Interbasin Transfer Certificate

2019 Annual Report

Prepared for

Town of Cary
Town of Apex

Submitted to

North Carolina
Division of Water Resources

April 2020

Submitted by
Sarah Braman, PE
Water Resources Engineer
Town of Cary
PO Box 8005
Cary, NC 27512-8005
919-462-3846
sarah.braman@townofcary.org

#

This page has been intentionally left blank.

#

Contents

Section **Page**

Introduction **1-1**

Withdrawals, Discharges and Interbasin Transfers **2-1**
2.1 IBT Certificate Limits 2-2
2.2 Summary of Water Withdrawals, Discharges and IBT 2-2
2.3 Monthly IBT 2-4

Consumptive Use by Basin **3-1**

Discharge Report **4-1**
4.1 Neuse Basin Demand and Required Discharge 4-1
4.2 Actual Discharge 4-2
4.3 Compliance Evaluation 4-3

Interbasin Transfer Certificate Conditions **5-1**

Appendices
A Daily Jordan Lake Water Supply Raw Water Withdrawals
B Daily IBT Amounts
C Monthly Billed Water Use
D AWWA M36 Water Audit Output
E Cape Fear River Basin Discharge

This page has been intentionally left blank.

SECTION 1

Introduction

On March 12, 2015, the North Carolina Environmental Management Commission (EMC) granted an interbasin transfer (IBT) certificate modification to the Towns of Cary and Apex (Towns) with transfer limits of 31 million gallons per day (mgd) from the Haw River basin to the Neuse River basin, and 2 mgd from the Haw River basin to the Cape Fear River basin, calculated as a daily average of a calendar month.

This 2019 Annual Report is specified in the Compliance and Monitoring Plan (Plan) approved by the North Carolina Division of Water Resources (NCDWR) on July 14, 2015 and revised March 9, 2018. The schedule for reporting on IBT certificate compliance is provided in the Plan and repeated below.

TABLE 1-1
Interbasin Transfer Compliance Monitoring and Reporting

Description [a]		Comments
IBT Limits	Daily average of a calendar month: - 31 mgd Haw to Neuse - 2 mgd Haw to Cape Fear	Daily average IBT is calculated daily and reported in the Annual IBT Report. IBT calculated as the daily average of a calendar month reported on the Town of Cary website quarterly and in the Annual IBT Report. The percentages of water use in each basin, summarized historically, and set for calculating daily IBT for the next year will be reported in the Annual IBT Report.
Condition 1	Water Conservation Plan	Initial submittal to NCDWR by June 10, 2015, and then revised as needed to obtain NCDWR approval. Updates, if necessary, will be provided to NCDWR in the Towns' respective Secondary and Cumulative Impacts Master Management Plan biennial updates. Water Conservation Plan will always be available on the Town of Cary website. Status of the plan will be included in the Annual IBT Report.
Condition 2	Drought Management Plan	Initial submittal to NCDWR by June 10, 2015, and then revised as needed to obtain NCDWR approval. Updates will be provided to NCDWR as needed. Drought Management Plan will always be available on the Town of Cary website. Status of the plan will be included in the Annual IBT Report.
Condition 3	IBT Compliance and Monitoring Plan	Initial submittal to NCDWR by June 10, 2015, and then revised as needed to obtain NCDWR approval. A revised submittal on March 9, 2018, following the modification of the 2015 IBT certificate, added condition 9. IBT Compliance and Monitoring Plan will always be available on the Town of Cary website. Status of the plan will be included in the Annual IBT Report.
Condition 4	EMC Consideration of Alternative Sources	No reporting necessary.
Condition 5	EMC Consideration of Future Water Demand	No reporting necessary.
Condition 6	Resale of Transferred Water	Included in the Annual IBT Report.
Condition 7	EMC Consideration of Impacts	No reporting necessary.
Condition 8	Intake Access	Included in the Annual IBT Report.
Condition 9	Required Discharge	Included in the Annual IBT Report

[a] Certificate conditions are described in Section 4.

To meet the annual reporting requirements of the Plan, the following sections of this 2019 Annual Report include:

- Status of compliance with IBT certificate limits.
- Summary of historical water withdrawals, reclaimed water usage, wastewater discharges and IBT for the January to December calendar years beginning with 2015.
- Table of calculated daily average of calendar month IBT amounts for the 2019 reporting year.
- Summary of amount of water used during 2015 to 2019 by customers in the Neuse River, Haw River, and Cape Fear River basins for use in determining the distribution of consumptive uses among the basins. Based on the amount of water used in each basin for the previous year, the distribution of consumptive use by basin in the following calendar year will be determined and documented.
- Discharge Report, documenting Required Discharge and Actual Discharge.
- Status of compliance with IBT certificate conditions.

Appendix A is a table of daily Jordan Lake water supply allocation raw water withdrawals for Cary/Apex, Morrisville and Wake County/RTP South for January 1 to December 31 of the 2019 reporting year.

Appendix B is a table of calculated daily IBT amounts for January 1 to December 31 of the 2019 reporting year.

Appendix C is a table of monthly billed water use for Cary/Apex for the 2019 reporting year from the Towns' billing database.

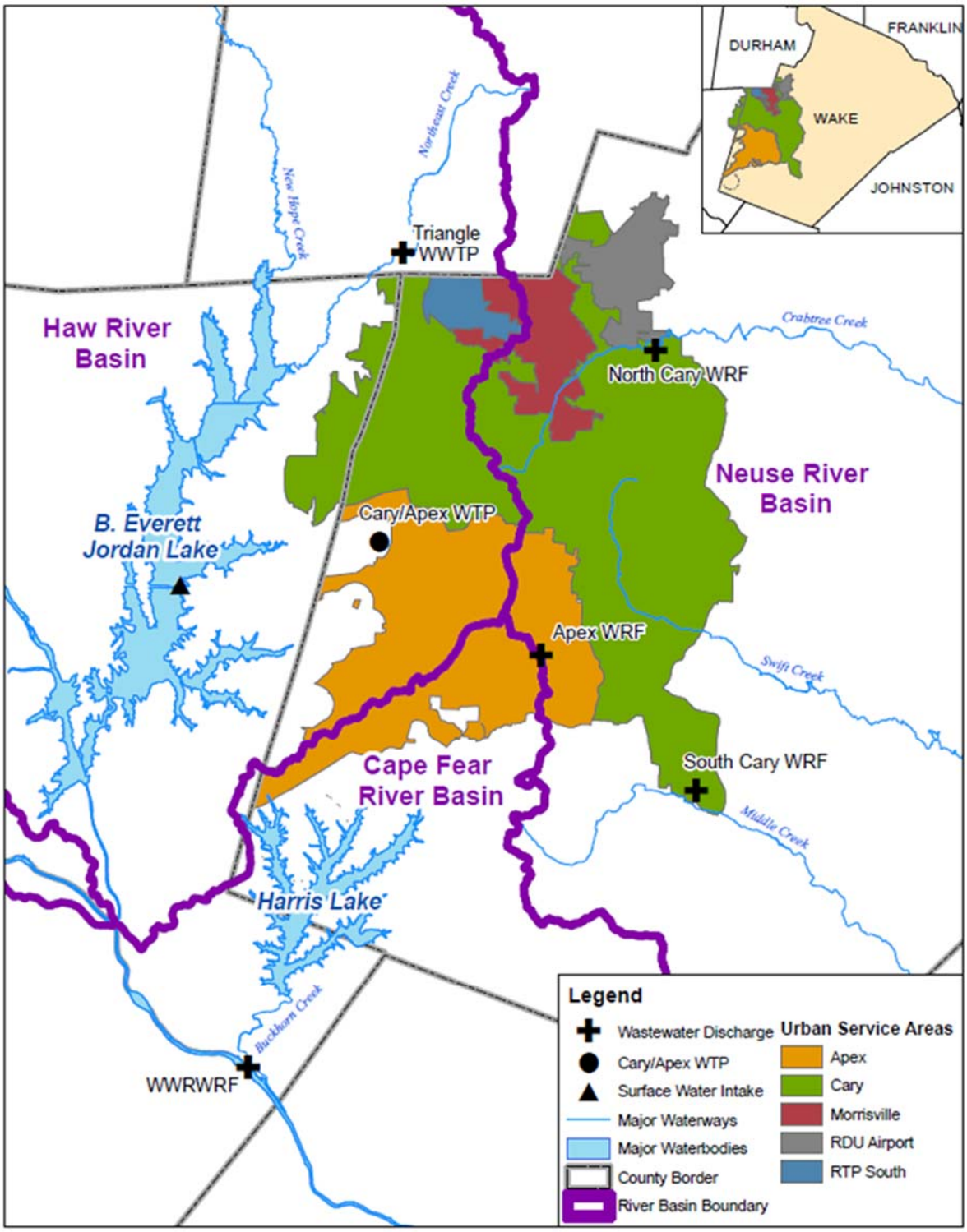
Appendix D is the performance indicator and water balance output from the Town of Cary's AWWA M36 Water Audit analysis performed for fiscal year 2019. The percentage non-revenue water is used in the discharge report to determine Neuse Demand.

Appendix E is a table of the actual discharge to the Cape Fear River Basin from Western Wake Regional Water Reclamation Facility (WWRWRF) and other discharges such as the Durham County Triangle Wastewater Treatment Plant.

SECTION 2

Withdrawals, Discharges and Interbasin Transfers

The Towns' service areas include Cary, Apex, Morrisville, RDU Airport and RTP South (the Wake County portion of Research Triangle Park). Because the Towns' water system service areas straddle the ridge lines between interbasin transfer (IBT) basins, water is transferred via wastewater discharge, potable water consumptive use, or reclaimed water consumptive use. The combined IBT amount from the communities served is calculated on a daily basis.



2.1 IBT Certificate Limits

The Towns' IBT certificate limits transfers to 31 million gallons per day (mgd) from the Haw River basin to the Neuse River basin, and to 2 mgd from the Haw River basin to the Cape Fear River basin, calculated as a daily average of a calendar month.

During calendar year 2019, the Towns were in compliance with the monthly IBT certificate limits. The peak month transfer from the Haw River basin to the Neuse River basin was 16.9 mgd (55% of certificate limit) which occurred during July 2019. The peak month transfer from the Haw River basin to the Cape Fear River basin was 0.14 mgd (7% of certificate limit) which occurred during September 2019.

Daily IBT estimates for the Towns are found in Appendix B. Monthly average daily IBT estimates are found in section 2.3.

2.2 Summary of Water Withdrawals, Discharges and IBT

The Towns of Cary and Apex are co-owners of the Cary/Apex Water Treatment Facility which has its raw water intake in Jordan Lake. Cary/Apex, Morrisville and Wake County (for the portion of RTP within that county) each hold allocations of Jordan Lake water supply storage. Daily tracking of raw water withdrawals from Jordan Lake for the allocation holders for the period January 1, 2019 through December 31, 2019 is found in Appendix A.

The average daily withdrawal for the Towns was 24.0 mgd during 2019 (Table 2-1). Raw water withdrawals for Cary (including Morrisville and RTP South) and Apex by calendar year beginning with 2015 are summarized in Table 2-1. The withdrawals in Table 2-1 do not include withdrawals for intake access. The City of Durham accessed its Jordan Lake water allocation through the Cary/Apex Water Treatment Facility for 26 days during calendar year 2019.

Table 2-1

Summary of Average Annual Jordan Lake Withdrawals[1]

Year	**Average Annual Withdrawal** (mgd)
2015	21.2
2016	22.3
2017	22.9
2018	23.0
2019	24.0

1. Withdrawals from Jordan Lake at the Cary/Apex raw water intake. Includes water use by Apex, Cary, Morrisville and RTP South. Does not include water use by Durham.

The Town of Cary owns and operates the North Cary and South Cary Water Reclamation Facilities (NCWRF and SCWRF) which discharge to Crabtree Creek and Middle Creek, respectively. The Town of Apex owns and operates the Apex Water Reclamation Facility (AWRF) which discharges to Middle Creek. The Towns co-own the Western Wake Regional Water Reclamation Facility (WWRWRF) which discharges to the Cape Fear River. Process water from the CAWTF is discharged to a tributary of Jordan Lake. The Town of Cary also has the ability to discharge wastewater to the Durham County Triangle Wastewater Treatment Plant (Durham Co.) which discharges to a tributary of Jordan Lake. The Town did not utilize this ability in 2019, as discussed in section 4.2.

Average annual wastewater discharges for Cary and Apex beginning with 2015, identified by receiving basin, are summarized in Table 2-2.

Table 2-2

Summary of Average Annual Wastewater Discharges

Year	CAWTF Discharge (mgd)	Wastewater Conveyed to Durham Co. WWTP (mgd)	WWRWRF Discharge (mgd)	NCWRF Discharge (mgd)	SCWRF Discharge (mgd)	AWRF Discharge (mgd)	Total (mgd)
	Haw	Haw	Cape Fear	Neuse	Neuse	Neuse	
2015	3.3	0.02	4.6	6.0	5.3	1.2	20.4
2016	4.0	0	4.9	5.7	5.4	1.1	21.1
2017	3.8	0.48	4.5	5.9	4.7	1.1	20.5
2018	3.2	0.01	5.5	6.3	5.0	1.3	21.3
2019	3.0	0.00	5.6	6.2	5.1	1.3	21.2

The NCWRF and SCWRF produce reclaimed water which is used at each plant, pumped through distribution systems to customers and dispensed in bulk. The WWRWRF produces reclaimed water which is used at the plant and dispensed in bulk. The Town of Cary purchases reclaimed water from the Durham Co. TWWTP for distribution to customers in its western service area.

Reclaimed water flows for Cary and Apex for calendar years beginning with 2015 are summarized in Table 2-3.

Table 2-3

Summary of Reclaimed Water Flows

Year	NCWRF [1] Reclaimed Water (mgd)	SCWRF [1] Reclaimed Water (mgd)	WWRWRF [2] Reclaimed Water (mgd)	Reclaimed Water Purchased from Durham Co. TWWTP (mgd)
2015	0.58	0.44	0.55	0.18
2016	0.57	0.38	0.85	0.20
2017	0.57	0.40	0.97	0.24
2018	0.52	0.38	0.83	0.23
2019	0.52	0.39	0.83	0.20

[1] includes distributed, bulk, and plant use
[2] includes bulk and plant use

Interbasin transfers for Cary and Apex for each calendar year beginning with 2015 are summarized in Table 2-4. Annual average day withdrawals from the Haw Basin are quantified as (1) returned to Haw subbasin, (2) transferred to Neuse subbasin, (3) returned to Cape Fear subbasin or (4) transferred to Cape Fear subbasin.

Table 2-4

Summary of Average Annual Interbasin Transfers for Cary and Apex

		Haw to Neuse		Haw to Cape Fear	
Year	Haw Basin Withdrawal (mgd)	Return to Haw Basin (mgd)	Haw-to-Neuse Interbasin Transfer (mgd)	Return to Cape Fear Basin (mgd)	Haw-to-Cape Fear Interbasin Transfer (mgd)
2015	21.2	4.3	12.9	4.0	0.03
2016	22.3	4.9	12.9	4.5	0
2017	22.9	5.4	13.2	4.2	0.05
2018	23.0	4.5	13.5	5.0	0.04
2019	24.0	4.5	14.3	5.2	0.06

2.3 Monthly IBT

Daily IBT is calculated based on a combination of meter data and assumptions, as defined in Section 2 of the Compliance and Monitoring Plan. Daily IBT data are then used to calculate the IBT certificate compliance metric – IBT calculated as the daily average of a calendar month.

Table 2-5 provides daily average interbasin transfers for each calendar month in 2019.

Table 2-5

Monthly IBT for Calendar Year 2019

Month	**Average Daily IBT from Haw to Neuse** (mgd)	**Average Daily IBT from Haw to Cape Fear** (mgd)
January	12.4	0.01
February	12.4	0.01
March	12.9	0.01
April	13.1	0.01
May	15.4	0.07
June	16.1	0.09
July	16.9	0.13
August	15.7	0.08
September	16.1	0.14
October	15.5	0.10
November	12.5	0.03
December	12.0	0.01
Certificate Limit	**31.0**	**2.00**
Max Month	July	September
Max Month IBT	16.9	0.14
Maximum % of Limit	**55%**	**7%**

SECTION 3

Consumptive Use by Basin

The average daily consumptive use was 18.9% for the period January 1, 2019 through December 31, 2019. Consumptive use has ranged between 10% and 23.5% since 2000. Historical consumptive use for each calendar year beginning with 2015 is shown in Table 3-1.

Table 3-1

Historical Consumptive Use for Cary and Apex

Year	Average Daily Finished Water Demand (mgd)	Average Daily Consumptive Use (mgd)	% Consumptive Use
2015	18.0	2.6	14.4%
2016	18.7	2.5	13.3%
2017	19.5	3.4	17.2%
2018	20.0	3.0	15.0%
2019	21.2	4.0	18.9%

Cary and Apex track historical use by assigning a subbasin to each customer. The distribution of consumptive uses between the Haw, Cape Fear, and Neuse River subbasins for 2019 was estimated based on the previous year's water use in each basin as determined by billing records for Cary and Apex.

During 2019, based on 2018 billing records, it was assumed that 33.6% of water use occurred in the Haw subbasin, 1.4% of water use occurred in the Cape Fear subbasin, and 65.0% of water use occurred in the Neuse River subbasin. During 2020, based on 2019 billing records, it will be assumed that 34.8% of their water use will occur in the Haw subbasin, 1.3% of their water use will occur in the Cape Fear subbasin, and 63.9% of water use will occur in the Neuse River subbasin.

Table 3-2 shows the combined water use for Cary (including Morrisville and RTP South) and Apex, and the percentage water use in the Haw, Cape Fear, and Neuse River subbasins. The table also shows the Haw and Cape Fear use percentages that will be used for 2020 calculations.

Table 3-2

Historic Water Use by Subbasin for Cary (including Morrisville and RTP South) and Apex (Annual Average Day)

Year	Total Billed Water Use (mgd)	Haw Subbasin		Cape Fear Subbasin		Neuse Subbasin	
		Billed Water Use (mgd)	Percent Use	Billed Water Use (mgd)	Percent Use	Billed Water Use (mgd)	Percent Use
2014	14.57	4.27	29.3%	0.17	1.2%	10.13	69.5%
2015	15.06	4.47	29.7%	0.21	1.4%	10.38	68.9%
2016	15.24	4.52	29.7%	0.25	1.6%	10.47	68.7%
2017	16.93	5.52	32.6%	0.23	1.4%	11.18	66.0%
2018	16.94	5.70	33.6%	0.23	1.4%	11.01	65.0%
2019	18.16	6.32	34.8%	0.24	1.3%	11.60	63.9%
Percentages to be used for 2020 IBT calculations			34.8%		1.3%		

SECTION 4

Discharge Report

The following is addressed in this section as required by Condition 9 of the 2015 IBT certificate modified by the North Carolina EMC in March 2018, and as defined by the Compliance and Monitoring Plan revised in March 2018:

- Required Discharge
- Actual Discharge
- Compliance Evaluation

Data supporting the computation of Neuse Basin Demand, Required Discharge and Actual Discharge are outlined in the following sections. If mitigation measures are required, they would be included in this section as well.

4.1 Neuse Basin Demand and Required Discharge

Neuse Basin Demand is the three-year running annual average daily amount of all finished water supplied from sources within the Haw River (2-1) and Cape Fear River (2-3) Basins, for the three preceding calendar years. Neuse Basin Demand is the sum of both billed and unbilled use by the Towns in the Neuse River Basin (10-1).

Billed potable water use is quantified from the Town of Apex and Town of Cary water meter and billing databases. Unbilled amounts of finished water are quantified as a percentage of billed water use. The percentage of non-revenue water is calculated on a system-wide basis for the Towns on a yearly basis using procedures detailed in AWWA's M36 Water Audits and Loss Control Programs publication.

Table 4-1 is a summary of the Neuse Basin demand and required discharge calculations. The total Neuse Basin demand value for 2016 was stipulated in the IBT certificate, modified by the EMC on March 8, 2018. Appendix C is a summary of the monthly billed water use for Cary and Apex. Appendix D is the output of Town of Cary's AWWA M36 Water audit for fiscal year 2019. The non-revenue water percentage in Appendix D is assumed representative of both Cary and Apex systems. The Neuse Basin treated water purchases summarized in Table 4-1 are identified on a daily basis in Appendix B.

Table 4-1

Neuse Basin Demand Calculation Table and Required Discharge

	Cary Billed Neuse Basin Water Use (mgd)[1]	Apex Billed Neuse Basin Water Use (mgd)[1]	Total Neuse Basin Billed Water Use (mgd)	Water Audit Unbilled Water %[2]	Neuse Basin Usage, with unbilled use (mgd)[3]	Neuse Basin Purchases (mgd)[4]	Total Neuse Basin Demand (mgd)[5]
2016	-	-	-	-	-	-	**11.10**
2017	10.16	1.02	11.18	10.2 %	12.32	0.35	**11.98**
2018	9.98	1.03	11.01	13.0%	12.44	0.24	**12.21**
2019	10.05	1.10	11.15	15.9%	12.92	0.20	**12.72**
3 year Running Average of Neuse Basin Demand							**12.30**
Required Discharge (3 year Running Average of Neuse Basin Demand – 9.756)							**2.54**

[1] From monthly billed water use (Appendix C)
[2] From AWWA M36 Water Audit (Appendix D)
[3] Neuse Basin Usage = Neuse Billed Water Use + (System-wide Non-Revenue Water % * Neuse Billed Water Use)
[4] From Appendix B columns (2), (3) and (4) which includes Durham County reclaimed water and purchases from Durham or Raleigh
[5] Neuse Basin Demand = Neuse Basin Usage – Neuse Purchases

4.2 Actual Discharge

"Actual Discharge" is the three-year running annual average daily amount (in mgd) for the three preceding calendar years of treated wastewater that the Towns of Cary and Apex actually discharge to the Haw River Basin and Cape Fear River Basin receiving waters, without regard to which Town of Cary or Apex treatment facilities (whether by ownership or third-party contract) from which the treated wastewater is discharged.

In 2019 the Towns of Cary and Apex discharged highly-treated wastewater effluent to the Cape Fear River Basin via the Western Wake Regional WRF (WWRWRF). Treated wastewater discharges to Durham County did not occur in 2019.

Figure 4-1 below shows the Towns' daily Cape Fear River Basin discharges from WWRWRF for 2019. Supporting data is found in Appendix E.

Figure 4-1
Cape Fear River Basin Actual Treated Wastewater Discharges

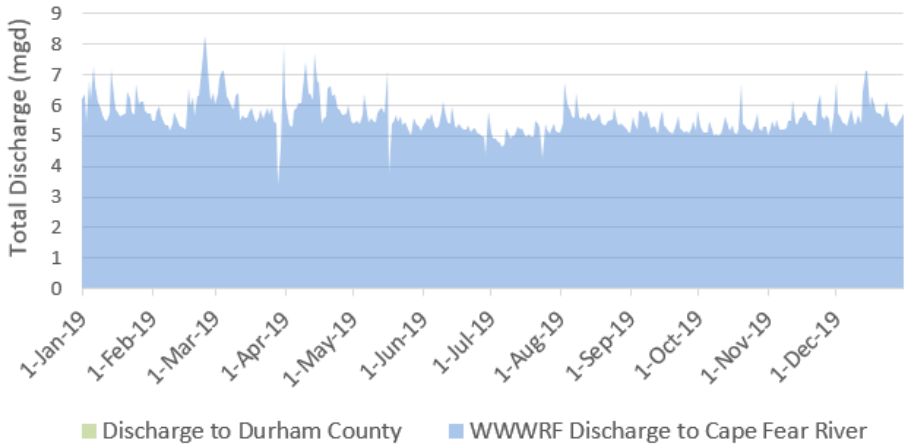


Table 4-2 shows the Towns' discharges to the Cape Fear River Basin beginning with 2015 and the 3-year running average for the reporting year 2019 which is compared to the required discharge to determine compliance.

Table 4-2

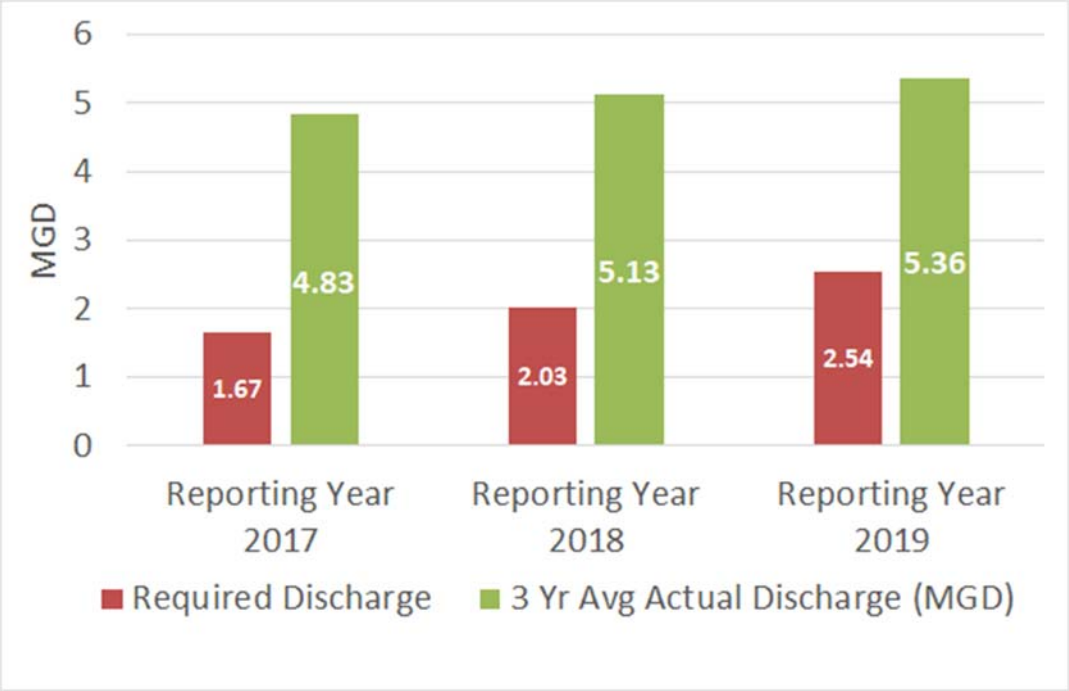
Actual Discharge Calculation Table - Cape Fear River Basin

	Western Wake Regional WRF (Average Day Discharge)	Other Treated Wastewater Discharges	Total Actual Discharge (mgd)
2016	4.9	0.00	4.90
2017	4.5	0.48	4.98
2018	5.5	0.01	5.51
2019	5.6	0	5.60
3 year running average			**5.36**

4.3 Compliance Evaluation

For 2019, Cary and Apex's 3-year running average of actual discharge to the Cape Fear (5.36 mgd) exceeded the required discharge (2.54 mgd) by 2.82 mgd. Figure 4-2 shows the compliance evaluation starting with reporting year 2017.

Figure 4-2
Discharge Compliance Evaluation



The Towns are in compliance with condition 9 of the 2015 IBT certificate modified by the North Carolina EMC in March 2018. The Towns will continue to monitor required discharge and will comply with reporting requirements.

If required in a future year, this section would discuss mitigation measures and temporary compliance solutions undertaken by the Towns of Cary and Apex in the prior calendar year, the estimated impact of each such measure, and all data supporting each estimated impact.

SECTION 5

Interbasin Transfer Certificate Conditions

In accordance with the Compliance and Monitoring Plan, the status of the additional eight conditions that the Towns must meet in order to maintain compliance with the IBT certificate are reported annually. The IBT certificate conditions and their status during the 2018 calendar year are as follows.

1. **Water Conservation Plan** – Within 90 days of receipt of the IBT certificate, the Towns are required to submit a water conservation plan subject to approval by the North Carolina Division of Water Resources (NCDWR) that specifies the water conservation measures that will be implemented by the Towns to ensure the efficient use of the transferred water.

   STATUS: The Water Conservation Plan was approved by NCDWR on July 14, 2015 and is available on the Town of Cary website (http://www.townofcary.org/home/showdocument?id=9609) . There were no updates during calendar year 2019.

2. **Drought Management Plan** – Within 90 days of receipt of the IBT certificate, the Towns are required to submit a drought management plan subject to approval by the NCDWR that specifies how the transfer will be managed to protect the source river basin (Haw River basin) during drought conditions or other emergencies that occur within the source river basin.

   STATUS: The Drought Management Plan was approved by NCDWR on July 14, 2015 and is available on the Town of Cary website (http://www.townofcary.org/home/showdocument?id=9607). An update was approved by NCDWR on August 17, 2015 to update the Town of Cary's approved Water Shortage Response Plan. Those minor updates were to make the Water Shortage Response Plan consistent with changes in the Town's organizational structure, changes in Town Council procedures, and changes in utility billing procedures. There were no updates during calendar year 2019.

3. **Compliance and Monitoring Plan** – Within 90 days of receipt of the IBT certificate, the Towns are required to submit a quarterly compliance and monitoring plan subject to approval by the NCDWR.

   STATUS: The Compliance and Monitoring Plan was approved by NCDWR on July 14, 2015. The plan was revised on March 9, 2018 following the modification of the 2015 IBT certificate to add condition 9. The current plan is available on the Town of Cary website. (http://www.townofcary.org/home/showdocument?id=19727).

4. **EMC Consideration of Alternative Sources** – The EMC may reopen and amend the maximum amount of the IBT authorized if it appears that an alternative source of water is available to the Towns within the receiving basin (Neuse River basin).

   STATUS: No reporting is necessary.

5. **EMC Consideration of Future Water Demands** – The EMC may reopen and amend the certificate if it is determined that the Towns' actual future water needs are significantly less than the projected water needs at the time the certificate was granted.

   STATUS: No reporting is necessary.

6. **Resale of Transferred Water** – The Towns shall not resell the water that would be transferred pursuant to the IBT certificate to another public water system.

   STATUS: There were no resales of transferred water by the Towns during calendar year 2019.

7. **EMC Consideration of Impacts** – The EMC may reopen the certificate and amend existing or require new conditions to ensure detrimental impacts are mitigated if environmental impacts are found to be substantially different from those on which the EMC's Findings of Fact were based.

   STATUS: No reporting is necessary.

8. **Intake Access** – The Towns shall be required to provide access at their existing intake site to other Jordan Lake water allocation holders that need access to utilize their allocations to the extent that this additional use is determined to be feasible by the NCDWR.

   STATUS: The Town of Cary has continued to provide retail water service to RTP South and the Town of Morrisville. Chatham County has continued to access its allocation through the Cary/Apex raw water intake. The City of Durham accessed its Jordan Lake water allocation through the Cary/Apex Water Treatment Facility for 26 days during calendar year 2019.

9. **Required Discharge** – The Towns shall discharge to the Cape Fear River Basin and Haw River Basin receiving waters a calendar year average daily treated wastewater discharge ("Required Discharge") calculated as:

   Required Discharge = Neuse Basin Demand – 9.756 million gallons per day (mgd)

   Neuse Basin Demand is defined as the 3-year running annual average daily amount for the 3 preceding calendar years of all finished water supplied from sources within the Haw River and Cape Fear River Basins, including both billed and unbilled amounts, expressed in mgd, used by the Towns of Cary and Apex in the Neuse River Basin. Unbilled amounts of finished water use are to be quantified following the procedures of AWWA's Manual of Practice M36, *Water Audits and Loss Control Programs*.

   "Actual Discharge" is the three-year running annual average daily amount (in mgd) for the three preceding calendar years of treated wastewater that the Towns of Cary and Apex actually discharge to the Haw River Basin and Cape Fear River Basin receiving waters, without regard to which Town of Cary or Apex treatment facilities (whether by ownership or third-party contract) from which the treated wastewater is discharged.

   STATUS: The Towns of Cary and Apex "Actual Discharge" was greater than the "Required Discharge" for the reporting year 2019.

Appendices

A Daily Jordan Lake Water Supply Raw Water Withdrawals

B Daily IBT Amounts

C Monthly Billed Water Use

D AWWA M36 Water Audit Summary

E Cape Fear River Basin Discharge

APPENDIX A - Daily Jordan Lake Water Supply Raw Water Withdrawals
Jordan Lake Water Supply Storage Allocation Tracking
Cary/Apex, Morrisville, and Wake County/RTP South COMBINED

Date	Reservoir Level (ft)	Cary/Apex/ Morrisville/RTP Water Supply (mgd)	Cary/Apex/ Morrisville/RTP Water Supply (cfs)	Inflow to Cary/Apex/ Morrisville/RTP (cfs)	Cary/Apex/ Morrisville/RTP Storage Level (ac-ft)	Cary/Apex/ Morrisville/RTP Storage Level (%)
1/1/2019	229.05	19.75	30.55	30.8	21,160	100.00%
1/2/2019	228.12	19.57	30.27	30.4	21,160	100.00%
1/3/2019	227.16	20.05	31.02	31.3	21,160	100.00%
1/4/2019	226.78	23.45	36.28	36.6	21,160	100.00%
1/5/2019	226.83	19.87	30.74	30.9	21,160	100.00%
1/6/2019	226.58	20.23	31.30	31.5	21,160	100.00%
1/7/2019	225.84	20.37	31.51	31.8	21,160	100.00%
1/8/2019	224.76	20.49	31.70	31.9	21,160	100.00%
1/9/2019	223.67	21.25	32.87	33.2	21,160	100.00%
1/10/2019	222.48	19.99	30.92	31.2	21,160	100.00%
1/11/2019	221.23	19.70	30.48	30.7	21,160	100.00%
1/12/2019	219.98	18.41	28.48	28.7	21,160	100.00%
1/13/2019	219.42	19.22	29.73	30.0	21,160	100.00%
1/14/2019	218.37	21.12	32.67	33.0	21,160	100.00%
1/15/2019	218.37	18.30	28.31	28.5	21,160	100.00%
1/16/2019	217.50	20.00	30.94	31.1	21,160	100.00%
1/17/2019	216.73	21.90	33.88	34.2	21,160	100.00%
1/18/2019	216.48	18.89	29.22	29.9	21,160	100.00%
1/19/2019	216.41	18.96	29.33	30.0	21,160	100.00%
1/20/2019	217.10	18.47	28.57	29.3	21,160	100.00%
1/21/2019	217.54	19.42	30.04	30.8	21,160	100.00%
1/22/2019	217.51	20.12	31.13	31.9	21,160	100.00%
1/23/2019	216.99	20.27	31.36	32.1	21,160	100.00%
1/24/2019	217.75	21.25	32.87	33.7	21,160	100.00%
1/25/2019	218.90	19.50	30.17	30.9	21,160	100.00%
1/26/2019	218.70	19.47	30.12	30.9	21,160	100.00%
1/27/2019	218.29	20.29	31.39	32.1	21,160	100.00%
1/28/2019	217.79	22.41	34.67	35.5	21,160	100.00%
1/29/2019	217.25	20.53	31.76	32.5	21,160	100.00%
1/30/2019	216.69	19.48	30.13	31.0	21,160	100.00%
1/31/2019	216.40	19.03	29.44	30.2	21,160	100.00%
2/1/2019	216.38	20.16	31.19	31.9	21,160	100.00%
2/2/2019	216.29	20.38	31.53	32.3	21,160	100.00%
2/3/2019	216.23	18.57	28.73	29.4	21,160	100.00%
2/4/2019	216.22	21.89	33.86	34.7	21,160	100.00%
2/5/2019	216.24	19.68	30.44	31.2	21,160	100.00%
2/6/2019	216.27	19.50	30.17	30.9	21,160	100.00%
2/7/2019	216.30	20.45	31.64	32.4	21,160	100.00%
2/8/2019	216.38	19.91	30.80	31.5	21,160	100.00%
2/9/2019	216.42	19.74	30.54	31.3	21,160	100.00%
2/10/2019	216.46	20.02	30.97	31.7	21,160	100.00%
2/11/2019	216.50	17.78	27.51	28.3	21,160	100.00%
2/12/2019	216.46	20.36	31.49	32.4	21,160	100.00%
2/13/2019	216.67	21.39	33.09	33.9	21,160	100.00%
2/14/2019	216.68	21.43	33.15	33.9	21,160	100.00%
2/15/2019	216.42	19.66	30.41	31.2	21,160	100.00%

APPENDIX A - Daily Jordan Lake Water Supply Raw Water Withdrawals
Jordan Lake Water Supply Storage Allocation Tracking
Cary/Apex, Morrisville, and Wake County/RTP South COMBINED

Date	Reservoir Level (ft)	Cary/Apex/ Morrisville/RTP Water Supply (mgd)	Cary/Apex/ Morrisville/RTP Water Supply (cfs)	Inflow to Cary/Apex/ Morrisville/RTP (cfs)	Cary/Apex/ Morrisville/RTP Storage Level (ac-ft)	Cary/Apex/ Morrisville/RTP Storage Level (%)
2/16/2019	216.29	19.36	29.95	30.7	21,160	100.00%
2/17/2019	216.25	19.77	30.58	31.3	21,160	100.00%
2/18/2019	217.48	18.54	28.68	29.4	21,160	100.00%
2/19/2019	218.19	21.38	33.07	33.9	21,160	100.00%
2/20/2019	218.48	19.38	29.98	30.8	21,160	100.00%
2/21/2019	219.13	20.44	31.62	32.4	21,160	100.00%
2/22/2019	220.82	19.60	30.32	31.0	21,160	100.00%
2/23/2019	223.76	19.28	29.83	30.5	21,160	100.00%
2/24/2019	227.23	19.71	30.49	31.2	21,160	100.00%
2/25/2019	228.37	21.64	33.48	34.5	21,160	100.00%
2/26/2019	228.69	21.21	32.81	33.6	21,160	100.00%
2/27/2019	228.57	18.94	29.30	30.0	21,160	100.00%
2/28/2019	228.11	19.77	30.58	31.5	21,160	100.00%
3/1/2019	227.79	23.22	35.92	36.8	21,160	100.00%
3/2/2019	228.49	21.15	32.72	33.5	21,160	100.00%
3/3/2019	229.14	18.50	28.62	29.4	21,160	100.00%
3/4/2019	230.34	23.05	35.66	36.5	21,160	100.00%
3/5/2019	230.80	22.39	34.64	35.5	21,160	100.00%
3/6/2019	230.88	19.19	29.69	30.5	21,160	100.00%
3/7/2019	230.57	21.49	33.25	34.1	21,160	100.00%
3/8/2019	229.83	22.07	34.14	35.0	21,160	100.00%
3/9/2019	229.09	19.30	29.86	30.5	21,160	100.00%
3/10/2019	228.25	19.19	29.69	30.4	21,160	100.00%
3/11/2019	227.39	21.06	32.58	33.4	21,160	100.00%
3/12/2019	226.44	20.39	31.54	32.3	21,160	100.00%
3/13/2019	225.47	20.85	32.25	33.0	21,160	100.00%
3/14/2019	224.43	22.75	35.19	36.1	21,160	100.00%
3/15/2019	223.40	20.52	31.74	32.5	21,160	100.00%
3/16/2019	222.40	19.10	29.54	30.3	21,160	100.00%
3/17/2019	221.31	20.60	31.87	32.6	21,160	100.00%
3/18/2019	220.17	21.42	33.14	33.9	21,160	100.00%
3/19/2019	219.16	19.41	30.03	30.7	21,160	100.00%
3/20/2019	218.45	20.88	32.30	33.1	21,160	100.00%
3/21/2019	219.02	19.15	29.63	30.4	21,160	100.00%
3/22/2019	219.96	20.04	31.00	31.7	21,160	100.00%
3/23/2019	219.94	19.14	29.61	30.3	21,160	100.00%
3/24/2019	219.67	20.08	31.06	31.8	21,160	100.00%
3/25/2019	219.14	21.30	32.95	33.7	21,160	100.00%
3/26/2019	218.52	19.21	29.72	30.4	21,160	100.00%
3/27/2019	217.81	20.53	31.76	32.5	21,160	100.00%
3/28/2019	217.02	20.71	32.03	32.8	21,160	100.00%
3/29/2019	216.61	20.31	31.42	32.2	21,160	100.00%
3/30/2019	216.60	20.45	31.64	32.4	21,160	100.00%
3/31/2019	216.64	20.17	31.20	32.0	21,160	100.00%
4/1/2019	216.49	22.18	34.31	35.2	21,160	100.00%
4/2/2019	216.27	19.27	29.81	30.8	21,160	100.00%

APPENDIX A - Daily Jordan Lake Water Supply Raw Water Withdrawals
Jordan Lake Water Supply Storage Allocation Tracking
Cary/Apex, Morrisville, and Wake County/RTP South COMBINED

Date	Reservoir Level (ft)	Cary/Apex/ Morrisville/RTP Water Supply (mgd)	Cary/Apex/ Morrisville/RTP Water Supply (cfs)	Inflow to Cary/Apex/ Morrisville/RTP (cfs)	Cary/Apex/ Morrisville/RTP Storage Level (ac-ft)	Cary/Apex/ Morrisville/RTP Storage Level (%)
4/3/2019	216.20	21.16	32.74	33.7	21,160	100.00%
4/4/2019	216.21	20.23	31.29	32.3	21,160	100.00%
4/5/2019	216.32	24.66	38.15	39.2	21,160	100.00%
4/6/2019	216.66	21.46	33.20	34.1	21,160	100.00%
4/7/2019	216.85	21.56	33.35	34.2	21,160	100.00%
4/8/2019	217.46	23.60	36.51	37.5	21,160	100.00%
4/9/2019	219.03	20.01	30.96	31.8	21,160	100.00%
4/10/2019	219.81	21.50	33.26	34.2	21,160	100.00%
4/11/2019	219.96	22.34	34.56	35.5	21,160	100.00%
4/12/2019	220.52	22.65	35.04	36.0	21,160	100.00%
4/13/2019	224.67	19.39	30.00	30.8	21,160	100.00%
4/14/2019	227.01	18.41	28.48	29.2	21,160	100.00%
4/15/2019	227.70	20.19	31.23	32.1	21,160	100.00%
4/16/2019	228.01	20.96	32.43	33.3	21,160	100.00%
4/17/2019	228.03	20.11	31.11	32.0	21,160	100.00%
4/18/2019	227.95	21.83	33.77	34.7	21,160	100.00%
4/19/2019	228.34	19.27	29.81	30.6	21,160	100.00%
4/20/2019	229.17	18.90	29.24	30.0	21,160	100.00%
4/21/2019	229.32	19.10	29.55	30.3	21,160	100.00%
4/22/2019	228.96	22.32	34.53	35.5	21,160	100.00%
4/23/2019	228.26	21.15	32.72	33.6	21,160	100.00%
4/24/2019	227.51	23.01	35.60	36.5	21,160	100.00%
4/25/2019	226.76	22.70	35.12	36.1	21,160	100.00%
4/26/2019	225.94	22.44	34.71	35.7	21,160	100.00%
4/27/2019	225.16	21.48	33.23	34.1	21,160	100.00%
4/28/2019	224.34	21.64	33.48	34.4	21,160	100.00%
4/29/2019	223.43	23.42	36.23	37.2	21,160	100.00%
4/30/2019	222.51	24.11	37.30	38.3	21,160	100.00%
5/1/2019	221.54	26.46	40.93	41.9	21,160	100.00%
5/2/2019	220.65	24.54	37.96	38.9	21,160	100.00%
5/3/2019	219.72	24.98	38.64	39.5	21,160	100.00%
5/4/2019	218.88	23.10	35.74	36.6	21,160	100.00%
5/5/2019	218.09	22.45	34.73	35.6	21,160	100.00%
5/6/2019	217.32	23.24	35.95	36.8	21,160	100.00%
5/7/2019	216.77	22.26	34.44	35.2	21,160	100.00%
5/8/2019	216.49	23.44	36.26	37.1	21,160	100.00%
5/9/2019	216.44	25.19	38.97	39.9	21,160	100.00%
5/10/2019	216.38	24.04	37.19	38.1	21,160	100.00%
5/11/2019	216.38	23.65	36.59	37.5	21,160	100.00%
5/12/2019	216.41	22.64	35.02	35.8	21,160	100.00%
5/13/2019	216.57	22.96	35.52	36.4	21,160	100.00%
5/14/2019	216.64	23.94	37.03	37.9	21,160	100.00%
5/15/2019	216.59	23.29	36.03	36.9	21,160	100.00%
5/16/2019	216.49	23.94	37.04	37.9	21,160	100.00%
5/17/2019	216.39	26.83	41.51	42.5	21,160	100.00%
5/18/2019	216.36	26.12	40.41	41.3	21,160	100.00%

APPENDIX A - Daily Jordan Lake Water Supply Raw Water Withdrawals
Jordan Lake Water Supply Storage Allocation Tracking
Cary/Apex, Morrisville, and Wake County/RTP South COMBINED

Date	Reservoir Level (ft)	Cary/Apex/ Morrisville/RTP Water Supply (mgd)	Cary/Apex/ Morrisville/RTP Water Supply (cfs)	Inflow to Cary/Apex/ Morrisville/RTP (cfs)	Cary/Apex/ Morrisville/RTP Storage Level (ac-ft)	Cary/Apex/ Morrisville/RTP Storage Level (%)
5/19/2019	216.27	28.78	44.52	45.6	21,160	100.00%
5/20/2019	216.29	26.12	40.41	41.4	21,160	100.00%
5/21/2019	216.27	29.31	45.34	46.4	21,160	100.00%
5/22/2019	216.20	30.97	47.91	49.0	21,160	100.00%
5/23/2019	216.21	26.46	40.93	41.9	21,160	100.00%
5/24/2019	216.20	31.02	47.99	49.1	21,160	100.00%
5/25/2019	216.19	29.77	46.05	47.1	21,160	100.00%
5/26/2019	216.18	27.28	42.20	43.2	21,160	100.00%
5/27/2019	216.17	27.45	42.47	43.4	21,160	100.00%
5/28/2019	216.16	33.28	51.48	52.7	21,160	100.00%
5/29/2019	216.13	32.85	50.82	52.0	21,160	100.00%
5/30/2019	216.10	29.55	45.71	46.8	21,160	100.00%
5/31/2019	216.09	35.19	54.44	55.7	21,160	100.00%
6/1/2019	216.10	26.86	41.55	42.6	21,160	100.00%
6/2/2019	216.10	28.28	43.75	44.8	21,160	100.00%
6/3/2019	216.08	29.11	45.03	46.1	21,160	100.00%
6/4/2019	216.00	28.87	44.66	-40.7	20,990	99.20%
6/5/2019	216.00	29.47	45.59	52.3	21,004	99.26%
6/6/2019	215.98	26.09	40.36	31.2	20,985	99.18%
6/7/2019	216.00	27.51	42.56	69.3	21,038	99.43%
6/8/2019	216.40	21.73	33.62	99.8	21,160	100.00%
6/9/2019	217.89	25.31	39.15	40.1	21,160	100.00%
6/10/2019	218.53	23.03	35.63	36.5	21,160	100.00%
6/11/2019	218.68	23.85	36.90	37.8	21,160	100.00%
6/12/2019	218.62	25.53	39.49	40.5	21,160	100.00%
6/13/2019	218.50	22.56	34.90	35.8	21,160	100.00%
6/14/2019	218.38	27.72	42.88	43.9	21,160	100.00%
6/15/2019	218.12	25.72	39.79	40.8	21,160	100.00%
6/16/2019	217.71	27.34	42.29	43.3	21,160	100.00%
6/17/2019	217.22	27.46	42.48	43.5	21,160	100.00%
6/18/2019	216.87	27.99	43.30	44.3	21,160	100.00%
6/19/2019	216.80	29.13	45.06	46.2	21,160	100.00%
6/20/2019	217.02	27.66	42.79	43.8	21,160	100.00%
6/21/2019	217.07	26.00	40.22	41.2	21,160	100.00%
6/22/2019	217.06	25.30	39.14	40.1	21,160	100.00%
6/23/2019	216.93	27.58	42.67	43.7	21,160	100.00%
6/24/2019	216.64	27.11	41.94	42.9	21,160	100.00%
6/25/2019	216.42	30.62	47.37	48.5	21,160	100.00%
6/26/2019	216.34	30.62	47.37	48.5	21,160	100.00%
6/27/2019	216.30	30.36	46.97	48.1	21,160	100.00%
6/28/2019	216.25	31.24	48.33	49.5	21,160	100.00%
6/29/2019	216.20	28.76	44.49	45.6	21,160	100.00%
6/30/2019	216.17	29.37	45.44	46.5	21,160	100.00%
7/1/2019	216.11	29.57	45.74	46.9	21,160	100.00%
7/2/2019	216.07	29.30	45.33	46.5	21,160	100.00%
7/3/2019	216.01	32.55	50.35	17.5	21,160	100.00%

APPENDIX A - Daily Jordan Lake Water Supply Raw Water Withdrawals
Jordan Lake Water Supply Storage Allocation Tracking
Cary/Apex, Morrisville, and Wake County/RTP South COMBINED

Date	Reservoir Level (ft)	Cary/Apex/ Morrisville/RTP Water Supply (mgd)	Cary/Apex/ Morrisville/RTP Water Supply (cfs)	Inflow to Cary/Apex/ Morrisville/RTP (cfs)	Cary/Apex/ Morrisville/RTP Storage Level (ac-ft)	Cary/Apex/ Morrisville/RTP Storage Level (%)
7/4/2019	215.94	28.66	44.34	9.5	21,091	99.67%
7/5/2019	215.93	26.72	41.34	60.4	21,128	99.85%
7/6/2019	215.91	26.89	41.60	43.0	21,131	99.87%
7/7/2019	215.89	28.82	44.58	43.9	21,130	99.86%
7/8/2019	215.93	28.52	44.12	62.8	21,160	100.00%
7/9/2019	216.03	30.24	46.78	50.0	21,160	100.00%
7/10/2019	216.02	28.79	44.54	39.2	21,160	100.00%
7/11/2019	216.06	28.51	44.10	45.2	21,160	100.00%
7/12/2019	216.05	26.81	41.48	42.6	21,160	100.00%
7/13/2019	216.06	29.01	44.88	46.0	21,160	100.00%
7/14/2019	216.03	28.78	44.52	45.7	21,160	100.00%
7/15/2019	215.99	30.05	46.49	-0.3	21,067	99.56%
7/16/2019	215.97	29.13	45.06	16.8	21,011	99.30%
7/17/2019	215.91	29.58	45.76	-10.9	20,898	98.77%
7/18/2019	215.91	30.99	47.94	62.7	20,928	98.90%
7/19/2019	215.83	29.96	46.35	-18.8	20,798	98.29%
7/20/2019	215.80	26.63	41.20	35.4	20,787	98.24%
7/21/2019	215.76	27.19	42.06	25.5	20,754	98.08%
7/22/2019	215.72	29.68	45.91	25.5	20,714	97.89%
7/23/2019	215.87	26.00	40.22	201.5	21,033	99.40%
7/24/2019	216.20	25.21	39.00	114.3	21,160	100.00%
7/25/2019	216.30	26.95	41.69	42.8	21,160	100.00%
7/26/2019	216.44	28.30	43.78	44.9	21,160	100.00%
7/27/2019	216.47	28.48	44.06	45.2	21,160	100.00%
7/28/2019	216.46	29.66	45.88	47.1	21,160	100.00%
7/29/2019	216.43	27.47	42.50	43.6	21,160	100.00%
7/30/2019	216.39	29.65	45.87	47.1	21,160	100.00%
7/31/2019	216.37	30.15	46.64	47.9	21,160	100.00%
8/1/2019	216.41	29.19	45.16	46.4	21,160	100.00%
8/2/2019	216.80	25.74	39.82	40.9	21,160	100.00%
8/3/2019	217.16	24.32	37.62	38.7	21,160	100.00%
8/4/2019	217.18	24.96	38.61	39.7	21,160	100.00%
8/5/2019	217.15	23.67	36.62	37.6	21,160	100.00%
8/6/2019	217.03	25.65	39.68	40.7	21,160	100.00%
8/7/2019	216.87	25.98	40.19	41.3	21,160	100.00%
8/8/2019	216.96	22.76	35.21	36.2	21,160	100.00%
8/9/2019	216.85	26.91	41.63	42.8	21,160	100.00%
8/10/2019	216.67	25.65	39.68	40.8	21,160	100.00%
8/11/2019	216.54	27.44	42.45	43.6	21,160	100.00%
8/12/2019	216.45	26.85	41.54	42.7	21,160	100.00%
8/13/2019	216.45	27.52	42.57	43.8	21,160	100.00%
8/14/2019	216.44	26.34	40.75	41.8	21,160	100.00%
8/15/2019	216.57	25.61	39.62	40.7	21,160	100.00%
8/16/2019	216.52	26.64	41.21	42.3	21,160	100.00%
8/17/2019	216.54	25.27	39.09	40.2	21,160	100.00%
8/18/2019	216.54	24.83	38.41	39.5	21,160	100.00%

APPENDIX A - Daily Jordan Lake Water Supply Raw Water Withdrawals
Jordan Lake Water Supply Storage Allocation Tracking
Cary/Apex, Morrisville, and Wake County/RTP South COMBINED

Date	Reservoir Level (ft)	Cary/Apex/ Morrisville/RTP Water Supply (mgd)	Cary/Apex/ Morrisville/RTP Water Supply (cfs)	Inflow to Cary/Apex/ Morrisville/RTP (cfs)	Cary/Apex/ Morrisville/RTP Storage Level (ac-ft)	Cary/Apex/ Morrisville/RTP Storage Level (%)
8/19/2019	216.57	26.28	40.66	41.7	21,160	100.00%
8/20/2019	216.49	28.57	44.20	45.4	21,160	100.00%
8/21/2019	216.52	31.46	48.67	50.0	21,160	100.00%
8/22/2019	216.43	27.82	43.04	44.2	21,160	100.00%
8/23/2019	216.35	26.58	41.12	42.2	21,160	100.00%
8/24/2019	216.38	24.56	37.99	39.0	21,160	100.00%
8/25/2019	216.56	25.60	39.60	40.7	21,160	100.00%
8/26/2019	216.57	25.03	38.72	39.7	21,160	100.00%
8/27/2019	216.35	24.79	38.35	39.4	21,160	100.00%
8/28/2019	216.26	26.63	41.20	42.3	21,160	100.00%
8/29/2019	216.23	27.49	42.53	43.7	21,160	100.00%
8/30/2019	216.19	26.82	41.49	42.6	21,160	100.00%
8/31/2019	216.13	25.22	39.02	40.0	21,160	100.00%
9/1/2019	216.09	25.66	39.70	40.6	21,160	100.00%
9/2/2019	216.04	24.33	37.64	18.5	21,160	100.00%
9/3/2019	216.00	28.94	44.77	20.4	21,111	99.77%
9/4/2019	215.95	29.11	45.03	7.8	21,037	99.42%
9/5/2019	216.10	24.77	38.32	103.0	21,160	100.00%
9/6/2019	215.99	22.83	35.32	-69.0	20,953	99.02%
9/7/2019	215.95	25.03	38.72	40.1	20,955	99.03%
9/8/2019	215.90	26.02	40.25	31.5	20,938	98.95%
9/9/2019	215.85	27.85	43.08	26.2	20,905	98.79%
9/10/2019	215.80	26.97	41.72	16.5	20,855	98.56%
9/11/2019	215.75	26.65	41.23	15.8	20,804	98.32%
9/12/2019	215.70	28.71	44.41	15.9	20,748	98.05%
9/13/2019	215.65	27.98	43.29	19.7	20,701	97.83%
9/14/2019	215.58	25.88	40.04	-1.5	20,619	97.44%
9/15/2019	215.53	27.51	42.56	19.6	20,573	97.23%
9/16/2019	215.47	25.83	39.96	8.9	20,511	96.94%
9/17/2019	215.44	28.72	44.43	40.6	20,504	96.90%
9/18/2019	215.33	29.37	45.44	-41.1	20,332	96.09%
9/19/2019	215.26	29.47	45.59	0.0	20,242	95.66%
9/20/2019	215.20	28.16	43.56	11.0	20,177	95.36%
9/21/2019	215.13	29.16	45.11	1.1	20,090	94.94%
9/22/2019	215.05	28.27	43.73	-9.3	19,984	94.45%
9/23/2019	214.99	28.76	44.49	11.6	19,919	94.14%
9/24/2019	214.93	29.66	45.89	14.3	19,857	93.84%
9/25/2019	214.84	31.62	48.92	0.0	19,760	93.38%
9/26/2019	214.80	30.05	46.49	34.2	19,735	93.27%
9/27/2019	214.74	29.84	46.16	14.3	19,672	92.97%
9/28/2019	214.67	29.37	45.44	4.3	19,590	92.58%
9/29/2019	214.63	30.00	46.41	34.2	19,566	92.47%
9/30/2019	214.57	29.12	45.05	7.7	19,492	92.12%
10/1/2019	214.51	30.42	47.06	16.7	19,432	91.83%
10/2/2019	214.43	31.57	48.84	4.1	19,343	91.41%
10/3/2019	214.38	30.93	47.85	20.8	19,289	91.16%

APPENDIX A - Daily Jordan Lake Water Supply Raw Water Withdrawals
Jordan Lake Water Supply Storage Allocation Tracking
Cary/Apex, Morrisville, and Wake County/RTP South COMBINED

Date	Reservoir Level (ft)	Cary/Apex/ Morrisville/RTP Water Supply (mgd)	Cary/Apex/ Morrisville/RTP Water Supply (cfs)	Inflow to Cary/Apex/ Morrisville/RTP (cfs)	Cary/Apex/ Morrisville/RTP Storage Level (ac-ft)	Cary/Apex/ Morrisville/RTP Storage Level (%)
10/4/2019	214.38	33.02	51.08	61.4	19,310	91.26%
10/5/2019	214.28	28.37	43.89	-36.3	19,151	90.51%
10/6/2019	214.20	29.79	46.09	-16.6	19,027	89.92%
10/7/2019	214.16	30.22	46.75	20.8	18,975	89.68%
10/8/2019	214.14	29.79	46.09	41.9	18,967	89.64%
10/9/2019	214.04	28.77	44.51	-35.6	18,808	88.89%
10/10/2019	213.97	29.57	45.74	-4.8	18,708	88.41%
10/11/2019	213.91	31.13	48.16	2.7	18,618	87.99%
10/12/2019	213.86	27.97	43.27	11.5	18,554	87.69%
10/13/2019	213.87	26.49	40.98	69.0	18,610	87.95%
10/14/2019	213.82	25.69	39.74	11.0	18,553	87.68%
10/15/2019	213.78	25.65	39.68	20.8	18,516	87.50%
10/16/2019	213.78	26.94	41.68	59.6	18,551	87.67%
10/17/2019	213.76	22.03	34.08	41.9	18,567	87.75%
10/18/2019	213.75	27.07	41.88	53.5	18,590	87.86%
10/19/2019	213.74	24.25	37.51	50.0	18,615	87.97%
10/20/2019	214.02	22.49	34.79	310.9	19,162	90.56%
10/21/2019	214.32	26.69	41.29	324.3	19,724	93.21%
10/22/2019	214.46	22.82	35.30	158.0	19,967	94.36%
10/23/2019	214.52	23.74	36.73	72.1	20,037	94.70%
10/24/2019	214.60	25.53	39.49	108.0	20,173	95.34%
10/25/2019	214.63	25.68	39.73	58.9	20,211	95.52%
10/26/2019	214.64	24.70	38.21	44.1	20,223	95.57%
10/27/2019	214.65	26.87	41.57	43.9	20,227	95.59%
10/28/2019	214.65	22.31	34.51	33.4	20,225	95.58%
10/29/2019	214.63	26.00	40.22	15.8	20,177	95.35%
10/30/2019	214.62	24.89	38.50	33.8	20,167	95.31%
10/31/2019	214.69	22.85	35.35	105.5	20,306	95.97%
11/1/2019	215.15	21.92	33.91	457.9	21,148	99.94%
11/2/2019	215.44	23.16	35.83	59.3	21,160	100.00%
11/3/2019	215.57	23.41	36.22	45.6	21,160	100.00%
11/4/2019	215.68	23.78	36.79	44.6	21,160	100.00%
11/5/2019	215.72	23.55	36.43	39.8	21,160	100.00%
11/6/2019	215.73	23.07	35.69	37.0	21,160	100.00%
11/7/2019	215.79	23.26	35.98	41.0	21,160	100.00%
11/8/2019	215.77	22.66	35.06	24.5	21,139	99.90%
11/9/2019	215.73	21.55	33.34	4.5	21,081	99.63%
11/10/2019	215.74	22.14	34.25	53.2	21,119	99.81%
11/11/2019	215.72	22.73	35.16	29.0	21,107	99.75%
11/12/2019	215.84	19.90	30.79	65.6	21,160	100.00%
11/13/2019	215.85	22.45	34.73	35.5	21,160	100.00%
11/14/2019	215.96	20.53	31.76	39.6	21,160	100.00%
11/15/2019	216.03	20.33	31.45	36.5	21,160	100.00%
11/16/2019	216.06	22.59	34.95	35.7	21,160	100.00%
11/17/2019	216.09	21.43	33.15	33.3	21,160	100.00%
11/18/2019	216.09	22.62	34.99	35.8	21,160	100.00%

APPENDIX A - Daily Jordan Lake Water Supply Raw Water Withdrawals
Jordan Lake Water Supply Storage Allocation Tracking
Cary/Apex, Morrisville, and Wake County/RTP South COMBINED

Date	Reservoir Level (ft)	Cary/Apex/ Morrisville/RTP Water Supply (mgd)	Cary/Apex/ Morrisville/RTP Water Supply (cfs)	Inflow to Cary/Apex/ Morrisville/RTP (cfs)	Cary/Apex/ Morrisville/RTP Storage Level (ac-ft)	Cary/Apex/ Morrisville/RTP Storage Level (%)
11/19/2019	216.09	22.89	35.41	35.3	21,160	100.00%
11/20/2019	216.12	20.71	32.04	32.7	21,160	100.00%
11/21/2019	216.12	22.77	35.23	35.2	21,160	100.00%
11/22/2019	216.14	22.08	34.16	34.9	21,160	100.00%
11/23/2019	216.13	21.31	32.97	33.7	21,160	100.00%
11/24/2019	216.35	19.44	30.07	30.8	21,160	100.00%
11/25/2019	216.56	22.40	34.65	35.4	21,160	100.00%
11/26/2019	216.58	20.32	31.44	32.1	21,160	100.00%
11/27/2019	216.56	21.62	33.45	34.2	21,160	100.00%
11/28/2019	216.60	20.64	31.93	32.7	21,160	100.00%
11/29/2019	216.45	19.60	30.32	31.0	21,160	100.00%
11/30/2019	216.29	16.96	26.24	26.8	21,160	100.00%
12/1/2019	216.42	20.16	31.19	31.7	21,160	100.00%
12/2/2019	216.98	22.38	34.62	35.2	21,160	100.00%
12/3/2019	217.05	22.31	34.51	35.1	21,160	100.00%
12/4/2019	216.78	19.49	30.15	30.6	21,160	100.00%
12/5/2019	216.40	20.08	31.06	31.6	21,160	100.00%
12/6/2019	216.25	22.33	34.54	35.1	21,160	100.00%
12/7/2019	216.28	19.06	29.49	30.0	21,160	100.00%
12/8/2019	216.29	21.72	33.60	34.2	21,160	100.00%
12/9/2019	216.28	19.85	30.71	31.2	21,160	100.00%
12/10/2019	216.33	21.10	32.64	33.2	21,160	100.00%
12/11/2019	216.35	21.35	33.03	33.6	21,160	100.00%
12/12/2019	216.44	21.48	33.23	33.8	21,160	100.00%
12/13/2019	216.67	18.42	28.50	29.0	21,160	100.00%
12/14/2019	218.09	19.69	30.46	31.0	21,160	100.00%
12/15/2019	218.94	21.26	32.89	33.4	21,160	100.00%
12/16/2019	219.21	22.48	34.78	35.4	21,160	100.00%
12/17/2019	219.28	19.23	29.75	30.3	21,160	100.00%
12/18/2019	219.23	21.41	33.12	33.7	21,160	100.00%
12/19/2019	218.83	22.58	34.93	35.5	21,160	100.00%
12/20/2019	218.34	20.52	31.74	32.3	21,160	100.00%
12/21/2019	217.77	19.81	30.65	31.1	21,160	100.00%
12/22/2019	217.18	19.65	30.40	30.9	21,160	100.00%
12/23/2019	216.79	17.61	27.24	27.7	21,160	100.00%
12/24/2019	216.69	20.36	31.50	32.0	21,160	100.00%
12/25/2019	216.69	19.51	30.18	30.7	21,160	100.00%
12/26/2019	216.68	19.44	30.07	30.6	21,160	100.00%
12/27/2019	216.65	18.10	28.00	28.5	21,160	100.00%
12/28/2019	216.57	18.68	28.90	29.4	21,160	100.00%
12/29/2019	216.50	19.25	29.78	30.3	21,160	100.00%
12/30/2019	216.47	20.46	31.65	32.2	21,160	100.00%
12/31/2019	216.53	20.44	31.62	32.2	21,160	100.00%

Appendix C - Monthly Billed Water Use

The monthly billed potable water use was exported from the billing databases of the Towns of Cary and Apex. The Town of Cary billed water use includes Morrisville and Wake County/RTP South.

APPENDIX C

Billed Water Use

Apex and Cary (includes Morrisville, and Wake County/RTP South)

	Apex Billed Water Use (MGD)			Cary Billed Water Use[1] (MGD)		Total Billed Water Use (MGD)		
Billed Month	Haw	Neuse	Cape Fear	Haw	Neuse	Haw	Neuse	Cape Fear
Jan-2019	1.95	1.00	0.21	3.19	8.81	5.14	9.81	0.21
Feb-2019	1.92	0.96	0.24	3.34	9.40	5.26	10.35	0.24
Mar-2019	1.75	0.92	0.24	3.09	8.45	4.84	9.37	0.24
Apr-2019	1.77	0.92	0.21	3.30	9.12	5.07	10.04	0.21
May-2019	1.98	1.02	0.24	3.55	9.69	5.53	10.71	0.24
Jun-2019	2.59	1.15	0.23	4.84	11.93	7.43	13.08	0.23
Jul-2019	2.73	1.14	0.26	4.82	12.46	7.54	13.61	0.26
Aug-2019	3.00	1.29	0.26	4.69	12.32	7.69	13.61	0.26
Sep-2019	2.94	1.24	0.30	4.64	11.61	7.58	12.85	0.30
Oct-2019	2.63	1.15	0.24	4.99	12.52	7.63	13.67	0.24
Nov-2019	2.87	1.46	0.26	3.99	10.91	6.86	12.37	0.26
Dec-2019	2.02	1.00	0.23	3.36	8.92	5.38	9.92	0.23
Annual Average Day	2.34	1.10	0.24	3.98	10.49	6.32	11.60	0.24

[1] Cary Billed Water Use includes Morrisville and Wake County/RTP South

This page has been intentionally left blank.

	(1)	(2)	(3)	(4)	(5)=1+2+3+4	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)=6+7+12+13	(17)=8+9+14	(18)=10+11+15	(19)=16+17+18	(20)=8+9	(21)=18-2-3-4
	Water Withdrawal/Purchase (mgd)					Consumptive Use (mgd)						Water Use Discharged as Wastewater (mgd)				Total Returned/Used in Each Basin (mgd)				Interbasin Transfer (mgd)	
	Jordan Lake Withdrawal	Neuse Basin Purchase			Total System Use	Haw		Cape Fear		Neuse		Haw		Cape Fear	Neuse	Haw	Cape Fear	Neuse	Total for All Basins	Haw to Cape Fear	Haw to Neuse
	Haw	Raleigh	Durham	Durham Co. Reclaimed		Potable	WRF Reuse	Potable	WRF Reuse	Potable	WRF Reuse	WTP Process Water	WRF	WRF	Total WRFs						
1/1/2019	19.75	0.00	0.00	0.036	19.79	0.286	0.036	0.012	0.000	0.552	0.196	2.79	0.00	4.99	10.92	3.11	5.00	11.67	19.79	0.012	11.64
1/2/2019	19.57	0.00	0.00	0.038	19.61	0.307	0.038	0.013	0.000	0.593	0.219	1.37	0.00	5.22	11.85	1.71	5.23	12.66	19.61	0.013	12.62
1/3/2019	20.05	0.00	0.00	0.032	20.08	0.262	0.032	0.011	0.000	0.506	0.207	4.50	0.00	3.89	10.68	4.79	3.90	11.39	20.08	0.011	11.36
1/4/2019	23.45	0.00	0.00	0.036	23.49	0.334	0.036	0.014	0.000	0.646	0.201	3.62	0.00	5.42	13.21	3.99	5.43	14.06	23.49	0.014	14.03
1/5/2019	19.87	0.00	0.00	0.033	19.90	0.280	0.033	0.011	0.000	0.541	0.206	3.26	0.00	4.39	11.18	3.57	4.40	11.93	19.90	0.011	11.90
1/6/2019	20.23	0.00	0.00	0.037	20.27	0.312	0.037	0.013	0.000	0.604	0.207	1.69	0.00	5.72	11.68	2.04	5.73	12.49	20.27	0.013	12.46
1/7/2019	20.37	0.00	0.00	0.038	20.41	0.315	0.038	0.013	0.000	0.609	0.228	1.66	0.00	5.44	12.10	2.01	5.45	12.94	20.41	0.013	12.90
1/8/2019	20.49	0.00	0.00	0.035	20.53	0.298	0.035	0.012	0.000	0.577	0.483	2.77	0.00	4.97	11.38	3.10	4.98	12.44	20.53	0.012	12.41
1/9/2019	21.25	0.00	0.00	0.038	21.29	0.302	0.038	0.012	0.000	0.584	0.112	3.31	0.00	5.06	11.86	3.65	5.08	12.56	21.29	0.012	12.52
1/10/2019	19.99	0.00	0.00	0.044	20.03	0.302	0.044	0.012	0.000	0.583	0.040	2.08	0.00	5.10	11.86	2.43	5.12	12.48	20.03	0.012	12.44
1/11/2019	19.70	0.00	0.00	0.040	19.74	0.307	0.040	0.013	0.000	0.594	0.235	1.46	0.00	5.03	12.06	1.81	5.05	12.89	19.74	0.013	12.85
1/12/2019	18.41	0.00	0.00	0.042	18.45	0.282	0.042	0.012	0.000	0.545	0.190	1.67	0.00	4.64	11.07	1.99	4.66	11.80	18.45	0.012	11.76
1/13/2019	19.22	0.00	0.00	0.036	19.26	0.288	0.036	0.012	0.000	0.557	0.201	2.11	0.00	4.07	11.98	2.43	4.08	12.74	19.26	0.012	12.70
1/14/2019	21.12	0.00	0.00	0.037	21.16	0.303	0.037	0.012	0.000	0.586	0.234	3.14	0.00	5.45	11.40	3.48	5.46	12.22	21.16	0.012	12.18
1/15/2019	18.30	0.00	0.00	0.035	18.34	0.290	0.035	0.012	0.000	0.560	0.198	1.09	0.00	4.89	11.26	1.41	4.91	12.01	18.34	0.012	11.98
1/16/2019	20.00	0.00	0.00	0.071	20.07	0.310	0.071	0.013	0.000	0.600	0.194	1.62	0.00	5.14	12.12	2.00	5.16	12.91	20.07	0.013	12.84
1/17/2019	21.90	0.00	0.00	0.080	21.98	0.330	0.080	0.014	0.000	0.637	0.183	2.37	0.00	5.49	12.88	2.78	5.50	13.70	21.98	0.014	13.62
1/18/2019	18.89	0.00	0.00	0.092	18.98	0.263	0.092	0.011	0.000	0.509	0.180	3.33	0.00	4.47	10.12	3.69	4.49	10.81	18.98	0.011	10.72
1/19/2019	18.96	0.00	0.00	0.100	19.06	0.299	0.100	0.012	0.000	0.578	0.169	1.28	0.00	5.01	11.61	1.68	5.02	12.36	19.06	0.012	12.26
1/20/2019	18.47	0.00	0.00	0.099	18.57	0.281	0.099	0.012	0.000	0.544	0.210	1.83	0.00	4.27	11.32	2.21	4.29	12.07	18.57	0.012	11.97
1/21/2019	19.42	0.00	0.00	0.079	19.50	0.302	0.079	0.012	0.000	0.585	0.277	1.51	0.00	5.33	11.41	1.89	5.34	12.27	19.50	0.012	12.19
1/22/2019	20.12	0.00	0.00	0.084	20.20	0.307	0.084	0.013	0.000	0.594	0.198	1.94	0.00	5.40	11.67	2.33	5.41	12.46	20.20	0.013	12.38
1/23/2019	20.27	0.00	0.00	0.124	20.39	0.307	0.124	0.013	0.000	0.594	0.161	2.11	0.00	5.06	12.02	2.54	5.08	12.78	20.39	0.013	12.65
1/24/2019	21.25	0.00	0.00	0.110	21.36	0.311	0.110	0.013	0.000	0.601	0.171	2.88	0.00	4.42	12.86	3.30	4.43	13.63	21.36	0.013	13.52
1/25/2019	19.50	0.00	0.00	0.110	19.61	0.304	0.110	0.012	0.000	0.588	0.216	1.51	0.00	5.39	11.47	1.92	5.41	12.28	19.61	0.012	12.17
1/26/2019	19.47	0.00	0.00	0.110	19.58	0.296	0.110	0.012	0.000	0.572	0.188	1.98	0.00	5.07	11.35	2.39	5.08	12.11	19.58	0.012	12.00
1/27/2019	20.29	0.00	0.00	0.110	20.40	0.306	0.110	0.013	0.000	0.591	0.195	2.21	0.00	5.21	11.76	2.63	5.22	12.55	20.40	0.013	12.44
1/28/2019	22.41	0.00	0.00	0.114	22.52	0.328	0.114	0.013	0.000	0.635	0.169	2.99	0.00	5.88	12.39	3.43	5.90	13.20	22.52	0.013	13.08
1/29/2019	20.53	0.00	0.00	0.105	20.64	0.301	0.105	0.012	0.000	0.582	0.216	2.72	0.00	4.84	11.86	3.13	4.86	12.65	20.64	0.012	12.55
1/30/2019	19.48	0.00	0.00	0.057	19.53	0.293	0.057	0.012	0.000	0.567	0.214	2.09	0.00	4.76	11.54	2.44	4.77	12.32	19.53	0.012	12.26
1/31/2019	19.03	0.00	0.00	0.097	19.13	0.280	0.097	0.011	0.000	0.541	0.193	2.47	0.00	4.81	10.73	2.85	4.82	11.46	19.13	0.011	11.36
2/1/2019	20.16	0.00	0.00	0.057	20.22	0.296	0.057	0.012	0.000	0.573	0.173	2.58	0.00	4.98	11.54	2.93	4.99	12.29	20.22	0.012	12.23
2/2/2019	20.38	0.00	0.00	0.072	20.45	0.284	0.072	0.012	0.000	0.550	0.192	3.53	0.00	4.76	11.05	3.89	4.78	11.79	20.45	0.012	11.72
2/3/2019	18.57	0.00	0.00	0.063	18.63	0.284	0.063	0.012	0.000	0.549	0.219	1.75	0.00	4.77	10.98	2.10	4.78	11.75	18.63	0.012	11.69
2/4/2019	21.89	0.00	0.00	0.054	21.94	0.364	0.054	0.015	0.000	0.703	0.253	1.61	0.00	5.94	13.00	2.03	5.96	13.96	21.94	0.015	13.90
2/5/2019	19.68	0.00	0.00	0.061	19.74	0.276	0.061	0.011	0.000	0.534	0.203	3.31	0.00	4.77	10.58	3.65	4.78	11.32	19.74	0.011	11.25
2/6/2019	19.50	0.00	0.00	0.064	19.56	0.289	0.064	0.012	0.000	0.559	0.224	2.37	0.00	4.76	11.28	2.72	4.77	12.07	19.56	0.012	12.00
2/7/2019	20.45	0.00	0.00	0.029	20.48	0.298	0.029	0.012	0.000	0.577	0.203	2.73	0.00	4.91	11.72	3.06	4.92	12.50	20.48	0.012	12.47

	(1)	(2)	(3)	(4)	(5)=1+2+3+4	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)=6+7+12+13	(17)=8+9+14	(18)=10+11+15	(19)=16+17+18	(20)=8+9	(21)=18-2-3-4
	Water Withdrawal/Purchase (mgd)					Consumptive Use (mgd)						Water Use Discharged as Wastewater (mgd)				Total Returned/Used in Each Basin (mgd)				Interbasin Transfer (mgd)	
	Jordan Lake Withdrawal	Neuse Basin Purchase			Total System Use	Haw		Cape Fear		Neuse		Haw		Cape Fear	Neuse	Haw	Cape Fear	Neuse	Total for All Basins	Haw to Cape Fear	Haw to Neuse
	Haw	Raleigh	Durham	Durham Co. Reclaimed		Potable	WRF Reuse	Potable	WRF Reuse	Potable	WRF Reuse	WTP Process Water	WRF	WRF	Total WRFs						
2/8/2019	19.91	0.00	0.00	0.274	20.18	0.315	0.274	0.013	0.000	0.608	0.339	1.47	0.00	5.11	12.06	2.06	5.12	13.00	20.18	0.013	12.73
2/9/2019	19.74	0.00	0.00	0.045	19.79	0.287	0.045	0.012	0.000	0.555	0.484	2.70	0.00	4.63	11.07	3.03	4.64	12.11	19.79	0.012	12.06
2/10/2019	20.02	0.00	0.00	0.000	20.02	0.290	0.000	0.012	0.000	0.561	0.703	2.76	0.00	4.66	11.04	3.05	4.67	12.30	20.02	0.012	12.30
2/11/2019	17.78	0.00	0.00	0.000	17.78	0.273	0.000	0.011	0.000	0.527	0.351	1.56	0.00	4.51	10.55	1.83	4.52	11.43	17.78	0.011	11.43
2/12/2019	20.36	0.00	0.00	0.000	20.36	0.280	0.000	0.012	0.000	0.542	-0.150	3.67	0.00	4.58	11.42	3.95	4.59	11.81	20.36	0.012	11.81
2/13/2019	21.39	0.00	0.00	0.195	21.59	0.551	0.195	0.023	0.000	1.065	-0.047	1.12	0.00	5.26	13.42	1.87	5.28	14.44	21.59	0.023	14.25
2/14/2019	21.43	0.00	0.00	0.176	21.61	0.315	0.176	0.013	0.000	0.609	0.072	2.88	0.00	5.07	12.47	3.37	5.09	13.15	21.61	0.013	12.97
2/15/2019	19.66	0.00	0.00	0.185	19.85	0.287	0.185	0.012	0.000	0.556	0.478	2.75	0.00	4.59	10.98	3.22	4.61	12.02	19.85	0.012	11.83
2/16/2019	19.36	0.00	0.00	0.072	19.43	0.288	0.072	0.012	0.000	0.556	0.582	2.33	0.00	4.10	11.49	2.69	4.12	12.63	19.43	0.012	12.55
2/17/2019	19.77	0.00	0.00	0.038	19.81	0.281	0.038	0.012	0.000	0.543	0.581	3.11	0.00	4.89	10.35	3.43	4.91	11.47	19.81	0.012	11.44
2/18/2019	18.54	0.00	0.00	0.037	18.57	0.246	0.037	0.010	0.000	0.475	0.441	3.97	0.00	3.65	9.75	4.25	3.66	10.66	18.57	0.010	10.63
2/19/2019	21.38	0.00	0.00	0.042	21.42	0.315	0.042	0.013	0.000	0.608	0.329	2.70	0.00	5.29	12.13	3.06	5.30	13.06	21.42	0.013	13.02
2/20/2019	19.38	0.00	0.00	0.038	19.42	0.279	0.038	0.011	0.000	0.539	0.380	2.83	0.00	3.89	11.45	3.15	3.90	12.37	19.42	0.012	12.33
2/21/2019	20.44	0.00	0.00	0.037	20.48	0.294	0.037	0.012	0.000	0.568	0.337	3.01	0.00	4.42	11.80	3.34	4.43	12.70	20.48	0.012	12.66
2/22/2019	19.60	0.00	0.00	0.047	19.65	0.304	0.047	0.012	0.000	0.588	0.343	1.54	0.00	4.02	12.79	1.89	4.04	13.72	19.65	0.012	13.67
2/23/2019	19.28	0.00	0.00	0.038	19.32	0.282	0.038	0.012	0.000	0.544	0.322	2.57	0.00	3.86	11.69	2.89	3.87	12.55	19.32	0.012	12.52
2/24/2019	19.71	0.00	0.00	0.037	19.75	0.288	0.037	0.012	0.000	0.557	0.326	2.62	0.00	4.71	11.19	2.94	4.73	12.08	19.75	0.012	12.04
2/25/2019	21.64	0.00	0.00	0.047	21.69	0.328	0.047	0.013	0.000	0.633	0.351	2.20	0.00	5.81	12.30	2.58	5.83	13.29	21.69	0.013	13.24
2/26/2019	21.21	0.00	0.00	0.066	21.28	0.297	0.066	0.012	0.000	0.574	0.359	3.60	0.00	4.91	11.45	3.96	4.92	12.39	21.28	0.012	12.32
2/27/2019	18.94	0.00	0.00	0.116	19.06	0.300	0.116	0.012	0.001	0.579	0.385	1.24	0.00	4.74	11.68	1.66	4.76	12.64	19.06	0.013	12.53
2/28/2019	19.77	0.00	0.00	0.029	19.79	0.297	0.029	0.012	0.000	0.573	0.393	2.15	0.00	4.93	11.41	2.48	4.95	12.37	19.79	0.012	12.34
3/1/2019	23.22	0.00	0.00	0.039	23.26	0.342	0.039	0.014	0.001	0.662	0.401	2.89	0.00	5.26	13.65	3.27	5.27	14.72	23.26	0.015	14.68
3/2/2019	21.15	0.00	0.21	0.028	21.39	0.317	0.028	0.013	0.000	0.613	0.395	2.52	0.00	4.82	12.68	2.87	4.84	13.69	21.39	0.013	13.45
3/3/2019	18.50	0.00	0.00	0.031	18.53	0.296	0.031	0.012	0.000	0.571	0.352	0.95	0.00	4.79	11.53	1.28	4.80	12.45	18.53	0.012	12.42
3/4/2019	23.05	0.00	0.00	0.054	23.10	0.334	0.054	0.014	0.000	0.645	0.403	3.26	0.00	5.02	13.37	3.65	5.03	14.42	23.10	0.014	14.37
3/5/2019	22.39	0.00	0.00	0.038	22.43	0.335	0.038	0.014	0.000	0.648	0.354	2.48	0.00	5.62	12.94	2.85	5.63	13.94	22.43	0.014	13.91
3/6/2019	19.19	0.00	0.00	0.039	19.23	0.290	0.039	0.012	0.000	0.561	0.330	1.96	0.00	4.73	11.31	2.29	4.74	12.20	19.23	0.012	12.16
3/7/2019	21.49	0.00	0.00	0.051	21.54	0.319	0.051	0.013	0.000	0.617	0.311	2.57	0.00	5.17	12.49	2.94	5.18	13.42	21.54	0.013	13.37
3/8/2019	22.07	0.00	0.00	0.042	22.11	0.342	0.042	0.014	0.000	0.662	0.303	1.75	0.00	5.60	13.40	2.13	5.62	14.36	22.11	0.014	14.32
3/9/2019	19.30	0.00	0.00	0.082	19.38	0.290	0.082	0.012	0.000	0.561	0.297	2.13	0.00	4.70	11.31	2.50	4.72	12.16	19.38	0.012	12.08
3/10/2019	19.19	0.00	0.00	0.037	19.23	0.295	0.037	0.012	0.000	0.571	0.269	1.65	0.00	5.14	11.25	1.98	5.15	12.09	19.23	0.012	12.06
3/11/2019	21.06	0.00	0.00	0.043	21.10	0.338	0.043	0.014	0.000	0.654	0.329	0.97	0.00	5.84	12.91	1.35	5.86	13.89	21.10	0.014	13.85
3/12/2019	20.39	0.00	0.00	0.047	20.44	0.272	0.047	0.011	0.000	0.526	0.327	4.25	0.00	4.30	10.70	4.57	4.31	11.56	20.44	0.011	11.51
3/13/2019	20.85	0.00	0.00	0.044	20.89	0.333	0.044	0.014	0.000	0.645	0.303	1.06	0.00	5.39	13.11	1.44	5.40	14.05	20.89	0.014	14.01
3/14/2019	22.75	0.00	0.00	0.045	22.80	0.476	0.045	0.020	0.001	0.920	0.311	2.36	0.00	5.57	13.10	2.88	5.59	14.33	22.80	0.020	14.28
3/15/2019	20.52	0.00	0.00	0.049	20.57	0.282	0.049	0.012	0.000	0.545	0.343	3.79	0.00	4.67	10.88	4.12	4.68	11.77	20.57	0.012	11.72
3/16/2019	19.10	0.00	0.00	0.041	19.14	0.284	0.041	0.012	0.000	0.550	0.330	2.22	0.00	4.83	10.88	2.54	4.84	11.76	19.14	0.012	11.72
3/17/2019	20.60	0.00	0.00	0.040	20.64	0.307	0.040	0.013	0.000	0.594	0.290	2.35	0.00	5.31	11.74	2.70	5.32	12.62	20.64	0.013	12.58

	(1)	(2)	(3)	(4)	(5)=1+2+3+4	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)=6+7+12+13	(17)=8+9+14	(18)=10+11+15	(19)=16+17+18	(20)=8+9	(21)=18-2-3-4
	Water Withdrawal/Purchase (mgd)					Consumptive Use (mgd)						Water Use Discharged as Wastewater (mgd)				Total Returned/Used in Each Basin (mgd)				Interbasin Transfer (mgd)	
	Jordan Lake Withdrawal	Neuse Basin Purchase			Total System Use	Haw		Cape Fear		Neuse		Haw		Cape Fear	Neuse	Haw	Cape Fear	Neuse	Total for All Basins	Haw to Cape Fear	Haw to Neuse
	Haw	Raleigh	Durham	Durham Co. Reclaimed		Potable	WRF Reuse	Potable	WRF Reuse	Potable	WRF Reuse	WTP Process Water	WRF	WRF	Total WRFs						
3/18/2019	21.42	0.00	0.00	0.110	21.53	0.325	0.110	0.013	0.000	0.629	0.367	2.19	0.00	5.34	12.56	2.63	5.35	13.55	21.53	0.013	13.44
3/19/2019	19.41	0.00	0.00	0.070	19.48	0.285	0.070	0.012	0.000	0.551	0.314	2.53	0.00	4.67	11.05	2.88	4.68	11.91	19.48	0.012	11.84
3/20/2019	20.88	0.00	0.00	0.044	20.92	0.314	0.044	0.013	0.000	0.607	0.328	2.25	0.00	5.21	12.16	2.61	5.22	13.10	20.92	0.013	13.05
3/21/2019	19.15	0.00	0.00	0.066	19.22	0.285	0.066	0.012	0.000	0.550	0.285	2.28	0.00	4.62	11.12	2.63	4.63	11.96	19.22	0.012	11.89
3/22/2019	20.04	0.00	0.00	0.043	20.08	0.307	0.043	0.013	0.000	0.594	0.361	1.80	0.00	4.90	12.06	2.15	4.92	13.02	20.08	0.013	12.97
3/23/2019	19.14	0.00	0.00	0.060	19.20	0.295	0.060	0.012	0.000	0.570	0.317	1.66	0.00	5.09	11.19	2.01	5.10	12.08	19.20	0.012	12.02
3/24/2019	20.08	0.00	0.00	0.049	20.13	0.306	0.049	0.013	0.000	0.591	0.331	1.94	0.00	5.30	11.60	2.29	5.31	12.52	20.13	0.013	12.47
3/25/2019	21.30	0.00	0.00	0.047	21.35	0.307	0.047	0.013	0.000	0.594	0.347	3.06	0.00	5.09	11.88	3.41	5.11	12.83	21.35	0.013	12.78
3/26/2019	19.21	0.00	0.00	0.072	19.28	0.291	0.072	0.012	0.000	0.562	0.295	1.99	0.00	4.86	11.20	2.35	4.87	12.06	19.28	0.012	11.99
3/27/2019	20.53	0.00	0.00	0.042	20.57	0.320	0.042	0.013	0.000	0.619	0.365	1.52	0.00	5.19	12.50	1.88	5.20	13.49	20.57	0.013	13.45
3/28/2019	20.71	0.00	0.00	0.061	20.77	0.310	0.061	0.013	0.000	0.600	0.324	2.31	0.00	5.00	12.15	2.68	5.02	13.07	20.77	0.013	13.01
3/29/2019	20.31	0.00	0.00	0.048	20.36	0.686	0.048	0.028	0.000	1.325	0.332	2.20	0.00	3.40	12.34	2.93	3.43	14.00	20.36	0.028	13.95
3/30/2019	20.45	0.00	0.00	0.089	20.54	0.290	0.089	0.012	0.000	0.560	0.337	3.31	0.00	4.32	11.62	3.69	4.34	12.51	20.54	0.012	12.42
3/31/2019	20.17	0.00	0.00	0.052	20.22	0.321	0.052	0.013	0.000	0.621	0.316	1.12	0.00	6.91	10.87	1.49	6.93	11.80	20.22	0.013	11.75
4/1/2019	22.18	0.00	0.00	0.041	22.22	0.328	0.041	0.013	0.000	0.634	0.349	2.70	0.00	5.94	12.22	3.07	5.95	13.20	22.22	0.013	13.16
4/2/2019	19.27	0.00	0.00	0.085	19.36	0.293	0.085	0.012	0.000	0.567	0.319	1.90	0.00	4.61	11.56	2.28	4.63	12.45	19.36	0.012	12.37
4/3/2019	21.16	0.00	0.00	0.041	21.20	0.322	0.041	0.013	0.000	0.623	0.338	2.04	0.00	5.07	12.75	2.40	5.08	13.71	21.20	0.013	13.67
4/4/2019	20.23	0.00	0.00	0.057	20.28	0.304	0.057	0.012	0.000	0.588	0.346	2.18	0.00	4.93	11.86	2.55	4.95	12.79	20.28	0.013	12.74
4/5/2019	24.66	0.00	0.00	0.063	24.73	0.362	0.063	0.015	0.000	0.701	0.384	3.17	0.00	5.60	14.44	3.59	5.61	15.52	24.73	0.015	15.46
4/6/2019	21.46	0.00	0.00	0.042	21.50	0.317	0.042	0.013	0.000	0.614	0.328	2.62	0.00	5.17	12.40	2.98	5.18	13.34	21.50	0.013	13.30
4/7/2019	21.56	0.00	0.00	0.041	21.60	0.316	0.041	0.013	0.000	0.612	0.309	2.78	0.00	5.35	12.18	3.14	5.36	13.10	21.60	0.013	13.06
4/8/2019	23.60	0.00	0.00	0.050	23.65	0.339	0.050	0.014	0.000	0.656	0.324	3.48	0.00	5.04	13.74	3.87	5.06	14.72	23.65	0.014	14.67
4/9/2019	20.01	0.00	0.00	0.051	20.06	0.295	0.051	0.012	0.000	0.571	0.356	2.50	0.00	3.73	12.55	2.85	3.74	13.47	20.06	0.012	13.42
4/10/2019	21.50	0.00	0.00	0.049	21.55	0.320	0.049	0.013	0.000	0.618	0.361	2.53	0.00	5.49	12.17	2.90	5.51	13.14	21.55	0.013	13.10
4/11/2019	22.34	0.00	0.00	0.054	22.39	0.311	0.054	0.013	0.000	0.600	0.356	3.92	0.00	5.23	11.92	4.28	5.24	12.87	22.39	0.013	12.82
4/12/2019	22.65	0.00	0.00	0.073	22.72	0.339	0.073	0.014	0.000	0.655	0.343	2.56	0.00	5.45	13.29	2.97	5.46	14.29	22.72	0.014	14.22
4/13/2019	19.39	0.00	0.00	0.044	19.43	0.277	0.044	0.011	0.000	0.536	0.354	2.94	0.00	3.80	11.47	3.26	3.81	12.36	19.43	0.011	12.32
4/14/2019	18.41	0.00	0.00	0.040	18.45	0.285	0.040	0.012	0.000	0.550	0.308	1.52	0.00	5.09	10.64	1.84	5.11	11.50	18.45	0.012	11.46
4/15/2019	20.19	0.00	0.00	0.064	20.25	0.299	0.064	0.012	0.000	0.578	0.462	2.47	0.00	4.63	11.74	2.83	4.64	12.78	20.25	0.012	12.72
4/16/2019	20.96	0.00	0.00	0.041	21.00	0.307	0.041	0.013	0.000	0.593	0.426	2.76	0.00	5.39	11.47	3.11	5.41	12.49	21.00	0.013	12.45
4/17/2019	20.11	0.00	0.00	0.055	20.16	0.304	0.055	0.012	0.000	0.587	0.414	2.09	0.00	4.63	12.07	2.45	4.65	13.07	20.16	0.012	13.01
4/18/2019	21.83	0.00	0.00	0.086	21.92	0.309	0.086	0.013	0.000	0.598	0.391	3.52	0.00	4.93	12.07	3.92	4.95	13.06	21.92	0.013	12.97
4/19/2019	19.27	0.00	0.00	0.083	19.35	0.299	0.083	0.012	0.000	0.578	0.407	1.56	0.00	4.37	12.04	1.94	4.38	13.03	19.35	0.012	12.94
4/20/2019	18.90	0.00	0.00	0.042	18.94	0.282	0.042	0.012	0.000	0.546	0.342	2.14	0.00	4.76	10.82	2.46	4.77	11.70	18.94	0.012	11.66
4/21/2019	19.10	0.00	0.00	0.042	19.14	0.285	0.042	0.012	0.000	0.551	0.379	2.18	0.00	5.12	10.57	2.51	5.13	11.50	19.14	0.012	11.46
4/22/2019	22.32	0.00	0.00	0.046	22.37	0.330	0.046	0.014	0.000	0.638	0.362	2.75	0.00	5.67	12.55	3.13	5.69	13.55	22.37	0.014	13.51
4/23/2019	21.15	0.00	0.00	0.077	21.23	0.298	0.077	0.012	0.000	0.575	0.440	3.52	0.00	5.12	11.19	3.89	5.13	12.20	21.23	0.012	12.13
4/24/2019	23.01	0.00	0.00	0.093	23.10	0.334	0.093	0.014	0.000	0.646	0.428	3.24	0.00	5.59	12.76	3.67	5.61	13.83	23.10	0.014	13.74

	(1)	(2)	(3)	(4)	(5)=1+2+3+4	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)=6+7+12+13	(17)=8+9+14	(18)=10+11+15	(19)=16+17+18	(20)=8+9	(21)=18-2-3-4
	Water Withdrawal/Purchase (mgd)					Consumptive Use (mgd)						Water Use Discharged as Wastewater (mgd)				Total Returned/Used in Each Basin (mgd)				Interbasin Transfer (mgd)	
	Jordan Lake Withdrawal	Neuse Basin Purchase			Total System Use	Haw		Cape Fear		Neuse		Haw		Cape Fear	Neuse	Haw	Cape Fear	Neuse	Total for All Basins	Haw to Cape Fear	Haw to Neuse
	Haw	Raleigh	Durham	Durham Co. Reclaimed		Potable	WRF Reuse	Potable	WRF Reuse	Potable	WRF Reuse	WTP Process Water	WRF	WRF	Total WRFs						
4/25/2019	22.70	0.00	0.00	0.094	22.80	0.329	0.094	0.014	0.000	0.637	0.400	3.20	0.00	5.53	12.60	3.62	5.54	13.63	22.80	0.014	13.54
4/26/2019	22.44	0.00	0.00	0.137	22.58	0.321	0.137	0.013	0.000	0.621	0.299	3.46	0.00	5.33	12.39	3.92	5.35	13.31	22.58	0.013	13.17
4/27/2019	21.48	0.00	0.00	0.187	21.67	0.310	0.187	0.013	0.000	0.599	0.265	3.23	0.00	5.32	11.75	3.73	5.33	12.61	21.67	0.013	12.43
4/28/2019	21.64	0.00	0.00	0.087	21.73	0.324	0.087	0.013	0.000	0.627	0.279	2.43	0.00	5.57	12.40	2.84	5.58	13.30	21.73	0.013	13.22
4/29/2019	23.42	0.00	0.00	0.094	23.51	0.364	0.094	0.015	0.000	0.704	0.304	3.42	0.00	5.99	12.62	3.88	6.00	13.63	23.51	0.015	13.54
4/30/2019	24.11	0.00	0.00	0.014	24.12	0.411	0.014	0.017	0.000	0.795	0.293	4.49	0.00	5.55	12.56	4.92	5.56	13.65	24.12	0.017	13.63
5/1/2019	26.46	0.00	0.00	0.163	26.62	0.792	0.163	0.033	0.000	1.532	0.368	5.76	0.00	5.37	12.60	6.72	5.40	14.50	26.62	0.033	14.34
5/2/2019	24.54	0.00	0.00	0.210	24.75	0.962	0.210	0.039	0.007	1.859	0.343	3.34	0.00	5.40	12.59	4.51	5.44	14.79	24.75	0.046	14.58
5/3/2019	24.98	0.00	0.00	0.148	25.13	0.873	0.148	0.036	0.000	1.688	0.637	4.14	0.00	5.44	12.16	5.16	5.48	14.49	25.13	0.036	14.34
5/4/2019	23.10	0.00	0.00	0.242	23.34	0.699	0.242	0.029	0.001	1.351	0.324	3.38	0.00	5.32	12.00	4.32	5.35	13.68	23.34	0.029	13.43
5/5/2019	22.45	0.00	0.00	0.143	22.59	0.340	0.143	0.014	0.000	0.657	0.284	2.38	0.00	5.62	13.15	2.86	5.63	14.10	22.59	0.014	13.95
5/6/2019	23.24	0.00	0.00	0.072	23.31	0.339	0.072	0.014	0.000	0.656	0.255	3.12	0.00	6.31	12.54	3.53	6.32	13.46	23.31	0.014	13.38
5/7/2019	22.26	0.00	0.00	0.172	22.43	0.314	0.172	0.013	0.001	0.607	0.337	3.76	0.00	5.37	11.86	4.25	5.39	12.80	22.43	0.014	12.63
5/8/2019	23.44	0.00	0.00	0.158	23.59	0.960	0.158	0.039	0.000	1.855	0.319	2.53	0.00	5.42	12.31	3.64	5.46	14.49	23.59	0.040	14.33
5/9/2019	25.19	0.00	0.00	0.262	25.45	0.991	0.262	0.041	0.000	1.916	0.373	3.92	0.00	5.49	12.46	5.17	5.53	14.75	25.45	0.041	14.49
5/10/2019	24.04	0.00	0.00	0.197	24.24	0.861	0.197	0.035	0.000	1.664	0.301	3.80	0.00	5.43	11.95	4.86	5.46	13.92	24.24	0.035	13.72
5/11/2019	23.65	0.00	0.00	0.280	23.93	1.073	0.280	0.044	0.008	2.075	0.315	3.09	0.00	5.35	11.69	4.44	5.40	14.08	23.93	0.052	13.80
5/12/2019	22.64	0.00	0.00	0.117	22.76	0.478	0.117	0.020	0.000	0.924	0.320	2.81	0.00	5.71	12.38	3.40	5.73	13.62	22.76	0.020	13.50
5/13/2019	22.96	0.00	0.00	0.276	23.24	0.338	0.276	0.014	0.000	0.653	0.353	3.14	0.00	5.52	12.94	3.75	5.53	13.95	23.24	0.014	13.67
5/14/2019	23.94	0.00	0.00	0.132	24.07	0.627	0.132	0.026	0.000	1.212	0.251	3.45	0.00	5.89	12.48	4.21	5.91	13.94	24.07	0.026	13.81
5/15/2019	23.29	0.00	0.00	0.178	23.47	1.260	0.178	0.052	0.000	2.436	0.324	2.67	0.00	5.66	10.89	4.11	5.71	13.65	23.47	0.052	13.47
5/16/2019	23.94	0.00	0.00	0.198	24.14	0.570	0.198	0.023	0.000	1.101	0.369	2.93	0.00	7.07	11.88	3.70	7.09	13.35	24.14	0.023	13.15
5/17/2019	26.83	0.00	0.00	0.313	27.14	2.402	0.313	0.099	0.001	4.644	0.494	3.72	0.00	3.69	11.78	6.44	3.79	16.92	27.14	0.100	16.61
5/18/2019	26.12	0.00	0.00	0.266	26.39	2.092	0.266	0.086	0.000	4.044	0.450	3.01	0.00	5.30	11.13	5.37	5.39	15.63	26.39	0.086	15.36
5/19/2019	28.78	0.00	0.00	0.308	29.09	2.229	0.308	0.091	0.000	4.310	0.483	3.52	0.00	5.38	12.77	6.06	5.47	17.56	29.09	0.091	17.25
5/20/2019	26.12	0.00	0.00	0.332	26.45	1.625	0.332	0.067	0.000	3.141	0.447	3.47	0.00	5.58	11.79	5.43	5.65	15.38	26.45	0.067	15.04
5/21/2019	29.31	0.00	0.00	0.382	29.69	2.612	0.382	0.107	0.001	5.050	0.807	4.32	0.00	5.32	11.10	7.31	5.42	16.95	29.69	0.108	16.57
5/22/2019	30.97	0.00	0.00	0.237	31.21	3.134	0.237	0.129	0.001	6.058	0.616	4.29	0.00	5.57	11.17	7.66	5.70	17.85	31.21	0.130	17.61
5/23/2019	26.46	0.00	0.00	0.395	26.86	2.107	0.395	0.086	0.001	4.073	0.673	2.86	0.00	5.22	11.44	5.36	5.30	16.19	26.86	0.087	15.80
5/24/2019	31.02	0.00	0.00	0.250	31.27	3.181	0.250	0.131	0.000	6.150	0.566	4.57	0.00	5.35	11.07	8.00	5.48	17.79	31.27	0.131	17.54
5/25/2019	29.77	0.00	0.00	0.485	30.26	3.122	0.485	0.128	0.000	6.036	0.637	3.77	0.00	5.17	10.90	7.38	5.30	17.58	30.26	0.128	17.09
5/26/2019	27.28	0.00	0.00	0.329	27.61	2.890	0.329	0.119	0.000	5.586	0.707	2.92	0.00	5.01	10.05	6.14	5.13	16.34	27.61	0.119	16.01
5/27/2019	27.45	0.00	0.00	0.456	27.91	2.917	0.456	0.120	0.000	5.639	0.677	2.59	0.00	4.89	10.62	5.96	5.01	16.94	27.91	0.120	16.48
5/28/2019	33.28	0.00	0.00	0.529	33.81	4.083	0.529	0.167	0.000	7.893	0.762	4.33	0.00	5.39	10.65	8.94	5.56	19.31	33.81	0.167	18.78
5/29/2019	32.85	0.00	0.00	0.345	33.20	4.134	0.345	0.170	0.001	7.992	0.862	3.56	0.00	5.25	10.88	8.04	5.42	19.74	33.20	0.170	19.39
5/30/2019	29.55	0.00	0.00	0.560	30.11	3.704	0.560	0.152	0.000	7.161	0.748	1.95	0.00	5.16	10.68	6.21	5.31	18.59	30.11	0.152	18.03
5/31/2019	35.19	0.00	0.00	0.381	35.57	3.933	0.381	0.161	0.001	7.603	0.731	6.10	0.00	5.04	11.62	10.41	5.21	19.95	35.57	0.162	19.57
6/1/2019	26.86	0.00	0.00	0.402	27.26	1.997	0.402	0.082	0.000	3.862	0.561	4.18	0.00	5.18	11.00	6.58	5.26	15.42	27.26	0.082	15.02

	(1)	(2)	(3)	(4)	(5)=1+2+3+4	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)=6+7+12+13	(17)=8+9+14	(18)=10+11+15	(19)=16+17+18	(20)=8+9	(21)=18-2-3-4
	Water Withdrawal/Purchase (mgd)					Consumptive Use (mgd)						Water Use Discharged as Wastewater (mgd)				Total Returned/Used in Each Basin (mgd)				Interbasin Transfer (mgd)	
	Jordan Lake Withdrawal	Neuse Basin Purchase			Total System Use	Haw		Cape Fear		Neuse		Haw		Cape Fear	Neuse	Haw	Cape Fear	Neuse	Total for All Basins	Haw to Cape Fear	Haw to Neuse
	Haw	Raleigh	Durham	Durham Co. Reclaimed		Potable	WRF Reuse	Potable	WRF Reuse	Potable	WRF Reuse	WTP Process Water	WRF	WRF	Total WRFs						
6/2/2019	28.28	0.00	0.00	0.317	28.60	2.565	0.317	0.105	0.000	4.959	0.651	3.73	0.00	5.35	10.92	6.61	5.45	16.53	28.60	0.105	16.22
6/3/2019	29.11	0.00	0.00	0.349	29.46	2.828	0.349	0.116	0.000	5.468	0.717	3.78	0.00	5.46	10.74	6.96	5.58	16.92	29.46	0.116	16.57
6/4/2019	28.87	0.01	0.00	0.557	29.43	3.153	0.557	0.129	0.000	6.095	0.764	2.70	0.00	5.35	10.68	6.41	5.48	17.54	29.43	0.129	16.98
6/5/2019	29.47	0.00	0.00	0.381	29.85	2.852	0.381	0.117	0.000	5.514	0.724	3.56	0.00	5.61	11.09	6.79	5.73	17.33	29.85	0.117	16.95
6/6/2019	26.09	0.00	0.00	0.346	26.44	1.983	0.346	0.081	0.000	3.833	0.597	3.27	0.00	5.22	11.11	5.60	5.30	15.54	26.44	0.081	15.19
6/7/2019	27.51	0.00	0.00	0.361	27.87	2.188	0.361	0.090	0.000	4.229	0.547	3.66	0.00	5.14	11.66	6.21	5.23	16.44	27.87	0.090	16.08
6/8/2019	21.73	0.00	0.00	0.239	21.97	0.328	0.239	0.013	0.001	0.634	0.469	2.47	0.00	4.83	12.99	3.04	4.84	14.09	21.97	0.014	13.85
6/9/2019	25.31	0.00	0.00	0.130	25.44	0.545	0.130	0.022	0.000	1.054	0.378	3.47	0.00	5.73	14.11	4.15	5.75	15.54	25.44	0.022	15.41
6/10/2019	23.03	0.00	0.00	0.137	23.17	0.340	0.137	0.014	0.000	0.656	0.497	2.97	0.00	5.70	12.86	3.45	5.71	14.01	23.17	0.014	13.87
6/11/2019	23.85	0.00	0.00	0.251	24.10	0.453	0.251	0.019	0.000	0.875	0.472	3.76	0.00	5.58	12.69	4.46	5.60	14.04	24.10	0.019	13.78
6/12/2019	25.53	0.00	0.00	0.274	25.80	1.533	0.274	0.063	0.000	2.963	0.560	2.73	0.00	5.38	12.30	4.54	5.44	15.83	25.80	0.063	15.55
6/13/2019	22.56	0.00	0.00	0.263	22.82	0.342	0.263	0.014	0.000	0.661	0.427	2.47	0.00	5.21	13.43	3.08	5.23	14.52	22.82	0.014	14.26
6/14/2019	27.72	0.00	0.00	0.187	27.91	1.420	0.187	0.058	0.000	2.744	0.416	5.46	0.00	5.93	11.69	7.07	5.99	14.85	27.91	0.058	14.67
6/15/2019	25.72	0.00	0.00	0.416	26.14	1.867	0.416	0.077	0.000	3.609	0.537	3.51	0.00	5.23	10.89	5.79	5.31	15.03	26.14	0.077	14.62
6/16/2019	27.34	0.00	0.00	0.231	27.57	2.407	0.231	0.099	0.000	4.653	0.551	3.19	0.00	5.20	11.24	5.83	5.30	16.45	27.57	0.099	16.22
6/17/2019	27.46	0.00	0.00	0.263	27.72	2.273	0.263	0.093	0.000	4.395	0.623	3.23	0.00	5.34	11.51	5.77	5.43	16.53	27.72	0.093	16.26
6/18/2019	27.99	0.00	0.00	0.370	28.36	2.459	0.370	0.101	0.000	4.753	0.681	3.50	0.00	5.20	11.29	6.33	5.30	16.73	28.36	0.101	16.36
6/19/2019	29.13	0.00	0.00	0.294	29.42	2.751	0.294	0.113	0.000	5.319	0.668	3.62	0.00	5.11	11.55	6.67	5.22	17.54	29.42	0.113	17.24
6/20/2019	27.66	0.00	0.00	0.434	28.09	2.018	0.434	0.083	0.000	3.900	0.780	4.05	0.00	5.10	11.73	6.50	5.18	16.41	28.09	0.083	15.98
6/21/2019	26.00	0.00	0.00	0.174	26.17	1.993	0.174	0.082	0.000	3.854	0.723	3.01	0.00	5.28	11.05	5.18	5.37	15.63	26.17	0.082	15.46
6/22/2019	25.30	0.00	0.00	0.328	25.63	1.961	0.328	0.080	0.000	3.791	0.649	3.04	0.00	5.03	10.75	5.33	5.11	15.19	25.63	0.080	14.87
6/23/2019	27.58	0.00	0.00	0.218	27.80	2.645	0.218	0.108	0.000	5.113	0.636	3.15	0.00	5.12	10.81	6.01	5.23	16.56	27.80	0.108	16.34
6/24/2019	27.11	0.00	0.00	0.220	27.33	2.185	0.220	0.090	0.000	4.223	0.659	3.27	0.00	5.20	11.48	5.67	5.29	16.36	27.33	0.090	16.14
6/25/2019	30.62	0.00	0.00	0.491	31.11	3.481	0.491	0.143	0.000	6.730	0.752	3.79	0.00	4.97	10.75	7.76	5.12	18.23	31.11	0.143	17.74
6/26/2019	30.62	0.00	0.00	0.444	31.06	3.539	0.444	0.145	0.000	6.841	0.695	3.46	0.00	4.94	11.00	7.44	5.09	18.53	31.06	0.145	18.09
6/27/2019	30.36	0.00	0.00	0.404	30.76	4.113	0.404	0.169	0.000	7.952	0.727	2.01	0.00	4.91	10.48	6.53	5.08	19.16	30.76	0.169	18.75
6/28/2019	31.24	0.00	0.00	0.312	31.55	3.885	0.312	0.159	0.000	7.511	0.757	2.89	0.00	4.88	11.16	7.09	5.03	19.43	31.55	0.159	19.12
6/29/2019	28.76	0.00	0.00	0.355	29.12	3.151	0.355	0.129	0.000	6.091	0.637	4.10	0.00	4.28	10.38	7.61	4.41	17.10	29.12	0.129	16.75
6/30/2019	29.37	0.00	0.00	0.237	29.61	3.281	0.237	0.135	0.000	6.342	0.693	2.60	0.00	5.70	10.62	6.12	5.83	17.66	29.61	0.135	17.42
7/1/2019	29.57	0.00	0.00	0.330	29.90	3.148	0.330	0.129	0.000	6.086	0.735	4.46	0.00	5.01	10.00	7.94	5.14	16.82	29.90	0.129	16.49
7/2/2019	29.30	0.00	0.00	0.470	29.77	3.468	0.470	0.142	0.000	6.705	0.789	3.02	0.00	4.78	10.39	6.96	4.92	17.89	29.77	0.143	17.42
7/3/2019	32.55	0.00	0.00	0.548	33.10	4.665	0.548	0.191	0.000	9.019	0.866	3.13	0.00	4.73	9.95	8.34	4.92	19.83	33.10	0.191	19.28
7/4/2019	28.66	0.00	0.00	0.681	29.34	3.464	0.681	0.142	0.000	6.696	0.714	3.50	0.00	4.60	9.54	7.64	4.74	16.96	29.34	0.142	16.27
7/5/2019	26.72	0.00	0.00	0.369	27.09	2.823	0.369	0.116	0.000	5.458	0.717	3.02	0.00	4.66	9.92	6.21	4.78	16.10	27.09	0.116	15.73
7/6/2019	26.89	0.00	0.00	0.463	27.35	3.012	0.463	0.124	0.000	5.823	0.726	2.92	0.00	4.48	9.80	6.40	4.61	16.35	27.35	0.124	15.89
7/7/2019	28.82	0.00	0.00	0.477	29.30	3.368	0.477	0.138	0.000	6.511	0.667	3.25	0.00	4.59	10.29	7.09	4.73	17.47	29.30	0.138	16.99
7/8/2019	28.52	0.00	0.00	0.374	28.89	2.545	0.374	0.104	0.000	4.920	0.725	3.74	0.00	5.13	11.35	6.66	5.24	17.00	28.89	0.104	16.62
7/9/2019	30.24	0.00	0.00	0.482	30.72	3.469	0.482	0.142	0.000	6.705	0.783	3.78	0.00	4.91	10.45	7.73	5.05	17.94	30.72	0.142	17.46

	(1)	(2)	(3)	(4)	(5)=1+2+3+4	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)=6+7+12+13	(17)=8+9+14	(18)=10+11+15	(19)=16+17+18	(20)=8+9	(21)=18-2-3-4
	Water Withdrawal/Purchase (mgd)					Consumptive Use (mgd)						Water Use Discharged as Wastewater (mgd)				Total Returned/Used in Each Basin (mgd)				Interbasin Transfer (mgd)	
	Jordan Lake Withdrawal	Neuse Basin Purchase			Total System Use	Haw		Cape Fear		Neuse		Haw		Cape Fear	Neuse	Haw	Cape Fear	Neuse	Total for All Basins	Haw to Cape Fear	Haw to Neuse
	Haw	Raleigh	Durham	Durham Co. Reclaimed		Potable	WRF Reuse	Potable	WRF Reuse	Potable	WRF Reuse	WTP Process Water	WRF	WRF	Total WRFs						
7/10/2019	28.79	0.00	0.00	0.387	29.18	3.268	0.387	0.134	0.000	6.318	0.742	2.99	0.00	4.82	10.52	6.65	4.95	17.58	29.18	0.134	17.19
7/11/2019	28.51	0.00	0.00	0.593	29.10	2.931	0.593	0.120	0.000	5.665	0.707	3.64	0.00	4.85	10.59	7.16	4.97	16.97	29.10	0.120	16.37
7/12/2019	26.81	0.00	0.00	0.381	27.19	2.130	0.381	0.087	0.000	4.117	0.579	3.36	0.00	4.92	11.62	5.87	5.00	16.32	27.19	0.088	15.93
7/13/2019	29.01	0.00	0.00	0.476	29.49	3.386	0.476	0.139	0.000	6.545	0.714	2.89	0.00	5.13	10.21	6.75	5.27	17.46	29.49	0.139	16.99
7/14/2019	28.78	0.00	0.00	0.332	29.11	3.308	0.332	0.136	0.000	6.396	0.667	2.68	0.00	5.11	10.48	6.32	5.25	17.54	29.11	0.136	17.21
7/15/2019	30.05	0.00	0.00	0.362	30.41	3.381	0.362	0.139	0.000	6.536	0.765	3.46	0.00	5.15	10.62	7.20	5.29	17.92	30.41	0.139	17.56
7/16/2019	29.13	0.00	0.00	0.505	29.64	3.021	0.505	0.124	0.001	5.840	0.825	3.67	0.00	4.88	10.77	7.20	5.01	17.43	29.64	0.125	16.93
7/17/2019	29.58	0.00	0.00	0.467	30.05	3.254	0.467	0.133	0.000	6.290	1.006	2.86	0.00	4.84	11.20	6.58	4.97	18.49	30.05	0.134	18.03
7/18/2019	30.99	0.00	0.00	0.669	31.66	3.931	0.669	0.161	0.001	7.600	0.725	3.29	0.00	4.85	10.44	7.89	5.01	18.76	31.66	0.162	18.09
7/19/2019	29.96	0.00	0.00	0.481	30.44	3.652	0.481	0.150	0.001	7.060	0.767	3.29	0.00	4.84	10.20	7.42	4.99	18.03	30.44	0.151	17.55
7/20/2019	26.63	0.00	0.00	0.482	27.11	3.396	0.482	0.139	0.000	6.565	0.607	0.45	0.00	4.83	10.64	4.33	4.97	17.82	27.11	0.139	17.33
7/21/2019	27.19	0.00	0.00	0.127	27.32	2.667	0.127	0.109	0.000	5.156	0.572	2.29	0.00	5.47	10.93	5.08	5.58	16.66	27.32	0.109	16.53
7/22/2019	29.68	0.00	0.00	0.103	29.78	3.123	0.103	0.128	0.000	6.037	0.790	3.31	0.00	5.38	10.92	6.54	5.50	17.74	29.78	0.128	17.64
7/23/2019	26.00	0.00	0.00	0.396	26.40	1.028	0.396	0.042	0.001	1.988	0.765	3.14	0.00	5.16	13.87	4.56	5.21	16.63	26.40	0.043	16.23
7/24/2019	25.21	0.00	0.00	0.274	25.49	1.847	0.274	0.076	0.000	3.571	0.549	3.01	0.00	4.16	12.00	5.13	4.24	16.12	25.49	0.076	15.85
7/25/2019	26.95	0.00	0.00	0.386	27.34	2.232	0.386	0.092	0.001	4.315	0.567	3.83	0.00	5.29	10.62	6.45	5.38	15.50	27.34	0.092	15.12
7/26/2019	28.30	0.00	0.00	0.363	28.66	2.833	0.363	0.116	0.000	5.477	0.644	2.56	0.00	5.08	11.59	5.76	5.20	17.71	28.66	0.116	17.35
7/27/2019	28.48	0.00	0.00	0.458	28.94	3.045	0.458	0.125	0.000	5.886	0.704	3.48	0.00	4.93	10.31	6.98	5.06	16.90	28.94	0.125	16.44
7/28/2019	29.66	0.00	0.00	0.307	29.97	3.433	0.307	0.141	0.000	6.636	0.651	3.19	0.00	5.10	10.51	6.93	5.24	17.80	29.97	0.141	17.49
7/29/2019	27.47	0.00	0.00	0.493	27.96	2.687	0.493	0.110	0.000	5.194	0.700	2.74	0.00	5.25	10.79	5.92	5.36	16.68	27.96	0.110	16.19
7/30/2019	29.65	0.00	0.00	0.402	30.05	3.107	0.402	0.127	0.000	6.006	0.759	3.96	0.00	5.05	10.64	7.47	5.18	17.41	30.05	0.127	17.00
7/31/2019	30.15	0.00	0.00	0.392	30.54	3.801	0.392	0.156	0.000	7.348	0.239	2.64	0.00	4.98	10.99	6.83	5.13	18.58	30.54	0.156	18.18
8/1/2019	29.19	0.00	0.00	0.290	29.48	3.102	0.290	0.127	0.001	5.996	0.697	2.87	0.00	5.04	11.36	6.26	5.17	18.05	29.48	0.129	17.76
8/2/2019	25.74	0.00	0.00	0.321	26.06	1.287	0.321	0.053	0.000	2.488	0.619	2.70	0.00	5.33	13.26	4.31	5.38	16.37	26.06	0.053	16.05
8/3/2019	24.32	0.00	0.00	0.312	24.63	0.376	0.312	0.015	0.000	0.727	0.543	2.25	0.00	6.39	14.02	2.94	6.41	15.29	24.63	0.015	14.97
8/4/2019	24.96	0.00	0.00	0.273	25.23	1.208	0.273	0.050	0.000	2.335	0.476	2.81	0.00	5.94	12.14	4.29	5.99	14.95	25.23	0.050	14.68
8/5/2019	23.67	0.00	0.00	0.218	23.89	0.359	0.218	0.015	0.000	0.694	0.525	2.54	0.00	5.72	13.82	3.12	5.73	15.04	23.89	0.015	14.82
8/6/2019	25.65	0.00	0.00	0.320	25.97	0.982	0.320	0.040	0.000	1.899	0.490	3.63	0.00	5.54	13.06	4.93	5.58	15.45	25.97	0.040	15.13
8/7/2019	25.98	0.00	0.00	0.341	26.32	1.475	0.341	0.060	0.000	2.851	0.606	2.79	0.00	5.47	12.73	4.61	5.53	16.19	26.32	0.061	15.85
8/8/2019	22.76	0.00	0.00	0.288	23.05	0.355	0.288	0.015	0.000	0.686	0.471	1.95	0.00	6.01	13.27	2.59	6.03	14.43	23.05	0.015	14.14
8/9/2019	26.91	0.00	0.00	0.337	27.25	2.238	0.337	0.092	0.000	4.326	0.670	2.42	0.00	5.54	11.62	4.99	5.63	16.62	27.25	0.092	16.28
8/10/2019	25.65	0.00	0.00	0.258	25.91	1.987	0.258	0.081	0.000	3.840	0.639	2.77	0.00	5.46	10.87	5.01	5.55	15.35	25.91	0.081	15.09
8/11/2019	27.44	0.00	0.00	0.340	27.78	2.521	0.340	0.103	0.000	4.874	0.597	2.80	0.00	5.52	11.03	5.66	5.62	16.50	27.78	0.103	16.16
8/12/2019	26.85	0.00	0.00	0.354	27.20	2.287	0.354	0.094	0.000	4.421	0.611	2.65	0.00	5.39	11.40	5.29	5.48	16.43	27.20	0.094	16.08
8/13/2019	27.52	0.00	0.00	0.205	27.73	1.904	0.205	0.078	0.000	3.681	0.698	3.01	0.00	5.67	12.48	5.12	5.74	16.86	27.73	0.078	16.66
8/14/2019	26.34	0.00	0.00	0.361	26.70	2.494	0.361	0.102	0.000	4.822	0.468	1.97	0.00	5.61	10.88	4.83	5.71	16.17	26.70	0.102	15.81
8/15/2019	25.61	0.00	0.00	0.285	25.90	1.052	0.285	0.043	0.000	2.034	0.528	3.33	0.00	5.43	13.20	4.67	5.47	15.76	25.90	0.043	15.47
8/16/2019	26.64	0.00	0.00	0.327	26.97	1.714	0.327	0.070	0.000	3.314	0.491	3.12	0.00	5.40	12.53	5.16	5.47	16.33	26.97	0.070	16.01

	(1)	(2)	(3)	(4)	(5)=1+2+3+4	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)=6+7+12+13	(17)=8+9+14	(18)=10+11+15	(19)=16+17+18	(20)=8+9	(21)=18-2-3-4
	Water Withdrawal/Purchase (mgd)					Consumptive Use (mgd)						Water Use Discharged as Wastewater (mgd)				Total Returned/Used in Each Basin (mgd)				Interbasin Transfer (mgd)	
	Jordan Lake Withdrawal	Neuse Basin Purchase			Total System Use	Haw		Cape Fear		Neuse		Haw		Cape Fear	Neuse	Haw	Cape Fear	Neuse	Total for All Basins	Haw to Cape Fear	Haw to Neuse
	Haw	Raleigh	Durham	Durham Co. Reclaimed		Potable	WRF Reuse	Potable	WRF Reuse	Potable	WRF Reuse	WTP Process Water	WRF	WRF	Total WRFs						
8/17/2019	25.27	0.00	0.00	0.280	25.55	1.863	0.280	0.076	0.000	3.601	0.532	2.31	0.00	5.51	11.38	4.45	5.59	15.51	25.55	0.076	15.23
8/18/2019	24.83	0.00	0.00	0.371	25.20	1.546	0.371	0.063	0.000	2.988	0.490	2.75	0.00	5.61	11.39	4.67	5.67	14.86	25.20	0.063	14.49
8/19/2019	26.28	0.00	0.00	0.367	26.65	1.860	0.367	0.076	0.000	3.597	0.566	2.88	0.00	5.32	11.98	5.11	5.39	16.15	26.65	0.076	15.78
8/20/2019	28.57	0.00	0.00	0.364	28.93	2.775	0.364	0.114	0.000	5.365	0.548	4.10	0.00	5.25	10.42	7.24	5.36	16.33	28.93	0.114	15.97
8/21/2019	31.46	0.00	0.00	0.340	31.80	4.400	0.340	0.180	0.000	8.505	0.651	0.78	0.00	5.26	11.68	5.52	5.44	20.84	31.80	0.180	20.50
8/22/2019	27.82	0.00	0.00	0.196	28.02	3.067	0.196	0.126	0.000	5.929	0.557	1.12	0.00	5.42	11.60	4.38	5.54	18.09	28.02	0.126	17.89
8/23/2019	26.58	0.00	0.00	0.366	26.95	1.497	0.366	0.061	0.000	2.894	0.466	4.53	0.00	5.37	11.77	6.39	5.43	15.13	26.95	0.061	14.76
8/24/2019	24.56	0.00	0.00	0.208	24.77	1.538	0.208	0.063	0.000	2.973	0.400	2.40	0.00	5.46	11.72	4.15	5.53	15.10	24.77	0.063	14.89
8/25/2019	25.60	0.00	0.00	0.295	25.90	1.798	0.295	0.074	0.000	3.476	0.412	2.61	0.00	5.82	11.41	4.70	5.89	15.30	25.90	0.074	15.00
8/26/2019	25.03	0.00	0.00	0.319	25.35	1.622	0.319	0.067	0.000	3.135	0.513	3.03	0.00	5.34	11.33	4.97	5.40	14.97	25.35	0.067	14.65
8/27/2019	24.79	0.00	0.00	0.282	25.07	1.543	0.282	0.063	0.000	2.982	0.562	2.76	0.00	5.26	11.62	4.58	5.33	15.16	25.07	0.063	14.88
8/28/2019	26.63	0.00	0.00	0.304	26.93	1.913	0.304	0.078	0.000	3.698	0.463	3.73	0.00	5.32	11.42	5.95	5.40	15.58	26.93	0.079	15.28
8/29/2019	27.49	0.00	0.00	0.316	27.81	2.492	0.316	0.102	0.000	4.817	0.438	3.14	0.00	5.19	11.31	5.95	5.29	16.57	27.81	0.102	16.25
8/30/2019	26.82	0.00	0.00	0.279	27.10	2.685	0.279	0.110	0.000	5.191	0.473	2.51	0.00	5.16	10.69	5.47	5.27	16.36	27.10	0.110	16.08
8/31/2019	25.22	0.00	0.00	0.279	25.50	2.128	0.279	0.087	0.000	4.115	0.595	3.04	0.00	5.01	10.25	5.45	5.10	14.96	25.50	0.087	14.68
9/1/2019	25.66	0.00	0.00	0.258	25.92	2.423	0.258	0.099	0.000	4.684	0.576	2.97	0.00	5.00	9.90	5.65	5.10	15.16	25.92	0.099	14.91
9/2/2019	24.33	0.00	0.00	0.343	24.67	1.488	0.343	0.061	0.000	2.876	0.563	2.89	0.00	5.52	10.94	4.72	5.58	14.38	24.67	0.061	14.03
9/3/2019	28.94	0.00	0.00	0.338	29.28	2.693	0.338	0.110	0.000	5.207	0.637	3.62	0.00	5.30	11.37	6.65	5.41	17.21	29.28	0.110	16.88
9/4/2019	29.11	0.00	0.00	0.408	29.52	3.171	0.408	0.130	0.000	6.131	0.500	3.00	0.00	5.10	11.08	6.58	5.23	17.71	29.52	0.130	17.30
9/5/2019	24.77	0.00	0.00	0.143	24.91	0.987	0.143	0.040	0.000	1.908	0.410	2.76	0.00	5.77	12.90	3.89	5.81	15.22	24.91	0.041	15.07
9/6/2019	22.83	0.00	0.00	0.250	23.08	0.349	0.250	0.014	0.000	0.675	0.255	2.89	0.00	5.71	12.93	3.49	5.73	13.86	23.08	0.014	13.61
9/7/2019	25.03	0.00	0.00	0.218	25.25	1.696	0.218	0.070	0.000	3.279	0.365	2.94	0.00	5.52	11.16	4.85	5.59	14.81	25.25	0.070	14.59
9/8/2019	26.02	0.00	0.00	0.229	26.25	0.757	0.229	0.031	0.000	1.463	0.300	6.31	0.00	5.74	11.42	7.30	5.77	13.18	26.25	0.031	12.95
9/9/2019	27.85	0.00	0.00	0.333	28.18	2.304	0.333	0.095	0.000	4.455	0.318	3.91	0.00	5.38	11.38	6.55	5.48	16.16	28.18	0.095	15.82
9/10/2019	26.97	0.00	0.00	0.333	27.30	2.571	0.333	0.105	0.000	4.971	0.375	2.46	0.00	5.17	11.32	5.36	5.27	16.67	27.30	0.105	16.33
9/11/2019	26.65	0.00	0.00	0.405	27.05	2.296	0.405	0.094	0.000	4.438	0.371	3.03	0.00	5.18	11.24	5.73	5.28	16.05	27.05	0.094	15.64
9/12/2019	28.71	0.00	0.00	0.387	29.10	3.009	0.387	0.123	0.000	5.818	0.479	3.15	0.00	5.17	10.96	6.55	5.29	17.26	29.10	0.123	16.87
9/13/2019	27.98	0.00	0.00	0.274	28.25	2.700	0.274	0.111	0.001	5.220	0.374	3.77	0.00	4.98	10.82	6.74	5.09	16.41	28.25	0.111	16.14
9/14/2019	25.88	0.00	0.00	0.257	26.14	2.205	0.257	0.090	0.000	4.262	0.472	2.94	0.00	5.36	10.55	5.40	5.45	15.28	26.14	0.090	15.02
9/15/2019	27.51	0.00	0.00	0.294	27.80	2.569	0.294	0.105	0.000	4.966	0.438	2.78	0.00	5.71	10.94	5.64	5.81	16.35	27.80	0.105	16.05
9/16/2019	25.83	0.00	0.00	0.429	26.26	2.050	0.429	0.084	0.000	3.963	0.441	3.16	0.00	5.19	10.94	5.64	5.28	15.34	26.26	0.084	14.92
9/17/2019	28.72	0.00	0.00	0.312	29.03	2.726	0.312	0.112	0.000	5.269	0.505	3.98	0.00	5.15	10.98	7.02	5.26	16.75	29.03	0.112	16.44
9/18/2019	29.37	0.00	0.00	0.431	29.80	3.139	0.431	0.129	0.001	6.068	0.502	3.61	0.00	5.03	10.89	7.18	5.16	17.46	29.80	0.130	17.03
9/19/2019	29.47	0.00	0.00	0.385	29.86	3.225	0.385	0.132	0.001	6.235	0.473	3.89	0.00	5.01	10.51	7.50	5.14	17.22	29.86	0.133	16.83
9/20/2019	28.16	0.00	0.00	0.305	28.47	2.877	0.305	0.118	0.001	5.562	0.535	3.20	0.00	4.95	10.91	6.38	5.07	17.01	28.47	0.119	16.70
9/21/2019	29.16	0.00	0.00	0.284	29.44	3.279	0.284	0.135	0.000	6.339	0.532	3.96	0.00	5.20	9.71	7.52	5.34	16.59	29.44	0.135	16.30
9/22/2019	28.27	0.00	0.00	0.349	28.62	2.905	0.349	0.119	0.000	5.616	0.479	2.90	0.00	5.51	10.74	6.15	5.63	16.83	28.62	0.119	16.49
9/23/2019	28.76	0.00	0.00	0.422	29.18	2.720	0.422	0.112	0.000	5.259	0.565	4.48	0.00	5.10	10.52	7.62	5.21	16.35	29.18	0.112	15.92

	(1)	(2)	(3)	(4)	(5)=1+2+3+4	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)=6+7+12+13	(17)=8+9+14	(18)=10+11+15	(19)=16+17+18	(20)=8+9	(21)=18-2-3-4
	Water Withdrawal/Purchase (mgd)					Consumptive Use (mgd)						Water Use Discharged as Wastewater (mgd)				Total Returned/Used in Each Basin (mgd)				Interbasin Transfer (mgd)	
	Jordan Lake Withdrawal	Neuse Basin Purchase			Total System Use	Haw		Cape Fear		Neuse		Haw		Cape Fear	Neuse	Haw	Cape Fear	Neuse	Total for All Basins	Haw to Cape Fear	Haw to Neuse
	Haw	Raleigh	Durham	Durham Co. Reclaimed		Potable	WRF Reuse	Potable	WRF Reuse	Potable	WRF Reuse	WTP Process Water	WRF	WRF	Total WRFs						
9/24/2019	29.66	0.00	0.00	0.361	30.03	3.206	0.361	0.132	0.960	6.198	0.529	3.07	0.00	5.05	10.52	6.64	6.14	17.24	30.03	1.092	16.88
9/25/2019	31.62	0.00	0.00	0.404	32.02	3.907	0.404	0.160	0.000	7.554	0.603	3.83	0.00	4.99	10.58	8.14	5.15	18.73	32.02	0.160	18.33
9/26/2019	30.05	0.00	0.00	0.435	30.49	3.562	0.435	0.146	0.000	6.885	0.539	3.21	0.00	5.03	10.68	7.21	5.18	18.10	30.49	0.146	17.67
9/27/2019	29.84	0.00	0.00	0.306	30.15	3.381	0.306	0.139	0.000	6.536	0.531	4.25	0.00	4.97	10.04	7.94	5.11	17.10	30.15	0.139	16.80
9/28/2019	29.37	0.00	0.00	0.369	29.74	3.433	0.369	0.141	0.000	6.636	0.532	3.11	0.00	5.13	10.39	6.91	5.27	17.56	29.74	0.141	17.19
9/29/2019	30.00	0.00	0.00	0.462	30.46	3.455	0.462	0.142	0.000	6.680	0.516	3.53	0.00	5.32	10.35	7.45	5.46	17.55	30.46	0.142	17.09
9/30/2019	29.12	0.00	0.00	0.403	29.52	3.546	0.403	0.145	0.000	6.855	0.569	2.49	0.00	5.03	10.48	6.44	5.17	17.91	29.52	0.145	17.51
10/1/2019	30.42	0.00	0.00	0.463	30.88	3.052	0.463	0.125	0.000	5.901	0.551	4.52	0.00	5.67	10.60	8.04	5.79	17.05	30.88	0.125	16.59
10/2/2019	31.57	0.00	0.00	0.495	32.07	3.961	0.495	0.163	0.000	7.658	0.620	3.36	0.00	5.13	10.68	7.82	5.29	18.96	32.07	0.163	18.46
10/3/2019	30.93	0.00	0.00	0.368	31.30	3.890	0.368	0.160	0.001	7.520	0.563	3.55	0.00	5.01	10.24	7.81	5.17	18.32	31.30	0.160	17.95
10/4/2019	33.02	0.00	0.00	0.375	33.40	4.549	0.375	0.187	0.000	8.795	0.537	3.62	0.00	5.01	10.32	8.54	5.19	19.66	33.40	0.187	19.28
10/5/2019	28.37	0.00	0.00	0.261	28.63	3.181	0.261	0.130	0.000	6.150	0.528	3.49	0.00	5.00	9.89	6.93	5.13	16.57	28.63	0.130	16.30
10/6/2019	29.79	0.00	0.00	0.276	30.07	3.411	0.276	0.140	0.000	6.594	0.496	3.26	0.00	5.42	10.47	6.95	5.56	17.56	30.07	0.140	17.29
10/7/2019	30.22	0.00	0.00	0.377	30.60	3.434	0.377	0.141	0.001	6.639	0.573	4.05	0.00	5.07	10.32	7.86	5.21	17.53	30.60	0.141	17.15
10/8/2019	29.79	0.00	0.00	0.353	30.14	3.046	0.353	0.125	0.001	5.888	0.526	4.75	0.00	4.93	10.53	8.15	5.05	16.94	30.14	0.126	16.59
10/9/2019	28.77	0.00	0.00	0.368	29.14	3.349	0.368	0.137	0.001	6.475	0.589	2.34	0.00	4.96	10.92	6.06	5.09	17.99	29.14	0.138	17.62
10/10/2019	29.57	0.00	0.00	0.371	29.94	3.369	0.371	0.138	0.000	6.513	0.505	3.82	0.00	4.91	10.31	7.56	5.05	17.33	29.94	0.138	16.96
10/11/2019	31.13	0.00	0.00	0.392	31.52	3.865	0.392	0.159	0.001	7.473	0.532	4.17	0.00	4.92	10.01	8.43	5.08	18.01	31.52	0.159	17.62
10/12/2019	27.97	0.00	0.00	0.279	28.25	3.025	0.279	0.124	0.000	5.848	0.577	3.35	0.00	5.10	9.95	6.65	5.22	16.38	28.25	0.124	16.10
10/13/2019	26.49	0.00	0.00	0.242	26.73	1.959	0.242	0.080	0.000	3.788	0.486	3.67	0.00	5.57	10.94	5.87	5.65	15.21	26.73	0.080	14.97
10/14/2019	25.69	0.00	0.00	0.246	25.94	1.963	0.246	0.081	0.001	3.795	0.342	3.19	0.00	5.22	11.10	5.40	5.30	15.23	25.94	0.081	14.99
10/15/2019	25.65	0.00	0.00	0.258	25.91	2.011	0.258	0.082	0.000	3.887	0.387	3.34	0.00	5.06	10.89	5.61	5.14	15.16	25.91	0.082	14.90
10/16/2019	26.94	0.00	0.00	0.231	27.17	1.657	0.231	0.068	0.000	3.203	0.398	4.39	0.00	5.28	11.94	6.28	5.35	15.55	27.17	0.068	15.31
10/17/2019	22.03	0.00	0.00	0.261	22.29	1.157	0.261	0.047	0.001	2.237	0.288	2.39	0.00	5.02	10.89	3.81	5.07	13.42	22.29	0.048	13.16
10/18/2019	27.07	0.00	0.00	0.302	27.37	2.716	0.302	0.111	0.000	5.251	0.395	3.41	0.00	4.95	10.23	6.43	5.06	15.88	27.37	0.111	15.58
10/19/2019	24.25	0.00	0.00	0.211	24.46	1.559	0.211	0.064	0.000	3.013	0.402	3.63	0.00	5.13	10.45	5.40	5.19	13.87	24.46	0.064	13.66
10/20/2019	22.49	0.00	0.00	0.170	22.66	0.327	0.170	0.013	0.000	0.633	0.306	3.19	0.00	5.75	12.27	3.69	5.76	13.21	22.66	0.013	13.04
10/21/2019	26.69	0.00	0.00	0.222	26.91	1.894	0.222	0.078	0.001	3.661	0.285	4.08	0.00	5.35	11.34	6.20	5.43	15.29	26.91	0.078	15.07
10/22/2019	22.82	0.00	0.00	0.163	22.98	0.843	0.163	0.035	0.000	1.629	0.328	2.96	0.00	5.24	11.79	3.97	5.27	13.74	22.98	0.035	13.58
10/23/2019	23.74	0.00	0.00	0.258	24.00	1.109	0.258	0.046	0.000	2.144	0.319	3.62	0.00	5.13	11.37	4.99	5.18	13.84	24.00	0.046	13.58
10/24/2019	25.53	0.00	0.00	0.229	25.76	1.846	0.229	0.076	0.000	3.568	0.332	3.49	0.00	5.13	11.09	5.56	5.20	14.99	25.76	0.076	14.76
10/25/2019	25.68	0.00	0.00	0.273	25.95	2.172	0.273	0.089	0.000	4.198	0.686	3.47	0.00	5.01	10.06	5.91	5.10	14.94	25.95	0.089	14.67
10/26/2019	24.70	0.00	0.00	0.226	24.93	1.987	0.226	0.081	0.000	3.840	0.350	2.49	0.00	5.29	10.66	4.70	5.38	14.85	24.93	0.081	14.62
10/27/2019	26.87	0.00	0.00	0.187	27.06	1.820	0.187	0.075	0.000	3.519	0.322	3.92	0.00	5.67	11.55	5.93	5.74	15.39	27.06	0.075	15.20
10/28/2019	22.31	0.00	0.00	0.235	22.55	1.048	0.235	0.043	0.000	2.025	0.321	2.76	0.00	5.17	10.94	4.04	5.22	13.28	22.55	0.043	13.05
10/29/2019	26.00	0.00	0.00	0.217	26.22	1.776	0.217	0.073	0.000	3.433	0.402	4.09	0.00	5.08	11.15	6.08	5.15	14.98	26.22	0.073	14.76
10/30/2019	24.89	0.00	0.00	0.198	25.09	0.927	0.198	0.038	0.000	1.793	0.341	4.35	0.00	5.25	12.19	5.48	5.29	14.32	25.09	0.038	14.13
10/31/2019	22.85	0.00	0.00	0.137	22.99	0.899	0.137	0.037	0.000	1.737	0.235	2.59	0.00	5.28	12.07	3.63	5.32	14.05	22.99	0.037	13.91

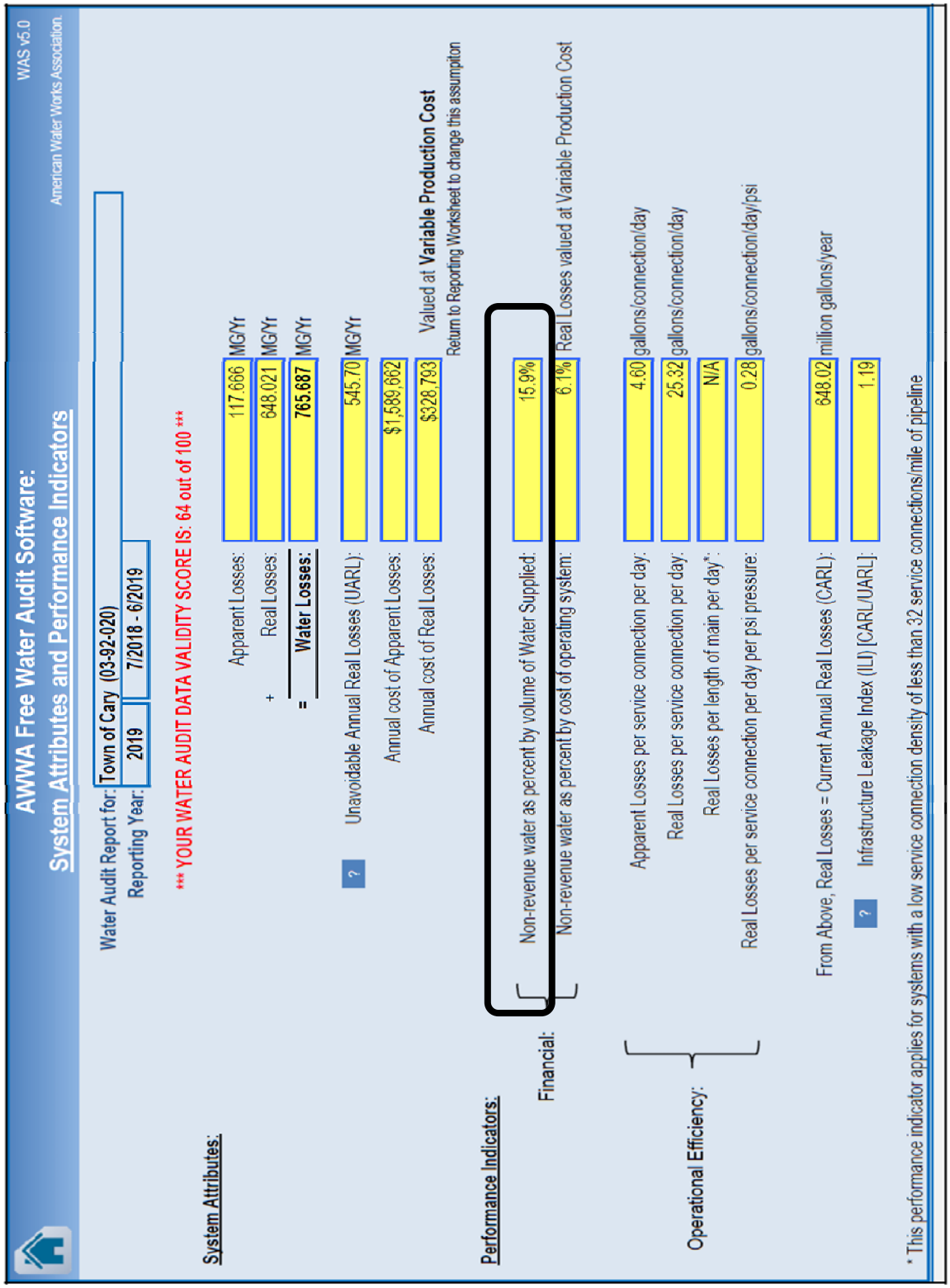
	(1)	(2)	(3)	(4)	(5)=1+2+3+4	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)=6+7+12+13	(17)=8+9+14	(18)=10+11+15	(19)=16+17+18	(20)=8+9	(21)=18-2-3-4
	Water Withdrawal/Purchase (mgd)					Consumptive Use (mgd)						Water Use Discharged as Wastewater (mgd)				Total Returned/Used in Each Basin (mgd)				Interbasin Transfer (mgd)	
	Jordan Lake Withdrawal	Neuse Basin Purchase			Total System Use	Haw		Cape Fear		Neuse		Haw		Cape Fear	Neuse	Haw	Cape Fear	Neuse	Total for All Basins	Haw to Cape Fear	Haw to Neuse
	Haw	Raleigh	Durham	Durham Co. Reclaimed		Potable	WRF Reuse	Potable	WRF Reuse	Potable	WRF Reuse	WTP Process Water	WRF	WRF	Total WRFs						
11/1/2019	21.92	0.00	0.00	0.203	22.12	0.984	0.203	0.040	0.000	1.901	0.215	2.50	0.00	4.96	11.32	3.69	5.00	13.44	22.12	0.040	13.23
11/2/2019	23.16	0.00	0.00	0.171	23.33	0.962	0.171	0.039	0.000	1.861	0.218	3.92	0.00	5.22	10.94	5.05	5.26	13.01	23.33	0.039	12.84
11/3/2019	23.41	0.00	0.00	0.140	23.55	1.107	0.140	0.045	0.000	2.139	0.262	2.83	0.00	5.47	11.55	4.08	5.52	13.95	23.55	0.045	13.81
11/4/2019	23.78	0.00	0.00	0.213	23.99	1.314	0.213	0.054	0.000	2.541	0.261	3.37	0.00	5.20	11.04	4.90	5.26	13.84	23.99	0.054	13.63
11/5/2019	23.55	0.00	0.00	0.203	23.75	0.698	0.203	0.029	0.001	1.350	0.261	4.60	0.00	5.46	11.15	5.50	5.49	12.76	23.75	0.029	12.56
11/6/2019	23.07	0.00	0.00	0.208	23.28	1.406	0.208	0.058	0.000	2.718	0.275	2.07	0.00	5.15	11.40	3.68	5.20	14.39	23.28	0.058	14.18
11/7/2019	23.26	0.00	0.00	0.130	23.39	1.323	0.130	0.054	0.001	2.558	0.205	2.87	0.00	5.19	11.06	4.32	5.24	13.82	23.39	0.055	13.69
11/8/2019	22.66	0.00	0.00	0.134	22.79	0.624	0.134	0.026	0.000	1.205	0.154	4.37	0.00	5.17	11.11	5.13	5.19	12.47	22.79	0.026	12.34
11/9/2019	21.55	0.00	0.00	0.134	21.68	0.838	0.134	0.034	0.000	1.620	0.187	2.55	0.00	5.23	11.09	3.52	5.26	12.90	21.68	0.034	12.77
11/10/2019	22.14	0.00	0.00	0.125	22.27	0.976	0.125	0.040	0.000	1.887	0.172	2.79	0.00	5.44	10.84	3.89	5.48	12.90	22.27	0.040	12.77
11/11/2019	22.73	0.00	0.00	0.141	22.87	1.298	0.141	0.053	0.000	2.509	0.181	1.97	0.00	5.44	11.28	3.41	5.50	13.97	22.87	0.053	13.82
11/12/2019	19.90	0.00	0.00	0.092	19.99	0.282	0.092	0.012	0.000	0.545	0.165	3.21	0.00	4.85	10.84	3.58	4.86	11.55	19.99	0.012	11.46
11/13/2019	22.45	0.00	0.00	0.130	22.58	0.301	0.130	0.012	0.000	0.581	0.186	4.69	0.00	5.13	11.55	5.12	5.15	12.31	22.58	0.012	12.18
11/14/2019	20.53	0.00	0.00	0.110	20.64	0.330	0.110	0.014	0.000	0.638	0.126	2.31	0.00	5.34	11.78	2.75	5.35	12.54	20.64	0.014	12.43
11/15/2019	20.33	0.00	0.00	0.125	20.46	0.270	0.125	0.011	0.000	0.523	0.163	4.37	0.00	4.63	10.36	4.77	4.64	11.05	20.46	0.011	10.92
11/16/2019	22.59	0.00	0.00	0.130	22.72	0.683	0.130	0.028	0.000	1.321	0.157	3.15	0.00	5.55	11.70	3.96	5.58	13.18	22.72	0.028	13.05
11/17/2019	21.43	0.00	0.00	0.132	21.56	0.297	0.132	0.012	0.000	0.574	0.152	3.90	0.00	5.44	11.06	4.33	5.45	11.79	21.56	0.012	11.65
11/18/2019	22.62	0.00	0.00	0.132	22.75	0.309	0.132	0.013	0.000	0.597	0.174	4.39	0.00	5.40	11.74	4.83	5.41	12.51	22.75	0.013	12.38
11/19/2019	22.89	0.00	0.00	0.136	23.03	0.324	0.136	0.013	0.000	0.626	0.170	3.75	0.00	5.46	12.55	4.21	5.47	13.34	23.03	0.013	13.21
11/20/2019	20.71	0.00	0.00	0.139	20.85	0.295	0.139	0.012	0.000	0.571	0.219	3.29	0.00	5.16	11.16	3.72	5.17	11.95	20.85	0.012	11.81
11/21/2019	22.77	0.00	0.00	0.138	22.91	0.743	0.138	0.030	0.000	1.437	0.176	3.70	0.00	5.32	11.37	4.58	5.35	12.98	22.91	0.030	12.84
11/22/2019	22.08	0.00	0.00	0.117	22.20	0.429	0.117	0.018	0.000	0.830	0.158	3.99	0.00	5.31	11.34	4.54	5.33	12.33	22.20	0.018	12.21
11/23/2019	21.31	0.00	0.00	0.097	21.41	0.304	0.097	0.012	0.000	0.588	0.171	3.32	0.00	5.36	11.55	3.72	5.37	12.31	21.41	0.012	12.22
11/24/2019	19.44	0.00	0.00	0.100	19.54	0.293	0.100	0.012	0.000	0.566	0.175	2.13	0.00	5.32	10.95	2.52	5.33	11.69	19.54	0.012	11.59
11/25/2019	22.40	0.00	0.00	0.104	22.50	0.653	0.104	0.027	0.000	1.262	0.282	2.85	0.00	5.61	11.72	3.61	5.63	13.26	22.50	0.027	13.16
11/26/2019	20.32	0.00	0.00	0.102	20.42	0.295	0.102	0.012	0.000	0.571	0.392	2.85	0.00	5.20	11.00	3.25	5.21	11.96	20.42	0.012	11.86
11/27/2019	21.62	0.00	0.00	0.102	21.72	0.312	0.102	0.013	0.000	0.602	0.413	3.19	0.00	5.31	11.78	3.60	5.33	12.79	21.72	0.013	12.69
11/28/2019	20.64	0.00	0.00	0.099	20.74	0.284	0.099	0.012	0.000	0.550	0.345	3.83	0.00	5.36	10.26	4.21	5.38	11.15	20.74	0.012	11.05
11/29/2019	19.60	0.00	0.00	0.103	19.70	0.548	0.103	0.022	0.000	1.059	0.380	2.24	0.00	5.03	10.32	2.89	5.05	11.76	19.70	0.022	11.66
11/30/2019	16.96	0.00	0.00	0.100	17.06	0.259	0.100	0.011	0.000	0.500	0.380	1.68	0.00	4.56	9.57	2.04	4.57	10.45	17.06	0.011	10.35
12/1/2019	20.16	0.00	0.00	0.106	20.27	0.292	0.106	0.012	0.000	0.565	0.375	2.89	0.00	5.15	10.88	3.29	5.16	11.82	20.27	0.012	11.71
12/2/2019	22.38	0.00	0.00	0.100	22.48	0.323	0.100	0.013	0.000	0.625	0.342	3.26	0.00	5.66	12.15	3.68	5.68	13.12	22.48	0.013	13.02
12/3/2019	22.31	0.00	0.00	0.095	22.41	0.313	0.095	0.013	0.000	0.605	0.347	3.80	0.00	5.51	11.72	4.21	5.53	12.67	22.41	0.013	12.57
12/4/2019	19.49	0.00	0.00	0.092	19.58	0.298	0.092	0.012	0.000	0.577	0.369	1.84	0.00	5.12	11.27	2.23	5.13	12.22	19.58	0.012	12.13
12/5/2019	20.08	0.00	0.00	0.092	20.17	0.281	0.092	0.012	0.000	0.544	0.330	3.44	0.00	4.94	10.53	3.81	4.95	11.41	20.17	0.012	11.32
12/6/2019	22.33	0.00	0.00	0.095	22.43	0.718	0.095	0.029	0.000	1.388	0.344	3.10	0.00	5.27	11.48	3.91	5.30	13.21	22.43	0.029	13.12
12/7/2019	19.06	0.00	0.00	0.084	19.14	0.272	0.084	0.011	0.000	0.525	0.318	2.99	0.00	4.95	10.00	3.35	4.96	10.84	19.14	0.011	10.76
12/8/2019	21.72	0.00	0.00	0.092	21.81	0.316	0.092	0.013	0.000	0.611	0.317	3.01	0.00	5.83	11.62	3.42	5.84	12.55	21.81	0.013	12.46

	(1)	(2)	(3)	(4)	(5)=1+2+3+4	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)=6+7+12+13	(17)=8+9+14	(18)=10+11+15	(19)=16+17+18	(20)=8+9	(21)=18-2-3-4
	Water Withdrawal/Purchase (mgd)					Consumptive Use (mgd)						Water Use Discharged as Wastewater (mgd)				Total Returned/Used in Each Basin (mgd)				Interbasin Transfer (mgd)	
	Jordan Lake Withdrawal	Neuse Basin Purchase			Total System Use	Haw		Cape Fear		Neuse		Haw		Cape Fear	Neuse	Haw	Cape Fear	Neuse	Total for All Basins	Haw to Cape Fear	Haw to Neuse
	Haw	Raleigh	Durham	Durham Co. Reclaimed		Potable	WRF Reuse	Potable	WRF Reuse	Potable	WRF Reuse	WTP Process Water	WRF	WRF	Total WRFs						
12/9/2019	19.85	0.00	0.00	0.101	19.95	0.305	0.101	0.013	0.000	0.590	0.334	1.80	0.00	5.28	11.53	2.21	5.29	12.45	19.95	0.013	12.35
12/10/2019	21.10	0.00	0.00	0.104	21.20	0.977	0.104	0.040	0.000	1.889	0.384	1.74	0.00	5.34	10.73	2.82	5.38	13.01	21.20	0.040	12.90
12/11/2019	21.35	0.00	0.00	0.141	21.49	0.296	0.141	0.012	0.000	0.573	0.447	3.86	0.00	4.65	11.51	4.30	4.66	12.53	21.49	0.012	12.39
12/12/2019	21.48	0.00	0.00	0.107	21.59	0.490	0.107	0.020	0.000	0.947	0.396	2.54	0.00	5.38	11.71	3.14	5.40	13.05	21.59	0.020	12.95
12/13/2019	18.42	0.00	0.00	0.101	18.52	0.272	0.101	0.011	0.000	0.526	0.323	2.34	0.00	4.44	10.51	2.71	4.45	11.36	18.52	0.011	11.26
12/14/2019	19.69	0.00	0.00	0.097	19.79	0.289	0.097	0.012	0.000	0.559	0.383	2.58	0.00	4.87	11.00	2.97	4.88	11.94	19.79	0.012	11.85
12/15/2019	21.26	0.00	0.00	0.097	21.36	0.308	0.097	0.013	0.000	0.596	0.401	3.03	0.00	5.92	11.00	3.44	5.93	11.99	21.36	0.013	11.90
12/16/2019	22.48	0.00	0.00	0.107	22.59	0.321	0.107	0.013	0.000	0.620	0.355	3.51	0.00	5.70	11.96	3.94	5.71	12.94	22.59	0.013	12.83
12/17/2019	19.23	0.00	0.00	0.094	19.32	0.280	0.094	0.012	0.000	0.542	0.358	2.64	0.00	4.76	10.64	3.01	4.77	11.54	19.32	0.012	11.45
12/18/2019	21.41	0.00	0.00	0.100	21.51	0.322	0.100	0.013	0.000	0.622	0.377	2.37	0.00	5.49	12.22	2.79	5.50	13.22	21.51	0.013	13.12
12/19/2019	22.58	0.00	0.00	0.097	22.68	0.424	0.097	0.017	0.000	0.820	0.335	3.16	0.00	5.77	12.05	3.68	5.79	13.21	22.68	0.017	13.11
12/20/2019	20.52	0.00	0.00	0.047	20.57	0.300	0.047	0.012	0.000	0.579	0.371	2.75	0.00	5.20	11.31	3.10	5.21	12.26	20.57	0.012	12.21
12/21/2019	19.81	0.00	0.00	0.047	19.86	0.278	0.047	0.011	0.000	0.536	0.351	3.35	0.00	4.97	10.31	3.67	4.98	11.20	19.86	0.011	11.15
12/22/2019	19.65	0.00	0.00	0.049	19.70	0.290	0.049	0.012	0.000	0.561	0.351	2.44	0.00	5.08	10.91	2.78	5.09	11.83	19.70	0.012	11.78
12/23/2019	17.61	0.00	0.00	0.059	17.67	0.268	0.059	0.011	0.000	0.519	0.343	1.71	0.00	4.62	10.14	2.04	4.63	11.00	17.67	0.011	10.94
12/24/2019	20.36	0.00	0.00	0.078	20.44	0.296	0.078	0.012	0.000	0.572	0.842	2.83	0.00	5.13	10.67	3.20	5.15	12.09	20.44	0.012	12.01
12/25/2019	19.51	0.00	0.00	0.055	19.57	0.279	0.055	0.011	0.000	0.539	0.378	2.99	0.00	5.12	10.19	3.32	5.14	11.11	19.57	0.011	11.05
12/26/2019	19.44	0.00	0.00	0.049	19.49	0.295	0.049	0.012	0.000	0.570	0.322	1.95	0.00	5.31	10.98	2.29	5.32	11.87	19.49	0.012	11.82
12/27/2019	18.10	0.00	0.00	0.054	18.15	0.272	0.054	0.011	0.000	0.525	0.316	2.00	0.00	4.76	10.21	2.33	4.77	11.06	18.15	0.011	11.00
12/28/2019	18.68	0.00	0.00	0.055	18.74	0.270	0.055	0.011	0.000	0.522	0.280	2.68	0.00	4.77	10.14	3.00	4.78	10.95	18.74	0.011	10.89
12/29/2019	19.25	0.00	0.00	0.052	19.30	0.280	0.052	0.011	0.000	0.541	0.400	2.67	0.00	4.92	10.43	3.00	4.93	11.37	19.30	0.011	11.32
12/30/2019	20.46	0.00	0.00	0.051	20.51	0.299	0.051	0.012	0.000	0.579	0.344	2.71	0.00	5.30	11.22	3.06	5.31	12.14	20.51	0.012	12.09
12/31/2019	20.44	0.00	0.00	0.054	20.49	0.284	0.054	0.012	0.000	0.548	0.355	3.63	0.00	5.04	10.57	3.97	5.05	11.47	20.49	0.012	11.42

Appendix D - AWWA M36 Water Audit Summary

The following screen shots summarize the Town of Cary water audit using the AWWA Free Water Audit Software v5.0. For fiscal year (FY) 2019, the non-revenue water is 15.9% by volume of the water supplied.

Performance Indicator output from FY2019 AWWA Audit for the Town of Cary:



AWWA Free Water Audit Software:
System Attributes and Performance Indicators

WAS v5.0
American Water Works Association.

Water Audit Report for: Town of Cary (03-92-020)
Reporting Year: 2019 7/2018 - 6/2019

*** YOUR WATER AUDIT DATA VALIDITY SCORE IS: 64 out of 100 ***

System Attributes:

Apparent Losses:	117.666	MG/Yr
+ Real Losses:	648.021	MG/Yr
= **Water Losses:**	**765.687**	MG/Yr
? Unavoidable Annual Real Losses (UARL):	545.70	MG/Yr
Annual cost of Apparent Losses:	$1,589,662	
Annual cost of Real Losses:	$328,793	Valued at **Variable Production Cost**

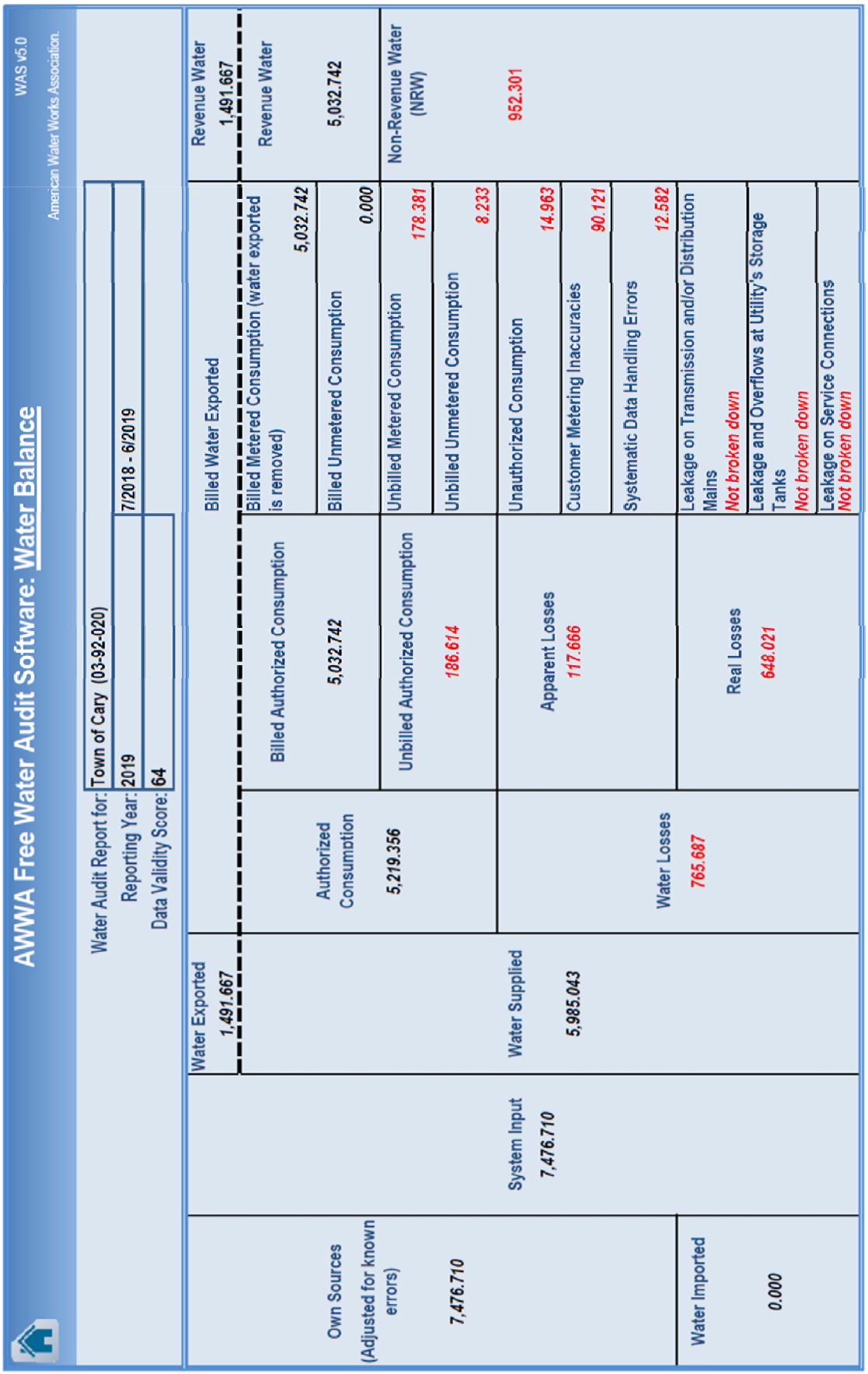
Return to Reporting Worksheet to change this assumption

Performance Indicators:

Financial: Non-revenue water as percent by volume of Water Supplied:	15.9%	
Non-revenue water as percent by cost of operating system:	6.1%	Real Losses valued at Variable Production Cost
Operational Efficiency: Apparent Losses per service connection per day:	4.60	gallons/connection/day
Real Losses per service connection per day:	25.32	gallons/connection/day
Real Losses per length of main per day*:	N/A	
Real Losses per service connection per day per psi pressure:	0.28	gallons/connection/day/psi
From Above, Real Losses = Current Annual Real Losses (CARL):	648.02	million gallons/year
? Infrastructure Leakage Index (ILI) [CARL/UARL]:	1.19	

* This performance indicator applies for systems with a low service connection density of less than 32 service connections/mile of pipeline

Water Balance Output from FY2019 AWWA Audit for the Town of Cary:



Appendix E – Cape Fear River Basin Discharge (MGD)

Date	Discharge to Durham County WWTP	WWWRF Discharge to Cape Fear River Basin
1-Jan-19	0.00	6.23
2-Jan-19	0.00	6.35
3-Jan-19	0.00	5.44
4-Jan-19	0.00	6.79
5-Jan-19	0.00	6.19
6-Jan-19	0.00	7.25
7-Jan-19	0.00	6.65
8-Jan-19	0.00	6.14
9-Jan-19	0.00	5.90
10-Jan-19	0.00	5.71
11-Jan-19	0.00	5.49
12-Jan-19	0.00	5.49
13-Jan-19	0.00	5.75
14-Jan-19	0.00	7.17
15-Jan-19	0.00	6.28
16-Jan-19	0.00	5.88
17-Jan-19	0.00	5.75
18-Jan-19	0.00	5.65
19-Jan-19	0.00	5.69
20-Jan-19	0.00	5.74
21-Jan-19	0.00	6.46
22-Jan-19	0.00	6.22
23-Jan-19	0.00	5.77
24-Jan-19	0.00	5.71
25-Jan-19	0.00	6.69
26-Jan-19	0.00	6.02
27-Jan-19	0.00	6.13
28-Jan-19	0.00	6.13
29-Jan-19	0.00	5.82
30-Jan-19	0.00	5.74
31-Jan-19	0.00	5.74
1-Feb-19	0.00	5.50
2-Feb-19	0.00	5.48
3-Feb-19	0.00	5.77
4-Feb-19	0.00	5.96
5-Feb-19	0.00	5.71
6-Feb-19	0.00	5.43
7-Feb-19	0.00	5.34
8-Feb-19	0.00	5.34
9-Feb-19	0.00	5.16
10-Feb-19	0.00	5.40
11-Feb-19	0.00	5.79
12-Feb-19	0.00	5.54
13-Feb-19	0.00	5.31
14-Feb-19	0.00	5.31
15-Feb-19	0.00	5.28
16-Feb-19	0.00	5.22
17-Feb-19	0.00	6.56
18-Feb-19	0.00	5.99
19-Feb-19	0.00	6.26
20-Feb-19	0.00	5.66
21-Feb-19	0.00	6.32
22-Feb-19	0.00	6.30
23-Feb-19	0.00	7.24
24-Feb-19	0.00	8.30
25-Feb-19	0.00	7.90

Date	Discharge to Durham County WWTP	WWWRF Discharge to Cape Fear River Basin
26-Feb-19	0.00	6.62
27-Feb-19	0.00	6.19
28-Feb-19	0.00	6.41
1-Mar-19	0.00	6.03
2-Mar-19	0.00	6.34
3-Mar-19	0.00	6.89
4-Mar-19	0.00	7.15
5-Mar-19	0.00	7.11
6-Mar-19	0.00	6.33
7-Mar-19	0.00	6.11
8-Mar-19	0.00	5.98
9-Mar-19	0.00	5.89
10-Mar-19	0.00	6.31
11-Mar-19	0.00	6.43
12-Mar-19	0.00	5.51
13-Mar-19	0.00	5.68
14-Mar-19	0.00	5.58
15-Mar-19	0.00	5.57
16-Mar-19	0.00	5.75
17-Mar-19	0.00	5.94
18-Mar-19	0.00	5.75
19-Mar-19	0.00	5.45
20-Mar-19	0.00	5.61
21-Mar-19	0.00	5.90
22-Mar-19	0.00	5.56
23-Mar-19	0.00	5.71
24-Mar-19	0.00	5.94
25-Mar-19	0.00	5.69
26-Mar-19	0.00	5.93
27-Mar-19	0.00	5.52
28-Mar-19	0.00	5.39
29-Mar-19	0.00	3.41
30-Mar-19	0.00	4.61
31-Mar-19	0.00	7.93
1-Apr-19	0.00	6.28
2-Apr-19	0.00	5.58
3-Apr-19	0.00	5.34
4-Apr-19	0.00	5.32
5-Apr-19	0.00	5.82
6-Apr-19	0.00	5.92
7-Apr-19	0.00	6.07
8-Apr-19	0.00	6.07
9-Apr-19	0.00	6.52
10-Apr-19	0.00	7.44
11-Apr-19	0.00	6.38
12-Apr-19	0.00	6.41
13-Apr-19	0.00	6.16
14-Apr-19	0.00	7.70
15-Apr-19	0.00	6.75
16-Apr-19	0.00	6.81
17-Apr-19	0.00	5.40
18-Apr-19	0.00	5.56
19-Apr-19	0.00	5.66
20-Apr-19	0.00	6.55
21-Apr-19	0.00	6.64
22-Apr-19	0.00	6.31
23-Apr-19	0.00	6.36
24-Apr-19	0.00	5.87

Date	Discharge to Durham County WWTP	WWWRF Discharge to Cape Fear River Basin
25-Apr-19	0.00	5.86
26-Apr-19	0.00	5.70
27-Apr-19	0.00	5.70
28-Apr-19	0.00	5.72
29-Apr-19	0.00	6.02
30-Apr-19	0.00	5.55
1-May-19	0.00	5.42
2-May-19	0.00	5.46
3-May-19	0.00	5.49
4-May-19	0.00	5.39
5-May-19	0.00	5.69
6-May-19	0.00	6.35
7-May-19	0.00	5.74
8-May-19	0.00	5.47
9-May-19	0.00	5.57
10-May-19	0.00	5.49
11-May-19	0.00	5.44
12-May-19	0.00	5.75
13-May-19	0.00	5.87
14-May-19	0.00	5.93
15-May-19	0.00	5.72
16-May-19	0.00	7.14
17-May-19	0.00	3.76
18-May-19	0.00	5.39
19-May-19	0.00	5.47
20-May-19	0.00	5.69
21-May-19	0.00	5.44
22-May-19	0.00	5.65
23-May-19	0.00	5.34
24-May-19	0.00	5.43
25-May-19	0.00	5.33
26-May-19	0.00	5.12
27-May-19	0.00	5.03
28-May-19	0.00	5.57
29-May-19	0.00	5.36
30-May-19	0.00	5.34
31-May-19	0.00	5.16
1-Jun-19	0.00	5.31
2-Jun-19	0.00	5.45
3-Jun-19	0.00	5.58
4-Jun-19	0.00	5.54
5-Jun-19	0.00	5.74
6-Jun-19	0.00	5.33
7-Jun-19	0.00	5.25
8-Jun-19	0.00	5.30
9-Jun-19	0.00	5.77
10-Jun-19	0.00	6.14
11-Jun-19	0.00	5.66
12-Jun-19	0.00	5.46
13-Jun-19	0.00	5.41
14-Jun-19	0.00	5.99
15-Jun-19	0.00	5.37
16-Jun-19	0.00	5.27
17-Jun-19	0.00	5.42
18-Jun-19	0.00	5.32
19-Jun-19	0.00	5.20
20-Jun-19	0.00	5.23

Date	Discharge to Durham County WWTP	WWWRF Discharge to Cape Fear River Basin
21-Jun-19	0.00	5.34
22-Jun-19	0.00	5.13
23-Jun-19	0.00	5.19
24-Jun-19	0.00	5.27
25-Jun-19	0.00	5.13
26-Jun-19	0.00	5.08
27-Jun-19	0.00	5.04
28-Jun-19	0.00	4.97
29-Jun-19	0.00	4.38
30-Jun-19	0.00	5.78
1-Jul-19	0.00	5.12
2-Jul-19	0.00	4.93
3-Jul-19	0.00	4.91
4-Jul-19	0.00	4.82
5-Jul-19	0.00	4.78
6-Jul-19	0.00	4.63
7-Jul-19	0.00	4.74
8-Jul-19	0.00	5.25
9-Jul-19	0.00	5.06
10-Jul-19	0.00	4.94
11-Jul-19	0.00	5.04
12-Jul-19	0.00	5.03
13-Jul-19	0.00	5.29
14-Jul-19	0.00	5.22
15-Jul-19	0.00	5.27
16-Jul-19	0.00	5.04
17-Jul-19	0.00	4.98
18-Jul-19	0.00	5.06
19-Jul-19	0.00	4.99
20-Jul-19	0.00	4.98
21-Jul-19	0.00	5.51
22-Jul-19	0.00	5.41
23-Jul-19	0.00	5.27
24-Jul-19	0.00	4.23
25-Jul-19	0.00	5.42
26-Jul-19	0.00	5.19
27-Jul-19	0.00	5.08
28-Jul-19	0.00	5.20
29-Jul-19	0.00	5.41
30-Jul-19	0.00	5.18
31-Jul-19	0.00	5.10
1-Aug-19	0.00	5.13
2-Aug-19	0.00	5.42
3-Aug-19	0.00	6.76
4-Aug-19	0.00	6.03
5-Aug-19	0.00	5.82
6-Aug-19	0.00	5.64
7-Aug-19	0.00	5.57
8-Aug-19	0.00	6.42
9-Aug-19	0.00	5.65
10-Aug-19	0.00	5.55
11-Aug-19	0.00	5.63
12-Aug-19	0.00	5.50
13-Aug-19	0.00	5.73
14-Aug-19	0.00	5.73
15-Aug-19	0.00	5.51
16-Aug-19	0.00	5.50
17-Aug-19	0.00	5.60

Date	Discharge to Durham County WWTP	WWWRF Discharge to Cape Fear River Basin
18-Aug-19	0.00	5.73
19-Aug-19	0.00	5.43
20-Aug-19	0.00	5.37
21-Aug-19	0.00	5.37
22-Aug-19	0.00	5.48
23-Aug-19	0.00	5.48
24-Aug-19	0.00	5.53
25-Aug-19	0.00	5.92
26-Aug-19	0.00	5.44
27-Aug-19	0.00	5.35
28-Aug-19	0.00	5.42
29-Aug-19	0.00	5.29
30-Aug-19	0.00	5.25
31-Aug-19	0.00	5.10
1-Sep-19	0.00	5.09
2-Sep-19	0.00	5.63
3-Sep-19	0.00	5.41
4-Sep-19	0.00	5.23
5-Sep-19	0.00	5.81
6-Sep-19	0.00	5.79
7-Sep-19	0.00	5.59
8-Sep-19	0.00	5.82
9-Sep-19	0.00	5.49
10-Sep-19	0.00	5.27
11-Sep-19	0.00	5.31
12-Sep-19	0.00	5.29
13-Sep-19	0.00	5.07
14-Sep-19	0.00	5.45
15-Sep-19	0.00	5.81
16-Sep-19	0.00	5.33
17-Sep-19	0.00	5.25
18-Sep-19	0.00	5.17
19-Sep-19	0.00	5.13
20-Sep-19	0.00	5.05
21-Sep-19	0.00	5.30
22-Sep-19	0.00	5.63
23-Sep-19	0.00	5.24
24-Sep-19	0.00	5.17
25-Sep-19	0.00	5.12
26-Sep-19	0.00	5.17
27-Sep-19	0.00	5.07
28-Sep-19	0.00	5.25
29-Sep-19	0.00	5.48
30-Sep-19	0.00	5.16
1-Oct-19	0.00	5.83
2-Oct-19	0.00	5.29
3-Oct-19	0.00	5.13
4-Oct-19	0.00	5.13
5-Oct-19	0.00	5.09
6-Oct-19	0.00	5.51
7-Oct-19	0.00	5.19
8-Oct-19	0.00	5.04
9-Oct-19	0.00	5.07
10-Oct-19	0.00	5.03
11-Oct-19	0.00	5.05
12-Oct-19	0.00	5.19
13-Oct-19	0.00	5.65

Date	Discharge to Durham County WWTP	WWWRF Discharge to Cape Fear River Basin
14-Oct-19	0.00	5.30
15-Oct-19	0.00	5.14
16-Oct-19	0.00	5.35
17-Oct-19	0.00	5.10
18-Oct-19	0.00	5.05
19-Oct-19	0.00	5.20
20-Oct-19	0.00	6.70
21-Oct-19	0.00	5.42
22-Oct-19	0.00	5.29
23-Oct-19	0.00	5.21
24-Oct-19	0.00	5.20
25-Oct-19	0.00	5.10
26-Oct-19	0.00	5.37
27-Oct-19	0.00	5.73
28-Oct-19	0.00	5.25
29-Oct-19	0.00	5.15
30-Oct-19	0.00	5.31
31-Oct-19	0.00	5.32
1-Nov-19	0.00	5.02
2-Nov-19	0.00	5.28
3-Nov-19	0.00	5.52
4-Nov-19	0.00	5.27
5-Nov-19	0.00	5.53
6-Nov-19	0.00	5.21
7-Nov-19	0.00	5.23
8-Nov-19	0.00	5.21
9-Nov-19	0.00	5.27
10-Nov-19	0.00	5.48
11-Nov-19	0.00	5.49
12-Nov-19	0.00	6.16
13-Nov-19	0.00	5.44
14-Nov-19	0.00	5.37
15-Nov-19	0.00	5.61
16-Nov-19	0.00	5.59
17-Nov-19	0.00	5.84
18-Nov-19	0.00	5.66
19-Nov-19	0.00	5.51
20-Nov-19	0.00	5.52
21-Nov-19	0.00	5.36
22-Nov-19	0.00	5.35
23-Nov-19	0.00	6.00
24-Nov-19	0.00	6.38
25-Nov-19	0.00	5.64
26-Nov-19	0.00	5.53
27-Nov-19	0.00	5.67
28-Nov-19	0.00	5.53
29-Nov-19	0.00	5.06
30-Nov-19	0.00	5.59
1-Dec-19	0.00	6.76
2-Dec-19	0.00	5.74
3-Dec-19	0.00	5.61
4-Dec-19	0.00	5.46
5-Dec-19	0.00	5.42
6-Dec-19	0.00	5.30
7-Dec-19	0.00	5.66
8-Dec-19	0.00	5.89
9-Dec-19	0.00	5.45
10-Dec-19	0.00	5.37

Date	Discharge to Durham County WWTP	WWWRF Discharge to Cape Fear River Basin
11-Dec-19	0.00	5.71
12-Dec-19	0.00	5.41
13-Dec-19	0.00	6.48
14-Dec-19	0.00	7.14
15-Dec-19	0.00	7.14
16-Dec-19	0.00	5.89
17-Dec-19	0.00	6.30
18-Dec-19	0.00	6.02
19-Dec-19	0.00	5.80
20-Dec-19	0.00	5.74
21-Dec-19	0.00	5.73
22-Dec-19	0.00	5.61
23-Dec-19	0.00	6.10
24-Dec-19	0.00	5.98
25-Dec-19	0.00	5.47
26-Dec-19	0.00	5.45
27-Dec-19	0.00	5.34
28-Dec-19	0.00	5.32
29-Dec-19	0.00	5.48
30-Dec-19	0.00	5.55
31-Dec-19	0.00	5.73