



Jun. 12, 2013
Mr. Tom Reeder
N.C. Division of Water Resources
1611 Mail Service Center
Raleigh, North Carolina 27699-1611

Subject: IBT Report for 2012

Dear Tom:

We are sending our calendar year 2012 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 2012, we experienced an actual maximum day IBT of 17.67 mgd based on August billing data. As of December 31, 2012, there were additional outstanding IBT commitments of 1.74 mgd. The total amount of IBT for 2012 was 19.4 mgd, approximately 59% of the authorized amount.

Please let me know if you have any questions.

Sincerely,

CHARLOTTE-MECKLENBURG UTILITIES

David W. Czerr, PE
Program Manager – Planning Section

CC: Toya Ogallo



*Charlotte-Mecklenburg Utilities Department
Annual Report on Interbasin Transfer
Calendar Year 2012*

INTRODUCTION

The North Carolina Environmental Management Commission (EMC) approved Charlotte-Mecklenburg Utility Department's (CMUD's) petition to increase the amount of water transferred from the Catawba River basin to the Rocky River basin. An interbasin transfer (IBT) Certificate was issued on March 14, 2002 that authorizes CMUD to transfer up to 33 million gallons per day (mgd) between the river basins.

The IBT Certificate requires CMUD 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, CMUD is required to report monthly. The Charlotte-Mecklenburg Utility Department has not exceeded 80% of the authorized IBT amount.

SYSTEM OVERVIEW

CMUD 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 river basin is regulated IBT.

Water for distribution to CMUD's customers is withdrawn from the Catawba River basin at two locations.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 CMUD's service area in Mecklenburg County and in small areas of Iredell, Cabarrus, and Union Counties. CMUD 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).

CMUD treats wastewater at five advanced wastewater treatment plants (WWTP's) that 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. CMUD also conveys wastewater generated in portions of Mecklenburg County to the Rocky River Regional Wastewater Treatment Plant (RRRWTP) operated by the Water and Sewer Authority of Cabarrus County (WSACC). The RRRWTP discharges treated effluent to the Rocky River.

IBT MONITORING

Water supplied to CMUD's 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 includes the City of Concord and the Town of Harrisburg.

CMUD 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 RRRWTP. CMUD's 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 CMUD that water sold to Concord should not be applied to CMUD's IBT amount. Concord did not purchase any potable water from CMUD in calendar year 2012, so the IBT amounts reported do not include sales to Concord.

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

Table 1 summarizes actual IBT amounts for calendar years 2002 through 2012 (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 River basin to customers within the Rocky River basin that is not returned to the Catawba River basin.

The maximum monthly IBT for calendar year 2012 was 17.67 mgd in August, which was approximately 53.5% of the authorized IBT of 33 mgd. The average IBT for 2012 was 12.18 mgd, approximately 37% of the authorized IBT. In addition to the actual amount of IBT reported in Table 1, CMUD has committed to provide IBT to development that has been proposed but has not yet been activated within the Rocky River basin. As of December 31, 2013, 1.03 mgd has been committed to permitted donated projects (subdivisions) that have not been activated and 0.71 mgd was committed to master meter connections (generally



commercial or multi-family developments) that have not been activated, both based on maximum day estimates. The combined actual plus committed IBT for 2012 was 19.4 mgd, approximately 59% of the authorized IBT.

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
2009	12.04	16.00
2010	13.33	18.33
2011	13.11	18.82
2012	12.18	17.67

COMPLIANCE WITH CERTIFICATE CONDITIONS

Condition 1: S.W.I.M. Program Summary

Mecklenburg County is required to annually summarize progress in implementation of watershed management approaches of the Surface Water Improvement and Management Program (S.W.I.M. program). The Division of Water Resources shall have the authority to approve modifications to and need for continued reporting as necessary.

Surface Water Improvement and Management (S.W.I.M.) Program watershed management approaches continued to be implemented during calendar year 2012. Efforts continued to focus on McDowell and Goose Creeks, as initiated in 2007, as well as on the South Prong and West Branch of the Rocky River in Davidson that began in 2009. During calendar year 2012, the following work was completed in the three (3) watersheds:

McDowell Creek (including the Torrence Creek Tributary to McDowell Creek)

1. Completed the restoration of 1,000 feet of stream and the retrofit of 5 rain gardens and 2 water quality swales on the North Mecklenburg Park property in Huntersville.
2. Completed restoration of Torrence Creek Tributary #1 in January 2013. The project restored approximately 1.6 miles of degraded stream bank along Torrence Creek at a



cost of \$1.428 million. NC Clean Water Management Trust fund contributed \$260,000 to the project.

3. Initiated construction of the restoration of approximately 1 mile of Torrence Creek within The Park – Huntersville property. Construction is expected to be complete in 2013. Project costs are anticipated to be \$919,100 which are partially offset by a \$364,711 NC Clean Water Management Trust Fund grant.
4. Applied for NC Clean Water Management Trust Fund Grant to restore McDowell Creek between Westmoreland and Sam Furr Roads.
5. Began design of McDowell Creek stream restoration between Birkdale Village and Gilead Road. Project is estimated to cost \$2.2 million. NC Clean Water Management Trust Fund Grant was awarded in the amount of \$400,000.
6. Private mitigation bank to restore approximately 1 mile of stream and 5 acres of wetland on private property off of Bud Henderson Road.

Goose Creek (including the Stevens Creek Tributary to Goose Creek)

1. Ongoing planning and property acquisition for the restoration of 2 miles of stream along Stevens Creek. Conceptual design completed.

Rocky River

1. Coordinated with the Town of Davidson staff and Mecklenburg County Park and Recreation to initiate planning process to restore 5 acres of floodplain along West Branch of the Rocky River.
2. Worked with the Town of Davidson citizens and elected officials to identify funding to repair significant head-cut on Davidson Elementary School grounds.

Condition 2: Stakeholder Process (Completed)

A stakeholder process is required 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: Goose Creek Subbasin (Completed)

The IBT Certificate removed the Goose Creek subbasin from the area to be served by the IBT, and imposed 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 were fully evaluated.



CMUD submitted the final Environmental Assessment of new development in the Goose Creek basin (Mint Hill area) to the NC Division of Water Resources (DWR) in February of 2013. The Environmental Management Commission approved the Environmental Assessment in May of 2013 and has removed the requirements under condition 3.

Condition 4: Environmental Management Commission

The IBT Certificate provides that the Environmental Management Commission may reopen the Certificate under certain circumstances. This did not occur in 2012.

Condition 5: Compliance and Monitoring Plan

The IBT Certificate requires CMUD 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. CMUD's monitoring plan and reporting format were approved in June of 2006 by NC DWR and continue to be used for 2012.

The Charlotte Mecklenburg Utility Department monitored water treatment plant pump rates, streamflow and lake storage indicators, the US Drought Monitor, and other factors in accordance with the CMUD Water Shortage Response Plan. Measurements were assessed monthly to identify designated triggers that could indicate developing drought conditions. All appropriate planning, communication and preparation were in place to respond as needed to changing conditions.

In coordination with 17 other utilities in the Catawba-Wateree river basin, CMUD participated in regional drought response planning and response activities as directed by the FERC- approved Low Inflow Protocol.

SUMMARY

The actual maximum day amount of water transferred from the Catawba River basin to the Rocky River basin was 17.67 mgd, less than 53.5% of the authorized maximum day value of 33 mgd. The combined total of actual and outstanding IBT volumes was 19.40 mgd, less than 59% of the authorized maximum day value. CMUD is in full compliance with IBT authorizations and compliance conditions for calendar year 2012.