



PAT MCCRORY  
*Governor*

DONALD R. VAN DER VAART  
*Secretary*

## MEMORANDUM

TO: ENVIRONMENTAL REVIEW COMMISSION  
The Honorable Jimmy Dixon, Co-Chairman  
The Honorable Chuck McGrady, Co-Chairman  
The Honorable Trudy Wade, Co-Chairman

FROM: Mollie Young, Director of Legislative Affairs

SUBJECT: Interim Report on Conducting a Study of Water Resources Available in the Cape Fear River Basin

DATE: May 1, 2016

Pursuant to S.L. 2015-196, The Environmental Review Commission, with the assistance of the Department of Environment and Natural Resources, shall study the aggregate uses of groundwater and surface water in or affecting the Cape Fear River Basin by all users, including, but not limited to, public water systems, industrial facilities, and agricultural operations. The study shall include all of the following elements: (i) a summary of the current and 50-year projected water-use demands along with the available water supplies for those portions of Alamance, Bladen, Brunswick, Caswell, Chatham, Columbus, Cumberland, Duplin, Durham, Guilford, Harnett, Hoke, Lee, Moore, New Hanover, Onslow, Orange, Pender, Randolph, Richmond, Robeson, Rockingham, Sampson, Scotland, and Wake counties within the Cape Fear River Basin; (ii) an evaluation of the adequacy of currently available supplies to meet the expected long-term needs for all water demands, including the identification of those areas of the basin that do not have a sustainable long-term water supply for the anticipated growth of that area; (iii) the identification of potential conflicts among the various users and recommendations for developing and enhancing coordination among users and groups of users in order to avoid or minimize those conflicts; and (iv) an enhanced review of the portions of the Cape Fear River Basin within Brunswick, New Hanover, and Pender counties addressing the increased demands on groundwater and limited surface water options in that area. All the information and any analytical tools, such as models, employed in the conduct of the study shall be made available electronically for public review and use on the Web site of the Department's Division of Water Resources. The Environmental Review Commission may submit an interim report to the 2016 Regular Session of the 2015 General Assembly and shall submit a final report of its findings and recommendations, including any legislative proposals, to the 2017 General Assembly.

If you have any questions or need additional information, please contact me by phone at (919) 707-8618 or via e-mail at [mollie.young@ncdenr.gov](mailto:mollie.young@ncdenr.gov).

cc: Tom Reeder, Assistant Secretary for Environment, NCDEQ  
Jennifer Mundt, ERC Council, NCGA  
Jeff Hudson, ERC Counsel, NCGA





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## **Interim Report to the Environmental Review Commission on Session Law 2015-196, Section 1, *An Act to Require the Environmental Review Commission to Conduct a Study of Water Resources Available in the Cape Fear River Basin.***

Session Law 2015-196, Section 1, *An Act to Require the Environmental Review Commission to Conduct a Study of Water Resources Availability in the Cape Fear River Basin* was ratified on July 29, 2015. Section 1 of Session Law 2015-196 had technical corrections made as part of Session Law 2015-264, Section 86.2 and reads as,

*"SECTION 1. The Environmental Review Commission, with the assistance of the Department of Environment and Natural Resources, shall study the aggregate uses of groundwater and surface water in or affecting the Cape Fear River Basin by all users, including, but not limited to, public water systems, industrial facilities, and agricultural operations. The study shall include all of the following elements: (i) a summary of the current and 50-year projected water-use demands along with the available water supplies for those portions of Alamance, Bladen, Brunswick, Caswell, Chatham, Columbus, Cumberland, Duplin, Durham, Guilford, Harnett, Hoke, Lee, Moore, New Hanover, Onslow, Orange, Pender, Randolph, Richmond, Robeson, Rockingham, Sampson, Scotland, and Wake counties within the Cape Fear River Basin; (ii) an evaluation of the adequacy of currently available supplies to meet the expected long-term needs for all water demands, including the identification of those areas of the basin that do not have a sustainable long-term water supply for the anticipated growth of that area; (iii) the identification of potential conflicts among the various users and recommendations for developing and enhancing coordination among users and groups of users in order to avoid or minimize those conflicts; and (iv) an enhanced review of the portions of the Cape Fear River Basin within Brunswick, New Hanover, and Pender counties addressing the increased demands on groundwater and limited surface water options in that area."*

All the information and any analytical tools, such as models, employed in the conduct of the study shall be made available electronically for public review and for use on the website of the department's Division of Water Resources.

The Environmental Review Commission may submit an interim report to the 2016 Regular Session of the 2015 General Assembly and shall submit a final report of its findings and recommendations, including any legislative proposals, to the 2017 General Assembly."

To see the bill language, go to:

<http://www.ncleg.net/gascripts/BillLookup/BillLookup.pl?Session=2015&BillID=S119>



No additional funds were allocated for this study. Therefore, only currently available data are being used for this analysis. There is incomplete groundwater use information in the lower reaches of the Cape Fear River watershed, but all available data will be used to assess the coastal aquifers. Two to three additional groundwater well stations will be added in 2016 and limited data from them will be available for inclusion in the final report.

As of February 2016, the surface water supply evaluation in the Cape Fear River watershed above lock and dam #1, near East Arcadia, is complete. The complex hydrologic model of the Neuse and Cape Fear River freshwater systems includes: surface water withdrawers and wastewater discharges, reservoir management protocols, water shortage/drought response protocols, as well as interconnections and transfers between the two river basins. This information is currently available in a draft Cape Fear River Water Supply Evaluation document. To see the document, go to: [https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Resources/Planning Section/Basin Planning/Cape Fear/Jordan Lake/Draft Cape Fear River Water Supply Evaluation Dec2015.pdf](https://ncdenr.s3.amazonaws.com/s3fs-public/Water%20Resources/Planning%20Section/Basin%20Planning/Cape%20Fear/Jordan%20Lake/Draft%20Cape%20Fear%20River%20Water%20Supply%20Evaluation%20Dec2015.pdf). The division is accepting comments on the document through May 18, 2016. The comments will be incorporated in the final study, including updated demand projections for Brunswick, New Hanover, and Pender counties.

A hydrologic model is not available for the lower portion of the Cape Fear River watershed due to tidal and saltwater influences. This area includes Black/South River, Northeast Cape Fear and Cape Fear River below lock and dam #1. (See map below). Evaluations are underway to determine the current and projected water supply needs for areas not supplied by withdrawals included in the Cape Fear River Water Supply Evaluation. Additional evaluations are underway to determine if the regional surface and groundwater resources are sustainable given the projected growth in the lower Cape Fear River basin. An assessment of the groundwater resource in the coastal plain aquifers is a key focus area that will be included in the final report, to the extent practicable, given the available data and time frame for this report.

The goal of this study is to have a better understanding the water resource needs throughout the Cape Fear basin in order to support regional partners in their planning for future needs, while protecting water quality and minimizing regional conflicts.

Map of Cape Fear River Watershed

