responsibilities.
- Coordinating with other drought management groups in the basin as needed.

Q: Framework discuss severity of the drought?

A: Just meeting if it was any drought stage. Up to the RBC to decide.

C: Depends on if drought response committee members are coordinators and liaisons for the RBC. If it gets more severe decide if need to meet monthly.

Q: Meeting frequency after the plan is done?

A: At least once per year.

C: Not extreme drought quarterly might be appropriate.

C: We haven't been in a drought to test RBC plan meetings. Don't be locked in and allow flexibility in mild droughts.

Q: Any DRC reps on RBC?

*A: No, may be a recommendation to get someone on the DRC.

C: Can always sit in on the calls.

C: Yes a liaison and communicating between DRC and RBC.

Planning Framework Outline for Chapter 8. Drought Response:

1. Summarize existing drought plans and drought advisory groups
2. Summarize any drought response initiatives developed by the RBC
3. List recommendations on drought management or drought management strategies
4. Include a communication plan to inform stakeholders and the public on current drought conditions and activities regarding drought response.

Drought Monitoring in South Carolina:

Elliot Wickham from the State Climatology Office facilitated this session by distinguishing differences between the Drought Response Committee and US Drought Monitor Processes and Outcomes. The SC Climate Office leads the state's drought monitoring efforts.

South Carolina Drought Response Committee (DRC):

Why: To carefully and closely monitor, conserve, and manage the state's water resources in the best interest of all South Carolinians.

Who: Drought Response Committee and Department of Natural Resources-State Climatology Office. The statewide members include;

- Forestry Commission
- Department of Agriculture
- Emergency Management Division
- Department of Health and Environmental Control

- Department of Natural Resources.

Committee Members: Local members (12 per DMA, which are Central DMA Santee Basin, Northwest DMA Pee Dee Basin, West DMA Savannah Basin, and Southern DMA ACE Basin) engaging in Water Utilities, Regional Council of Governments, Power Generation Facilities, Soil and Water Cons. Districts, Agriculture, Domestic Users, and Industry. The whole committee has 53 members.

The DRC functions as:

1. Meets as needed
2. Makes county-level designations for drought severity, including Normal, Incipient, Moderate, Severe, and Extreme.
3. At severe and extreme levels will make recommendations for non-essential water curtailment for only public water supplies.

Public Water Suppliers:

1. Are required to have local drought management plan response ordinance for water conservation and may enact their plans based on DRC county-level drought designations.

When all the committee members meet, they look at the following indicators which include:

- Palmer Drought Severity Index (PDSI)
- Crop Moisture Index (CMI)
- Standard Precipitation Index (SPI)
- Ketch-Byram Drought Index (KBDI)
- Average daily streamflow
- Groundwater Levels.

The United States Drought Monitor (USDM):

- National product to map drought severity and extent
- The US Drought Monitor aims to capture and depict all types of drought, including meteorological, agricultural, hydrologic, socioeconomic and ecological.
- Some programs use this product for agricultural aid

The USDM Process:

- The map is updated each week by one author
- All authors are part of federal entities

- USDM categories are based on convergence of evidence from multiple data points and indicators
- Most states provide input to help the author accurately depict local conditions.

The USDM process: Data include;

- Surface Water
- Vegetation Health
- Evaporation
- Ground Water
- Soil Moisture
- Precipitation
- Impacts & Conditions Monitoring reports

The USDM Process: Categories; intensity is based on historical likelihood. Data is based on percentile and 100 years of ranked data. Also, categories into Drought from D1-D4 are “moderate, severe, extreme and exceptional droughts,” respectively, and D0 is “Not drought,” which is abnormally dry.

South Carolina and USDM: Weekly data Review includes;

- Precipitation
- Evaporation
- Surface Water
- Soil Moisture
- Groundwater
- Vegetation Health
- Reports

USDM vs. SC DRC

Agency Leads:

USDM- Authors are from Federal Agencies (NDMC, NOAA, and USDA)

SC DRC- Five States Agencies (DNR, DHEC, SCDA, EMD, SCFC)

Participants:

USDM - Federal and State Agencies, as well as universities and other entities that monitor conditions.

SC DRC- Local stakeholders (water suppliers, agriculture, conservation district, power generation, local gov.)

Frequency:

USDM- Weekly product

SC DRC- Committee convenes as needed when conditions warrant discussion.

Severity Levels:

USDM - Abnormally dry, Moderate, Severe, Extreme, & Exceptional Drought

SC DRC- Incipient, Moderate, Severe, and Extreme Drought

Allows for:

USDM- Federal disaster declarations and loans for agriculture

SC DRC- curtailment recommendations for public water suppliers in South Carolina.

Why the Maps Look Different?**Time:**

- DRC map updated as needed
- USDM updated weekly

Indicators:

- Used indicators are similar yet different
- Spatial and temporal variations
- DRC uses indicator thresholds, USDM uses percentile rankings.
- DRC designations follow county lines, USDM designations follow data “polygons”

Process Outcomes:

DRC:

1. County-level drought designations that can result in local public water systems enacting their drought management.
2. At severe and extreme levels will make recommendations for non-essential water curtailment for only public water suppliers.

The outcomes of DRC process relate to public water suppliers

USDM:

1. The (USDA) may use the USDM for agricultural aid depending on severity and temporal extent for the following programs: Crop Insurance, Conservation Reserve Program Haying and Grazing, Emergency Conservation Program, Farm loans, Emergency Watershed program and Livestock Forage Program.

The outcomes of USDM process relate to Agriculture.

Discussion during this portion of the meeting:

Q: 1st map – are we in incipient drought?

A: Indicator for abnormally dry (yellow). We are in all white right now with all of the rain we've received.

Q: DRC expect input from councils?

A: We're navigating that process, haven't been there yet. Most RBCs have DRC members on council.

Drought can vary spatially, getting that perspective is good. This is a multi-sector group looking at other things which is invaluable.

C: Would hope that is the case since we have 8 interest categories.

C: Comes back again to drought meeting frequency.

Q: Is DRC restricted by law to only make recommendations for public water suppliers?

A: Yes, we'll make county designations and also recommendations for curtailment for water suppliers who have a drought plan. Would look and determine curtailment.

Q: Can State mandate?

A: No mandate, haven't gotten there yet. If gets bad enough they'll communicate with the Governor's Office. Governor decides.

C: Never mandated but has authority to mandate (Governor).

Q: What do they do if you don't reduce?

A: It would get ugly – National Guard may come out.

C: Process outcomes – is that saying (EQIP) would prioritize funding.

C: Big one is livestock forage program – how long in drought and severity. Different for each program.

C: Usual farmer compliant – they aren't capturing data to be eligible. Clemson is putting out weather stations to help clarify.

C: Reporting is a big component. One Recommendation is to use CMOR tool to put in information. Much more detailed. Geotags it. Refines the scale.

Q: Hope's pet project?

A: No, Mesonet is different. Working on getting more reports. Farm Service Agency sends me weekly reports. More reports are a good thing. We are trying to get more station data.

C: Stations would get to that more.

C: We are always asking for more. Can get Hope to update the group if necessary.

Q: DRC can only make recommendations to only public water suppliers. DRC recommendations for other permitted/registered users?

A: No, 11-12 year gap between Drought Response Act and SW regulations.

C: Drought Act supersedes if Governor makes declaration.

C: Governor has authority.

C: Yes, he or she does.

C: Once drought beyond scope of DRC gets kicked over to SERT for operations plan.

Q: How does process/how are recommendations made? Person or group that interprets this non-subjectively.

A: When we do a committee meeting. We go through data, hear State agency reports, forestry reports. Then we go through each DMA – local members can only vote on their DRC. We go county by county. Who should be in drought. Make motions, vote, etc. Keep it so it isn't flipping back and forth. It can happen depending on rainfall.

C: Could be open to scrutiny – political process. Not purely data driven.

C: More heavily focused on public supply systems. Sometimes moving too slowly. Where drought monitor comes in. There's always scrutiny. They go hand in hand.

C: My experience – easier to get in to drought than get out. Groups work well together.

C: LIP is a black box - crunches #s gives you the answer.

Q: In Chat

A: DRC is for response – not giving recommendations down the road. County level vs River basin level question. It is they generally follow. "2-level cut" the river basins snapped out at county level. Usually a water system is in one county. Up to water supplier to enact the plan. Most people understand a county vs a watershed.

C: Yes, thinking about how Broad and Saluda cut through Greenville. 2 RBCs and if there is disagreement.

Drought Management and Response Part 2:

Drought Planning Guidebook: Elliot anchored this session by highlighting the background concerning mitigation response act and regulations required to create a drought management plan, response or events. The drought management planning developed a tabletop exercise for the water utilities across the state during drought management and how this exercise can be transferable to other water systems or adapted to their needs. This drought planning guidebook provides background information on things

to consider when updating water utility drought plans. However, feel free to send helpful information on how to improve the drought plan guidebook.

Discussion:

Q: GVL Water just updated plan. Not yet approved, but can you give us an update?

A: Our plan had no teeth to make people act. Still voluntary but now have a tiered structure. Voluntary until extreme drought. More difficult for people to ignore. Wouldn't impact normal users.

C: Only impacts high water users. Low income folks not impacted.

C: 1st tier is 5000 g/month but from 5000-10000 goes up. Our water is cheap so the cost doesn't go up that much even with a tiered structure.

C: Updated indicators as well. More fine scale data for individual water systems.

C: We set indicators in our lakes. Table Rock and other lake is also impacted by Upper savannah Lake Keowee management issue.

Q: Why is water so cheap? Does it foster abuse?

A: Water is cheap but sewer is also on the bill so it will get people to cut use.

Saluda River Drought Management Plans (examples): John Boyer started by citing the example of the Saluda River Basin Management Plans for almost twenty years; most of the plans are not updated and pointed out two vital areas that had drought indicators, which include demand or storage in their distribution system not necessarily on supply. He disagreed with the assertion, stating that drought could be triggered by available supply in Lake or river, not necessarily by the distribution systems.

C: Wouldn't say getting rid of. Don't have example of what has happened. Flash droughts in the Fall. Having a plan for water (not having enough) not necessarily drought related. Example of freeze in 2022 which burst pipes.

C: Small systems use and would (supply guidance) know what to do.

C: SCO is working with SCRWA – four workshops coming up. Working with utilities to help them update their plan. Continuing education units. Implementation thing for RBC to consider.

C: Education is a component – why not broader audience?

C: With helping utilities - give them the tools to update. Utilities can educate their base.

Drought Management and Response Part 3: John Boyer started this session by introducing –

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Drought management Areas include Central DMA Santee Basin, Northeast DMA Pee Dee Basin, West DMA Savannah Basin, and Southern DMA ACE Basin. The Saluda Basins are mostly in the central DMA.

South Carolina Drought Response Committee: The DRC carefully and closely monitors, conserves, and manages the State’s water resources in the best interest of the South Carolinians.

C: A county can only have 2 people on the DRC.

However, having that background information, some of the questions for the RBC to address include- (Drought Response-Communication Plan):

2. How does the RBC want to communicate to the rest of the RBC, the public, and stakeholders?

The structure of this discussion includes the RBC chair and/or Vice Chair soliciting input from RBC members on drought conditions and responses for their location and interests, then compiling drought information from RBC members, and RBC Chair reports to Central DMA Representatives and DRC. The DRC and SCDNR have existing mechanisms to communicate and coordinate drought response with stakeholders and the public.

Discussion:

Q: Point where all RBCs get together?

A: Not been discussed or offered.

Q: Consistent w/ other RBCs?

A: Up to you.

C: Be on the same page.

C: Chair and Vice Chair would have a role.

C: One person – get consensus then communicate it.

C: Yes, Saluda Drought committee is that a call or meeting to solicit input.

C: Set up online meetings – zoom or whatever.

C: Do it before DRC meeting to put info into that group.

C: DRC lead time worse case scenario is 2 weeks in advance. Posted?

C: DRC listserv and scdrought.com it is updated.

Q: If this council appoints a liaison can they get on listserv?

A: Yes, we need to know who.

C: If you wanted to provide info on calls – we have local condition report time set aside. We would bring that into the meeting if the person had slides.

Q: Are the Clemson weather stations used?

A: Yes, not used for DRC – I use it for my weekly reports. Newer data set.

C: Brought up flash drought.

C: Might suggest RBC members know local conditions. Have duty to report to RBC liaison.

C: Clemson weather stations in every county. At some point we'll capture more data.

C: Wanting to hook in private weather stations to improve data.

C: Cocorahs is different. Rain gage only. Captures precip.

C: Don't all exactly read alike.

C: They can be calibrated. Setting – can adjust or just give you info for your farm/land.

C: We don't have soil moisture data. For this state look at remote sensing data.

C: Becoming more of a push in agriculture – soil moisture sensors.

C: Members on DRC – one is on other side of county near the airport.

C: He does a great job giving us ag updates. He's the only one for the whole Central DMA.

C: Also works for FSA – takes pictures. NAP insurance related.

Q: Willing to serve as liaison?

A: Adding extra layers of communication sometimes miss things. Is there a tool for us to all use and make it everyone's responsibility? EPA tool can take picture, write info, and its compiled.

C: Set up certain parameters/drop down tools. Canned responses then imported into spreadsheet.

C: Tool?

C: Anecdata – can be used statewide.

C: Spatially tied.

C: Sounds good. Still needs to be someone's job.

C: Never hear of it with drought community. Now sure how to use it for drought. CMOR tool or Anecdata someone still has to compile and look at it. Prevent duplication of efforts maybe. Low-budget surveys populating survey with that information then populated for someone. Google survey.

Q: What is CMOR tool?

A: Best way to report. I could show what it looks like online. Geotag.

Q: Once data is entered can people see the data?

A: Time components – circle for report. Usually ag reports and option for pictures.

C: Anyone could go in and see the observations?

C: Other RBCs use CMOR tool.

Q: Who is the liaison?

A: Chair or Vice Chair. Keep "or" appropriate liaison.

Public Communications (RBC involved?)

C: Comms with stakeholders and not public.

C: Need to rely on DRC and water utilities.

C: Saluda RBC could set up social media sites.

C: Redundant or dependent same as others doing it. Stepping on other's toes.

C: Risk of mixed messages.

C: Shouldn't we be prepared. RBC policy? Do you have a comment? If media or press reaches out, can't speak on behalf of RBC. Can speak on own interests.

1. Does the RBC want to develop any drought management or response strategies?

The strategy serves to augment statewide and municipal drought management plans by triggering tiered withdrawal curtailment by the largest surface water users in the basin when Edisto River flow reaches

certain low levels. Remember, in one of our last meetings, Jeff talked about the CWWMG Low Inflow Protocol, including a set protocol that has the four different stages that trigger drought management. Another example we looked at is the Keowee-Toxaway Low Inflow Protocol, where we looked at 5 stages that trigger drought conditions. With those in mind, do we all see the need for any low inflow protocol to support a drought management strategy that applies to parts of the basin or everything in the basin?

Discussion:

C: LIP – streamflow, drought monitor, groundwater monitoring, 1 more put data in and it cranks out drought stage. Gets to zero, monthly meeting to discuss response.

Q: LTA?

A: Long term average.

C: Edisto is totally different situation. Conjunctive use opportunities. Catawba system is concerning with mandates. Seems too detailed.

C: Used to live under LIP, served a good purpose for that area. If we bring Saluda into it, would conflict with GVL Water. Would get sticky quick. Doesn't seem like it would work well here. Individual utilities can come up with own decisions.

C: GVL Water reservoir management and go to Keowee. We already have one sort of. Maintain base flows maybe not RBC LIP but GVL default one.

C: Have hydro on those two basins (Duke Energy).

C: Another difference is nuclear plants and cooling needs. Not applicable here.

C: Years ago had issue with minimum flow. Comes back to low flow, how does it affect micro/macro invertebrates? Without them the water is dead.

C: Extreme droughts – emotion and politics get involved. If GVL was pulling in extreme droughts it gets political and complicated in a hurry.

More evaporating from nuclear plant then GVL was pulling out. Relicensing agreement with Duke and USACE, GVL Water when it gets dry those discussions come back up.

3. Does the RBC want to develop recommendations on drought management?

1. An example of drought response recommendations in Chapter 8 states that RBC recommends that water utilities review and update their drought management plan and response ordinance every 5

years or more frequently if conditions change. Changing conditions that could merit an update might include:

- Change in the source(s) of water
- Significant increase in water demand (such as the addition of a new, large wholesale customer)
- Significant change in the proportion of water used by one sector compared to another (e.g., residential versus commercial use)
- Addition (or loss) of another user relying on the state source water
- New water supply agreement with a neighboring utility
- Incorporating lessons learned (if any) from recent drought

Discussion:

KEEP

C: Seems boiler plate.

C: 10 years not 5 years.

C: The 5 year part is FEMA hazard recommendation. Depends on your utility and growth or other changes. Update doesn't mean rewrite the whole thing. Could be updating contact info.

C: 5 years is good with turnover and it is important to review and make adjustments.

C: Suggest – modifier to update/review 5 years and if appropriate, update.

C: Not just a review cycle of 5 years. Update when an event occurs especially if something didn't work.

After a significant drought Add as a bullet – lessons learned - John added.

Q: Drought management plan – how often do you open it?

A: We had ours approved in 2023 (planned 21-22) replaced 2008.

C: When someone says drought that's when we pull it down.

C: Merit in recommending review other than when a drought occurs.

C: Yes, make someone open it.

C: Need to explain it to replacements (every 5 years).

C: DRC when hots drought – we send out message to all affected water utilities. You're in drought. Review your plan.

C: In 2008 we were getting called every week.

2. The RBC recommends that water utilities, when updating their drought management plan and response ordinance, look for opportunities to develop response actions that are consistent with those of neighboring utilities.

Discussion:

TOSS

C: Difficult to get everyone on the same page.

C: If we have a liaison perhaps that's a responsibility of that liaison to reach out. Systems are so different though.

C: Source is different and systems are different.

C: Broad basin there were inconsistencies local to systems involved. Wholesale customers primarily. Some unique issues in that basin. Does it warrant a recommendation in the Saluda? Would prefer we recommend things that make sense to us.

C: If you get utilities to update and use guidebook there is language in there that speaks to that in the guidebook.

C: Communication issue.

C: Scratch it.

3. The RBC recommends that water utilities coordinate, to the extent practical, their drought response messaging.

Discussion:

TABLED

C: Support – this one makes sure one utility we have tons of water no problem and other utilities have to cut.

C: What if it is true?

C: Above us in 2008 they were running out of water. We weren't running out, hard to have same messaging

C: Last point monthly meeting.

C: For utilities – already meeting.

C: I'd support if on zoom and someone hosting it.

In drought utilities coordinate through monthly meetings

C: If can't agree – agree to disagree.

C: They can figure out meeting frequency.

C: Bold does stay?

Q: Can we think this over?

A: Yes

Q: Leave it in and table to wordsmith.

A: We'll take it and try to wordsmith it.

*C: Depending on drought may need to cross basins.

4. Next, the RBC encourages water utilities in the basin to consider drought surcharges on use during severe and/or extreme drought phases. Drought surcharges, when used, are typically only implemented if voluntary reductions are not successful in achieving the desired reduction in water use. Several water utilities have already built into their response ordinance the ability to implement drought surcharges during the severe and/ or extreme drought phases. For instance, in the event of an extreme drought, Greer CPW limits domestic water use to 55 gallons per household member per day and may include a surcharge of \$0.02 per gallon for use above that limit. Institutional, commercial, industrial, and recreational water users are subject to water use surcharges of \$20 per 1,000 gallons of water used if it is deemed that adequate conservation measures were not implemented.

Discussion:

KEEP

C: GVL already did it.

C: We have an option to put one in.

C: We do too.

C: Last 5 year updates probably do have that language.

C: Do wholesale customers add surcharges?

C: 4 meters – surcharging me in a drought. Price gouging during a time of natural disaster. Goes against my brain.

C: We bill wrong – we don't and we need to.

C: Incentivizing using more water currently.

C: We also heard about revenues as well for utilities.

Q: Why not higher prices?

A: People won't cut back until it hits their pocketbook. Only option is to make it painful in another way. All we have. Reinstitute public shame. Non-draconian level – people don't cut back. Our reality.

Q: Plan for large industrial users. Surcharge them?

A: Put it on a volume for some utilities – their customer buys most of their water so can't surcharge them. Expect people to cut back when they can. 20 years water was cheap. Not cheap anymore.

C: So they can't cut back have to shut the plant down.

C: There are exemptions sometimes.

C: What's the trigger? Drought or non-cutbacks.

C: Yes, we'll ask first then we have the surcharge then cutoffs. Ask people will help. Don't like mandates.

C: I was on news – 30 days of water left.

C: Duke does time of day rates.

Q: Arbitrarily double or triple rates?

A: If we are having brown outs, people will be sitting in the dark.

C: Drought surcharges were not popular in that article we sent out.

C: It's a step in the process.

C: Utilities are reluctant to go to this extreme step.

Would be good to have in severe as well as extreme drought.

C: Didn't touch the 0-5000 folks just the higher use.

C: Household of 4 could bump into tier 2.

C: 130 gall/household/day in Laurens.

C: GVL was 70 gall/person/day.

C: Its an average not census based on actual household numbers.

C: I'm against, do we need all those examples if we keep it?

examples of systems in basin

Folks can look it up themselves.

C: Can live with it.

5. Next, when droughts occur, the RBC encourages water users and those with water interests to submit their drought observations through the Condition Monitoring Observer reports (CMOR). The

CMOR system, maintained by the National Drought Mitigation Center (CMOR), provides supporting evidence in the form of on-the-ground information to help the authors of the US.

Discussion:

TABLED

C: Difference between submitting condition reports vs impact reports.

C: Change word impact observations period – all data drought or not drought.

C: Context info is important not just impact.

C: A picture or nothing? Not getting a soil moisture sensor.

C: Observation is what you're getting.

C: Agriculture – conditions in ground are outpacing the data. What does that mean for your crops or farm...

C: Would you use this system? Ag folks?

C: Never knew it existed not widely known.

C: We are trying to grow it. If its over your head, send us an email.

C: Water systems should be in the plan. Supposed to be telling DNR if going to be more severe or less severe. Send us the info, we want to know.

C: Satellites can see what's going on, is google earth used?

C: Depends on the satellite system. LANDSAT only ever 14-17 days or so and if no cloud cover. Some are finer scale.

C: Couple concerns and questions. Not housed in-state (intended to go on forever) - I like local control. Output from tool is it free? Inputting data and not get output? 19 datapoints input for 2024, not widely used yet in SC.

1. Use it?

2. Comprehensive enough?

C: Until I know more about the tool table it. Noise in the system.

C: Why Broad recommended it - info for national folks to get better data and maps for SC. Ag is possibly the beneficiary. CMOR was used heavily in Missouri. SCO wants to raise awareness.

C: Not the answer but is helpful. It can add noise. Whoever liaison is and compiling data its work. Don't have to do it. Maybe worth setting something up like a simple survey.

C: Another tool in the bag.

C: RBC members play around with it then decide later.

C: Trying to shoehorn it in.

C: Redundant?

C: Public education campaign for backyard landowner for outdoor irrigation.

C: Municipal water management strategies could include in drought chapter maybe.

C: Encouraging businesses with large campus and is mowed for no real reason. Convert campus to non-irrigated.

C: Chapter 6 – we could work that in.

Upcoming Meeting Schedule and Topics- (Wed, June 19, 2024):

Informational Topics includes;

- Chapters 2 and 3 Review Discussion
- Discuss and develop Technical, Program, policy, regulatory and Legislative Recommendations.
- Others.

1st public meeting look to November/December for draft plan.

2nd public meeting #2 about 2 months later.

KC asked for a motion to adjourn.

1st – David Coggins

2nd – Michael Waddell

Meeting adjourned: 2:02 PM

Minutes: Iffy Ogbekene and Tom Walker

Approved: 6/19/24

RBC Chat:

09:58:39 From Katherine Amidon to Everyone:

Good Morning!

Tom please make sure we talk about the June meeting date and location (I doubt John will forget)

09:59:09 From Thomas Walker to Everyone:

roger that thank you

10:02:49 From Katherine Amidon to Everyone:

Approval

10:08:13 From Katherine Amidon to Everyone:

Reminder to add to the parking lot ideas for additional UGGS gages that would help us in the future

10:34:01 From Katherine Amidon to Everyone:

We should meet at the frequency needed based on the severity of the drought

10:34:33 From Katherine Amidon to Everyone:

Agreed with what was just said

10:41:26 From Alex Pellett to Everyone:

Regarding the return interval of extreme droughts (>50 years), it seems like a tricky question to answer, and it would depend on a lot of assumptions, reasonable people could disagree. But, if we look to the tree-ring record, there is evidence of multi-decade droughts within the past 500 years. So, I would speculate that the modelled droughts repeating historical dry years up to a decade would have a return interval of less than 500 years, maybe much less. The monthly-minimum modelled drought is more speculative - the tree ring record provides annual estimates, and the extremity of tree-ring droughts for a single year does not appear worse than our recent droughts (the duration, multiple decades in the tree-rings, is worse than living memory or reliable records). . . I appreciate those drought scenarios, very interesting. And I'm looking forward to hear more about Kirk's work on this subject.

11:11:34 From Thomas Walker to Everyone:

break until 11:20

11:11:46 From Katherine Amidon to Everyone:

Is there a set of recommendations for drought mitigation that the DRC follows? Apologies if I missed that

If yes how can we incorporate into chapter 8

Also re following counties - I get why we do that politically but hydrologically that doesn't make sense. Greenville Is half in Saluda and half in Broad - what if there is disagreement by county due to those political boundaries

11:19:21 From Thomas Walker to Everyone:

do you want to ask elliot after we get back from break?

11:32:53 From Katherine Amidon to Everyone:

Thanks Tom!

Can you drop a link to this report in the meeting minutes? I'm not finding this planning document quickly

11:35:44 From Thomas Walker to Everyone:

scdrought.com at top go to tabs planning tab hallway down

11:35:51 From Thomas Walker to Everyone:

halfway down

11:38:30 From Katherine Amidon to Everyone:

Thanks! I was on the resources tab

12:06:07 From Josie Newton to Everyone:

Anecdata: <https://www.anecdata.org/pages/about>

12:09:06 From Josie Newton to Everyone:

Example of an Anecdata tool produced by FoRR: <https://www.anecdata.org/projects/view/1027>

How To Guide for FoRR project: <https://www.friendsofthereedyriver.org/streambank-collector>

12:18:50 From Thomas Walker to Everyone:

break for 20 mins. 12:40 reconvene

12:23:04 From Katherine Amidon to Everyone:

Who has access to the back end of the CMOR tool (aka who can download the spatial data?)

12:31:26 From Thomas Walker to Everyone:

elliott said the national drought mitigation center

12:40:09 From Katherine Amidon to Everyone:

I wonder how responsive they are to supplying it - it would be nice to have more local control of the data from a tool like this - like through DNR

13:06:13 From Charlie Timmons to Everyone:

yes sir

13:06:19 From Josie Newton to Everyone:

Yes


13:51:55 From Katherine Amidon to Everyone:

Quick correction 19 data points input for 2024 not total

13:52:18 From Katherine Amidon to Everyone:

For the notes Tom

13:54:38 From Thomas Walker to Everyone:

Reacted to "For the notes Tom" with 

14:01:37 From Katherine Amidon to Everyone:

I would like to skip july

14:01:41 From Charlie Timmons to Everyone:

hahaha true

14:03:25 From Thomas Walker to Everyone:

meeting adjourned