



May 26, 2011

Mr. Tom Reeder
N.C. Division of Water Resources
1611 Mail Service Center
Raleigh, North Carolina 27699-1611

Subject: IBT Report for 2008

Dear Tom:

We are sending our calendar year 2008 IBT Annual Report. We are also transmitting this report to you electronically. The report follows the format of earlier reports and includes a narrative section with background and program progress reports along with spreadsheets detailing the IBT amount calculation.

For calendar year 2008, we experienced an actual maximum day IBT of 17.42 mgd based on July billing data and as of December 31, 2008, had additional outstanding IBT commitments of 2.24 mgd. The summation of these amounts would indicate a 2008 IBT amount of 19.66 mgd which is less than 60% of our authorized amount.

Please let me know if you have any questions.

Sincerely,

CHARLOTTE-MECKLENBURG UTILITIES

A handwritten signature in black ink, appearing to read "Barry M. Gullet", is written over the typed name.

Barry M. Gullet, PE
Director

Cc: Toya F. Ogallo



*Charlotte-Mecklenburg Utilities
Annual Report on Interbasin Transfer
Calendar Year 2008*

The North Carolina Environmental Management Commission (EMC) approved Charlotte Mecklenburg Utilities' (Utilities') petition to increase the amount of water transferred from the Catawba basin to the Rocky River basin and an interbasin transfer (IBT) Certificate was issued on March 14, 2002. The Certificate authorizes Utilities to transfer up to 33 million gallons per day (mgd) from the Catawba River basin to the Rocky River basin.

The IBT Certificate requires Utilities to report maximum daily IBT amounts annually to the North Carolina Division of Water Resources (NC DWR) until such time as the transfer amount exceeds 80% of the authorized amount. Once that amount is exceeded, Utilities is required to report monthly. To date, Charlotte-Mecklenburg Utilities has not exceeded 80% of the authorized IBT amount.

System Overview

The Utilities operates the water and wastewater systems that serve Charlotte, Cornelius, Davidson, Huntersville, Mint Hill, Matthews, Pineville, and much of the unincorporated areas of Mecklenburg County. This system is divided between two river basins designated by NC General Statutes for regulation of IBT water. The western portion of the system is within the Catawba River basin and the eastern portion is within the Rocky River basin. Water transferred from the Catawba River basin to the Rocky River basin that is not returned to the Catawba is regulated IBT.

Water for distribution to Utilities' customers is withdrawn from the Catawba River basin at two locations. An intake at Lake Norman sends water to the Lee S. Dukes Water Treatment Plant. A second intake at Mountain Island Lake sends water to the Walter M. Franklin Water Treatment Plant and to the Vest Water Treatment Plant. Potable water from these three plants is delivered through an interconnected distribution system to retail customers throughout Utilities' service area in Mecklenburg County and in small areas of Iredell, Cabarrus, and Union Counties. The Utilities also provides wholesale water to municipal systems for Resale including: City of Concord (NC), Town of Harrisburg (NC), Union County (NC), York County Water & Sewer Authority (SC), and Lancaster County Water and Sewer District (SC).

Utilities treats wastewater at five advanced wastewater treatment plants (WWTP's) which discharge into small streams in Mecklenburg County. Four of the streams are tributary to the Catawba River basin and one (Mallard Creek) is tributary to the Rocky River basin. Utilities also conveys wastewater generated in portions of Mecklenburg to the Rocky River Regional Wastewater Treatment Plant (RRRWWTP) operated by the Water and Sewer Authority of Cabarrus County (WSACC). The RRRWWTP discharges treated effluent to the Rocky River.



IBT Monitoring

Water supplied to Utilities' retail customers in the Rocky River Basin, that is not returned to the Catawba basin is included in the reported IBT amounts. Water provided to municipalities with service areas in the Rocky River basin include the City of Concord and the Town of Harrisburg.

Utilities can transfer treated potable water to the City of Concord through three metered connections to their water system. All of Concord's service area is within the Rocky River basin, so any water purchased by them becomes an IBT. Water service is only provided as an emergency back-up to Concord's routine supply which is Lake Howell and several smaller reservoirs. All of these reservoirs are within the Rocky River basin. Wastewater from Concord is treated at the RRRWWTP. Utilities' agreement with Concord is that water will be supplied to them subject to availability and subject to regulatory constraints including IBT and Federal Energy Regulatory Commission (FERC) limitations.

Concord received an IBT Certificate in January 2007, for the transfer of up to 10 mgd from the Catawba River basin to the Rocky River basin. NC DWR advised Utilities that water sold to Concord should not be applied to Utilities' IBT amount. Concord did not purchase any potable water from Utilities in calendar year 2008, so the IBT amounts reported do not include sales to Concord.

Utilities can transfer treated potable water to the Town of Harrisburg through two metered connections to their water system. All of Harrisburg's service area is within the Rocky River basin and is included in the Utilities' IBT amounts.

Table 1 below summarizes actual IBT amounts for calendar years 2002 through 2008 (all calculated using the methodology approved by NC DWR in June of 2006). The table considers the daily amounts of water transferred from the Catawba basin to customers within the Rocky River basin that is not returned to the Catawba basin.

The data indicates that the maximum amount of IBT for year 2008 occurred in July, and was 17.42 mgd, less than 53% of the authorized maximum day value of 33 mgd. The average IBT for 2008 was 11.39 mgd, which is approximately 35% of the authorized maximum day value. In addition to the amount of actual IBT reported in Table 1, Utilities has committed to provide additional IBT to development that has been proposed but not yet activated in the Rocky River basin. As of December 31, 2008, 1.42 mgd was committed to permitted donated projects (subdivisions) that had not been activated and 0.81 mgd was committed to master meter connections (generally commercial or multi-family developments) that had not been activated, both based on maximum day estimates. This brings the total of the actual and outstanding IBT in 2008 to 19.66 mgd, or less than 60% of the authorized maximum day value.

Table 1. Actual IBT Summary

Calendar Year	Avg. Annual IBT (mgd)	Max. Day IBT (mgd)
2002	6.74	11.97
2003	6.91	9.82
2004	7.79	12.56
2005	8.66	13.79
2006	9.56	14.35
2007	9.96	17.22
2008	11.39	17.42

Compliance with Certificate Conditions

Condition 1 of Utilities’ IBT certificate requires Mecklenburg County to summarize progress in implementation of watershed management approaches of the Surface Water Improvement and Management Program (S.W.I.M. program). This summary follows:

The watershed management approaches of the Surface Water Improvement and Management (SWIM) Program continued to be implemented in the McDowell and Goose Creek Watersheds during calendar year 2008 resulting in the completion of the following activities:

- a. *Construction was completed on a BMP retrofit project at the following locations in the McDowell Creek Watershed near Interstate 77, Highway 73 (Sam Furr Road) and US 21 (Statesville Road):*

- *Northcross Shopping Center*
- *Carolinas Medical Center-Northcross*
- *Northcross Commons*
- *Monteith Park subdivision*



Rain Garden at Northcross Shopping Center

These projects included retrofitting rain gardens and wetlands into existing developments to collect and treat storm water runoff for pollutant removal as part of efforts to restore water quality conditions in McDowell Creek. The total cost for the projects was \$1,900,000.

- b. *Planning and design was completed for a stream restoration project including over 7,500 feet in the McDowell Creek Watershed from Westmoreland Road in Cornelius to Sam*



Furr Road in Huntersville. The objectives of this project are to return the stream channel to a more natural pattern, stabilize eroding stream banks, revitalize surrounding floodplains, improve overall water quality, and restore aquatic and terrestrial habitat along the project corridor. The total cost for the project is estimated at \$1,250,000.

- c. Planning and design was completed for a stream restoration project including 1,700 feet in the upper portion of the McDowell Creek Watershed near Danesway Lane in Huntersville. The badly-eroded stream bed will be relocated. Wetlands and a rain garden will also be added along the restored stream to filter out pollutants. The total cost for the project is estimated at \$742,000.*
- d. Planning and design was completed for a stream restoration and BMP retrofit project on Caldwell Station Creek in the upper portion of the McDowell Creek Watershed in Cornelius. No cost estimate is available.*
- e. The Goose Creek Watershed Management Plan was completed, including specific actions aimed at reducing fecal coliform bacteria levels in the stream. Efforts were initiated for the identification of specific projects for restoring overall water quality conditions.*
- f. Mecklenburg County continues to partner with the Sierra Club and local schools to plant trees along the banks of McDowell Creek to restore the water quality buffer. During 2008, over 2,500 trees were planted in the McDowell Creek buffer including participation by 350 volunteers.*

Condition 2 of Utilities' IBT certificate required a stakeholder process to investigate, develop, adopt, and implement storm water ordinances that control water quantity from single-family development and water quality for all development until completed. The requirements of Condition 2 were completed in 2007.

Condition 3 of the IBT Certificate removes the Goose Creek subbasin from the area to be served by the IBT, and imposes a moratorium on the installation of new IBT water lines (water lines crossing the ridgeline) into Goose Creek subbasin until the impacts of additional growth on the endangered species are fully evaluated.

The Utilities received proposals for performing an Environmental Assessment (EA) of new development in the Goose Creek basin (Mint Hill area), impacts to water quality, and measures required to protect the Carolina Heelsplitter. Due to budget and cost considerations the Utilities has postponed plans for undertaking the study and has requested the NC Division of Water Resources (DWR) to prepare the EA.



Condition 4 of the IBT Certificate provides that the Environmental Management Commission may reopen the Certificate under certain circumstances. This did not occur in 2008.

Condition 5 of the IBT Certificate requires Utilities to develop a compliance and monitoring plan for reporting maximum daily transfer amounts, compliance with certificate conditions, and progress on mitigation measures, and drought management activities. Utilities' monitoring plan and reporting format were approved in June of 2006 by NCDWR and continued to be used for 2008.

The drought that gripped the Catawba River Basin in 2007 persisted throughout 2008, requiring the continued implementation of drought management activities. The drought response plan adopted by the utility members of the Catawba- Wateree Drought Management Group contained specific triggers or measurements intended to guide the activities to reduce overall consumption.

Restrictions prohibiting outdoor water use carried over into 2008, resulting in significant reductions in withdrawals from the Catawba – Wateree basin. These measures helped the basin realize savings of 20 – 30 % as compared to unrestricted use.

Outdoor water use restrictions were eased to allow outdoor watering two times a week starting in September 2008. The result was a continued decline in consumption. The improvements in water supply in the basin were slow and caused Charlotte Mecklenburg Utilities to maintain water restrictions throughout all of 2008. Customer behaviors remained conservative resulting in an overall reduction of 22% for the year.

Summary

The actual maximum day amount of water transferred from the Catawba River basin to the Rocky River basin was 17.42 mgd, less than 53% of the authorized maximum day value of 33 mgd. The total of actual and outstanding IBT was 19.66 mgd, less than 60% of the authorized maximum day value. Utilities is in full compliance with IBT authorizations and compliance conditions for calendar year 2008.