

**North Carolina Environmental Management Commission -
Water Allocation Committee
Meeting Summary**

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

9:00-10:00 a.m.
Wednesday, September 12, 2012

Water Allocation Committee (WAC)

Commissioner Mayor Darryl D. Moss, Chair
Commissioner Stephen Smith, EMC Chair
Commissioner Marvin S. Cavanaugh, Sr.
Commissioner Steve Keen
Commissioner Jeffrey Morse
Commissioner Dickson Phillips, III
Commissioner Clyde E. Smith, Jr.
Commissioner Steve Tedder
Commissioner Amy Pickle
Commissioner Benne C. Hutson

Item I. Preliminary Matters

1. Committee Chairman, Commissioner Mayor Darryl D. Moss, called the meeting to order. Pursuant to Executive Order Number One, the committee chairman called upon committee members to evaluate the matters to come before the committee and to identify any known conflict of interest or the appearance of a conflict of interest. There were no conflicts of interest.

2. Minutes and Agenda

The committee approved the minutes of the July meeting as a true and accurate summary of the proceedings. The agenda for the July meeting included a validation of the Broad River basin model.

Item II. Action Item

1. Broad Model Approval

During the last WAC meeting, the Division of Water Resources (DWR) showed the committee how they validated the Broad River basin model. Now, DWR is asking for approval of the model. The division will ask the EMC to approve the model in the November meeting.

Background: The 2010 General Assembly passed legislation that requires the Environmental Management Commission to approve the hydrologic basin models that are developed by the Division of Water Resources. The statute requires that the modeling process take into consideration a wide variety of environmental and anthropogenic factors. Ecological flows are not incorporated in the models as of now, but there are place holders for them once they are developed.

To meet these statutory requirements, DWR employs the OASIS modeling platform, which is a very flexible and powerful program. OASIS is primarily a water balance model that measures inflow versus outflow. It is a very powerful tool that South Carolina may also adopt in the future. If they do, we will be able to marry the models for the river basins that are shared between these two states.

The model allows users to simulate critical scenarios, such as how increases in demand affect downstream water users on a basinwide level. Many local stakeholders are involved in developing the model and they all need to be able to use the final product. The goal is for the model to become a planning tool that can be used for local water resource planning and for the development and testing of water shortage response plans. DWR provided training twice for anyone who wants to use the Broad River Basin Model.

Process: The model contract was initiated in May 2010 and the Broad River model was completed in May 2012. Local water systems attended a kickoff meeting and then a second meeting to review the draft model. In addition, there was a third stakeholder meeting in the basin in order to solicit additional feedback and to provide a training session to the local users. The technical advisory group meets to hear updates about the modeling process. The statute requires the division to hold a 60-day public comment period regarding the final model. DWR received one comment from Duke Energy. Duke requested that DWR make a change to the operating rules that govern their facilities at Lake Summit and Gaston Shoals. DWR incorporated Duke Energy's recommendations into the model.

The model only measures water quantity and studies how the water moves from upstream to downstream. It does not perform flood analyses or water quality-related analyses. DWR is trying to develop the means to better incorporate ground water into the models. The division is now able to model drought plans. The model uses an arc/node configuration. Nodes are at key points in the model schematic and the arcs show how water moves between them. Blue squares indicate withdrawal points and the arrows show an inflow into the system. The triangles represent reservoirs. DWR uses historical streamflows from USGS gauges, evaporation, and rainfall in the creation of the model. DWR works with local soil and water districts to incorporate agricultural water demand. The large community water systems report to the division on an annual basis. Once DWR gathers all the data, the gaps are filled in.

DWR compares the computed and historic levels for validation purposes. A frequency curve is used to determine the probability of the subject water being above or below a certain flow. Current conditions can be compared to the whole period of record. The model can be employed to alter demands on a broad scale and can be utilized to examine drought triggers based on the flow and the historical drought record. The division is asking to take the model to the full EMC for approval in November.

Links to Broad Model information and training are listed below:

Broad Model website: http://www.ncwater.org/Data_and_Modeling/Broad/

Broad Model Report:

http://www.ncwater.org/Data_and_Modeling/Broad/background/03_BRBM_Modeling_the_Broad_River_Basin_Operations_with_OASIS.pdf

Model Training Signup: http://www.ncwater.org/Data_and_Modeling/Broad/training.php

The committee voted to take the Broad River Basin Model to the full EMC in November and to recommend approval of this model.

Item III. Informational Item

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1. Interbasin Transfer (IBT) Updates

Toya Ogallo gave an update on all the IBT requests that are currently in house. There will most likely be action items on these starting next year (2013).

The first one is the Kerr Lake Regional water system. The partners are Henderson, Oxford and Warren counties. They want to transfer 24 million gallons a day from the Roanoke River basin to the Tar, Fishing Creek and Neuse river basins. They first sent the in the notice of intent to the division in 2009. After that, they sent in an environmental assessment. DWR provided comments on the draft. The Roanoke River basin model needs to be updated before it can go out for public comment and full agency review. DWR is expecting that the work will be completed in June 2013.

Brunswick County requested 17 million gallons a day from Cape Fear to Shallotte Basin in 2009. This request was affected by a 2010 statute that defined the Shallotte Basin as an isolated river basin. Therefore, they can follow the older 22i statute, with which DWR issued the Greenville Utilities Commission IBT under. The Brunswick County IBT will follow that same process.

A draft environmental assessment was recently received from Charlotte-Mecklenburg Utilities. In 2002, an IBT was issued, however the Goose Creek watershed was exempt from that IBT to further study the impact to the Carolina Heelsplitter. They have come back since 2009 and submitted an internal draft to have the Goose Creek watershed added back to the IBT certificate. Charlotte-Mecklenburg will be setting up meetings with various resource agencies to discuss those actions.

Adjournment

There being no further business, **Chairman Mayor Darryl D. Moss**, dismissed the assembly at 9:35 a.m.