

**NORTH CAROLINA
ENVIRONMENTAL MANAGEMENT COMMISSION**

**WATER ALLOCATION COMMITTEE
MEETING SUMMARY MINUTES**

**512 N. Salisbury Street
Archdale Building
Raleigh, NC
Ground Floor Hearing Room**

**Time: 9:00 a.m. – 10:00 a.m.
Wednesday, November 12, 2014**

Executive Order Number One mandates that the Chair inquire as to whether any member knows of any conflict of interest or appearance of conflict with respect to matters before the Commission. If any member knows of a conflict of interest or appearance of conflict, please so state at this time.

Tommy Craven, Chairman, Presiding

Committee Members in Attendance: Tommy Craven (Chairman), Gerard Carroll, Dan Dawson, Benne Hutson, Steve Tedder, and Manning Puette

Commission Members in Attendance: Lawrence Raymond and David Anderson

I. Preliminary Matters

1. Call to Order
2. Approval of minutes from the September meeting
 - The committee approved the September minutes.
3. Revisions or additions to the agenda
 - There were no revisions or additions to the agenda.

II. Information Items

1. Central Coastal Plain Capacity Use Area Status Report Nat Wilson, DWR
 - This Central Coastal and Capacity Use Area is a 15-county area portion of the coastal plain, with 15 counties currently. There are 293 permit holders in the area and 56 registrations. A permit holder is someone who is using more than 100,000 gallons per day. Any ground water withdrawals between 10,000 and 100,000 gallons per day require an annual registration.
 - Surface water withdrawals of 10,000 gallons per day require annual registration. Permit holders are required to report daily withdrawals, monthly water levels, and annual chloride concentrations. On top of that first filter of requiring a permit there's a set of reduction zones, indicated on the map in the 15 counties in the three zones: declining water level zone, dewatering zone and salt water encroachment zone.
 - Folks using aquifers in these zones are required to reduce their withdrawals between 2002, 2018 in three phases. Those reductions take place from what we call an approved base rate, established for each one of the permit holders that are affected by these reductions based on their 1996 calendar year use or a combination year 1999 and 2000 use, whichever was higher.
 - In these zones those reductions take place in those years and their reductions amount to between 30 and 75 percent from those aquifers. If you're one of those permit holders you have a reduction schedule where you received your approved base rate and in those years between 2002 and 2018

we have reductions that take place and what you need to do is bring on alternate sources of water to achieve those reductions.

- The alternative sources of water can be regional or independent sources. They could be surface water, or shallower wells/aquifers. The Cretaceous aquifer sources that we are reducing folks from are deeper aquifers, so shallower aquifers tend to be able to recharge quickly and so we have pushed people to use those shallower aquifers. They'll also need to bring about better water treatment capability because the shallower aquifers and surface water tend to require more treatment. The compliance of these rules is an investment of hundreds of millions of dollars.
- The folks that have complied have told us over the years they expect others to comply because they've invested a lot of money they want other systems to do the same. As a result, they passed the legislative bill in 2009 that changed the penalty assessment to be as high as \$1,000 per day to increase our enforcement capability.
- Another way to look at this in the aggregate is the combined approved base rates were a little over 55 million gallons per day and over the years that will reduce to less than 20 million gallons per day, combined for a total of 33 percent of that approved base rate. We're hoping that brings about sustainable use for these Cretaceous aquifers.
- The Black Creek and the Upper Cape Fear are the two aquifers that are of most significance. The alternative sources will make up for those reductions and will allow the communities to experience growth. There is a lot of information on our website: online access to the ground water levels, withdrawal data, and other information we make publicly available. There's Central Coastal Plain webpage that is off the DWR webpage at <http://www.ncwater.org/?page=49>. There's also information on the groundwater system and various status reports and assessment documents that we've published over the years.
- For an individual permit holder you may see information like this when the permit was last issued, when it expires, or when those reductions take effect. Other detailed information is available online. You can look at information in aggregate by county or by type of use to see how their water use sums and also how the yearly rates will decrease over time to those 2018 levels. It's a very significant reduction.
- There is also a document we put out in 2011 that discusses the various alternatives that the permit holders have come up with. We also have a link to the UNC environmental science center where there's a very useful tool that talks about water rates and how those vary across the state.
- We needed a way to make use of a temporary permit that allows us to set a withdrawal rate for the permit holder different from the reduction schedule, but the permit holder still must meet certain criteria. We demand that static water levels must be level or upward trending and be above the top of the aquifer. Pump intakes must be above the aquifer top and its important chloride concentrations are fresh with no upward trend.
- These criteria have allowed six permit holders in all to obtain a temporary permit in the last eight or nine months. Those permit holders are in Wayne, Greene, and Lenoir Counties. We expect others to request temporary permits especially as the next reduction nears. The temporary permits allow the division to customize withdrawals to location and help us achieve the highest sustainable use of groundwater so we think it's an important tool to add to our permitting system.
- Carroll: It shows that in 2012, 57 percent of the water withdrawals were for mine dewatering can you please discuss what that is?
- Wilson: Mine dewatering is critical for mining in our coastal plain. Mines are dewatered throughout the state, but in order to access the rock or sand they've got to do it under dry conditions.
- Carroll: In other words, this is groundwater seepage into the pit and they have to pump it out.

- Wilson: Right. There's only one case where we intercept the water before it gets into the pit and that's with PCS Phosphate. They are lowering the pressure in the aquifer so they can dry mine. Every other mine it's a matter of collecting the water that has seeped in the pit to maintain dry conditions.
- Carroll: Where does the water go?
- Wilson: It goes into local drainage.
- Dawson: The benefits we had hoped to receive from this program, is all that panning out as we thought it would? Or do we need to take another look at the assumptions that were made that are requiring all these people to spend this money?
- Wilson: It's been very successful from my position. From others who have spent the money, they are in a more sustainable place. They are able to meet demands with a source of water that's more sustainable that can be used for many years to come.
- Dawson: Do you feel the users recognize and appreciate that also?
- Wilson: I think they would do so publicly, but privately they would scorn us. It had to be done in a collective way to convince various towns and counties to do the right thing, in an equitable fashion.
- Dawson: Should we be tweaking the requirements so maybe the expenses of the communities may not be so significant to adhere to rules and requirements? We haven't revisited the rules since the beginning of the program.
- Wilson: I think the temporary permit program allows us to do some of that tweaking. We can lighten that reduction for them with the temporary permit. I think it helps us ease up in some communities.
- Dawson: Is there adequate dialogue with the regulated community? Is there a need to reassess what's adequate and sustainable?
- Craven: We will continue that discussion.

2. Cary, Apex and Wake County Interbasin Transfer (IBT)
Certificate modification

Bill Kreutzberger, CH2M Hill

- The purpose of this update is to provide you background on the IBT Certificate modification request, which came to the commission as a notice of intent a little over a year ago. There are two main objectives.
- The first is to meet the state's objectives which is basically to shift the IBT calculation consistent with the session law that was passed last year related to regulating IBT, rather than maximum day to a daily average over a month and the other was to incorporate some service areas within the town of Apex along the Cape Fear River sub-basin that were not previously included in the service area for the IBT.
- The second is a modification objective. Cary has requested additional allocation from Jordan Lake and they want the IBT certificate to be consistent with the 30 year planning period for that updated through 2045.
- Some background on the existing IBT certificate. The IBT certificate was issued in July 2001. It was for a transfer from the Haw River sub-basin of the Cape Fear Basin to the Neuse River basin. It focused on the 2030 planning period. That analysis was done with the first Cape Fear River hydrologic model. There have been no detrimental impacts since 2001 based upon the transfer.
- Requirements of this certificate: It's a max day transfer of 24 million gallons a day (MGD) from the Haw to the Neuse sub-basins. There are several conditions. One in particular was after 2010 they needed to begin to return water to the Haw and Cape Fear River sub-basins. There are several other conditions related to monitoring, water shortage response time, etc. The towns have been compliant since the certificate was issued.

- The Western Wake Regional Water Reclamation facility was the vehicle by which they were returning water to the Cape Fear Basin. It took over a decade for the planning and permitting of this facility, and required the towns of Apex, Morrisville, Holly Springs, and Cary and Wake County. There was a state EIS process that was started that was moved to a core process under the National Environmental Policy Act (NEPA) because of the potential pipeline impacts. The final Environmental Impact Statement (EIS) and subsequent Record of Decision (ROD) were completed in 2010 which allowed the state to go ahead with the National Pollutant Discharge Elimination System (NPDES) permit in 2011.
- One of the drivers for this was a condition requiring the return after 2010. In order to meet that condition the town of Cary began diverting some wastewater to the Durham County wastewater treatment plant upstream of Jordan Lake in 2005. Also, in 2010 Holly Springs left the partnership.
- The Western Wake Facility began construction in 2011 and began to discharge to the Cape Fear River in 2014. There's an Open House next week. You're all invited if you want to see the Open House for the facility in southwestern Wake County. The facility budget was just under \$300 million. It was a significant effort in order to build one of the largest wastewater acclamation facilities that's been done in the state in a while.
- To talk a little bit about water resources planning. The towns of Cary and Apex have done extensive planning as they've rapidly grown in the last 20-30 years. It's important to note the towns are well recognized for their water resource management and conservation programs. Their demands are some of the lowest you will see in terms of per capita demands. This water resources planning has supported this request for innovation transfer, particularly more long range water resources plan.
- Out of the long range water resources plan came several alternatives. The first was no action, which basically just represents the updated transfer, which is 22 million gallons per day over the average of a calendar month. That reflects the statute changes last year.
- Increasing the IBT to 2045 demands consistent with Jordan Lake allocation requests is the preferred alternative. We also have another alternative which is a higher IBT. The towns would utilize all of their wastewater capacity in the Neuse River basin. There are several alternatives to avoid an IBT increase.
- IBT and Jordan Lake allocation requests each had statute changes and prior approaches on how Jordan Lake allocations are done relative to IBT. We have the statute changes that occurred last year modifying the process for IBT that previously weren't in place where you had to go through the same process to get a modification for a statute. The changing of the basis from max day to calendar month, which I mentioned previously, as well as some other issues related the threshold requirements certificate.
- Previously, with Jordan Lake allocations, which is the only water body that the commissions and the state allocates themselves, the commission required any innovation transfer to be dealt with prior to the allocation process. The towns have been participating as part of the Jordan Lake partnership and their plans for the allocations inter-basin transfer are incorporated in the recently completed Triangle Regional Supply plan.
- Again, I've summarized previously what the updated and modification of the existing IBT certificate is in terms of the increase in Jordan Lake allocation that will also be based on a 30-year planning period through 2045. The previous allocation was based through 2030. The IBT certificate modification request is supported by the Triangle Regional Water Supply plan.
- Upcoming steps: The towns have requested the certificate modification. The notice of intent was submitted over a year ago. The draft Environmental Assessment (EA) was initially submitted to DWR in September and we've received comments back and have resubmitted it to the department. It's beginning to go through the department in accordance with the modification statute that passed

last year. The department will receive a public notice sometime in December and this will come back in either March or May.

- The division has been working on reviewing Jordan Lake draft allocation requests and the submission deadline is the end of this week and they're going to determine how to proceed.
- In summary, we're basically trying to request, with the recent statute changes, the additional area where there's only consumptive use in the town of Apex. We want to make this consistent with the Jordan Lake Allocation process through 2045. The towns have been actively trying to minimize IBT and maximize compliance which is related to the existing certificate. There have been no detrimental impacts with the existing IBT certificate.

3. Union County Interbasin Transfer Certificate

Kevin Mosteller, PE, HDR

- I want to talk about Union County's water supply challenges, the work they've done developing an inter-local intake and transmission agreement and where they are in the process of securing an IBT certificate.
- Water supply challenges: Over the last 20 years Union County has experienced explosive suburban growth. The problem, relative to water supply, is that the county sits with no major river basins running through it. To the west, you've got the Catawba River and to the east you have the Yadkin River and nothing major running through the county.
- Unfortunately, one of the designated IBT sub-basins by the legislation is the Rocky River sub-basin within the Yadkin. For Union County to move water anywhere would be considered an inter-basin transfer under the current legislative framework.
- They have depended in the past on the Catawba grandfathered IBT limit. Right now, they bring water from the Catawba plant, which is a joint venture project that they have with South Carolina. They also move water into their Catawba river service area and also into the Yadkin service area. But they have a five million gallons a day (MGD) IBT limit, so in order to stay in compliance with that, they pump water back through the water treatment facilities in the Catawba basin.
- The growth in the county, to date, has been in the Catawba service area, but now is expanding into the Yadkin service area. They currently have a small supply from Anson County, which is about three MGD. That agreement terminates in 2019 or 2020, so they're not certain that's a long term source for them.
- Water demands continue to grow and if you look at their planning forecast you can see the concentration that's moving towards the Yadkin. The majority of the county depends on the Union County public works for drinking water. The city of Monroe maintains their own drinking water, but the rest of the county depends on the county for water.
- They recognize that securing long-term water supply is going to take a long time. In 2007, with the drought that hit that area they went into mandatory water use restrictions and have been there since that time. They were also limited on new connections and I believe much of that still exists today.
- They went through a number of water plant feasibility studies and master planning efforts. A few years ago they decided to look for a project partner in the Yadkin basin. It's worth noting that in the water and wastewater master plan there were three alternatives identified, two of which were increasing their inter-basin transfers from the Catawba as a solution and one that was truly dependent on the Yadkin. That's the one they chose because they believe it to be the best likelihood for securing a source in the time frame they need it.
- They went, after that master plan was completed, and looked for project partners in the Yadkin River basin. They have worked for over a year and a half to develop an agreement with the town of Norwood that would allow them, if this inter-basin transfer certificate is approved, to move

water from Lake Tillery. They thought it was important to do that ahead of time because of the time and cost of the permitting and regulatory approval process.

- Benefits the agreement was based on: For Norwood, it provides them a steady income stream based on Union County's water use. For the county, it gives them some protection if they can get approval for this. They can build the project so it's going to be infrastructure in a different county, which they will not have the opportunity to acquire property in.
- Last August, we submitted a notice of intent to move 28 million gallons a day and that's based on a maximum daily basis. We are now converting all those numbers to a maximum monthly basis. That's a 2050 water demand into the Yadkin River basin service area.
- The solution the county is working towards is their future demand from Lake Tillery and their partnership with Norwood. We have been working on an environmental impact statement where we've been looking at the Lake Tillery option against a number of alternatives. To meet the need, Union County needs to progress pretty quickly and have infrastructure in place by 2020/2021. Our current schedule is to submit a draft to the Division of Water Resources (DWR) in January. The long term goal is to minimize the Catawba IBT.
- Hutson: There's been turmoil with Goose Creek and the Carolina Heelsplitter. Are these issues going to pop their heads up on this one?
- Fransen: Not sure what's in the EIS, but there is a management plan that's been approved by the commission. That should be covered.
- Hutson: Is what we did in the last meeting in regard to Ecological Flow proving to be workable when it comes to these IBTs?
- Mosteller: Yes.
- Craven: That's a lot of water coming out of the Yadkin. What's the condition of the other users?
- Mosteller: That's a maximum day number not maximum month. Downstream of this withdrawal there aren't any major users in NC or SC. Some of the interested parties are power companies who are losing power in this withdrawal. That's a bigger issue than some of the water users.

4. Kerr Lake Regional Water System Interbasin Transfer Certificate

Bill Kreutzberger, CH2M Hill

- The Kerr Lake Regional water system has three primary partners: Henderson, Oxford and Warren County. They withdraw water from Kerr Lake and provide water to 15 additional communities in Vance, Warren, Granville and Franklin Counties. There are three receiving basins: Tar, Fishing Creek and a little bit of Neuse River through Creedmoor and Youngsville.
- In terms of available supply and future demand, Kerr Lake was developed in 1952 and water supply was added in 1958. Most of the reservoir is in Virginia and it's a very large reservoir. The water system came to some agreements with the U.S. Army Corps of Engineers. The water use agreement was for up to 20 MGD. In 2005, they got 20 MGD average annual withdrawal from the lake.
- The partners are planning for storage so Kerr Regional water pays annually for maintenance and storage. In 2013, their average water demand was six MGD and their maximum month demand was less than eight MGD. Their IBT is part of that and is 4.68 MGD on a maximum month.
- That's projected to go up to a maximum month water demand of 17 in 2045 and an IBT of 14. Even in 2060, their average demand will be 16, so they're well under their allocation from the Corps in terms of what they're paying for. Their grandfathered IBT is 10, so the 14 is considerably above that.
- This is a very rural system, so this is different than the suburban growth in other counties. A lot of the growth we're seeing is not new development but is an expansion of water systems in other

counties. Vance and Franklin Counties are taking people off of groundwater because of contamination issues. Franklin County is the only area with some suburban growth.

- This notice of intent was submitted in 2009. We were operating under the 2007 amendments to this statute. We had five public meetings within 90 days of submitting the notice of intent. We were using the original version of the River Basin Hydrologic model at the time. That's the model the state had before the statute passed.
- The division determined that we needed to use an updated version of the model, based on the statute requirements, as well as updated planning information from VA. We have been using this model since August. We are focusing on 2045 scenarios and we've looked at the baseline versus the 2045 IBT, and we've looked at several indicators. We used the model to evaluate changes in lake level, reservoir releases and hydropower.
- It's interesting as you're dealing with these basins you'll deal with different droughts. This basin is so big the only drought that caused a significant drawdown was the 2002 drought. The difference in the water level is due to increased use. The IBT has almost no change on the lake.
- The projected demands of IBT were significantly less and the model showed no change in lake levels. We've had a moving target with this IBT. This was initiated based on the 2007 amendment that required a lot of public meetings. They changed the law last year to maximum month. They changed this year the process for the coastal counties and one public hearing is required and that's how we're proceeding.
- Path forward: We got the model in August and we presented model results in October. We anticipate comments on the EA shortly. We're hoping for a FONSI in Dec. or Jan. We hope to bring this back to get approval for a hearing in January.

III. Concluding Remarks

Adjournment: The Chairman adjourned the meeting at 9:57 a.m.