



## Surface Water Meeting #2 October 21, 2021

### Introductions

Kristy Ellenberg, Director of Collaborative Partnerships at DHEC, kicked off the meeting by welcoming everyone back to the meetings

### Opening Remarks

Myra Reece, director of Environmental Affairs at DHEC, welcomed the group and expressed thanks for their time and input so far. She expressed how the Department needs ideas of how to bring more people to the table and how to gather all perspectives. This work group is talking a critical issues and the Department wants more dialogue from all parties. We want to ensure there is some level of public participation, and in order to do that, we need the work group to get the word out about the website with an active comment form and all presentation materials. We want to work and learn together in order to get all ideas for South Carolina and water management across the state.

Kristy Ellenberg introduced everyone by sector in order to get an idea of how different groups are represented:

- David Bereskin Greenville Water
- Tim Brown Grand Strand Water & Sewer Authority
- Frank Eskridge City of Columbia Water
- Jill Miller SC Rural Water Association
- Rick Caldwell SC Farm Bureau
- Cassidy Murphy SC Farm Bureau
- Gary Spires SC Farm Bureau
- Mandy Brawley SC Department of Commerce
- Megan Chase Upstate Forever
- Erika Hollis Upstate Forever
- Emily Cedzo Coastal Conservation League
- Zach Bjur SC Conservation Voters of SC
- Bill Stangler Congaree Riverkeeper
- Rebecca Leach SC Manufacturer's Alliance
- Laura Bagwell Edisto River Basin Council
- Derek Phinney Clemson Extension
- Jeff Allen SC Water Resources Center at Clemson
- Kendall Kirk Clemson
- Heather Nix Water Resources Agent Clemson
- Ed Bruce Duke Energy
- Jesse Cannon Santee Cooper
- Scott Harder SC DNR

- Alex Pellett SC DNR

### Alex Pellett - Water Projection Presentation

- Talked about forecast vs projections and how a forecast is expected to be accurate based on information while a projection is based on hypothetical scenarios
- SC DNR contacted stakeholders for input and had technical advisory calls throughout the process of developing the projection process and is part of what DNR is using for the Edisto RBC process
- During development, feedback from multiple stakeholders was received from groups like SC FB, WWA, Utility Council, Chamber commerce, etc.
- Most feedback was from the agricultural community to look at advanced modeling techniques while utilities have their own modeling projections from their own datasets
- the calculations use water use data from SC DHEC for the withdrawal factor, while the demand is a function of withdrawal, storage, purchased water, etc. and has a physical mass balance and grabs the discharges from the SWAM model for the basin
- The different drivers of demand are based on sector: thermo power driven by energy production; water supply driven by population; industry driven by economic production; irrigation/golf course driven by irrigated acreage
- Some smaller counties project declining population, but based on demand the models flat-line the population or lightly increase when looking at high demand scenarios.
- **Question:** why wasn't declining population looked at?
- **Answer:** we could and it would represent rural decay, don't want to insinuate that will be the case. Also, these demand projections are biased towards an increase in demand. Also, many of the counties that are showing these declines are already such low county populations that the result would be negligible.
- Next place to look if there are shortages is the drivers or a deeper dive at population trends
- Projections were done to 2035 based on population data available, hoping for more projections when 2020 census data is available
- moderate demand scenario: increases irrigated acreage by 38% over modeled time, which is an annual rate of 0.65%
- high demand scenario: increases irrigated acreage by 44% over modeled time, which is an annual rate of 0.73%
- the statistical model used was a more pared down equation, although for agricultural calculations some weather variable was included, but the  $r^2$  values were not agreeable to keep

### Rob Devlin – Defining Problem with Maximizing Allocation

- focus today is on overallocation and how it limits availability
- the overallocation is on paper, some on FERC licensed impoundments but mostly due to large capacity intakes based on regulation requiring permits to be issued based on capacity and not need/reasonableness criteria
- important to think about permit duration and how needs are different across sector
- overallocation on paper is based on capacity, not need, but Department can't do much about it
- duration: existing is 30-50 yr permits, new are 20-50 yr permits, and ag do not expire

- existing make up 95% of the water use and cannot be reduced; new make up about 1% of use and cannot be reduced during renewal; ag makes up 4% and cannot be transferred or reduced
- other states in SE show permits around 10 yr mark and other programs in Department are 5 years
- requirement differences: irrigation use mostly in summer with industrial and WS mostly consistent year-round with some spikes during summer
- BMPs important for how managing water, but are different for each area and type use
- only know when the use is highest and that's when demands increase
- don't want to be at the "do nothing" scenario where we will have compounded issues later on
- Water use state wide-mostly flow-through Hydropower; when removing power uses, WS is largest use followed by Industrial and then irrigation
- **Question:** what are the next steps with regards to the stakeholder input/ideas?
- **Answer:** in December, we will be able to make a decision with the group. We will have heard about the consequences and are there things that will help with the overall management of our water resources? We will look at how everything fits together and make improvements and we are looking for specific feedback. Same baseline of knowledge/data and the pathway to make improvements. What can we do to have a parallel track for public participation? We have a formal approval process with the Board and it is very prescriptive. Focusing on the regulatory process, it is a formal APA process, first we have to make an attempt at changing the regulation, then it has a public comment period, following by the Office of General Council looking over it, then it goes to the DHEC Board, finally to the legislature when it goes through more comment periods and then any changes and discussion after that.
- **Question:** what was the "do nothing solution"?
- **Answer:** Basically, the Department is stuck and can't issue registrations and potentially permits due to overallocation on paper. Also some climate issues that have come up recently such as flash flooding. If we are not ready to make adjustments, we will have bigger issues down the line for irrigators but also other future users.
- We want to be sure to have the best tools to manage our water resources for needs – balance of groundwater and surface water. We want to be able to step back and look at the regulations and see if it needs changes based on changing demands, climate, etc. We want regulatory tools that allow us to make good decisions based on sound science and provide certainty to users that they will have what they need.
- On the groundwater side, all water use is looked at how it will affect all users around them and get a reasonableness criteria based on what they need. We make sure existing users are not affected, but groundwater is in three dimensions, with additional aquifers, while surface water is more two dimensional. We want to look at conjunctive use of surface and groundwater. The constraints on surface water are tighter which makes it harder to do what we do already with groundwater.
- **Question:** the graph with percent variance: can we get one with the actual water use also?
- **Answer:** yes, it will be added to the presentation when it is uploaded to the website.

## Discussion Questions:

1. What is reasonable to protect and ensure availability of the resource to meet future demand:
  - a. relative to overallocation?
  - b. relative to length of time of permit?
  - c. relative to meet different needs for different users?

## Points of Discussion

- There appear to be no real metrics to determine overallocation or appropriate allocation; we have heard that some irrigators would flood the area if using their full registration; we should have a metric for how much can be used or permitted based on irrigated acreage or industry standard for industrial uses, or population served for water supply, etc.
  - o Department: This is done on the groundwater side, we just cannot on the surface water side, why we want to bring how we do it on the groundwater side next meeting
- Agreement with previous bullet, question about ensuring availability, is this physical availability, legal availability, or both?
  - o Both. Also, we don't have the ability to look at an intake and say it can withdraw a certain amount of water but the facility or pump can only handle a smaller amount, the regulation required that permits were done based on intake capacity specifically.
- With utility, supply is measured and modeled on a 30-40 year effort rate, we need enough to meet those projections and are trying to be good stewards. It is not unusual to see large discrepancies between permitted intake volumes and actual usage.
- Adding from the utility perspective, we can add pumps for future treatment plant that may not be able to support today, but will need the increased capacity later when populations increase. There is a difficulty in creating new raw water sources for industry that would push them to using utility sources in their area – some of an idea as to why utility has increased capacity with decreased current withdrawal numbers
- Planning for economic growth and vitality in a service area that will encompass an entire county, there is no metric for water use. Take planning and population projection and looking at planning for the future.
  - o Side note- looking to reduce permit duration based on drought? We have drought legislation in place so this should not be part of the conversation
- if permits go down to 5 or 10 year duration in order to make room for allocation for others, there may not be enough buffer to catch up and be enough available for the needs of the utility per capita which is a different issue.
  - o We understand that water supply had to evaluate demands for future needs, we know that reasonable demands for FERC and other issues, a 10-20 year time frame is better than just giving it away. We can make adjustments for the 5/10 year increments like we do for groundwater. We also always make buffer room on permits to protect current users, and we take into account upstream and downstream users so current withdrawers are not affected with looking to bring in new permittees
- Law would not address anything to do with drought, process should not add drought

- Most droughts in our state are short-term; DNR is looking at this now, we are not writing the regulation for drought, just normal management of the resource. Some low flow conditions like the 20-30-40 flows need to be examined, but this is not for drought mitigation.
- Some clarification: I help to manage water supply for several municipalities and further discussion on issues we are dealing with: there is no overallocation on their reservoirs per those FERC licenses. Immediate issues are more related to free-flowing streams and not reservoirs possibly?
  - Given this regulation, want to look at need vs. what has been issued; we need to be able to say a permit is more based on FERC is not allowed, some existing permits were based on a capacity that they had, which would put them over a FERC license withdrawal
- Good conversation: balance between planning horizon when every other permit issued by the department is over a shorter time frame, having permits that last over careers is not sustainable
- Confidence in FERC and those allocations, maybe ask if all allocations similar to those that other water suppliers have, shouldn't be a problem with state regulators
- Yes, 50 years on FERC, but have been moving away from this and needs to be looked at again on a shorter time frame than 40-50 years
  - A lot goes into issuing a FERC license, which we understand, should be able to see who does and doesn't get water. We understand that it is a very rigorous review process.

### Final Thoughts and Next Steps

Kristy acknowledged that we were out of time, and that we all appreciate the commitment to the process. We will have a draft agenda out with the reminder email for next meeting. A reminder: we are trying to have members across all sectors with a decent spread of users statewide. We are keeping the website up-to-date and have a comment form available. Thank you for the frank conversation and we need to continue these types of discussion with differing perspectives on what is going on. You can reach out for additional opportunities to meet and discuss with stakeholders, or we can reach out to your groups.