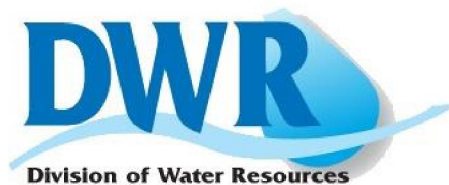


# 2012 & 2013 Annual Report on Interbasin Transfers from the Catawba River Basin

North Carolina Division of Water Resources



Department of the Environment and Natural  
Resources

August 2013

## INTRODUCTION

This report has been prepared in accordance with the Settlement Agreement signed on December 3, 2010 reached between the States of South Carolina and North Carolina, Duke Energy Carolinas LLC, and the Catawba River Water Supply Project. As a condition of that agreement, *“each State shall prepare an annual report of the average daily transfer amounts for each entity holding an [Interbasin Transfer] IBT certificate and provide it to the other State.”* Therefore, this annual report is intended to be a summary of IBTs to and from the Catawba River Basin that are conducted by IBT certificate holders. Due to a recent reorganization within the North Carolina Department of Environment and Natural Resources (NCDENR), no report was issued in 2012; therefore, this report includes both calendar years 2012 and 2013.

## BACKGROUND: IBT LAW IN NORTH CAROLINA

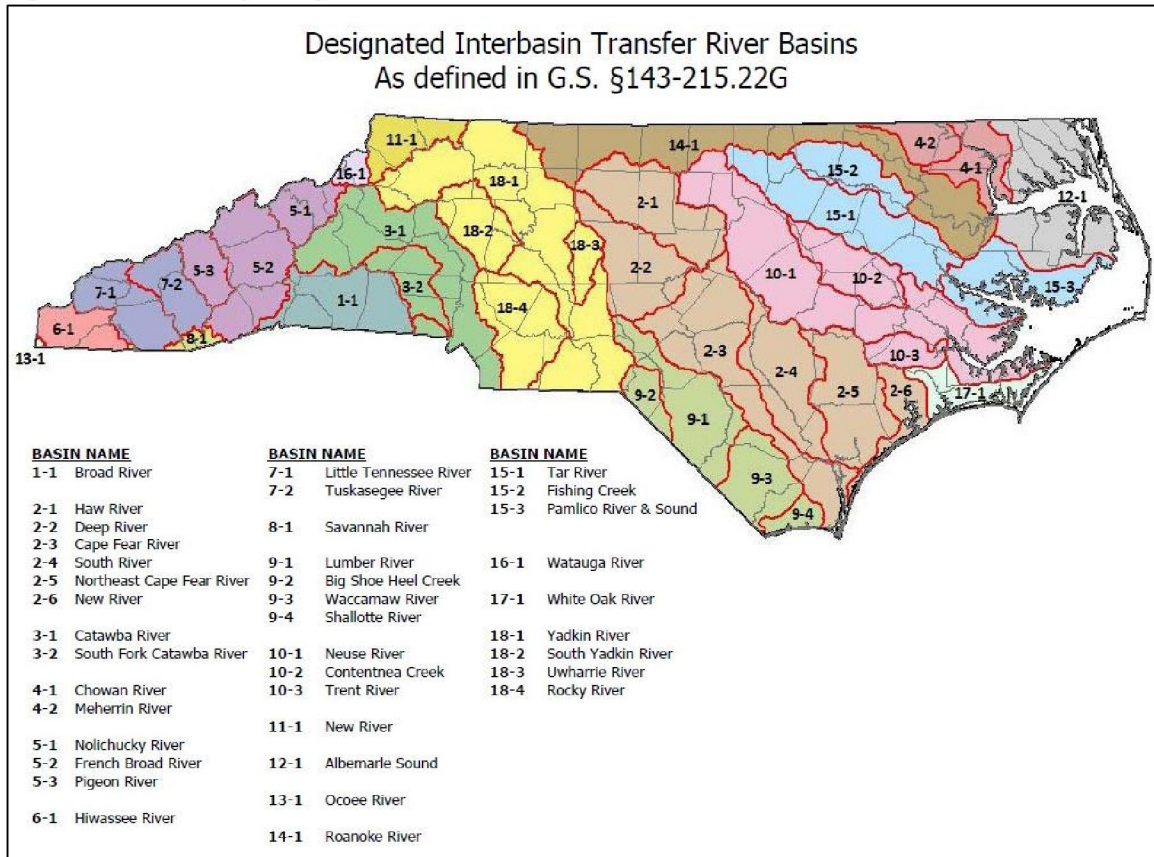
In 1993, the North Carolina Legislature enacted General Statute G.S. §143-215.22I as part of An Act to Regulate Interbasin Transfers (Session Law 1993-348). This law regulated large surface water transfers between river basins by requiring a certificate from the Environmental Management Commission (EMC). Following General Statute G.S. §143-215.22I, a transfer certificate is required for new transfers of 2.0 million gallons per day (MGD) or more.

Due to the fact that the Surface Water Transfer Act was first adopted in 1993, many of the IBT rules and requirements reference a system’s daily flows and capacity at that time. Facilities that were in existence prior to 1993 are said to have Grandfathered Transfers up to either 25% above their average daily flow at that time, their maximum system capacity at that time, or 2 MGD - whichever is greater. If a facility existed or was under construction by July 1, 1993, a certificate is not required up to the full capacity of that facility to transfer water, regardless of the transfer amount.

An important point in NC’s IBT law is that it creates its own, specific definition of a “river basin”. According to G.S. §143-215.22G, there are 38 designated river basins. An IBT certificate is required for any transfer, meeting the statutorily defined thresholds, between any of these defined river basins. Figure 1 illustrates the designated river basins.



Figure 1: Statutorily designated IBT river basins



The current procedure for obtaining an IBT Certificate is specifically laid out in Session Law 2013-388. The full process can take three to five years (or more), requires local and interstate notification, and offers a number of opportunities for public comment and review. In addition, the recent passage of Session Law 2013-388 has changed the way in which a proposed IBT would be calculated, among other revisions. Instead of a maximum daily transfer, the revised calculation is based on an average daily transfer calculated over a calendar month. Even though the statistical calculation has changed, the 2.0 MGD threshold remains the same. The water systems with IBT certifications involving the Catawba River basin were approved prior to the most recent IBT statutory change; therefore, the water transfer data will follow the reporting requirements as set forth in §143-215.22I. The full text of IBT statute §143-215.22I, the law under which the Charlotte Mecklenburg Utilities IBT was approved, is included as Appendix A in this report. Session Law 2013-388 and previous IBT statutes are available on the Division of Water Resources (DWR) website at, <http://www.ncwater.org/?page=297>.

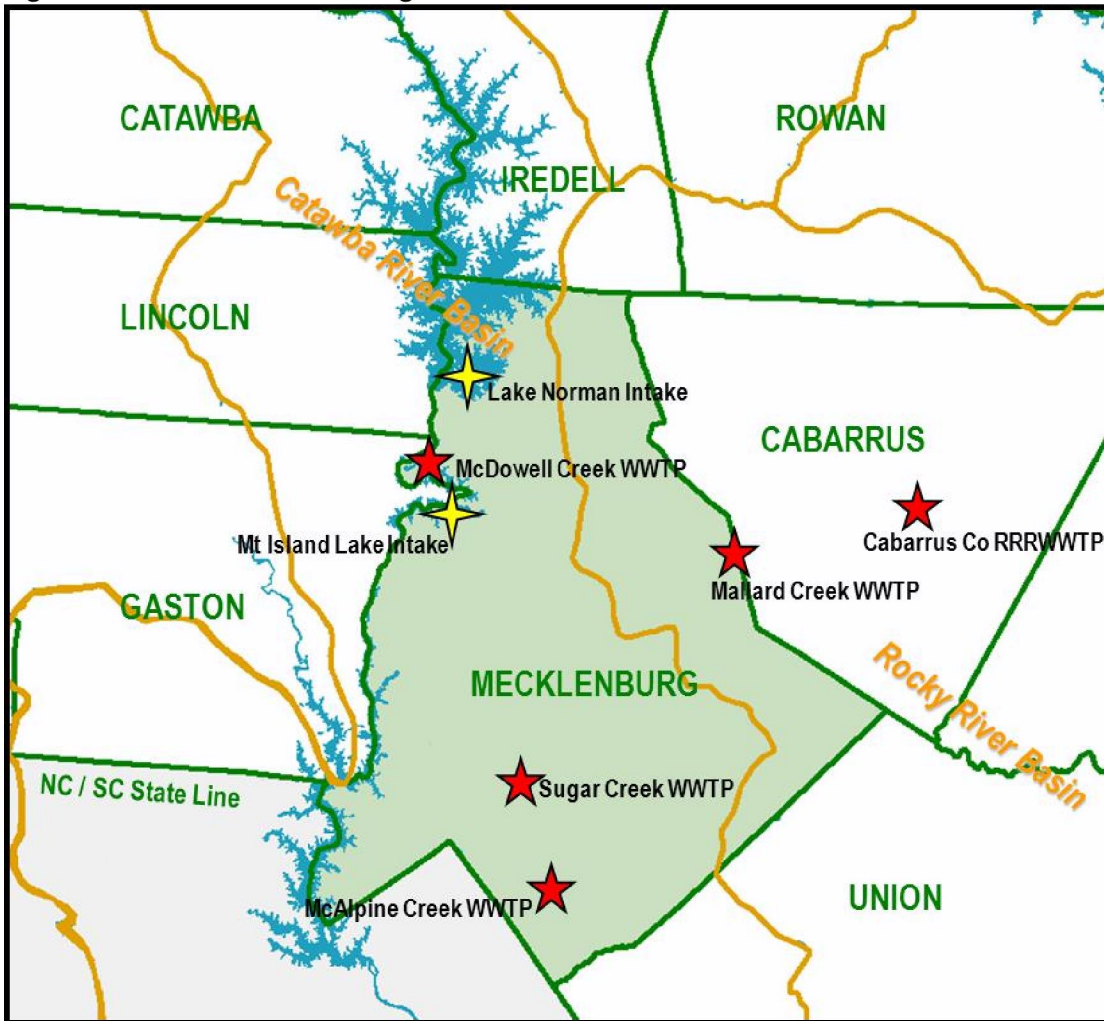
As of August 2014, The North Carolina EMC has issued IBT certificates for six water systems. Two of these certificates directly affect the Catawba River Basin. Those two certificates, Charlotte Mecklenburg Utilities and the Cities of Concord and Kannapolis, are further discussed in this report. The DWR also estimates that there are more than 100 grandfathered systems performing IBTs throughout the State, most of which transfer less

than 2.0 MGD on a maximum day basis. These grandfathered systems are not required to obtain an IBT certificate until they exceed the statutory thresholds. Since these systems are not required to obtain an IBT certificate, they are not discussed in this document.

CHARLOTTE MECKLENBURG UTILITIES

Charlotte Mecklenburg Utilities (CMU) has held an IBT certificate since March 14, 2002. The certificate allows CMU to transfer up to 33.0 MGD from the Catawba River Basin to the Rocky River basin. Figure 2 illustrates CMUs two water intakes in the Catawba River basin, and five wastewater treatment plants throughout the Catawba and Rocky River basins. The utility pursued this certificate in order to meet projected demands through 2030 in eastern Mecklenburg County. Specific details of the CMUs service area and sales are included in Appendix B, Charlotte Mecklenburg Utilities 2012 & 2013 IBT Annual Reports.

Figure 2: Charlotte Mecklenburg Utilities Service Area





In May 2013, CMU was granted a modification to the original IBT Certificate from the EMC, which removed Condition 3 from the Certificate. Condition 3 stated that, “*the Goose Creek subbasin in Mecklenburg County is removed from the area to be served by the IBT. A moratorium on the installation of new interbasin transfer water lines (water lines crossing the ridgeline) into Goose Creek subbasin is in effect until the impacts of additional urban growth on the endangered species are fully evaluated.*” This condition was removed after the EMC determined that the Town of Mint Hill’s 2010 Post-Construction Ordinance (PCO) permanently implemented appropriate mitigation measures for impacts to the Carolina Heelsplitter (*Lasmigona decorata*) in the Goose Creek watershed. Removal of this condition allows CMU to provide water service to customers in the Goose Creek watershed.

CMU provides water to retail customers in the Rocky River basin, as well as customers in the City of Concord and Town of Harrisburg, in neighboring Cabarrus County. However, water is only provided to Concord as an emergency backup to Concord’s primary supply consisting of Lake Howell and several smaller reservoirs. All of these reservoirs are within the Rocky River basin. Concord received an IBT Certificate in January 2007 for the transfer of up to 10.0 MGD from the Catawba River basin to the Rocky River basin; therefore, water sold to Concord is not applied to CMU’s IBT amount.

Concord did not purchase any potable water from CMU during the 2012 calendar year. However in 2013, Concord purchased 3.335 million gallons on December 22 and 1.934 million gallons from CMU on December 23 for an emergency water quality issue at Concord’s Coddle Creek Water Treatment Plant (WTP). This transfer was unavoidable due to a blue-green algae bloom in the source water for the WTP.

Charlotte Mecklenburg Utilities’ IBT calculation methodology was approved by DWR in June, 2006. Per the certificate, CMU reports the maximum daily IBT amounts annually to DWR until such time as the transfer amount exceeds 80% of the authorized amount. Once that amount is exceeded, CMU is required to report monthly. To date, CMU has not exceeded 80% of the authorized IBT amount. CMU’s IBT certificate requires an annual report listing the maximum daily transfer for the calendar year. The average daily and maximum daily transfers for 2012 and 2013 are summarized below in Table 1. CMU’s 2012 & 2013 IBT annual reports are included in Appendix B. Annual reports from 2002-2013 are available on the Division’s website at, <http://www.ncwater.org/?page=300>.

**Table 1: Charlotte Mecklenburg Utilities 2012 & 2013 Interbasin Transfers**

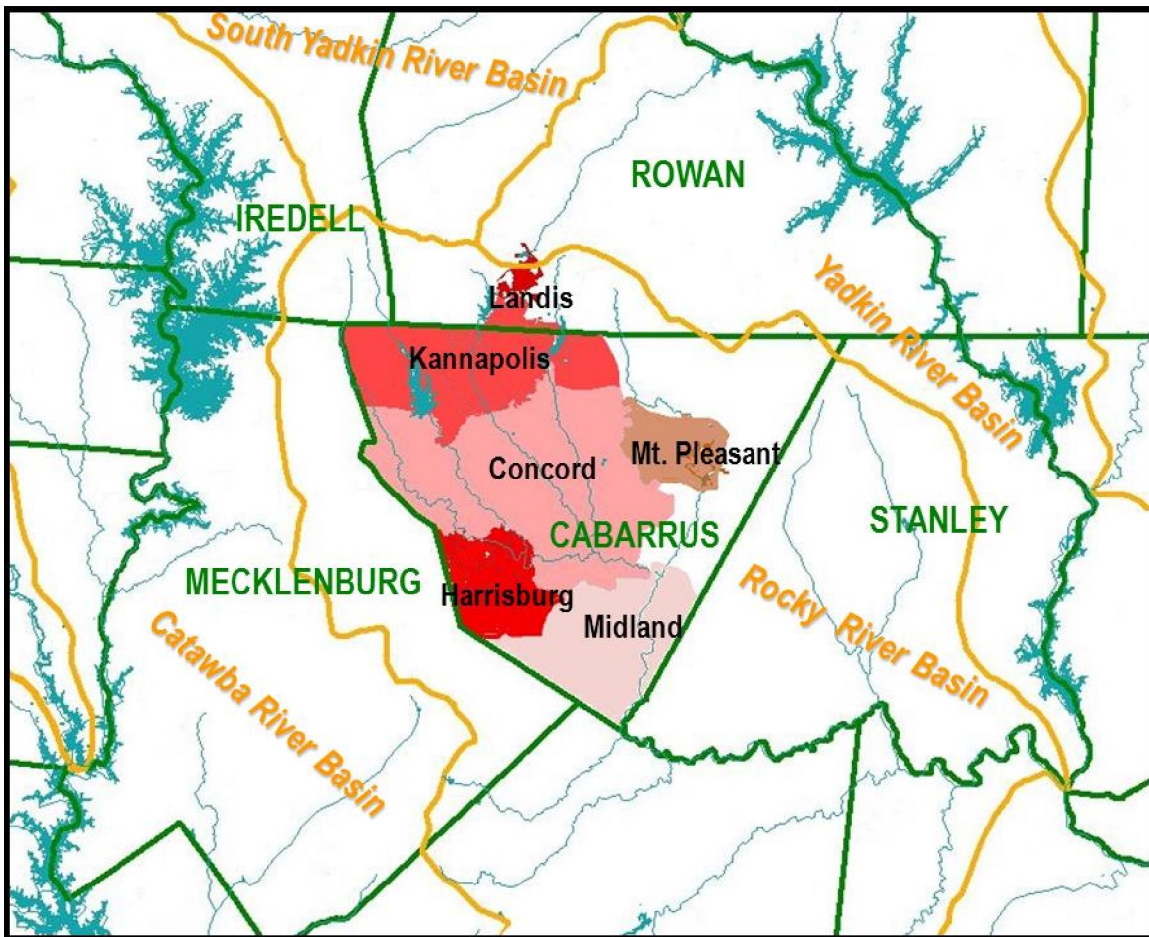
Calendar Year	Avg. Annual IBT (MGD)	Max. Day IBT (MGD)
2012	12.18 (37%)	17.67 (53.5%)
2013	12.99 (49.4%)	16.8 (50.9%)

Values in parentheses represent the percentage of the total allowable transfer per the CMU IBT Certificate.

## CONCORD AND KANNAPOLIS

The Cities of Concord and Kannapolis (the Cities) have held an IBT certificate since January 2007. This certificate authorizes the transfer of up to 10.0 MGD from the Catawba River basin to the Rocky River basin and 10.0 MGD from the Yadkin River basin to the Rocky River basin. This amount was authorized based on the Cities' needs through 2035 and an analysis of the yield of available water sources. In addition, the Cities have a grandfathered transfer capacity (based on infrastructure in place prior to 1993) of 6.0 MGD for transfers from the South Yadkin River basin to the Rocky River basin. Figure 3 illustrates the Cities' service area and interbasin transfers. Specific details of the Cities' service area and sales are included in Appendix C, Concord and Kannapolis' 2012 & 2013 IBT Annual Reports.

Figure 3: Concord and Kannapolis Service Area



In 2010 the Cities reached a settlement in a lawsuit filed by the Catawba River

Foundation, Inc. and the Protect the Catawba Coalition. While this settlement agreement does not affect the IBT Certificate, its conditions, or required reporting, the Cities did agree to several operational conditions in the Catawba River basin. Until July 1, 2015, the Cities have agreed to transfer no more than 3.0 MGD (on a maximum day basis) from the Catawba River basin. Thereafter, the Cities must first transfer 5.0 MGD from the Yadkin River basin before exceeding an IBT of 3.0 MGD from the Catawba River basin. During designated droughts beyond July 1, 2015, following either Low Inflow Protocol (LIP) or Drought Management Advisory Council (DMAC) Drought Stage declaration, the Cities have agreed to limit the Catawba River basin IBT so that it corresponds to water use reduction goals. Further details about this agreement, including the water use reduction goals after July 2015, can be found in Appendix C.

The Cities' IBT certificate requires an annual report listing the maximum daily transfer for the calendar year. The average daily and maximum daily transfers for 2012 & 2013 are summarized below in Table 2.

**Table 2: Concord and Kannapolis 2013 Interbasin Transfers**

Calendar Year	Catawba to Rocky		Yadkin to Rocky		South Yadkin to Rocky	
	Avg. Daily (MGD)	Max. Day (MGD)	Avg. Daily (MGD)	Max. Day (MGD)	Avg. Daily (MGD)	Max. Day (MGD)
2012	0	0	0.3 (3%)	0.3 (3%)	0.199 (3.3%)	0.454 (7.6%)
2013	0.014	3.335 (33.4%)	0.3 (3%)	0.3 (3%)	-0.21 <sup>1</sup>	-.045 <sup>1</sup>

Values in parentheses represent the percentage of the total allowable transfer per the CMU IBT Certificate. No value listed is effectively zero.

1. The grandfathered 6 MGD Max-Day IBT from the South Yadkin into the Rocky is not included in the 10 MGD IBT limit from the Yadkin. IBT regulations define the South Yadkin as a separate basin from the Yadkin.

Based on the information provided above, Concord and Kannapolis had a maximum daily transfer of 3.335 MGD from the Catawba River basin in 2013. This exceeds the 2010 settlement agreement with the Catawba River Foundation, Inc. and the Protect the Catawba Coalition, to not exceed 3.0 MGD, except under emergency conditions. On December 22, 2013 there was an emergency that required 3.335 MGD on that day and 1.934 MGD the following day. This transfer was unavoidable due to a blue-green algae bloom in the source water for Concord's Coddle Creek Water Treatment Plant. The bloom required treatment train modifications to ensure finished water was in compliance with State water quality regulations. It should be noted that the average daily transfer value (0.014 mgd) for the Catawba River basin to the Rocky River basin is based upon the 2-day event divided across a full 365-day year (Table 1). The 2012 & 2013 annual reports are included in Appendix C. Annual reports from 2007-2013 are available on the Division's website at, <http://www.ncwater.org/?page=301>.



## CONCLUSION

Based on the information previously discussed in this report, NCDENR estimates that IBT certificate holders transferred approximately 12.18 MGD, on an average daily basis, from the Catawba River basin in 2012, and 13.0 MGD from the Catawba River basin in 2013. On a maximum day basis, approximately 17.67 MGD was transferred from the Catawba River basin in 2012 and approximately 20.1 MGD was transferred from the Catawba River basin in 2013. None of the transfers from the Catawba River basin exceeded 80% of the allowable transfer; therefore, annual reports will continue to be the required monitoring procedure. For any questions concerning these IBTs please contact Harold Brady with the NC Division of Water Resources at (919)707-9005. Further information can also be found on our website at, <http://www.ncwater.org/?page=297>.

Appendix A:

North Carolina General Statute §143-215.22I

as required by this subsection.

(e) Any person who is required to register a water transfer or withdrawal under this section and fails to do so shall pay, in addition to the registration fee required under G.S. 143- 215.3(a)(1a) and G.S. 143-215.3(a)(1b), a late registration fee of five dollars (\$5.00) per day for each day the registration is late up to a maximum of five hundred dollars (\$500.00). A person who is required to update a registration under this section and fails to do so shall pay a fee of five dollars (\$5.00) per day for each day the updated information is late up to a maximum of five hundred dollars (\$500.00). A late registration fee shall not be charged to a farmer who submits a registration that pertains to farming operations. (1991, c. 712, s. 1; 1993, c. 344, s. 1; c. 553, s. 81; 1998-168, s. 3.)

#### **§ 143-215.22I. Regulation of surface water transfers.**

(a) No person, without first securing a certificate from the Commission, may:

(1) Initiate a transfer of 2,000,000 gallons of water or more per day from one river basin to another.

(2) Increase the amount of an existing transfer of water from one river basin to another by twenty-five percent (25%) or more above the average daily amount transferred during the year ending July 1, 1993, if the total transfer including the increase is 2,000,000 gallons or more per day.

(3) Increase an existing transfer of water from one river basin to another above the amount approved by the Commission in a certificate issued under G.S. 162A-7 prior to July 1, 1993.

(b) Notwithstanding the provisions of subsection (a) of this section, a certificate shall not be required to transfer water from one river basin to another up to the full capacity of a facility to transfer water from one basin to another if the facility was existing or under construction on July 1, 1993.

(c) An applicant for a certificate shall petition the Commission for the certificate. The petition shall be in writing and shall include the following:

(1) A description of the facilities to be used to transfer the water, including the location and capacity of water intakes, pumps, pipelines, and other facilities.

(2) A description of the proposed uses of the water to be transferred.

(3) The water conservation measures to be used by the applicant to assure efficient use of the water and avoidance of waste.

(4) Any other information deemed necessary by the Commission for review of the proposed water transfer.

(d) Upon receipt of the petition, the Commission shall hold a public hearing on the proposed transfer after giving at least 30 days' written notice of the hearing as follows:

(1) By publishing notice in the North Carolina Register.

(2) By publishing notice in a newspaper of general circulation in the area of the river basin downstream from the point of withdrawal.

(3) By giving notice by first-class mail to each of the following:

a. A person who has registered under this Part a water withdrawal or transfer from the same river basin where the water for the proposed transfer would be withdrawn.

b. A person who secured a certificate under this Part for a water transfer from the same river basin where the water for the proposed transfer would be withdrawn.

c. A person holding a National Pollutant Discharge Elimination System (NPDES) wastewater discharge permit exceeding 100,000 gallons per day for a discharge located downstream from the proposed withdrawal point of the proposed transfer.

d. The board of county commissioners of each county that is located entirely or partially within the river basin that is the source of the proposed transfer.



e. The governing body of any public water supply system that withdraws water downstream from the withdrawal point of the proposed transfer.

(e) The notice of the public hearing shall include a nontechnical description of the applicant's request and a conspicuous statement in bold type as to the effects of the water transfer on the source and receiving river basins. The notice shall further indicate the procedure to be followed by anyone wishing to submit comments on the proposed water transfer.

(f) In determining whether a certificate may be issued for the transfer, the Commission shall specifically consider each of the following items and state in writing its findings of fact with regard to each item:

(1) The necessity, reasonableness, and beneficial effects of the amount of surface water proposed to be transferred and its proposed uses.

(2) The present and reasonably foreseeable future detrimental effects on the source river basin, including present and future effects on public, industrial, and agricultural water supply needs, wastewater assimilation, water quality, fish and wildlife habitat, hydroelectric power generation, navigation, and recreation. Local water supply plans that affect the source major river basin shall be used to evaluate the projected future municipal water needs in the source major river basin.

(2a) The cumulative effect on the source major river basin of any water transfer or consumptive water use that, at the time the Commission considers the application for a certificate is occurring, is authorized under this section, or is projected in any local water supply plan that has been submitted to the Department in accordance with G.S. 143-355(1).

(3) The detrimental effects on the receiving river basin, including effects on water quality, wastewater assimilation, fish and wildlife habitat, navigation, recreation, and flooding.

(4) Reasonable alternatives to the proposed transfer, including their probable costs, and environmental impacts.

(5) If applicable to the proposed project, the applicant's present and proposed use of impoundment storage capacity to store water during high-flow periods for use during low-flow periods and the applicant's right of withdrawal under G.S. 143-215.44 through G.S. 143-215.50.

(6) If the water to be withdrawn or transferred is stored in a multipurpose reservoir constructed by the United States Army Corps of Engineers, the purposes and water storage allocations established for the reservoir at the time the reservoir was authorized by the Congress of the United States.

(7) Any other facts and circumstances that are reasonably necessary to carry out the purposes of this Part.

(f1) An environmental assessment as defined by G.S. 113A- 9(1) shall be prepared for any petition for a certificate under this section. The determination of whether an environmental impact statement shall also be required shall be made in accordance with the provisions of Article 1 of Chapter 113A of the General Statutes. The applicant who petitions the Commission for a certificate under this section shall pay the cost of special studies necessary to comply with Article 1 of Chapter 113A of the General Statutes.

(g) A certificate shall be granted for a water transfer if the applicant establishes and the Commission concludes by a preponderance of the evidence based upon the findings of fact made under subsection (f) of this section that: (i) the benefits of the proposed transfer outweigh the detriments of the proposed transfer, and (ii) the detriments have been or will be mitigated to a reasonable degree. The conditions necessary to ensure that the detriments are and continue to be mitigated to a reasonable degree shall be attached to the certificate in accordance with subsection (h) of this section.

(h) The Commission may grant the certificate in whole or in part, or deny the certificate. The Commission may also grant a certificate with any conditions attached that the Commission believes are

necessary to achieve the purposes of this Part. The conditions may include mitigation measures proposed to minimize any detrimental effects of the proposed transfer and measures to protect the availability of water in the source river basin during a drought or other emergency. The certificate shall include a drought management plan that specifies how the transfer shall be managed to protect the source river basin during drought conditions. The certificate shall indicate the maximum amount of water that may be transferred. No person shall transfer an amount of water that exceeds the amount in the certificate.

(i) In cases where an applicant requests approval to increase a transfer that existed on July 1, 1993, the Commission shall have authority to approve or disapprove only the amount of the increase. If the Commission approves the increase, however, the certificate shall be issued for the amount of the existing transfer plus the requested increase. Certificates for transfers approved by the Commission under G.S. 162A-7 shall remain in effect as approved by the Commission and shall have the same effect as a certificate issued under this Part.

(j) In the case of water supply problems caused by drought, a pollution incident, temporary failure of a water plant, or any other temporary condition in which the public health requires a transfer of water, the Secretary of the Department of Environment and Natural Resources may grant approval for a temporary transfer. Prior to approving a temporary transfer, the Secretary of the Department of Environment and Natural Resources shall consult with those parties listed in G.S. 143-215.22I(d)(3) that are likely to be affected by the proposed transfer. However, the Secretary of the Department of Environment and Natural Resources shall not be required to satisfy the public notice requirements of this section or make written findings of fact and conclusions in approving a temporary transfer under this subsection. If the Secretary of the Department of Environment and Natural Resources approves a temporary transfer under this subsection, the Secretary shall specify conditions to protect other water users. A temporary transfer shall not exceed six months in duration, but the approval may be renewed for a period of six months by the Secretary of the Department of Environment and Natural Resources based on demonstrated need as set forth in this subsection.

(k) The substantive restrictions and conditions upon surface water transfers authorized in this section may be imposed pursuant to any federal law that permits the State to certify, restrict, or condition any new or continuing transfers or related activities licensed, relicensed, or otherwise authorized by the federal government.

(l) When any transfer for which a certificate was issued under this section equals eighty percent (80%) of the maximum amount authorized in the certificate, the applicant shall submit to the Department a detailed plan that specifies how the applicant intends to address future foreseeable water needs. If the applicant is required to have a local water supply plan, then this plan shall be an amendment to the local water supply plan required by G.S. 143-355(l). When the transfer equals ninety percent (90%) of the maximum amount authorized in the certificate, the applicant shall begin implementation of the plan submitted to the Department.

(m) It is the public policy of the State to maintain, protect, and enhance water quality within North Carolina. Further, it is the public policy of the State that the cumulative impact of transfers from a source river basin shall not result in a violation of the antidegradation policy set out in 40 Code of Federal Regulations § 131.12 (1 July 1997 Edition) and the statewide antidegradation policy adopted pursuant thereto. (1993, c. 348, s. 1; 1997-443, ss. 11A.119(a), 15.48(c); 1997-524, s. 1; 1998-168, s. 4.)

Appendix B:

Charlotte Mecklenburg Utilities 2012 & 2013 IBT Annual Reports



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.



Aug. 4, 2014  
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 2013 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 2013, we experienced an actual maximum day IBT of 16.80 mgd based on November billing data. As of December 31, 2013, there were additional outstanding IBT commitments of 1.45 mgd. The total amount of IBT for 2013 was 18.3 mgd, approximately 55.3% of the authorized amount.

Please let me know if you have any questions.

Sincerely,

CHARLOTTE-MECKLENBURG UTILITIES

A handwritten signature in black ink, appearing to read "D. Czerr", written over a horizontal line.

David W. Czerr, PE  
Program Manager – Planning Section

CC: Toya Ogallo



*Charlotte-Mecklenburg Utilities Department  
Annual Report on Interbasin Transfer  
Calendar Year 2013*

## **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 (RRRWWTTP) 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 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 RRRWWTP. 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 2013 (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 average monthly IBT for calendar year 2013 was 16.8 mgd in November, which was approximately 50.9% of the authorized IBT of 33 mgd. The average IBT for 2013 was 12.99 mgd, approximately 39.4% 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, 0.63 mgd has been committed to permitted donated projects (subdivisions) that have not been activated and 0.82 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 2013 was 18.3 mgd, approximately 55.3% of the authorized IBT.

**Table 1. Actual IBT Summary**

<b>Calendar Year</b>	<b>Avg. Annual IBT (mgd)</b>	<b>Max. Day IBT (mgd)</b>
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
2013	12.99	16.80

**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). Provided below is the summary of progress made during CY2013. The Division of Water Resources shall have the authority to approve modifications to and need for continued reporting as necessary.

During CY2013, watershed management approaches continued to be implemented as part of Mecklenburg County’s S.W.I.M. Program. 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 2013, 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 approximately 4,000 feet of Torrence Creek within the business park called The Park - Huntersville.*





2. Completed the restoration of approximately 10,000 feet of the main stem of McDowell Creek downstream of the Birkdale community in the Town of Huntersville.
3. Initiated the design process for Phase II of the stream restoration project within The Park - Huntersville.

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

1. Completed the conceptual design for the restoration of approximately two (2) miles of Stevens Creek. Planning and property acquisition is ongoing for this project.

#### **Rocky River**

1. Received notification from the U.S. Army Corps of Engineers that the Rocky River Watershed in Mecklenburg County was approved for a 206 Program study.
2. Continued to collaborate with the citizens and elected officials in the Town of Davidson to identify funding to repair a significant head-cut on the grounds of Davidson Elementary School.

#### **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 2013.



### **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 2013.

*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 16.8 mgd, less than 50.9% of the authorized maximum day value of 33 mgd. The combined total of actual and outstanding IBT volumes was 18.25 mgd, less than 55.3% of the authorized maximum day value. CMUD is in full compliance with IBT authorizations and compliance conditions for calendar year 2013.

Appendix C:

Concord and Kannapolis' 2012 & 2013 IBT Annual Reports



2012 Annual Report on Interbasin Transfers  
for  
The Cities of Concord and Kannapolis

Prepared for and by:

City of Concord



City of Kannapolis

KANNAPOLIS



Submitted to:

North Carolina Division of Water Resources

January 2012

## Executive Summary

The 2012 Annual Report on Interbasin Transfers (IBTs) for the Cities of Concord and Kannapolis (Cities) includes monitoring data for daily tracking of IBT amounts and documentation of compliance with all IBT Certificate conditions. Annual reports were previously prepared for calendar years 2007 through 2011 and are available on the North Carolina Division of Water Resources (NCDWR) website.

The North Carolina Environmental Management Commission (EMC) approved the Cities' IBT Certificate in January 2007 authorizing transfers of up to 10 million gallons per day (mgd) from the Catawba River Basin to the Rocky River Basin and 10 mgd from the Yadkin River Basin to the Rocky River Basin. Additionally, a grandfathered IBT of 6 mgd authorizes transfer from Second Creek, located in the South Yadkin River Basin, to the Rocky River Basin. The terms "Cities" and "Certificate Holders" are used interchangeably herein.

In 2012, the Certificate Holders complied with all conditions of their IBT Certificate. The Cities of Concord and Kannapolis purchased no water from Charlotte-Mecklenburg Utilities (CMU) from the Catawba River Basin during 2012. The maximum daily transfer from the Yadkin River Basin was 0.3 mgd.

In 2012, the City of Kannapolis pumped water from Second Creek to Kannapolis Lake under its South Yadkin River Basin grandfathered IBT. Water sales to Landis averaging 0.20 mgd resulted in an IBT to Second Creek (South Yadkin River Basin) during 2012. The maximum day transfer to the South Yadkin River Basin was 0.45 mgd. IBT amounts for 2012 are provided in Table ES-1. The 2012 IBT daily transfers for Concord and Kannapolis are shown in Figure ES-1.

In addition, a settlement was reached in 2010 on a lawsuit filed by the Catawba River Foundation, Inc. and the Protect the Catawba Coalition. While this does not change the IBT Certificate or required reporting in any way, the Cities did agree to some operational conditions regarding the Catawba River Basin during times of drought.

**Table ES-1**

2012 IBT Average Annual & Maximum Day Demands for Concord and Kannapolis Service Areas

Year	Catawba River Basin			Yadkin River Basin			Second Creek <sup>d</sup> (South Yadkin River Basin)		
	Water Purchase (mgd) <sup>a</sup>		IBT as % of Certificate <sup>b</sup>	Water Purchase (mgd)		IBT as % of Certificate <sup>c,d</sup>	Water Transfer (mgd)		IBT as % of Grandfathered amount
	Average Annual	Max. Day	Max. Day	Average Annual	Max. Day	Max. Day	Average Annual	Max. Day	Max. Day
2012	0.00	0.00	0.0%	0.30	0.30	3.0%	0.199	0.454	7.6%

<sup>a</sup> Concord no longer purchases water from CMU for a residential neighborhood.

<sup>b</sup> Maximum Day IBT of 10 mgd from the Catawba River Basin.

<sup>c</sup> Maximum Day IBT of 10 mgd from the Yadkin River Basin.

<sup>d</sup> The grandfathered 6-mgd Maximum Day IBT limit from Second Creek (South Yadkin River Basin) into the Rocky River Basin is not included in the 10-mgd Maximum Day IBT limit for the Yadkin River Basin.

### 2012 Daily IBT Per Basin (mgd)

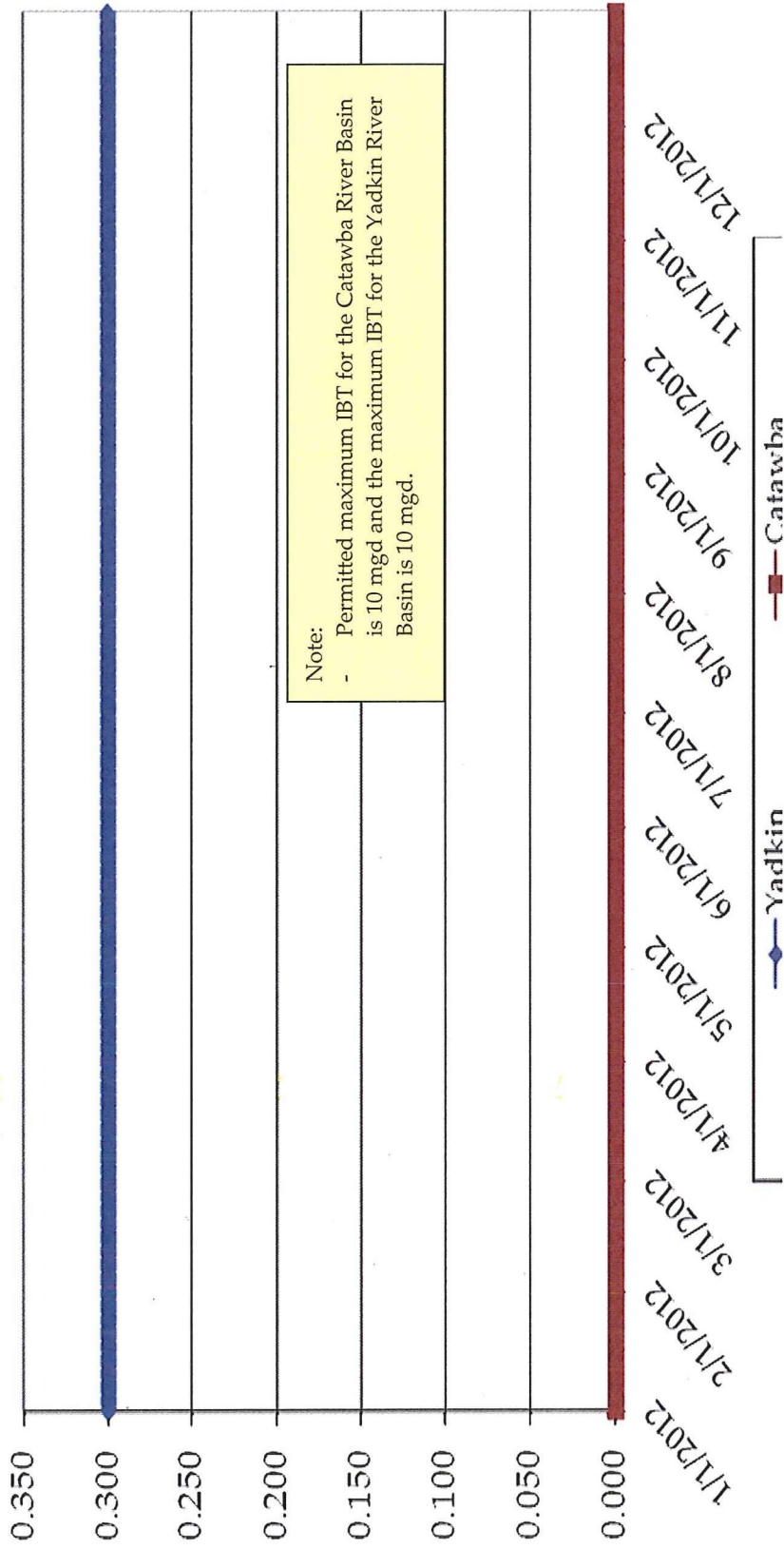


Figure ES-1  
2012 Daily Interbasin Transfers by Basin

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## Appendix

Daily Interbasin Transfer Amounts for 2012

# Acronyms and Abbreviations

CMU	Charlotte-Mecklenburg Utilities
DMAC	Drought Management Advisory Council
EMC	Environmental Management Commission
FERC	Federal Energy Regulatory Commission
IBT	Interbasin Transfer
LIP	Low Inflow Protocol
mgd	million gallons per day
NCDWR	North Carolina Division of Water Resources
WSRP	Water Shortage Response Plan
WTP	Water Treatment Plant



## 1.0 - Introduction

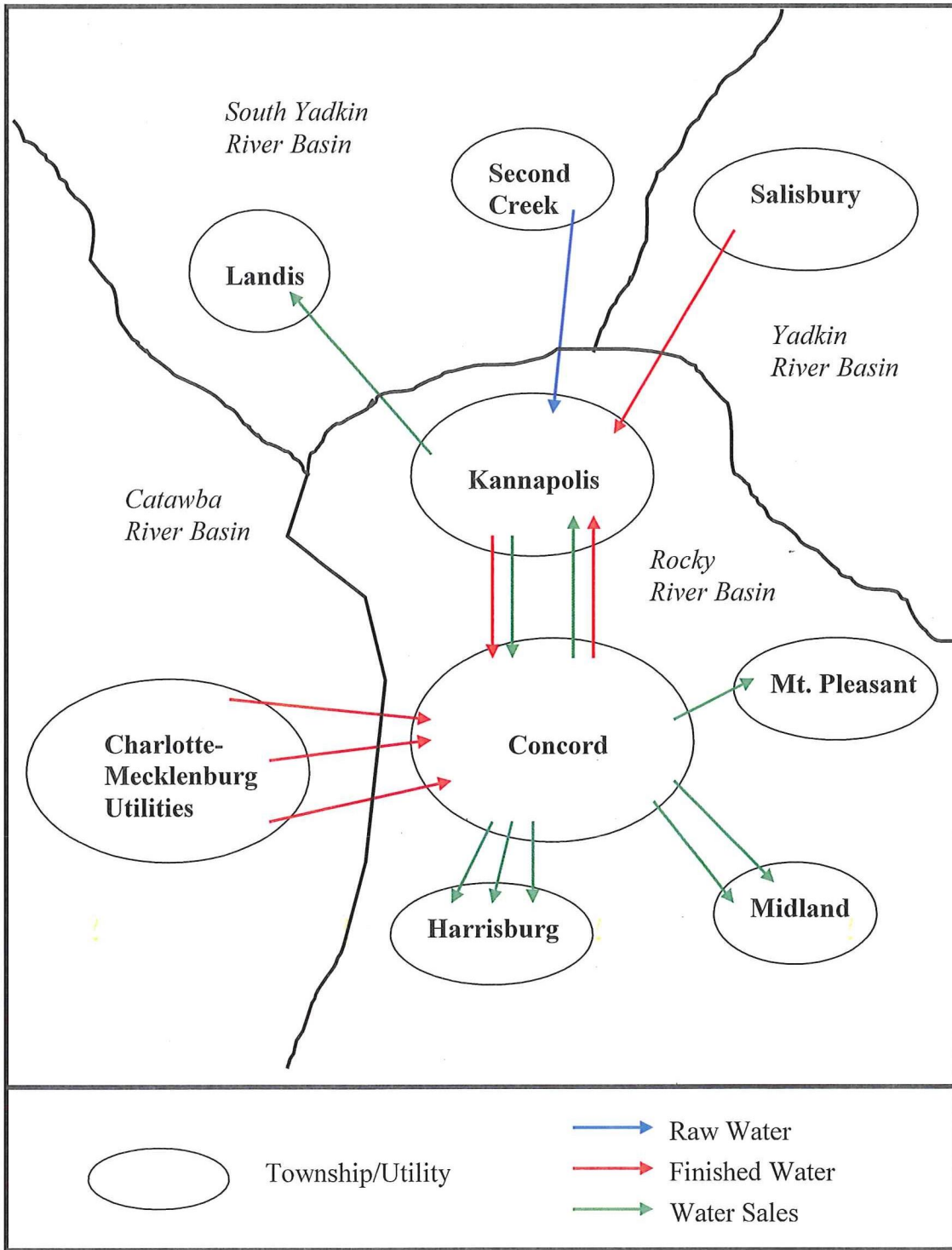
The Cities of Concord and Kannapolis (Cities) received an interbasin transfer (IBT) Certificate, which was originally approved on January 10, 2007, and signed into effect on January 25, 2007. The North Carolina Environmental Management Commission (EMC) has authorized transfers of up to 10 million gallons per day (mgd) from the Catawba River Basin to the Rocky River Basin and 10 mgd from the Yadkin River Basin to the Rocky River Basin. As a condition of the IBT Certificate, the Cities are required to produce an Annual Report that documents transfers over the past year. Annual reports were also prepared for calendar years 2007 through 2011 and are available on the North Carolina Division of Water Resources (NCDWR) website.

The Cities provide water to each other, various municipalities in the area (including: Mount Pleasant, Midland, Harrisburg, and Landis), and unincorporated areas of Cabarrus County. Concord owns and operates the water distribution system used by the Town of Midland. Charlotte-Mecklenburg Utilities (CMU) and the City of Salisbury currently have contracts to provide water to the Cities from the Catawba and Yadkin River Basins, respectively. Kannapolis has an agreement in place with the City of Salisbury to purchase 0.3 mgd of finished water on a daily basis; the Cities are also in the process of constructing an interconnection with the City of Albemarle, which is located in the Yadkin River Basin. Concord no longer purchases finished water from CMU for a small residential area.

The terms "Cities" and "Certificate Holders" are used interchangeably herein. Figure 1-1 illustrates the ability to transfer water among the Certificate Holders and all municipalities served by the Certificate Holders.

**Figure 1-1**

Water Connections of the Certificate Holders and All Municipalities Served by the Certificate Holders



## 2.0 - IBT Monitoring

### 2.1 - Service Area Water Demand

Table 2-1 presents 2012 annual average water production for the Certificate Holders based on finished water produced at the Hillgrove, Coddle Creek, and Kannapolis Water Treatment Plants (WTPs). It also shows finished water purchases from CMU and the City of Salisbury, if they occurred. Additionally, Table 2-1 presents the 2012 annual average IBT (or water purchases) from each basin covered by the IBT Certificate and from Second Creek, from which transfers are authorized by a grandfathered IBT. In 2012, finished water production averaged 12.71 mgd, purchased IBT finished water averaged 0.03 mgd for the Yadkin River Basin and 0.20 mgd for Second Creek. The City of Concord purchased no water from CMU, whose water source is from the Catawba River Basin, during 2012. The combined 2012 annual average water use for the Certificate Holders was 13.21 mgd.

**Table 2-1**

2012 Water Production or Purchases by River Basin

Certificate Holders	Annual Average Finished Water Produced <sup>a</sup> (mgd)	2012			Annual Average Combined Water Use (mgd)
		Annual Average Purchased Water (mgd)			
		Catawba River Basin <sup>b</sup>	Yadkin River Basin	Second Creek	
Concord & Kannapolis	12.71	0.00	0.30	0.20	13.21

<sup>a</sup> Water produced within Rocky River Basin; may include water from Second Creek transferred directly into Kannapolis Lake.

<sup>b</sup> Concord no longer purchases water from CMU for a residential neighborhood.

### 2.2 - Interbasin Transfers

Daily IBT amounts for the Certificate Holders are included in the Appendix. Data are provided for the period January 1, 2012 through December 31, 2012. *There was no IBT from the Catawba River Basin during the calendar year 2012. The maximum day IBT from the Yadkin River Basin during the calendar year 2008 was 0.3 mgd, which was consistent daily throughout 2012 due to contract agreements between Salisbury and Kannapolis.* This represents 3.0 percent of the permitted maximum day, 10 mgd IBT from the Yadkin River Basin under the Certificate approved by the EMC in January 2007. There were transfers of raw water from Second Creek



with a maximum day IBT of 0.454 mgd, which represents 7.6% of the permitted maximum day, 6 mgd IBT from the South Yadkin River Basin under the grandfathered Certificate. Table 2-2 shows the IBT use for the Certificate Holders and the percentage of use from the Catawba and Yadkin River Basins.

**Table 2-2**

2012 IBT Average Annual & Maximum Day Demands for Concord and Kannapolis Service Areas

Year	Catawba River Basin			Yadkin River Basin			Second Creek <sup>d</sup> (South Yadkin River Basin)		
	Water Purchase (mgd) <sup>a</sup>		IBT as % of Certificate <sup>b</sup>	Water Purchase (mgd)		IBT as % of Certificate <sup>c,d</sup>	Water Transfer (mgd)		IBT as % of Grandfathered amount
	Average Annual	Max. Day	Max. Day	Average Annual	Max. Day	Max. Day	Average Annual	Max. Day	Max. Day
2012	0.00	0.00	0.0%	0.30	0.30	3.0%	0.199	0.454	7.6%

<sup>a</sup> Concord no longer purchases water from CMU for a residential neighborhood.

<sup>b</sup> Maximum Day IBT of 10 mgd from the Catawba River Basin.

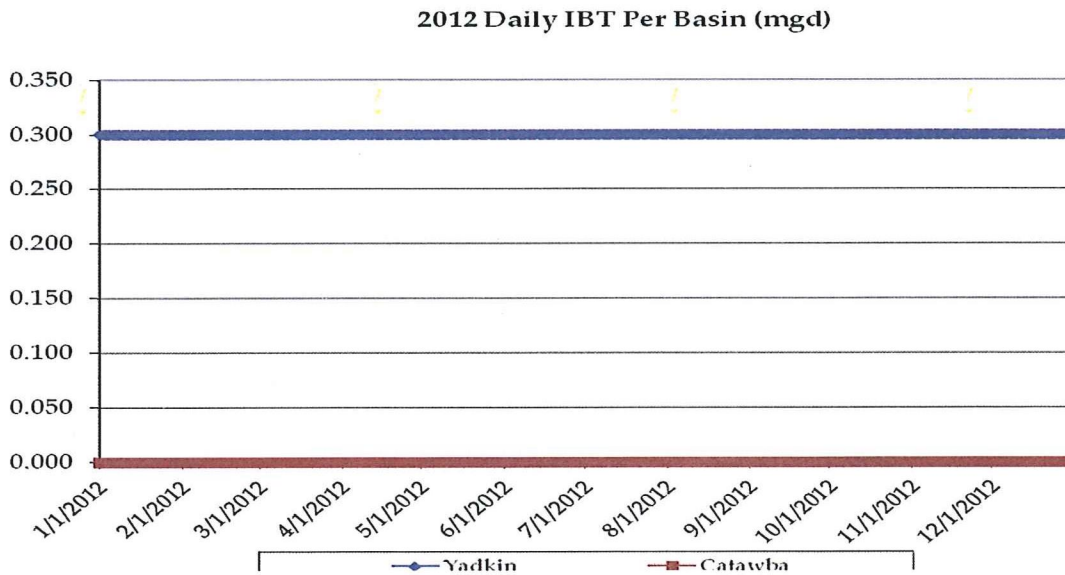
<sup>c</sup> Maximum Day IBT of 10 mgd from the Yadkin River Basin.

<sup>d</sup> The grandfathered 6-mgd Maximum Day IBT limit from Second Creek (South Yadkin River Basin) into the Rocky River Basin is not included in the 10-mgd Maximum Day IBT limit for the Yadkin River Basin.

Figure 2-1 displays the daily IBT amounts for water purchases from the Catawba and Yadkin River Basins.

**Figure 2-1**

2012 Daily Interbasin Transfers by Basin



### 3.0 - Other Related Information

In 2010, a settlement was reached in a lawsuit filed by the Catawba River Foundation, Inc. and the Protect the Catawba Coalition. While this does not affect the IBT Certificate, its conditions, or required reporting in any way, the Cities did agree to some operational conditions regarding the Catawba River Basin during times of drought.

Until July 1, 2015, the Cities have agreed to transfer no more than 3.0 mgd (maximum day) from the Catawba River Basin. Thereafter, the Cities must first transfer 5.0 mgd from the Yadkin River Basin before exceeding an IBT of 3.0 mgd from the Catawba River Basin.

During designated droughts beyond July 1, 2015, following either Low Inflow Protocol (LIP) or Drought Management Advisory Council (DMAC) Drought Stage declaration, the Cities have agreed to limit the Catawba River Basin IBT so that it corresponds to water use reduction goals. A summary of this agreement is presented in Table 3-1.

**Table 3-1**  
Catawba River Basin IBT during Drought Conditions

LIP Stage or DMAC Drought Stage	Maximum Day Transfer (mgd)
0 / Abnormally Dry	10.0
1 / Moderate Drought	9.0
2 / Severe Drought	8.5
3 / Extreme Drought	7.0
4 / Exceptional Drought	6.0

## 4.0 - Compliance with Certificate Conditions

A summary of the conditions of the IBT Certificate approved on January 10, 2007 along with the current status of compliance for each is provided below. Language from the certificate is followed by 2010 actions for each condition.

### 4.1 - Condition 1 (Federal Energy Regulatory Commission [FERC] Licensure)

*If at any time any legal requirement that (a) governs the operation of the hydroelectric facilities in the Catawba River Basin currently licensed as Federal Energy Regulatory Commission (FERC) Project No. P-2232 or in the Yadkin Pee-Dee River Basin currently licensed as FERC Project Nos. P-2206 and P-2197 and (b) governs or affects water use and/or quality, substantially differs from the actual or anticipated FERC license conditions or other legal requirement upon which the analysis underlying this Certificate is based, such as changes to minimum flow requirements or drought mitigation measures, the Commission may reopen and modify this Certificate.*

This condition requires no action by the Certificate Holders.

### 4.2 - Condition 2 (Drought Management Plan)

*Each Certificate Holder shall prepare a Drought Management Plan. The Cities shall implement measures corresponding to the most severe level of drought conditions in either the Catawba or Yadkin River Basins. The Cities shall not transfer any water to any other jurisdictions unless that jurisdiction agrees to be bound by this condition in full.*

The Cities submitted the Drought Management Plan on July 31, 2007; comments were received on November 11, 2007, and the revised plan was submitted on January 8, 2008. The Drought Management Plan was incorporated into an updated Water Shortage Response Plan (WSRP) in 2010. The WSRP, prepared as a joint document for the Certificate Holders, is available on the NCDWR website at the following web address:

[http://www.ncwater.org/Water\\_Supply\\_Planning/Water\\_Shortage\\_Response\\_Plans/plan](http://www.ncwater.org/Water_Supply_Planning/Water_Shortage_Response_Plans/plan)

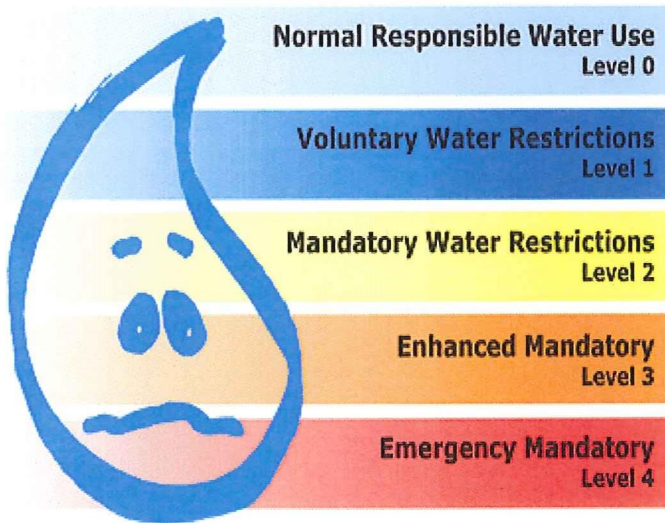
Table 4-1 shows Normal and Drought Stages 0-4, the names of each, the date the Catawba River Basin managers implemented Draft LIP actions in response to drought monitoring, the Yadkin-Pee Dee River Basin drought monitor, and the associated actions taken by the Cities.

Beginning in the winter of 2008, drought conditions in the state began to decrease, permitting an easing of drought restrictions for both the Catawba and Yadkin River Basins. In April 2009, the Cities adopted a restricted irrigation schedule which allows irrigation on Tuesdays, Thursdays, and Saturdays only. This modified Level 0, Normal Responsible Water Use, was in place from January 1 through December 31 of 2012 (Figure 4-1). Other outdoor water use conservation



measures are encouraged but not required. Both the Catawba and Yadkin River Basins began the year with Stage 0, Abnormally Dry, water levels. In the spring, rainfall decreased and the Yadkin-Pee Dee River Basin moved to Stage 1, Moderate Drought, but rainfall increased in the summer and the basin moved back to Abnormally Dry and Normal for periods. In the late summer rainfall decreased and the Yadkin-Pee Dee River Basin went from Normal to Abnormally Dry to Moderate Drought and ultimately finished the year in Stage 2, Severe Drought. The Catawba River Basin stayed in Stage 0, Abnormally Dry, for the entirety of the year.

During the year, the Cities drought stages follow the drought stages of the Catawba-Wataree Water Management Group; hence the Cities stayed in Normal Responsible Water Use Level.



The Cities have agreements in place that include enforcement policies with other systems that purchase water from them.

**Table 4-1**  
Concord and Kannapolis 2012 Normal and Drought Stages

2012 Period of Drought					
Drought Stage	Drought Monitor Classification	Catawba River Basin <sup>a</sup> (Low Inflow Protocol)	Yadkin River Basin <sup>b</sup> (NC Drought Monitor)	Action by Cities	Cities' Actions Taken
	Normal		September 25 – October 15		
0	Abnormally Dry	January 1 - December 31	January 1 - March 2 May 15 – September 24 October 16 - November 5	Level 0 from January 1 - December 31	Lawn irrigation allowed only on Tuesday, Thursday, & Saturday. Other voluntary conservation efforts encouraged.
1	Moderate Drought	-	March 3 -May 14 November 6 -December 17		
2	Severe Drought	-		December 18 – December 31	
3	Extreme Drought	-			
4	Exceptional Drought	-			

<sup>a</sup> The Catawba River Basin is listed as the drought stage declared by the Catawba-Wataree Water Management Group.

<sup>b</sup> The Yadkin River Basin is listed as the highest classification within the basin at a given date. Portions of the basin may be in a lower category.

### 4.3 - Condition 3 (Disaggregation of IBT Amount)

*If the Certificate Holders discontinue their cooperative service agreement, then the permitted IBT amount will be allocated amongst the Certificate Holders based on their projected 2030 needs.*

The cooperative service agreement between the Certificate Holders remained in effect throughout 2010.

The Cities and local municipalities cooperatively and effectively communicate and manage their respective water distribution systems. The Cities sell water to each other and reconcile billing monthly. Additionally, Concord owns and operates the water distribution system for Midland, providing water service to all Midland customers. Harrisburg purchases water from Concord, measured by five meters. Concord also provides water service to unincorporated areas of Cabarrus County. Mount Pleasant did not purchase water from the City of Concord in 2012. Further emphasizing the interconnected nature of the Cities and local municipalities, Kannapolis provides water to Landis, located in the South Yadkin River Basin, which is not subject to this IBT Certificate.

### 4.4 - Condition 4 (Compliance and Monitoring Plan)

*In cooperation with the Division of Water Resources, the Certificate Holders shall develop an IBT Compliance and Monitoring Plan.*

The Cities submitted the Compliance and Monitoring Plan on July 31, 2007. This plan was finalized in December 2007.

### 4.5 - Condition 5 (EMC Consideration of Impacts)

*The EMC may reopen the Certificate and adjust existing or require new conditions to ensure detrimental impacts are mitigated if environmental impacts are found to be substantially different from those projected in the EMC's Findings of Fact.*

This condition requires no action by the Certificate Holders. The EMC did not take action on this condition in 2012.

### 4.6 - Condition 6 (20-Year Certificate Evaluation)

*In twenty years from the date of the Certificate, the Cities shall submit a written report to the EMC to include: (a) summary of transfers for the previous twenty years, (b) discussion of any changes to the environmental impacts assessment from IBT transfers, (c) summary of all actions to address actual or potential drought conditions, (d) recommendations for any changes to the Certificate, (e) details on consultation with interested stakeholders, and (f) certification of compliance with Certificate. This will continue at 20-year intervals.*



The IBT Certificate was approved on January 10, 2007 and signed into effect on January 25, 2007; therefore, the first 20-year certificate evaluation report will be completed in 2027.

## 4.7 - Condition 7 (Limit of Certificate)

*The Certificate does not exempt the Cities from compliance with any other requirements of law.*

This condition requires no action by the Cities.

# APPENDIX

## Daily Interbasin Transfer Amounts for 2012



2012 Concord-Kannapolis IBT Tracking

Calculated Fields

Condition of IBT Certificate (January 25, 2007)

Maximum day transfer from the Catawba River Basin

10 MGD

Maximum day transfer from the Yadkin Pee-Dee River Basin

10 MGD

Maximum day transfer from the South Yadkin River Basin (grandfather)

6 MGD

Maximum day transfer to the South Yadkin River Basin (cannot exceed transfer from South Yadkin by more than 1.99 MGD)

Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin				Interbasin Transfer							
	Salisbury 1		Albemarle 1			South Yadkin	NOTE: All Wastewater discharge is to the Rocky River from RRWWTP, excluding water sales to Landis (subtracted from Total South Yadkin IBT).			Catawba	Catawba	Yadkin	Yadkin	Yadkin	Yadkin	Yadkin	Yadkin
	South Yadkin	Yadkin	Yadkin	Catawba			South Yadkin	Yadkin	Catawba								
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT	% of Permitted MDD Transfer	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer			
1/1/2012	0.000	0.300	0.000	0.000	0.164	-0.164	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.164	-2.733%	0.164	8.241%	
1/2/2012	0.000	0.300	0.000	0.000	0.171	-0.171	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.171	-2.850%	0.171	8.593%	
1/3/2012	0.000	0.300	0.000	0.000	0.196	-0.196	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.196	-3.267%	0.196	9.849%	
1/4/2012	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%	
1/5/2012	0.000	0.300	0.000	0.000	0.175	-0.175	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.175	-2.917%	0.175	8.794%	
1/6/2012	0.000	0.300	0.000	0.000	0.182	-0.182	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.182	-3.033%	0.182	9.146%	
1/7/2012	0.000	0.300	0.000	0.000	0.123	-0.123	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.123	-2.050%	0.123	6.181%	
1/8/2012	0.000	0.300	0.000	0.000	0.163	-0.163	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.163	-2.717%	0.163	8.191%	
1/9/2012	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%	
1/10/2012	0.000	0.300	0.000	0.000	0.170	-0.170	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.170	-2.833%	0.170	8.543%	
1/11/2012	0.000	0.300	0.000	0.000	0.168	-0.168	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.168	-2.800%	0.168	8.442%	
1/12/2012	0.000	0.300	0.000	0.000	0.175	-0.175	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.175	-2.917%	0.175	8.794%	
1/13/2012	0.000	0.300	0.000	0.000	0.166	-0.166	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.166	-2.767%	0.166	8.342%	
1/14/2012	0.000	0.300	0.000	0.000	0.155	-0.155	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.155	-2.583%	0.155	7.789%	
1/15/2012	0.000	0.300	0.000	0.000	0.165	-0.165	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.165	-2.750%	0.165	8.291%	
1/16/2012	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%	
1/17/2012	0.000	0.300	0.000	0.000	0.182	-0.182	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.182	-3.033%	0.182	9.146%	
1/18/2012	0.000	0.300	0.000	0.000	0.179	-0.179	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.179	-2.983%	0.179	8.995%	
1/19/2012	0.000	0.300	0.000	0.000	0.172	-0.172	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.172	-2.867%	0.172	8.643%	
1/20/2012	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%	
1/21/2012	0.000	0.300	0.000	0.000	0.138	-0.138	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.138	-2.300%	0.138	6.935%	
1/22/2012	0.000	0.300	0.000	0.000	0.135	-0.135	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.135	-2.250%	0.135	6.784%	
1/23/2012	0.000	0.300	0.000	0.000	0.195	-0.195	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.195	-3.250%	0.195	9.799%	
1/24/2012	0.000	0.300	0.000	0.000	0.176	-0.176	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.176	-2.933%	0.176	8.844%	
1/25/2012	0.000	0.300	0.000	0.000	0.164	-0.164	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.164	-2.733%	0.164	8.241%	
1/26/2012	0.000	0.300	0.000	0.000	0.187	-0.187	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.187	-3.117%	0.187	9.397%	
1/27/2012	0.000	0.300	0.000	0.000	0.126	-0.126	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.126	-2.100%	0.126	6.332%	
1/28/2012	0.000	0.300	0.000	0.000	0.151	-0.151	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.151	-2.517%	0.151	7.588%	
1/29/2012	0.000	0.300	0.000	0.000	0.172	-0.172	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.172	-2.867%	0.172	8.643%	
1/30/2012	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%	
1/31/2012	0.000	0.300	0.000	0.000	0.152	-0.152	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.152	-2.533%	0.152	7.638%	
2/1/2012	0.000	0.300	0.000	0.000	0.232	-0.232	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.232	-3.867%	0.232	11.658%	
2/2/2012	0.000	0.300	0.000	0.000	0.118	-0.118	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.118	-1.967%	0.118	5.930%	
2/3/2012	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%	
2/4/2012	0.000	0.300	0.000	0.000	0.151	-0.151	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.151	-2.517%	0.151	7.588%	
2/5/2012	0.000	0.300	0.000	0.000	0.152	-0.152	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.152	-2.533%	0.152	7.638%	
2/6/2012	0.000	0.300	0.000	0.000	0.227	-0.227	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.227	-3.783%	0.227	11.407%	
2/7/2012	0.000	0.300	0.000	0.000	0.165	-0.165	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.165	-2.750%	0.165	8.291%	
2/8/2012	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%	
2/9/2012	0.000	0.300	0.000	0.000	0.159	-0.159	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.159	-2.650%	0.159	7.990%	
2/10/2012	0.000	0.300	0.000	0.000	0.151	-0.151	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.151	-2.517%	0.151	7.588%	
2/11/2012	0.000	0.300	0.000	0.000	0.145	-0.145	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.145	-2.417%	0.145	7.286%	
2/12/2012	0.000	0.300	0.000	0.000	0.143	-0.143	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.143	-2.383%	0.143	7.186%	
2/13/2012	0.000	0.300	0.000	0.000	0.149	-0.149	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.149	-2.483%	0.149	7.487%	
2/14/2012	0.000	0.300	0.000	0.000	0.149	-0.149	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.149	-2.483%	0.149	7.487%	
2/15/2012	0.000	0.300	0.000	0.000	0.168	-0.168	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.168	-2.800%	0.168	8.442%	
2/16/2012	0.000	0.300	0.000	0.000	0.175	-0.175	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.175	-2.917%	0.175	8.794%	
2/17/2012	0.000	0.300	0.000	0.000	0.159	-0.159	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.159	-2.650%	0.159	7.990%	



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin				Interbasin Transfer							
	Salisbury 1		Albemarle 1		South Yadkin	NOTE: All Wastewater discharge is to the Rocky River from RRWWTP, excluding water sales to Landis (subtracted from Total South Yadkin IBT).			Catawba	Catawba	Yadkin	Yadkin	Catawba	Catawba	Yadkin	Yadkin	Catawba
	South Yadkin	Yadkin	Yadkin	Catawba		South Yadkin	Yadkin	Catawba									
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT	% of Permitted MDD Transfer	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer			
2/18/2012	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%	
2/19/2012	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%	
2/20/2012	0.000	0.300	0.000	0.000	0.195	-0.195	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.195	-3.250%	0.195	9.799%	
2/21/2012	0.000	0.300	0.000	0.000	0.196	-0.196	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.196	-3.267%	0.196	9.849%	
2/22/2012	0.000	0.300	0.000	0.000	0.207	-0.207	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.207	-3.450%	0.207	10.402%	
2/23/2012	0.000	0.300	0.000	0.000	0.164	-0.164	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.164	-2.733%	0.164	8.241%	
2/24/2012	0.000	0.300	0.000	0.000	0.161	-0.161	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.161	-2.683%	0.161	8.090%	
2/25/2012	0.000	0.300	0.000	0.000	0.158	-0.158	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.158	-2.633%	0.158	7.940%	
2/26/2012	0.000	0.300	0.000	0.000	0.202	-0.202	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.202	-3.367%	0.202	10.151%	
2/27/2012	0.000	0.300	0.000	0.000	0.145	-0.145	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.145	-2.417%	0.145	7.286%	
2/28/2012	0.000	0.300	0.000	0.000	0.142	-0.142	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.142	-2.367%	0.142	7.136%	
2/29/2012	0.000	0.300	0.000	0.000	0.154	-0.154	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.154	-2.567%	0.154	7.739%	
3/1/2012	0.000	0.300	0.000	0.000	0.166	-0.166	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.166	-2.767%	0.166	8.342%	
3/2/2012	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%	
3/3/2012	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%	
3/4/2012	0.000	0.300	0.000	0.000	0.155	-0.155	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.155	-2.583%	0.155	7.789%	
3/5/2012	0.000	0.300	0.000	0.000	0.161	-0.161	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.161	-2.683%	0.161	8.090%	
3/6/2012	0.000	0.300	0.000	0.000	0.159	-0.159	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.159	-2.650%	0.159	7.990%	
3/7/2012	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%	
3/8/2012	0.000	0.300	0.000	0.000	0.153	-0.153	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.153	-2.550%	0.153	7.688%	
3/9/2012	0.000	0.300	0.000	0.000	0.159	-0.159	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.159	-2.650%	0.159	7.990%	
3/10/2012	0.000	0.300	0.000	0.000	0.143	-0.143	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.143	-2.383%	0.143	7.186%	
3/11/2012	0.000	0.300	0.000	0.000	0.120	-0.120	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.120	-2.000%	0.120	6.030%	
3/12/2012	0.000	0.300	0.000	0.000	0.164	-0.164	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.164	-2.733%	0.164	8.241%	
3/13/2012	0.000	0.300	0.000	0.000	0.163	-0.163	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.163	-2.717%	0.163	8.191%	
3/14/2012	0.000	0.300	0.000	0.000	0.220	-0.220	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.220	-3.667%	0.220	11.055%	
3/15/2012	0.000	0.300	0.000	0.000	0.156	-0.156	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.156	-2.600%	0.156	7.839%	
3/16/2012	0.000	0.300	0.000	0.000	0.155	-0.155	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.155	-2.583%	0.155	7.789%	
3/17/2012	0.000	0.300	0.000	0.000	0.159	-0.159	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.159	-2.650%	0.159	7.990%	
3/18/2012	0.000	0.300	0.000	0.000	0.155	-0.155	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.155	-2.583%	0.155	7.789%	
3/19/2012	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%	
3/20/2012	0.000	0.300	0.000	0.000	0.148	-0.148	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.148	-2.467%	0.148	7.437%	
3/21/2012	0.000	0.300	0.000	0.000	0.149	-0.149	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.149	-2.483%	0.149	7.487%	
3/22/2012	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%	
3/23/2012	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%	
3/24/2012	0.000	0.300	0.000	0.000	0.148	-0.148	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.148	-2.467%	0.148	7.437%	
3/25/2012	0.000	0.300	0.000	0.000	0.147	-0.147	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.147	-2.450%	0.147	7.387%	
3/26/2012	0.000	0.300	0.000	0.000	0.149	-0.149	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.149	-2.483%	0.149	7.487%	
3/27/2012	0.000	0.300	0.000	0.000	0.170	-0.170	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.170	-2.833%	0.170	8.543%	
3/28/2012	0.000	0.300	0.000	0.000	0.203	-0.203	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.203	-3.383%	0.203	10.201%	
3/29/2012	0.000	0.300	0.000	0.000	0.181	-0.181	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.181	-3.017%	0.181	9.095%	
3/30/2012	0.000	0.300	0.000	0.000	0.164	-0.164	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.164	-2.733%	0.164	8.241%	
3/31/2012	0.000	0.300	0.000	0.000	0.159	-0.159	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.159	-2.650%	0.159	7.990%	
4/1/2012	0.000	0.300	0.000	0.000	0.179	-0.179	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.179	-2.983%	0.179	8.995%	
4/2/2012	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%	
4/3/2012	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%	
4/4/2012	0.000	0.300	0.000	0.000	0.190	-0.190	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.190	-3.167%	0.190	9.548%	
4/5/2012	0.000	0.300	0.000	0.000	0.166	-0.166	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.166	-2.767%	0.166	8.342%	
4/6/2012	0.000	0.300	0.000	0.000	0.103	-0.103	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.103	-1.717%	0.103	5.176%	
4/7/2012	0.000	0.300	0.000	0.000	0.114	-0.114	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.114	-1.900%	0.114	5.729%	
4/8/2012	0.000	0.300	0.000	0.000	0.124	-0.124	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.124	-2.067%	0.124	6.231%	
4/9/2012	0.000	0.300	0.000	0.000	0.230	-0.230	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.230	-3.833%	0.230	11.558%	
4/10/2012	0.000	0.300	0.000	0.000	0.210	-0.210	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.210	-3.500%	0.210	10.553%	
4/11/2012	0.000	0.300	0.000	0.000	0.190	-0.190	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.190	-3.167%	0.190	9.548%	
4/12/2012	0.000	0.300	0.000	0.000	0.140	-0.140	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.140	-2.333%	0.140	7.035%	
4/13/2012	0.000	0.300	0.000	0.000	0.231	-0.231	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.231	-3.850%	0.231	11.608%	



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)				IBT Totals Per Basin				Interbasin Transfer					
	Salisbury 1		Albemarle 1		CMU 1-3		South Yadkin	South Yadkin	Yadkin	Catawba	NOTE: All Wastewater discharge is to the Rocky River from RRWWTP, excluding water sales to Landis (subtracted from Total South Yadkin IBT).							
	South Yadkin	Yadkin	Yadkin	Catawba	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>					Total Yadkin IBT	Total Catawba IBT	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord														
4/14/2012	0.000	0.300	0.000	0.000	0.170	-0.170	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.170	-2.833%	0.170	8.543%		
4/15/2012	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%		
4/16/2012	0.000	0.300	0.000	0.000	0.230	-0.230	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.230	-3.833%	0.230	11.558%		
4/17/2012	0.000	0.300	0.000	0.000	0.215	-0.215	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.215	-3.583%	0.215	10.804%		
4/18/2012	0.000	0.300	0.000	0.000	0.195	-0.195	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.195	-3.250%	0.195	9.799%		
4/19/2012	0.000	0.300	0.000	0.000	0.206	-0.206	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.206	-3.433%	0.206	10.352%		
4/20/2012	0.000	0.300	0.000	0.000	0.182	-0.182	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.182	-3.033%	0.182	9.146%		
4/21/2012	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%		
4/22/2012	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%		
4/23/2012	0.000	0.300	0.000	0.000	0.201	-0.201	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.201	-3.350%	0.201	10.101%		
4/24/2012	0.000	0.300	0.000	0.000	0.177	-0.177	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.177	-2.950%	0.177	8.894%		
4/25/2012	0.000	0.300	0.000	0.000	0.200	-0.200	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.200	-3.333%	0.200	10.050%		
4/26/2012	0.000	0.300	0.000	0.000	0.190	-0.190	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.190	-3.167%	0.190	9.548%		
4/27/2012	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%		
4/28/2012	0.000	0.300	0.000	0.000	0.163	-0.163	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.163	-2.717%	0.163	8.191%		
4/29/2012	0.000	0.300	0.000	0.000	0.200	-0.200	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.200	-3.333%	0.200	10.050%		
4/30/2012	0.000	0.300	0.000	0.000	0.210	-0.210	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.210	-3.500%	0.210	10.553%		
5/1/2012	0.000	0.300	0.000	0.000	0.293	-0.293	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.293	-4.883%	0.293	14.724%		
5/2/2012	0.000	0.300	0.000	0.000	0.238	-0.238	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.238	-3.967%	0.238	11.960%		
5/3/2012	0.000	0.300	0.000	0.000	0.177	-0.177	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.177	-2.950%	0.177	8.894%		
5/4/2012	0.000	0.300	0.000	0.000	0.245	-0.245	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.245	-4.083%	0.245	12.312%		
5/5/2012	0.000	0.300	0.000	0.000	0.236	-0.236	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.236	-3.933%	0.236	11.859%		
5/6/2012	0.000	0.300	0.000	0.000	0.154	-0.154	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.154	-2.567%	0.154	7.739%		
5/7/2012	0.000	0.300	0.000	0.000	0.251	-0.251	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.251	-4.183%	0.251	12.613%		
5/8/2012	0.000	0.300	0.000	0.000	0.248	-0.248	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.248	-4.133%	0.248	12.462%		
5/9/2012	0.000	0.300	0.000	0.000	0.178	-0.178	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.178	-2.967%	0.178	8.945%		
5/10/2012	0.000	0.300	0.000	0.000	0.229	-0.229	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.229	-3.817%	0.229	11.508%		
5/11/2012	0.000	0.300	0.000	0.000	0.216	-0.216	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.216	-3.600%	0.216	10.854%		
5/12/2012	0.000	0.300	0.000	0.000	0.202	-0.202	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.202	-3.367%	0.202	10.151%		
5/13/2012	0.000	0.300	0.000	0.000	0.208	-0.208	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.208	-3.467%	0.208	10.452%		
5/14/2012	0.000	0.300	0.000	0.000	0.230	-0.230	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.230	-3.833%	0.230	11.558%		
5/15/2012	0.000	0.300	0.000	0.000	0.225	-0.225	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.225	-3.750%	0.225	11.307%		
5/16/2012	0.000	0.300	0.000	0.000	0.228	-0.228	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.228	-3.800%	0.228	11.457%		
5/17/2012	0.000	0.300	0.000	0.000	0.210	-0.210	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.210	-3.500%	0.210	10.553%		
5/18/2012	0.000	0.300	0.000	0.000	0.175	-0.175	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.175	-2.917%	0.175	8.794%		
5/19/2012	0.000	0.300	0.000	0.000	0.171	-0.171	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.171	-2.850%	0.171	8.593%		
5/20/2012	0.000	0.300	0.000	0.000	0.205	-0.205	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.205	-3.417%	0.205	10.302%		
5/21/2012	0.000	0.300	0.000	0.000	0.229	-0.229	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.229	-3.817%	0.229	11.508%		
5/22/2012	0.000	0.300	0.000	0.000	0.311	-0.311	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.311	-5.183%	0.311	15.628%		
5/23/2012	0.000	0.300	0.000	0.000	0.202	-0.202	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.202	-3.367%	0.202	10.151%		
5/24/2012	0.000	0.300	0.000	0.000	0.378	-0.378	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.378	-6.300%	0.378	18.995%		
5/25/2012	0.000	0.300	0.000	0.000	0.189	-0.189	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.189	-3.150%	0.189	9.497%		
5/26/2012	0.000	0.300	0.000	0.000	0.192	-0.192	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.192	-3.200%	0.192	9.648%		
5/27/2012	0.000	0.300	0.000	0.000	0.183	-0.183	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.183	-3.050%	0.183	9.196%		
5/28/2012	0.000	0.300	0.000	0.000	0.261	-0.261	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.261	-4.350%	0.261	13.116%		
5/29/2012	0.000	0.300	0.000	0.000	0.204	-0.204	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.204	-3.400%	0.204	10.251%		
5/30/2012	0.000	0.300	0.000	0.000	0.200	-0.200	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.200	-3.333%	0.200	10.050%		
5/31/2012	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%		
6/1/2012	0.000	0.300	0.000	0.000	0.178	-0.178	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.178	-2.967%	0.178	8.945%		
6/2/2012	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%		
6/3/2012	0.000	0.300	0.000	0.000	0.233	-0.233	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.233	-3.883%	0.233	11.709%		
6/4/2012	0.000	0.300	0.000	0.000	0.208	-0.208	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.208	-3.467%	0.208	10.452%		
6/5/2012	0.000	0.300	0.000	0.000	0.215	-0.215	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.215	-3.583%	0.215	10.804%		
6/6/2012	0.000	0.300	0.000	0.000	0.229	-0.229	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.229	-3.817%	0.229	11.508%		
6/7/2012	0.000	0.300	0.000	0.000	0.251	-0.251	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.251	-4.183%	0.251	12.613%		
6/8/2012	0.000	0.300	0.000	0.000	0.277	-0.277	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.277	-4.617%	0.277	13.920%		



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin				Interbasin Transfer								
	Salisbury 1		Albemarle 1		South Yadkin	NOTE: All Wastewater discharge is to the Rocky River from RRWWTP, excluding water sales to Landis (subtracted from Total South Yadkin IBT).				Catawba	% of Permitted MDD Transfer		Grandfathered IBT from Second Creek - South Yadkin River Basin		% of Permitted MDD Transfer		IBT from Yadkin to South Yadkin River Basin	
	South Yadkin	Yadkin	Yadkin	Catawba		South Yadkin	Yadkin	Catawba	Catawba		Yadkin	Transfer	Basin	Transfer	Basin	Transfer	Basin	
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Basin	% of Permitted MDD Transfer	Basin	% of Permitted MDD Transfer	Basin	
6/9/2012	0.000	0.300	0.000	0.000	0.294	-0.294	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.294	-4.900%	0.294	14.774%		
6/10/2012	0.000	0.300	0.000	0.000	0.181	-0.181	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.181	-3.017%	0.181	9.095%		
6/11/2012	0.000	0.300	0.000	0.000	0.189	-0.189	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.189	-3.150%	0.189	9.497%		
6/12/2012	0.000	0.300	0.000	0.000	0.218	-0.218	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.218	-3.633%	0.218	10.955%		
6/13/2012	0.000	0.300	0.000	0.000	0.248	-0.248	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.248	-4.133%	0.248	12.462%		
6/14/2012	0.000	0.300	0.000	0.000	0.157	-0.157	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.157	-2.617%	0.157	7.889%		
6/15/2012	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%		
6/16/2012	0.000	0.300	0.000	0.000	0.274	-0.274	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.274	-4.567%	0.274	13.769%		
6/17/2012	0.000	0.300	0.000	0.000	0.288	-0.288	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.288	-4.800%	0.288	14.472%		
6/18/2012	0.000	0.300	0.000	0.000	0.138	-0.138	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.138	-2.300%	0.138	6.935%		
6/19/2012	0.000	0.300	0.000	0.000	0.206	-0.206	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.206	-3.433%	0.206	10.352%		
6/20/2012	0.000	0.300	0.000	0.000	0.325	-0.325	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.325	-5.417%	0.325	16.332%		
6/21/2012	0.000	0.300	0.000	0.000	0.324	-0.324	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.324	-5.400%	0.324	16.281%		
6/22/2012	0.000	0.300	0.000	0.000	0.225	-0.225	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.225	-3.750%	0.225	11.307%		
6/23/2012	0.000	0.300	0.000	0.000	0.173	-0.173	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.173	-2.883%	0.173	8.693%		
6/24/2012	0.000	0.300	0.000	0.000	0.257	-0.257	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.257	-4.283%	0.257	12.915%		
6/25/2012	0.000	0.300	0.000	0.000	0.251	-0.251	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.251	-4.183%	0.251	12.613%		
6/26/2012	0.000	0.300	0.000	0.000	0.193	-0.193	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.193	-3.217%	0.193	9.698%		
6/27/2012	0.000	0.300	0.000	0.000	0.251	-0.251	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.251	-4.183%	0.251	12.613%		
6/28/2012	0.000	0.300	0.000	0.000	0.239	-0.239	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.239	-3.983%	0.239	12.010%		
6/29/2012	0.000	0.300	0.000	0.000	0.295	-0.295	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.295	-4.917%	0.295	14.824%		
6/30/2012	0.000	0.300	0.000	0.000	0.291	-0.291	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.291	-4.850%	0.291	14.623%		
7/1/2012	0.000	0.300	0.000	0.000	0.291	-0.291	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.291	-4.850%	0.291	14.623%		
7/2/2012	0.000	0.300	0.000	0.000	0.442	-0.442	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.442	-7.367%	0.442	22.211%		
7/3/2012	0.000	0.300	0.000	0.000	0.356	-0.356	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.356	-5.933%	0.356	17.889%		
7/4/2012	0.000	0.300	0.000	0.000	0.194	-0.194	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.194	-3.233%	0.194	9.749%		
7/5/2012	0.000	0.300	0.000	0.000	0.245	-0.245	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.245	-4.083%	0.245	12.312%		
7/6/2012	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%		
7/7/2012	0.000	0.300	0.000	0.000	0.200	-0.200	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.200	-3.333%	0.200	10.050%		
7/8/2012	0.000	0.300	0.000	0.000	0.290	-0.290	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.290	-4.833%	0.290	14.573%		
7/9/2012	0.000	0.300	0.000	0.000	0.300	-0.300	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.300	-5.000%	0.300	15.075%		
7/10/2012	0.000	0.300	0.000	0.000	0.290	-0.290	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.290	-4.833%	0.290	14.573%		
7/11/2012	0.000	0.300	0.000	0.000	0.290	-0.290	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.290	-4.833%	0.290	14.573%		
7/12/2012	0.000	0.300	0.000	0.000	0.267	-0.267	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.267	-4.450%	0.267	13.417%		
7/13/2012	0.000	0.300	0.000	0.000	0.158	-0.158	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.158	-2.633%	0.158	7.940%		
7/14/2012	0.000	0.300	0.000	0.000	0.224	-0.224	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.224	-3.733%	0.224	11.256%		
7/15/2012	0.000	0.300	0.000	0.000	0.224	-0.224	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.224	-3.733%	0.224	11.256%		
7/16/2012	0.000	0.300	0.000	0.000	0.220	-0.220	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.220	-3.667%	0.220	11.055%		
7/17/2012	0.000	0.300	0.000	0.000	0.230	-0.230	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.230	-3.833%	0.230	11.558%		
7/18/2012	0.000	0.300	0.000	0.000	0.220	-0.220	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.220	-3.667%	0.220	11.055%		
7/19/2012	0.000	0.300	0.000	0.000	0.215	-0.215	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.215	-3.583%	0.215	10.804%		
7/20/2012	0.000	0.300	0.000	0.000	0.225	-0.225	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.225	-3.750%	0.225	11.307%		
7/21/2012	0.000	0.300	0.000	0.000	0.223	-0.223	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.223	-3.717%	0.223	11.206%		
7/22/2012	0.000	0.300	0.000	0.000	0.235	-0.235	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.235	-3.917%	0.235	11.809%		
7/23/2012	0.000	0.300	0.000	0.000	0.250	-0.250	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.250	-4.167%	0.250	12.563%		
7/24/2012	0.000	0.300	0.000	0.000	0.243	-0.243	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.243	-4.050%	0.243	12.211%		
7/25/2012	0.000	0.300	0.000	0.000	0.280	-0.280	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.280	-4.667%	0.280	14.070%		
7/26/2012	0.000	0.300	0.000	0.000	0.381	-0.381	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.381	-6.350%	0.381	19.146%		
7/27/2012	0.000	0.300	0.000	0.000	0.265	-0.265	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.265	-4.417%	0.265	13.317%		
7/28/2012	0.000	0.300	0.000	0.000	0.266	-0.266	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.266	-4.433%	0.266	13.367%		
7/29/2012	0.000	0.300	0.000	0.000	0.250	-0.250	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.250	-4.167%	0.250	12.563%		
7/30/2012	0.000	0.300	0.000	0.000	0.245	-0.245	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.245	-4.083%	0.245	12.312%		
7/31/2012	0.000	0.300	0.000	0.000	0.300	-0.300	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.300	-5.000%	0.300	15.075%		
8/1/2012	0.000	0.300	0.000	0.000	0.279	-0.279	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.279	-4.650%	0.279	14.020%		
8/2/2012	0.000	0.300	0.000	0.000	0.262	-0.262	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.262	-4.367%	0.262	13.166%		
8/3/2012	0.000	0.300	0.000	0.000	0.316	-0.316	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.316	-5.267%	0.316	15.879%		



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin				Interbasin Transfer							
	Salisbury 1		Albemarle 1	CMU 1-3		NOTE: All Wastewater discharge is to the Rocky River from RRWWTP, excluding water sales to Landis (subtracted from Total South Yadkin IBT).											
	South Yadkin	Yadkin	Yadkin	Catawba	South Yadkin	South Yadkin	Yadkin	Catawba	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer	
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT									
8/4/2012	0.000	0.300	0.000	0.000	0.218	-0.218	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.218	-3.633%	0.218	10.955%	
8/5/2012	0.000	0.300	0.000	0.000	0.245	-0.245	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.245	-4.083%	0.245	12.312%	
8/6/2012	0.000	0.300	0.000	0.000	0.274	-0.274	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.274	-4.567%	0.274	13.769%	
8/7/2012	0.000	0.300	0.000	0.000	0.235	-0.235	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.235	-3.917%	0.235	11.809%	
8/8/2012	0.000	0.300	0.000	0.000	0.230	-0.230	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.230	-3.833%	0.230	11.558%	
8/9/2012	0.000	0.300	0.000	0.000	0.251	-0.251	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.251	-4.183%	0.251	12.613%	
8/10/2012	0.000	0.300	0.000	0.000	0.219	-0.219	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.219	-3.650%	0.219	11.005%	
8/11/2012	0.000	0.300	0.000	0.000	0.237	-0.237	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.237	-3.950%	0.237	11.910%	
8/12/2012	0.000	0.300	0.000	0.000	0.215	-0.215	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.215	-3.583%	0.215	10.804%	
8/13/2012	0.000	0.300	0.000	0.000	0.220	-0.220	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.220	-3.667%	0.220	11.055%	
8/14/2012	0.000	0.300	0.000	0.000	0.190	-0.190	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.190	-3.167%	0.190	9.548%	
8/15/2012	0.000	0.300	0.000	0.000	0.225	-0.225	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.225	-3.750%	0.225	11.307%	
8/16/2012	0.000	0.300	0.000	0.000	0.273	-0.273	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.273	-4.550%	0.273	13.719%	
8/17/2012	0.000	0.300	0.000	0.000	0.235	-0.235	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.235	-3.917%	0.235	11.809%	
8/18/2012	0.000	0.300	0.000	0.000	0.242	-0.242	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.242	-4.033%	0.242	12.161%	
8/19/2012	0.000	0.300	0.000	0.000	0.175	-0.175	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.175	-2.917%	0.175	8.794%	
8/20/2012	0.000	0.300	0.000	0.000	0.260	-0.260	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.260	-4.333%	0.260	13.065%	
8/21/2012	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%	
8/22/2012	0.000	0.300	0.000	0.000	0.236	-0.236	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.236	-3.933%	0.236	11.859%	
8/23/2012	0.000	0.300	0.000	0.000	0.261	-0.261	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.261	-4.350%	0.261	13.116%	
8/24/2012	0.000	0.300	0.000	0.000	0.248	-0.248	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.248	-4.133%	0.248	12.462%	
8/25/2012	0.000	0.300	0.000	0.000	0.234	-0.234	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.234	-3.900%	0.234	11.759%	
8/26/2012	0.000	0.300	0.000	0.000	0.269	-0.269	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.269	-4.483%	0.269	13.518%	
8/27/2012	0.000	0.300	0.000	0.000	0.295	-0.295	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.295	-4.917%	0.295	14.824%	
8/28/2012	0.000	0.300	0.000	0.000	0.200	-0.200	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.200	-3.333%	0.200	10.050%	
8/29/2012	0.000	0.300	0.000	0.000	0.170	-0.170	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.170	-2.833%	0.170	8.543%	
8/30/2012	0.000	0.300	0.000	0.000	0.374	-0.374	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.374	-6.233%	0.374	18.794%	
8/31/2012	0.000	0.300	0.000	0.000	0.454	-0.454	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.454	-7.567%	0.454	22.814%	
9/1/2012	0.000	0.300	0.000	0.000	0.231	-0.231	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.231	-3.850%	0.231	11.608%	
9/2/2012	0.000	0.300	0.000	0.000	0.198	-0.198	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.198	-3.300%	0.198	9.950%	
9/3/2012	0.000	0.300	0.000	0.000	0.244	-0.244	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.244	-4.067%	0.244	12.261%	
9/4/2012	0.000	0.300	0.000	0.000	0.192	-0.192	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.192	-3.200%	0.192	9.648%	
9/5/2012	0.000	0.300	0.000	0.000	0.220	-0.220	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.220	-3.667%	0.220	11.055%	
9/6/2012	0.000	0.300	0.000	0.000	0.221	-0.221	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.221	-3.683%	0.221	11.106%	
9/7/2012	0.000	0.300	0.000	0.000	0.210	-0.210	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.210	-3.500%	0.210	10.553%	
9/8/2012	0.000	0.300	0.000	0.000	0.208	-0.208	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.208	-3.467%	0.208	10.452%	
9/9/2012	0.000	0.300	0.000	0.000	0.209	-0.209	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.209	-3.483%	0.209	10.503%	
9/10/2012	0.000	0.300	0.000	0.000	0.275	-0.275	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.275	-4.583%	0.275	13.819%	
9/11/2012	0.000	0.300	0.000	0.000	0.288	-0.288	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.288	-4.800%	0.288	14.472%	
9/12/2012	0.000	0.300	0.000	0.000	0.245	-0.245	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.245	-4.083%	0.245	12.312%	
9/13/2012	0.000	0.300	0.000	0.000	0.235	-0.235	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.235	-3.917%	0.235	11.809%	
9/14/2012	0.000	0.300	0.000	0.000	0.135	-0.135	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.135	-2.250%	0.135	6.784%	
9/15/2012	0.000	0.300	0.000	0.000	0.176	-0.176	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.176	-2.933%	0.176	8.844%	
9/16/2012	0.000	0.300	0.000	0.000	0.183	-0.183	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.183	-3.050%	0.183	9.196%	
9/17/2012	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%	
9/18/2012	0.000	0.300	0.000	0.000	0.194	-0.194	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.194	-3.233%	0.194	9.749%	
9/19/2012	0.000	0.300	0.000	0.000	0.225	-0.225	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.225	-3.750%	0.225	11.307%	
9/20/2012	0.000	0.300	0.000	0.000	0.211	-0.211	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.211	-3.517%	0.211	10.603%	
9/21/2012	0.000	0.300	0.000	0.000	0.194	-0.194	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.194	-3.233%	0.194	9.749%	
9/22/2012	0.000	0.300	0.000	0.000	0.155	-0.155	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.155	-2.583%	0.155	7.789%	
9/23/2012	0.000	0.300	0.000	0.000	0.141	-0.141	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.141	-2.350%	0.141	7.085%	
9/24/2012	0.000	0.300	0.000	0.000	0.175	-0.175	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.175	-2.917%	0.175	8.794%	
9/25/2012	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%	
9/26/2012	0.000	0.300	0.000	0.000	0.198	-0.198	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.198	-3.300%	0.198	9.950%	
9/27/2012	0.000	0.300	0.000	0.000	0.192	-0.192	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.192	-3.200%	0.192	9.648%	
9/28/2012	0.000	0.300	0.000	0.000	0.197	-0.197	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.197	-3.283%	0.197	9.899%	



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin			Interbasin Transfer							
	Salisbury 1		Albemarle 1	CMU 1-3		NOTE: All Wastewater discharge is to the Rocky River from RRWWTP, excluding water sales to Landis (subtracted from Total South Yadkin IBT).										
	South Yadkin	Yadkin	Yadkin	Catawba	South Yadkin	South Yadkin	Yadkin	Catawba	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT								
9/29/2012	0.000	0.300	0.000	0.000	0.195	-0.195	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.195	-3.250%	0.195	9.799%
9/30/2012	0.000	0.300	0.000	0.000	0.165	-0.165	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.165	-2.750%	0.165	8.291%
10/1/2012	0.000	0.300	0.000	0.000	0.175	-0.175	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.175	-2.917%	0.175	8.794%
10/2/2012	0.000	0.300	0.000	0.000	0.262	-0.262	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.262	-4.367%	0.262	13.166%
10/3/2012	0.000	0.300	0.000	0.000	0.205	-0.205	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.205	-3.417%	0.205	10.302%
10/4/2012	0.000	0.300	0.000	0.000	0.229	-0.229	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.229	-3.817%	0.229	11.508%
10/5/2012	0.000	0.300	0.000	0.000	0.212	-0.212	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.212	-3.533%	0.212	10.653%
10/6/2012	0.000	0.300	0.000	0.000	0.215	-0.215	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.215	-3.583%	0.215	10.804%
10/7/2012	0.000	0.300	0.000	0.000	0.178	-0.178	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.178	-2.967%	0.178	8.945%
10/8/2012	0.000	0.300	0.000	0.000	0.137	-0.137	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.137	-2.283%	0.137	6.884%
10/9/2012	0.000	0.300	0.000	0.000	0.233	-0.233	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.233	-3.883%	0.233	11.709%
10/10/2012	0.000	0.300	0.000	0.000	0.185	-0.185	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.185	-3.083%	0.185	9.296%
10/11/2012	0.000	0.300	0.000	0.000	0.246	-0.246	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.246	-4.100%	0.246	12.362%
10/12/2012	0.000	0.300	0.000	0.000	0.198	-0.198	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.198	-3.300%	0.198	9.950%
10/13/2012	0.000	0.300	0.000	0.000	0.199	-0.199	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.199	-3.317%	0.199	10.000%
10/14/2012	0.000	0.300	0.000	0.000	0.168	-0.168	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.168	-2.800%	0.168	8.442%
10/15/2012	0.000	0.300	0.000	0.000	0.208	-0.208	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.208	-3.467%	0.208	10.452%
10/16/2012	0.000	0.300	0.000	0.000	0.214	-0.214	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.214	-3.567%	0.214	10.754%
10/17/2012	0.000	0.300	0.000	0.000	0.292	-0.292	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.292	-4.867%	0.292	14.673%
10/18/2012	0.000	0.300	0.000	0.000	0.211	-0.211	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.211	-3.517%	0.211	10.603%
10/19/2012	0.000	0.300	0.000	0.000	0.155	-0.155	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.155	-2.583%	0.155	7.789%
10/20/2012	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%
10/21/2012	0.000	0.300	0.000	0.000	0.177	-0.177	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.177	-2.950%	0.177	8.894%
10/22/2012	0.000	0.300	0.000	0.000	0.166	-0.166	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.166	-2.767%	0.166	8.342%
10/23/2012	0.000	0.300	0.000	0.000	0.295	-0.295	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.295	-4.917%	0.295	14.824%
10/24/2012	0.000	0.300	0.000	0.000	0.171	-0.171	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.171	-2.850%	0.171	8.593%
10/25/2012	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%
10/26/2012	0.000	0.300	0.000	0.000	0.159	-0.159	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.159	-2.650%	0.159	7.990%
10/27/2012	0.000	0.300	0.000	0.000	0.168	-0.168	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.168	-2.800%	0.168	8.442%
10/28/2012	0.000	0.300	0.000	0.000	0.148	-0.148	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.148	-2.467%	0.148	7.437%
10/29/2012	0.000	0.300	0.000	0.000	0.169	-0.169	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.169	-2.817%	0.169	8.492%
10/30/2012	0.000	0.300	0.000	0.000	0.171	-0.171	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.171	-2.850%	0.171	8.593%
10/31/2012	0.000	0.300	0.000	0.000	0.203	-0.203	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.203	-3.383%	0.203	10.201%
11/1/2012	0.000	0.300	0.000	0.000	0.114	-0.114	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.114	-1.900%	0.114	5.729%
11/2/2012	0.000	0.300	0.000	0.000	0.236	-0.236	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.236	-3.933%	0.236	11.859%
11/3/2012	0.000	0.300	0.000	0.000	0.148	-0.148	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.148	-2.467%	0.148	7.437%
11/4/2012	0.000	0.300	0.000	0.000	0.166	-0.166	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.166	-2.767%	0.166	8.342%
11/5/2012	0.000	0.300	0.000	0.000	0.165	-0.165	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.165	-2.750%	0.165	8.291%
11/6/2012	0.000	0.300	0.000	0.000	0.185	-0.185	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.185	-3.083%	0.185	9.296%
11/7/2012	0.000	0.300	0.000	0.000	0.169	-0.169	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.169	-2.817%	0.169	8.492%
11/8/2012	0.000	0.300	0.000	0.000	0.203	-0.203	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.203	-3.383%	0.203	10.201%
11/9/2012	0.000	0.300	0.000	0.000	0.195	-0.195	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.195	-3.250%	0.195	9.799%
11/10/2012	0.000	0.300	0.000	0.000	0.142	-0.142	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.142	-2.367%	0.142	7.136%
11/11/2012	0.000	0.300	0.000	0.000	0.243	-0.243	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.243	-4.050%	0.243	12.211%
11/12/2012	0.000	0.300	0.000	0.000	0.175	-0.175	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.175	-2.917%	0.175	8.794%
11/13/2012	0.000	0.300	0.000	0.000	0.179	-0.179	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.179	-2.983%	0.179	8.995%
11/14/2012	0.000	0.300	0.000	0.000	0.145	-0.145	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.145	-2.417%	0.145	7.286%
11/15/2012	0.000	0.300	0.000	0.000	0.217	-0.217	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.217	-3.617%	0.217	10.905%
11/16/2012	0.000	0.300	0.000	0.000	0.156	-0.156	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.156	-2.600%	0.156	7.839%
11/17/2012	0.000	0.300	0.000	0.000	0.141	-0.141	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.141	-2.350%	0.141	7.085%
11/18/2012	0.000	0.300	0.000	0.000	0.216	-0.216	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.216	-3.600%	0.216	10.854%
11/19/2012	0.000	0.300	0.000	0.000	0.141	-0.141	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.141	-2.350%	0.141	7.085%
11/20/2012	0.000	0.300	0.000	0.000	0.241	-0.241	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.241	-4.017%	0.241	12.111%
11/21/2012	0.000	0.300	0.000	0.000	0.197	-0.197	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.197	-3.283%	0.197	9.899%
11/22/2012	0.000	0.300	0.000	0.000	0.164	-0.164	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.164	-2.733%	0.164	8.241%
11/23/2012	0.000	0.300	0.000	0.000	0.129	-0.129	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.129	-2.150%	0.129	6.482%



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin			Interbasin Transfer							
	South Yadkin	Salisbury 1 Yadkin	Albemarle 1 Yadkin	CMU 1-3 Catawba		South Yadkin	South Yadkin	Yadkin	Catawba	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer
11/24/2012	0.000	0.300	0.000	0.000	0.129	-0.129	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.129	-2.150%	0.129	6.482%
11/25/2012	0.000	0.300	0.000	0.000	0.179	-0.179	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.179	-2.983%	0.179	8.995%
11/26/2012	0.000	0.300	0.000	0.000	0.243	-0.243	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.243	-4.050%	0.243	12.211%
11/27/2012	0.000	0.300	0.000	0.000	0.236	-0.236	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.236	-3.933%	0.236	11.859%
11/28/2012	0.000	0.300	0.000	0.000	0.134	-0.134	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.134	-2.233%	0.134	6.734%
11/29/2012	0.000	0.300	0.000	0.000	0.237	-0.237	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.237	-3.950%	0.237	11.910%
11/30/2012	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%
12/1/2012	0.000	0.300	0.000	0.000	0.189	-0.189	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.189	-3.150%	0.189	9.497%
12/2/2012	0.000	0.300	0.000	0.000	0.159	-0.159	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.159	-2.650%	0.159	7.990%
12/3/2012	0.000	0.300	0.000	0.000	0.276	-0.276	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.276	-4.600%	0.276	13.869%
12/4/2012	0.000	0.300	0.000	0.000	0.250	-0.250	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.250	-4.167%	0.250	12.563%
12/5/2012	0.000	0.300	0.000	0.000	0.192	-0.192	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.192	-3.200%	0.192	9.648%
12/6/2012	0.000	0.300	0.000	0.000	0.189	-0.189	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.189	-3.150%	0.189	9.497%
12/7/2012	0.000	0.300	0.000	0.000	0.228	-0.228	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.228	-3.800%	0.228	11.457%
12/8/2012	0.000	0.300	0.000	0.000	0.126	-0.126	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.126	-2.100%	0.126	6.332%
12/9/2012	0.000	0.300	0.000	0.000	0.173	-0.173	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.173	-2.883%	0.173	8.693%
12/10/2012	0.000	0.300	0.000	0.000	0.206	-0.206	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.206	-3.433%	0.206	10.352%
12/11/2012	0.000	0.300	0.000	0.000	0.121	-0.121	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.121	-2.017%	0.121	6.080%
12/12/2012	0.000	0.300	0.000	0.000	0.212	-0.212	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.212	-3.533%	0.212	10.653%
12/13/2012	0.000	0.300	0.000	0.000	0.202	-0.202	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.202	-3.367%	0.202	10.151%
12/14/2012	0.000	0.300	0.000	0.000	0.206	-0.206	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.206	-3.433%	0.206	10.352%
12/15/2012	0.000	0.300	0.000	0.000	0.188	-0.188	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.188	-3.133%	0.188	9.447%
12/16/2012	0.000	0.300	0.000	0.000	0.131	-0.131	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.131	-2.183%	0.131	6.583%
12/17/2012	0.000	0.300	0.000	0.000	0.249	-0.249	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.249	-4.150%	0.249	12.513%
12/18/2012	0.000	0.300	0.000	0.000	0.135	-0.135	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.135	-2.250%	0.135	6.784%
12/19/2012	0.000	0.300	0.000	0.000	0.139	-0.139	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.139	-2.317%	0.139	6.985%
12/20/2012	0.000	0.300	0.000	0.000	0.208	-0.208	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.208	-3.467%	0.208	10.452%
12/21/2012	0.000	0.300	0.000	0.000	0.154	-0.154	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.154	-2.567%	0.154	7.739%
12/22/2012	0.000	0.300	0.000	0.000	0.134	-0.134	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.134	-2.233%	0.134	6.734%
12/23/2012	0.000	0.300	0.000	0.000	0.164	-0.164	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.164	-2.733%	0.164	8.241%
12/24/2012	0.000	0.300	0.000	0.000	0.153	-0.153	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.153	-2.550%	0.153	7.688%
12/25/2012	0.000	0.300	0.000	0.000	0.136	-0.136	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.136	-2.267%	0.136	6.834%
12/26/2012	0.000	0.300	0.000	0.000	0.178	-0.178	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.178	-2.967%	0.178	8.945%
12/27/2012	0.000	0.300	0.000	0.000	0.139	-0.139	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.139	-2.317%	0.139	6.985%
12/28/2012	0.000	0.300	0.000	0.000	0.202	-0.202	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.202	-3.367%	0.202	10.151%
12/29/2012	0.000	0.300	0.000	0.000	0.111	-0.111	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.111	-1.850%	0.111	5.578%
12/30/2012	0.000	0.300	0.000	0.000	0.154	-0.154	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.154	-2.567%	0.154	7.739%
12/31/2012	0.000	0.300	0.000	0.000	0.168	-0.168	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.168	-2.800%	0.168	8.442%
AVG 2012	0.000	0.300	0.000	0.000	0.199	-0.199	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.199	-1.989%	0.199	3.315%
MAX 2012	0.000	0.300	0.000	0.000	0.454	-0.454	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.454	-4.540%	0.454	7.567%

<sup>1</sup> Transfers from Second Creek to Kannapolis Lake (South Yadkin Basin to Rocky River Basin) shall not exceed 6 MGD, positive numbers represent this direction of transfer as dominate  
Transfers from Kannapolis (via purchase from Salisbury) to Landis (Yadkin Basin to South Yadkin Basin) shall not exceed 2 MGD; negative numbers represent this direction of transfer as the dominate



**2013 Annual Report on Interbasin Transfers  
for  
The Cities of Concord and Kannapolis**

Prepared for and by:

**City of Concord**



**City of Kannapolis**



Submitted to:

**North Carolina Division of Water Resources**

February 2014



## Executive Summary

The 2013 Annual Report on Interbasin Transfers (IBTs) for the Cities of Concord and Kannapolis (Cities) includes monitoring data for daily tracking of IBT amounts and documentation of compliance with all IBT Certificate conditions. Annual reports were previously prepared for calendar years 2007 through 2012 and are available on the North Carolina Division of Water Resources (NCDWR) website.

The North Carolina Environmental Management Commission (EMC) approved the Cities' IBT Certificate in January 2007 authorizing transfers of up to 10 million gallons per day (mgd) from the Catawba River Basin to the Rocky River Basin and 10 mgd from the Yadkin River Basin to the Rocky River Basin. Additionally, a grandfathered IBT of 6 mgd authorizes transfer from Second Creek, located in the South Yadkin River Basin, to the Rocky River Basin. The terms "Cities" and "Certificate Holders" are used interchangeably herein.

In 2013, the Certificate Holders complied with all conditions of their IBT Certificate. The City of Concord purchased water from Charlotte-Mecklenburg Utilities (CMU) as an emergency draw in December due to a blue-green algae bloom in the source water for Concord's Coddle Creek Water Treatment Plant. This algae bloom required treatment train modifications to ensure finished water was in compliance with State regulations. The maximum daily transfer from the Yadkin River Basin was 0.3 mgd.

In 2013, the City of Kannapolis pumped water from Second Creek to Kannapolis Lake under its South Yadkin River Basin grandfathered IBT. Water sales to Landis averaging 0.21 mgd resulted in an IBT to Second Creek (South Yadkin River Basin) during 2013. The maximum day transfer to the South Yadkin River Basin was 0.45 mgd. IBT amounts for 2013 are provided in Table ES-1. The 2013 IBT daily transfers for Concord and Kannapolis are shown in Figure ES-1.

In addition, a settlement was reached in 2010 on a lawsuit filed by the Catawba River Foundation, Inc. and the Protect the Catawba Coalition. While this does not change the IBT Certificate or required reporting in any way, the Cities did agree to some operational conditions regarding the Catawba River Basin during times of drought.

**Table ES-1**

2013 IBT Average Annual & Maximum Day Demands for Concord and Kannapolis Service Areas

Year	Catawba River Basin			Yadkin River Basin			Second Creek <sup>c,d</sup> (South Yadkin River Basin)		
	Water Purchase (mgd)		IBT as % of Certificate <sup>a</sup>	Water Purchase (mgd)		IBT as % of Certificate <sup>b,c</sup>	Water Transfer (mgd)		IBT as % of Grandfathered amount
	Average Annual	Max. Day	Max. Day	Average Annual	Max. Day	Max. Day	Average Annual	Max. Day	Max. Day
2013	0.014	3.335	33.35%	0.30	0.30	3.0%	-0.21	-0.45	-4.45%

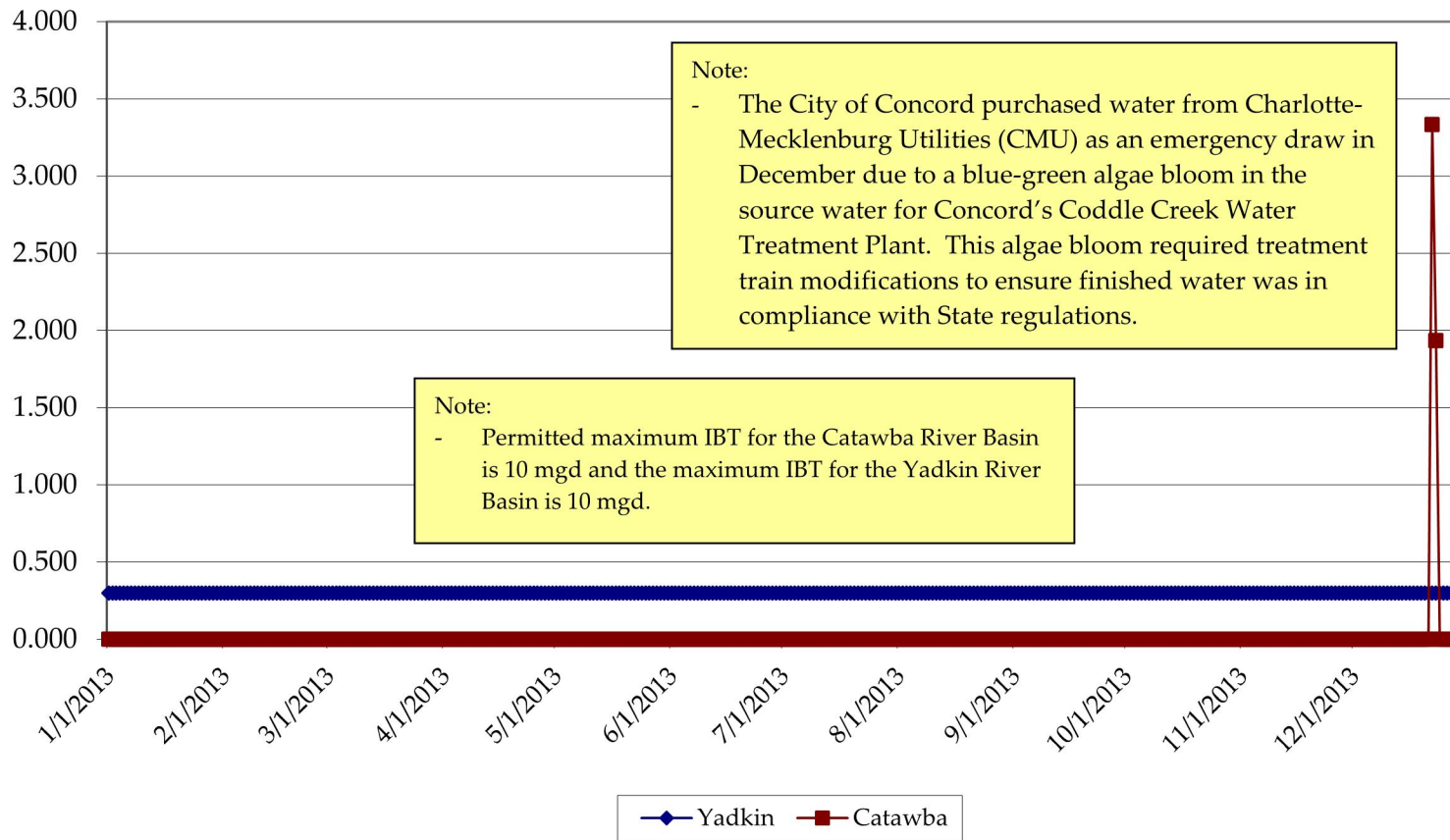
<sup>a</sup> Maximum Day IBT of 10 mgd from the Catawba River Basin.

<sup>b</sup> Maximum Day IBT of 10 mgd from the Yadkin River Basin.

<sup>c</sup> The grandfathered 6-mgd Maximum Day IBT limit from Second Creek (South Yadkin River Basin) into the Rocky River Basin is not included in the 10-mgd Maximum Day IBT limit for the Yadkin River Basin.

<sup>d</sup> There was no transfer from Second Creek, therefore these numbers are negative.

### 2013 Daily IBT Per Basin (mgd)



**Figure ES-1**  
2013 Daily Interbasin Transfers by Basin

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## Appendix

Daily Interbasin Transfer Amounts for 2013

# Acronyms and Abbreviations

CMU	Charlotte-Mecklenburg Utilities
DMAC	Drought Management Advisory Council
EMC	Environmental Management Commission
FERC	Federal Energy Regulatory Commission
IBT	Interbasin Transfer
LIP	Low Inflow Protocol
mgd	million gallons per day
NCDWR	North Carolina Division of Water Resources
WSRP	Water Shortage Response Plan
WTP	Water Treatment Plant

# 1.0 - Introduction

The Cities of Concord and Kannapolis (Cities) received an interbasin transfer (IBT) Certificate, which was originally approved on January 10, 2007, and signed into effect on January 25, 2007. The North Carolina Environmental Management Commission (EMC) has authorized transfers of up to 10 million gallons per day (mgd) from the Catawba River Basin to the Rocky River Basin and 10 mgd from the Yadkin River Basin to the Rocky River Basin. As a condition of the IBT Certificate, the Cities are required to produce an Annual Report that documents transfers over the past year. Annual reports were also prepared for calendar years 2007 through 2011 and are available on the North Carolina Division of Water Resources (NCDWR) website.

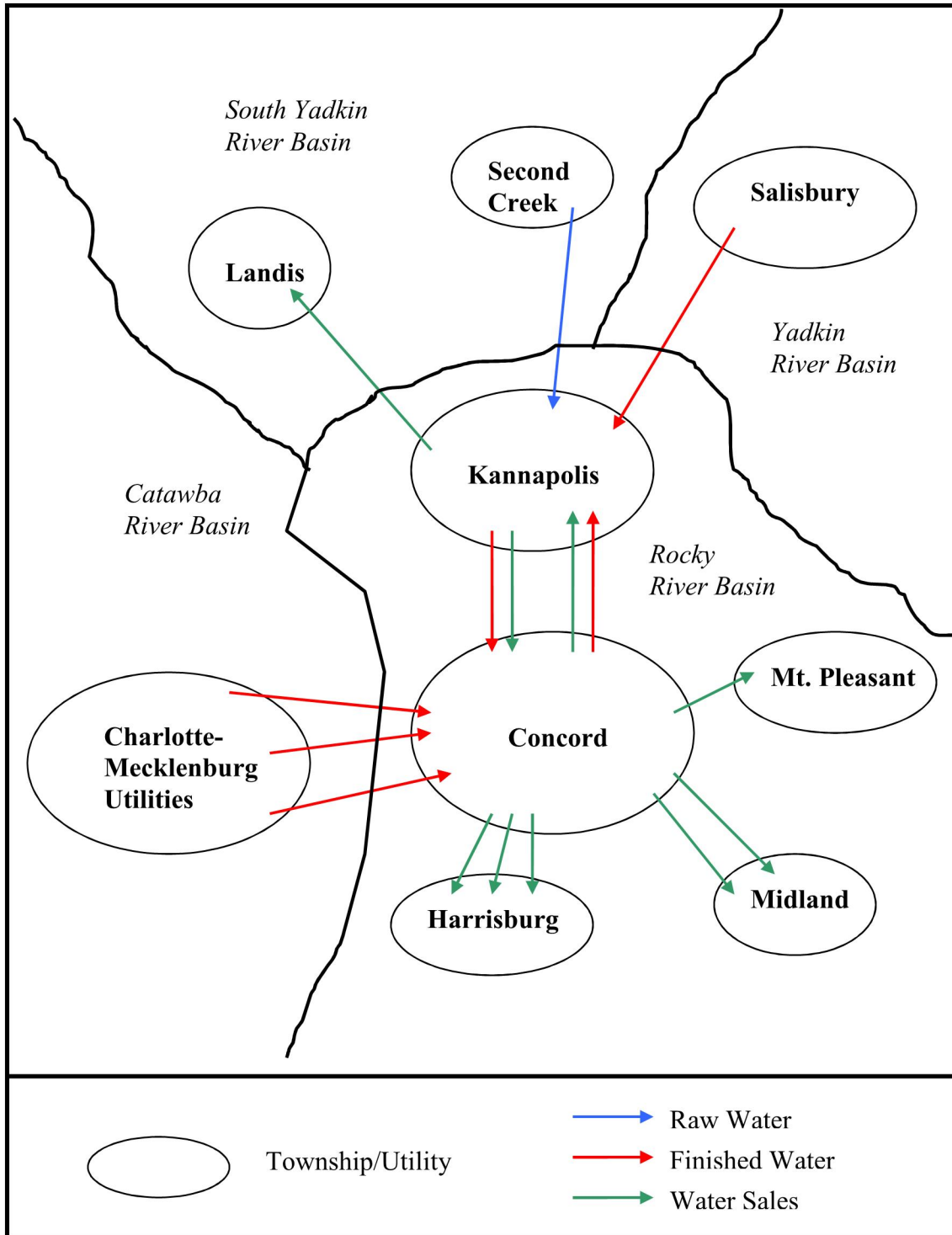
The Cities provide water to each other, various municipalities in the area (including: Mount Pleasant, Midland, Harrisburg, and Landis), and unincorporated areas of Cabarrus County. Concord owns and operates the water distribution system used by the Town of Midland. Charlotte-Mecklenburg Utilities (CMU) and the City of Salisbury currently have contracts to provide water to the Cities from the Catawba and Yadkin River Basins, respectively. Kannapolis has an agreement in place with the City of Salisbury to purchase 0.3 mgd of finished water on a daily basis; the Cities are also in the process of constructing an interconnection with the City of Albemarle, which is located in the Yadkin River Basin. Concord no longer purchases finished water from CMU for a small residential area.

The terms "Cities" and "Certificate Holders" are used interchangeably herein. Figure 1-1 illustrates the ability to transfer water among the Certificate Holders and all municipalities served by the Certificate Holders.



**Figure 1-1**

Water Connections of the Certificate Holders and All Municipalities Served by the Certificate Holders



## 2.0 - IBT Monitoring

### 2.1 - Service Area Water Demand

Table 2-1 presents 2013 annual average water production for the Certificate Holders based on finished water produced at the Hillgrove, Coddle Creek, and Kannapolis Water Treatment Plants (WTPs). It also shows finished water purchases from CMU and the City of Salisbury, if they occurred. Additionally, Table 2-1 presents the 2013 annual average IBT (or water purchases) from each basin covered by the IBT Certificate and from Second Creek, from which transfers are authorized by a grandfathered IBT. In 2013, finished water production averaged 13.05 mgd, purchased IBT finished water averaged 0.03 mgd for the Yadkin River Basin and -0.21 mgd for Second Creek (negative since there is no transfer from Second Creek). The City of Concord purchased water from CMU as an emergency draw in December due to a blue-green algae bloom in the source water for Concord’s Coddle Creek Water Treatment Plant. This algae bloom required treatment train modifications to ensure finished water was in compliance with State regulations. The combined 2013 annual average water use for the Certificate Holders was 13.14 mgd.

**Table 2-1**

2013 Water Production or Purchases by River Basin

		2013			Annual Average Combined Water Use (mgd)
		Annual Average Purchased Water (mgd)			
Certificate Holders	Annual Average Finished Water Produced <sup>a</sup> (mgd)	Catawba River Basin <sup>b</sup>	Yadkin River Basin	Second Creek	
Concord & Kannapolis	13.05	0.00	0.30	-0.21	13.14

<sup>a</sup> Water produced within Rocky River Basin; may include water from Second Creek transferred directly into Kannapolis Lake.

<sup>b</sup> Concord no longer purchases water from CMU for a residential neighborhood.

### 2.2 - Interbasin Transfers

Daily IBT amounts for the Certificate Holders are included in the Appendix. Data are provided for the period January 1, 2013 through December 31, 2013. *There was an emergency IBT from the Catawba River Basin during the calendar year 2013 on 2 occasions. The first being on December 22 in the amount of 3.335 mgd and the second on December 23 in the amount of 1.934 mgd. The maximum day IBT from the Yadkin River Basin during the calendar year 2013 was 0.3 mgd,*

which was consistent daily throughout 2013 due to contract agreements between Salisbury and Kannapolis. This represents 3.0 percent of the permitted maximum day, 10 mgd IBT from the Yadkin River Basin under the Certificate approved by the EMC in January 2007. There were transfers of raw water from Second Creek with a maximum day IBT of 0.454 mgd, which represents 7.6% of the permitted maximum day, 6 mgd IBT from the South Yadkin River Basin under the grandfathered Certificate. Table 2-2 shows the IBT use for the Certificate Holders and the percentage of use from the Catawba and Yadkin River Basins.

**Table 2-2**

2013 IBT Average Annual & Maximum Day Demands for Concord and Kannapolis Service Areas

Year	Catawba River Basin			Yadkin River Basin			Second Creek <sup>c,d</sup> (South Yadkin River Basin)		
	Water Purchase (mgd)		IBT as % of Certificate <sup>a</sup>	Water Purchase (mgd)		IBT as % of Certificate <sup>b,c</sup>	Water Transfer (mgd)		IBT as % of Grandfathered amount
	Average Annual	Max. Day	Max. Day	Average Annual	Max. Day	Max. Day	Average Annual	Max. Day	Max. Day
2013	0.014	3.335	33.35%	0.30	0.30	3.0%	-0.21	-0.45	-4.45%

<sup>a</sup> Maximum Day IBT of 10 mgd from the Catawba River Basin.

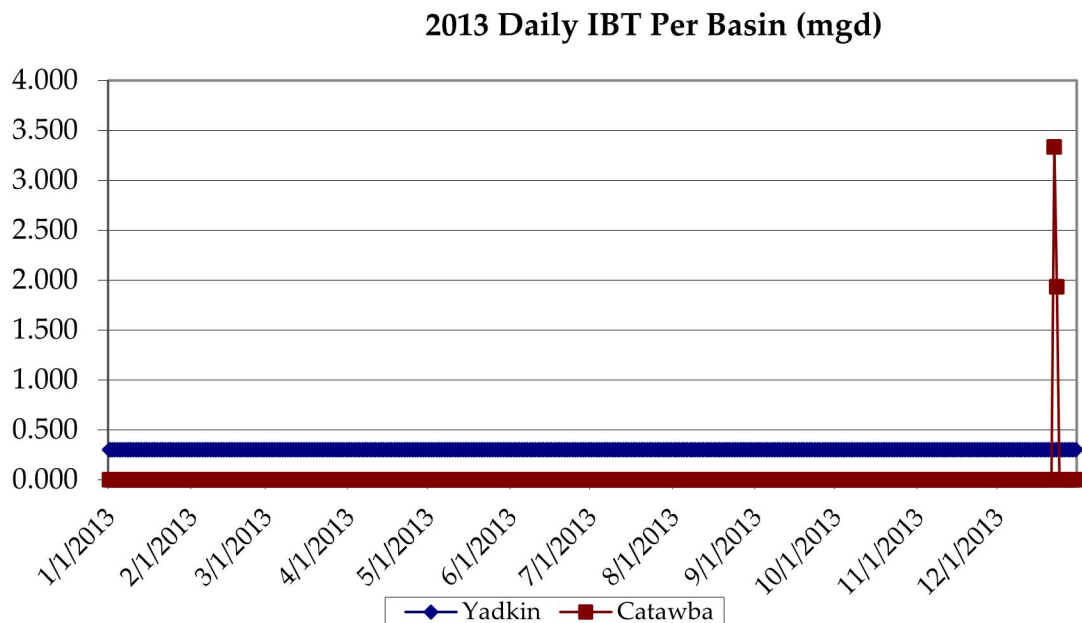
<sup>b</sup> Maximum Day IBT of 10 mgd from the Yadkin River Basin.

<sup>c</sup> The grandfathered 6-mgd Maximum Day IBT limit from Second Creek (South Yadkin River Basin) into the Rocky River Basin is not included in the 10-mgd Maximum Day IBT limit for the Yadkin River Basin.

Figure 2-1 displays the daily IBT amounts for water purchases from the Catawba and Yadkin River Basins.

**Figure 2-1**

2013 Daily Interbasin Transfers by Basin



### 3.0 - Other Related Information

In 2010, a settlement was reached in a lawsuit filed by the Catawba River Foundation, Inc. and the Protect the Catawba Coalition. While this does not affect the IBT Certificate, its conditions, or required reporting in any way, the Cities did agree to some operational conditions regarding the Catawba River Basin during times of drought.

Until July 1, 2015, the Cities have agreed to transfer no more than 3.0 mgd (maximum day) from the Catawba River Basin. Thereafter, the Cities must first transfer 5.0 mgd from the Yadkin River Basin before exceeding an IBT of 3.0 mgd from the Catawba River Basin. On December 22, there was an emergency that required 3.335 mgd on that day and 1.934 mgd the following day that could not be avoided. There was a blue-green algae bloom in the source water for Concord’s Coddle Creek Water Treatment Plant. This algae bloom required treatment train modifications to ensure finished water was in compliance with State regulations.

During designated droughts beyond July 1, 2015, following either Low Inflow Protocol (LIP) or Drought Management Advisory Council (DMAC) Drought Stage declaration, the Cities have agreed to limit the Catawba River Basin IBT so that it corresponds to water use reduction goals. A summary of this agreement is presented in Table 3-1.

**Table 3-1**  
Catawba River Basin IBT during Drought Conditions

LIP Stage or DMAC Drought Stage	Maximum Day Transfer (mgd)
0 / Abnormally Dry	10.0
1 / Moderate Drought	9.0
2 / Severe Drought	8.5
3 / Extreme Drought	7.0
4 / Exceptional Drought	6.0

## 4.0 - Compliance with Certificate Conditions

A summary of the conditions of the IBT Certificate approved on January 10, 2007 along with the current status of compliance for each is provided below. Language from the certificate is followed by 2010 actions for each condition.

### 4.1 - Condition 1 (Federal Energy Regulatory Commission [FERC] Licensure)

*If at any time any legal requirement that (a) governs the operation of the hydroelectric facilities in the Catawba River Basin currently licensed as Federal Energy Regulatory Commission (FERC) Project No. P-2232 or in the Yadkin Pee-Dee River Basin currently licensed as FERC Project Nos. P-2206 and P-2197 and (b) governs or affects water use and/or quality, substantially differs from the actual or anticipated FERC license conditions or other legal requirement upon which the analysis underlying this Certificate is based, such as changes to minimum flow requirements or drought mitigation measures, the Commission may reopen and modify this Certificate.*

This condition requires no action by the Certificate Holders.

### 4.2 - Condition 2 (Drought Management Plan)

*Each Certificate Holder shall prepare a Drought Management Plan. The Cities shall implement measures corresponding to the most severe level of drought conditions in either the Catawba or Yadkin River Basins. The Cities shall not transfer any water to any other jurisdictions unless that jurisdiction agrees to be bound by this condition in full.*

The Cities submitted the Drought Management Plan on July 31, 2007; comments were received on November 11, 2007, and the revised plan was submitted on January 8, 2008. The Drought Management Plan was incorporated into an updated Water Shortage Response Plan (WSRP) in 2010. The WSRP, prepared as a joint document for the Certificate Holders, is available on the NCDWR website at the following web address:

[http://www.ncwater.org/Water\\_Supply\\_Planning/Water\\_Shortage\\_Response\\_Plans/plan](http://www.ncwater.org/Water_Supply_Planning/Water_Shortage_Response_Plans/plan)

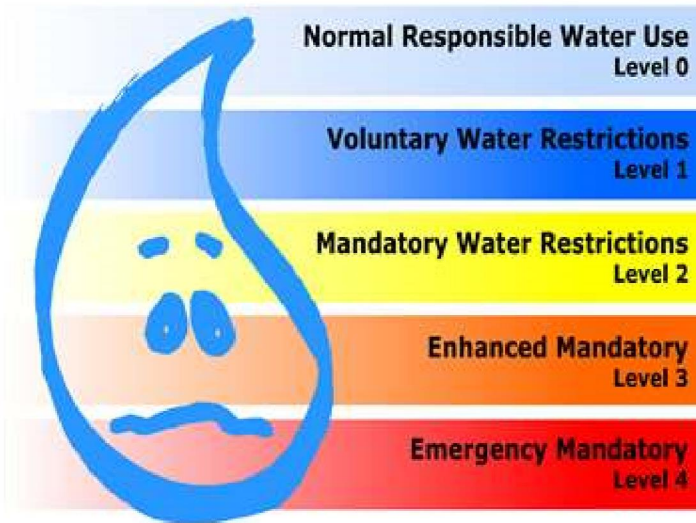
Table 4-1 shows Normal and Drought Stages 0-4, the names of each, the date the Catawba River Basin managers implemented Draft LIP actions in response to drought monitoring, the Yadkin-Pee Dee River Basin drought monitor, and the associated actions taken by the Cities.

Beginning in the winter of 2008, drought conditions in the state began to decrease, permitting an easing of drought restrictions for both the Catawba and Yadkin River Basins. In April 2009, the Cities adopted a restricted irrigation schedule which allows irrigation on Tuesdays, Thursdays, and Saturdays only. This modified Level 0, Normal Responsible Water Use, was in place from January 1 through December 31 of 2013 (Figure 4-1). Other outdoor water use conservation



measures are encouraged but not required. The Yadkin River Basin began the year with Stage 2, Severe Drought, water levels. In late January, rainfall increased and both basins moved to Stage 1, Moderate Drought. In February the rainfall increased in the Yadkin-Pee Dee River Basin and the basin moved to Abnormally Dry levels. The Catawba River Basin moved to Abnormally Dry Levels in April. Both basins moved to Normal in the spring and stayed at those levels until October when rainfall decreased and they both moved back to Abnormally Dry, where they finished the year.

During the year, the Cities drought stages follow the drought stages of the Catawba-Wateree Water Management Group; hence the Cities stayed in Normal Responsible Water Use Level.



The Cities have agreements in place that include enforcement policies with other systems that purchase water from them.

**Table 4-1**

Concord and Kannapolis 2013 Normal and Drought Stages

2013 Period of Drought					
Drought Stage	Drought Monitor Classification	Catawba River Basin <sup>a</sup> (Low Inflow Protocol)	Yadkin River Basin <sup>b</sup> (NC Drought Monitor)	Action by Cities	Cities' Actions Taken
	Normal	June 3 – December 31	May 7 – October 21		
0	Abnormally Dry	January 1 – June 2	April 30 – May 6 October 22 – December 31	Level 0 from January 1 - December 31	Lawn irrigation allowed only on Tuesday, Thursday, & Saturday. Other voluntary conservation efforts encouraged.
1	Moderate Drought	-	January 22 – April 29		
2	Severe Drought	-	January 1 – January 21		
3	Extreme Drought	-	-		
4	Exceptional Drought	-	-		

<sup>a</sup> The Catawba River Basin is listed as the drought stage declared by the Catawba-Wateree Water Management Group.

<sup>b</sup> The Yadkin River Basin is listed as the highest classification within the basin at a given date. Portions of the basin may be in a lower category.

### **4.3 - Condition 3 (Disaggregation of IBT Amount)**

*If the Certificate Holders discontinue their cooperative service agreement, then the permitted IBT amount will be allocated amongst the Certificate Holders based on their projected 2030 needs.*

The cooperative service agreement between the Certificate Holders remained in effect throughout 2013.

The Cities and local municipalities cooperatively and effectively communicate and manage their respective water distribution systems. The Cities sell water to each other and reconcile billing monthly. Additionally, Concord owns and operates the water distribution system for Midland, providing water service to all Midland customers. Harrisburg purchases water from Concord, measured by five meters. Concord also provides water service to unincorporated areas of Cabarrus County. Mount Pleasant did not purchase water from the City of Concord in 2013. Further emphasizing the interconnected nature of the Cities and local municipalities, Kannapolis provides water to Landis, located in the South Yadkin River Basin, which is not subject to this IBT Certificate.

### **4.4 - Condition 4 (Compliance and Monitoring Plan)**

*In cooperation with the Division of Water Resources, the Certificate Holders shall develop an IBT Compliance and Monitoring Plan.*

The Cities submitted the Compliance and Monitoring Plan on July 31, 2007. This plan was finalized in December 2007.

### **4.5 - Condition 5 (EMC Consideration of Impacts)**

*The EMC may reopen the Certificate and adjust existing or require new conditions to ensure detrimental impacts are mitigated if environmental impacts are found to be substantially different from those projected in the EMC's Findings of Fact.*

This condition requires no action by the Certificate Holders. The EMC did not take action on this condition in 2013.

### **4.6 - Condition 6 (20-Year Certificate Evaluation)**

*In twenty years from the date of the Certificate, the Cities shall submit a written report to the EMC to include: (a) summary of transfers for the previous twenty years, (b) discussion of any changes to the environmental impacts assessment from IBT transfers, (c) summary of all actions to address actual or potential drought conditions, (d) recommendations for any changes to the Certificate, (e) details on consultation with interested stakeholders, and (f) certification of compliance with Certificate. This will continue at 20-year intervals.*

The IBT Certificate was approved on January 10, 2007 and signed into effect on January 25, 2007; therefore, the first 20-year certificate evaluation report will be completed in 2027.

## **4.7 - Condition 7 (Limit of Certificate)**

*The Certificate does not exempt the Cities from compliance with any other requirements of law.*

This condition requires no action by the Cities.

# **APPENDIX**

## **Daily Interbasin Transfer Amounts for 2013**



2013 Concord-Kannapolis IBT Tracking

Calculated Fields

Condition of IBT Certificate (January 25, 2007)

Maximum day transfer from the Catawba River Basin

10 MGD

Maximum day transfer from the Yadkin Pee-Dee River Basin

10 MGD

Maximum day transfer from the South Yadkin River Basin (grandfather)

6 MGD

Maximum day transfer to the South Yadkin River Basin (cannot exceed transfer from South Yadkin by more than 1.99 MGD)

Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin				Interbasin Transfer						
	South Yadkin	Yadkin	Yadkin	Catawba		South Yadkin	South Yadkin	Yadkin	Catawba	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT								
1/1/2013	0.000	0.300	0.000	0.000	0.140	-0.140	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.140	-2.333%	0.140	7.035%
1/2/2013	0.000	0.300	0.000	0.000	0.000	0.000	0.300	0.000	0.000	0.000%	0.300	3.000%	0.000	0.000%	0.000	0.000%
1/3/2013	0.000	0.300	0.000	0.000	0.190	-0.190	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.190	-3.167%	0.190	9.548%
1/4/2013	0.000	0.300	0.000	0.000	0.188	-0.188	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.188	-3.133%	0.188	9.447%
1/5/2013	0.000	0.300	0.000	0.000	0.141	-0.141	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.141	-2.350%	0.141	7.085%
1/6/2013	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%
1/7/2013	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%
1/8/2013	0.000	0.300	0.000	0.000	0.338	-0.338	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.338	-5.633%	0.338	16.985%
1/9/2013	0.000	0.300	0.000	0.000	0.137	-0.137	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.137	-2.283%	0.137	6.884%
1/10/2013	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%
1/11/2013	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%
1/12/2013	0.000	0.300	0.000	0.000	0.166	-0.166	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.166	-2.767%	0.166	8.342%
1/13/2013	0.000	0.300	0.000	0.000	0.172	-0.172	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.172	-2.867%	0.172	8.643%
1/14/2013	0.000	0.300	0.000	0.000	0.196	-0.196	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.196	-3.267%	0.196	9.849%
1/15/2013	0.000	0.300	0.000	0.000	0.286	-0.286	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.286	-4.767%	0.286	14.372%
1/16/2013	0.000	0.300	0.000	0.000	0.184	-0.184	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.184	-3.067%	0.184	9.246%
1/17/2013	0.000	0.300	0.000	0.000	0.155	-0.155	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.155	-2.583%	0.155	7.789%
1/18/2013	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%
1/19/2013	0.000	0.300	0.000	0.000	0.118	-0.118	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.118	-1.967%	0.118	5.930%
1/20/2013	0.000	0.300	0.000	0.000	0.130	-0.130	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.130	-2.167%	0.130	6.533%
1/21/2013	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%
1/22/2013	0.000	0.300	0.000	0.000	0.165	-0.165	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.165	-2.750%	0.165	8.291%
1/23/2013	0.000	0.300	0.000	0.000	0.164	-0.164	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.164	-2.733%	0.164	8.241%
1/24/2013	0.000	0.300	0.000	0.000	0.149	-0.149	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.149	-2.483%	0.149	7.487%
1/25/2013	0.000	0.300	0.000	0.000	0.222	-0.222	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.222	-3.700%	0.222	11.156%
1/26/2013	0.000	0.300	0.000	0.000	0.141	-0.141	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.141	-2.350%	0.141	7.085%
1/27/2013	0.000	0.300	0.000	0.000	0.247	-0.247	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.247	-4.117%	0.247	12.412%
1/28/2013	0.000	0.300	0.000	0.000	0.158	-0.158	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.158	-2.633%	0.158	7.940%
1/29/2013	0.000	0.300	0.000	0.000	0.153	-0.153	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.153	-2.550%	0.153	7.688%
1/30/2013	0.000	0.300	0.000	0.000	0.168	-0.168	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.168	-2.800%	0.168	8.442%
1/31/2013	0.000	0.300	0.000	0.000	0.165	-0.165	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.165	-2.750%	0.165	8.291%
2/1/2013	0.000	0.300	0.000	0.000	0.161	-0.161	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.161	-2.683%	0.161	8.090%
2/2/2013	0.000	0.300	0.000	0.000	0.174	-0.174	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.174	-2.900%	0.174	8.744%
2/3/2013	0.000	0.300	0.000	0.000	0.134	-0.134	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.134	-2.233%	0.134	6.734%
2/4/2013	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%
2/5/2013	0.000	0.300	0.000	0.000	0.165	-0.165	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.165	-2.750%	0.165	8.291%
2/6/2013	0.000	0.300	0.000	0.000	0.359	-0.359	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.359	-5.983%	0.359	18.040%
2/7/2013	0.000	0.300	0.000	0.000	0.153	-0.153	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.153	-2.550%	0.153	7.688%
2/8/2013	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%
2/9/2013	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%
2/10/2013	0.000	0.300	0.000	0.000	0.175	-0.175	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.175	-2.917%	0.175	8.794%
2/11/2013	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%
2/12/2013	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%
2/13/2013	0.000	0.300	0.000	0.000	0.320	-0.320	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.320	-5.333%	0.320	16.080%
2/14/2013	0.000	0.300	0.000	0.000	0.175	-0.175	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.175	-2.917%	0.175	8.794%
2/15/2013	0.000	0.300	0.000	0.000	0.195	-0.195	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.195	-3.250%	0.195	9.799%
2/16/2013	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%
2/17/2013	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin				Interbasin Transfer						
	Salisbury 1		Albemarle 1	CMU 1-3		NOTE: All Wastewater discharge is to the Rocky River from RRWWTP, excluding water sales to Landis (subtracted from Total South Yadkin IBT).										
	South Yadkin	Yadkin	Yadkin	Catawba	South Yadkin	South Yadkin	Yadkin	Catawba	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT								
2/18/2013	0.000	0.300	0.000	0.000	0.292	-0.292	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.292	-4.867%	0.292	14.673%
2/19/2013	0.000	0.300	0.000	0.000	0.167	-0.167	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.167	-2.783%	0.167	8.392%
2/20/2013	0.000	0.300	0.000	0.000	0.171	-0.171	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.171	-2.850%	0.171	8.593%
2/21/2013	0.000	0.300	0.000	0.000	0.165	-0.165	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.165	-2.750%	0.165	8.291%
2/22/2013	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%
2/23/2013	0.000	0.300	0.000	0.000	0.157	-0.157	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.157	-2.617%	0.157	7.889%
2/24/2013	0.000	0.300	0.000	0.000	0.173	-0.173	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.173	-2.883%	0.173	8.693%
2/25/2013	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%
2/26/2013	0.000	0.300	0.000	0.000	0.179	-0.179	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.179	-2.983%	0.179	8.995%
2/27/2013	0.000	0.300	0.000	0.000	0.185	-0.185	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.185	-3.083%	0.185	9.296%
2/28/2013	0.000	0.300	0.000	0.000	0.185	-0.185	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.185	-3.083%	0.185	9.296%
3/1/2013	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%
3/2/2013	0.000	0.300	0.000	0.000	0.143	-0.143	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.143	-2.383%	0.143	7.186%
3/3/2013	0.000	0.300	0.000	0.000	0.207	-0.207	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.207	-3.450%	0.207	10.402%
3/4/2013	0.000	0.300	0.000	0.000	0.151	-0.151	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.151	-2.517%	0.151	7.588%
3/5/2013	0.000	0.300	0.000	0.000	0.195	-0.195	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.195	-3.250%	0.195	9.799%
3/6/2013	0.000	0.300	0.000	0.000	0.200	-0.200	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.200	-3.333%	0.200	10.050%
3/7/2013	0.000	0.300	0.000	0.000	0.212	-0.212	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.212	-3.533%	0.212	10.653%
3/8/2013	0.000	0.300	0.000	0.000	0.168	-0.168	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.168	-2.800%	0.168	8.442%
3/9/2013	0.000	0.300	0.000	0.000	0.154	-0.154	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.154	-2.567%	0.154	7.739%
3/10/2013	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%
3/11/2013	0.000	0.300	0.000	0.000	0.173	-0.173	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.173	-2.883%	0.173	8.693%
3/12/2013	0.000	0.300	0.000	0.000	0.204	-0.204	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.204	-3.400%	0.204	10.251%
3/13/2013	0.000	0.300	0.000	0.000	0.169	-0.169	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.169	-2.817%	0.169	8.492%
3/14/2013	0.000	0.300	0.000	0.000	0.167	-0.167	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.167	-2.783%	0.167	8.392%
3/15/2013	0.000	0.300	0.000	0.000	0.146	-0.146	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.146	-2.433%	0.146	7.337%
3/16/2013	0.000	0.300	0.000	0.000	0.158	-0.158	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.158	-2.633%	0.158	7.940%
3/17/2013	0.000	0.300	0.000	0.000	0.194	-0.194	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.194	-3.233%	0.194	9.749%
3/18/2013	0.000	0.300	0.000	0.000	0.165	-0.165	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.165	-2.750%	0.165	8.291%
3/19/2013	0.000	0.300	0.000	0.000	0.170	-0.170	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.170	-2.833%	0.170	8.543%
3/20/2013	0.000	0.300	0.000	0.000	0.160	-0.160	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.160	-2.667%	0.160	8.040%
3/21/2013	0.000	0.300	0.000	0.000	0.174	-0.174	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.174	-2.900%	0.174	8.744%
3/22/2013	0.000	0.300	0.000	0.000	0.159	-0.159	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.159	-2.650%	0.159	7.990%
3/23/2013	0.000	0.300	0.000	0.000	0.155	-0.155	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.155	-2.583%	0.155	7.789%
3/24/2013	0.000	0.300	0.000	0.000	0.207	-0.207	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.207	-3.450%	0.207	10.402%
3/25/2013	0.000	0.300	0.000	0.000	0.190	-0.190	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.190	-3.167%	0.190	9.548%
3/26/2013	0.000	0.300	0.000	0.000	0.186	-0.186	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.186	-3.100%	0.186	9.347%
3/27/2013	0.000	0.300	0.000	0.000	0.189	-0.189	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.189	-3.150%	0.189	9.497%
3/28/2013	0.000	0.300	0.000	0.000	0.172	-0.172	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.172	-2.867%	0.172	8.643%
3/29/2013	0.000	0.300	0.000	0.000	0.178	-0.178	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.178	-2.967%	0.178	8.945%
3/30/2013	0.000	0.300	0.000	0.000	0.211	-0.211	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.211	-3.517%	0.211	10.603%
3/31/2013	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%
4/1/2013	0.000	0.300	0.000	0.000	0.182	-0.182	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.182	-3.033%	0.182	9.146%
4/2/2013	0.000	0.300	0.000	0.000	0.186	-0.186	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.186	-3.100%	0.186	9.347%
4/3/2013	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%
4/4/2013	0.000	0.300	0.000	0.000	0.198	-0.198	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.198	-3.300%	0.198	9.950%
4/5/2013	0.000	0.300	0.000	0.000	0.245	-0.245	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.245	-4.083%	0.245	12.312%
4/6/2013	0.000	0.300	0.000	0.000	0.124	-0.124	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.124	-2.067%	0.124	6.231%
4/7/2013	0.000	0.300	0.000	0.000	0.209	-0.209	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.209	-3.483%	0.209	10.503%
4/8/2013	0.000	0.300	0.000	0.000	0.217	-0.217	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.217	-3.617%	0.217	10.905%
4/9/2013	0.000	0.300	0.000	0.000	0.204	-0.204	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.204	-3.400%	0.204	10.251%
4/10/2013	0.000	0.300	0.000	0.000	0.209	-0.209	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.209	-3.483%	0.209	10.503%
4/11/2013	0.000	0.300	0.000	0.000	0.213	-0.213	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.213	-3.550%	0.213	10.704%
4/12/2013	0.000	0.300	0.000	0.000	0.156	-0.156	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.156	-2.600%	0.156	7.839%
4/13/2013	0.000	0.300	0.000	0.000	0.199	-0.199	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.199	-3.317%	0.199	10.000%
4/14/2013	0.000	0.300	0.000	0.000	0.190	-0.190	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.190	-3.167%	0.190	9.548%



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin			Interbasin Transfer							
	Salisbury 1		Albemarle 1	CMU 1-3		NOTE: All Wastewater discharge is to the Rocky River from RRWWTP, excluding water sales to Landis (subtracted from Total South Yadkin IBT).										
	South Yadkin	Yadkin	Yadkin	Catawba	South Yadkin	South Yadkin	Yadkin	Catawba								
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer
4/15/2013	0.000	0.300	0.000	0.000	0.193	-0.193	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.193	-3.217%	0.193	9.698%
4/16/2013	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%
4/17/2013	0.000	0.300	0.000	0.000	0.261	-0.261	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.261	-4.350%	0.261	13.116%
4/18/2013	0.000	0.300	0.000	0.000	0.140	-0.140	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.140	-2.333%	0.140	7.035%
4/19/2013	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%
4/20/2013	0.000	0.300	0.000	0.000	0.157	-0.157	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.157	-2.617%	0.157	7.889%
4/21/2013	0.000	0.300	0.000	0.000	0.281	-0.281	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.281	-4.683%	0.281	14.121%
4/22/2013	0.000	0.300	0.000	0.000	0.196	-0.196	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.196	-3.267%	0.196	9.849%
4/23/2013	0.000	0.300	0.000	0.000	0.234	-0.234	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.234	-3.900%	0.234	11.759%
4/24/2013	0.000	0.300	0.000	0.000	0.149	-0.149	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.149	-2.483%	0.149	7.487%
4/25/2013	0.000	0.300	0.000	0.000	0.292	-0.292	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.292	-4.867%	0.292	14.673%
4/26/2013	0.000	0.300	0.000	0.000	0.167	-0.167	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.167	-2.783%	0.167	8.392%
4/27/2013	0.000	0.300	0.000	0.000	0.128	-0.128	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.128	-2.133%	0.128	6.432%
4/28/2013	0.000	0.300	0.000	0.000	0.132	-0.132	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.132	-2.200%	0.132	6.633%
4/29/2013	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%
4/30/2013	0.000	0.300	0.000	0.000	0.186	-0.186	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.186	-3.100%	0.186	9.347%
5/1/2013	0.000	0.300	0.000	0.000	0.168	-0.168	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.168	-2.800%	0.168	8.442%
5/2/2013	0.000	0.300	0.000	0.000	0.162	-0.162	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.162	-2.700%	0.162	8.141%
5/3/2013	0.000	0.300	0.000	0.000	0.217	-0.217	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.217	-3.617%	0.217	10.905%
5/4/2013	0.000	0.300	0.000	0.000	0.161	-0.161	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.161	-2.683%	0.161	8.090%
5/5/2013	0.000	0.300	0.000	0.000	0.262	-0.262	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.262	-4.367%	0.262	13.166%
5/6/2013	0.000	0.300	0.000	0.000	0.125	-0.125	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.125	-2.083%	0.125	6.281%
5/7/2013	0.000	0.300	0.000	0.000	0.227	-0.227	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.227	-3.783%	0.227	11.407%
5/8/2013	0.000	0.300	0.000	0.000	0.214	-0.214	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.214	-3.567%	0.214	10.754%
5/9/2013	0.000	0.300	0.000	0.000	0.201	-0.201	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.201	-3.350%	0.201	10.101%
5/10/2013	0.000	0.300	0.000	0.000	0.156	-0.156	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.156	-2.600%	0.156	7.839%
5/11/2013	0.000	0.300	0.000	0.000	0.182	-0.182	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.182	-3.033%	0.182	9.146%
5/12/2013	0.000	0.300	0.000	0.000	0.173	-0.173	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.173	-2.883%	0.173	8.693%
5/13/2013	0.000	0.300	0.000	0.000	0.225	-0.225	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.225	-3.750%	0.225	11.307%
5/14/2013	0.000	0.300	0.000	0.000	0.215	-0.215	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.215	-3.583%	0.215	10.804%
5/15/2013	0.000	0.300	0.000	0.000	0.230	-0.230	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.230	-3.833%	0.230	11.558%
5/16/2013	0.000	0.300	0.000	0.000	0.225	-0.225	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.225	-3.750%	0.225	11.307%
5/17/2013	0.000	0.300	0.000	0.000	0.231	-0.231	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.231	-3.850%	0.231	11.608%
5/18/2013	0.000	0.300	0.000	0.000	0.209	-0.209	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.209	-3.483%	0.209	10.503%
5/19/2013	0.000	0.300	0.000	0.000	0.210	-0.210	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.210	-3.500%	0.210	10.553%
5/20/2013	0.000	0.300	0.000	0.000	0.250	-0.250	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.250	-4.167%	0.250	12.563%
5/21/2013	0.000	0.300	0.000	0.000	0.283	-0.283	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.283	-4.717%	0.283	14.221%
5/22/2013	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%
5/23/2013	0.000	0.300	0.000	0.000	0.176	-0.176	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.176	-2.933%	0.176	8.844%
5/24/2013	0.000	0.300	0.000	0.000	0.186	-0.186	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.186	-3.100%	0.186	9.347%
5/25/2013	0.000	0.300	0.000	0.000	0.188	-0.188	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.188	-3.133%	0.188	9.447%
5/26/2013	0.000	0.300	0.000	0.000	0.193	-0.193	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.193	-3.217%	0.193	9.698%
5/27/2013	0.000	0.300	0.000	0.000	0.354	-0.354	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.354	-5.900%	0.354	17.789%
5/28/2013	0.000	0.300	0.000	0.000	0.257	-0.257	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.257	-4.283%	0.257	12.915%
5/29/2013	0.000	0.300	0.000	0.000	0.267	-0.267	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.267	-4.450%	0.267	13.417%
5/30/2013	0.000	0.300	0.000	0.000	0.317	-0.317	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.317	-5.283%	0.317	15.930%
5/31/2013	0.000	0.300	0.000	0.000	0.201	-0.201	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.201	-3.350%	0.201	10.101%
6/1/2013	0.000	0.300	0.000	0.000	0.279	-0.279	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.279	-4.650%	0.279	14.020%
6/2/2013	0.000	0.300	0.000	0.000	0.218	-0.218	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.218	-3.633%	0.218	10.955%
6/3/2013	0.000	0.300	0.000	0.000	0.211	-0.211	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.211	-3.517%	0.211	10.603%
6/4/2013	0.000	0.300	0.000	0.000	0.280	-0.280	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.280	-4.667%	0.280	14.070%
6/5/2013	0.000	0.300	0.000	0.000	0.183	-0.183	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.183	-3.050%	0.183	9.196%
6/6/2013	0.000	0.300	0.000	0.000	0.209	-0.209	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.209	-3.483%	0.209	10.503%
6/7/2013	0.000	0.300	0.000	0.000	0.183	-0.183	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.183	-3.050%	0.183	9.196%
6/8/2013	0.000	0.300	0.000	0.000	0.212	-0.212	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.212	-3.533%	0.212	10.653%
6/9/2013	0.000	0.300	0.000	0.000	0.193	-0.193	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.193	-3.217%	0.193	9.698%



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin				Interbasin Transfer						
	South Yadkin	Yadkin	Yadkin	Catawba		South Yadkin	Yadkin	Catawba	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT								
6/10/2013	0.000	0.300	0.000	0.000	0.220	-0.220	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.220	-3.667%	0.220	11.055%
6/11/2013	0.000	0.300	0.000	0.000	0.223	-0.223	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.223	-3.717%	0.223	11.206%
6/12/2013	0.000	0.300	0.000	0.000	0.250	-0.250	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.250	-4.167%	0.250	12.563%
6/13/2013	0.000	0.300	0.000	0.000	0.337	-0.337	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.337	-5.617%	0.337	16.935%
6/14/2013	0.000	0.300	0.000	0.000	0.194	-0.194	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.194	-3.233%	0.194	9.749%
6/15/2013	0.000	0.300	0.000	0.000	0.352	-0.352	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.352	-5.867%	0.352	17.688%
6/16/2013	0.000	0.300	0.000	0.000	0.153	-0.153	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.153	-2.550%	0.153	7.688%
6/17/2013	0.000	0.300	0.000	0.000	0.352	-0.352	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.352	-5.867%	0.352	17.688%
6/18/2013	0.000	0.300	0.000	0.000	0.220	-0.220	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.220	-3.667%	0.220	11.055%
6/19/2013	0.000	0.300	0.000	0.000	0.211	-0.211	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.211	-3.517%	0.211	10.603%
6/20/2013	0.000	0.300	0.000	0.000	0.445	-0.445	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.445	-7.417%	0.445	22.362%
6/21/2013	0.000	0.300	0.000	0.000	0.235	-0.235	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.235	-3.917%	0.235	11.809%
6/22/2013	0.000	0.300	0.000	0.000	0.223	-0.223	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.223	-3.717%	0.223	11.206%
6/23/2013	0.000	0.300	0.000	0.000	0.274	-0.274	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.274	-4.567%	0.274	13.769%
6/24/2013	0.000	0.300	0.000	0.000	0.213	-0.213	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.213	-3.550%	0.213	10.704%
6/25/2013	0.000	0.300	0.000	0.000	0.292	-0.292	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.292	-4.867%	0.292	14.673%
6/26/2013	0.000	0.300	0.000	0.000	0.249	-0.249	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.249	-4.150%	0.249	12.513%
6/27/2013	0.000	0.300	0.000	0.000	0.176	-0.176	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.176	-2.933%	0.176	8.844%
6/28/2013	0.000	0.300	0.000	0.000	0.208	-0.208	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.208	-3.467%	0.208	10.452%
6/29/2013	0.000	0.300	0.000	0.000	0.210	-0.210	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.210	-3.500%	0.210	10.553%
6/30/2013	0.000	0.300	0.000	0.000	0.173	-0.173	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.173	-2.883%	0.173	8.693%
7/1/2013	0.000	0.300	0.000	0.000	0.212	-0.212	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.212	-3.533%	0.212	10.653%
7/2/2013	0.000	0.300	0.000	0.000	0.255	-0.255	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.255	-4.250%	0.255	12.814%
7/3/2013	0.000	0.300	0.000	0.000	0.200	-0.200	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.200	-3.333%	0.200	10.050%
7/4/2013	0.000	0.300	0.000	0.000	0.217	-0.217	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.217	-3.617%	0.217	10.905%
7/5/2013	0.000	0.300	0.000	0.000	0.231	-0.231	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.231	-3.850%	0.231	11.608%
7/6/2013	0.000	0.300	0.000	0.000	0.244	-0.244	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.244	-4.067%	0.244	12.261%
7/7/2013	0.000	0.300	0.000	0.000	0.211	-0.211	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.211	-3.517%	0.211	10.603%
7/8/2013	0.000	0.300	0.000	0.000	0.225	-0.225	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.225	-3.750%	0.225	11.307%
7/9/2013	0.000	0.300	0.000	0.000	0.292	-0.292	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.292	-4.867%	0.292	14.673%
7/10/2013	0.000	0.300	0.000	0.000	0.189	-0.189	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.189	-3.150%	0.189	9.497%
7/11/2013	0.000	0.300	0.000	0.000	0.254	-0.254	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.254	-4.233%	0.254	12.764%
7/12/2013	0.000	0.300	0.000	0.000	0.173	-0.173	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.173	-2.883%	0.173	8.693%
7/13/2013	0.000	0.300	0.000	0.000	0.219	-0.219	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.219	-3.650%	0.219	11.005%
7/14/2013	0.000	0.300	0.000	0.000	0.219	-0.219	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.219	-3.650%	0.219	11.005%
7/15/2013	0.000	0.300	0.000	0.000	0.331	-0.331	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.331	-5.517%	0.331	16.633%
7/16/2013	0.000	0.300	0.000	0.000	0.216	-0.216	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.216	-3.600%	0.216	10.854%
7/17/2013	0.000	0.300	0.000	0.000	0.236	-0.236	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.236	-3.933%	0.236	11.859%
7/18/2013	0.000	0.300	0.000	0.000	0.235	-0.235	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.235	-3.917%	0.235	11.809%
7/19/2013	0.000	0.300	0.000	0.000	0.232	-0.232	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.232	-3.867%	0.232	11.658%
7/20/2013	0.000	0.300	0.000	0.000	0.209	-0.209	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.209	-3.483%	0.209	10.503%
7/21/2013	0.000	0.300	0.000	0.000	0.286	-0.286	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.286	-4.767%	0.286	14.372%
7/22/2013	0.000	0.300	0.000	0.000	0.227	-0.227	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.227	-3.783%	0.227	11.407%
7/23/2013	0.000	0.300	0.000	0.000	0.187	-0.187	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.187	-3.117%	0.187	9.397%
7/24/2013	0.000	0.300	0.000	0.000	0.401	-0.401	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.401	-6.683%	0.401	20.151%
7/25/2013	0.000	0.300	0.000	0.000	0.219	-0.219	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.219	-3.650%	0.219	11.005%
7/26/2013	0.000	0.300	0.000	0.000	0.177	-0.177	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.177	-2.950%	0.177	8.894%
7/27/2013	0.000	0.300	0.000	0.000	0.241	-0.241	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.241	-4.017%	0.241	12.111%
7/28/2013	0.000	0.300	0.000	0.000	0.242	-0.242	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.242	-4.033%	0.242	12.161%
7/29/2013	0.000	0.300	0.000	0.000	0.201	-0.201	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.201	-3.350%	0.201	10.101%
7/30/2013	0.000	0.300	0.000	0.000	0.184	-0.184	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.184	-3.067%	0.184	9.246%
7/31/2013	0.000	0.300	0.000	0.000	0.260	-0.260	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.260	-4.333%	0.260	13.065%
8/1/2013	0.000	0.300	0.000	0.000	0.202	-0.202	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.202	-3.367%	0.202	10.151%
8/2/2013	0.000	0.300	0.000	0.000	0.297	-0.297	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.297	-4.950%	0.297	14.925%
8/3/2013	0.000	0.300	0.000	0.000	0.263	-0.263	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.263	-4.383%	0.263	13.216%
8/4/2013	0.000	0.300	0.000	0.000	0.273	-0.273	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.273	-4.550%	0.273	13.719%



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin				Interbasin Transfer							
	South Yadkin	Yadkin	Yadkin	Catawba	South Yadkin	South Yadkin	Yadkin	Catawba	NOTE: All Wastewater discharge is to the Rocky River from RRWWTP, excluding water sales to Landis (subtracted from Total South Yadkin IBT).								
	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer	
DATE																	
8/5/2013	0.000	0.300	0.000	0.000	0.226	-0.226	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.226	-3.767%	0.226	11.357%	
8/6/2013	0.000	0.300	0.000	0.000	0.204	-0.204	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.204	-3.400%	0.204	10.251%	
8/7/2013	0.000	0.300	0.000	0.000	0.209	-0.209	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.209	-3.483%	0.209	10.503%	
8/8/2013	0.000	0.300	0.000	0.000	0.260	-0.260	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.260	-4.333%	0.260	13.065%	
8/9/2013	0.000	0.300	0.000	0.000	0.269	-0.269	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.269	-4.483%	0.269	13.518%	
8/10/2013	0.000	0.300	0.000	0.000	0.285	-0.285	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.285	-4.750%	0.285	14.322%	
8/11/2013	0.000	0.300	0.000	0.000	0.329	-0.329	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.329	-5.483%	0.329	16.533%	
8/12/2013	0.000	0.300	0.000	0.000	0.227	-0.227	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.227	-3.783%	0.227	11.407%	
8/13/2013	0.000	0.300	0.000	0.000	0.211	-0.211	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.211	-3.517%	0.211	10.603%	
8/14/2013	0.000	0.300	0.000	0.000	0.317	-0.317	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.317	-5.283%	0.317	15.930%	
8/15/2013	0.000	0.300	0.000	0.000	0.171	-0.171	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.171	-2.850%	0.171	8.593%	
8/16/2013	0.000	0.300	0.000	0.000	0.250	-0.250	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.250	-4.167%	0.250	12.563%	
8/17/2013	0.000	0.300	0.000	0.000	0.243	-0.243	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.243	-4.050%	0.243	12.211%	
8/18/2013	0.000	0.300	0.000	0.000	0.364	-0.364	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.364	-6.067%	0.364	18.291%	
8/19/2013	0.000	0.300	0.000	0.000	0.239	-0.239	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.239	-3.983%	0.239	12.010%	
8/20/2013	0.000	0.300	0.000	0.000	0.219	-0.219	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.219	-3.650%	0.219	11.005%	
8/21/2013	0.000	0.300	0.000	0.000	0.216	-0.216	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.216	-3.600%	0.216	10.854%	
8/22/2013	0.000	0.300	0.000	0.000	0.273	-0.273	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.273	-4.550%	0.273	13.719%	
8/23/2013	0.000	0.300	0.000	0.000	0.273	-0.273	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.273	-4.550%	0.273	13.719%	
8/24/2013	0.000	0.300	0.000	0.000	0.361	-0.361	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.361	-6.017%	0.361	18.141%	
8/25/2013	0.000	0.300	0.000	0.000	0.236	-0.236	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.236	-3.933%	0.236	11.859%	
8/26/2013	0.000	0.300	0.000	0.000	0.271	-0.271	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.271	-4.517%	0.271	13.618%	
8/27/2013	0.000	0.300	0.000	0.000	0.246	-0.246	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.246	-4.100%	0.246	12.362%	
8/28/2013	0.000	0.300	0.000	0.000	0.192	-0.192	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.192	-3.200%	0.192	9.648%	
8/29/2013	0.000	0.300	0.000	0.000	0.317	-0.317	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.317	-5.283%	0.317	15.930%	
8/30/2013	0.000	0.300	0.000	0.000	0.197	-0.197	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.197	-3.283%	0.197	9.899%	
8/31/2013	0.000	0.300	0.000	0.000	0.169	-0.169	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.169	-2.817%	0.169	8.492%	
9/1/2013	0.000	0.300	0.000	0.000	0.244	-0.244	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.244	-4.067%	0.244	12.261%	
9/2/2013	0.000	0.300	0.000	0.000	0.269	-0.269	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.269	-4.483%	0.269	13.518%	
9/3/2013	0.000	0.300	0.000	0.000	0.268	-0.268	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.268	-4.467%	0.268	13.467%	
9/4/2013	0.000	0.300	0.000	0.000	0.198	-0.198	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.198	-3.300%	0.198	9.950%	
9/5/2013	0.000	0.300	0.000	0.000	0.252	-0.252	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.252	-4.200%	0.252	12.663%	
9/6/2013	0.000	0.300	0.000	0.000	0.240	-0.240	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.240	-4.000%	0.240	12.060%	
9/7/2013	0.000	0.300	0.000	0.000	0.252	-0.252	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.252	-4.200%	0.252	12.663%	
9/8/2013	0.000	0.300	0.000	0.000	0.206	-0.206	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.206	-3.433%	0.206	10.352%	
9/9/2013	0.000	0.300	0.000	0.000	0.382	-0.382	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.382	-6.367%	0.382	19.196%	
9/10/2013	0.000	0.300	0.000	0.000	0.117	-0.117	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.117	-1.950%	0.117	5.879%	
9/11/2013	0.000	0.300	0.000	0.000	0.226	-0.226	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.226	-3.767%	0.226	11.357%	
9/12/2013	0.000	0.300	0.000	0.000	0.218	-0.218	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.218	-3.633%	0.218	10.955%	
9/13/2013	0.000	0.300	0.000	0.000	0.263	-0.263	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.263	-4.383%	0.263	13.216%	
9/14/2013	0.000	0.300	0.000	0.000	0.178	-0.178	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.178	-2.967%	0.178	8.945%	
9/15/2013	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%	
9/16/2013	0.000	0.300	0.000	0.000	0.250	-0.250	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.250	-4.167%	0.250	12.563%	
9/17/2013	0.000	0.300	0.000	0.000	0.220	-0.220	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.220	-3.667%	0.220	11.055%	
9/18/2013	0.000	0.300	0.000	0.000	0.169	-0.169	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.169	-2.817%	0.169	8.492%	
9/19/2013	0.000	0.300	0.000	0.000	0.196	-0.196	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.196	-3.267%	0.196	9.849%	
9/20/2013	0.000	0.300	0.000	0.000	0.218	-0.218	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.218	-3.633%	0.218	10.955%	
9/21/2013	0.000	0.300	0.000	0.000	0.171	-0.171	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.171	-2.850%	0.171	8.593%	
9/22/2013	0.000	0.300	0.000	0.000	0.213	-0.213	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.213	-3.550%	0.213	10.704%	
9/23/2013	0.000	0.300	0.000	0.000	0.170	-0.170	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.170	-2.833%	0.170	8.543%	
9/24/2013	0.000	0.300	0.000	0.000	0.213	-0.213	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.213	-3.550%	0.213	10.704%	
9/25/2013	0.000	0.300	0.000	0.000	0.185	-0.185	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.185	-3.083%	0.185	9.296%	
9/26/2013	0.000	0.300	0.000	0.000	0.239	-0.239	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.239	-3.983%	0.239	12.010%	
9/27/2013	0.000	0.300	0.000	0.000	0.230	-0.230	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.230	-3.833%	0.230	11.558%	
9/28/2013	0.000	0.300	0.000	0.000	0.235	-0.235	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.235	-3.917%	0.235	11.809%	
9/29/2013	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%	



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin			Interbasin Transfer							
	Salisbury 1	Albemarle 1	CMU 1-3			NOTE: All Wastewater discharge is to the Rocky River from RRWWTP, excluding water sales to Landis (subtracted from Total South Yadkin IBT).										
	South Yadkin	Yadkin	Yadkin	Catawba	South Yadkin	South Yadkin	Yadkin	Catawba	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT								
9/30/2013	0.000	0.300	0.000	0.000	0.222	-0.222	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.222	-3.700%	0.222	11.156%
10/1/2013	0.000	0.300	0.000	0.000	0.244	-0.244	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.244	-4.067%	0.244	12.261%
10/2/2013	0.000	0.300	0.000	0.000	0.269	-0.269	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.269	-4.483%	0.269	13.518%
10/3/2013	0.000	0.300	0.000	0.000	0.268	-0.268	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.268	-4.467%	0.268	13.467%
10/4/2013	0.000	0.300	0.000	0.000	0.198	-0.198	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.198	-3.300%	0.198	9.950%
10/5/2013	0.000	0.300	0.000	0.000	0.252	-0.252	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.252	-4.200%	0.252	12.663%
10/6/2013	0.000	0.300	0.000	0.000	0.240	-0.240	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.240	-4.000%	0.240	12.060%
10/7/2013	0.000	0.300	0.000	0.000	0.252	-0.252	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.252	-4.200%	0.252	12.663%
10/8/2013	0.000	0.300	0.000	0.000	0.206	-0.206	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.206	-3.433%	0.206	10.352%
10/9/2013	0.000	0.300	0.000	0.000	0.382	-0.382	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.382	-6.367%	0.382	19.196%
10/10/2013	0.000	0.300	0.000	0.000	0.117	-0.117	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.117	-1.950%	0.117	5.879%
10/11/2013	0.000	0.300	0.000	0.000	0.226	-0.226	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.226	-3.767%	0.226	11.357%
10/12/2013	0.000	0.300	0.000	0.000	0.218	-0.218	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.218	-3.633%	0.218	10.955%
10/13/2013	0.000	0.300	0.000	0.000	0.263	-0.263	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.263	-4.383%	0.263	13.216%
10/14/2013	0.000	0.300	0.000	0.000	0.178	-0.178	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.178	-2.967%	0.178	8.945%
10/15/2013	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%
10/16/2013	0.000	0.300	0.000	0.000	0.250	-0.250	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.250	-4.167%	0.250	12.563%
10/17/2013	0.000	0.300	0.000	0.000	0.220	-0.220	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.220	-3.667%	0.220	11.055%
10/18/2013	0.000	0.300	0.000	0.000	0.169	-0.169	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.169	-2.817%	0.169	8.492%
10/19/2013	0.000	0.300	0.000	0.000	0.196	-0.196	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.196	-3.267%	0.196	9.849%
10/20/2013	0.000	0.300	0.000	0.000	0.218	-0.218	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.218	-3.633%	0.218	10.955%
10/21/2013	0.000	0.300	0.000	0.000	0.171	-0.171	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.171	-2.850%	0.171	8.593%
10/22/2013	0.000	0.300	0.000	0.000	0.213	-0.213	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.213	-3.550%	0.213	10.704%
10/23/2013	0.000	0.300	0.000	0.000	0.170	-0.170	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.170	-2.833%	0.170	8.543%
10/24/2013	0.000	0.300	0.000	0.000	0.213	-0.213	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.213	-3.550%	0.213	10.704%
10/25/2013	0.000	0.300	0.000	0.000	0.185	-0.185	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.185	-3.083%	0.185	9.296%
10/26/2013	0.000	0.300	0.000	0.000	0.239	-0.239	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.239	-3.983%	0.239	12.010%
10/27/2013	0.000	0.300	0.000	0.000	0.230	-0.230	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.230	-3.833%	0.230	11.558%
10/28/2013	0.000	0.300	0.000	0.000	0.235	-0.235	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.235	-3.917%	0.235	11.809%
10/29/2013	0.000	0.300	0.000	0.000	0.180	-0.180	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.180	-3.000%	0.180	9.045%
10/30/2013	0.000	0.300	0.000	0.000	0.222	-0.222	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.222	-3.700%	0.222	11.156%
10/31/2013	0.000	0.300	0.000	0.000	0.174	-0.174	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.174	-2.900%	0.174	8.744%
11/1/2013	0.000	0.300	0.000	0.000	0.128	-0.128	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.128	-2.133%	0.128	6.432%
11/2/2013	0.000	0.300	0.000	0.000	0.185	-0.185	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.185	-3.083%	0.185	9.296%
11/3/2013	0.000	0.300	0.000	0.000	0.302	-0.302	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.302	-5.033%	0.302	15.176%
11/4/2013	0.000	0.300	0.000	0.000	0.283	-0.283	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.283	-4.717%	0.283	14.221%
11/5/2013	0.000	0.300	0.000	0.000	0.219	-0.219	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.219	-3.650%	0.219	11.005%
11/6/2013	0.000	0.300	0.000	0.000	0.149	-0.149	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.149	-2.483%	0.149	7.487%
11/7/2013	0.000	0.300	0.000	0.000	0.135	-0.135	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.135	-2.250%	0.135	6.784%
11/8/2013	0.000	0.300	0.000	0.000	0.178	-0.178	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.178	-2.967%	0.178	8.945%
11/9/2013	0.000	0.300	0.000	0.000	0.201	-0.201	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.201	-3.350%	0.201	10.101%
11/10/2013	0.000	0.300	0.000	0.000	0.141	-0.141	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.141	-2.350%	0.141	7.085%
11/11/2013	0.000	0.300	0.000	0.000	0.144	-0.144	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.144	-2.400%	0.144	7.236%
11/12/2013	0.000	0.300	0.000	0.000	0.225	-0.225	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.225	-3.750%	0.225	11.307%
11/13/2013	0.000	0.300	0.000	0.000	0.215	-0.215	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.215	-3.583%	0.215	10.804%
11/14/2013	0.000	0.300	0.000	0.000	0.157	-0.157	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.157	-2.617%	0.157	7.889%
11/15/2013	0.000	0.300	0.000	0.000	0.173	-0.173	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.173	-2.883%	0.173	8.693%
11/16/2013	0.000	0.300	0.000	0.000	0.144	-0.144	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.144	-2.400%	0.144	7.236%
11/17/2013	0.000	0.300	0.000	0.000	0.206	-0.206	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.206	-3.433%	0.206	10.352%
11/18/2013	0.000	0.300	0.000	0.000	0.219	-0.219	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.219	-3.650%	0.219	11.005%
11/19/2013	0.000	0.300	0.000	0.000	0.172	-0.172	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.172	-2.867%	0.172	8.643%
11/20/2013	0.000	0.300	0.000	0.000	0.187	-0.187	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.187	-3.117%	0.187	9.397%
11/21/2013	0.000	0.300	0.000	0.000	0.166	-0.166	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.166	-2.767%	0.166	8.342%
11/22/2013	0.000	0.300	0.000	0.000	0.167	-0.167	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.167	-2.783%	0.167	8.392%
11/23/2013	0.000	0.300	0.000	0.000	0.137	-0.137	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.137	-2.283%	0.137	6.884%
11/24/2013	0.000	0.300	0.000	0.000	0.199	-0.199	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.199	-3.317%	0.199	10.000%



Map Code Source Basin	Water Transfer (MGD) to Rocky River Basin				Water Sales (MGD)	IBT Totals Per Basin				Interbasin Transfer							
	South Yadkin	Salisbury 1 Yadkin	Albemarle 1 Yadkin	CMU 1-3 Catawba		South Yadkin	South Yadkin	Yadkin	Catawba	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer
DATE	Raw Water to Kannapolis Lake from Second Creek	Salisbury Finished water Interconnection with Kannapolis	Albemarle Finished water Interconnection with Concord	CMU Finished water Interconnections with Concord	Kannapolis Finished water sales to Landis	Total South Yadkin IBT <sup>1</sup>	Total Yadkin IBT	Total Catawba IBT	Catawba	% of Permitted MDD Transfer	Yadkin	% of Permitted MDD Transfer	Grandfathered IBT from Second Creek - South Yadkin River Basin	% of Permitted MDD Transfer	IBT from Yadkin to South Yadkin River Basin	% of Permitted MDD Transfer	
11/25/2013	0.000	0.300	0.000	0.000	0.165	-0.165	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.165	-2.750%	0.165	8.291%	
11/26/2013	0.000	0.300	0.000	0.000	0.167	-0.167	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.167	-2.783%	0.167	8.392%	
11/27/2013	0.000	0.300	0.000	0.000	0.189	-0.189	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.189	-3.150%	0.189	9.497%	
11/28/2013	0.000	0.300	0.000	0.000	0.138	-0.138	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.138	-2.300%	0.138	6.935%	
11/29/2013	0.000	0.300	0.000	0.000	0.135	-0.135	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.135	-2.250%	0.135	6.784%	
11/30/2013	0.000	0.300	0.000	0.000	0.141	-0.141	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.141	-2.350%	0.141	7.085%	
12/1/2013	0.000	0.300	0.000	0.000	0.308	-0.308	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.308	-5.133%	0.308	15.477%	
12/2/2013	0.000	0.300	0.000	0.000	0.195	-0.195	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.195	-3.250%	0.195	9.799%	
12/3/2013	0.000	0.300	0.000	0.000	0.230	-0.230	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.230	-3.833%	0.230	11.558%	
12/4/2013	0.000	0.300	0.000	0.000	0.259	-0.259	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.259	-4.317%	0.259	13.015%	
12/5/2013	0.000	0.300	0.000	0.000	0.200	-0.200	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.200	-3.333%	0.200	10.050%	
12/6/2013	0.000	0.300	0.000	0.000	0.318	-0.318	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.318	-5.300%	0.318	15.980%	
12/7/2013	0.000	0.300	0.000	0.000	0.199	-0.199	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.199	-3.317%	0.199	10.000%	
12/8/2013	0.000	0.300	0.000	0.000	0.268	-0.268	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.268	-4.467%	0.268	13.467%	
12/9/2013	0.000	0.300	0.000	0.000	0.216	-0.216	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.216	-3.600%	0.216	10.854%	
12/10/2013	0.000	0.300	0.000	0.000	0.226	-0.226	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.226	-3.767%	0.226	11.357%	
12/11/2013	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%	
12/12/2013	0.000	0.300	0.000	0.000	0.183	-0.183	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.183	-3.050%	0.183	9.196%	
12/13/2013	0.000	0.300	0.000	0.000	0.198	-0.198	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.198	-3.300%	0.198	9.950%	
12/14/2013	0.000	0.300	0.000	0.000	0.147	-0.147	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.147	-2.450%	0.147	7.387%	
12/15/2013	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%	
12/16/2013	0.000	0.300	0.000	0.000	0.245	-0.245	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.245	-4.083%	0.245	12.312%	
12/17/2013	0.000	0.300	0.000	0.000	0.204	-0.204	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.204	-3.400%	0.204	10.251%	
12/18/2013	0.000	0.300	0.000	0.000	0.204	-0.204	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.204	-3.400%	0.204	10.251%	
12/19/2013	0.000	0.300	0.000	0.000	0.191	-0.191	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.191	-3.183%	0.191	9.598%	
12/20/2013	0.000	0.300	0.000	0.000	0.229	-0.229	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.229	-3.817%	0.229	11.508%	
12/21/2013	0.000	0.300	0.000	0.000	0.102	-0.102	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.102	-1.700%	0.102	5.126%	
12/22/2013	0.000	0.300	0.000	3.335	0.209	-0.209	0.300	3.335	3.335	33.350%	0.300	3.000%	-0.209	-3.483%	0.209	10.503%	
12/23/2013	0.000	0.300	0.000	1.934	0.185	-0.185	0.300	1.934	1.934	19.340%	0.300	3.000%	-0.185	-3.083%	0.185	9.296%	
12/24/2013	0.000	0.300	0.000	0.000	0.135	-0.135	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.135	-2.250%	0.135	6.784%	
12/25/2013	0.000	0.300	0.000	0.000	0.137	-0.137	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.137	-2.283%	0.137	6.884%	
12/26/2013	0.000	0.300	0.000	0.000	0.138	-0.138	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.138	-2.300%	0.138	6.935%	
12/27/2013	0.000	0.300	0.000	0.000	0.190	-0.190	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.190	-3.167%	0.190	9.548%	
12/28/2013	0.000	0.300	0.000	0.000	0.150	-0.150	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.150	-2.500%	0.150	7.538%	
12/29/2013	0.000	0.300	0.000	0.000	0.130	-0.130	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.130	-2.167%	0.130	6.533%	
12/30/2013	0.000	0.300	0.000	0.000	0.200	-0.200	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.200	-3.333%	0.200	10.050%	
12/31/2013	0.000	0.300	0.000	0.000	0.172	-0.172	0.300	0.000	0.000	0.000%	0.300	3.000%	-0.172	-2.867%	0.172	8.643%	
<b>AVG 2013</b>	0.000	0.300	0.000	0.014	0.207	-0.207	0.300	0.014	0.014	0.144%	0.300	3.000%	-0.207	-2.067%	0.207	-3.445%	
<b>MAX 2013</b>	0.000	0.300	0.000	3.335	0.445	-0.445	0.300	3.335	3.335	33.350%	0.300	3.000%	-0.445	-4.450%	0.445	22.362%	

<sup>1</sup> Transfers from Second Creek to Kannapolis Lake (South Yadkin Basin to Rocky River Basin) shall not exceed 6 MGD, positive numbers represent this direction of transfer as dominate  
Transfers from Kannapolis (via purchase from Salisbury) to Landis (Yadkin Basin to South Yadkin Basin) shall not exceed 2 MGD; negative numbers represent this direction of transfer as the dominate