MEETING BRIEF

During the September 9, 2020 web conference meeting of the North Carolina Environmental Management Commission’s (EMC) Water Quality Committee (WQC), the WQC:

• Approved the draft minutes for the July 8, 2020 WQC meeting.


• Heard presentations on four information items: Draft Chowan River Basinwide Resources Plan, Neuse Watershed Modeling Update per Session Law (SL) 2020-18, Division of Water Resources (DWR) Review of North Carolina Policy Collaboratory Jordan Lake Study, and Update on Development of Falls Lake Stage 1 Existing Development Program.

WQC MEMBERS IN ATTENDANCE

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<tr>
<th>Ms. Marion Deerhake, WQC Chair</th>
<th>Mr. Mitch Gillespie</th>
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<td>Ms. Patricia Harris, WQC Vice Chair</td>
<td>Mr. John McAdams</td>
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<td>Ms. Donna Davis</td>
<td>Ms. Maggie Monast</td>
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<td>Mr. Charles Carter</td>
<td>Dr. Stan Meiburg, Ex-Officio, EMC Chairman</td>
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EMC MEMBERS & COUNSEL IN ATTENDANCE

| Mr. Phillip Reynolds, EMC Counsel |

DEQ STAFF & OTHERS IN ATTENDANCE

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<tr>
<th>Mr. Danny Smith, DWR Director</th>
<th>Mr. Forrest Westall, Ex. Dir., Upper Neuse River Basin Association</th>
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<td>Ms. Julie Gryzb, DWR Deputy Director</td>
<td>(add Virginia Baker, Fred Shepherd, Michelle Raquet, Nora Deamer, Karen Higgins, Patrick Beggs, John Huisman, Pam Behm)</td>
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<td>DWR Staff</td>
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I. Preliminary Matters

• The meeting was called to order at 1:35 pm with WQC Chair Deerhake presiding. She took a voice roll call of the members attending and determined that a quorum existed.

• Chair Deerhake read the State Government Ethics Act - G.S. 163A-159(e) Conflicts of Interest (COI)
notice. In response to the notice, WQC Vice Chair Harris announced that she is a contractor for a stakeholder group for the Chowan Basin plan. Mr. Reynolds informed the WQC that there are no issues with conflict of interest that would prohibit her from participating in the information item on the Chowan Basin plan.

- The WQC unanimously approved the draft minutes for the July 8, 2020 WQC meeting without discussion.

II. Action Items


Description
North Carolina General Statutes 143-215.8B(d) and 143-355(p) require the Department of Environmental Quality (DEQ) to report to the Environmental Review Commission (ERC) on basinwide water management planning. The report includes information related to developing and implementing basinwide water management plans and hydrologic models and is due to the ERC by November 1 of each year. Virginia Baker, Basin Planner, DWR Basin Planning Branch, presented an overview of the 2020 Annual ERC Report on Basinwide Water Management Planning and requested WQC’s approval to proceed to the EMC with the draft report.

Discussion
Chair Deerhake asked why there will be three sub-watersheds reported in the Cape Fear River Basinwide Resources Plan report rather than the entire basin. Ms. Baker explained that the Cape Fear river has a lot of issues and because of this it would be easier to present the information at the watershed level. Chair Deerhake asked that future annual reports elaborate more on agricultural sources i.e., crop versus animal.

Motion
Commissioner Monast made a motion to take the draft ERC report to the EMC. The motion was seconded by Commissioner Davis and passed unanimously.

III. September 10, 2020 EMC Agenda Items

Chair Deerhake reminded the members of the WQC that the 2020 Annual Environmental Review Commission Report on Basinwide Water Management Planning would be presented at the September 10, 2020, EMC meeting.

IV. Information Items

1. Draft Chowan River Basinwide Resources Plan

Forest Shepherd, Chowan River Basin Planner, DWR Basin Planning Branch, presented a general overview of the Chowan River basin plan including water quality and quantity concerns such as the
growing occurrence of algal blooms. Mr. Shepherd also reviewed DWR’s recommendations for protecting water resources in the basin.

Commissioner Monast asked whether existing information resources related to poultry operations, such as manure hauler data, were incorporated in reporting or analysis. Ms. Michelle Raquet, also from the DWR Basin Planning Branch, said no. She said basin planners review the agriculture census data and review animal numbers to gauge how animal numbers have changed on a county basis over time. She added that DWR needs more information about the location of poultry operations and land application of litter (poultry waste). She stated that not knowing the location of the operations makes it a challenge (to understand impacts). Basin planners use the information from the agriculture census data as best they can to understand where they (poultry operations) are located (and changes over time).

Commissioner Monast presented information related to a 2012 Environmental Defense Fund intern’s project related to manure haulers. The intern digitized manure hauler records for 2007 to 2011. Data represented only 9% of the estimated litter generated in counties reporting, indicating reporting inaccuracies. She said that despite the limited data, it was interesting to see where manure was being moved. She recommended that DWR update the data or that DWR develop a more modern reporting system for manure haulers.

EMC Chairman Meiburg asked are there any identifiable factors going on in the basin that potentially correlate with high spikes in chlorophyll-a. Ms. Nora Deamer, DWR Basin Planning Branch, explained that research is ongoing to identify the potential nutrient sources in the basin that may be contributing to the high frequency of algal blooms and the higher nutrient concentrations; however, DWR doesn’t know what those sources are. EMC Chairman Meiburg also asked if any of the spikes repeated themselves in 2019. Ms. Deamer said yes, in 2019, there were serious blooms throughout the system. 2020 has been a wet year, and blooms have been less frequent but the blooms also appear to be developing farther out in the Albemarle Sound.

Vice Chair Harris requested that the closed CF Industries location (a Superfund site) be monitored to ascertain any potential effects of the lagoons closed with contents remaining in situ. She added the facility was a large contributor of nutrients to the river back in the 1970s.

Chair Deerhake said she hopes there will be coordination between the county health departments and coastal resources regarding public health effects of the harmful algal blooms in the basin. She also pointed out that the poultry population has increased in certain river basin counties since 2007, and the locations of those counties relative to nutrient sensitive waters are important to identify, follow, and understand.

2. Neuse Watershed Modeling Update per Session Law 2020-18

Karen Higgins, DWR’s Planning Section Chief, provided an update on developing a watershed model for the Neuse River Basin as required by SL 2020-18. She first provided some background on the Neuse, noting there is an EPA-approved Total Maximum Daily Load (TMDL) from 1999. This TMDL was conditionally approved and called for a second phase, which was completed in 2001. The Phase II TMDL provided three calibrated nutrient response models to estimate needed reductions in nutrient loading required to meet the chlorophyll-a standard in the estuary. Neither phase included a calibrated nitrogen delivery model, also called a watershed model, which details non-point sources as well as...
transport of nutrients through the watershed to the estuary. Because watershed modeling was not
completed to allow for transport or delivery factors to be fully implemented, the TMDL established four
transport zones for purposes of National Pollutant Discharge Elimination System (NPDES) permitting
with the intent of completing watershed modeling. At that time, the United States Geological Survey
was developing the SPARROW model (a type of watershed model), but as the development of this
model progressed, it was not at a fine enough scale to be informative for purposes of this strategy. Ms.
Higgins also provided a brief overview of SL 2007-438, which limited point source to non-point sources
trades within the same eight-digit HUC and SL 2019-86, which also allows a point source to purchase
offset credits downstream. Finally, Ms. Higgins described the requirements for modeling in SL 2020-18,
which directed DEQ to begin watershed modeling by August 1, 2020. The modeling will be used to
determine new transport zones and delivery factors for point source discharges and nutrient offset
credits, and the modeling will be performed in conjunction with affected parties. SL 2020-18 also states
once the watershed modeling is complete, the EMC shall incorporate the new transport zones and
delivery factors into the Neuse River Nutrient Strategy Waters Management Strategy rules. She also
noted that DEQ applied for a North Carolina Environmental Enhancement Grant before SL 2020-18 was,
requesting funding to support the watershed model’s development, and a copy of the application was
shared with stakeholders, requesting their feedback. Chair Deerhake asked if the watershed model will
be used for the entire basin. Ms. Higgins responded yes. Pam Behm, Supervisor for the DWR’s Modeling
Assessment Branch, clarified that there is significant work to develop models (both nutrient response
and watershed) for the Falls Lake watershed underway by the Upper Neuse River Basin Association;
therefore, DWR will focus model development efforts beginning at the Falls Lake Dam and continuing
down to the estuary.

3. DWR Review of North Carolina Policy Collaboratory Jordan Lake Study

Patrick Beggs, DWR Nonpoint Source Planning Branch, presented DWR’s review of the North Carolina
Policy Collaboratory Jordan Lake Study. He covered three topics that were discussed in the study: (1)
new science findings for Jordan Lake watershed; (2) policy recommendations for improving nutrient
management strategies for point and nonpoint sources, urban infrastructure retrofits, forest
preservation, and ecosystems; and (3) the timeline for process of the required readoption of the Jordan
Lake rules. Before covering these topics, he explained how section 14.13 of SL 2016-94 and section 13-8
of SL 2018-5 affected the Collaboratory’s effort for the Jordan Lake watershed. He noted that
development of the watershed model for Jordan Lake begun during the Collaboratory’s study will
continue under contract to DWR and will (1) incorporate Collaboratory study data, (2) improve various
 calibrations, (3) produce standards attainment curves, and (4) undergo peer review. He noted that the
model will be completed between 2021 and 2022. He gave a brief overview of Jordan Lake One Water
(JLOW), an integrated watershed management planning process for the Jordan watershed.
Commissioner Davis asked if there is a deficit in the current rules to meet the water quality standards.
He explained that the current New Development stormwater rule (15A NCAC 02B .0265) and the
implementation phase (Stage 2) of the current Existing Development stormwater rule (15A NCAC 02B
.0266) were both delayed until readoption. Several communities have been implementing some retrofits
though. Chair Deerhake requested DWR explore and consider the following topics to improve the
nutrient management strategy for the watershed: (1) financial assistance instruments for land
conservation, (2) identification of high-priority undeveloped lands to avert additional nutrient loading,
(3) nonprofit funding sources, and (4) cattle exclusion. Mr. Beggs highlighted the completed and planned wastewater treatment plant improvements for the Cities of Greensboro and Durham to manage nutrients. The Chair asked if DWR will address two of the provisions required of the Collaboratory by SL 2016-94 that it has yet to get to (1) studying and analyzing nutrient management strategies and (2) comparing water quality trends to the current rules. Mr. Beggs replied that DWR will do the comparison through modeling and is using information from the Collaboratory and JLOW to improve the Jordan Lake nutrient management rules.

4. Update on Development of Falls Lake Stage 1 Existing Development Program

The Falls Lake Existing Development Stormwater Rule (.0278) requires affected parties to implement load reduction programs to reduce nutrient loading from existing developed lands under their control in the watershed. Implementation is divided into two Stages with Stage I calling for reductions in loading to 2006 baseline levels and additional reductions called for in Stage II that equate to the full reduction goals of the strategy. John Huisman in DWR’s Nonpoint Source Branch noted that the rule also requires DWR to develop a Model Program to provide the accounting tools, practices, and guidance affected parties can use to develop their required load reduction programs. Forrest Westall, Executive Director of the Upper Neuse River Basin Association (UNRBA), gave an overview of the Association’s engagement in the development of the draft Model Program including the ongoing work to provide an Interim Alternative Implementation Approach (IAIA) for meeting the Stage I requirements of the rule. Once completed, the final Model Program will be brought to the November meeting of the WQC to request permission to present it at the January EMC meeting for approval. EMC Chairman Meiburg asked if there are provisions in the program to determine if projects achieved expected water quality results. Mr. Westall said there should be a projection of how many pounds of reduction that would be achieved by a project. Chair Deerhake asked (1) how is performance measured for the new practices and programs that will be implemented as part of the program and (2) were the assumptions for the practices/programs reviewed by the scientific community. Mr. Huisman replied that DWR and UNRBA have been working on establishing credits for different practices, including sand filters, cattle exclusion, soil improvements, storm drain cleanouts that are (1) reviewed by subject matter experts, (2) brought to the Nutrient Scientific Advisory Board, and (3) assembled into documents that layout the crediting and design elements for implementing the practices for public comment. The Chair asked are the practice documents basin-specific. He replied that they are limited to the Jordan and Falls basins.

5. Future Committee Interests

Commissioner Gillespie made the following suggestion:

The General Assembly passed legislation requiring the EMC to look at potentially reducing regulations for Inter-basin Transfers (IBTs) in some sub-basins. Understanding that the Water Allocation Committee is going to be examining that legislative directive, the WQC could also potentially play a role in the EMC’s analysis. The WQC could develop decision-making criteria to apply to IBT program-delineated sub-basins that seek relief from basin-level IBT regulations. Examples of such criteria could include: 1) how many miles of impaired streams are in the delivering basin’s sub-basin of interest; 2) does that sub-basin flow into the reservoirs or lakes or the ocean; 3) what type of land use is in the sub-basin (e.g., forestry, agriculture); and 4) are the sub-basin and basin overall located such that they require interstate
cooperation (as with the Chowan River Basin). Also, if DEQ decides to draft sub-basin-level IBT regulations (versus the current basin-level regulations), then another suggestion could be to implement some of the draft river basin plan recommendations such as those heard for the Chowan River’s plan today.

6. DWR Director’s Remarks

DWR Director Smith had no remarks.

V. WQC Chair Closing Remarks

WQC members had no remarks.

Chair Deerhake adjourned the meeting and announced the next meeting will be held in November.