



North Carolina Department of Environment and Natural Resources  
Division of Water Resources

Michael F. Easley, Governor

William G. Ross Jr., Secretary  
John Morris, Director

July 7, 2006

**MEMORANDUM**

**TO: Interested Parties**

**FROM: Division of Water Resources**

**RE: Cities of Concord and Kannapolis Interbasin Transfer Request –  
Distribution of Supplemental Information**

The purpose of this memorandum is to:

1. Distribute supplemental modeling results analyzing the potential impacts of a proposed interbasin transfer (IBT) by the Cities of Concord and Kannapolis,
2. Distribute a supplement to the Petition for this IBT, which includes updated water demand estimates and a description of facilities that would be used to make the proposed transfer, and
3. Provide additional public comments that were omitted due to an oversight from Appendix F of the Final Environmental Impact Statement (FEIS) dated May 2006.

All of the supplemental information described here can be downloaded at:

[http://www.ncwater.org/Permits\\_and\\_Registration/Interbasin\\_Transfer/Status/Concord/FEIS/](http://www.ncwater.org/Permits_and_Registration/Interbasin_Transfer/Status/Concord/FEIS/)

Hard copies may be requested from the Division by contacting Phil Fragapane at [Phil.Fragapane@ncmail.net](mailto:Phil.Fragapane@ncmail.net)

**1. Supplemental Model Results**

The Division of Water Resources (DWR) previously released modeling results which were included in the May 2006 FEIS. This modeling included model runs intended to evaluate IBT quantities of zero and 24 MGD with 2035 water demands. After the FEIS was released, it was discovered that the inputs to all model runs for the Catawba River Basin 2035 demand scenario actually included an extra 14 MGD of IBT from Lake Norman attributed to the Cities of Concord

and Kannapolis. For this reason, the zero IBT, 2035 demands scenario in the FEIS actually represents a 14 MGD IBT, and the 24 MGD IBT, 2035 demands scenario actually represents a 38 MGD IBT.

An important concern with this discovery is that the modeling results do not contain a zero IBT run. In order to address this situation, two additional runs were subsequently performed, a zero IBT run and a 24 MGD IBT run. These runs and results are summarized in the *Supplemental Report: CHEOPS Simulation of Proposed Concord-Kannapolis Interbasin Transfer from the Catawba River Basin*.

Note that these supplemental modeling runs update only the results of the Catawba River Basin modeling. Modeling conducted for the Yadkin River Basin remains as presented in the FEIS.

### **IBT Impacts – Low Inflow Protocol**

An important measure of the impact of the proposed IBT is the frequency with which the Low Inflow Protocol (LIP) would be invoked, requiring varying levels of water conservation measures by all basin water users, including Duke Power. The LIP is being developed during the on-going hydropower relicensing process required by the Federal Energy Regulatory Commission. It was developed by representative stakeholders throughout the Catawba River Basin on the basis that all users and parties in the basin with interests in water quantity will share the responsibility to conserve water during low inflow conditions. The LIP includes five stages of water management (Stage 0 to Stage 4), starting with public notification and voluntary restrictions to extreme mandatory restrictions on water use.

Analysis of the supplemental modeling output predicts that during the 2001-02 drought, the IBT would have caused Stage 3 restrictions to have been implemented one month earlier than would have been required without the IBT, assuming 2035 water demands. This one-month difference is the only impact on the frequency of implementation of the LIP predicted by the model during the 75 years of record.

Note: The modeling results in the FEIS and in the *Supplemental Report* are based on the LIP at the time the modeling was performed in November 2005. Subsequently, the LIP has been revised. The revisions affect only the response time period required for implementing LIP actions, and do not affect minimum reservoir elevations or water withdrawal reduction levels.

### **IBT Impacts – Lake Elevations, Outflows**

During all periods other than the most extreme drought, the supplemental modeling results show little or no differences in lake elevations in the Catawba River Basin caused by the IBT. However, during the extreme drought of 2001-02, assuming 2035 projected water demands, the model predicts a difference in elevation at Lake James due to the IBT of up to approximately 4 feet between September 2002 and March 2003 (see Figure 5 of the *Supplemental Report*).

During other droughts, specifically the droughts of the 1950's and 1980's, no Lake James elevation impacts due to the IBT are predicted by the model (Figures 3 and 4).

The supplemental modeling shows no noticeable differences in the elevation duration curves for Lake James or Lake Norman during the 75 year period of record (Figures 5 and 9 in the *Supplemental Report*). Also, the modeling shows no noticeable differences in the outflow

duration curves for Lakes James, Oxford, Wylie and Wateree during the period of record (Figures 12-15).

## **2. Supplement to Petition**

Concord and Kannapolis plan to rely primarily on existing infrastructure for the proposed IBT. The need to construct major new pipelines would occur many years in the future, if at all. Additional information on this aspect of the proposal is included in *Supplemental Information to the Petition for Interbasin Transfer – Cities of Concord and Kannapolis*. This supplement also includes updated water demands and projected IBT quantities.

## **3. Additional Public Comments**

All comments received by DWR before the comment deadline were analyzed in detail by DWR staff, summarized and addressed in the Final EIS. Comments received after the deadline were not analyzed in detail, but were accepted with the intention of appending them to the Final EIS. Because of an oversight, the subsequent comments were not included in the Final EIS. They are now added in an addendum to Appendix F.

Note: Only comments that were received by DWR have been added. Comments that were sent to members of the Environmental Management Commission may not have been received by DWR and may not be included.