

*Towns of Cary, Apex and Morrisville and Wake County
Proposed Interbasin Transfer Certificate Modification*

Hearing Officer's Report

Environmental Management Commission

North Carolina

Department of Environment and Natural Resources

Division of Water Resources

March 2015

Hearing Officer's Recommendations

Two public hearings were held to receive public comments on the Interbasin Transfer (IBT) Certification Modification by the Towns of Cary, Apex and Morrisville and Wake County. The first was held on January 7, 2015 at 6:30 p.m. at the Town of Apex Public Works. A second public hearing was held on January 22, 2015 at 6:30 p.m. at the Fayetteville City Hall in Fayetteville. A total of 30 oral comments were received and 35 persons submitted written comments during the comment period for the Environmental Assessment for the Interbasin Transfer Modification.

Having reviewed and considered the comments received during the public review process and the requirements set forth in the North Carolina General Statutes, the Hearing Officer and the Division Director recommend that the Environmental Management Commission grant the Towns of Cary and Apex a permitted transfer amount not exceed a maximum of 31 million gallons per day from the Haw River Basin to the Neuse River Basin and 2 million gallons per day from the Haw River Basin to the Cape Fear River Basin, calculated as a daily average of a calendar month basis, with the following conditions:

1. Within 90 days of receipt of the IBT certificate, the Towns of Cary and Apex shall update and submit a water conservation plan subject to approval by the Division of Water Resources (Division) that specifies the water conservation measures that will be implemented by the Towns to ensure the efficient use of the transferred water. Except in circumstances of technical or economic infeasibility or adverse environmental impact, the water conservation plan shall provide for the mandatory implementation of water conservation measures that equal or exceed the most stringent water conservation plan implemented by a public water system that withdraws water from the source river basin.
2. Within 90 days of receipt of the IBT certificate, the Towns of Cary and Apex shall update and submit a drought management plan subject to approval by the Division that specifies how the transfer shall be managed to protect the source river basin (Haw River basin) during drought conditions or other emergencies that occur within the source river basin. Except in circumstances of technical or economic infeasibility or adverse environmental impact, this drought management plan shall include mandatory reductions in the permitted amount of the transfer based on the severity and duration of a drought occurring within the source river basin and shall provide for the mandatory implementation of a drought management plan by the Towns of Cary and Apex that equals or exceeds the most stringent water conservation plan implemented by a public water system that withdraws water from the source river basin.
3. Within 90 days of receipt of the IBT certificate, the Towns of Cary and Apex shall update and submit a quarterly compliance and monitoring plan subject to approval by the Division. The plan shall include methodologies and reporting schedules for reporting the following information: daily transfer amount calculated as the average daily over the maximum month, compliance with permit conditions, progress on mitigation measures, drought management, and reporting. A copy of the approved plan shall be kept on file with the Division for public inspection. The Division shall have the authority to make modifications to the compliance and monitoring plan as necessary to assess compliance with the certificate. The quarterly compliance and monitoring report shall be submitted

to the Commission no later than 30 days after the end of the quarter. The Towns of Cary and Apex shall employ any methods or install and operate any devices needed to measure the amount of water that is transferred during each calendar quarter, calculated as a daily average of a calendar month.

4. The Commission may amend the certificate to reduce the maximum amount of water authorized to be transferred whenever it appears that an alternative source of water is available to the certificate holder from within the receiving river basin, including, but not limited to, the purchase of water from another water supplier within the receiving basin or to the transfer of water from another sub-basin within the receiving major river basin.
5. The Commission shall amend the certificate to reduce the maximum amount of water authorized to be transferred if the applicant's current projected water needs are significantly less than the applicant's projected water needs at the time the certificate was granted.
6. The applicant shall not resell the water that would be transferred pursuant to the certificate to another public water system. This limitation shall not apply in the case of a proposed resale or transfer among public water systems within the receiving river basin as part of an inter-local agreement or other regional water supply arrangement, provided that each participant in the inter-local agreement or regional water supply arrangement is a co-applicant for the certificate and will be subject to all the terms, conditions, and limitations made applicable to any lead or primary applicant.
7. If the Commission determines that the record on which this Certificate is based is substantially in error or if new information becomes available that clearly demonstrates that any Finding of Fact (including those regarding environmental, hydrologic, or water use impacts) pursuant to G.S. § 143-215.22L(k) was not or is no longer supported or is materially incomplete, the Commission may reopen and modify this Certificate to ensure continued compliance with G.S. Chapter 143, Article 21, Part 2A.
8. The Towns of Cary and Apex shall be required to provide access at their existing intake site to other Jordan Lake water allocation holders that need access to utilize their allocation to the extent that this additional use is determined to be feasible by the Division of Water Resources. The cost associated with getting any necessary permits, engineering design, and associated construction costs are the responsibility of the allocation holder(s) requesting the access and not the Towns of Cary and Apex.



Evan Kane, Hearing Officer
North Carolina Division of Water Resources



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North Carolina Division of Water Resources

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PART 1 – INTERBASIN TRANSFER CERTIFICATE

**CERTIFICATE AUTHORIZING THE TOWNS OF CARY AND APEX TO TRANSFER
WATER FROM THE HAW RIVER BASIN TO THE NEUSE AND CAPE FEAR RIVER
BASINS
UNDER THE PROVISIONS OF G.S. § 143-215.22L**

On September 30, 2013, the Towns of Cary, Apex and Morrisville and Wake County (on behalf of the Wake County portion of Research Triangle Park) filed a notice of intent with the Environmental Management Commission (EMC) to request a modification to their jointly held interbasin transfer (IBT) certificate. The IBT certificate issued by the EMC on July 12, 2001 allows for the transfer of up to 24 million gallons per day (MGD) on a maximum day basis from the Haw River basin to the Neuse River basin.

The requested modification will address:

- Recently adopted changes to G.S. 143-215.22L;
- Inclusion of transfers to the Cape Fear River basin (consumptive uses in the southwestern portion of the Town of Apex service area), so that the modified certificate addresses transfers from the Haw River basin to both the Neuse River basin and Cape Fear River basin; and
- Extension of the certificate term to cover a 30-year planning period, ensuring the modified certificate addresses IBT through 2045 (previous certificate was based on 2030 planning). The permitted transfer amount shall not exceed a maximum of 31 million gallons per day from the Haw River Basin to the Neuse River Basin and 2 million gallons per day from the Haw River Basin to the Cape Fear River Basin, calculated as a daily average of a calendar month basis.

A public hearing on the Interbasin Transfer Certificate Modification for the Towns of Cary, Apex and Morrisville and Wake County was held on January, 7, 2015 in Apex pursuant to G.S. 143-215.22L. In response to the public's requests for an additional comment opportunity, a second public hearing was held on January 22, 2015 in Fayetteville. Throughout the process, a total of 30 oral comments was received and 35 persons submitted written comments.

The EMC will consider the petitioners' request at its regular meeting on March 12, 2015. According to G.S. § 143-215.L(m), the EMC shall grant a certificate modification if the benefits of the proposed modification outweigh the detriments of the proposed modification, and the detriments have been or will be mitigated to a reasonable degree.

The EMC may grant the requested modification in whole or in part, or deny it, and may grant a modification with conditions, as provided in G.S. § 143-215.22L (k)-(m). In making this determination, the EMC shall specifically consider:

1. Necessity, reasonableness, and beneficial effects of the transfer
2. Detrimental effects on the source river basin
3. Cumulative effects on the source major river basins of any current or projected water transfer or consumptive water use
4. Detrimental effects on the receiving basin

5. Reasonable alternatives to the proposed transfer
6. Applicants' use of impounded storage capacity
7. Purposes of any US Army Corps of Engineers multi-purpose reservoir relevant to the certificate modification
8. Whether applicants' service area is located in both the source and receiving river basins
9. Any other facts or circumstances which are reasonably necessary to carry out the law

The Commission Finds:

The members of the EMC reviewed and considered the complete record, which included the Hearing Officer's Report, the applicants' notice of intent to modify the interbasin transfer certificate, and the Environmental Assessment (EA), including public comments on the EA. Based on the record, the Commission makes the following findings of fact.

Findings of Fact

(1) Necessity, Reasonableness, and Beneficial Effects of the Transfer

The applicants' current water supply is provided by the B. Everett Jordan Lake (Jordan Lake) in the Haw River basin of the Cape Fear River basin. The Towns of Apex and Cary jointly have a Jordan Lake water supply allocation issued by the Environmental Management Commission (EMC). The Town of Cary administers the individual Jordan Lake water supply allocations of the Town of Morrisville and Wake County. Additionally, the Town of Cary owns and operates the Town of Morrisville's water and sewer system, and operates and maintains the water utility infrastructure for Wake County (for RTP South), by agreement. Figure 1 is a site map with facility locations and Figure 2 summarizes the applicants' requested 2045 projected movement of water.

The proposed water transfer will provide water to the rapidly growing communities of Cary, Apex, and Morrisville, as well as the Research Triangle Park (RTP) within Wake County. The current population served in 2015 is about 215,800 and has an estimated current average day water demand (ADD) of 24.1 MGD. The 2045 projected service area population is 354,800, with an ADD of 45.1 MGD.

The Towns of Apex, Cary, Morrisville, and Wake County (for RTP South), are subject to an IBT certificate issued by the EMC in 2001. This certificate is required by North Carolina law, because wastewater discharges and consumptive uses of surface water occur in receiving basins that differ from the Towns' water supply source basin, the Haw River basin. The 2001 IBT Certificate limits transfers from the Towns' water supply source basin, the Haw River basin (Jordan Lake), to the Neuse River basin to 24 MGD on a maximum day basis.

When the 2001 IBT Certificate was issued, it was projected to be sufficient for transfers through 2030. However, based on more recent population growth projections and forecasts of future raw water supply needs, it is estimated that the 24 MGD (adjusted to 22 MGD representing the average day for a maximum month) IBT may be exceeded between 2020 and 2025 (Table 1).

More information about the future population growth and water demand projections may be found in section 2.2 of the Environmental Assessment (EA).

Table 1. Forecast of IBT from the Haw River Basin to the Neuse River Basin and Cape Fear River Basin, 2012–2045, Maximum Month Average Day

	2012 ^a	2013 ^a	2015	2020	2025	2030	2035	2040	2045
IBT (MGD)	17.1	16.1	19.8	22.8	26.1	28.7	31.1	32.4	33.0

^a 2012 and 2013 IBT based on actual IBT monitoring data

The proposed certificate modification is to increase the allowable transfer to 33 MGD daily average for a calendar month, for the month in which IBT is expected to be the highest. This increase is needed in order to support the projected population growth and water supply needed for the economic growth of the Towns of Cary, Apex, and Morrisville and the Wake County portion of RTP over the next 30 years.

Based on the record, the Commission finds that current allowable water supply transfer rate is insufficient to supply the Towns of Cary, Apex and Morrisville and Wake County, and their related service areas for the reasonable 30-year planning horizon through the year 2045. Providing water for the anticipated growth of these communities will have a major beneficial effect on the region. The requested IBT certificate modification to increase the transfer to 33 MGD daily average for a calendar month is found to be a necessary and reasonable amount to support the growing residential and industrial needs of this area.

Figure 1. Site Map with Facility Locations

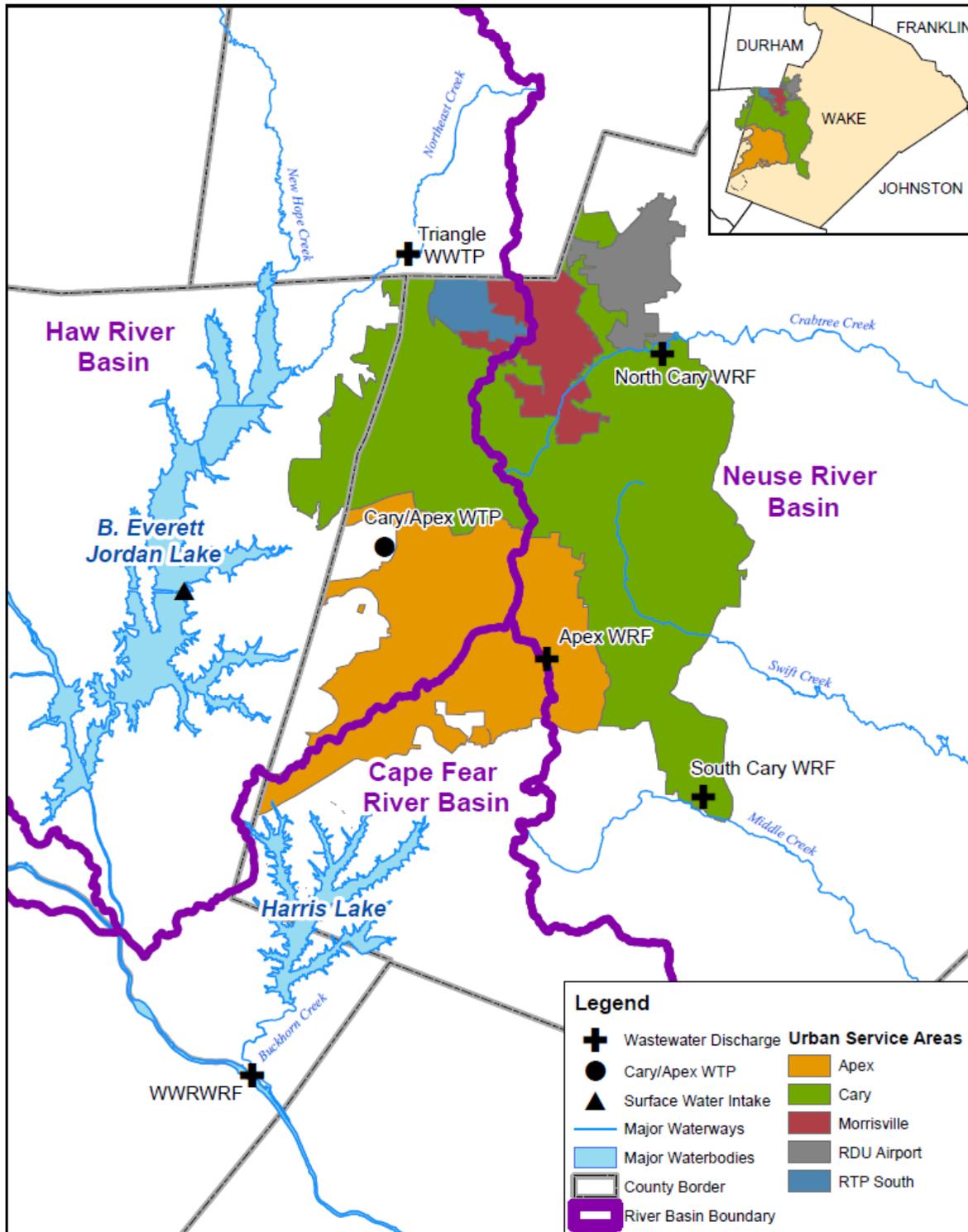
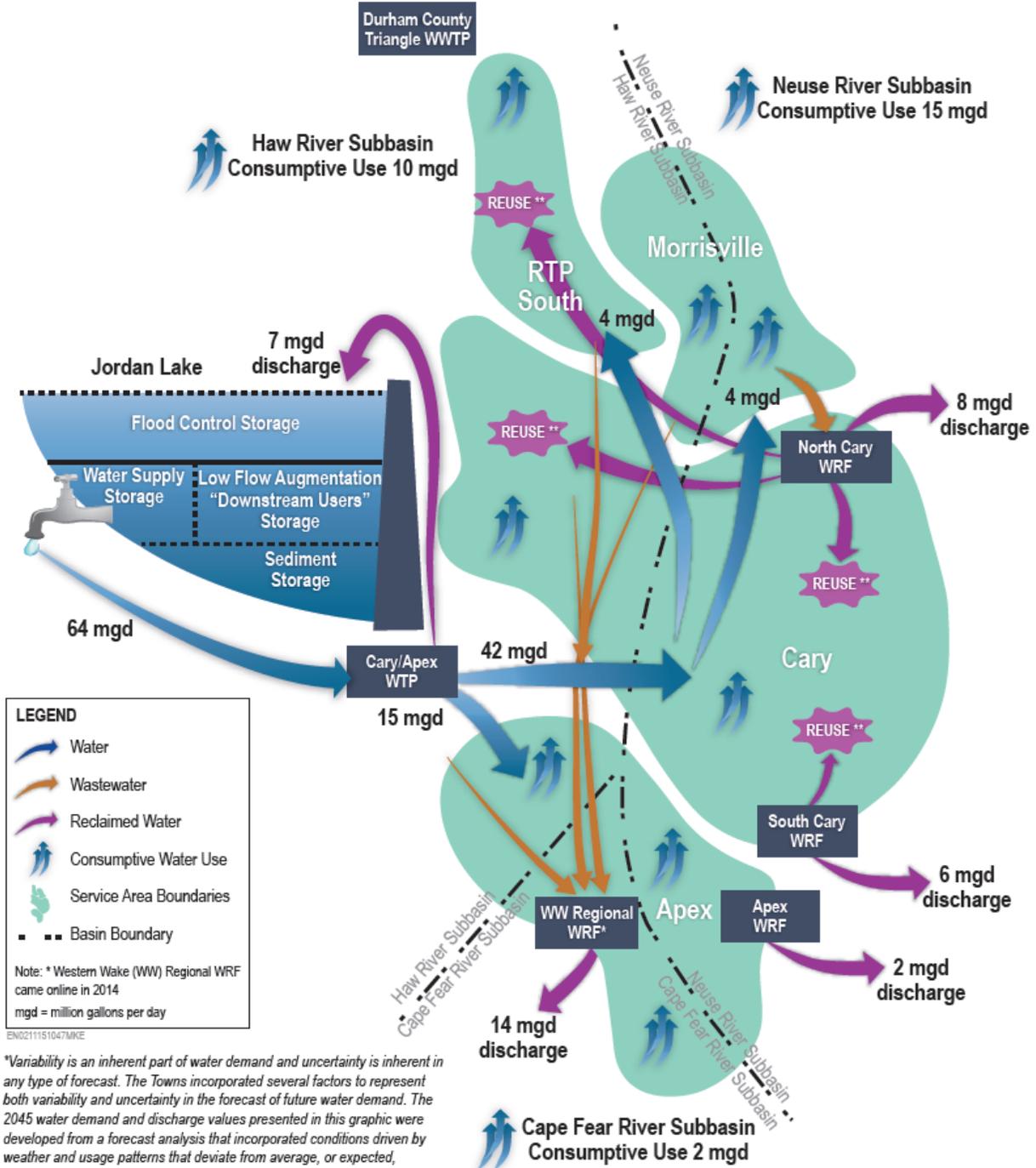


Figure 2. Jordan Lake and Regional Water Movement

2045 Projected Maximum Monthly Average Day Demand Conditions, for Requested IBT Certificate Modification*



(2) Detrimental Effects on the Source River Basin

To evaluate the direct impacts on the source basin resulting from the increased IBT, the primary tool used was the combined Cape Fear–Neuse River Basin Hydrologic Model, based on OASIS with OCL™. OASIS with OCL™ is a computer program designed to simulate the routing of water through the system described by a specific application. The Cape Fear – Neuse River Basin Hydrologic Model is a mathematical model that simulates surface water flows in the Cape Fear and Neuse river basins taking into consideration watershed inflows, withdrawals, wastewater discharges and water management protocols. The model is a tool to evaluate the impacts to water quantity with changes in water demands and water management protocols. The model considers all major water withdrawals and discharges within the Cape Fear River basin above Lock & Dam #1 in Bladen County, including those into and out of Jordan Lake. As required under G.S. 143-215.22L(k)(2), data from local water supply plans (LWSPs) were used in developing the model. In addition, industrial, recreation, energy production, mining, and agricultural withdrawals were factored into the model.

The initial set of conditions for the model represents demands, discharges and management protocols as they were in 2010. This model scenario provides a point of comparison to characterize the impacts of changes in demands and management scenarios by incorporating future demands to create several future scenarios. Estimates of future demands and discharges through the year 2045 were developed by DWR using data reported in LWSPs, information provided directly from municipalities, and input from Triangle J Council of Governments. The following four scenarios were developed to allow evaluation of the potential relative effects of the proposed increase in IBT and alternatives:

- 2010 Baseline – represents current conditions as defined by DWR
- 2045 Baseline – represents Alternative 1 (no action) and Alternatives 3a through 3e (avoid an increase in IBT)
- 2045 Expanded IBT – represents Alternative 2a (proposed increase in IBT, preferred alternative)
- 2045 Maximum IBT – represents Alternative 2b (increased discharge to the Neuse River basin)

To isolate the impact of the proposed increase in IBT from the effects of increased use of the Jordan Lake water supply pool, all of the 2045 scenarios assume full allocation and use of the Jordan Lake water supply pool's estimated yield of 100 MGD. Output variables related to Jordan Lake elevation, water quality and water supply pool levels, and flows at the Lillington United States Geological Survey (USGS) gage and the Fayetteville Public Works Commission (PWC) water supply intake were selected as key hydrologic indicators for use in evaluating the relative effects of the alternatives.

The source for all of the petitioners' water is the water supply pool of Jordan Lake. The water supply pool is operated entirely separate from the low-flow augmentation pool. The low-flow augmentation pool, not the water supply pool, is dedicated to maintaining flows in the Cape Fear River downstream of Jordan Lake dam. Therefore, the petitioners' water supply withdrawals will have no significant impact on the downstream flows as demonstrated by the model. Modeling results showed that the proposed transfer will not have any significant impact on Jordan Lake

surface water elevation, minimum releases from the dam, or low-flow augmentation pool levels compared to the other alternatives and to present conditions (see Tables 5, 6, 7, 8, and 9 in Appendix D of the Environmental Assessment (EA)).

Approximately two-thirds of Jordan Lake's conservation storage is dedicated to maintaining minimum flows in the Cape Fear River, compared with the one-third dedicated to water supply. Downstream users benefit from this low-flow augmentation pool without requiring a Jordan Lake allocation and at no cost. Upstream users do not benefit from the low flow augmentation pool. The historic low flow of the Cape Fear River at Lillington was 75 cubic feet per second (cfs) prior to regulation by Jordan Dam. The target flow at Lillington is now $600 \text{ cfs} \pm 50 \text{ cfs}$, supported by the low flow augmentation pool of Jordan Lake. This target flow is equivalent to 388 MGD. Even allowing for instream flow requirements at water supply intakes for aquatic wildlife habitat, an enormous amount of water is available to downstream users. Between Lillington and Lock & Dam #3, below Fayetteville, there are three public water systems that withdraw water from the Cape Fear River: Dunn, Harnett County Regional Water, and Fayetteville PWC. Based on data used to review basinwide water demands in the review of requests for water supply allocations from Jordan Lake, the estimated combined demands for these systems in 2045 is 99 MGD. These water systems return almost 80% of the cumulative withdrawals as treated wastewater resulting in an estimated cumulative net withdrawal of about 22 MGD. The target flow of 388 MGD is almost 4 times as great as the total projected municipal water supply demand downstream of the Lillington gage. Target flows at Lillington and Fayetteville for the various model scenarios are illustrated by flow duration curves in Figures 28 and 29 in Appendix D of the EA.

Table 2 presents results showing the frequency with which the key hydrologic indicators occur over the entire period of record (January 1930 through September 2011), for each model scenario.

Table 2.
Comparison of the Percentage of the Period of Record below the Key Hydrologic Indicators

Model Scenario	2010 Baseline	2045 Baseline	2045 Requested IBT	2045 Increased Neuse Discharge IBT
EA Alternative		Alt. 1 (no action) and 3a through 3e	2a (preferred)	2b
Jordan Lake Level < 210 feet msl ¹	0.0%	1.6%	2.0%	2.0%
Jordan Lake Level < 210 feet msl, Memorial Day to Labor Day ²	0.0%	0.2%	0.3%	0.4%
Water Quality Pool <80% ³	13.5%	15.8%	16.4%	16.9%
Water Quality Pool <60% ⁴	5.6%	5.9%	6.4%	6.5%
Water Quality Pool <40% ⁵	0.9%	0.5%	0.7%	0.8%
Water Quality Pool <20% ⁶	0.0%	0.0%	0.0%	0.0%
Water Supply Pool <50% ⁷	0.0%	1.6%	1.9%	1.9%
<i>Flows downstream of Jordan Dam in the Cape Fear receiving basin</i>				
Flow at Lillington < 550 cfs ⁸	13.9%	15.6%	15.9%	16.4%
Flow at Fayetteville < 600 cfs ⁹	5.9%	6.1%	6.3%	6.7%
1: Jordan Lake Levels less than 210 feet mean sea level (msl) (lower limit for boat ramp use)				
2: Jordan Lake Levels less than 210 feet msl (lower limit for boat ramp use): between Memorial Day and Labor Day				
3: Water Quality Pool less than 80 percent (Stage 1 Drought trigger, in accordance with the <i>Jordan Lake Drought Contingency Plan</i>)				
4: Water Quality Pool less than 60 percent (Stage 2 Drought trigger, in accordance with the <i>Jordan Lake Drought Contingency Plan</i>)				
5: Water Quality Pool less than 40 percent (Stage 3 Drought trigger, in accordance with the <i>Jordan Lake Drought Contingency Plan</i>)				
6: Water Quality Pool less than 20 percent (Stage 4 Drought trigger, in accordance with the <i>Jordan Lake Drought Contingency Plan</i>)				
7: Water Supply Pool less than 50 percent				
8: Cape Fear River Flow at the Lillington USGS gage less than 550 cubic feet per second (cfs) (normal target flow is 600 ± 50 cfs)				
9: Cape Fear River Flow at the Fayetteville Public Works Commission intake less than 600 cfs				

The model results indicate the potential for a small decrease in lake level and Cape Fear River flow from the 2010 to 2045 Baseline scenario. This is attributed to the increased utilization of the Jordan Lake water supply pool and the expected increases in water withdrawals upstream of Jordan Lake – both of which are assumed to occur regardless of any increase in the applicants' IBT certificate.

For all scenarios, Jordan Lake's low-flow augmentation pool never goes below 20 percent of capacity. Under both the 2045 Requested IBT and 2045 Increased Neuse River discharge scenarios, there is a 0.4 percent increase in duration over the period of record when the lake level is below 210 feet mean sea level (msl), as compared to the 2045 baseline scenario. For the same model scenarios, there is a 0.6 percent increase in the duration of time over the period of record when the water supply and water quality pools operate below 80 percent capacity, when compared to the 2045 baseline scenario.

The Environmental Assessment (EA) concluded that the direct effects of the proposed IBT certificate modification on the source basin would be insignificant. The proposed IBT certificate modification will not significantly change Jordan Lake elevations, low-flow augmentation or water supply pool storage volumes, downstream flows, downstream users' water supply availability, or downstream water quality in the source or receiving basins. Based on the hydrologic modeling, there are noticeable changes in a number of the reviewed hydrologic indicators, but only as a result of future water withdrawals within the Cape Fear River basin and increased utilization of the Jordan Lake water supply pool, not due to the proposed IBT modification. No significant direct effects to environmental resources are expected.

Secondary effects from growth such as increased runoff, erosion, and loss of open space are expected to have negative impacts on water quality and fish and wildlife habitat. These impacts will be mitigated to a reasonable degree through existing regulations and programs (as outlined in Section 6 of the Environmental Assessment). Because wastewater assimilation is directly related to flows, no significant changes in wastewater assimilation are expected from the proposed action. Similarly, no impacts were identified for hydropower generation, navigation or recreation.

Based on the record, the Commission finds that the detrimental effects on the source basin described in G.S. § 143-215.22L(k)(2) will be insignificant. Additionally, the Commission finds that it is reasonable to minimize the impacts of secondary effects caused by growth in the Towns of Cary, Apex and Morrisville and Wake County through the implementation of local ordinances for parts of their jurisdictions that are within the Jordan Lake watershed for the protection of the lake.

(3) Cumulative Effects on the Source Major River Basin of Any Current or Projected Water Transfer or Consumptive Water Use

Local water supply plan data, including current and projected water use and water transfers, were used to develop the input data sets for the Cape Fear-Neuse River Basin Hydrologic Model scenarios. The model was used to evaluate current and future scenarios of basin water use.

A comparison of in-stream flows under the 2045 Baseline and 2045 Requested IBT scenario was performed at the Lillington USGS gage and at the Fayetteville PWC intake. It was determined that on average there is only a 10 cfs (0.3 percent) difference between the scenarios for the period of record. During drought periods the 2045 Requested IBT scenario had a 0.2 to 1.9 percent increase in time below specific low flow targets (550 cfs and 250 cfs for Lillington; 600 cfs for Fayetteville). These results indicate that the proposed increase in IBT will not affect the low-flow augmentation pool sufficiently to reduce releases from Jordan Lake required to maintain in-stream flows (as scheduled by U.S. Army Corps of Engineers operation guidelines), even during periods of drought. Downstream flow releases from Jordan Lake will remain subject to the USACE release regimes, and the target flows at the Lillington gage, intended to protect in-stream aquatic habitat and resources, will continue to be met.

In addition to the key hydrologic indicators reviewed, Jordan Lake Drought Stages, as defined by the *Jordan Lake Drought Contingency Plan* (USACE, 2008), and downstream water supply availability were also reviewed. The following bullets highlight the results:

- The model results show that all downstream demands (City of Sanford, Harnett County, Fayetteville PWC, City of Dunn, Smithfield Foods, Lower Cape Fear Water and Sewer Authority, and Cape Fear Public Utility Authority) are met 100 percent of the time for all model scenarios (see Table 3); no shortages result from the increase in future demands or from either of the scenarios with an increase in IBT. These results are based on water supply demand projections provided by these utilities and municipalities in their Local Water Supply Plans.
- For all scenarios, there is no occurrence of a Stage 4 Drought, as defined in the *Jordan Lake Drought Contingency Plan*, during the entire period of record (January 1930-September 2011).
- The frequencies and durations of Stage 1 and Stage 2 Droughts for all 2045 scenarios were greater than the 2010 Baseline scenario, as would be expected based on the increased withdrawals within the Cape Fear River basin and the assumed full utilization of the water supply pool.

Table 3. Comparison of the Downstream User Water Supply Availability

Percent of Time the Full Projected Water Supply Withdrawals are Met¹
 Demand values are presented in parentheses (MGD)

Water System/Withdrawer	2010 Baseline	2045 Baseline	2045 Requested IBT	2045 Increased Neuse Discharge IBT
		Alt. 1 (no action) and 3a though 3e	2a (preferred)	2b
City of Sanford	100% (6.54)	100% (17.83)	100% (17.83)	100% (17.83)
Harnett County	100% (16.28)	100% (50.36)	100% (50.36)	100% (50.36)
Fayetteville PWC	100% (29.38)	100% (69.04)	100% (69.04)	100% (69.04)
City of Dunn	100% (3.41)	100% (3.07)	100% (3.07)	100% (3.07)
Smithfield Foods	100% (2.25)	100% (2.25)	100% (2.25)	100% (2.25)
Lower Cape Fear Water and Sewer Authority	100% (25.16)	100% (20.79)	100% (20.79)	100% (20.79)
Cape Fear Public Utility Authority	100% (4.67)	100% (20.12)	100% (20.12)	100% (20.12)

¹: The reliability for these systems is without the Water Shortage Response Plans being included in the model.

The increase in wastewater discharge to the Cape Fear River from the WWRWRF results in a reduced need for releases from Jordan Lake during drought periods; thereby resulting in a lower frequency of Stage 3 Droughts for the 2045 scenarios when compared to the 2010 Baseline scenario.

Under the 2045 Requested IBT scenario, there is a very small increase in the duration of time when the lake level is below 210 feet msl (0.4 percent increase in duration over the period of record) as compared to the 2045 baseline scenario. Both the water supply and low-flow augmentation pools operate at lower levels for a very small percentage of the period of record (example: 0.6 percent increase in duration below 80 percent full for the water quality pool, as compared to the 2045 baseline scenario). See Appendix D of the EA for more results and discussion, particularly Table 11.

The assessment of secondary and cumulative impacts (SCI) for both the source and receiving basins is presented in the Towns’ Secondary and Cumulative Impact Master Management Plan (SCIMMP)(CH2M HILL, 2005a, 2005b, 2005c, 2014a, 2014b, and 2014c). The SCIMMPs include a comprehensive description of mitigation programs to avoid or minimize SCI to environmental resources that could occur with the Towns’ land use plans and implementation of

projects in the Towns' infrastructure master plans. The SCIMMPs discuss the federal, state, and local programs that mitigate the potential SCI related to growth facilitated to some extent by infrastructure and public utility projects, including this proposed increase in IBT. The SCIMMPs discuss the potential for SCI to occur and the programs designed to mitigate SCI to a level that is not expected to be significant. The SCIMMPs are included in this section by reference, because no construction is proposed as part of this IBT certificate modification, the only potential for direct effects is related to water resources.

Based on the record, the Commission finds that the cumulative effects of this and other future water transfers and consumptive water uses as described in G.S. § 143-215.22L(k)(3) will be insignificant on the source basin.

(4) Detrimental Effects on the Receiving Basins

The receiving basins, to which water is transferred from Jordan Lake via both consumptive use and wastewater discharge, include primarily the Neuse River basin as well as the Cape Fear River basin.

Neuse River basin

Wastewater discharges are expected to increase in the Neuse River basin, but are planned to be within the limits of the current NPDES permitted flows. No additional water quantity or water quality impacts beyond those already accounted for in the NPDES permits are expected. Because stream flows in the Neuse River basin are not expected to change significantly due to the proposal, no impacts are likely to occur to navigation, recreation, or flooding.

Within the Neuse River basin, the proposed IBT will not have direct impacts to soils, wildlife resources, land cover, agricultural land and prime farmland, forested resources, public lands and scenic and natural areas, archaeological and historic resources, air quality, noise levels, and toxic substances/hazardous wastes. This is because there are no construction activities directly associated with the proposed increase in IBT.

The assessment of secondary and cumulative impacts (SCI) for both the source and receiving basins is presented in the Towns' Secondary and Cumulative Impact Master Management Plan (SCIMMP)(CH2M HILL, 2005a, 2005b, 2005c, 2014a, 2014b, and 2014c). The SCIMMPs include a comprehensive description of mitigation programs to avoid or minimize SCI to environmental resources that could occur with the Towns' land use plans and implementation of projects in the Towns' infrastructure master plans. The SCIMMPs discuss the federal, state, and local programs that mitigate the potential SCI related to growth facilitated to some extent by infrastructure and public utility projects, including this proposed increase in IBT. The SCIMMPs discuss the potential for SCI to occur and the programs designed to mitigate SCI to a level that is

not expected to be significant. The SCIMMPs are included in this section by reference, because no construction is proposed as part of this IBT certificate modification, the only potential for direct effects is related to water resources.

Any future facility construction needed to meet 2045 water demands will undergo a separate environmental permitting process and assessment of potential environmental impacts.

Cape Fear River basin

There have been no measurable impacts on the Jordan Lake water surface elevation or downstream flow patterns as a result of the applicants' current withdrawal and IBT. Refer to Table 2 in the discussion of Finding No. 2 for a presentation of the modeling results for key hydrologic indicators, including Jordan Lake levels and flow of the Cape Fear River at Lillington and Fayetteville. Aquatic resources in Jordan Lake, its tributaries, and in the downstream reaches of the Haw River and Cape Fear River are not expected to be directly impacted by the proposed increase in water withdrawal from Jordan Lake. Lake levels are not expected to be significantly altered, and downstream flow releases from Jordan Lake will remain subject to the USACE release regimes. In-stream flow patterns will not be impacted, and the target flows at the Lillington gage, which protect in-stream aquatic habitat, aquatic resources and water quality, will continue to be met.

The hydrologic modeling and impact analyses that were conducted for the Environmental Assessment have taken into account discharges to the Cape Fear River from the Western Wake Regional Water Reclamation Facility (WWRWRF). As required by §143-215.22L(k)(4), this modeling also used water demand projections supplied by Local Water Supply Plans. It is expected that these discharges from the WWRWRF will not only continue, but will increase in the future as withdrawals from Jordan Lake increase to support the expected growth, while more fully utilizing existing infrastructure. Modeling results project a lower frequency of Stage 3 droughts for the 2045 scenarios when compared to the 2010 baseline scenario. This is due to the increase in wastewater discharge to the Cape Fear River from the WWRWRF, which results in a reduced need for releases from Jordan Lake during drought. For the applicants to fully utilize their projected Jordan Lake water allocation, water will need to be returned to be in compliance with the requested transfer amount. It is expected that water quality will be protected from the expected increase in waste water discharge because the WWRWRF has more stringent nutrient removal criteria in its NPDES permit than any other facility in the Middle Cape Fear River basin.

Based on the record, the Commission finds that detrimental effects on the receiving basins as described in § 143-215.22L(k)(4) will be insignificant. The transfer will support continued population growth and the associated impacts of that growth. These impacts include effects on wastewater assimilation, fish and wildlife habitat, and water quality similar to the secondary growth effects described in Finding No. 2. However, these impacts will be minimal.

(5) Reasonable Alternatives to the Proposed Transfer

Several alternatives to the proposed project were defined and evaluated for their ability to meet the Towns' water supply needs through 2045, as described in Section 4.1 of the EA document. The following three categories of alternatives, with a total of eight water supply alternatives, were evaluated and summarized below:

1. No action (Updated 2001 IBT Certificate; 22 MGD total IBT):

- **Alternative 1 - No action**

Under Alternative 1, no actions designed to meet projected demands through 2045 would be undertaken; the Towns would receive an Updated 2001 IBT Certificate limiting transfers from the Haw River basin to 22 MGD, reflecting the recent statutory change to a maximum month average day measurement. The Towns would limit future development and utility services so that no additional water would be transferred to the Neuse River basin above 20 MGD, essentially stopping all development and any increase in water use after 2016. Additional transfer to the Cape Fear River basin would remain less than 2 MGD. This alternative is not considered feasible because the applicant would be unable to meet projected water supply needs of their customers in the Neuse River basin.

2. Increase IBT:

- **Alternative 2a – Increase in IBT to meet 2045 demands (Proposed IBT Certificate Modification; 33 MGD total IBT)**

Under Alternative 2a, the Towns would increase their Jordan Lake withdrawal consistent with future water demand projections for 2045 (pending the separate Round 4 allocation process) and update the IBT certificate to address IBT through the 30-year planning period ending in 2045 (the previous IBT certificate was based on a 30-year planning period ending in 2030).

Alternative 2a would meet the demands through 2045 by transferring up to 33 MGD from the Haw River basin (Jordan Lake); expanding the Cary/Apex Water Treatment Facility (CAWTF) to 72 MGD; using existing wastewater treatment facilities; and continuing water resources management measures to minimize IBT. The Towns intend to continue to use their existing Water Reclamation Facilities (North Cary, South Cary, Apex, and Western Wake Regional Water Reclamation Facility (WWRWRF)) to treat wastewater. The WWRWRF discharge returns treated wastewater effluent to the Cape Fear River basin; thereby, reducing IBTs. It is estimated that by 2045, the WWRWRF will discharge approximately 12 MGD on an annual average day basis to the Cape Fear River basin.

- **Alternative 2b – Increase in IBT to meet 2045 demands and use current permitted wastewater capacity (44 MGD total IBT)**

Under Alternative 2b, the Towns would increase their Jordan Lake withdrawal consistent with future water demand projections for 2045. Alternative 2b would meet the 2045 demands by transferring up to 44 MGD from the Haw River basin (Jordan Lake); expanding the CAWTF to 72 MGD; and continuing water resources management measures to minimize IBT. In contrast to Alternative 2a, wastewater treatment would occur through expansion of the South Cary WRF (SCWRF) from 12.8 MGD to its permitted discharge capacity of 16 MGD, as well as continued use of existing facilities (North Cary, Apex and Western Wake WRFs). Under this alternative, the WWRWRF would discharge about 5 MGD on an average day basis to the Cape Fear River basin by 2045.

While this alternative fully utilizes existing treatment facilities and existing permitted discharges, it would require additional pipeline infrastructure to route a larger portion of the wastewater collection system to the South Cary WRF (SCWRF).

3. Avoid IBT increase (Updated 2001 IBT Certificate; 22 MGD total IBT):

- **Alternative 3a – Transfer of untreated wastewater from the Neuse River basin to the WWRWRF, which discharges to the Cape Fear River basin.**

Under Alternative 3a, the Towns would increase their Jordan Lake withdrawal consistent with future water demand projections for 2045. Alternative 3a would meet the 2045 demands by transferring up to 22 MGD (no change from the Updated 2001 IBT Certificate) from the Haw River basin (Jordan Lake) and expanding the CAWTF to 72 MGD. In contrast to Alternatives 2a and 2b, wastewater treatment would occur through expansion of the WWRWRF, as well as use of existing facilities (North Cary, South Cary and Apex WRFs).

Wastewater generated in both the Neuse River basin and in the Cape Fear River basin would be pumped to the new WWRWRF for treatment; the treated effluent would then be discharged into the Cape Fear River via the WWRWRF's outfall. Ultimately, an average of approximately 9 MGD of additional untreated wastewater (in addition to the future flows already within the areas defined for the WWRWRF service area) would need to be pumped from the North Cary WRF, South Cary WRF, and/or Apex WRF service areas into the WWRWRF influent collection infrastructure to avoid the need to increase IBT. By 2045, the additional inflows to the WWRWRF would result in treatment and discharge of about 24 MGD on an annual average day basis to the Cape Fear River basin from the WWRWRF.

Alternative 3a would require the construction of major raw wastewater pumping facilities and wastewater conveyance infrastructure to transfer raw wastewater from the Neuse River basin into the Cape Fear basin. This alternative would require the expansion of the WWRWRF to be online in approximately 2029, much earlier than currently projected, and would result in already-built capacity and investment at the Apex WRF and North Cary WRF being underutilized.

For a more thorough evaluation and discussion see the technical memorandum, “Comparisons for Environmental Assessment Alternatives 2a and 3a” (Appendix D). Because of the significant cost of Alternative 3a, the underutilization of existing facility capacity, and environmental impacts, this alternative is not considered fiscally responsible.

- **Alternative 3b – Transfer of treated wastewater effluent from the Neuse River basin to the Cape Fear River basin**

Under Alternative 3b, the Towns would increase their Jordan Lake withdrawal consistent with future water demand projections for 2045. Alternative 3b would meet the 2045 demands by transferring up to 22 MGD (no change from the Updated 2001 IBT Certificate) from the Haw River basin (Jordan Lake) and expanding the CAWTF to 72 MGD.

Wastewater produced in the Neuse River basin would be treated at the WRFs currently used for the Towns’ wastewater service areas, and a portion of the effluent from the WRFs would be pumped into the Haw River or Cape Fear River basins for discharge. Ultimately, approximately 9 MGD of additional treated wastewater effluent (in addition to the WWRWRF effluent discharge defined for the WWRWRF service area) would need to be pumped from the North Cary WRF, South Cary WRF, and/or Apex WRF into the Haw River or Cape Fear River basins to avoid increasing IBT above the 2001 IBT Certificate.

This alternative would require the construction of major pumping facilities to transfer treated effluent. A new discharge outfall would be constructed on the Cape Fear River, because of the longer distance to the WWRWRF effluent pumping facility and because the WWRWRF effluent pipeline capacity is not sufficient for both the current WWRWRF build-out capacity and the additional effluent flow. Alternative 3b could result in additional treatment requirements at the Apex WRF and South Cary WRF, because neither facility is designed to meet the effluent total phosphorus (TP) limits in the current WWRWRF NPDES permit.

Because of the significant cost of Alternative 3b, this alternative is not considered fiscally responsible and will not be further evaluated.

- **Alternative 3c – Use a water supply source in the Neuse River basin**

Under Alternative 3c, the Towns would use a water source in the Neuse River basin to meet future water demands and comply with the Updated 2001 IBT Certificate. The current Jordan Lake Allocation would not be increased, and IBT would not be increased above the Updated 2001 IBT Certificate. This would be accomplished by (1) the Towns developing a new water supply source or (2) purchasing finished water and water supply capacity from another system in the Neuse River basin. To accomplish this, approximately 10 to 12 MGD of supply from the Neuse River basin is needed.

Because of the uncertain feasibility of developing a new water supply source in the Neuse River basin, this is an unreliable solution to meet the Towns' 2045 water demands. Similarly, purchasing finished water from within the Neuse River basin is not considered to be feasible due to the prohibitive cost involved with purchasing the water and constructing additional water transmission pumping and pipeline infrastructure, concerns about potential environmental impacts from construction activities, and the likelihood that increasing demands in the region would limit the potential for long-term capacity purchase agreements.

- **Alternative 3d – Use groundwater as a water supply source**

Under Alternative 3d, new groundwater wells would be installed to supply the Towns with the additional water needed to meet 2045 demands. This alternative would require 45 to 65 new wells withdrawing at an average of 100 to 150 gallons per minute, and the wells would need to be placed at ¼- to ½-mile intervals. This “well-field” approach, with multiple wells on a single property, would be impractical because of the requirement for at least about 5 square miles of undeveloped property.

Such a well system is expected to be cost prohibitive because of the area of land that would be required, the length of the raw water transmission line that would be needed, the operations and maintenance challenges associated with numerous wells, and water quality concerns due to expected iron and manganese concentrations. Also, there is no information to indicate whether the required yield could be sustained. New water treatment facilities for groundwater would be required; the current water treatment facilities at the CAWTF were designed for Jordan Lake's surface water quality. Alternative 3d is not considered feasible.

- **Alternative 3e – Use additional water resources management tools**

The Towns have implemented proactive water resources management tools for more than 15 years to encourage conservation and wise water use practices. Alternative 3e would continue and expand the Towns' programs with the implementation of additional water resources management tools to reduce future water demands. These programs will

increase the reliability with which the Towns can meet customer demands and comply with a modified IBT certificate. However, Alternative 3e is not considered feasible as a means to meet projected growth needs while reducing the Towns' long-term water demand and comply with the Updated 2001 IBT Certificate.

Based on the record, the Commission finds that reasonable alternatives to the proposed IBT were considered. Based on a review of the project information, the Commission finds the recommended alternative (Alternative 2a) to be the most feasible for meeting the petitioners' water supply needs while minimizing detrimental environmental impacts.

(6) Applicants' Use of Impoundment Storage Capacity

This criterion is not applicable, as the petitioners do not own, manage, or maintain a water supply impoundment.

(7) Purposes of Any US Army Corps of Engineers Multi-Purpose Reservoir Relevant to the Petition

Jordan Lake was constructed to provide flood control and water supply, but it must also meet multiple objectives including low-flow augmentation, fish propagation, and recreation. The lake is actively managed by the United States Army Corps of Engineers to meet these different objectives.

Water in Jordan Lake is considered to be in one of three storage pools: flood control storage, conservation storage, and sediment storage. The conservation storage pool is further split into a water supply pool and a low-flow augmentation, or water quality pool. To support aquatic life and other downstream uses, flows in the Cape Fear River are augmented by releases from the Jordan Lake Dam. These flows come from the water quality pool; when full, the water quality pool contains approximately 94,600 acre-feet of water.

Water supply withdrawals for permitted users come from the water supply pool. The water supply pool contains approximately 45,800 acre-feet of water and is estimated to yield approximately 100 MGD, of which 39 percent is allocated to the Towns of Apex, Cary, Morrisville and Wake County. However, a separate reallocation process is currently underway in order to meet anticipated future water supply needs through 2045 for all municipalities which rely on Jordan Lake for their water supply.

Table 2 depicts anticipated impacts to lake levels as a result of the proposed IBT, particularly the percentages of time levels are predicted to drop below 210 msl for boat access to the lake. These are presented during both year-round and during prime recreational boating season (Memorial Day to Labor Day). As Table 2 shows, the proposed IBT increase will result in a 0.4% increase in time year-round when the lake will drop below 210 msl, over the period of record (January

1930-September 2011). The proposed IBT increase will result in a 0.1% increase in time during the prime boating season when the lake will drop below 210 msl, over the period of record.

The Commission finds that the transfer and allocations are consistent with the federally authorized project purposes of Jordan Lake. Also, the Commission finds that to be consistent with the use of Jordan Lake as a regional water supply the Towns of Cary and Apex are required to provide access through their intake with other Jordan Lake Water Allocation Holders that need access to their allocation. The cost associated with getting any necessary permits, engineering design, and associated construction costs are not the responsibility of the Towns of Cary and Apex.

(8) Whether applicants’ service area is located in both the source and receiving river basins
 The service areas for the Towns and the County are within the Haw River IBT basin (source), the Cape Fear River IBT basin (receiving), and the Neuse River IBT basin (receiving), as illustrated in Figure 1. The percentages of the Towns and County’s service areas land area within each IBT basin are presented in Table 4:

Table 4. Percentage of Service Area in Individual River Basins

Municipality	River Basin		
	Neuse	Haw	Cape Fear
Town of Cary	71%	29%	-
Town of Apex	19%	59%	22%
Town of Morrisville	81%	19%	-
Wake County (RTP South)	-	100%	-

Therefore, the applicants’ service area is located in both the source and receiving river basins.

The Commission finds that the Towns’ service area population is within both the source and receiving basins, thereby avoiding the removal or receipt of water in a basin not contained within the existing service area.

(9) Any Other Facts or Circumstances that are Reasonably Necessary

The Commission finds that to protect the source basin during drought conditions, to mitigate the future need for allocations of the limited resources of this basin, and as authorized by G.S. § 143-215.22L(n), a drought management plan is appropriate. The plan should describe the actions that the Towns of Cary and Apex will take to protect the Cape Fear River Basin during drought conditions.

The Commission notes that future developments may prove the projections and predictions in the EA to be incorrect and new information may become available that shows that there are substantial environmental impacts associated with this transfer. Therefore, to protect water quality and availability and associated benefits, modification of the terms and conditions of the certificate may be necessary at a later date.

Decision

Based on the Findings of Fact stated above, the Commission has determined that (1) the benefits of the proposed certificate modification outweigh the detriments of the certificate modification, and (2) any detriments of the proposed certificate modification will be mitigated to a reasonable degree under the conditions of this Certificate. Therefore, and by duly made motions, the Commission grants the Towns of Cary's and Apex's request to transfer water from the Haw River basin to the Neuse River basin and Cape Fear River basin. The permitted transfer amount shall not exceed a maximum of 31 million gallons per day from the Haw River Basin to the Neuse River Basin and 2 million gallons per day from the Haw River Basin to the Cape Fear River Basin, calculated as a daily average of a calendar month basis.

The certificate is subject to the conditions below, which are imposed under the authority of G.S. § 143-215.22L. The Towns and County shall comply with any plan that is approved pursuant to this Certificate and any approved amendments to such plan. A violation of any plan approved pursuant to this Certificate will be considered a violation of the terms and conditions of this Certificate.

1. Within 90 days of receipt of the IBT certificate, the Towns of Cary and Apex shall update and submit a water conservation plan subject to approval by the Division of Water Resources (Division) that specifies the water conservation measures that will be implemented by the Towns to ensure the efficient use of the transferred water. Except in circumstances of technical or economic infeasibility or adverse environmental impact, the water conservation plan shall provide for the mandatory implementation of water conservation measures that equal or exceed the most stringent water conservation plan implemented by a public water system that withdraws water from the source river basin.
2. Within 90 days of receipt of the IBT certificate, the Towns of Cary and Apex shall update and submit a drought management plan subject to approval by the Division that specifies how the transfer shall be managed to protect the source river basin (Haw River basin) during drought conditions or other emergencies that occur within the source river basin. Except in circumstances of technical or economic infeasibility or adverse environmental impact, this drought management plan shall include mandatory reductions in the permitted amount of the transfer based on the severity and duration of a drought occurring within the source river basin and shall provide for the mandatory implementation of a drought management plan by the Towns of Cary and Apex that equals or exceeds the most stringent water conservation plan implemented by a public water system that withdraws water from the source river basin.
3. Within 90 days of receipt of the IBT certificate, the Towns of Cary and Apex shall update and submit a quarterly compliance and monitoring plan subject to approval by the Division. The plan shall include methodologies and reporting schedules for reporting the

following information: daily transfer amount calculated as the average daily over the maximum month, compliance with permit conditions, progress on mitigation measures, drought management, and reporting. A copy of the approved plan shall be kept on file with the Division for public inspection. The Division shall have the authority to make modifications to the compliance and monitoring plan as necessary to assess compliance with the certificate. The quarterly compliance and monitoring report shall be submitted to the Commission no later than 30 days after the end of the quarter. The Towns of Cary and Apex shall employ any methods or install and operate any devices needed to measure the amount of water that is transferred during each calendar quarter, calculated as a daily average of a calendar month.

4. The Commission may amend the certificate to reduce the maximum amount of water authorized to be transferred whenever it appears that an alternative source of water is available to the certificate holder from within the receiving river basin, including, but not limited to, the purchase of water from another water supplier within the receiving basin or to the transfer of water from another sub-basin within the receiving major river basin.
5. The Commission shall amend the certificate to reduce the maximum amount of water authorized to be transferred if the applicant's actual future water needs are significantly less than the applicant's projected water needs at the time the certificate was granted.
6. The applicant shall not resell the water that would be transferred pursuant to the certificate to another public water system. This limitation shall not apply in the case of a proposed resale or transfer among public water systems within the receiving river basin as part of an inter-local agreement or other regional water supply arrangement, provided that each participant in the inter-local agreement or regional water supply arrangement is a co-applicant for the certificate and will be subject to all the terms, conditions, and limitations made applicable to any lead or primary applicant.
7. If the Commission determines that the record on which this Certificate is based is substantially in error or if new information becomes available that clearly demonstrates that any Finding of Fact (including those regarding environmental, hydrologic, or water use impacts) pursuant to G.S. § 143-215.22L(k) was not or is no longer supported or is materially incomplete, the Commission may reopen and modify this Certificate to ensure continued compliance with G.S. Chapter 143, Article 21, Part 2A.
8. The Towns of Cary and Apex shall be required to provide access at their existing intake site to other Jordan Lake water allocation holders that need access to utilize their allocation to the extent that this additional use is determined to be feasible by the Division of Water Resources. The cost associated with getting any necessary permits, engineering design, and associated construction costs are the responsibility of the allocation holder(s) requesting the access and not Cary and Apex.

NOTICE: The holders of this certificate are jointly and severally responsible for compliance with the terms, conditions and requirements stated herein, and are therefore jointly and severally liable for all penalties assessed to enforce such terms, conditions and requirements as provided in G.S. §143-215.6A.

This is the _____ day of _____, 2015.

Gerard P. Carroll, Chairman

PART 2 – STAFF RESPONSE TO COMMENTS

**Cary, Apex and Morrisville and Wake County IBT Certificate Modification – Public Hearing Comments
Written Comments Received**

#	Name	Affiliation	Date Submitted	Format
1	Adams, Glenn	Cumberland County Commissioner	1/22/15	Oral statement
2	Allen, Charles	Citizen	1/30/15	Email
3	Baer, Katherine	Director of Conservation, Triangle Land Conservancy	2/5/15	Letter
4	Barfield, Jonathan	Chairman, New Hanover County Board of Commissioners	2/4/15	Resolution
5	Benoit, Betty Lou	Citizen-Cary	1/20/15	Email
6	Birke, Kathryn	Citizen-Fayetteville	2/2/15	Email
7	Brady, Melissa	Citizen-Fayetteville	2/6/15	Email
8	Broadwell, Nancy	Citizen-Fayetteville	1/30/15	Email
9	Bruce, Ashley	Citizen	1/22/15	Oral statement
10	Bryan, Norwood	Citizen-Fayetteville	1/22/15	Oral statement
11	Bryant, Rick	Sustainable Sandhills	2/3/15	Email
12	Buchan, Edward	City of Raleigh Public Utilities	1/7/15	Oral statement
13	Bull, Leonard	NCSU-Emeritus Professor	2/4/15	Email
14	Chiosso, Elaine	Haw Riverkeeper, Haw River Assembly	2/4/15	Letter
15	Daniel, Libby	Citizen-Fayetteville	2/3/15	Email
16	Dietrich, Barbara	Citizen-Fayetteville	2/5/15	Email
17	Dietrich, Walt	Citizen-Fayetteville	2/5/15	Email
18	Edge, Kenneth	Chairman, Cumberland County Board of Commissioners		Resolution
19	Ehrenreich, Hannah	Sustainable Sandhills	1/22/15	Oral statement
20	Ellis III, John W.	Town Manager, Town of Hope Mills	2/2/15	Resolution
21	Gaskell, Brian	Citizen-Fayetteville	1/24/15	Email
22	Glazier, Rick	Representative, NC General Assembly	1/22/15	Oral statement
23	Greeley, Don	Director, Dept. of Water Management, City of Durham	1/22/15	Oral statement
24	Greer, Kyle	Vice President of Economic Development, Cary Chamber of Commerce	1/7/15	Oral statement
25	Hartmann, Jim	County Manager, Wake County	1/22/15	Oral statement
26	Hinkel, Ralph	Citizen	1/5/15	Email
27	Hirsch, Jo Ellen	Sustainable Sandhills	1/22/15 & 2/6/15	Oral statement & Email
28	Holman, Bill	NC Director, The Conservation Fund	1/7/15	Oral statement
29	Hutchinson, Sig	Wake County Commissioner	1/7/15	Oral statement
30	Ingalls, Arthur	Citizen	1/31/15	Email
31	Johnson, Liz	Mayor Pro Tem, Town of Morrisville	1/7/15	Oral statement
32	Johnson, Paul	Chairman, Sustainable Sandhills	1/22/15	Oral statement
33	Johnson, R. Timothy	Citizen-Fuquay Varina	2/4/15	Letter

**Cary, Apex and Morrisville and Wake County IBT Certificate Modification – Public Hearing Comments
Written Comments Received**

#	Name	Affiliation	Date Submitted	Format
35	Johnson, Samuel	Citizen	2/5/15	Email
36	Kreiser, Lynne	Citizen-Fayetteville	2/4/15	Email
37	Lallier, Michael	Chairman, Fayetteville PWC	1/28/15	Resolution
38	Landguth, Michael	President and CEO, Raleigh-Durham Airport Authority	1/7/15	Oral statement
39	Layko, Ralph	Citizen-Cary	1/29/15	Email
40	McLaurin, Charles	Mayor, Town of Eastover	1/22/15	Resolution
41	Miller, Lynda	Citizen-Harnett County	2/3/15	Email
42	Morrison, James	Citizen-Cary	2/5/15	Email
43	Noland, Mick	COO, Fayetteville PWC	1/7/15 & 1/22/15	Oral statement
44	Peters, Douglas	President & CEO, Fayetteville Regional Chamber	1/22/15	Oral statement
45	Rey, Chris	Chair, Cumberland County Mayor's Coalition	2/6/15	Resolution
46	Rooks, Elizabeth	Executive Vice President and COO, Research Triangle Foundation	1/7/15	Oral statement
47	Rosario, Deanna	Sustainable Sandhills	1/22/15	Oral statement
48	Rouse, Ruth	Orange Water and Sewer Authority	1/7/15	Oral statement
49	Saffo, Bill	Mayor, City of Wilmington	2/2/15	Letter
50	Schlegel, Mike	Triangle J Council of Governments	1/7/15 & 1/22/15	Oral statement
51	Shivar, Benjamin	Town Manager, Town of Cary	1/22/15	Oral statement & Letter
52	Singleton, Rudolph	Citizen	1/22/15	Oral statement
53	Sustainable Sandhills	Sustainable Sandhills	2/6/15	Email
54	Sutton, Bill	Mayor, Town of Apex	1/7/15	Oral statement
55	Ungaro, Carlotta	President, Morrisville Chamber of Commerce	1/7/15	Oral statement
56	Valentine, Sharon	Citizen-Fayetteville	2/4/15	Email
57	Waldroup, Kenneth	Assistant Public Utilities Director, City of Raleigh	2/5/15	Letter
58	Weinbrecht, Harold	Mayor, Town of Cary	1/7/15	Oral statement
59	Westbrook, Vicki	Asst. Dir. Dept. of Water Management, City of Durham	1/7/15	Oral statement
60	Williams, Candace	Citizen	1/22/15	Oral statement
61	York, Dawn	President, Cape Fear River Watch	2/5/15	Resolution

Towns of Cary, Apex and Morrisville and Wake County IBT Certificate Modification Public Comments

Hearings Held January 7 and 22, 2015

#	Comment	Commenter(s)	Response
1	<p>Fast Track Review is Unreasonable: The applicants' December 2014 Environmental Assessment (EA) was not available for review until December 19, 2014 just a few days before the holiday season when many people are away for extended periods. The public hearing in Apex was then held on January 7, 2015, just a few days after the New Year's weekend. For a decision of this magnitude it seems unreasonable to expect public and agency reviews to be comprehensive as they should be given the short timeframe allowed and the scheduling of the review over the Christmas and New Year holiday season.</p>	<p>13, 18, 21, 22, 27, 43, 53</p>	<p><i>DWR believes that ample time has been given to submit written comments following the Fayetteville public hearing. The announcement for accessing the EA document was published in the North Carolina Department of Administration State Clearinghouse on December 19, 2015 with instructions for submitting comments to DENR regarding the document. The EA was available for comment through January 20, 2015 (30-days) via the State Clearinghouse.</i></p> <p><i>Per G.S.143-215.22L, the Department is required to give 30 days' notice prior to holding a public hearing on an IBT modification request. Public notice of the IBT modification public hearing was posted in the North Carolina Department of Administration's Environmental Bulletin on December 5, 2015. The EA and associated FONSI related to the modification request were available via the DWR website beginning on December 19, 2015. According to G.S.143-215.22L, "The Department shall accept comments on the requested modification for a minimum of 30 days following the public hearing." Public hearings on the request were held in Apex on January 7, 2015 and in Fayetteville on January 22, 2015. Public comments were accepted beginning January 7, 2015 through February 6, 2015, providing 30 days for public comment following the first public hearing.</i></p> <p><i>The public hearing in Fayetteville was conducted due to concerns raised by the Fayetteville Public Works Commission (PWC) as well as some citizens in Fayetteville. The selection of the January 22 date provided for a 34-day review period of the document prior to the public hearing and 15 days before the public comment period closed.</i></p>

2	<p>Basin Plan Should Come Before Major Water Use Decisions: For years we have been awaiting Division of Water Resources (DWR) completion of a Cape Fear River Basin Water Supply Plan that considers the future uses and needs of all major water users in the basin. We do not understand how a water use of this magnitude being requested by the applicants can be made before the Basin Plan has even been completed or reviewed.</p>	4, 13, 18, 20, 33, 37, 40, 43, 45, 61	<p><i>DWR is currently in the early stages of writing the Cape Fear River Basin Water Supply Plan. Among other items, it will detail the existing and projected water supply demands as they have been reported by units local of government in annually-submitted Local Water Supply Plans. A primary component of any water supply plan in the Cape Fear River basin will discuss results from various model scenarios from the Combined Cape Fear-Neuse River Basins OASIS Hydrologic Model. This model uses the same Local Water Supply Plan projection data, as required by G.S.143-215.22L(k)(3), as will be presented in the basin plan. A revision to this model was completed by the DWR in 2014. It was the primary instrument used by the applicant to demonstrate any potential impacts and is available for review by the public. Therefore, even though the basin water supply plan has not been completed, the plan will be based on the suite of model scenarios that were used by the applicants and are being used by agency staff to analyze applications for water supply allocations from Jordan Lake.</i></p>
3	<p>30-Year Allocation is Excessive: We are concerned about the practice of allocating a limited water supply to any entity based on what they project to be their 30-year need.</p>	4, 13, 18, 19, 20, 22, 27, 33, 37, 40, 43, 45, 53, 61	<p><i>An IBT Certificate is not an allocation; it gives permission to transfer water between river basins. All of the IBT Certificates to date have been based on the 30-year planning horizon due to several factors including, the significant capital costs of large infrastructure projects; availability of 50-year water supply demand projections, on 10-year increments, provided by the units local of government; and to avoid excessive state government permitting. The EMC has previously determined with earlier IBT Certificates that a 30-year planning horizon balances the capital investment costs of the water system with any changes to environmental conditions and development in North Carolina.</i></p>

4	<p>Exceeding 50% Watershed Diversion Cap Requires Formal Rule-Making: Currently, 42 mgd of the 62 mgd allocated as a result of Round 3 allocations involves diversion outside of the Jordan lake watershed. The Round 4 requests exceed 100 mgd which is more than the 100 mgd water supply safe yield estimate that DWR has been using for Jordan Lake and the possibility therefore exists that approved allocations would surpass the 50% Jordan Lake watershed diversion cap found in 15A NCAC 2G .0504(h). The applicants’ proposed IBT increase, which is dependent on increased Jordan Lake allocation, seems premature. Applicants are requesting 1/3 of the total Jordan allocation.</p>	4, 13, 18, 20, 22, 27, 33, 37, 40, 43, 45 , 61	<p><i>The question of limiting off-the-watershed diversions from the water supply storage pool will be reviewed in the process of developing the Jordan Lake water supply allocation recommendations.</i></p>
5	<p>Effective IBT Increase Should be Stated: The request at hand is to transfer an additional 9 mgd (calculated as the daily average of a calendar month) from the Haw River basin to the Neuse River basin. However, the increase is effectively more than a 9 mgd increase since the current 24 mgd IBT limit is a maximum day value whereas the requested 33 mgd IBT limit is not a maximum day value. It would be beneficial and more transparent for the applicants’ EA and DENR’s FONSI to state the effective increase in proposed IBT since the real increase is more than indicated by simply comparing 33 to 24 mgd.</p>	13, 18, 43	<p><i>Per the current IBT statute G.S.143-215.22L, all IBT Certificates and modifications are to be “calculated as a daily average of a calendar month”. Therefore, the applicants are following the revised statute changes by detailing all transfers, including proposed increases, by the revised statistic. In an effort to provide a comparative statistic, DENR requested that the maximum daily value of 24 mgd from the original Certificate be converted to an equivalent value representing the average day of the maximum month. The value of the converted statistic is 22 mgd. This value was presented in the EA document as well as presentations given during the public hearing. It should be noted that, 2 mgd of the 33 mgd proposed transfer from the Haw River basin will be transferred into the Cape Fear River basin through consumptive loss. Therefore, using comparative statistics, this proposal would allow the transfer of an additional 9 mgd to the Neuse River basin.</i></p>

6	<p>Support of Alternative 3A: We do not understand why such abbreviated analysis was done for Alternative 3a (Avoid Interbasin Transfer Increase by Sending Additional Untreated Wastewater to the Western Wake Regional Water Reclamation Facility (WWRWRF)). The proposed IBT merely being less expensive than other options doesn't show that applicant needs can't be met using other alternatives such as 3a, which EA Exhibit 3-4 lists as technically feasible, and meeting the project purpose and need. Merely stating that a propose IBT increase is less expensive than other options falls far short of the intent of the IBT regulations and prevents proper analysis of the alternatives.</p>	<p>1, 4, 7, 8, 9, 10, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 27, 33, 34, 35, 37, 39, 40, 41, 42, 43, 44, 45, 47, 49, 52, 53, 61</p>	<p><i>In addition to financial concerns, outlined in Appendix B, Alternative 3a would result in estimated unavoidable environmental impacts to 2.7 acres of wetlands and 1,500 linear feet of streams. It has been determined that the implementation of Alternative 3a would result in no significant additional flows for downstream uses (see table 2 in Hearing Officers report) due primarily to the management of Jordan Lake and the Cape Fear River. Considering that the hydrologic modeling¹ results in Table 3 of the hearing officers report demonstrate that all downstream water supply demands will be met at all times for both Alternatives 2a and 3a, the least financially challenging and least environmentally damaging alternative (Alternative 2a) was selected as the preferred alternative.</i></p>
7	<p>The WWRWRF should be more fully utilized: PWC doesn't understand why DENR's FONSI makes no mention of returning the first condition of the current IBT certificate, which requires the certificate holders to return water used in excess of 16 mgd in the Neuse River basin to either the Haw or Cape Fear River basins. The effect of fully utilizing the WWRWRF for its intended purpose would be to improve the reliability of the Jordan Lake water quality pool which is used for low flow augmentation. A more dependable water quality pool in Jordan Lake means a more dependable water supply for PWC and other users who rely on the Cape Fear River downstream of Jordan Lake.</p>	<p>13, 18, 42, 43</p>	<p><i>The proposed modification includes provision to transfer up to 31 mgd of water from the Haw River Basin to the Neuse River Basin. An estimated 15 mgd will be used consumptively in 2045 with the remainder being discharged as treated wastewater from existing permitted water reclamation facilities. A modified IBT Certificate will limit the amount of water that can be transferred to the Neuse Basin, with quarterly monitoring reports submitted to DENR. In 2045 the applicants anticipate using an annual average of 45 mgd, or about 62 mgd on average during the maximum use month. When water demands reach these levels of use the IBT Certificate will require water used in the Neuse River Basin over the 31 mgd limit to be returned to the Haw or Cape Fear River basins. Figure 2 in the Hearing Officer's Report indicates the 2045 estimated discharge from the WWRWRF to be 14 mgd with the transfer into the Neuse River Basin limited to 31 mgd. For the applicants to fully meet the projected water demands in 2045, water will need to be returned to be in compliance with the requested transfer amount. According to data presented in Section 5.1 and Appendix D of the EA based on the 2014 Combined Cape Fear-Neuse River Basin OASIS Hydrologic Model¹, no significant impacts to downstream flows are anticipated by the proposed modification to the IBT Certificate. Therefore, any condition requiring the applicants to return a specified amount of water into the Haw River or Cape Fear River basins was viewed as not necessary to avoid impacts to</i></p>

			<i>downstream flows.</i>
8	Impacts to aquatic wildlife downstream: Wildlife Resources Commission (WRC) is has stated that increased withdrawals from Jordan lake and increased IBT could impact anadromous fish. The ongoing efforts to restore anadromous fish passage in the Cape Fear River Basin underscore the importance of ecological considerations in addition to those of water supply users such as PWC.	4, 7, 13, 18, 20, 21, 33, 37, 40, 43, 45, 47, 49, 53, 61	<i>WRC recommended that the applicants return as much water as practically possible to the Cape Fear River basin. The WRC comment goes on to state, “over time the proportion returned to the Cape Fear River is projected to increase up to 37% (13.0 of 35.4 mgd [total wastewater discharges by the applicants]) in 2045.” These values demonstrate the applicants’ intent to expand the existing Cape Fear River basin discharge infrastructure in a responsible fashion with long-term planning paramount. DENR reviewed the comment received from the WRC and interpreted it as not opposing the proposed project or the preferred alternative. Furthermore, it should be emphasized that downstream flows will remain subject to USACE release regimes, limiting the potential for cumulative impacts of water withdrawals and IBT.</i>
9	Alternative 2b (fully utilizing existing Neuse River basin wastewater infrastructure) is Not Feasible: Why did the applicant present Alternative 2b as a possible alternative? It’s inconceivable that this alternative with a 44 mgd IBT rate could even be considered permissible and seems to have only been included to perhaps make the applicants’ preferred alternative look better by comparison.	13, 43	<i>There are 8 primary alternatives explored in the EA. Alternative 2b was included as a potentially feasible alternative because of its full utilization of the existing wastewater discharge infrastructure. Per the SEPA Administrative Rules 01 NCAC 25. Section .0502 (Content), “reasonable alternatives to the recommended course of action [should be evaluated].” Until the review is conducted for each alternative, their individual feasibility or reasonableness is unknown. It should be stated that Alternative 2b is not the preferred alternative and will not be presented to the EMC as the preferred alternative.</i>
10	Raleigh’s Proposed Use of the Cape Fear River as a Water Supply Requires Evaluation: We understand that Raleigh has expressed an interest in withdrawing water from the Cape Fear River near Lillington and then returning treated wastewater back to the Cape Fear River downstream of Lillington. We are not aware of this water use being considered in any hydrologic modeling scenarios. This is a significant development and should be evaluated to determine how it would affect the modeling results.	13, 18, 43	<i>The City of Raleigh recently submitted a request for an allocation from Jordan Lake as part of the Round 4 Jordan Lake allocation process. Their proposal is to withdraw water near the existing Harnett County water system intake, on the Wake County side of the river, and discharge treated wastewater back into the Cape Fear River downstream of the intake to manage surface water transfers. As proposed, the return flows would keep the transfer under 2 mgd avoiding the necessity to apply for an IBT Certificate. It should be stated that the City of Raleigh is evaluating many water supply scenarios to avoid projected water supply deficits. Most of the scenarios being evaluated by the City of Raleigh do not include the Haw River or Cape Fear River basins. §143-215.22L(k)(3) requires the analysis to be based on the information supplied by water systems in their local water supply plans and the City of Raleigh has not included Jordan Lake as one of their future alternatives.</i>

11	<p>Additional Modeling Results are Warranted: A model scenario that would be informative, but wasn't included in the applicants' EA, would be to simulate the applicants' 2045 Jordan Lake withdrawals and increased IBT without other 2045 basin demand changes. This scenario would isolate the incremental effects of the applicants' proposal as compared to 2010 Baseline conditions.</p>	13, 43	<p><i>The modeling analysis¹ is consistent with the requirements of G.S.143-215.22L(k)(3) to consider the cumulative effect of current and projected demands. Accordingly, all projected public water supply demands within the Cape Fear and Neuse River basins, both upstream and downstream of Jordan Lake, are included in the modeling scenarios¹. The data are provided to DWR by the individual water systems through the local water supply plans. Moreover, since the applicants do not expect to need the full amount of the proposed 33 mgd transfer limit until year 2045, it would not be a meaningful scenario. The scenarios modeled are an appropriate approach to analyze the incremental effects of the proposed transfer.</i></p>
12	<p>Modeling is Overly Optimistic: According to the hydrologic model developers, the model simulates Jordan Lake releases being made with perfect foresight. In real time it's impossible to manage reservoir releases this finely. This type of analysis does not provide assurance that downstream flow effects won't be more pronounced than what has been simulated. In addition, our understanding is that some projected industrial withdrawals such as those for Harris Lake Nuclear Station were held constant in the hydrologic modeling on the basis of assumption. Once again, these assumptions do not provide assurance that downstream flow effects won't be more pronounced than what has been simulated.</p>	13, 43, 53	<p><i>The 2014 combined Cape Fear-Neuse River Basin OASIS Hydrologic Model¹ is the best planning tool available to estimate water supply reliability over the range of flow conditions that have occurred since 1930. Self-supplied industrial water withdrawers are not required to project future demands when they register water use under G.S. 143-215.22H. Without additional information on anticipated changes in water usage in the future these withdrawals are modeled based on historical water use. No definitive information is available concerning expansions of generating capacity at the Harris Nuclear facility.</i></p> <p><i>All modeling is based on approximations of real world operations. A user can gain a good understanding of both potential benefits and impacts by comparing the various model scenarios¹. To account for uncertainties in the modeling assumptions, an additional worst case model scenario was conducted with all inflows reduced by 10%. This scenario found that all of the water systems projected to use the Cape Fear River in 2045 are able to meet their 2045 demands 100% of the time (Table 3 of the Hearing Officer's Report). The full details of this scenario are in technical memorandum outlining the additional model scenarios (EA Appendix C).</i></p>

13	<p>Modeling Shows Substantial decreases in Minimum Flows: Based on the applicants' modeling results as portrayed in Figures 28 and 29 of the EA Appendix D, minimum flows at points downstream of Jordan Lake such as Lillington and Fayetteville are dropping by about one-third when comparing 2010 Baseline to any of the 2045 scenarios. This begs the question of why any significant new upstream water use decisions are being made before understanding what can be done to minimize these large reductions in minimum flow levels posing increased risks to other entities' water supplies.</p>	<p>4, 18, 20, 21, 33, 37, 40, 43, 45, 61</p>	<p><i>The 2045 model scenarios¹ integrate the anticipated water demands that the modeled public water supply systems expect to face in 2045. The modeling results characterize changes in flow conditions that may occur if and when those demand levels become reality. The model compares that set of cumulative demands to a reconstruction of the full range of flow conditions that occurred in the basin since 1930. The 2010 model scenario compares the 2010 levels of demands to the same set of flow conditions. Analyzing different levels of water withdrawals over the fixed range of flow conditions is expected to result in different flow conditions. This exercise is conducted to characterize the possible changes to flow conditions that may occur under various demand possibilities. The modeling does indicate that for the 2045 demand scenarios flows less than 550 cfs (356 mgd) may occur 1.7% more frequently than under the 2010 demand scenario, over the range of flows modeled. With the proposed certificate modification the difference may increase to 2%. Similarly, at Fayetteville flows below 600 cfs (388 mgd) could be experienced an additional 0.2% of the time with the 2045 levels of withdrawals than occurred with the 2010 water use. The time with flows below 600 cfs (388 mgd) may increase an additional 0.2% with the proposed IBT modification. Knowing this provides water utilities with valuable information with which to plan. The modeling also indicates that public water withdrawers downstream of Jordan Dam can satisfy their predicted 2045 demands over the entire range of flow conditions in the model without implementing their water shortage response plans.</i></p>
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14	<p>How will Climate Change and /or future droughts affect: the tributaries of Jordan Lake and the Cape Fear River, and the future projections of water supply and water quality into 15-30 years? Modeling does not take into account the significant effects of micro-climate change or severe droughts which are projected to increase.</p>	<p>1, 6, 9, 14, 19, 21, 22, 27, 53</p>	<p>To address this concern, the DWR requested additional hydrologic modeling to review the sensitivity of the modeling evaluation results to the potential effects of a future reduced river inflow scenario. As a response to the request, the Petitioners submitted a technical memorandum outlining the additional model scenarios¹ (Appendix C). For the sensitivity analysis, the modeling scenarios evaluated for the IBT Certificate Modification EA were repeated assuming a 10-percent reduction in daily river inflows within the Cape Fear-Neuse River Basin Hydrologic Model for the entire 80+ year period of record. This evaluation demonstrated that even under a reduced river inflow scenario, the relative impact of the requested IBT Certificate Modification is similar to the original evaluation: there are no significant impacts on key hydrologic indicators. In addition, all water users downstream of Jordan Lake can meet projected 2045 water demands 100-percent of the time during the simulated period of record. These results are without considering any required Water Shortage Response Plan demand reductions.</p>
15	<p>Affect on downstream water withdrawers: How will this Interbasin Transfer Certificate request affect agricultural, hydraulic fracturing, and other water users use during droughts in the future?</p>	<p>1, 6, 9, 14, 17, 19, 22, 26, 27, 32, 36, 39, 49, 53, 56, 60</p>	<p>The hydrologic modeling analyses¹ conducted for this IBT request includes all registered water withdrawals per G.S.143-215.22(H). Analyses conducted included all data available from the period of record, which includes specific USGS gages in the Cape Fear River, which includes 70 years or older flow data. Additionally, figures 7 and 8 in Appendix D of the EA depict what the effects of the IBT request would be like under conditions observed during the recent 2002 and 2007 droughts. During these conditions, the differences between the 2045 Baseline and the 2045 Baseline with IBT are negligible.</p>
16	<p>Impacts to downstream water quality: Concern for inherently higher vulnerability of water quality and pollutants loading in the Cape Fear River. Increased rate of algal blooms downstream. Reduced flows will cause algae blooms in the Cape Fear River.</p>	<p>1, 3, 22, 27, 28, 53, 56, 60, 61</p>	<p>The hydrologic modeling analyses¹ conducted for this request have shown no significant change in the projected flows downstream of the Jordan Lake Dam as compared to the projected 2045 Baseline flows; therefore, no algal blooms or other water quality issues are expected to occur downstream of the Jordan Lake Dam as a direct result of this IBT request.</p>
17	<p>Opposed the idea of water transfer.</p>	<p>2, 6</p>	<p>Comment noted.</p>

18	<p>Impacts to Jordan Lake water quality: EA does not address the impacts to Jordan Lake from growth, supported by water withdrawals. Source water protection is needed for Jordan Lake from pollution and contamination.</p>	3, 26, 28, 42	<p><i>The assessment of secondary and cumulative impacts (SCI) for both the source and receiving basins is presented in the Towns' Secondary and Cumulative Impact Master Management Plan (SCIMMP). The SCIMMPs include a comprehensive description of mitigation programs to avoid or minimize SCI to environmental resources that could occur with the Towns' land use plans and implementation of projects in the Towns' infrastructure master plans. The SCIMMPs discuss the federal, state, and local programs that mitigate the potential SCI related to growth facilitated to some extent by infrastructure and public utility projects, including this proposed increase in IBT. The SCIMMPs discuss the potential for SCI to occur and the programs designed to mitigate SCI to a level that is not expected to be significant. The Jordan Lake Rules, passed in 2009 (15A NCAC 02B .0267), were designed to protect and restore the water quality of Jordan Lake.</i></p>
19	<p>Request is unnecessary. Poses increase risks to the water supply of downstream counties.</p>	4, 18, 20, 21, 33, 37, 39, 40, 45, 61	<p><i>As outlined in the Finding of Fact No. 1 in the Hearing Officers Report, the proposed water transfer will provide water to the rapidly growing communities of Cary, Apex, and Morrisville, as well as the Research Triangle Park (RTP) within Wake County. The current population served in 2015 is about 215,800 and has an estimated current average day water demand (ADD) of 24.1 MGD. The 2045 projected service area population is 354,800, with an ADD of 45.1 MGD. Table 1 suggests that the existing IBT may be exceeded between 2020 and 2025. More information concerning the future population growth and water demand projections may be found in section 2.2 of the Environmental Assessment (EA). Modeling¹ of the increased IBT indicates that downstream water users will still be able to meet all projected demands in 2045.</i></p>
20	<p>Future population growth downstream of request: Maintain the highest level of certainty for our future water supply.</p>	4, 6, 7, 11, 13, 15, 16, 18, 19, 20, 21, 22, 26, 27, 33, 37, 40, 44, 45, 48, 49, 53	<p><i>Projected water supply demands by all water systems from data submitted in required Local Water Supply Plans are included in all projection modeling analyses¹.</i></p>
21	<p>Lack of Jordan Lake reserve: Could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream.</p>	4, 18, 20, 27, 33, 37, 40, 45, 61	<p><i>Finding of Fact No. 7 of the Hearing Officers Report presents the results from the hydrologic modeling analyses¹, which shows that all outlined objectives of the reservoir will continue to be met with the IBT request.</i></p>

22	Considerations for Chatham Park: Has the proposed development of the 400 acre Chatham Park been included? It is estimated 60,000 new residents alone would be added to the existing 7,000+, plus the supporting businesses. How will the wastewater be handled?	5, 26, 42	<i>Water demand for Chatham Park was included in the modeling supporting the EA. Water will be provided by the Town of Pittsboro. Some of the wastewater generated by Chatham Park will be treated and reused on-site for non-potable water uses. Pittsboro may supply additional wastewater treatment under its existing wastewater discharge permit.</i>
23	Request precedence: Will this request set a precedence for water rights for North Carolina?	16	<i>This IBT request is consistent with all North Carolina water rights laws and statutes, particularly the 1967 Water Act and the current IBT statute.</i>
24	Lack of collaboration between upstream and downstream users.	22	<i>According to a letter regarding issues raised during the public comment period addressed to the Hearing Officer from the Town of Cary dated February 4, 2015, there have been a number of opportunities for downstream users to collaborate with upstream users starting in 2009 and continuing throughout water supply planning efforts to date.</i>
25	Lack of availability to EA document	27, 53	<i>Following publication of the announcement for the availability to review the EA from State Environmental Protection Act (SEPA) State Clearinghouse administered by the North Carolina Department of Administration (DOA), which had 2 hard copies and several digital copies available to the public, the Division of Water Resources posted the EA and FONSI documents on a webpage for IBT modification request, http://www.ncwater.org/?page=473, and sent out a press release to create awareness in the community. Four copies were available at the Public Hearing in Fayetteville on January 22, 2015 for reference within the hearing room.</i>
26	Impact to existing groundwater wells.	26, 27, 56	<i>No impacts to any groundwater wells are anticipated as a direct result of this IBT request. The hydrologic modeling analyses¹ demonstrated no significant alterations of the anticipated flows downstream of the Jordan Lake dam as compared to the 2045 Baseline conditions; therefore, any groundwater wells adjacent to the river are not expected to experience any effects from the IBT request.</i>
27	Same population projections need to be used for both the EA and Round 4 allocation application.	28	<i>Comment noted.</i>

28	Updated Secondary and Cumulative Impact Management Plan (SCIMP) document not finalized prior to EA document, which references earlier SCIMP document.	28	<i>The current SCIMP document was referenced in the EA document and serves to address potential secondary and cumulative impacts associated with the requested IBT Certificate modification.</i>
29	EA does not provide a cost savings the local governments will have by selecting the preferred alternative.	28	<i>A full fiscal evaluation of all alternatives is typically not conducted for EA documents as directed by the State Environmental Policy Act (SEPA) (statute: G.S.113A and Administrative Rules 01 NCAC 25). However, following the public hearings, cost comparisons between the alternatives presented in the EA were conducted and are presented in Appendix A. The results from the cost analysis demonstrate that Alternative 3a would be between \$207 million and \$333 million, while Alternative 2a has no additional costs.</i>
30	Opposed to using water previously treated at a wastewater treatment plant again downstream, even after said water is treated at a drinking water treatment plant.	30	<i>No wastewater discharges, especially those from water supply wastewater treatment facilities, in North Carolina can violate water quality standards specific for the receiving waters. Monthly water quality reports are submitted to the Department of Environment and Natural Resources (DENR), per the NPDES discharge permit. Furthermore, all potable surface water withdrawn must be treated to drinking water quality standards; those reports are submitted to the Public Water Supply Section in DENR's Division of Water Resources.</i>
31	Withdrawals during droughts: Water supplies from Jordan Lake should be reduced during times of drought and water-supply stress	32	<i>The petitioners currently maintain drought management plans, water conservation plans, and water shortage response plans. Should the IBT request be granted, these will be revised accordingly and submitted to the Division of Water Resources within 90 days for review and approval. These documents, particularly the Water Shortage Response Plan, outline water demand reductions.</i>
32	Alternative 2a does not minimize IBT	28	<i>To minimize the requested IBT, Alternative 2a includes a projected discharge of 14 mgd (21.7 cfs) from the Western Wake Regional Water Reclamation Facility, which is the applicants' 30-year development planning capacity of the facility. This was included in the projected 2045 model evaluations¹. In addition, the petitioners have implemented ordinances to significantly control growth in a responsible fashion as documented in Section 6.1 of the EA and in their SCIMMP documents.</i>
33	Lack of page numbers in Table of Contents	27, 53	<i>Page numbers are listed as specific sub-section numbers.</i>

34	<u>Fayetteville PWC has not developed 2045 water demand projections</u>	27, 53	<i>Water supply demand projections on 10-year increments from 2020 through 2060 were submitted by Fayetteville PWC in their Local Water Supply Plan, and have been integrated in the hydrologic modeling scenarios¹ conducted for this IBT request. The 2045 water supply demands were extrapolated from this data and represent values between the 2040 and 2050 projections.</i>
35	<u>What is the benefit of this proposal to the Fayetteville area?</u>	60	<i>According to hydrologic modeling¹ conducted for this IBT request, all water supply demands in the Fayetteville area are projected to be met through 2045.</i>
36	<u>Provided support</u> for the Interbasin Transfer Certificate request.	12, 23, 24, 25, 29, 31, 38, 46, 48, 50, 51, 52, 54, 55, 57, 58, 59	<i>Comment noted.</i>

¹ Access to the hydrologic model and all the model scenarios presented in the EA and the Hearing Officers Report are publicly available. Please visit, http://www.ncwater.org/data_and_modeling/Cape_Fear-Neuse/, to request public access to the Combined Cape Fear – Neuse River Basin Model.

Oral Statement of Glenn Adams, Cumberland County Commissioner

January 22, 2015 Fayetteville City Hall

I come to speak on the request, and I speak because in 2001 there was an agreement that in term of the in water transfer that water would be taken out of the Cape Fear River taken through the waste water management treatment plant and put back into the Cape Fear River. That would be the alternatives that the stake holders downstream in Cape Fear River would suggest we do at this particular time. We understand our neighbors in Cary and Wake County and we are truly, truly there to help them. That is why we would not oppose that the water be taken out of the Cape Fear River Basin; however, as we know when they created the waste water Treatment plant in Cary the agreement was to put it back into the Cape Fear River. We are strongly downstream, as we are looking to expand our economic base, we understand that water is essential to that and right now if you look down river, Wilmington's already getting algae blooms down the Cape Fear River. As we talk about the economic climate, and the climate in terms of North Carolina and the number of droughts that we have had, the Eastern part of N.C. is agriculture. The life blood of any agriculture is water. We understand our neighbors to the North have major, major problems with the Neuse River. We sympathize with them, we know that they have tried to reduce the nutrient level in the Neuse River and have been unsuccessful in that, however our life blood is the Cape Fear River. We have taken care of the Cape Fear River, and we believe that putting the water back after it has gone through a waste water treatment plant. So were not being greedy and not letting you use the water, we're allowing you to do that because we understand that it's important to you, but we really urge DENR and the state of North Carolina to go with the alternative of replacing the water in the Cape Fear River Basin. - End

From: [Charles Allen](#)
To: [Brady, Harold M.](#)
Subject: Inter basin Water transfer
Date: Friday, January 30, 2015 7:28:08 PM

I am opposed to this idea continuing.

Thank you,

Charles

Please excuse any typos. Sent from mobile device.



Mr. Harold Brady
NC Division of Water Resources
1611 Mail Service Center
Raleigh, North Carolina 27699-1611

February 5, 2015

RE: Proposed Interbasin Transfer Certificate Modification from Haw River Basin to the Neuse and Cape Fear River Basins

Dear Mr. Brady,

Triangle Land Conservancy (TLC) is a nonprofit conservation organization that strives to create a healthier and more vibrant Triangle region by safeguarding clean water, protecting natural habitat, supporting local farms and food, and connecting people with nature through land protection and stewardship, collaboration, and catalyzing community action. TLC has long worked to protect the region's clean water supplies, primarily by permanently protecting riparian buffer zones, creating conservation plans, and convening regional summits on watershed issues.

Our six county service area (Chatham, Durham, Johnston, Lee, Orange, and Wake counties) spans two major river basins, the Upper Cape Fear and the Upper Neuse, and TLC has permanently protected over 100 miles of stream buffers through conservation easements and fee simple acquisition throughout the region, reflecting the importance of land protection as one key water management strategy. We believe that the pending interbasin transfer certificate modification request provides an important opportunity to address watershed protection, and urge the Environmental Management Commission (EMC) to require initiation of such a process as a condition of approval.

The proposed interbasin transfer certificate modification request provides the opportunity to examine both the quality and quantity of our drinking water supplies. Jordan Lake and many of its tributaries have been listed as impaired for nutrients, sediment and other pollutants by the N.C. Division of Water resources and the U.S. Environmental Protection Agency. Moreover, according to North Carolina's Source Water Assessment Program, Jordan Lake is classified as having a moderate rating for inherent vulnerability to contamination and is classified as having high ratings for both contaminant and susceptibility ratings. With the increase in development

predicted for the Jordan Lake watershed, without further protective measures, pollution will also increase, impacting drinking water treatment costs.

Mechanisms for source water protection are flourishing throughout the country, and there are a variety of regional models where communities are cooperatively prioritizing and funding watershed protection. As an example, in this region, the Upper Neuse Clean Water Initiative (UNCWI) has permanently protected over 7,200 acres along 66 miles of streams and leveraged Raleigh's contributions to this effort at a 13:1 ratio, providing a significant return on investment.

TLC believes that the interbasin transfer certificate modification request to increase the allocation from the Haw River provides an important opportunity to more comprehensively address watershed protection to protect the regional water supplies. Building on their already strong record of cooperation through the Jordan Lake Partnership and other efforts, Cary, Apex, Morrisville and Wake County are well-positioned to work with a variety of partners to develop a regional conservation effort to secure clean and plentiful water into the future.

We appreciate this opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Katherine Baer". The signature is fluid and cursive, with the first name being more prominent.

Katherine Baer
Director of Conservation



**NEW HANOVER COUNTY
BOARD OF COMMISSIONERS**

230 GOVERNMENT CENTER DRIVE, SUITE 175
WILMINGTON, NC 28403
(910) 798-7149
(910) 798-7145 FAX
WWW.NHCGOV.COM

Jonathan Barfield, Jr.
Chairman
Beth Dawson
Vice-Chairman
Woody White
Commissioner
Skip Watkins
Commissioner
Rob Zapple
Commissioner

February 4, 2015

Harold Brady
NC Division of Water Resources
1611 Mail Service Center
Raleigh, NC 27699-1611

RE: New Hanover County Board of Commissioners Resolution Opposing Proposed Interbasin Transfer Certificate Modification for the Towns of Apex, Cary and Morrisville, and Wake County

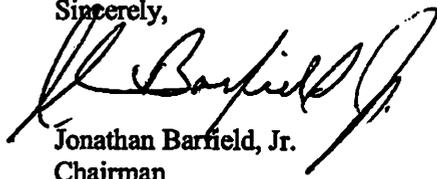
Dear Mr. Brady:

Please accept the attached resolution opposing the proposed interbasin transfer certificate modification for the towns of Apex, Cary and Morrisville, and Wake County. This opposition is made acknowledging that the Cape Fear River is an incredible resource to New Hanover County, which is located at the end of the river system and is subject to the impacts of all upstream withdrawals. As are the towns of Apex, Cary and Morrisville and Wake County, New Hanover County is a fast growing county expecting our population to grow by 135,000 by the year 2040. The County is also part of a region including three of the State's fastest growing counties.

This request for interbasin transfer appears to be made while there are other alternatives available that would not require the transfer of any additional water out of the Cape Fear River Basin and its tributaries. While we fully understand the need for the towns and Wake County to plan for their future, we do not support their request to transfer water from the Cape Fear River basin. Alternative 3A indicated in the Environmental Assessment appears to be a reasonable alternative that would meet the needs of this region.

Thank you for your consideration of this resolution and our river basin.

Sincerely,



Jonathan Barfield, Jr.
Chairman

**NEW HANOVER COUNTY BOARD OF COMMISSIONERS
REQUEST FOR BOARD ACTION
MEETING DATE: February 2, 2015**

ADDITIONAL ITEMS

DEPARTMENT: Planning

PRESENTER(S): Chris O'Keefe, Planning & Inspections Director

CONTACT(S): Chris O'Keefe

SUBJECT:

Consideration of a Resolution Opposing the Proposed Interbasin Transfer Certificate Modification for the Towns of Apex, Cary and Morrisville, and Wake County (For RTP South) Alternative 2A - Increase IBT to Meet 2045 Demands

BRIEF SUMMARY:

A request was made by the Towns of Apex, Cary and Morrisville and Wake County for an amendment to their interbasin transfer (IBT) certificate. Currently this group holds a certificate to transfer 24MGD from the Haw River Basin (a tributary to the Cape Fear River) to the Neuse River Basin. The modification would increase the amount of the IBT from 24 MGD to 33 MGD. NC Division of Water Resources administers the IBT process. Because this process is for an amendment the process is fairly brief and gives us only until February 5, 2015 to comment on the proposal. Following are some points to consider:

About the Request

- The request is being made to accommodate future growth expected to occur in the region up through 2045.
- The request is supported by the town's and county's water supply plans.
- An environmental assessment was developed for the applicant to support the request. The assessment evaluated several alternatives and recommended this action.
- Public meetings were held in Apex on 1/7/15 and in Fayetteville on 1/22/15.
- All comments must be postmarked or emailed by February 5.

What the Request Does Not Adequately Consider

- The assessment does not account for growth projected to occur downstream.
- The assessment does not evaluate environmental impacts as fully as an Environmental Impact Statement would.
- The statement identifies reasonable alternatives to the chosen action which would return water to the Cape Fear River Basin which should be more fully examined.
- The review period has been very short and we have not had time to consider potential impacts on our water supply or the river's ecology.

What Else You Should Know

- The City will consider a resolution about this topic on Tuesday, February 3, 2015.
- The Fayetteville Public Water Committee has submitted comments with several important concerns – these concerns are attached.
- The regulations governing certificate amendments were added to state statutes in 2013. They greatly streamlined the process.

STRATEGIC PLAN ALIGNMENT:

Superior Public Health, Safety and Education

- Keep the public informed on important information

RECOMMENDED MOTION AND REQUESTED ACTIONS:

Adopt the resolution.

ATTACHMENTS:

Resolution

Public Hearing Notice

FPWC IBT Summary

COUNTY MANAGER'S COMMENTS AND RECOMMENDATIONS: (only Manager)

Recommend approval.

NEW HANOVER COUNTY BOARD OF COMMISSIONERS

RESOLUTION

**OPPOSING THE PROPOSED INTERBASIN TRANSFER CERTIFICATE
MODIFICATION FOR THE TOWNS OF APEX, CARY AND MORRISVILLE, AND
WAKE COUNTY (FOR RTP SOUTH)
ALTERNATIVE 2A - INCREASE IBT TO MEET 2045 DEMANDS**

WHEREAS, New Hanover County finds that the Interbasin Transfer (IBT) Certificate request submitted by the towns of Apex, Cary and Morrisville, and Wake County (for RTP South) is unnecessary and poses increased risks to the water supply of New Hanover County; and

WHEREAS, the Cape Fear River is a tremendous resource to our community, providing our major source of water supply as well as affording many recreational opportunities to our citizens, and it is our responsibility to maintain the highest level of certainty for our future water supply; and

WHEREAS, it is our understanding that the NC Wildlife Resources Commission has indicated concern that increased withdrawals from Jordan Lake could negatively impact fish populations in the Cape Fear River and therefore negatively impact the river's ecosystem; and

WHEREAS, it is our understanding that current requests for water supply from Jordan Lake do not allow for any water to be held in reserve; which could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream; and

WHEREAS, it is our understanding that the additional transfer will cause more than 50% of the water supply to be diverted away from the Jordan Lake drainage basin; which is not in compliance with NC Department of Environment and Natural Resources (DENR) rules and could jeopardize replenishment of the lake; and

WHEREAS, a water use decision of this magnitude seems premature given that the Cape Fear Water Supply Plan, being prepared by DENR to determine whether or not all water supply needs can be met throughout the entire Cape Fear River Basin, has not been finalized; and

WHEREAS, it is our understanding that this transfer is based on a 30-year planning period, which is excessive and would compromise our ability to meet changes due to regulations, statutes, customer demands, climate changes, and regional needs; and a shorter planning period of 15 years would be more prudent.

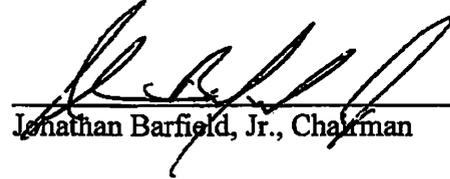
NOW, THEREFORE, BE IT RESOLVED, that the New Hanover County Board of Commissioners recommends utilization of Alternative 3A, as described in the Environmental Assessment for the proposed IBT. This option avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility. It is our understanding that the Western Wake Partnership has the infrastructure in place to allow the

return of treated wastewater to the Cape Fear River. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.

ADOPTED this the 2nd day of February, 2015.



NEW HANOVER COUNTY


Jonathan Barfield, Jr., Chairman


Teresa P. Elmore, Clerk to the Board

From: [Betty Lou Benoit](#)
To: [Brady, Harold M.](#)
Cc: waterlou96@gmail.com
Subject: Lake Joran water issue
Date: Tuesday, January 20, 2015 9:44:20 AM

Hello Mr. Brady,

When I moved to Cary in late 1995, water was an issue many people spoke of back then. My home is located just off of Davis Drive, which in 1996 was a two lane road known as the driveway to IBM, where one passed cows in the fields. Today that view has changed to a four lane road, the cows are gone replaced by apartments and multiple shopping strips on all four corners of Morrisville Carpenter, and Davis Drive and High House Road and Davis Drive. This describes the growth of only one area within a three mile radius that is still under construction.

Water, the one commodity that cannot be reproduced, is still an everlasting issue. Everyone needs it and developers want more and more of it. I have seen the shore line's recede on Jordan Lake and yet water restrictions weren't put into place until much later. I would suggest the odd - even restrictions be enforced twelve months a year regardless of rain amounts, and higher fines be enforced to make it memorable to abusers. In the case of companies the higher usage rate should apply. The greed for growth for the benefit of developers with little to no regard of consequences to the land and lakes has amazed me. Fines for clearing additional areas not authorized are so small they clear the land, cut down older trees and apologize if enough people bring it to our attention.

I have read two articles in The Cary News on towns that seek additional water from Jordan Lake. I personally feel that Mike Noland, chief operating officer for the Fayetteville Public Works Commission, for the city's utility has every right to be concerned about less water flowing downstream. That area has as much right to be sustained and grow as those close to the source, and those further upstream. Please listen to his concerns.

*One of the articles informs us the state controls the rights of 100 million gallons per day which is shared by Apex, Cary, Morrisville, Holly Springs Raleigh, Wake County, Durham, Pittsboro, Sanford, Chatham County, Orange County, Hillsborough and the Orange Water and Sewer Authority . Several of these have given their blessings to the proposal to increase an additional 9 million gallons of water be transferred daily from Jordan Lake. Business like RTP and the RDU airport (the runoff of the tarmac water is very damaging) praised the increase of water allowed to come from Jordan Lake. Has the proposed development of just **Pittsboro's** 7,000 plus additional 400 acre Chatham Park even been included in this thought process by*

anyone? It is estimated 60,000 new residents alone would be added, plus the infrastructure of supporting businesses.

Growth and development are good, but an area without water due to over population and poor management would be a disaster.

I feel certain you are aware of everything I just spoke of. My goal is to have solid consideration given to the consequences of poor planning vs. the pressure of greed.

Respectfully,

*Lou Benoit
Cary, NC*



This email is free from viruses and malware because [avast! Antivirus](#) protection is active.

From: [Betty Lou Benoit](#)
To: [Brady, Harold M.](#)
Cc: waterlou96@gmail.com
Subject: RE: Lake Jordan water issue
Date: Wednesday, January 21, 2015 10:09:38 AM

Good morning Mr. Brady,

A friend read my email and asked if I feel Cary should be entitled to more water because of its growth (see my first paragraph)? I was just using that as an example of how dense development can become even within a small radius of three miles in one area. These new townhomes, apartments, and condos, to say nothing of the businesses use a great deal of water to support that growth. The popular development now is high density and multi use. We REALLY need to be mindful of what we are doing.

Thank you again,

Lou Benoit

From: Brady, Harold M. [mailto:harold.m.brady@ncdenr.gov]
Sent: Tuesday, January 20, 2015 9:51 AM
To: Betty Lou Benoit
Subject: RE: Lake Jordan water issue

Ms. Benoit,

Thank you for your comments regarding the proposed modification to the Interbasin Transfer (IBT) Certificate for the Towns of Apex, Cary and Morrisville, and Wake County (for RTP South). NCDENR will be accepting comments regarding the proposed modification through February 6, 2015. All comments received will be part of the public record, and will be included along with responses prepared by NCDENR as part of the Hearing Officers' Report to the NC Environmental Management Commission (EMC). The EMC is the decision-making body for the proposed IBT certificate modification. We anticipate the final determination will be made at the EMC's March 12th meeting.

Thank you,

[Harold M. Brady](#)
Water Supply Planning Branch
NCDENR - Division of Water Resources

phone: 919-707-9005 fax: 919-733-3558
email: harold.m.brady@ncdenr.gov
www.ncwater.org

E-mail correspondence to and from this address may be subject to the North Carolina Public Records Law and may be disclosed to third parties.

From: Betty Lou Benoit [<mailto:waterlou96@gmail.com>]
Sent: Tuesday, January 20, 2015 9:44 AM
To: Brady, Harold M.
Cc: waterlou96@gmail.com
Subject: Lake Jordan water issue

Hello Mr. Brady,

When I moved to Cary in late 1995, water was an issue many people spoke of back then. My home is located just off of Davis Drive, which in 1996 was a two lane road known as the driveway to IBM, where one passed cows in the fields. Today that view has changed to a four lane road, the cows are gone replaced by apartments and multiple shopping strips on all four corners of Morrisville Carpenter, and Davis Drive and High House Road and Davis Drive. This describes the growth of only one area within a three mile radius that is still under construction.

Water, the one commodity that cannot be reproduced, is still an everlasting issue. Everyone needs it and developers want more and more of it. I have seen the shore line's recede on Jordan Lake and yet water restrictions weren't put into place until much later. I would suggest the odd - even restrictions be enforced twelve months a year regardless of rain amounts, and higher fines be enforced to make it memorable to abusers. In the case of companies the higher usage rate should apply. The greed for growth for the benefit of developers with little to no regard of consequences to the land and lakes has amazed me. Fines for clearing additional areas not authorized are so small they clear the land, cut down older trees and apologize if enough people bring it to our attention.

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*One of the articles informs us the state controls the rights of 100 million gallons per day which is shared by Apex, Cary, Morrisville, Holly Springs Raleigh, Wake County, Durham, Pittsboro, Sanford, Chatham County, Orange County, Hillsborough and the Orange Water and Sewer Authority . Several of these have given their blessings to the proposal to increase an additional 9 million gallons of water be transferred daily from Jordan Lake. Business like RTP and the RDU airport (the runoff of the tarmac water is very damaging) praised the increase of water allowed to come from Jordan Lake. Has the proposed development of just **Pittsboro's** 7,000 plus additional 400 acre Chatham Park even been included in this thought process by*

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Growth and development are good, but an area without water due to over population and poor management would be a disaster.

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Respectfully,

*Lou Benoit
Cary, NC*

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From: [Kathryn Birke](#)
To: [Brady, Harold M.](#)
Subject: Interbasin Water Transfer
Date: Monday, February 02, 2015 5:28:48 PM

Mr. Brady,

I have recently followed news accounts of the Cary/Apex/Morrisville/Wake County desire to draw more water from the Cape Fear River, which flows right through my hometown of Fayetteville. First of all, what arrogance these community officials are displaying to want additional water, on top of the 24 million gallons a day they now receive from our area. Not only do they say they require more water, they've also broken a promise to have it eventually flow back to us from their treatment plant, built to do so! I am very much against their new 9-million-gallon-a-day request. They have indicated that they cannot be trusted to be good neighbors/stewards of our water. Those Triangle areas might be growing, but we along the Cape Fear matter, too. Many of us resent our river water being taken and not returned by wealthier, more populous communities. We want to ensure that we, too, are prepared for future population growth and the always-possible effects of drought.

Thank you for your attention to my concern.

Sincerely,
Kathryn Birke

From: [Melissa Brady](#)
To: [Brady, Harold M.](#)
Subject: Wake Co Water Withdrawal
Date: Friday, February 06, 2015 10:53:27 AM
Attachments: [image002.png](#)

Good morning Mr. Brady. I am writing to voice my opinion regarding the matter of Wake County's water withdrawal request from our main water source.

If Wake County requires more water they should have it on the premise they they be REQUIRED to put said used and treated water BACK into the Cape Fear River, NOT the Neuse River Basin. The Cape Fear River has enough to sustain all only when used properly in its current natural state. Not only must Fayetteville's water needs be sustained but all communities south of Jordan Lake need the Cape Fear River water source. Consider also that this one water source is also utilized for taxable recreation, food and spawning waters for big Atlantic sport fish. Consider how taking twenty-four million gallons of water from one river and putting it into another would negatively impact both precious water sources. We want all waters removed from the Cape Fear River put BACK into the Cape Fear River. It only makes logical sense.

Let's not create a "water war" like what Georgia and Florida faced in 2014. The Cape Fears waters need to remain with her banks, not the banks of the Neuse River Basin.

<http://www.foxnews.com/politics/2014/02/17/water-war-southern-states-battle-to-keep-faucets-flowing/>

Respectively submitted,

Melissa Brady

Melissa Brady, BSD
Health Education Coordinator

Better Health
1422 Bragg Blvd.
Fayetteville, NC 28303
910 483 7534 ext. 102
910 483 2157 FAX
www.BetterHealthCC.org

A United Way Partner Agency



From: [Nancy](#)
To: [Brady, Harold M.](#)
Subject: Water transfer
Date: Friday, January 30, 2015 5:57:48 PM

Cary can afford to return water to the Cape Fear by using the plant already built.
Nancy
Fayetteville

Sent from my iPad

Oral Statement of Ashley Bruce – citizen

January 22, 2015 Fayetteville City Hall

Hi, I'm Ashley Bruce, before I came here tonight I asked my son who is two years old, Think mommy should go to the inter basin transfer meeting? He looks at me and says Mom what's that? I said, Wake County wants to take our water and not put it back." He looked in there and said mom you need to barge in there and tell them they can have the water but they have to put it back. He is the future of Cumberland County, we have firmly put our rots down here in Cumberland County in the last two years, and we're not going anywhere. That is straight from the mouth from a babe whenever he said that. But, there are also some other reasons for saying no to the inter basin transfer as it is proposed, not just for the children who are our future, but also the environmental assessment failed to include future changes to climate that may result in less water. Including over the next 30 years, the EA also denied including unrestricting withdrawal by the future of hydraulic fracturing in the industry. Hydraulic fracturing requires withdrawals of up to 2 million gallons per well. This will happen and it is proposed to be permitted as early as the spring in this county. The only rules right now that are in place is that hydraulic fracturing firms only have to submit a water use plan, they do have to say where the water comes from, but there is nothing in the rules that stop them from withdrawing them from our surface water. If Wake County wants to take our water, they are going to need to put it back. Given the nature of what is to come over the next few years, I recommend that Wake County use the water and put it back. – End

Oral Statement of Norwood Bryan – citizen

January 22, 2015 Fayetteville City Hall

My name is Norwood Bryan, I am 80 years old. I am a resident of North Carolina and Fayetteville since I was born here in 1935. I care a lot about my community and my state. I have watched this process for a long time. In 1967, the legislature combined a few entities into the Department of Water Resources. I was part of that effort because I was part of the legislature during that date and at that time. It went on from there and it grew, I asked Bob Scott who was governor at the time to appoint a fella DWR, his name was James Wallace. My friend Mr. Singleton remembers him well; he was a very smart fellow, degrees in physics and mathematics. He was reappointed many times by many governors, he's now gone unfortunately. But, I got a call from him one day, he said Cary wants water out of the Cape Fear River and they want to return it to the Neuse River. He said there was no authority in the statutes to do that. AT that time I'm sure if you review the statutes there was not authority for the board to grant permission to transfer. There was a prohibition as I recall, but they weren't actually authorized to do it, but they did it anyway. I wanted to enjoin them from doing it and I contacted the city attorney, I contacted my friend Tom McCoy who was chairman of PWC at the time and I tried to get the city council evolved so we could hire a lawyer and stop them. The only person that was really for it was a fellow named Wafford who was on the city council. Without a good group we just didn't do anything and they went on and did the transfer. I think that, well because I haven't read all the documents, I think that the whole idea of not returning the water to the source is a bad idea. I think that the department and the commission should permit Raleigh and the Cary area to have their water on the condition that before a single drop of water is taken from the basin that the infrastructure must be in place and functional. The treatment should be equal to the same treatment of the Lake Tahoe plant offers. – End

From: [Rick Bryant](#)
To: [Brady, Harold M.](#)
Subject: Water Supply for Cape Fear Region
Date: Tuesday, February 03, 2015 7:35:16 PM

Mr. Brady,

Please consider in all discussions of an inter-basin water transfer that the delicate balance of water for Cumberland County to include Fayetteville should not be disrupted. The Cumberland County area is crucial to the livelihood of civilians, businesses, soldiers, government, and transportation. Disruption of the delicate water supply could impact all activities such that the Cape Fear Region could not recover.

V/r

Richard Bryant, Jr.
Member, Sustainable Sandhills

Edward Buchan

My name is Ed Buchan and I am representing the City of Raleigh Public Utilities Department. We would like to express our sincere support for this IBT certificate modification for the towns of Cary, Apex, Morrisville and Wake County. Much of what I had planned to say has already been covered, but this is what happens when you are ninth in the speaking arrangement, but I would like to highlight the historic value of the Triangle Regional Water Supply Plan. I have lived in this area all my life, in fact grew up in Cary, lived in Apex and Morrisville and now live in Raleigh. So, I think the key word there to remember is regional. I have been in the water supply business for quite some time. This is the first effort that I have seen a regional collaborative effort on meeting long term water supply needs for the triangle region. It's been talked about for a long time but I think this is the first step in that, and this certificate modification represents an integral part of that plan to move forward to make sure that the Triangle region has water supply resources available to them into the future. As someone whose work is involved in developing water resources that are not even there yet, I can assure you that is a much more lengthy time consuming process than using existing resources which we feel like this certificate represents. Finally, I would also mention that I've been involved in the City of Raleigh's water efficiency own conservation efforts and we've desperately tried to model our efforts after what Cary has done. This is an example that we believe Cary and their partners are good stewards of the water resources and any request of this nature is a legitimate one for their long term needs. Thank you - END

Comments on Bulleted Points in “Proposed Interbasin Transfer (IBT) Implications on FPWC Service Area”

Leonard S Bull, PhD, PAS
Emeritus Professor of Animal Science and Emeritus Associate Director
NCState Animal and Poultry Waste Management Center
512 Dandridge Drive
Fayetteville, NC 28303

Summary:

- The Cape Fear River is a tremendous resource to our community, providing our major source of water supply as well as affording many recreational opportunities for our citizens. For this reason, we have a great deal of interest and responsibility to maintain the highest level of certainty for our future water supply.

No comment although this is not an adequate statement of the importance of the issue

- The Towns of Apex, Cary and Morrisville and Wake County (applicants) currently have authorization to transfer 24 million gallons of water per day (MGD) out of the Cape Fear River Basin (Jordan Lake) and into the Neuse River Basin. These applicants have submitted an Interbasin Transfer (IBT) Certificate request to increase the transfer rate by 9 MGD, for a total authorization of 33 MGD.

An increase in request for water transfer of 40% is significant, and has potentially serious impacts on every community that depends on the Cape Fear River for water. Wake County has had the potential for water shortage for a long time. A decade ago they were within a few days of literally running out of water, and north end of Falls Lake (around I-85) was literally a hayfield. And the only “leadership” statement from Raleigh, etc., was that: “It will rain sometime soon.” They had the opportunity to dredge the north end of the lakebed and did NOTHING. Same for Jordan Lake that was drawing down to the lower outlet requiring serious treatment increases. Nothing done! A review of rainfall in Central and Eastern NC will show that the dependence on HURRICANES for achieving normal water levels going into winter is CRITICAL. If there is a shift in hurricane landfall on NC as has been recently observed, the future water crisis not only on the area requesting the transfer BUT ON THOSE CURRENTLY DEPENDING ON THE CAPE FEAR RIVER is evident.

- The IBT request is processed by the NC Division of Water Resources (DWR) within the NC Department of Environment and Natural Resources (DENR). Final agency action is taken by the NC Environmental Management Commission.

No comment

- The first public hearing is scheduled on 1/7/15 in Apex and the second hearing is scheduled on 1/22/15 in Fayetteville.

Are these the final hearings?

Concerns:

- To reduce the effects of a previously approved IBT, the Western Wake Partnership installed infrastructure at great cost (\$290 million) to allow the return of treated wastewater to the Cape Fear River. It is not clear why the return of waste water is not a criteria for the proposed transfer, since it is a condition of the current IBT certificate. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.

The new treatment system should be required for ALL of the water (33 MGD) if this system is approved. HOWEVER, the concern is that while the Cape Fear River water going to Wake County will contain some nutrients, the water being returned will probably have HIGHER levels of nutrients, because of the allowed discharge of those nutrients that will be granted. Thus, Wake County will send some of its nutrients BACK to the Cape Fear, which is already a river with concern for high nutrient levels. Whether or not the IBT is approved, the return water (33 MGD) needs to be processed. There are efforts in place already to address the current nutrient levels in the River (NC Wildlife Resources Commission is supporting such work, and I was a team member of the latest alternate contending proposal). These need to be continued regardless of the future of the proposed IBT.

- A water use decision of this magnitude should allow ample time for the required public review process. Instead, it seems the process is being fast tracked, with a critical review period being held over the winter holidays. The Environmental Assessment (EA) document became available on 12/19/14 and the final comments are due on 2/5/15.

Absolutely agree. Such decisions always suggest that something is being "hidden" or that there are aspects that the public is not intended to have access to!

- The additional transfer will cause more than 50% percent of the water supply to be diverted away from the Jordan Lake drainage basin. This does not align with DENR rules and could jeopardize replenishment of the lake.

The 50% diversion represents a serious potential problem and is another reason to turn the request down.

- Although the EA (used to evaluate/define potential environmental impact) indicates that the transfer would have no significant adverse impact on the environment or downstream water users, it is not clear that all due diligence was exercised.

It does not seem possible that the conclusion of “no adverse impact” could be true either today or with ANY projected growth! And this does not even consider the possibility of an additional load on the Cape Fear River that the installation of the Sanderson poultry plant could impose!

For example:

- a. Most of the state agencies asked to review this assessment, except for NC Wildlife Resources Commission, had no comments on this major decision.

NC Wildlife has had an ongoing concern about the status of the Cape Fear River (see above comment about grant program)

- b. Under the IBT regulations, the request should include a specific finding as to why the applicant's need for water cannot be satisfied by alternatives within the receiving basin. The proposed IBT merely focuses on it being less expensive than other options, without fully explaining the analysis or providing costs for the other options.

Because the request is the “least expensive” is certainly not adequate! The lack of vision a decade ago when it would have been possible to dredge the dry Falls Lake bed, does not speak well for the kind of consideration of all options!

- c. The City of Raleigh recently indicated they are evaluating the withdrawal of water from the Cape Fear River and returning treated wastewater back to the Cape Fear River. This would be a significant development that should be included in the impact analysis of the proposed IBT.

The return of “used” water after treatment should be an absolute requirement (and expanded to the whole 33 MGD or treat it all and save back the extra 9 MGD and return the rest...). However in addition, a complete net balance on the nutrient concentration and loading in the Cape Fear River immediately downstream from the point of IBT BEFORE and AFTER implementation should be required over the entire range of annual daily flow of the River at that point (“wet” as well as “dry” seasons)

- In the public announcement, it was noted that “NC Department of Public Safety Emergency Management requested to participate in NC Department of Environment and Natural Resources internal review process and it was granted essentially to help expedite the environmental document for the applicant”. This does not appear to be a standard practice and it is not clear why this was necessary or if it was appropriate.

I agree with this concern.

- Finally, a water use decision of this magnitude seems premature given that the Cape Fear River Water Supply Plan has not been finalized. This plan, which is prepared by DENR, will determine whether or not all water supply needs can be met throughout the entire Cape Fear River Basin.

Absolutely agree. And that plan surely must address the nutrient loading in the River and ways to mediate it.

Risks to the FPWC Service Area if the IBT is Approved:

- Based on modeling results, the minimum flows at Lillington and Fayetteville will be reduced significantly in the future even with no increase in IBT. For this reason, treated wastewater needs to be returned to the Cape Fear River Basin to mitigate future reduced flows due to other demands on the river.

This is ABSOLUTELY critical and unless addressed and mitigated with return water the request for the IBT should be rejected. Allowing limitation of future development opportunities for Lillington and Fayetteville by allowing this IBT as proposed does not represent responsible leadership.

- Comments made by the NC Wildlife Resources Commission indicate concern that increased withdrawals from Jordan Lake could negatively impact fish populations in the Cape Fear River. Efforts are already underway to protect this important part of the river’s ecosystem, any additional impacts should be carefully considered.

This is a serious concern and underscores the importance of serious consideration for dredging Falls Lake to increase its storage capacity, as noted above.

- The request for an additional transfer of 9 MGD is an average for the month, which means that any one day of that month could be higher than 9 MGD. This uncertainty needs to be analyzed to make sure it does not cause a problem with water availability downstream.

The limits for transfer, if approved, need to be tightly controlled, and also, if drought reduces the flow of the river below long term average, that daily transfer needs to be reduced also.

- Current requests for water supply from Jordan Lake do not allow for any water to be held in reserve. This could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream.

The Lake Jordan reserve needs to be established and maintained.

- This transfer is based on a 30-year planning period, which is excessive and would compromise our ability to meet changes due to regulations, statutes, customer demands, climate change and regional needs. A shorter planning period of 15 years would be more prudent.

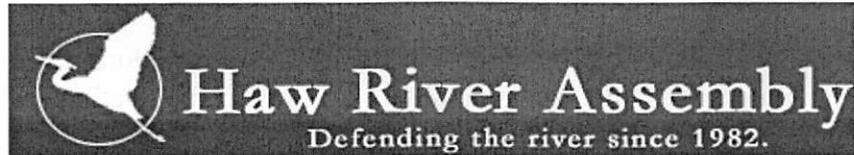
The shorter planning horizon is logical, and possibly an even shorter timeframe might be proposed.

What We Recommend:

- FPWC recommends utilization of alternative 3a (as described in the EA), which avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility.

Excellent recommendation.

LSB/2/5/15



P.O. Box 187 Bynum NC 27228 (919) 542-5790 info@hawriver.org

February 4, 2015

Harold Brady, Division of Water Resources
1611 Mail Service Center
Raleigh, NC 27699-1611.
Harold.M.Brady@ncdenr.gov.

Comments on the Request for Modification of IBT Certificates by Apex, Cary and Morrisville

The Haw River Assembly wishes to express our concerns about the proposed modification of the interbasin transfer (IBT) certificate for Cary, Apex and Morrisville, and Wake County (on behalf of the Wake County portion of Research Triangle Park), The current IBT certificate allows transfers from the Jordan Lake in the Haw River subbasin to the Neuse River subbasin and the Cape Fear basin for up to 24 million gallons per day (mgd) on a maximum day basis. The new certificate will allow up to 33 million gallons per day, increasing the interbasin transfer by 9 mgd.

We have two issues of concern:

1. All waters withdrawn from Jordan Lake by these municipalities should be treated and sent back into the Cape Fear River via the new Western Wake Regional Water Reclamation Facility (WWRWRF). It was built in order to allow these western Wake cities to increase their allocation (and growth) while returning water to the same river basin, not the Neuse River. Alternative 3a of the EA on this IBT Modification "Avoid Interbasin Transfer Increase by Sending Additional Untreated Wastewater to the WWRWRF" gives increased costs at the primary reason for avoiding this IBT increase. It is understandable that cities do not want to increase costs for drinking water - no one does. But the principles behind avoiding interbasin transfers in order to protect the rights of downstream water users are equally important. Also, the alternative 3E that would "Avoid Interbasin Transfer Increase by Using Additional Water Resources Management Tools" seems to be dismissed by the rather curious argument that these towns have been so successful in their conservation, education, policy, rate-paying and planning tools, that they cannot do more. Section 1.2 seems to refute this by saying "The Towns intend to use the three existing WRFs and the new WWRWRF to treat wastewater **and to continue significant water resources planning, conservation efforts, and the development of management tools to reduce IBT.**" Why not increase the likelihood of success by incorporating this into a reduced IBT?

2. The request for an increase of an interbasin transfer of 9 million gallons per day appears to be based on a 30 year long range future water supply for a growing population. The Haw River Assembly does not believe that future supplies should be dependent on an interbasin transfer, nor should there be the assumption of sufficient water for this level of continued growth. We are not convinced that the estimated 100 mgd for total water supply allocations from Jordan Lake can be used without severe impacts to the environment, and recreational use of the lake. We do not believe it represents the impact on the lake of drought conditions or possible changes in rainfall patterns or sustained droughts that could be the new normal of climate change in 30 years. We believe a much more conservative target should be used for water allocations from Jordan Lake. This would avoid the promise of water supply to an increased population that cannot be sustained. The precautionary principal is the best approach when we are looking at a future with such large unknowns.

Finally, we believe that the state, and many local governments, have shown a great lack of diligence and responsibility in their willingness to actually decrease pollution in Jordan Lake. We are building growth on dirty water.

Thank you for your consideration of these comments.

A handwritten signature in cursive script, appearing to read "Elaine Chiosso".

Elaine Chiosso
Haw Riverkeeper

From: [Libby S. Daniel](#)
To: [Brady, Harold M.](#)
Subject: FW: email re water transfer
Date: Tuesday, February 03, 2015 7:36:57 AM

Dear Mr. Brady,

I am a citizen of Fayetteville & Cumberland County. I am very much opposed to plans to divert millions of gallons per day from the Cape Fear River by the Town of Cary without returning the water to the Cape Fear.

I support use of the water by the Town of Cary *with* return to the Cape Fear River. Water is a highly valuable and limited resource; vital to both our physical and economic health. Permanently reducing our water supply in this way will handicap our economic development efforts and quality of life for the people and business in all the counties downstream. The impact will only increase in the years to come.

The right to draw this amount of water over an unlimited time period has a significant monetary value. The town of Cary can use the water to support it's own growth and return the water by making limited adjustments to their existing infrastructure. Their cost, relative to their benefit, is minimal and water flow for downstream communities is uninterrupted. Everyone wins.

Return of the water to the river is little enough to ask for the right to use this resource. Why a high wealth area would be allowed to divert this vital resource away from lower wealth counties without bearing the expense to return the water is incomprehensible to me.

Therefore, I ask that you support a plan that will require the Cape Fear River water be returned to the Cape Fear River. Thank you.

Sincerely,
Libby Daniel
2417 Raeford Rd.
Fayetteville, NC 28305

From: [Barbara Dietrich](#)
To: [Brady, Harold M.](#)
Subject: Cape Fear River water removal
Date: Thursday, February 05, 2015 9:19:43 PM

I am deeply concerned about the initiative to take water from the Cape Fear River without returning it. As someone downriver and dependent on that water, it concerns me greatly. I have lived here long enough to observe a drought and see how low the river can get without removal of water. Wake County with all of its growth can afford the added expense of putting it back. With all the growth of Morrisville, Apex and Cary, they'll have plenty of tax base and revenue to support the increased expense; however, if allowed to dump it into the Neuse River, those of us downriver will suffer. May I ask, how Wake County would feel if some one took their water source with no regard for the environmental, developmental and necessary drinking water losses? Is there no regard for the families and businesses in this area or the many soldiers that have come to make their home downriver? What if the situation was reversed? Would Wake County then see the error of their thinking and believe that they deserved to have the very same water that they want to take away from u?. Is this to set a precedence for water rights for North Carolina? I certainly hope not. Please do not allow Wake County to take the water out of the Cape Fear without returning it. Barbara Dietrich, Fayetteville, NC

From: [Walt Dietrich](#)
To: [Brady, Harold M.](#)
Subject: Inter-basin Transfer Issue
Date: Thursday, February 05, 2015 10:40:20 AM

Mr. Harold Brady,

I am writing to you to express my concern with the decision to allow inter-basin water transfer from the Cape Fear River basin to the Neuse River Basin. This should not occur because water is the life blood of any community downstream. Although, Fayetteville has not expanded as rapidly as the Cary, Morrisville and Apex in the Wake County area we should not have our source of water reduced due to over development and poor planning by Wake county and cities. This is the second time this issue has come up in the last 15 years. Why do you continue to allow it? Make them fund a water treatment plant that resupplies the same amount of water taken and put back into the Cape Fear watershed? The current situation will not be sustainable in the future for Wake or any community downstream. It is time to make Wake area absorb the real costs of development and not kick the can down the road causing future burdens on other downstream communities.

I do not know what your study shows but not so long ago our state suffered from one of the worst droughts ever in my 29 years of living in Fayetteville. The Cape Fear River was extremely low and I think I could have spit across it. What are you going to do if this occurs again and farmers and meat packing plants need water to operate and provide us with food. Much of the Cape Fear Region is agriculture. How are you going to save the farmers then when any surplus water is needed to provide a food supply?

This is all about a short term solution for big money (developers) interest and local and state political push for jobs in the Triangle area. Make a decision that makes sense for the long term for all communities that rely on the Cape Fear River water! **Make them build a water treatment plant in the Cape Fear basin, before receiving any more water.**

Walt Dietrich
429 Summerlea Dr.
Fayetteville, NC 28311

**RESOLUTION OPPOSING THE PROPOSED INTERBASIN TRANSFER (“IBT”) CERTIFICATE
MODIFICATION FOR THE TOWNS OF APEX, CARY AND MORRISVILLE, AND WAKE
COUNTY (FOR RTP SOUTH) ALTERNATIVE 2A
– INCREASE IBT TO MEET 2045 DEMANDS**

WHEREAS, the County of Cumberland, North Carolina, believes the Interbasin Transfer (“IBT”) Certificate request submitted by the towns of Apex, Cary and Morrisville, and Wake County (for RTP South) is unnecessary and poses increased risks to the water supply of Cumberland County and other counties downstream; and

WHEREAS, the Cape Fear River is a tremendous resource to our community, providing our major source of water supply as well as affording many recreational opportunities for our citizens, and it is our responsibility to maintain the highest level of certainty for our future water supply; and

WHEREAS, based on modeling results, it has been determined that the minimum flows from the Cape Fear River at Lillington and Fayetteville will be reduced significantly in the future, even with no increase in IBT, making it critical that treated wastewater be returned to the Cape Fear River Basin; and

WHEREAS, the N.C. Wildlife Resources Commission has indicated concern that increased withdrawals from Jordan Lake could negatively impact fish populations in the Cape Fear River and therefore negatively impact the river’s ecosystem; and

WHEREAS, current requests for water supply from Jordan Lake do not allow for any water to be held in reserve; which could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream; and

WHEREAS, the additional transfer will cause more than 50 percent of the water supply to be diverted away from the Jordan Lake drainage basin; which is not in compliance with N.C. Department of Environmental Resources (DENR) rules and could jeopardize replenishment of the lake; and

WHEREAS, a water use decision of this magnitude seems premature given that the Cape Fear River Water Supply Plan, being prepared by DENR to determine whether or not all water supply needs can be met throughout the entire Cape Fear River Basin, has not been finalized; and

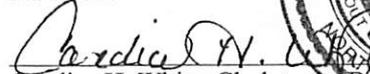
WHEREAS, this transfer request is based on a 30-year planning period, which is excessive and would compromise our ability to meet changes due to regulations, statutes, customer demands, climate changes, and regional needs; and a shorter planning period of 15 years would be more prudent; and

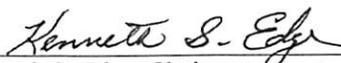
NOW, THEREFORE, BE IT RESOLVED THAT: The County of Cumberland recommends utilization of alternative 3A, as described in the Environmental Assessment for the proposed IBT. This option avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility. The Western Wake Partnership has the infrastructure in place to allow the return of treated wastewater to the Cape Fear River. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.

PASSED AND APPROVED BY THE CUMBERLAND COUNTY BOARD OF COMMISSIONERS, on this, the 2nd day of February, 2015; such meeting was held in compliance with the Open Meetings Act, at which meeting a quorum was present and voting.



ATTEST:


Candice H. White, Clerk to the Board
Cumberland County Board of Commissioners


Kenneth S. Edge, Chairman
Cumberland County Board of Commissioners

Interbasin Transfer Certificate Modification for the Towns of Apex, Cary and Morrisville, and Wake County (for RTP South)

NOTICE OF PUBLIC HEARING

**January 22, 2015, 6:30 PM
Fayetteville City Hall
433 Hay Street
Fayetteville, NC 28301**

The North Carolina Department of Environment and Natural Resources (NCDENR) will hold a public hearing to receive comments on the Towns of Apex, Cary and Morrisville, and Wake County (for RTP South) interbasin transfer (IBT) certificate modification request.

The Towns of Apex, Cary and Morrisville, and Wake County (for RTP South) have requested a modification of their current IBT certificate for three purposes:

- Modify the basis of their IBT certificate approved July 12, 2001 from a maximum day IBT calculation to IBT calculated as the daily average of a calendar month, per the changes to NC General Statute 143-215.22L based on Session Law 2013-388.
- Include, at the request of the NCDENR Division of Water Resources, transfers to the Cape Fear River subbasin, so that the modified certificate addresses transfers from the Haw River subbasin to both the Neuse River basin and Cape Fear River subbasin.
- Base the certificate term on a 30-year planning period, addressing the Towns' and County's IBT through 2045; resulting in a total of transfer of 33 mgd from the Haw River subbasin to the Neuse River basin and Cape Fear River subbasin on a daily average of a calendar month basis.

The public hearing will start at 6:30 p.m. on Thursday, January 22, 2015, at the Fayetteville City Hall, City Council Chambers, 433 Hay St., Fayetteville, NC 28301. The public may review the supporting environmental document by visiting <http://www.ncwater.org/?page=473>.

The purpose of this announcement is to encourage interested parties to attend and/or provide relevant written and verbal comments. Division of Water Resources staff requests that parties submit written copies of oral comments. Based on the number of people who wish to speak, the length of oral presentations may be limited.

If you are unable to attend, you may mail written comments to Harold Brady, Division of Water Resources, 1611 Mail Service Center, Raleigh, NC 27699-1611. Comments may also be submitted electronically to Harold.M.Brady@ncdenr.gov. Mailed and emailed comments will be given equal weight. All comments must be postmarked or emailed by February 5, 2015.

Proposed Interbasin Transfer (IBT) Implications on FPWC Service Area

Summary

- The Cape Fear River is a tremendous resource to our community, providing our major source of water supply as well as affording many recreational opportunities for our citizens. For this reason, we have a great deal of interest and responsibility to maintain the highest level of certainty for our future water supply.
- The Towns of Apex, Cary and Morrisville and Wake County (applicants) currently have authorization to transfer 24 million gallons of water per day (MGD) out of the Cape Fear River Basin (Jordan Lake) and into the Neuse River Basin. These applicants have submitted an Interbasin Transfer (IBT) Certificate request to increase the transfer rate by 9 MGD, for a total authorization of 33 MGD.
- The IBT request is processed by the NC Division of Water Resources (DWR) within the NC Department of Environment and Natural Resources (DENR). Final agency action is taken by the NC Environmental Management Commission.
- The first public hearing is scheduled on 1/7/15 in Apex and the second hearing is scheduled on 1/22/15 in Fayetteville.

Concerns

- To reduce the effects of a previously approved IBT, the Western Wake Partnership installed infrastructure at great cost (\$290 million) to allow the return of treated wastewater to the Cape Fear River. It is not clear why the return of waste water is not a criteria for the proposed transfer, since it is a condition of the current IBT certificate. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.
- A water use decision of this magnitude should allow ample time for the required public review process. Instead, it seems the process is being fast tracked, with a critical review period being held over the winter holidays. The Environmental Assessment (EA) document became available on 12/19/14 and the final comments are due on 2/5/15.
- The additional transfer will cause more than 50% percent of the water supply to be diverted away from the Jordan Lake drainage basin. This does not align with DENR rules and could jeopardize replenishment of the lake.
- Although the EA (used to evaluate/define potential environmental impact) indicates that the transfer would have no significant adverse impact on the environment or downstream water users, it is not clear that all due diligence was exercised. For example:
 - Most of the state agencies asked to review this assessment, except for NC Wildlife Resources Commission, had no comments on this major decision.
 - Under the IBT regulations, the request should include a specific finding as to why the applicant's need for water cannot be satisfied by alternatives within the receiving basin. The proposed IBT merely focuses on it being less expensive than other options, without fully explaining the analysis or providing costs for the other options.

Proposed Interbasin Transfer (IBT) Implications on FPWC Service Area

- The City of Raleigh recently indicated they are evaluating the withdrawal of water from the Cape Fear River and returning treated wastewater back to the Cape Fear River. This would be a significant development that should be included in the impact analysis of the proposed IBT.
- In the public announcement, it was noted that “NC Department of Public Safety Emergency Management requested to participate in NC Department of Environment and Natural Resources internal review process and it was granted essentially to help expedite the environmental document for the applicant”. This does not appear to be a standard practice and it is not clear why this was necessary or if it was appropriate.
- Finally, a water use decision of this magnitude seems premature given that the Cape Fear River Water Supply Plan has not been finalized. This plan, which is prepared by DENR, will determine whether or not all water supply needs can be met throughout the entire Cape Fear River Basin.

Risks to the FPWC Service Area if the IBT is Approved

- Based on modeling results, the minimum flows at Lillington and Fayetteville will be reduced significantly in the future even with no increase in IBT. For this reason, treated wastewater needs to be returned to the Cape Fear River Basin to mitigate future reduced flows due to other demands on the river.
- Comments made by the NC Wildlife Resources Commission indicate concern that increased withdrawals from Jordan Lake could negatively impact fish populations in the Cape Fear River. Efforts are already underway to protect this important part of the river’s ecosystem, any additional impacts should be carefully considered.
- The request for an additional transfer of 9 MGD is an average for the month, which means that any one day of that month could be higher than 9 MGD. This uncertainty needs to be analyzed to make sure it does not cause a problem with water availability downstream.
- Current requests for water supply from Jordan Lake do not allow for any water to be held in reserve. This could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream.
- This transfer is based on a 30-year planning period, which is excessive and would compromise our ability to meet changes due to regulations, statutes, customer demands, climate change and regional needs. A shorter planning period of 15 years would be more prudent.

What We Recommend

- FPWC recommends utilization of alternative 3a (as described in the EA), which avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility.

Oral Statement of Hannah Ehrenreich – Sustainable Sandhills

January 22, 2015 Fayetteville City Hall

I want to personally send a welcome to our friends in Cary and Wake County, to Fayetteville and Cumberland County. We have amazing restaurants just down the street, fabulous microbrews, clean water; please enjoy our hospitality while you are down here, if you don't get down here enough. That being said, Sustainable Sandhills has some deep reservations about the inter basin water transfer. Specifically, we are worried about the detrimental effect to the source basin should fracking occur in Lee County where unmitigated water withdrawals without any hope of seeing that water back come back could seriously reduce the water supply that we are all relying upon. I did get an answer from the Department of Water Resources on the current capacity for the Western water treatment center its current is 18 million gallons per day and it is permitted to 30 million gallons per day. We would request that if the interbasin water transfer is approved that the amount of the processed water be increased to the 30 permitted and that that water be returned to the Cape Fear Basin otherwise the detrimental effect of on the receiving basin could be in place and that would be an option 3A. That being said, and with all due respect to our friends in the Water Resources Department, it has come to our attention that at previous public hearing that micro climate shift data is not available to them or has not been used to project what the increase might be in drought. As Doug Peters from the Chamber said, we are projecting more growth some of that growth might be in the form of climate refugees or migrants from either the Outer Banks or other areas in the deep south that have come to North Carolina because we are a tempered area. This has impact on our water resources current availability as well as future availability and if that micro-climate data is not available or used in these projections, a 30 year projection is ridiculous. So, we would ask for a reduced amount of time in terms of the projections or even the permit, should the inter basin transfer be approved. I also was personally very appreciative of the gentleman from Wake County. I would like to know what your plans are for water consumption, reduction, if your growth patterns just continue unchecked, we don't have unlimited supplies of water. We need to know that your conservation plan is solid and in place and effective so that we don't face inter basin water requests every ten years. It is a concern that the water treatment plant took so long that we haven't seen the return flows to the Cape Fear River. How can we trust that this is going to happen the way it is stated if it hasn't happened before? We definitely want to provide as much water to North Carolinas growth across the board, but it has to be done in an environmentally sound and safe manner that doesn't hinder our growth or the environmental effects on the Cape Fear. I also want to appreciate the mayor and our friends from PWC and the county that are here tonight. We very much appreciate your support for our environment and again microbrews are fantastic, fracking is not so let's just be a little more judicious about our water usage. Thank you. – End



TOWN OF HOPE MILLS

5770 ROCKFISH ROAD • HOPE MILLS, NORTH CAROLINA 28348-1848
TELEPHONE (910) 424-4555 • FAX (910) 424-4902

February 3, 2015

Attn: Harold Brady
Division of Water Resources
1611 Mail Service Center
Raleigh, NC 27699-1611

Dear Mr. Brady,

Attached is a copy of Resolution 2015-02 to oppose the proposed Inter-basin Transfer Certificate Modification for the towns of Apex, Cary and Morrisville, and Wake County (for RTP South) as adopted by the Board of Commissioners of the Town of Hope Mills at their Regular Meeting on February 2, 2015.

If I can be of further assistance please contact me at the information below.

Sincerely,

John W. Ellis, III
Town Manager
Town of Hope Mills
5770 Rockfish Road
Hope Mills, NC 28348
910-426-4116
jwellis@townofhopemills.com

RECEIVED

FEB 09 2015

**RESOLUTION NO. 2015-02 TO OPPOSE THE
PROPOSED INTERBASIN TRANSFER CERTIFICATE MODIFICATION FOR THE TOWNS
OF APEX, CARY AND MORRISVILLE, AND WAKE COUNTY (FOR RTP SOUTH)
ALTERNATIVE 2A – INCREASE IBT TO MEET 2045 DEMANDS**

WHEREAS, The Town of Hope Mills feels the Interbasin Transfer (IBT) Certificate request submitted by the towns of Apex, Cary and Morrisville, and Wake County (for RTP South) is unnecessary and poses increased risks to the water supply of Cumberland County and other counties downstream; and

WHEREAS, the Cape Fear River is a tremendous resource to our community, providing our major source of water supply as well as affording many recreational opportunities for our citizens, and it is our responsibility to maintain the highest level of certainty for our future water supply; and

WHEREAS, based on modeling results, it has been determined that the minimum flows from the Cape Fear River at Lillington and Fayetteville will be reduced significantly in the future, even with no increase in IBT, making it critical that treated wastewater be returned to the Cape Fear River Basin; and

WHEREAS, the NC Wildlife Resources Commission has indicated concern that increased withdrawals from Jordan Lake could negatively impact fish populations in the Cape Fear River and therefore negatively impact the river's ecosystem; and

WHEREAS, current requests for water supply from Jordan Lake do not allow for any water to be held in reserve; which could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream; and

WHEREAS, the additional transfer will cause more than 50% percent of the water supply to be diverted away from the Jordan Lake drainage basin; which is not in compliance with NC Department of Environmental Resources (DENR) rules and could jeopardize replenishment of the lake; and

WHEREAS, a water use decision of this magnitude seems premature given that the Cape Fear River Water Supply Plan, being prepared by DENR to determine whether or not all water supply needs can be met throughout the entire Cape Fear River Basin, has not been finalized; and

WHEREAS, this transfer request is based on a 30-year planning period, which is excessive and would compromise our ability to meet changes due to regulations, statutes, customer demands, climate changes, and regional needs; and a shorter planning period of 15 years would be more prudent; and

NOW, THEREFORE, BE IT RESOLVED THAT:

The Town of Hope Mills recommends utilization of alternative 3A, as described in the Environmental Assessment for the proposed IBT. This option avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility. The Western Wake Partnership has the infrastructure in place to allow the return of treated wastewater to the Cape Fear River. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.

Adopted on this 2nd of February, 2015 at Hope Mills, North Carolina.



TOWN OF HOPE MILLS



Jackie Warner, Mayor

ATTEST:



Melissa P. Adams, MMC Town Clerk

From: [Brian Gaskell](#)
To: [Brady, Harold M.](#)
Cc: [Carolyn Justice-Hinson](#)
Subject: Cape Fear River Interbasin Transfer Request
Date: Saturday, January 24, 2015 12:08:48 PM

Dear Mr. Brady,

I am a resident of Fayetteville and have intently followed the discussion regarding the Cape Fear Interbasin Transfer request. As a concerned citizen, Fayetteville Public Works Commission customer, and member of the Fayetteville Public Works Commission Citizen Advisory Board, I am opposed to the current request, due to the following reasons:

1. It is my understanding that the Western Wake Partnership currently must return their water resources to the Cape Fear, and that they have adequate capacity/resources to continue doing so, even with an additional 9 million gallons per day. Therefore, why would this potential capacity not be utilized-is this strictly a matter of trying to reduce financial costs to the Western Wake Partnership? I also find it disturbing that related impacts to communities downstream/proposed alternatives have not been identified.
2. I find it unacceptable that the public comment period for this transfer is being held on such a short time-frame, to include time spanning the holidays. This gives the impression that the NC Division of Water Resources and the applicants are trying to sneak the proposal through the approval process, while giving as little opportunity as possible for response.
3. I am concerned that diverting water flow away from the Cape Fear could inhibit the ability of adequate water resources for communities further down the Cape Fear River. After all, isn't it reasonable to expect that there could be additional growth in areas such as Fayetteville, Lillington and Wilmington, which also rely on this valuable resource? What alternatives would those communities have if this proposal is approved?
4. I do not see how this proposal could have any positive environmental impact on wildlife/fish habitats. Lower water levels almost always lead to negative ecological impacts.
5. It is my understanding that the proposed 9 million gallons/day is only an average figure, and that the actual withdraw could be higher or lower, depending on need. Nine million gallons is a significant amount of water...it is unsettling to consider that this amount could be exceeded on a daily basis, especially considering this area's continued susceptibility to periods of dry weather/water shortage.

I appreciate the opportunity to share my concerns on this issue and thank you for your

time. I look forward to a decision that will be in the best interest of **ALL** residents of North Carolina.

Please feel free to contact me if you would further like to discuss this matter.

Sincerely,

Brian Gaskell

brian.Gaskell@Hotmail.com

616-690-5236

558 Lambert Street, Fayetteville, NC 28305

Oral Statement of Rick Glazier – NC House of Representatives

January 22, 2015 Fayetteville City Hall

I was debating whether to speak and waited till the end to listen to all the comments. I have a few points to make actually as a result of that and also you reserve the right to submit written comments which I suspect will be more detailed and follow the criteria that EMC is going to have to make its decision by. The first point I want to make, and I appreciate and congratulate the triangle folks for their collaboration about what should happen in the triangle. The collaboration in the water supply means in a different context here that there needs to be, and there ought to be full collaboration between upstream and downstream users I don't want people or the record to reflect that there is a collaboration by everyone. It's appreciated the collaboration that was created in the Triangle, for the Triangle. But the issues in the case of the Triangle also affect all of us downstream, and that collaboration there has not been. The Triangle should not be left with the misconception that there has been when there hasn't. Second, to reduce the effects of the previously introduces IBT the Western Wake Partnership installed to their credit, infrastructure at tremendous cost probably \$290 to 300 million dollars to allow the return of the treated waste water to the Cape Fear, it is unclear, at best why that return is no a criteria of the proposed transfer we all understand the cost issue. The part of the cost to the economic development upstream is an appreciation of the effects downstream. Part of that cost as several people have made clear with a finite resource simply has to be a part of the calculus. One would at least argue that perhaps that has not been included in this calculus. Third, a water decision of this magnitude should allow a less expedited public review process. I believe the IBT became available December 19, the final comments are due February 5 and while on the normal scheme of things that might be a sufficient time when you subtract out holiday and break time for a lot of people and the ability to get it assessed by scientific experts, you're really talking not about a two month time frame, but a one month time frame. That seems a fast track in an unnecessary way, it deprives real process here and I think causes heartburn with downstream users and people who now having to assess more quickly than they ought to the impacts, process matters. Fourth, the additional processes is clearly going to cost more than 50% of the water supply to be diverted away from the Jordan Lake drainage basin and that would seem to suggest some concern and conflict with DENR rules. I highlight this to our friends from the triangle, who legitimately in my view argued at great length when the Jordan Lake rules so meticulously negotiated by so many members upstream and by the triangle community were dismembered to some degree in this last legislative session much to their chagrin and the triangle complained somewhat bitterly about the upstream users because of cost did not want to adhere to a long negotiated deal that benefited all. It seems to me that those people who come complain so bitterly about the Jordan Lake rules are here talking collaborating in their community but not collaborating with those who will be affected downstream in this case. It would seem to me that the experience you had ought to be one that is a teaching moment for all us and not be imposed on the downstream users here. Fifth, based on modeling results the minimum flows at Lillington and Fayetteville would be reduced significantly in the future, even with no increase in the IBT. For that reason alone it seems to me the points made too often tonight by Sandhills, Commissioner Adams and others would seem to suggest that 3A and the return of wastewater really is needed to Cape Fear River Basin to mitigate future

reduced flows and as others have pointed out serious issues in two ways. One, affected by climate change which only recently has been noted to be accelerated and have to be considered in any water issue, whether it is out west or it is east. Failure to do that I think is not in the public interest given where we are in that issue. The other thing I would suggest, an interesting point is that DENR has made and this section has made previously; when the coal ash debate came up there was an assessment about the situation regarding each of the water basins in the state and what difficulty they might be in, where there were issues. Some of the same issues are discussed in the fracking debate. It has been consistently noted that the Cape Fear River water basin is one of the most endangered in the state. To suggest then that continued diversion from that basin up stream would not have some affect seems to be in congress at least with previous findings by the department that the basin is in jeopardy and that the ecosystem of the basin has real issues. I'm not a scientist; I don't pretend to know everything in that EA although I'm going to learn a whole lot more as we go, but it strikes me as fairly absurd to suggest that this diversion of water can have no affect ecologically downstream, when the departments already indicated that the basin is in jeopardy given the current situation. My last point is a reminder from what has happened out west. We've all seen what has happened to the Colorado River despite the best efforts on the partnership and the tremendous burdens it has put now on agriculture. Where existing agriculture and existing business are threatened and many will not survive because of the lack of water made even with the best of intentions up stream for economic development and development over all. None of us wants to see that happen here but there can't be anything more crucial to the survival of any community than the quality and quantity of its water supply. To rush this decision along to suggest that there is a collegial decision upstream and downstream here to not look at climate control issues, to not look at the diversion issues at best case and worse case scenarios. To not work out an agreement does not have public safe guards in the public interest and the state as a whole and certainly of this community or downstream community. I hope that furthered discussions by the EMC will take all that into consideration, I hope that they will be a position that we can find that will secure the benefits to both communities but will do so more fairly than the current proposal suggests. – End



Representative Rick Glazier
North Carolina General Assembly
1021 Legislative Building
Raleigh, North Carolina 27601-1096

Harold Brady
Division of Water Resources
NC Department of Environment and natural resources
1611 Mail Service center
Raleigh, NC 27699-1611

Re: Interbasin Transfer comments on the Application for the Towns of Apex, Cary, Morrisville and County of Wake, (for RTP South)

Dear Mr. Brady:

According to an article I read the other day in the Fayetteville Observer, the city of Raleigh is one of the top 50 fastest growing economies in the world. This figure was listed by the Brookings Institution, and listed only two other American cities in the top 50. This should come as a surprise to none of us, because of the promising future of the Triangle region as a whole. This growth is not confined to Raleigh. Morrisville, Cary, Apex, Fayetteville, Wilmington, and smaller towns in-between have all experienced rapid growth as North Carolina becomes a more desirable place to start a business and raise a family. With that growth, must come a sustainable approach to the use of North Carolina's resources, of which the most critical and vulnerable of these is water.

The Towns of Apex, Cary, Morrisville, and Wake County have applied for the ability to draw 9 million more gallons of water a day from the Cape Fear River Basin; which is roughly a 37% increase from the 24 million gallons already allowed to be taken daily. I recognize that only once has the drawdown been near the 24 million gallons and that the average is in the teens, but that, of course, is precisely why there is no need to rush this application without a full appreciation of the potential and likely effects of a greatly enhanced drawdown capacity over time and without any real dialogue with downstream consumers.

The paramount issue in this application is the replacement of treated water back into the river basin. The applicants have requested the ability to take an additional 9 million gallons a day without having to return the water. A request of this form was rejected in 2001 when the Town of Cary applied for an interbasin transfer. As a result, a \$290 million sewage-treatment plant was built in order to return vital basin water. This plant, which opened last year, exists solely for situations like the one before us.

The Cape Fear River Basin is a tremendous resource that has been continuously assaulted in recent years. The Fayetteville Public Works Commission classified the Cape Fear River as having an inherently higher vulnerability rating in three categories: (1) Watershed Classification, (2) Intake Location, and (3) Raw Water Quality. The inherent vulnerability rating takes into account geologic characteristics or existing conditions of the surface water source and the delineated assessment area. PWC supplies roughly 85,000 customers daily who consume on average 25 million gallons of water each day. The Cape Fear River Basin is PWC's main source for this service. Despite this, leadership in various triangle regions are willing to rely on a 30 year model showing no significant impact as a reason to support the request. I believe that rapidly changing and challenging variables of the environment, societal growth, economic growth, and general intangible factors make this model a



Representative Rick Glazier
North Carolina General Assembly
1021 Legislative Building
Raleigh, North Carolina 27601-1096

severely imprudent benchmark. Furthermore, the Source Water Assessment Program Report is not the only evidence that classifies the Cape Fear River in danger.

The North Carolina Department of Environment and Natural Resources has continually labeled the Cape Fear River Basin as one of North Carolina's most vulnerable. This is the same river basin that continues to suffer from the unaddressed consequences of coal ash, a matter hardly yet resolved with the Cape Fear plant not even rated as of this time and thus no timetable for clean-up in place, as well as future demands of fracking, which if it ever occurs, and that appears likely, those sites will be close by the Cape Fear Basin and will inevitably impact it. Finally, the drought conditions of several years ago remind us the supply of water resources, both in quantity and quality, is finite and climate change, a rapidly changing and critical factor, is barely given a wink and a nod in the current application. The concern for communities downstream is mounting daily.

Despite this, leadership in Apex, Cary, Morrisville, and Wake County have stated that there will be no tangible effects downstream of drawing an additional 9 million gallons a day and not replacing that water. I believe this is an irresponsible claim that ignores obvious statistical analysis, and scientific categorization of one of North Carolina's most valuable resources.

Besides the scientific issues that abound, I believe there has been a lack of transparency, and intentional rush to judgment with this interbasin transfer application. The Environmental Assessment document was first available days before the holidays on December, 19. There have been only two opportunities for public comment; first, on January 7 in Apex, and second, on January 22 in Fayetteville. The period for public comment concluded on February 5. Claims have been made by the applicants that they have both "met and exceeded" the legal requirements of General Statute § 143-215.22L, which regulates surface water transfers. While it may be true that the procedural requirements have been minimally met, the exploration of reasonable alternatives, and comprehensive analysis of societal impacts fall measurably short of the statutes' legislative intent.

Furthermore, claims have been made that the application process thus far has been one of collegiality. I am sure there is little to debate when the only leadership giving input is the stakeholders living upstream from Fayetteville. Both the Cumberland County Board of Commissioners and City of Fayetteville, as well other local municipalities, and some other communities downstream from Fayetteville, have unanimously passed resolutions in opposition of the proposed interbasin transfer. Indeed, it seems apparent little, if any, consultation on this application occurred. Given the tremendous interdependence on all of the affected areas in water resources, transportation, energy and grid capacity, and state resources in general, and with no exigency for the applicants at the moment, as even they concede no use of the additional 9 million gallons will be likely for at least 10 years, further intensive studies and far greater collaboration and mediation of this issue are in the best interests of the inter-connected working and political relationship between the Triangle and all other southeastern downstream users. It seems as well important for this negotiation to set the model of conduct for other similar issues certain to come or continue in other parts of the state and I assume downstream users everywhere will be watching how this matter is administratively handled and resolved.

Thus, for now and under this proposal, I too am opposed to the application in its current form. In that regard, I feel confident I speak for every member of the Cumberland County legislative delegation, regardless of political affiliation. Economic growth in Apex, Cary, Morrisville, and Wake County is a good thing for North Carolina, and thus a good thing for all of us. Yet, we cannot divert the full



Representative Rick Glazier
North Carolina General Assembly
1021 Legislative Building
Raleigh, North Carolina 27601-1096

costs of their economic growth to those who live downstream. Sustainable economic growth calls for a plan that is responsible and fair to all North Carolinians. We should not gamble with a 30-year environmental projection when dealing with a resource as precious as the Cape Fear River Basin.

Section (k) of §143-215.22L addresses a number of factors to be considered in determining whether a certificate may be issued for the transfer. These factors include, but are not limited to: (1) the reasonableness of the application, (2) reasonable foreseeable detrimental effects, (3) cumulative effects, (4) availability of reasonable alternatives, and (5) whether the service area of the applicant is located in both the source river basin and the receiving river basin. Again, for reasons stated in many comments provided by others, including PWC, the County of Cumberland, and the City of Fayetteville, I believe this application process has fallen measurably short of meeting its burden to prove a balance of the above factors falls in favor of the application as is. Reasonable alternatives abound; little discussion has taken place between the real parties in interest in this case; the cumulative effects of the application and prior agreement are likely very consequential for downstream users, the EA is at best a minimal document with multiple questionable assumptions; and the application cannot be viewed in isolation from everything else happening along and to the Cape Fear River basin.

The statute is abundantly clear that the legislature intended for transfer applications to be meticulously scrutinized. A withdrawal of 9 million more gallons a day without treating the water and returning it to the Cape Fear River Basin does not meet the high bar set by the legislature. And, more to the point is totally at odds with the initial certificate granted solely on that basis! Furthermore, in the face of reasonable alternatives readily available to applicants, such as the expanded use over time of the newly opened \$290 million treatment plant, the proposed application with no put back is an irresponsible use of our resources. Much more time, study and discussion by all affected parties is needed before any action occurs on the application.

Thank you very much for considering these comments. I stand ready to further these comments, as well as the oral presentation I made in Fayetteville, at any time. I also stand ready with legislative and public leaders from all of these areas to work towards a negotiated resolution of the application.

Sincerely,

A handwritten signature in cursive script that reads "Rick Glazier".

Representative Rick Glazier
House District 44
North Carolina General Assembly



CITY OF DURHAM | NORTH CAROLINA

**Interbasin Transfer Certification Modification for the Towns of Cary, Apex,
Morrisville and Wake County (for RTP South)
Public Hearing – Fayetteville, NC - January 22, 2015**

Thank you for the opportunity to speak regarding the IBT Certificate Modification request by the Towns of Cary, Apex, Morrisville and Wake County.

My name is Don Greeley and this evening, I am speaking on behalf of the City of Durham in my role as Director of the Department of Water Management and as Chair of the Jordan Lake Partnership.

The City of Durham Department of Water Management has collaborated with the Town of Cary and its partners on numerous planning projects over the last two plus decades. For several years, Durham provided approximately between 4 and 5 million gallons of water per day to Cary while the Cary/Apex Water Treatment facility was expanded to its current capacity. Presently, Durham's only access to our current 10% allocation of the water supply pool of Jordan Lake is through interconnections with the Town of Cary. These connections became even more important during the historic drought of 2007-2008 when Durham had to rely heavily on its mutual aid agreement with the Town of Cary to provide treated drinking water – from our Jordan Lake allocation – to Durham's customers. Another utility neighbor and Jordan Lake Partner – the Orange Water and Sewer Authority – also provided aid until the welcome rains finally came to replenish our main water sources – Lake Michie and Little River in the Neuse Basin.

That experience only heightened the collaboration between Cary, Apex, Morrisville and Wake County and was one of the integral forces behind the development of the Jordan Lake Regional Water Supply Partnership - also known as the Jordan Lake Partnership or JLP. The JLP has now grown to include thirteen (13) entities in the Triangle Region in the Neuse and Cape Fear River basins. The Partnership's stated purpose is to "work collaboratively to enhance the sustainability and security of the region's water supply resources through conservation and efficiency, interconnection, and coordinated planning and development of the Jordan Lake water supply." It is also important to note that the JLP committed to work cooperatively with constituent organizations, jurisdictions and water suppliers up and down stream, and with state and federal regulators to create environmentally sustainable, secure and mutually beneficial water supply strategies for the Triangle Region.

Since its formation in 2009, the JLP has been transparent about its mission by reaching out to a number of downstream water providers. These outreach efforts have included meetings with staff at the Fayetteville Public Works Commission (2009 to the present) and the Lower Cape Fear Water and Sewer Authority (2010). Additionally, JLP partners have made presentations at

annual conferences of the Cape Fear River Basin Assembly (2011) to update our downstream colleagues regarding the progress of our planning efforts.

We are quite proud of the results of our successful alliance – Phases 1 and 2 of the Triangle Regional Water Supply Plan (TRWSP) – which has been widely recognized as an outstanding example of regional cooperation. This document identifies the long range water supply needs for the 13 Partners as well as a “best fit or preferred” regional alternative that meets the water supply requirements for 2045 and beyond. During the course of developing the preferred regional alternative, the Jordan Lake Partnership, in coordination with the North Carolina Division of Water Resources, conducted significant hydrologic modeling. The results of the modeling indicated that implementation of this preferred alternative should have no detrimental impact on Fayetteville’s, or any other downstream community’s, ability to meet its water supply needs, to include its projected, future water supply needs through the year 2060.

The Environmental Assessment for the Cary, Apex, Morrisville, and Wake County Interbasin Transfer Certificate Modification (EA) developed by CH2MHill references the JLP’s TRWSP in a number of areas. This includes technical, peer reviewed data in the sections related to population and demand projections.

The IBT Certification Modification request is consistent with the TRWSP based on Durham staff review of the EA and our knowledge of the extensive planning efforts conducted by Cary, Apex, Morrisville and Wake County through the Jordan Lake Partnership,. Therefore, we concur with the Department of Environmental and Natural Resources, Division of Water Resources Finding of No Significant Impact (FONSI) for this Interbasin transfer modification.

In closing, I would like to reassure our downstream colleagues as well as members of the EMC and DENR/DWR staff that Durham and its Jordan Lake Partners remain committed to working with our downstream colleagues to ensure reliable, sustainable water supplies throughout North Carolina and particularly in the Neuse and Cape Fear River Basins.

Respectfully,

Donald F. Greeley, P.E., PLS
Director

Good Evening and thank you for the opportunity to speak to you tonight.

My name is Kyle Greer and I am the Vice President of Economic Development for the Cary Chamber of Commerce. We are an organization of over 1200 business members from local mom and pop establishments to fortune 50 companies who employ tens of thousands of Cary and Wake County residents.

I am here to ask you to approve the Interbasin Transfer Certificate modification being requested by Apex, Cary, Morrisville, and Wake County. My job is to attract, recruit and retain businesses to Cary. A reliable and sustainable water source is absolutely essential for the Cary and the Research Triangle Region to continue to grow and thrive. It is my understanding, that no detrimental impacts related to the existing certificate were predicted, none have been observed, and none are predicted for the requested modification. In fact, analysis performed by the State Division of Water Resources for 2060 shows that the requested IBT certificate modification will have no detrimental impact on any downstream communities' abilities to meet their water supply needs. For this reason and for the continued success of our community and the families we serve, I would ask for your support of the IBT request.

Thank you.



Office of the County Manager

Post Office Box 550 • Raleigh, North Carolina 27602

TEL 919 856 6160
FAX 919 856 6168

Remarks of James K. Hartmann for Jan. 22 Public Hearing: Proposed Change to Water Transfer Certificate

Good evening. I am Wake County Manager, Jim Hartmann. Thank you to everyone for being here to collaborate on decisions about a vital resource.

Wake County is acquainted with collaborative decision making. There are 16 partner towns and organizations, and two river basins within our borders. We have experience balancing the needs of different groups of stakeholders.

The matter before this hearing today is an application for an Inter Basin Transfer certificate modification that was presented to the State by the Town of Cary. That modification will bring the certificate into compliance with the new language of NC General Statute 143-215.55L. The method of measuring stream flow will be calculated as daily average flow over a calendar month. At the same time this certificate modification anticipates the need for water for our community as projected through 2045. That will assure that a local water supply plan is in place to support all of the residents of the area through that year. These are sensible changes that are needed to operate water systems for existing and projected need.

This modification has been studied carefully by the NC Division of Water Resources. In their Finding of No Significant Impact (FONSI) there is a statement that is important to Wake County as good stewards of natural resources.

Hydrologic modeling results presented in the EA effectively demonstrate that the proposed water supply project will have no significant detrimental effects on the water levels in Jordan Lake. These modeling efforts included agricultural, recreational, and industrial, as well as upstream and downstream water supply demands from water systems. The results from the hydrologic modeling also demonstrate that the proposed project will

cause no significant alterations of releases into the Haw River downstream of the B. Everett Jordan Dam. Due to these results, the proposed project is not expected to affect downstream flows in the Cape Fear River. Therefore, no direct impacts are expected from the preferred alternative.

This is an important consideration to Wake County. Our interest in water quality and quantity is demonstrated by our Unified Development Ordinance, 100 foot setbacks, collaboration on the Jordan and Falls lake groups, and our new groundwater outreach program. Wake County will continue to respect and conserve this resource for long term benefit to all of the stakeholders.

With that in mind, on behalf of the Wake County portion of Research Triangle Park and the many Wake County Residents that work in the service area of our partner municipalities, Wake County requests that the Environmental Management Commission approve the proposed changes to this interbasin transfer certificate.

Thank you for the opportunity to comment this evening, and have a good night.

From: [R. Hinkel](#)
To: [Brady, Harold M.](#)
Subject: More water from Jordan Lake
Date: Monday, January 05, 2015 1:16:12 PM

Hello,

I understand that without water there is no growth possible, but before growth there should be sustainability. Will there be any studies of the impact on existing wells? Are there provisions for the Chatham Park project? What happens when fracking starts? Will there be enough water for the people? What is the fallback position if there is a fracking accident and Jordan lake will be polluted? Also with less and smaller buffer zones will there new treatment facilities required? How will upstream pollution effect the water quality when there is less water in the lake to dilute it? I hope DNER has answers and has made provisions to deal with all the possibilities. Even so this year we did not have a drought,the next one will come surely.

Regards,

Ralph Hinkel

From: [Jo Ellen Hirsch](#)
To: [Brady, Harold M.](#)
Subject: re: IBT permit request, public comment
Date: Friday, February 06, 2015 12:49:48 PM

Dear Mr. Brady,

I have carefully reviewed the Environmental Assessment Plan and its conclusion of insignificant impact on the source basin and Jordan Lake. This conclusion is based on historical data only. Modeling does not take into account the significant effects of climate change which are projected to increase in an exponential fashion.

Also, the increasing needs for development in downstream communities- the largest of these is Fayetteville and Wilmington- are not taken into account. Additionally, this document does not take into account the increased impacts of nutrient pollution due to the combined effects of expanding growth of development and agricultural and industrial wastes, resulting in higher pollutant loads in the Cape Fear River.

No environmental assessment has been done south of Lillington. Parts of the Cape Fear River basin host significant endangered species and the effects of even small changes in flow and increased concentrations of pollutants on these populations are not necessarily linear and therefore unknown.

Here are the specific sections of the document upon which my comments are based.

Section 4.2: Referenced in the NC DENR 2000 Cape Fear River Plan there are 3.7 miles between Haw & Deep Rivers algae blooms are common with elevated Ph levels due to discharges into the Haw & Deep (nutrient overload). Based on data from 2003 (not updated). Similar issues may be present south of Lillington where downstream flow monitoring is not included in the IBT report.

Section 4.6: US Geological Survey 2006 Land Cover Database uses pre-2011 data and fails to provide modeling for changes in land use, including increased runoff as a result of development and intensive farming, and subsequent higher nutrient levels in the River section.

Section 4.8: 48% of land in the study area is forested but factors that will affect our water quality include advancing rates of residential and commercial development, deforestation and reduction in riparian barriers with resulting increase in sediment and runoff into the source basin. It is unknown the degree to which these factors will increase pollutants in the river and their effect on healthy and sustainable wildlife and fish populations.

Section 5: Indirect impacts are classed under cumulative impact projections which mention runoff and development impacts on water quality. However, specific projections on degree of water degradation or land use practices is not present in the IBT document.

Section 2.2: Objection to 30 year forecasting- the 2045 projection on water use does not include impacts of water intensive industries (hydraulic fracturing) in Lee County or additional industrial development in downstream communities.

Can the Jordan Lake rules provide for our future use?

PWC is projecting that by 2022 water demand for their service area will avg 46 mgd. Fayetteville will draw 28 mgd per day directly from the Cape Fear River. PWC has not yet completed projections through 2045 for daily avg usage.

Section 1.1.1: Water Supply

39 mgd allocated for Cary/Apex/Morrisville/RTP and parts of Airport

18 mgd operationable ability of Western Wake Regional Water Reclamation Facility

Section 1.1.2 and Section 1.1.3:

46 mgd ability to treat wastewater includes North Cary WFF, South Cary WRF, Apex WRF, and WWRWRF

PWC and Wilmington utility information:

87 mgd in water usage for combined communities, Fayetteville & Wilmington

63 mgd from Cape Fear River usage for combined communities, Fayetteville & Wilmington

24 mgd from alternative sources including Glenville Lake (18 mgd) and ground water, Fayetteville & Wilmington

These numbers do not include water usage in Lumberton and other downstream communities.

How will Climate Change affect the tributaries of Jordan Lake, and the future projections of water supply and water quality into 15-30 years?

Micro-climate shift data is not factored into water usage projection data in the IBT permit request. This is a serious omission in regional forecasting for the continued capacity for Jordan Lake. While Exhibit 4-7 shows the Jordan Lake Management Plan has succeeded in decreasing the maximum flow and increasing the minimum flow at the Lillington gauge this does not provide certainty for future water management in the face of climate change and industrial development.

Process objections: inaccessibility of the Environmental Assessment document, specifically, lack of page numbers on Table of Contents. Copies of the Environmental Assessment were not available at the Fayetteville Public Hearing for use by the public. The Environmental Assessment was released within a too-short time frame for adequate review prior to the end of the Public Comment period.

Respectfully,
Jo Ellen Hirsch, MD

From: [Jo Ellen Hirsch](#)
To: [Brady, Harold M.](#)
Subject: Proposed IBT plan comments - resubmission
Date: Friday, February 06, 2015 2:25:24 PM

Dear Mr. Brady,

This is a resubmission and supersedes my original comments in which I failed to include my contact information.

I have carefully reviewed the Environmental Assessment Plan and its conclusion of insignificant impact on the source basin and Jordan Lake. This conclusion is based on historical data only. Modeling does not take into account the significant effects of climate change which are projected to increase in an exponential fashion.

Also, the increasing needs for development in downstream communities- the largest of these is Fayetteville and Wilmington- are not taken into account. Additionally, this document does not take into account the increased impacts of nutrient pollution due to the combined effects of expanding growth of development and agricultural and industrial wastes, resulting in higher pollutant loads in the Cape Fear River.

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Respectfully,

Jo Ellen Hirsch, MD

307 Whitney Dr

Fayetteville, NC 28314

910-339-8012

919-920-6330

Oral Statement of Jo Ellen Hirsch – Sustainable Sandhills

January 22, 2015 Fayetteville City Hall

Good evening, I come here as a private citizen. I had something else I had rather have been tonight. I was not prepared with facts and figures to prove a point; I simply am coming with common sense and hopefully some logic. My biggest concern about North Carolina in water is drought. I find that we never heard the word drought mentioned in conjunction with fracking. In the fracking debate, I said to myself how can we take all this water put it under ground where we can't always use it again and have our state continue to grow? This is a state that will grow it's almost inevitable, it keeps growing. We have to be careful that we keep our natural resources in all respects, including the water, including the biological systems up and down the river that depend on this water are part of what brings people here. As a resident of Fayetteville I am concerned to see the city have healthy growth. I'm concerned that we bring in good industries that aren't harmful to people's health. We have a trained group of people, our Fort Bragg soldiers who are very adaptable, very bright a great work force and if we want to build their future and build a future for the rest of the Fayetteville we have to count on our water supply. Additionally, it doesn't affect only Fayetteville it affects all of the agriculture counties around Fayetteville who are dependent on clean water. For all these reasons, I guess I urge two things, one is conservation is going to have to be part of our water use plan and secondly take the water give it back. I am strongly in favor of the alternative 3A. Thank you very much for your time. – End

The Conservation Fund
Box 271
Chapel Hill, NC 27514

February 5, 2015

Mr. Tommy Craven, Chairman
Water Allocation Committee
Environmental Management Commission
1617 Mail Service Center
Raleigh, North Carolina 27699-1617

Mr. Harold Brady
NC Division of Water Resources
1611 Mail Service Center
Raleigh, North Carolina 27699-1611

Re: Proposed EA/FONSI on Cary/Apex/Morrisville/Wake County's Request to Modify & Increase Interbasin Transfer from Haw River Basin to the Neuse and Cape Fear River Basins

Dear Chairman Craven and Mr. Brady:

Thank you for the opportunity to speak at the January 7, 2015 public hearing in Apex on the proposed Environmental Assessment/Finding of No Significant Impact drafted by CH2MHill and Brown & Caldwell in support of Cary, Apex, Morrisville and Wake County's request to the Environmental Management Commission to modify and increase their interbasin transfer (IBT) of water from 22 MGD to 33 MGD from Jordan Lake in the Haw River Basin to the Neuse and Cape Fear River Basins.

I am writing on behalf of The Conservation Fund to provide more detailed comments on the EA/FONSI and IBT request. The Conservation Fund and other land conservation organizations will make a proposal to Cary, Apex, Morrisville, Wake County and other members of the Jordan Lake Partnership to increase protection and restoration of their source water, Jordan Lake, later this year.

The Conservation Fund will be respectfully urging Cary, Apex, Morrisville, Wake County and other members of the Jordan Lake Partnership to build upon their regional water supply planning collaboration to work with land conservation organizations: 1) to develop a plan to increase protection and restoration of Jordan Lake in the Upper Cape Fear River Basin, and 2) to begin to reserve and invest funds in land conservation and restoration. Their investments in green infrastructure could leverage other public and private funds.

The Conservation Fund respectfully asks the Division of Water Resources and Environmental Management Commission to also urge Cary, Apex, Morrisville, Wake County and other members of the Jordan Lake Partnership to work with land conservation organizations and to invest in protecting and restoring Jordan Lake as you consider requests for IBT and water allocation.

If the Environmental Management Commission approves their request to continue and increase the interbasin transfer from Jordan Lake to the Neuse and Cape Fear River Basins, Cary, Apex, Morrisville and Wake County will save millions of dollars in avoided grey infrastructure costs.

The Conservation Fund notes that Raleigh's Upper Neuse Clean Water Initiative in the Falls Lake/Upper Neuse River Basin has conserved 7219 acres and 66 miles of stream at a cost to Raleigh of \$5,400,000 and has leveraged \$71,800,000 in other public and private funds. Five applicants recently requested \$417,000 from Raleigh to conserve and restore an additional 506 acres and 7 miles of stream valued at \$2,180,000.

Regional Collaboration

The Conservation Fund appreciates and commends the regional collaboration and long range planning of the Jordan Lake Partnership in general and of Cary, Apex, Morrisville and Wake County in particular. The regional approach to water supply and wastewater treatment is delivering assured supplies of clean drinking water and highly treated wastewater services to the citizens and businesses in western Wake County at affordable rates. It provides a solid foundation of sustainable economic development in the Research Triangle Region.

The Conservation Fund also commends Cary, Apex, Morrisville and Wake County for adopting and implementing policies in the such as riparian buffer protections, that are stricter than the minimum state requirements to help protect the quality and quantity of water in Jordan Lake and its tributaries.

2014 – The Year of Source Water Protection?

A variety of preventable disasters threatened drinking water supplies across the United States in 2014.

In January a coal-cleaning chemical (4-methylcyclohexane methanol) from Freedom Industries spilled into the Elk River upstream from Charleston, West Virginia's and shut down the city's water system for days. 300,000 people lacked access to safe drinking water. The US Geological Survey reported that the plume traveled 390 miles down the Ohio River past Huntington, Cincinnati and Louisville and other water systems. Many citizens in West Virginia lost confidence in the safety of their public water systems.

In February coal ash from a retired Duke Energy coal fired plant spilled into the Dan River and threatened the drinking water supply for Danville and other communities.

In August a toxic blue-green algae bloom in Lake Eire shut down the City of Toledo's water supply for days and left 400,000 people scrambling for safe drinking water. Later in August a diesel spill into the Ohio River threatened Cincinnati's water supply.

In response to these threats to drinking water supplies Representative Rick Catlin from New Hanover County and others sponsored HB 894, An Act to Improve Source Water Protection Planning, in the 2014 General Assembly. The General Assembly enacted and Governor McCrory signed SL 2014-41. GS 130A-320 now *requires* public water suppliers to develop source water protection plans. Investments in conservation and restoration will help Cary and other members of the Jordan Lake Partnership comply with GS 130A-320.

North Carolina's Source Water Assessment Program in the Division of Water Resources considers Jordan Lake to have a *moderate* inherent vulnerability rating, *higher* contaminant rating and a *higher* susceptibility rating.

The NC Division of Water Resources and US Environmental Protection Agency have listed Jordan Lake and many of its tributaries as impaired waters for nutrients, sediment and other pollutants on the 303(d) list. The Conservation Fund understands that Cary's Water Resources Department is investing about \$2,700,000 in capital costs and ongoing operating costs in aeration technology to treat water at its intake in Jordan Lake but has proposed no investments in preventing nutrient or sediment loading.

The EA/FONSI for the interbasin transfer of water and the application by Cary, Apex, Morrisville and Wake County for additional water in the pending Round 4 of the Jordan Lake Allocation process do not propose or recommend measures to reduce the risks identified by the Source Water Assessment Program or the Jordan Lake Rules to prevent and reduce pollution in Jordan Lake. The EA/FONSI also does not address the impacts that additional growth, supported by additional water withdrawals, will have on the Jordan Lake.

Leadership & Collaboration Needed to Protect & Restore Jordan Lake

In the 1980's Cary, Apex, Morrisville, Wake County and other local governments in the Research Triangle region led North Carolina in developing watershed protection policies (as both Falls Lake and Jordan Lake were filled). They along with the Jordan Lake Partnership have also led a collaborative regional water supply planning process.

Greater regional collaboration and leadership are needed to protect both the quantity and quality of Jordan Lake. The EA/FONSI notes that the NC General Assembly has delayed implementation of rules adopted by the Environmental Management Commission to reduce nutrient loading and sedimentation into Jordan Lake. The NC General Assembly has continued funding for the Clean Water Management Trust Fund, but has substantially cut its funding.

If the quality and quantity of water in Jordan Lake is to be protected it will require more leadership, collaboration and funding by the local government that depend upon it to maintain and sustain their economic growth and high quality of life.

The Conservation Fund is excited about the potential of a major parks & open space bond referendum in Wake County in 2016 that would enable water utilities, Wake County, and conservation organizations to increase protection of Jordan Lake (and Falls Lake & Swift Creek) and leverage public and private funds. However, Wake County funds alone and available in 2017 at the earliest, will be inadequate for the task of protecting and restoring Jordan Lake.

Growth in Western Wake/Eastern Chatham Counties

The proposed EA/FONSI and the Cary/Apex/Morrisville/Wake County November 2014 application for additional allocation of water from Jordan Lake use different estimates of population growth. Both documents estimate that the population of their service areas will grow from over 200,000 in 2015 to about 350,000 in the next 30 years in 2045.

Substantial population growth is also projected for Southern Durham and Eastern Chatham Counties between 2015 and 2030.

Much of that population growth will occur in the Jordan Lake watershed. Unless major public and private investments are made and mitigation measures are implemented, this growth will increase stormwater runoff, nutrient loading and sediment loading into Jordan Lake.

The Conservation Fund understands that the towns and Wake County are updating their Secondary & Cumulative Impact Master Management Plan (SCIMMP) of 2005 (drafted before the adoption of the Jordan Lake rules and nutrient reduction goals) and hopes that it will include more aggressive land conservation. However, an updated SCIMMP was not adopted prior to the EA/FONSI and is currently not available for public review.

Land conservation supports the stated goals of Cary, Apex, Morrisville, Wake County and Research Triangle Foundation to focus growth in their downtowns, in key transportation corridors and in the Research Triangle Park and to discourage development in water supply watersheds, riparian areas, and floodplains. Land conservation also supports the goals of local governments to extend and connect their excellent greenway systems down White Oak Creek, Beaver Creek, and other streams to Jordan Lake state park and game lands.

Outside of downtown Raleigh, Durham, and Charlotte, land values in western Wake County are among the highest in North Carolina. After the EMC approved an increase in interbasin transfer of water for Cary, Apex, Morrisville and Wake County to 24 MGD in 2001 and provided an assured supply of water for growth, land prices rose rapidly in the western Wake County. Prices declined during the great recession, but have risen rapidly as the economy has recovered. If the EMC approves another increase in interbasin transfer/Jordan Lake allocation, land values will continue their rapid rise. Land that has not been permanently conserved in the Jordan Lake watershed in western Wake County, eastern Chatham County, and southern Durham County by 2045 will have been converted from forest to urban uses.

Value of Jordan Lake Water Resources

The assured supplies of water provided by the investment that the US Army Corps of Engineers and the State of North Carolina made in Jordan Lake have fueled the growth of Wake County's portion of the Research Triangle Park, the major expansion of the RDU International Airport, Cary, Apex and Morrisville. Wake County's economy and property tax base have increased by billions of dollars.

The State can provide the additional water resources from Jordan Lake that Cary, Apex, Morrisville and Wake County are requesting for a one-time payment of about \$650,000 or about 17 cents/gallon. Raleigh's proposed Little Reservoir will probably cost over \$250,000,000 or over \$2.25/gallon for about the same amount of water.

Preferred IBT Alternative Saves Local Governments Substantial Costs

The proposed EA/FONSI recommends Alternative 2a because it relies on existing wastewater collection and treatment systems and saves Cary, Apex, Morrisville and Wake County substantial funds. Alternative 2a does not minimize interbasin transfer of water. The EA/FONSI does not provide an estimate of the tens of millions of dollars that Alternative 2a will save the local governments. It should either provide an

estimate of the cost savings afforded by Alternative 2a or an estimate of the costs of the other alternatives that require more investment in grey infrastructure.

The local governments, the EMC and DWR should consider the millions of dollars that their preferred alternative will save in grey infrastructure capital and operating costs and invest the savings in green infrastructure in the Jordan Lake watershed. Green infrastructure provides many other public benefits, increases the quality of life in the region, and enhances property values.

EMC May Require Mitigation Measures

In its July 2001 decision to approve a temporary increase in interbasin transfer of water from 16 MGD to 24 MGD from Jordan Lake in the Haw River Basin to the Neuse River Basin, the EMC set out a number of conditions to mitigate the impacts of the IBT, including requiring most of the water to be returned to the Cape Fear River Basin and Condition #8 that required the towns and Wake County to adopt similar or more restrictive rules than the Neuse River riparian buffer rules. The EMC was also aware and appreciative that the towns and Wake County had already adopted stormwater requirements more stringent than the minimal rules required by the EMC to implement the Water Supply Watershed Protection Act of 1989.

The annual reports to the EMC provided by the local governments, including the latest in 2013, note modest improvements in the riparian buffer protections/mitigation measures in the watershed, but no major improvements.

Morrisville has recently created a stormwater utility. Cary, Apex and Wake County have stormwater programs but do not have stormwater utilities.

A strong partnership between Cary, Apex, Morrisville, Wake County, the other members of the Jordan Lake Partnership, and land conservation organizations such as The Conservation Fund, Triangle Land Conservancy, the Conservation Trust for NC, and county soil & water conservation districts would provide effective mitigation, strengthen the towns and Wake County's request for an increase in IBT and an increase in allocation from Jordan Lake, and increase protection of public health and the environment.

Partnerships similar to the Upper Neuse Clean Water Initiative with land conservation organizations and the Upper Neuse River Basin Association with upstream and downstream communities would reduce conflict over protection and restoration of Jordan Lake and demonstrate willingness by communities that withdraw water from Jordan Lake to invest in communities that supply water to Jordan Lake.

These partnerships could be good models for the upcoming efforts by state and local governments to reduce nutrient pollution in other watersheds, such as the Middle Cape Fear River Basin and High Rock Lake in the Yadkin/Pee Dee River Basin. The EMC, DWR & DENR recently committed to the US Environmental Protection Agency to address nutrient problems in these waters.

It would also initiate the necessary collaboration – lead by local leaders – to protect the quality and quantity of the water in Jordan Lake, a resource critical to the future of the Research Triangle Region and the State of North Carolina.

The Conservation Fund plans to submit similar comments when the EMC begins public review and comment on Round 4 of Jordan Lake allocation later this year.

Thank you for your consideration.

Sincerely,

Bill Holman
North Carolina Director

C: Mr. Benne Hutson, EMC WAC
Mr. Gerard Carroll, EMC WAC
Mr. Daniel Dawson, EMC WAC
Mr. Boots Elam, EMC WAC
Mr. Manning Puette, EMC WAC
Mr. Butch Smith, EMC WAC
Mr. Steve Tedder, EMC WAC
Mr. Steve Brown, PE, Director of Water Resources, Cary
Mr. Tim Donnelly, PE, Director of Public Works & Utilities, Apex
Mr. Britt Stoddard, Director, Wake County Water Quality Division
Ms. Liz Rooks, Executive Vice-President and COO, Research Triangle Foundation
Mr. Warren Miller, Jordan Lake Partnership
Mr. Mike Schlegel, Triangle J COG



Environmental Services

TEL 919 856 7400
FAX 919 743 4772

Administration
336 Fayetteville Street • Raleigh, NC 27602
www.wakegov.com

Suggested Talking Points for Jan.7 Public Hearing: Proposed Change To Water Transfer Certificate

For Wednesday, January 7, 2015. Arrive by 6:15 p.m. and be sure to register to speak; guests speak in which the order they are registered. Apex Public Works, 105-B Upchurch Street, Apex.

Good evening. I am Wake County Commissioner Sig Hutchinson. On behalf of the Wake County portion of Research Triangle Park and the many Wake County Residents that work in the service area of these municipalities I would like to comment in favor of the proposed changes to this interbasin transfer certificate.

The changes will bring this certificate into compliance with the latest version of the General Statute 143-215.22L. This is a sensible change that will keep the water allocation documentation in order since the changes to the statute in 2013. A new method of calculation of quantity is now codified and the certificate should reflect that as well.

Wake County has long had an interest in using resources wisely. Wake County's Unified Development Plan is forward thinking and aggressive. 100 foot stream buffers and other strong stormwater management practices were developed in keeping with our respect for our vital water resources.

It is important that these changes have been vetted by the North Carolina Division of Water Resources and are not going to impact downstream users negatively.

Wake County will continue to address the need to preserve and protect this resource. In the future, our partnership with Apex, Cary, Raleigh and Morrisville will result in new methods and technologies to minimize consumptive use and continue to improve smart use of this resource.

I would like to thank the North Carolina Division of Water Resources for this opportunity to support the changes to the certificate on behalf of Wake County.

From: [arthur.ingalls](#)
To: [Brady, Harold M.](#)
Subject: Removal of water from Cape Fear
Date: Saturday, January 31, 2015 2:43:34 PM

I'll be out of town on 2/5 but I did want to send a comment. Reusing water bothers me. Reusing water from the Cape Fear worries me even more. I'm a retired chemist and worked part time for PWC for several months at their water intake facility on 301. Discussions there concerned me. The presence of fluorohydrocarbons (in trace amounts) in the "purified" water concerned me enough so that I installed an undersink filter. My industrial hygiene experience suggests that even trace amounts of fluorohydrocarbons are of concern because we don't know if existing levels are safe. The levels we were seeing in our water concerns me. Taking water from and returning water to the river (after flowing through a treatment plant) is not a good idea.

Arthur Ingalls
910-485-6023



Town of Morrisville
Post Office Box 166
Morrisville, North Carolina 27560

Phone: 919.463.6200
Fax: 919.481.2907
www.townofmorrisville.org

COMMENTS OF TOWN OF MORRISVILLE ON REQUESTED *INTERBASIN TRANSFER CERTIFICATE MODIFICATION*

Submitted by: TOWN OF MORRISVILLE MAYOR PRO TEM LIZ JOHNSON
To: North Carolina Department of Environment and Natural Resources (NCDENR)
Public Hearing January 7, 2015

Town of Apex

OFFERED BY MAYOR PRO TEM LIZ JOHNSON

Request: Interbasin Transfer Certificate Modification for the Towns of Apex, Cary, and Morrisville, and Wake County (RTP South)

- Good evening; thank you for the opportunity to represent the residents and businesses of the Town of Morrisville regarding the requested modification to the Interbasin Transfer Certificate for the Towns of Apex, Cary and Morrisville, and Wake County (for RTP South) .
- As you are aware, this requested modification is necessary because of 2013 changes in the State statutes regarding IBT law and, more importantly, to ensure that water resources in the region are managed in a collaborative, environmentally responsible, and cost effective manner.
- Water in the Town of Morrisville is a critical resource, supporting the manufacturing and commercial activities of the business community, while providing our residents and visitors with important quality of life benefits, including a safe and reliable source of water and recreation amenities.
- The Town of Morrisville is committed not only to protecting our own water resources; the Town strives to be a responsible regional partner by taking steps to protect water quality for current and future residents in the Triangle as well as our neighboring downstream communities.
- The Town is committed to approaching water resource issues on a regional basis in cooperation with other jurisdictions, and is proud to be one of the 13 members of the Jordan Lake Partnership.
- Morrisville has had positive experiences approaching water on a regional, collaborative basis; in 2006 we merged our water and sanitary utilities system with the Town of Cary in order to minimize adverse environmental impacts, provide the highest quality services to our citizens in the most cost efficient manner, and ensure a reliable supply of water services to serve the demands of future growth.

Our Mission: The Town of Morrisville is dedicated to enhancing the quality of life by preserving our past and protecting our future through a collective community partnership. By balancing responsible growth with core values, we embrace a sense of membership, communication, and support.

- As the lead agency for the IBT Certificate modification, the Town of Cary has performed extensive due diligence and modeling, and has incorporated stakeholder input throughout the entire IBT process.
- The analysis performed by DENR Division of Water Resources through the year 2060 shows that the requested IBT certificate modification will have no detrimental impact on any downstream communities' abilities to meet their water supply needs.
- I am pleased to be associated with the Towns of Cary and Apex, along with Wake County; together we have acted to minimize future IBT requests, maintain compliance with the current IBT certificate, and minimize environmental impact.
- The IBT Certificate Modification is essential for Morrisville *to* continue supporting the economic health and vitality of our town and the region, and we urge the State to approve the request.
- Thank you for your consideration.

Paul A Johnson
1202 Hunters Trail
Hope Mills, NC 28348

Rec'd at
hearing 1/22/15 ak

January 22, 2015

Dear NCDENR,

I'm grateful to you to have the ability and your willingness to accept my comment on behalf of all downriver North Carolina residents with dependence on Jordan Lake and the Cape Fear River basin for water supply.

As you contemplate the best solution for sharing water from Jordan Lake and the Cape Fear River basin with residents of Apex, Cary, Morrisville and Wake County (for the South RTP), please consider ways of mitigating the amount of water taken by the above communities during periods of drought and water-supply stress.

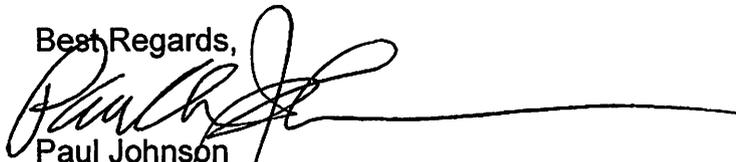
I would suggest a comparable percentage reduction based upon percentage drop in lake and river levels (however water supply is gauged and monitored. Perhaps even a temporary moratorium on water drawn from the Cape Fear River basin in cases of extreme shortage.

I feel this is only fair to downriver communities that depend solely on the Cape Fear River basin and its system of lakes, rivers and tributaries.

Fairness to all in trying times is the key.

Please feel free to contact me with any questions.
Thank you!

Best Regards,



Paul Johnson
(910) 978-3930 (cell/home)
(910) 486-2060 (work)
pjohnson102@gmail.com

To Whom it May Concern:

Re the IBT Certificate Modification proposal by the towns of Cary, Apex, Morrisville and Wake County, the existing certificate w/ the modification would be, just for these four, $\frac{1}{3}$ of the total N.C. State's allocation from Jordan Lake. But, the real insult or injury to the Greater Cape Fear River Basin is that only a pittance is offered $\frac{1}{10}$ required to be returned. Therefore, there can be no other decision by EMC that meets Good Neighbor / Greater Good policy, environmentally and demographically, than alternative B A of the Environmental Assessment.

RECEIVED
FEB 04 2015
DIVISION OF WATER RESOURCES

2-3-2015

R. Timothy Johnson
24 Bay Street
Fuquay Varina, NC 27526-9715
919-567-9420

Very sincerely,
R. T. Johnson

**RESOLUTION TO OPPOSE THE
PROPOSED INTERBASIN TRANSFER CERTIFICATE MODIFICATION FOR THE TOWNS
OF APEX, CARY AND MORRISVILLE, AND WAKE COUNTY (FOR RTP SOUTH)
ALTERNATIVE 2A – INCREASE IBT TO MEET 2045 DEMANDS**

WHEREAS, [NAME OF AGENCY] feels the Interbasin Transfer (IBT) Certificate request submitted by the towns of Apex, Cary and Morrisville, and Wake County (for RTP South) is unnecessary and poses increased risks to the water supply of Cumberland County and other counties downstream; and

WHEREAS, the Cape Fear River is a tremendous resource to our community, providing our major source of water supply as well as affording many recreational opportunities for our citizens, and it is our responsibility to maintain the highest level of certainty for our future water supply; and

WHEREAS, based on modeling results, it has been determined that the minimum flows from the Cape Fear River at Lillington and Fayetteville will be reduced significantly in the future, even with no increase in IBT, making it critical that treated wastewater be returned to the Cape Fear River Basin; and

WHEREAS, the NC Wildlife Resources Commission has indicated concern that increased withdrawals from Jordan Lake could negatively impact fish populations in the Cape Fear River and therefore negatively impact the river's ecosystem; and

WHEREAS, current requests for water supply from Jordan Lake do not allow for any water to be held in reserve; which could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream; and

WHEREAS, the additional transfer will cause more than 50% percent of the water supply to be diverted away from the Jordan Lake drainage basin; which is not in compliance with NC Department of Environmental Resources (DENR) rules and could jeopardize replenishment of the lake; and

WHEREAS, a water use decision of this magnitude seems premature given that the Cape Fear River Water Supply Plan, being prepared by DENR to determine whether or not all water supply needs can be met throughout the entire Cape Fear River Basin, has not been finalized; and

WHEREAS, this transfer request is based on a 30-year planning period, which is excessive and would compromise our ability to meet changes due to regulations, statutes, customer demands, climate changes, and regional needs; and a shorter planning period of 15 years would be more prudent; and

NOW, THEREFORE, BE IT RESOLVED THAT:

The [NAME OF AGENCY] recommends utilization of alternative 3A, as described in the Environmental Assessment for the proposed IBT. This option avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility. The Western Wake Partnership has the infrastructure in place to allow the return of treated wastewater to the Cape Fear River. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.

Adopted on this [DAY] of [MONTH], [YEAR], at [CITY], North Carolina.

[NAME OF AGENCY]

[TITLE]

ATTEST:

[TITLE]

Drafted by: M.J. Noland, P.E.
P.O. Box 1089
Fayetteville, NC 28302
910-223-4733

Endorsed by: Gerald Arnold
1206 Ballyhast Pl,
Raleigh, NC 27607
919-782-7075

2-1
15

From: [Rob Johnson](#)
To: [Brady, Harold M.](#)
Subject: Proposal for the Cary, Apex, Morrisville, and Wake County IBT certificate modification
Date: Thursday, February 05, 2015 10:38:33 AM

As a co-owner of a historic Harnett County farm that has been in my family since 1780, I support alternative 3(a) of the environmental assessment in the proposal for the Cary, Apex, Morrisville, and Wake County IBT certificate modification.

I understand the water needs of these growing population centers, but the Cape Fear River is a historically and ecologically significant river that should not be sacrificed to growth. By returning treated water to the Cape Fear, option 3(a) meets both the needs of NC's growing population and its imperative to maintain its historical and ecological heritage.

Thank you.

Best,
Rob Johnson

From: [Sam Johnson](#)
To: [Brady, Harold M.](#)
Subject: Inner Basin Transfer Certificate Modification - Support Alternative 3A
Date: Thursday, February 05, 2015 11:47:33 AM

To Whom It May Concern,
As a property owner in the affected basin I proposed that Alternative 3A of the Environmental Assessment be accepted.

Sincerely,
Samuel R. Johnson
252-531-1604

From: [lynne kreiser](#)
To: [Brady, Harold M.](#)
Subject: Inter-basin transfer
Date: Wednesday, February 04, 2015 9:04:12 AM

Please consider the request for changes to this agreement very carefully. I live in Fayetteville and care very deeply about the quality of life in my city. Access to clean water is one of the most basic human rights.

While the people of Fayetteville may not have the money and influence that those in Cary and Wake county have, they are entitled to the protection of their representatives just as much as anyone in the state.

Please do your job to consider the best interests of all citizens.

Thank you.

Lynne Kreiser
1826 Swann St
Fayetteville NC 28303



MICHAEL G. LALLIER, COMMISSIONER
LYNNE B. GREENE, COMMISSIONER
DARSWEIL L. ROGERS, COMMISSIONER
WADE R. FOWLER, JR., COMMISSIONER

PUBLIC WORKS COMMISSION
OF THE CITY OF FAYETTEVILLE

955 OLD WILMINGTON RD
P.O. BOX 1089
FAYETTEVILLE, NORTH CAROLINA 28302 1089
TELEPHONE (910) 483-1401
WWW.FAYPWC.COM

ELECTRIC & WATER UTILITIES

February 2, 2015

Harold Brady
Division of Water Resources
1611 Mail Service Center
Raleigh, NC 27699-1611

Dear Mr. Brady,

Please see the attached Resolution Number PWC2015-01 from the Public Works Commission of the City of Fayetteville in opposition to Interbasin Certificate Modification for the Towns of Apex, Cary and Morrisville and Wake County (for RTP South).

Please let us know if you require further information.

Best regards,
FAYETTEVILLE PUBLIC WORKS COMMISSION

Michael G. Lallier
Chairman

cc: PWC Commissioners



BUILDING COMMUNITY CONNECTIONS SINCE 1905

AN EQUAL EMPLOYMENT OPPORTUNITY / AFFIRMATIVE ACTION EMPLOYER

**RESOLUTION TO OPPOSE THE
PROPOSED INTERBASIN TRANSFER CERTIFICATE MODIFICATION FOR THE TOWNS
OF APEX, CARY AND MORRISVILLE, AND WAKE COUNTY (FOR RTP SOUTH)
ALTERNATIVE 2A – INCREASE IBT TO MEET 2045 DEMANDS**

WHEREAS, The Public Works Commission of the City of Fayetteville, feels the Interbasin Transfer (IBT) Certificate request submitted by the towns of Apex, Cary and Morrisville, and Wake County (for RTP South) is unnecessary and poses increased risks to the water supply of Cumberland County and other counties downstream; and

WHEREAS, the Cape Fear River is a tremendous resource to our community, providing our major source of water supply as well as affording many recreational opportunities for our citizens, and it is our responsibility to maintain the highest level of certainty for our future water supply; and

WHEREAS, based on modeling results, it has been determined that the minimum flows from the Cape Fear River at Lillington and Fayetteville will be reduced significantly in the future, even with no increase in IBT, making it critical that treated wastewater be returned to the Cape Fear River Basin; and

WHEREAS, the NC Wildlife Resources Commission has indicated concern that increased withdrawals from Jordan Lake could negatively impact fish populations in the Cape Fear River and therefore negatively impact the river's ecosystem; and

WHEREAS, current requests for water supply from Jordan Lake do not allow for any water to be held in reserve; which could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream; and

WHEREAS, the additional transfer will cause more than 50% percent of the water supply to be diverted away from the Jordan Lake drainage basin; which is not in compliance with NC Department of Environmental Resources (DENR) rules and could jeopardize replenishment of the lake; and

WHEREAS, a water use decision of this magnitude seems premature given that the Cape Fear River Water Supply Plan, being prepared by DENR to determine whether or not all water supply needs can be met throughout the entire Cape Fear River Basin, has not been finalized; and

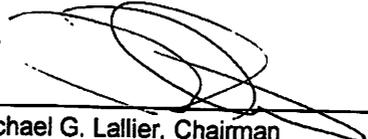
WHEREAS, this transfer request is based on a 30-year planning period, which is excessive and would compromise our ability to meet changes due to regulations, statutes, customer demands, climate changes, and regional needs; and a shorter planning period of 15 years would be more prudent.

NOW, THEREFORE, BE IT RESOLVED THAT:

The Public Works Commission of the City of Fayetteville recommends utilization of alternative 3A, as described in the Environmental Assessment for the proposed IBT. This option avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility. The Western Wake Partnership has the infrastructure in place to allow the return of treated wastewater to the Cape Fear River. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.

Adopted on this 20TH of JANUARY, 2015, at Fayetteville, North Carolina.

PUBLIC WORKS COMMISSION OF THE CITY OF
FAYETTEVILLE, NORTH CAROLINA



Michael G. Lallier, Chairman

ATTEST:



Wade Fowler, Secretary



Michael J. Landguth, A.A.E.
President & CEO

RALEIGH-DURHAM AIRPORT AUTHORITY
1000 Trade Drive • P O Box 80001 • RDU Airport, NC 27623

tel: (919) 840-7700 • fax: (919) 840-0175 • www.rdu.com

Michael Landguth, President and CEO

Raleigh-Durham Airport Authority

IBT Public Hearing Remarks

Jan. 7, 2014

Good evening. My name is Michael Landguth and I am the president and CEO of the Raleigh-Durham Airport Authority. I am here tonight to ask you to approve the Interbasin Transfer Certificate modification being requested by Apex, Cary, Morrisville and Wake County.

Each year, more than nine million passengers travel through Raleigh-Durham International Airport (RDU). So having a safe and reliable water supply is crucial to the operations of the airport. Water is needed for our shops, restaurants and to maintain and operate our facilities.

We know of no scientific reason for denying the IBT modification request. Based on the analysis performed by the State Division of Water Resources for 2060, it shows that the requested IBT certificate modification will have no detrimental impact on any downstream communities' abilities to meet their water supply needs, which is important to all of us.

In addition, we are impressed by the actions Cary, Apex, Morrisville and Wake County have taken to minimize the need for a future IBT and their proactive steps in areas of water conservation and reuse.

RDU has an economic impact of 8 Billion dollars a year on our region. Ensuring we have a clean and reliable water supply is vital to the airport and regions success. For this reason, I would like to reiterate the airport's support for the IBT request.

Thank you for your time.

From: [ralph layko](#)
To: [Brady, Harold M.](#)
Subject: Proposal to increase water withdrawal from Lake Jordan
Date: Thursday, January 29, 2015 6:07:37 AM

Mr. Brady,

Any water taken from Lake Jordan for municipal use needs to be treated then returned to the Cape Fear River Basin. Downstream communities needs must be considered when descisions are made regarding the state's natural resources. We must not ignore the effect this action will have.

Ralph Layko
Cary, NC



TOWN *of* EASTOVER

RESOLUTION TO OPPOSE THE PROPOSED INTERBASIN TRANSFER CERTIFICATE MODIFICATION FOR THE TOWNS OF APEX, CARY AND MORRISVILLE, AND WAKE COUNTY (FOR RTP SOUTH) ALTERNATIVE 2A – INCREASE IBT TO MEET 2045 DEMANDS

RESOLUTION No. 2015-01

WHEREAS, the Eastover Town Council feels the Interbasin Transfer (IBT) Certificate request submitted by the towns of Apex, Cary and Morrisville, and Wake County (for RTP South) is unnecessary and poses increased risks to the water supply of Cumberland County and other counties downstream; and

WHEREAS, the Cape Fear River is a tremendous resource to our community, providing our major source of water supply as well as affording many recreational opportunities for our citizens, and it is our responsibility to maintain the highest level of certainty for our future water supply; and

WHEREAS, based on modeling results, it has been determined that the minimum flows from the Cape Fear River at Lillington and Fayetteville will be reduced significantly in the future, even with no increase in IBT, making it critical that treated wastewater be returned to the Cape Fear River Basin; and

WHEREAS, the NC Wildlife Resources Commission has indicated concern that increased withdrawals from Jordan Lake could negatively impact fish populations in the Cape Fear River and therefore negatively impact the river's ecosystem; and

WHEREAS, current requests for water supply from Jordan Lake do not allow for any water to be held in reserve; which could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream; and

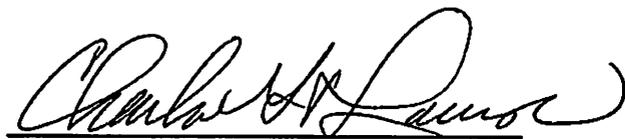
WHEREAS, the additional transfer will cause more than 50% percent of the water supply to be diverted away from the Jordan Lake drainage basin; which is not in compliance with NC Department of Environmental Resources (DENR) rules and could jeopardize replenishment of the lake; and

WHEREAS, a water use decision of this magnitude seems premature given that the Cape Fear River Water Supply Plan, being prepared by DENR to determine whether or not all water supply needs can be met throughout the entire Cape Fear River Basin, has not been finalized; and

WHEREAS, this transfer request is based on a 30-year planning period, which is excessive and would compromise our ability to meet changes due to regulations, statutes, customer demands, climate changes, and regional needs; and a shorter planning period of 15 years would be more prudent; and

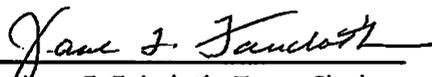
NOW, THEREFORE, BE IT RESOLVED THAT, the Eastover Town Council recommends utilization of alternative 3A, as described in the Environmental Assessment for the proposed IBT. This option avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility. The Western Wake Partnership has the infrastructure in place to allow the return of treated wastewater to the Cape Fear River. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.

Adopted on this 22nd day of January, 2015.



Charles G. McLaurin, Mayor

ATTEST:


Jane F. Faircloth, Town Clerk

From: [Susan Byrd Godkin](#)
To: [Brady, Harold M.](#)
Subject: Message from Lynda Miller regarding IBT
Date: Tuesday, February 03, 2015 3:55:34 PM

Dear Mr. Brady, I am sending this message from my email account on behalf of my aunt, Lynda Miller, a resident of Harnett County.

I recommend utilization of alternative 3A, as described in the Environmental Assessment for the proposed IBT. This option avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility. The Western Wake Partnership has the infrastructure in place to allow the return of treated wastewater to the Cape Fear River. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.

Thanks for your consideration of this proposal.

Sincerely,
Susan Godkin on behalf of Lynda Miller

From: [James Morrison](#)
To: [Brady, Harold M.](#)
Subject: WATER PLANS CAUSE WORRY IN FAYETTEVILLE, NC
Date: Thursday, February 05, 2015 6:07:01 PM

I am sending a few thoughts and comments regarding a recent news article about Cary, Apex, Morrisville and Wake County's request to increase the amount of water taken from Lake Jordan/Cape Fear River Basin. It seems the problem is taking water from the Cape Fear River Basin and releasing most of it into the Neuse River Basin. Why did Cary spend all of that money to build the New Hill Waste Treatment Plant and not build the necessary infrastructure to get the waste to it in order to prevent this basin transfer of water? It appears in the future, Cary's growth will end as it is surrounded by other municipalities (Raleigh, Durham, Apex, and Holly Springs), and Lake Jordan to its western boundary. So they need to increase their infrastructure to get waste water to the New Hill Treatment Plant to increase its use. In addition, if they want to protect their drinking water from Lake Jordan, it would be wise to do a public/private infrastructure agreement with the developers of the 7,000 acre Chatham Park. Since Pittsboro does not have the funds or the capacity to serve Chatham Park's massive future utility needs, the developers will be forced to treat their Chatham Park waste water with a private land application waste treatment system that will drain into Lake Jordan. This will not be good for the water quality of Lake Jordan. As a citizen of Cary and a retired City Planner who has seen how this type of sewer treatment in another urban county can affect the water quality of a reservoir, I do not look forward to drinking Lake Jordan's water - as its quality will surely deteriorate. Cary is a large and growing city that needs to increase its infrastructure to New Hill and beyond as part of their request to increase their water use.

James W. Morrison
341 Orbison Dr.
Cary, NC 27519



MICHAEL G. LALLIER, COMMISSIONER
LYNNE B. GREENE, COMMISSIONER
DARSWEIL L. ROGERS, COMMISSIONER
WADE R. FOWLER, JR, COMMISSIONER

PUBLIC WORKS COMMISSION

OF THE CITY OF FAYETTEVILLE

ELECTRIC & WATER UTILITIES

955 OLD WILMINGTON RD
P.O. BOX 1089
FAYETTEVILLE, NORTH CAROLINA 28302-1089
TELEPHONE (910) 483-1401
WWW.FAYPWC.COM

February 5, 2015

RECEIVED
FEB 09 2015
DIVISION OF WATER RESOURCES

Harold Brady
Division of Water Resources
NC Department of Environment and Natural Resources
1611 Mail Service Center
Raleigh, NC 27699-1611

Re: Interbasin Transfer Certificate Modification for the Towns of Apex, Cary and Morrisville,
and Wake County (for RTP South)

Dear Mr. Brady,

The City of Fayetteville Public Works Commission (PWC) appreciates the opportunity to provide these comments on the interbasin transfer (IBT) certificate modification request made by the Towns of Cary, Apex and Morrisville, and Wake County (for RTP South). PWC provides regional water service to the citizens of Fayetteville, Cumberland County, Hoke County and Fort Bragg. The Cape Fear River is an invaluable resource to our community, providing our major source of water supply and we desire to maintain the highest possible level of certainty for our future water supply. For this reason, we offer the following comments for your consideration.

1. Fast Track Review is Unreasonable: The applicants' December 2014 Environmental Assessment (EA) was not available for review until December 19, 2014 just a few days before the holiday season when many people are away from work for extended periods. The public hearing in Apex was then held on January 7, 2015, just a few days after the New Year's weekend. For a decision of this magnitude it seems unreasonable to expect public and agency reviews to be as comprehensive as they should be given the short timeframe allowed and the scheduling of the review over the Christmas and New Year holiday season.
2. Basin Plan Should Come Before Major Water Use Decisions: For years we have been awaiting DWR's completion of a Cape Fear River Basin Water Supply Plan that considers the future uses and needs of all major water users in the basin. We do not understand how a water use decision of the magnitude being requested by the applicants can be made before the Basin Plan has even been completed or reviewed.
3. 30-Year Allocation is Excessive: We are concerned about the practice of allocating a limited water supply to any entity based on what they project to be their 30-year need. Once such an allocation is granted, it is difficult to take it back to re-allocate to another entity that has a greater, unanticipated need develop during the interim. A shorter time period like 15 years should be considered to determine the amount to be allocated and any associated IBT. We emphasize this point in light of the current Round 4 of Jordan Lake allocation requests amounting to more than the 100 mgd safe yield estimate that DWR has been using for the

Jordan Lake water supply pool. If most of these requests are granted, there will be no more allocatable water supply from this public source for other communities who may develop a water supply need before 2045.

4. Exceeding 50% Watershed Diversion Cap Requires Formal Rule-Making: Currently, 42 mgd of the 63 mgd allocated as a result of Round 3 allocations involves diversion outside of the Jordan Lake watershed. The Round 4 requests exceed 100 mgd which is more than the 100 mgd water supply safe yield estimate that DWR has been using for Jordan Lake and the possibility therefore exists that approved allocations would surpass the 50% Jordan Lake watershed diversion cap found in 15A NCAC 2G .0504(h). PWC and its legal counsel are of the opinion that adjusting this 50% cap can only be done through adoption of an amended rule accomplished through the rulemaking process set forth in Section 150B-21.2 of the Administrative Procedure Act. Consequently, the applicants' proposed IBT increase, which is dependent on increased Jordan Lake allocation, seems premature.
5. Effective IBT Increase Should be Stated: The request at hand is to transfer an additional 9 mgd (calculated as the daily average of a calendar month) from the Haw River basin to the Neuse River basin. However, the requested increase is effectively more than a 9 mgd increase since the current 24 mgd IBT limit is a maximum day value whereas the requested 33 mgd IBT limit is not a maximum day value. It would be beneficial and more transparent for the applicants' EA and DENR's FONSI to state the effective increase in proposed IBT since the real increase is more than indicated by simply comparing 33 to 24 mgd.
6. Alternatives Analysis is Deficient: We do not understand why such abbreviated analysis was done for Alternative 3a (Avoid Interbasin Transfer Increase by Sending Additional Untreated Wastewater to the Western Wake Regional Water Reclamation Facility (WWRWRF)). The analysis concludes that the significant cost increase for 3a is not considered fiscally responsible when compared to the applicants' preferred alternative, which is Alternative 2a (i.e., the proposed IBT certificate modification). However, the EA contains no dollar amounts for the costs of the evaluated alternatives. Under the IBT regulations, a determination on whether to grant the IBT request shall include a specific finding as to why the applicant's need for water cannot be satisfied by alternatives within the receiving basin. The proposed IBT merely being less expensive than other options doesn't show that applicant needs can't be met using other alternatives such as 3a which EA Exhibit 3-4 lists as technically feasible and meeting the project purpose and need. Merely stating that a proposed IBT increase is less expensive than other options falls far short of the intent of the IBT regulations and prevents proper analysis of the alternatives.
7. Alternative 3a Warrants Further Analysis: There was approximately \$290 million spent on the WWRWRF for the main purpose of returning treated wastewater to the Cape Fear River to reduce the effects of a previously approved IBT. According to the EA, the WWRWRF has a permitted capacity of 30 mgd. However, EA Exhibit 5-1 shows only 12.8 mgd of average wastewater flow through the WWRWRF in 2045 under the applicants' preferred scenario. To not make full use of this infrastructure investment to mitigate the effects of the proposed IBT would also call into question the fiscal responsibility of such a

decision. Additional consideration should be given to Alternative 3a to transfer additional wastewater back to the WWRWRF for treatment and discharge back into the Cape Fear River. This approach was used at great expense for the last IBT certificate and should be used this time as well. PWC doesn't understand why DENR's FONSI makes no mention of retaining the first condition of the current IBT certificate which requires the certificate holders to return water used in excess of 16 mgd in the Neuse River Basin to either the Haw or Cape Fear River basins. The effect of fully utilizing the WWRWRF for its intended purpose would be to improve the reliability of the Jordan Lake water quality pool which is used for low flow augmentation. More discharge of treated effluent to the Cape Fear River would further improve the reliability of the water quality pool since then smaller Jordan Lake releases will be needed under drought conditions to meet target flows downstream. This conclusion is evident based on the model simulation results presented in Figures 11 and 12 of EA Appendix D which show positive effects on the Jordan Lake water quality pool for 2045 scenarios that are due to increased return flows to the Cape Fear River. A more dependable water quality pool in Jordan Lake means a more dependable water supply for PWC and other users who rely on the Cape Fear River downstream of Jordan Lake. In addition, as noted by the NC Wildlife Resources Commission in their comments on the applicants' proposal, increased withdrawals from Jordan Lake and increased IBT could impact anadromous fish. The ongoing efforts to restore anadromous fish passage in the Cape Fear River Basin underscore the importance of ecological considerations in addition to those of water supply users such as PWC. The primary infrastructure is in place (i.e., WWRWRF) to allow the return of treated wastewater to the Cape Fear River and Alternative 3a is the one that should be utilized.

8. Alternative 2b is Not Applicable: We do not understand why the applicants spent any time evaluating and presenting Alternative 2b (Increased Neuse Discharge IBT). It's inconceivable that this alternative with a 44 mgd IBT rate could be considered permissible and seems to have only been included to perhaps make the applicants' preferred alternative look better by comparison.
9. Raleigh's Proposed Use of Cape Fear River Requires Evaluation: We understand that Raleigh has expressed an interest in withdrawing water from the Cape Fear River near Lillington and then returning treated wastewater back to the Cape Fear River downstream of Lillington. We are not aware of this water use being considered in any hydrologic modeling scenarios. This is a significant development and should be evaluated to determine how it would affect the modeling results.
10. Additional Modeling Results are Warranted: A model scenario that would be informative, but wasn't included in the applicants' EA, would be to simulate the applicants' 2045 Jordan Lake withdrawals and increased IBT without other 2045 basin demand changes. This scenario would isolate the incremental effects of the applicants' proposal as compared to 2010 Baseline conditions.
11. Modeling is Overly Optimistic: According to the hydrologic model developers, the model simulates Jordan Lake releases being made with perfect foresight. In real-time it's impossible to manage reservoir releases this finely. This type of analysis does not provide

assurance that downstream flow effects won't be more pronounced than what has been simulated. In addition, our understanding is that some projected industrial withdrawals such as those for Harris Lake Nuclear Station were held constant in the hydrologic modeling on the basis of assumption. Once again, these assumptions do not provide assurance that downstream flow effects won't be more pronounced than what has been simulated.

12. Modeling Shows Substantial Decreases in Minimum Flows: Based on the applicants' modeling results as portrayed in Figures 28 and 29 of EA Appendix D, minimum flows at points downstream of Jordan Lake such as Lillington and Fayetteville are dropping by about one-third when comparing 2010 Baseline to any of the 2045 scenarios. This change is difficult to discern due to the manner in which these graphs are formatted and we were unable to find any mention in the EA of minimum flow changes at Fayetteville or Lillington. This begs the question of why any significant new upstream water use decisions are being made before understanding what can be done to minimize these large reductions in minimum flow levels.

In summary, PWC finds the information presented in the applicants' EA to be significantly deficient in the ways enumerated above. PWC also believes there are compelling reasons why it would be premature for North Carolina to make any decision now on the proposed IBT increase. If a decision is nevertheless made, it should be to select Alternative 3a (Avoid Interbasin Transfer Increase by Sending Additional Untreated Wastewater to the Western Wake Regional Water Reclamation Facility (WWRWRF)). PWC appreciates your careful consideration of our comments and we look forward to your response.

Very Truly Yours,
PUBLIC WORKS COMMISSION



Mick Noland, PE
Chief Operations Officer
Water Resources Division

cc: Tom Reeder
Tom Fransen
Steven Blanchard
Amos Danson
Paul Peterson
Environmental Management Commission
Cumberland County Delegation
PWC Commissioners
Nat Robertson
Jim Arp
Rep. Rick Catlin
Carolyn Justice-Hinson
Amy Cannon

Douglas Peters, President & CEO
Fayetteville Regional Chamber
January 22, 2015

The Fayetteville Regional Chamber and its Economic Development Alliance stand here tonight on behalf of our business community.

We all can agree that there is perhaps no greater resource than our water supply, and it's vital for our growing region to have clean and accessible water.

While we are sympathetic to the needs of the growing towns of Apex, Cary and Morrisville, we want everyone to understand we are growing and thriving as well. Our community is on the rise, and we expect to see exponential growth over the 30-year time period outlined in the request. We are diversifying our business climate and are seeing interest in our community grow more and more every day.

The transfer of such a large amount of water out of the Jordan Lake drainage basin is dangerous for that growth. Threatening the ability for this vital resource to replenish at adequate levels hurts everything we stand for as a growing community.

We want to see vibrant growth throughout our region. We want to see the towns of Apex, Cary and Morrisville have wild success that continues to paint a stronger picture for what it means to be a resident of Eastern North Carolina. But we can't have that picture leaving us out.

One of the alternative options outlines, alternative 3A, has strong merit when it comes to benefiting growth across all of our communities. While there would be additional up-front costs involved in setting up systems to put a larger percentage of the water back in the Cape Fear River, the importance of the end result benefit far outweighs the dollar signs attached.

There is an option here that benefits everyone. There is an option here that allows for growth across Apex, Cary, Morrisville, Wake County AND the greater Fayetteville region. As stewards of this vibrant, growing region, the Chamber and Alliance respectfully request that DENR exercise alternative 3A in the Environmental Assessment for the proposed interbasin transfer.

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**RESOLUTION TO OPPOSE THE
PROPOSED INTERBASIN TRANSFER CERTIFICATE MODIFICATION FOR THE TOWNS
OF APEX, CARY AND MORRISVILLE, AND WAKE COUNTY (FOR RTP SOUTH)
ALTERNATIVE 2A – INCREASE IBT TO MEET 2045 DEMANDS**

WHEREAS, The Cumberland County Mayor's Coalition feels the Interbasin Transfer (IBT) Certificate request submitted by the towns of Apex, Cary and Morrisville, and Wake County (for RTP South) is unnecessary and poses increased risks to the water supply of Cumberland County and other counties downstream; and

WHEREAS, the Cape Fear River is a tremendous resource to our community, providing our major source of water supply as well as affording many recreational opportunities for our citizens, and it is our responsibility to maintain the highest level of certainty for our future water supply; and

WHEREAS, based on modeling results, it has been determined that the minimum flows from the Cape Fear River at Lillington and Fayetteville will be reduced significantly in the future, even with no increase in IBT, making it critical that treated wastewater be returned to the Cape Fear River Basin; and

WHEREAS, the NC Wildlife Resources Commission has indicated concern that increased withdrawals from Jordan Lake could negatively impact fish populations in the Cape Fear River and therefore negatively impact the river's ecosystem; and

WHEREAS, current requests for water supply from Jordan Lake do not allow for any water to be held in reserve; which could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream; and

WHEREAS, the additional transfer will cause more than 50% percent of the water supply to be diverted away from the Jordan Lake drainage basin; which is not in compliance with NC Department of Environmental Resources (DENR) rules and could jeopardize replenishment of the lake; and

WHEREAS, a water use decision of this magnitude seems premature given that the Cape Fear River Water Supply Plan, being prepared by DENR to determine whether or not all water supply needs can be met throughout the entire Cape Fear River Basin, has not been finalized; and

WHEREAS, this transfer request is based on a 30-year planning period, which is excessive and would compromise our ability to meet changes due to regulations, statutes, customer demands, climate changes, and regional needs; and a shorter planning period of 15 years would be more prudent; and

NOW, THEREFORE, BE IT RESOLVED THAT:

The Cumberland County Mayor's Coalition recommends utilization of alternative 3A, as described in the Environmental Assessment for the proposed IBT. This option avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility. The Western Wake Partnership has the infrastructure in place to allow the return of treated wastewater to the Cape Fear River. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.

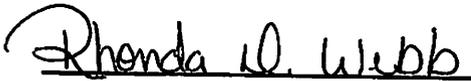
Adopted on this 6th of February, 2015 at Hope Mills, North Carolina.

**CUMBERLAND COUNTY
MAYOR'S COALITION**



Mayor Chris Rey, Chair

ATTEST:



Rhonda D. Webb, Secretary



**Comments for the Public Hearing for the Interbasin Transfer Certificate Modification for the Towns of
Apex, Cary and Morrisville, and Wake County (for RTP South)**

January 7, 2015

Good Evening,

My name is Elizabeth Rooks. I am Executive Vice President and COO of the Research Triangle Foundation, the owner and developer of the Research Triangle Park. I appreciate the opportunity to speak with you tonight about the importance of reliable water supply for the continued development of the Wake County portion of RTP. We opened that section of RTP in 1991. Since that date, 20 companies have located in the Wake County portion of RTP. These companies employ an estimated 12,757 people and have added \$1,517,719,529 in tax valuation to Wake County. We still have 570 acres of vacant, developable land for sale in Wake County. Furthermore, most of our existing Wake County companies still have significant expansion capacity on their campuses and many, in fact, have plans for expansion. However, long-range sustainable planning for water supply is crucial to retaining our existing companies, enabling their future expansion and attracting new companies to RTP. We believe the requested IBT certificate modification helps provide the assurance of reliable water supply.

The requested IBT certificate modification is consistent with:

- The Towns' and County's Round 4 Jordan Lake allocation applications;
- The Towns' and County's 2013 Long Range Water Resources Plan; and
- The Jordan Lake Partnership's 2014 Triangle Regional Water Supply Plan.

On behalf of the Research Triangle Foundation and the Wake County companies of RTP, I respectfully ask you to approve the requested IBT certificate modification.

Oral Statement of Deanna Rosario – Sustainable Sandhills

January 22, 2015 Fayetteville City Hall

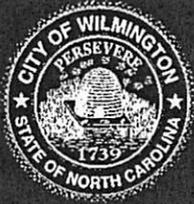
I am a recent graduate from the University of Maryland College through their military program as an environmental manager. One of my last papers that I wrote for school was on the Cape Fear River Basin. The Jordan Lake rules was the basis of my paper, what was going on upstream of Jordan Lake was affecting the lake itself. By extension since the Cape Fear River Basin is the only one in North Carolina that is totally in composed in North Carolina and directly into the Atlantic Ocean. It is a unique and fragile basin. It will take too much water out of it. It is not just going to be Fayetteville that's going to be stressing for water in 20 or 30 years. Its Elizabethtown, it's Wilmington, it's where you like to go out on your charter fishing boats and catch big fish. There is not going to be big fish if there is no place for them to spawn. The habitat along the Cape Fear River from where the Haw and the deep meet up to become Cape Fear all the way down to the port of Wilmington the ecosystem is going to be damaged if water is taken out. One thing that we really have to remember, when you borrow something, you give it back. As long as we get back what we borrow everybody can benefit. But, if you take it and you give it to your neighbor who ever was originally supposed to have it, where are they going to get theirs. Who are they going to borrow it from? There is nobody to borrow it from we can't take it from the reservoir that half of Cumberland County gets their water from. Raleigh, Wake, Cary, Apex, you can borrow our water, but please, please give it back. – End

OWASA Public Comments on IBT Certificate Modification Request for Towns of Cary, Apex, and Morrisville and Wake County (RTP South)

Presented by Ruth Rouse, Planning and Development Manager

- OWASA is public, non-profit agency which provides water, wastewater, and reclaimed water services to the Towns of Chapel Hill and Carrboro
- Our largest customers are UNC-CH and UNC Hospitals, important resources in the state
- OWASA is a member of the Jordan Lake Partnership (JLP)
- The JLP is a consortium of 13 local governments and water systems created in 2009 to plan for future water supply in the Triangle Region
- JLP - Collaborative process to identify future water needs through 2060 and regional solutions that are acceptable to all Partners while protecting downstream users
- Process
 - Demand projection – peer reviewed
 - Regional needs assessment – shortfall of existing sources
 - Triangle Regional Water Supply Plan (TRWSP) – identifies sources to meet future needs
- EA is consistent with TRWSP
 - Withdrawals from Jordan Lake are consistent
 - Demand projections are consistent – there are some minor differences; Cary used the same base demand projections for the EA, but did uncertainty analysis (Monte Carlo) on the projections which resulted in slightly different medians presented in the table. The differences between the projections included in the EA and TRWSP are minor and would not impact regional water supply
- Modeling completed by the JLP indicates that even under 2060 water demands, downstream water users needs will be protected.
- Finding is consistent with the modeling presented in the EA and with modeling completed by DWR presented at a meeting with local governments in August 2014

- Support the request from Cary, Apex, Morrisville, and Wake County to modify their IBT as outlined in the EA. This is consistent with the recommendations of the TRWSP and helps ensure OWASA's and other JLP members future water supply while protecting the needs of downstream users



Mayor and City Council

Mayor
Bill Saffo

Mayor Pro-Tem
Margaret E. Haynes

Council Members
Neil Anderson
Kevin O'Grady
Laura W. Padgett
Charlie Rivenbark
Earl Sheridan

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WILMINGTON
CITY OF
NORTH CAROLINA

February 2, 2015

The Honorable Donald R. van der Vaart
Secretary
NC Dept. of Environment and Natural Resources
1601 Mail Service Center
Raleigh, NC 27699-1601

Re: Proposed IBT Certificate Modification For The Towns of Apex, Cary, and Morrisville, and Wake County (For RTP South) Alternative 2A.

Dear Secretary van der Vaart:

We are writing regarding the Interbasin Transfer (IBT) Certificate request submitted by the Towns of Apex, Cary, and Morrisville, and Wake County. Specifically, we would like to express our concerns surrounding this request on behalf of the City of Wilmington. The Cape Fear River is a tremendous resource to our community, providing our major source of water supply as well as affording recreational opportunities for our citizens. The river is also the focal point of our region's history and a major attraction for tourists to our downtown.

While we understand the need for growing communities to provide safe and adequate sources of water to residents, we ask that you remain mindful of the impacts to those in the lower Cape Fear River basin. The NC Wildlife Resources Commission has previously indicated concern that increased withdrawals from Jordan Lake could negatively impact the downstream flow regimes and therefore negatively impact the Cape Fear River's ecosystem and its fisheries. The Cape Fear Public Utility Authority has projected that the maximum safe allocation from the river to serve our region will be reached within 25 years. CFPUA's projection does not account for increased upstream demands or upstream interbasin transfers, both of which apply to this request.

It is imperative for public health and safety, growth, and economic vitality to maintain the highest level of certainty for our future water resources in the Cape Fear River. This can be accomplished, in part, by stipulating that the applicants return the maximum amount practical of the treated wastewater to the Cape Fear River as a condition of the proposed transfer. We respectfully request that DENR work to limit any adverse impacts to the lower Cape Fear River basin through careful consideration of this, and any future, IBT submission.

Sincerely,

Bill Saffo

CC: Wilmington City Council
Wilmington City Manager



TRIANGLE J COUNCIL OF GOVERNMENTS

World Class Region

Oral Comments by Mike Schlegel

IBT Modification Request Public Hearing – Apex, NC – January 7, 2015

“Good evening. Thank you for the opportunity to speak briefly in support of the IBT certificate modification request by the Towns of Cary, Apex, and Morrisville and Wake County.

“My name is Mike Schlegel, and I am the Water Resources Program Manager at Triangle J Council of Governments. Triangle J is one of 16 Regional Councils in North Carolina, and we facilitate collaboration among local governments, stakeholders and partners, addressing issues that cross jurisdictional lines, such as water resources and transportation.

“In my role at TJCOG, I have been working with the Towns of Cary, Apex, and Morrisville and Wake County through the Jordan Lake Partnership since 2010 on regional water supply planning. The Jordan Lake Partnership is a consortium of 13 local governments and water systems in the Triangle that formed in 2009 to plan for sustainable and secure water supply in the Triangle Region, including the use of Jordan Lake.

“The Jordan Lake Partnership represents an unprecedented level of regional cooperation and collaboration around water supply planning. With support from Triangle J, the Partnership developed the award-winning Triangle Regional Water Supply Plan, which is an historic consensus on the current status and future water supply needs for the Triangle Region through 2060. This effort was the first-of-its-kind for the Triangle Region and included a thorough peer review of population and water demand projections. The Partners evaluated a wide range of potential options for meeting the future water supply needs in the region, and the Plan lays out a consensus-preferred regional alternative. The TRWSP was adopted by the governing boards of all 13 partners, and was recognized by the NC Chapter of the American Planning Association as a model of successful regional collaboration. The TRWSP provided for coordinated Jordan Lake Allocation requests and included significant modeling to ensure downstream communities would not be negatively impacted. Modeling results by the JLP, which were independently verified by DWR’s modeling team, indicate that there should be no impact to any downstream community’s ability to meet its own future water supply needs.

“The IBT modification request by the Towns of Cary, Apex, and Morrisville and Wake County is entirely consistent with the Triangle Regional Water Supply Plan, and I am pleased to offer these comments in **support** of the IBT modification request. I am happy to provide further information or answer any questions related to the Triangle Regional Water Supply Plan, and my contact information is available at TJCOG.org.

“Thank you for this opportunity to provide comment.”

Mike Schlegel, TJCOG Water Resources Program Manager
mschlegel@tjcog.org, (919) 295-0017

www.tjcog.org

919.549.0551

Fax: 919.549.9390



TRIANGLE J COUNCIL OF GOVERNMENTS

World Class Region

Oral Comments by Mike Schlegel

IBT Modification Request Public Hearing – Fayetteville, NC – January 22, 2015

“Good evening. Thank you for the opportunity to speak briefly in support of the IBT certificate modification request by the Towns of Cary, Apex, and Morrisville and Wake County.

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“Thank you for this opportunity to provide comment.”

Mike Schlegel, TJCOG Water Resources Program Manager
mschlegel@tjcog.org, (919) 295-0017

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919.549.0551
Fax: 919.549.9390

REMARKS FOR CARY TOWN MANAGER BEN SHIVAR FOR IBT CERTIFICATE PUBLIC HEARING

For Wednesday, January 22, 2015, in Fayetteville, NC

Rec'd at
being 1/22/15
AK

Good evening. I'm Cary Town Manager Ben Shivar. I want to thank the North Carolina Division of Water Resources for facilitating a comprehensive and inclusive process to ensure that the requested modification to the current interbasin transfer certificate does not adversely impact our state.

Not surprisingly, I am here to speak in favor of our requested modification to the current interbasin transfer certificate. This modification is necessary in order to be consistent with the 2013 changes to IBT law by the General Assembly, and to help ensure continued environmentally responsible and cost-effective resources management through 2045.

As you are aware, the 2013 changes to the IBT law require updating methodologies and assumptions, with IBT calculated as a daily average of a calendar month instead of as a maximum daily average. Our requested IBT certification modification, like our existing certificate, will be based on a 30-year planning period, which is consistent with the planning period for the Round Four Jordan Lake water supply allocation process.

Interbasin Transfer is not taken lightly in our state, nor should it be. There is extensive, rigorous scientific study and analysis that must be completed before such transfers are allowed.

In the matter being heard tonight, it is important to keep foremost in our minds that such an analysis by the North Carolina Division of Water Resources for 2060 shows that our requested IBT certificate modification will have no detrimental impact on Fayetteville or other downstream community's ability to meet their water supply needs.

As for alternatives to our requested IBT certificate modification, they are included in the Environmental Assessment, which I would like to briefly quote from:

"Alternative 2a appears to be the most appropriate alternative to meet the long-range water supply needs through the year 2045 for the Towns of Apex and Cary. Alternative 2a is the Towns' preferred alternative. The other alternatives present significantly greater technical, environmental, and/or economical challenges."

We agree with these findings and this conclusion.

Throughout the state, Cary is known as a leader in environmental management, with efforts that include: mandatory year-round water conservation, 100-foot stream buffers, reclaimed water, and stormwater management. Each of these programs either represents firsts in the state, firsts in the region, or award-winning efforts by the Town of Cary,

In my over 35 years of working in North Carolina local governments, I can say definitively and without hesitation that I know of no community that has done more than Cary when it comes to the careful, science-based stewardship of natural resources, and it is with this history and this culture that we come to you with this certificate modification request.

As a Manager, it is my job to ensure that Cary meets or exceeds all regulatory requirements, that we fulfill our obligations under the law, and that, overall, we do the right thing. And it is with this responsibility in mind that I reiterate our continuing commitment to effectively and efficiently serving the region and being good neighbors to those downstream.

Thank you for the opportunity to comment on this project and for the fair, full, and science-based consideration we know the agency will give to our request.



TOWN MANAGER'S OFFICE

February 4, 2015

Harold Brady
Division of Water Resources
1611 Mail Service Center
Raleigh, NC 27699-1611
Attn.: Evan Kane/NCDENR Hearing Officer

Ben Shivar, Town Manager
Town of Cary
PO Box 8005
Cary, NC 27512-8005

RE: Towns of Cary, Apex and Morrisville, and Wake County IBT Certificate Modification
Environmental Assessment Public Review Period Comments

Dear Mr. Kane:

As a representative of the lead agency in matters related to water supply and interbasin transfer (IBT) for our partners, the towns of Apex and Morrisville, and Wake County (for RTP South), I am submitting the following additional comments and clarifying information related to issues that have been raised concerning our IBT certificate modification request. Our consultant, CH2M HILL, will be submitting technical information separately, related to the potential impacts of future climate variability, as requested by Division of Water Resources staff.

Issue: Water Available to Support Fayetteville's Future Growth

The amount of Cape Fear River flow at the point of Fayetteville's water supply intake is on average 2,700 mgd, almost 40 times greater than the amount of water that Fayetteville Public Works Commission (PWC) projects it might need in 2045, and 35 times PWC's projected need in 2060.

- Hydrologic modeling results show that all downstream communities' water needs were met 100 percent of the time throughout the 80+ year period of climatological record simulated under both 2045 and 2060 projected demands provided to DWR by communities as part of their Local Water Supply Plans. This includes PWC's 2045 projected average need of 67 mgd (a 40-mgd increase over its 2013 use of 17 mgd) even during the simulated significant droughts of the 1930s, 1950s, and more recent droughts of 2002 and 2007.
- Hydrologic modeling conducted by the NC Division of Water Resources (DWR) for both Jordan Lake Water Supply Allocations and the Cape Fear

TOWN OF CARY

River Basin Water Supply Plan indicates that all downstream communities' projected 2060 water needs (provided by each community as part of its Local Water Supply Plan) would be met without fail, and without activating their Water Shortage Response Plans.

- The increase in IBT provided for in our IBT certificate modification request comprises only 0.4 percent of the Cape Fear River flow volume available to Fayetteville.
- About two-thirds of Jordan Lake's conservation storage is dedicated to supplementing downstream flows, twice as much as the remaining one-third of the conservation storage that is allocated by the state to local governments for water supply. The storage dedicated to downstream flows comes at no cost to any downstream users and maintains a target flow at Lillington of 388 mgd, which is eight times greater than the historic low flow.
- The Western Wake Regional Water Reclamation Facility (WWRWRF) currently returns 5 million gallons per day (mgd) of water to the Cape Fear River and is projected to increase to 13 mgd in 2045.

Issue: Schedule for Review of Documents Related to IBT Certification Modification

The review of our IBT certificate modification request has in no way been "fast-tracked," and both DWR and we have well exceeded the requirements established by the General Assembly in the IBT statute for providing public review opportunity.

- The General Assembly established the schedule for the review of environmental documents and IBT requests in General Statute §143-215.221.
 - DWR and we have met and exceeded all legal requirements for State and Federal resource agency and public review and comment for the environmental assessment prepared for our IBT Certificate modification request.
 - DWR held a second public hearing in Fayetteville, which was in addition to the public hearing required by statute.
 - DWR provided 50 days of review between when the EA was published on their website and the comment period deadline (a minimum of 30 days is required by statute).
- Based on PWC's strong interest in our IBT in the past, we requested PWC input on technical analysis early during EA development; no input was provided.
 - A conference call was conducted on April 23, 2014, with a PWC official) and PWC's engineering consultant to discuss hydrologic modeling of the requested IBT and review preliminary results.
 - The draft technical memorandum (TM) summarizing hydrologic modeling of the requested IBT was provided to PWC on June 19, 2014.
- Between April and August 2014 (when the draft EA was submitted to DWR) PWC was contacted several times via email, phone and when the opportunity was available, in person, to see if PWC had questions or comments on the TM; no input was provided.

Issue: Downstream Communities' Preference for Alternative 3a

The NC Division of Water Resources has issued a Finding of No Significant Impact (FONSI), stating that it selected the preferred alternative (Alternative 2a) because it meets the demonstrated water supply needs while minimizing any potential impacts resulting from the IBT. Alternative 3a would have negative environmental impacts greater than the preferred alternative.

- We have completed a comprehensive review of water supply alternatives documented in the environmental assessment for our IBT certificate modification request and our Long Range Water Resources Plan.
- We all rely upon Jordan Lake as our sole source of raw water supply, and a Jordan Lake water supply storage allocation for the Towns of Cary, Apex and Morrisville, and Wake County will have the least cost and fewest negative impacts among all water supply alternatives.
- Alternative 3a has a greater cost than the preferred alternative associated with additional infrastructure to pump and convey wastewater, early expansion of the WWRWRF, and abandoned treatment capacity in the Neuse River Basin. Our customers and rate payers already support a substantial investment in infrastructure.
- Alternative 3a would have significantly greater negative environmental impacts caused by construction of additional infrastructure, and thereafter for the production of the increased energy used during operation.
- Alternative 3a would not provide any significant benefit to downstream water users, increasing the average flow at PWC's intake by only 0.4 percent.

Issue: Collaboration with Downstream Users

As members of the Jordan Lake Partnership, we have invited and supported collaboration in water supply planning with PWC and other downstream water suppliers.

- The Jordan Lake Partnership (Partnership) includes the Towns of Cary, Apex and Morrisville, and Wake County (all founding members) along with the towns of Hillsborough, Holly Springs and Pittsboro, the cities of Durham, Raleigh and Sanford, Chatham County, Orange County, and Orange Water & Sewer Authority, and is committed to working collaboratively to enhance the sustainability and security of the region's water supply resources without compromising the ability of any downstream community in meeting its own water needs.
- Representatives of the Partnership met with City of Fayetteville and PWC officials on February 26, 2009, to discuss any concerns they might have with water supply.
- The Partnership sent a letter in support of the City of Fayetteville's and PWC's concerns about the state's Cape Fear River Hydrologic Model to DWR on April 21, 2009.
- The Partnership sent a letter in support of the City of Fayetteville's and PWC's concerns about the Jordan Lake Drought Contingency Plan to the US Army Corps of Engineers on April 21, 2009.

- The Partnership invited the City of Sanford, Harnett County, and PWC to join its membership in June 2009. Sanford joined the Partnership.
- The Partnership has kept PWC officials informed and invited their attendance at technical review meetings at various stages throughout its water supply planning efforts since 2009.

Issue: Planning Period Length

The 30-year planning period used by the NC Division of Water Resources and NC Environmental Management Commission in actions related to water supply and IBT is not only required by statute and rule, but is prudent.

- The 30-year planning period is required by the IBT General Statute §143-215.221 and is specified in the Jordan Lake water supply storage allocation rule (15A NCAC 2G.0500).
- Uncertainty related to future water supply needs and the decades required to develop water supply sources support using a 30-year planning period.
- DWR and the Environmental Management Commission (EMC) require public water suppliers to develop local, 50-year water supply plans and use that information to develop basinwide water supply plans. DWR and the EMC make their IBT and water supply decisions in a 50-year, basinwide context.

Issue: Water Available for Instream Flow Needs

The NC Division of Water Resources has issued a Finding of No Significant Impact (FONSI), stating that our requested IBT certificate modification will not have a significant adverse effect on the quality of the environment, which includes the flows needed for spawning anadromous fish.

- The hydrologic modeling results for the 2045 conditions presented in the environmental assessment for our IBT certificate modification request indicated that the increase in IBT will not significantly affect Jordan Lake or downstream flows. Specifically, it was determined that the increase in IBT will not affect the Jordan Lake storage dedicated to downstream flows and will not affect releases from the Lake even during periods of drought.
- Our requested IBT certificate modification will not affect how the US Army Corps of Engineers operates Jordan Lake. Releases from Jordan Lake are subject to the US Army Corp of Engineers' management, including the target flows at the Lillington USGS gage that help protect in-stream aquatic habitat and supplement flows available for downstream water needs.

Issue: Jordan Lake Rules

The towns of Apex, Cary, and Morrisville have proactively implemented Jordan Lake nutrient management strategies in their jurisdictions, including nonpoint source stormwater runoff rules consistent with those delayed by the state.

- The Towns have implemented all existing requirements to help protect the quality of Jordan Lake, and our requested IBT certificate modification does not alter this commitment.

- The requested IBT increase has no effect on the water quality of Jordan Lake or of downstream waters.

Issue: Cape Fear River Water Quality Concerns

Our requested IBT certificate modification will have no significant impact on the assimilative capacity for nutrients or other pollutants of the Cape Fear River.

- The increase in IBT in our IBT certificate modification request comprises less than three percent of the Cape Fear River's low flow (7Q10) at Lillington.
- The hydrologic modeling results for the 2045 conditions presented in the environmental assessment for our IBT certificate modification request indicated that the increase in IBT will not significantly affect Jordan Lake or downstream flows.
- The water currently being returned by the towns to the Cape Fear River through the WWRWRF is subject to and consistently meets some of the most stringent treatment requirements in North Carolina.
- WWRWRF treatment requirements include nutrient limits more stringent than those required of other discharges in the river basin downstream of Jordan Lake.

Issue: 2001 IBT Certificate Compliance

We have always been in compliance with our 2001 IBT certificate, including the required return of water to the Cape Fear River basin after 2010.

- Cary diverted wastewater to the Durham County Triangle WWTP beginning in 2006 as a means of returning water to the Cape Fear River basin (not required until 2011) until the permitting and construction of the Western Wake Regional Wastewater Management Facilities were completed.
- The WWRWRF began operation in August 2014, and Cary continued to pay Durham County to treat some of its wastewater at the Triangle WWTP through December 2014.
- We have submitted annual IBT compliance and monitoring reports to DWR since 2001 and these annual reports can be found on DWR's website: [http://www.ncwater.org/Permits and Registration/Interbasin Transfer/index.php?tabid=1&subtabid=1](http://www.ncwater.org/Permits_and_Registration/Interbasin_Transfer/index.php?tabid=1&subtabid=1)

Issue: Water Resources Management Efforts

We have invested over \$20 million in water conservation and in reclaimed water infrastructure to date and remain committed to the sound water resources management practices that benefit our rate-payers as well as all Jordan Lake and downstream Cape Fear River water users.

- We have a long history of effectively managing water resources and ensuring a safe and reliable water supply.
- The thoughtful planning and implementation of a water conservation program, starting in 1996, and constructing the first reclaimed water distribution system in the State starting in 2001 have benefits well beyond the communities

served by the Applicants, including benefits to the communities downstream of Jordan Lake.

- The towns of Cary and Apex's Water Shortage Response Plans protect the yield of the Jordan Lake water supply pool. During times of drought or water shortage, the Towns restrict the amount of water their customers may use.

Issue: Diversion of Allocations from Jordan Lake Watershed

The 50 percent watershed diversion limit for Jordan Lake allocations is not relevant to our requested IBT certificate modification.

- The 50 percent watershed diversion limit applies to Jordan Lake allocations and is being reviewed in that context as the process for Jordan Lake water supply storage allocation continues.
- The rule governing the Allocation of Jordan Lake Water Supply Storage (15A NCAC 2G.0500) limits the transfer of 50 percent of the total water supply pool yield out of the Jordan Lake watershed but also states the EMC may review and revise this limit based on experience in managing the lake.
- The 50 percent limit would not be exceeded if the EMC were to deny or delay Raleigh's requested Jordan Lake allocation.
- Analyses completed by DWR indicate that the 50 percent diversion rule may not be necessary as a factor of safety for protecting the water supply pool's yield. The current reliability of the water supply pool well exceeds the reliability calculated when the rule was written 27 years ago.

Issue: Raleigh's Requested Jordan Lake Allocation

The City of Raleigh's requested Jordan Lake allocation is not relevant to our requested IBT certificate modification.

- The City of Raleigh's requested Jordan Lake water supply storage allocation, if it were granted by the EMC, would have no impact on flows downstream of Lillington, as its proposal includes withdrawal from the Cape Fear River near the Harnett County water intake and return of the water near Lillington.
- The City of Raleigh's request for a Jordan Lake water supply storage allocation is being reviewed in that context as the process for Jordan Lake water supply storage allocation continues.

Issue: Jordan Lake Water Supply Allocation Requests in Total

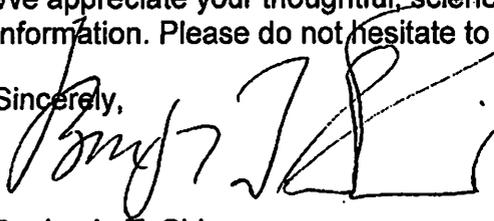
The Jordan Lake allocations requested by local governments other than the towns of Apex, Cary, and Morrisville are not relevant to our requested IBT certificate modification.

- Current requests to DWR for Jordan Lake water supply storage allocations equal a total of 96 percent of the water supply pool volume based on 2045 projected needs.
- The EMC will determine which requests will be granted and the ultimate use of the Jordan Lake water supply pool, but the total volume of Jordan Lake assigned to water supply was determined by the US Congress.

- The US Congress determined that 1/3 of the storage volume of the conservation pool would be dedicated for water supply and 2/3 for downstream water needs (the water quality pool).
- Regardless of the EMC's water supply storage allocation decision, Jordan Lake will continue to meet all of its Congressionally authorized purposes, including maintaining releases from the water quality pool to support downstream flows.

We appreciate your thoughtful, science-based consideration of this additional information. Please do not hesitate to contact the Town should you have questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Benjamin T. Shivar". The signature is written in a cursive style with a large, prominent initial "B".

Benjamin T. Shivar,
Town Manager

cc: Bruce Radford, Town of Apex
Martha Wheelock, Town of Morrisville
Jim Hartmann, Wake County

Oral Statement of Rudolph Singleton, Citizen

January 22, 2015 Fayetteville City Hall

My name is Rudolph Singleton, and by way of identity I would share with you the visible group notice the Department of Water Resources, the back ground and why we're here. There have been 108 floods in Cumberland County from the Cape Fear River and in 1970 the Corp of Engineers wanted to build a dam originally referred to as the New Hope Dam, but it became the Jordan Dam. Because of flood control, Cumberland County and Fayetteville, and the other six downstream communities and with particularity the Cape Fear Water and Sewer Authority from New Hanover gathered together and I was a litigation attorney for Fayetteville and Cumberland County from 1970 to 1976 when secured the Jordan Dam. While we sited the benefits of the Jordan Dam in litigation as flood control, we also sited salt water intrusion, recreation and water supply, but water supply was a minor thing. As the communities up stream, the very communities which had oppose this, primarily Chapel Hill, they've joined in as intervenes and opposition to it. Durham joined in because they did not want to increase their sanitary systems. In any event in 1990 Cary, Apex by that time had built a water and sewer treatment plant that would handle 50 million gallons per day which was an incredible amount. It was approved by DWR and relying upon the DWR as its staff. Of course the Environmental Management Commission did not have an opportunity to review all the stuff just like the legislature and congress didn't have the opportunity to read all about the health care act with 2700 pages on the thing so it was in effect rubber stamped. We were then sent a litigation team here to Raleigh before an administrative law judge and his finding was that it was not arbitrary and capricious although he said it may have been wrong, he said it was not arbitrary and it was not in bad faith. So we got the first inter basin transfer approved of 15 million gallons per day. There have been other IBT's in NC but none had been approved, that was in 1990 and in some other time, probably in about 2000 they gave another 9,000 which is the 24,000 that we have now. Now they are coming back and they want 9 more 1000 and this has increased from Cary and Apex to Raleigh which gets the water from them and from Morrisville which has sprung up like a mushroom near the airport. In the thousands of years that have come by people have always followed water. Water has not followed people. But what we have here is a taking of more than half or a proposed taking for more than half of water from the Cape Fear River Basin and using it. We have no opposition at all to our friends to the north who are more populous, unfortunately more wealthy, and unfortunately more influential in getting this. But, it looks like upon coming here was the recommendation, and we hate like the dickens to have to go back and wait for the Environmental Management Commission to say it must be so because the staff has found it and we go to the administrative judge and have a judge say it's wrong again but it's not arbitrary and capricious. There is in effect the capacity for Cary and Apex to return water to the system. What it's about is money. It cost money to return the water. Now it's not really actually our water, but we feel like it is our water because if it were not for us, you probably would not have had that water up there. – End

From: [Sustainable Sandhills](#)
To: [Brady, Harold M.](#)
Subject: re: public comments, IBT
Date: Friday, February 06, 2015 1:03:41 PM

Mr. Brady,

Sustainable Sandhills has some questions about the notes inaccessibility of the Environmental Assessment document, specifically, lack of page numbers on Table of Contents. We were not provided with a copy of the Environmental Assessment at the Fayetteville Public Hearing on 1/22/15. Our ability to respond to the Environmental Assessment was compromised by the release date in mid-December where holidays did not allow adequate review prior to the bitter end of the Public Comment period.

Sustainable Sandhills cannot endorse the IBT permit request unless the 3A provision is enforced in the permit. Not only are we seriously concerned that the lack of environmental assessment south of Lillington but that the increased use of water supply coupled with effects of climate change on Jordan Lake tributaries with actively harm the souce basin.

Section 2.2: The 30 year water usage timeframe for this permit request is ridiculous and cannot be accepted by downstream communities as the data involved in water supply projects fails to address serious increased usage in both upstream and downstream communities. The 2045 projection on water use does not include impacts of water intensive industries (hydraulic fracturing, animal processing, and brewing) in Lee County and Harnett Counties or additional industrial development in downstream communities located in Cumberland, Harnett, and Robeson Counties.

Future water projections have not factored downstream needs.

PWC is projecting that by 2022 water demand for their service area will avg 46 mgd. Fayetteville will draw 28 mgd per day directly from the Cape Fear River. PWC has not yet completed projections through 2045 for daily avg usage.

Section 1.1.1: Water Supply

39 mgd allocated for Cary/Apex/Morrisville/RTP and parts of Airport

18 mgd operationable ability of Western Wake Regional Water Reclamation Facility

Section 1.1.2 and Section 1.1.3:

46 mgd ability to treat wastewater includes North Cary WFF, South Cary WRF, Apex WRF, and WWRWRF

PWC and Wilmington utility information:

87 mgd in water usage for combined communities, Fayetteville & Wilmington

63 mgd from Cape Fear River usage for combined communities, Fayetteville & Wilmington

24 mgd from alternative sources including Glenville Lake (18 mgd) and ground water, Fayetteville & Wilmington
These numbers do not include water usage in Lumberton and other downstream communities.

We object to the lack of micro-climate shift data in water usage projections for this IBT permit request. This is a serious omission in regional forecasting for the continued capacity for Jordan Lake.

Section 4.6: US Geological Survey 2006 Land Cover Database uses pre-2011 data and fails to provide modeling for changes in land use, including increased runoff as a result of development and intensive farming, and subsequent higher nutrient levels in the downstream Cape Fear River.

Section 4.8: Cape Fear River is an endangered ecosystem and the impacts on the anadromous fish populations along with their habitat are adequately assessed in the context of active fish run remediation efforts and potential removal of downstream dams.

Sustainable Sandhills would like the timeframe of the IBT permit reduced to 15 years and request a fair return of treated wastewater to replenish downstream flows with option 3A under this IBT permit request. We have serious concerns about the continued health, vitality, and sustainability of water supply from the Jordan Lake if forecasting and micro-climate data are not factually represented in long-term projections. There is not enough current and solid future projection data to support the viability of option 2 or a 30 year IBT permit.

Sincerely,
Sustainable Sandhills

Sustainable Sandhills
351 Wagoner Drive, Suite 333
Fayetteville NC 28303
910-484-9098

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Sustainable Sandhills
P.O. Box 144 | Fayetteville, NC | 28302
(910) 484-9098

IBT Public Hearing Remarks

Good evening, and welcome to Apex. On behalf of the Apex Town Council and staff, I'd like to thank you for your time here tonight. I appreciate the opportunity to speak to the North Carolina Division of Water Resources in favor of the modification to our Interbasin Transfer Certificate.

I have been involved with our IBT certificate process during many phases, first as the Apex Town Manager. During that time Apex was experiencing tremendous growth, and the initial certificate was vital to providing adequate water supply to support that growth.

Now serving as Mayor of Apex, it is again my responsibility to ensure that our residents have access to adequate water in an efficient, environmentally sound manner.

For decades, the towns of Apex, Cary and Morrisville have partnered for projects with highly successful results. The most recent example of this is the opening of the Western Wake Regional Wastewater Management Facility, a project that demonstrates our commitment to maintaining compliance with the current IBT certificate.

Again, the towns have come together with a solution to meet changing laws and growing demand. This solution is presented to you as the modification of our current IBT certificate.

The modification will allow compliance with the recently amended state law governing the issuance of an IBT certificate. The revised permitted transfer will be calculated on an average day withdrawal for a calendar month. Previously it was calculated on a maximum day transfer. It will also include the consumptive use of an area in Apex that is in the Cape Fear River sub-basin. This area was not included in the original 2001 certificate.

The revised certificate will also address the projected future water needs of the towns through the year 2045, by increasing the transfer from the original 24 MGD based on the maximum day of a given month, to 33 MGD based on the daily average for any given month.

We recognize that water does not stop and start with our sources, and that our actions can impact those downstream. But we know from extensive modeling of the Cape Fear River that the modified IBT Certificate would have no significant impact on the safety and sufficiency of our neighbors' water supplies.

Again, we thank you for your time, and for your consideration of this request.

**COMMENTS OF TOWN OF MORRISVILLE ON REQUESTED *INTERBASIN TRANSFER*
*CERTIFICATE MODIFICATION***

Submitted by: MORRISVILLE CHAMBER OF COMMERCE

To: North Carolina Department of Environment and Natural Resources (NCDENR)

Public Hearing January 7, 2015

Town of Apex

Offered by CHAMBER OF COMMERCE PRESIDENT CARLOTTA UNGARO

Request: Interbasin Transfer Certificate Modification for the Towns of Apex, Cary, and Morrisville, and Wake County (RTP South)

- Thank you for the opportunity to speak on behalf of the 350 members of the Morrisville Chamber in regards to the modification request to the Interbasin Transfer Certificate for the Towns of Apex, Cary and Morrisville, and Wake County for RTP South.
- We are fortunate in Morrisville to be blessed by a great geography and proximity to tremendous facilities and institutions – Research Triangle Park, a number of major educational institutions, RDU International Airport, major interstate highways, North Carolina Railroad - all of which have attracted a very talented population and workforce, and fueled a very healthy local and regional economy.
- Morrisville is an important cog in the bustling Triangle economic engine; but to keep Morrisville and the region growing, we need to manage our resources wisely. Water is a critical resource for the Town of Morrisville; we cannot take it for granted.

- As recently as 2000, Morrisville's population hovered around 2,500. Today we are roughly 25,000. A key reason for this growth was the 2006 merger of the Town's utility system with the Town of Cary. The merger resolved water and treatment capacity issues in Morrisville and removed the uncertainty related to the ability of the Town to provide basic water and sanitary sewer services to new business and residents to Morrisville.
- The Town of Cary and the other members of the Jordan Lake Partnership have done significant due diligence in preparing the 2014 Triangle Regional Water Supply Plan which includes the requested IBT Certificate modification. Long-term environmental stewardship and sensitivity to downstream users have been addressed along with financial and fiscal responsibility.
- DENR Division of Water Resources has also stated that through the year 2060, the requested IBT certificate modification will have no detrimental impact on any downstream communities' abilities to meet their water supply needs.
- Cary, Apex, Morrisville, and Wake County have acted to minimize future IBT requests and maintain compliance with the current IBT certificate.
- The Morrisville Chamber of Commerce supports the efforts of the Partnership to work collaboratively on regional water supply planning. Again, the certainty and predictability will benefit the development community and private sector over the coming years.
- The IBT Certificate Modification is essential for Morrisville *to continue supporting the economic health and vitality our town, and the Morrisville Chamber urges the State to approve the request.*
- Thank you for your attention.



Interbasin Transfers

The Morrisville Chamber uses three guiding principles in setting its legislative agenda.

- *Maintain and grow opportunities for Morrisville businesses*
- *Reduce the cost of doing business*
- *Manage growth and support infrastructure improvements so that the marketability of the area is maintained and improved*

Issue

Water is a critical resource for the Town of Morrisville. As recently as 2000, Morrisville's population was approximately 2,500 and today we are roughly 25,000. A key catalyst for growth was the 2006 merger of the Town's utility system with the Town of Cary. The merger resolved key water and treatment capacity issues in Morrisville, and removed the uncertainty related to the ability of the Town to provide basic water and sanitary sewer services to new residential and business customers.

The Town of Cary and the other members of the Jordan Lake Partnership have done their due diligence in preparing the 2014 Triangle Regional Water Supply Plan which includes the requested IBT Certificate modification. Long-term environmental stewardship and sensitivity to downstream users have been addressed along with financial and fiscal responsibility,

The analysis performed by DENR Division of Water Resources through the year 2060 shows that the requested IBT certificate modification will have no detrimental impact on any downstream communities' abilities to meet their water supply needs. Cary, Apex, Morrisville, and Wake County have acted to minimize future IBT requests and maintain compliance with the current IBT certificate

One of the key benchmarks of the Morrisville Chamber's legislative policy is "to manage growth and support infrastructure improvements so that the marketability of the area is maintained and improved." Access to water is a key part of infrastructure. The IBT Certificate Modification is essential for Morrisville to continue supporting the economic health and vitality our town, and the Morrisville Chamber urges the State to approve the request.

Positions/Recommendations

Support Town of Cary's request for an increase in interbasin transfers which addresses water supply in Cary, Morrisville, Apex and the Wake County portion of RTP.

From: BOERGIRL@aol.com
To: [Rep. Tim Moore](#); [President Pro Tem Phil Berger](#); [Rep. Paul Stam](#)
Cc: homebull@aol.com; [Brady, Harold M.](#); boergirl@aol.com; mlallier@reedlallier.com; mick.noland@faypwc.com; steve.blanchard@pwc.com
Subject: Re: Response to Concerns about Interbasin Transfer from Cape Fear to Neuse/Wa...
Date: Wednesday, February 04, 2015 6:33:03 PM

Response to Proposed Interbasin Transfer on FWPC Service Area

The proposed request from Wake County and the towns of Apex, Cary and Morrisville to increase an additional 9MGD out of the Cape Fear River Basin into the Neuse River Basin is an ill conceived "band aid" for lack of good planning by local officials and is one that jeopardizes the health, agriculture, drinking water and economies of all residents in the Cape Fear Basin.

As the former owner of a 6000 acre farm in southern Cumberland County I watched the farm aquifers fall 12 feet in 15 years from drought and water requirements from the nearby Smithfield Processing plant in Tarheel, NC. This falling aquifer has been experienced throughout the Cape Fear Basin and has forced municipal utilities, agriculture and companies to increasingly rely on water supply from the Cape Fear River.

The growth of Ft. Bragg has impacted the water requirements of smaller communities such as Spring Lake and Lillington and has, as a result, put pressure on available water resources and river volumes. In addition, recent reports of high level levels of 1.4 dioxanes, pollutants and other nutrients would amplify the toxicity in river water with further diversion of water volume.

Apparently there has been no reliable comprehensive study (or it is not available) of nutrient levels in the Cape Fear River downstream from the proposed transfer site to Wilmington, NC. **The concern over nutrient levels coupled with the lack of solid scientific data of the river water should, in itself, be enough to stop this proposal until proper due diligence and alternative solutions are completed.** Certainly if proper procedure and critical review is not followed an injunction should be sought by communities belonging to the Cape Fear Assembly.

-

The rapid development of the upstream communities should have and still requires careful planning. Reservoirs, filter plants and local environmental investment that support their populations need to be considered---alternatives that are not *at the expense* of downstream communities who are also coping with their own water issues. The proposed IBT for the FPWC Service Area should be denied.

Sharon Valentine
512 Dandridge Dr.

Fayetteville, NC



RECEIVED
FEB 09 2015
DIVISION OF WATER RESOURCES

City Of Raleigh

NORTH CAROLINA

February 5, 2015

Harold Brady,
Division of Water Resources
1611 Mail Service Center,
Raleigh, NC 27699

Subject: Inter Basin Transfer Certificate modification for the Towns of Cary, Apex and Morrisville

Dear Mr. Brady,

In keeping with the Raleigh City Council's *Resolution Supporting the Jordan Lake Partnership and the Triangle Regional Water Supply Plan* (November 5, 2014) and in response to the request for comments regarding the proposed Inter Basin Transfer (IBT) Certificate modification for the Towns of Cary, Apex and Morrisville, the City of Raleigh would like to express support for the increase and modification, as detailed in the Triangle Regional Water Supply Plan (TRWSP).

The City believes the increased transfer, itself a very small fraction of the flows in the Cape Fear River, will not negatively impact the ecological aspects of the Haw River basin, nor will it negatively impact other potable water providers in the Haw River basin. This conclusion is fully supported by the modeling work conducted by the Division of Water Resources in their analysis of the request.

The Towns of Cary, Apex and Morrisville have been key participants in the Jordan Lake Partnership, which produced the TRWSP; this regional stakeholder process has made great strides towards identifying the future drinking water resource needs for all Triangle area communities. Through this group's work, the proposed increased transfer from the Haw River basin to the Neuse River basin was identified as a critical element required to meet the long-term water supply needs for the Triangle region.

It should also be noted the Town of Cary has established a strong environmental stewardship record as demonstrated in their Secondary and Cumulative Impact Management Plan and successful water

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Raleigh, North Carolina 27601

conservation programs. Thus it is clear additional water supply requests are seriously considered and represent a legitimate future need.

We thank the staff of the Division of Water Resources for their stewardship of our environmental resources and for their reasonable and practical approach to the question of IBTs. We encourage the North Carolina Environmental Management Commission to approve this IBT Certificate modification, which will have de minimis impact on the source basin, in the same spirit of reasonable and practical stewardship.

Respectfully,



Kenneth R. Waldroup
Assistant Public Utilities Director

CC: Tansy Hayward, Assistant City Manager
John Robert Carman, Public Utilities Director
Whit Wheeler, Assistant Public Utilities Director
Daniel F. McLawhorn, Associate City Attorney

erb/krw

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Raleigh, North Carolina 27601

REMARKS FOR IBT CERTIFICATE PUBLIC HEARING FOR MAYOR WEINBRECHT

*For Wednesday, January 7, 2015. Arrive by 6:15 p.m. and be sure to register to speak; guests speak in which the order they are registered. Apex Public Works, 105-B Upchurch Street, Apex. Business attire. Report to Sydney Miller, (919) 627-0360, who will meet you in the lower entrance of the building. **At this time, only other known speakers are Apex Town Manager*

Good evening. I'm Cary Mayor Harold Weinbrecht, and on behalf of the Cary Town Council and the more than 150,000 people who call Cary home, I want to thank the North Carolina Division of Water Resources for facilitating a comprehensive and inclusive process to ensure that the requested modification to the current interbasin transfer certificate does not adversely impact our region's environment.

I am pleased to be commenting in favor of our requested modification to the current interbasin transfer certificate. This modification is necessary in order to be consistent with the 2013 changes to IBT law by the General Assembly, and to ensure environmentally responsible and cost-effective water resources management through 2045.

The 2013 changes to the IBT law require updating methodologies and assumptions, with IBT calculated as a daily average of a calendar month instead of as a maximum daily average. The requested IBT certificate modification, like the existing certificate, will be based on a 30-year planning period, which is consistent with the planning period for the Round Four Jordan Lake water supply allocation process currently underway. Additionally, the requested IBT certificate modification is consistent with Cary and Wake County's 2013 Long Range Water Resources Plan and the Jordan Lake Partnership's 2014 Triangle Regional Water Supply Plan.

I am happy to report that analysis performed by the North Carolina Division of Water Resources for 2060 shows that the requested IBT certificate modification will have no detrimental impact on any downstream communities' ability to meet their water supply needs.

In addition to Cary's long history of meeting or exceeding utility regulatory requirements, we've joined Apex, Morrisville and Wake County to aggressively minimize future interbasin transfer needs and maintain compliance with the current certificate. In November, these municipalities jointly opened the Western Wake Regional Wastewater Management Facilities, a \$300 million system of wastewater pump stations with a water reclamation facility to return clean, high-quality wastewater to the Cape Fear basin. This was one of the largest, most successful public works projects in the recent history of our state, and we are very proud of our work and the results.

Throughout the state, Cary is known as a leader in environmental management, with efforts that include: curbside recycling, computer recycling, urban stream restoration, partnership for safe drinking water, mandatory year-round water conservation, 100-foot stream buffers, reclaimed water, sedimentation control, stormwater management, biosolids drying, and tree preservation. Each of these programs either represents firsts in the state, firsts in the region, or award-winning efforts by the Town of Cary, and it is with this history and this culture that we come to you with this certificate modification request.

We are committed to effectively and efficiently serving the region and being good neighbors to those downstream. As Mayor, I give my personal pledge that our organization will continue to be good stewards of our finite natural resources.

In closing, we appreciate being given the opportunity to comment on this project and the fair, full, and science-based consideration we know the agency will give to our request. Thank you.

Cary, Apex, Morrisville and Wake County Interbasin Transfer Certification Modification Request to the Environmental Management Commission

Public Hearing January 7, 2015

Apex Town Hall

Members of the Environmental Management Commission, Hearing Officers, thank you for allowing me the opportunity to speak. My name is Vicki Westbrook and this evening, I am speaking on behalf of the City of Durham in my role as Assistant Director of the Department of Water Management and as representative of the Lead Agency for the Jordan Lake Partnership.

The City of Durham Department of Water Management has collaborated with the Town of Cary and its partners on numerous planning projects over the last two plus decades. For several years, Durham provided approximately between 4 and 5 million gallons of water per day to Cary while the Cary/Apex Treatment facility was expanded to its current capacity. Now, Durham's only access to our current 10% allocation of the water supply pool of Jordan Lake is through interconnections with the Town of Cary. During the historic drought of 2007-2008, Durham relied heavily on its mutual aid agreement with the Town of Cary to provide treated drinking water – from our Jordan Lake allocation – to Durham's customers. This access helped Durham survive until the welcome rains finally came to replenish our main water sources – Lake Michie and Little River in the Neuse Basin.

That experience only heightened the collaboration between Cary, Apex, Morrisville and Wake County and was one of the integral forces behind the development of the Jordan Lake Regional Water Supply Partnership - also known as the Jordan Lake Partnership or JLP. The JLP has now grown to include thirteen (13) entities in the Triangle Region in the Neuse and Cape Fear River basins. The Partnership's stated purpose is to "work collaboratively to enhance the sustainability and security of the region's water supply resources through conservation and efficiency, interconnection, and coordinated planning and development of the Jordan Lake water supply." It is also important to note that the JLP committed to work cooperatively with constituent organizations, jurisdictions and water suppliers up and down stream, and with state and federal regulators to create environmentally sustainable, secure and mutually beneficial water supply strategies for the Triangle Region.

The results of this successful alliance – Phases 1 and 2 of the Triangle Regional Water Supply Plan – are referenced in the Environmental Assessment for the Cary/Apex/Morrisville/Wake County Interbasin Transfer Certificate Modification (EA) developed by CH2MHill. The EA presents technical, peer reviewed data in the sections related to population and demand projections. Based on Durham staff review of the EA and our knowledge of the extensive planning efforts conducted by Cary, Apex, Morrisville and Wake County through the Jordan Lake Partnership, we concur with the Department of Environmental and Natural Resources, Division of Water Resources Finding of No Significant Impact (FONSI) for this Interbasin transfer modification.

Oral Statement of Candace Williams – citizen

January 22, 2015 Fayetteville City Hall

Hello, I'm Candace Williams, I hadn't planned on speaking tonight but when I got here and I looked around the room and I didn't see as many citizens I would like to see here tonight I felt that as a citizen I should speak on behalf of my community. I do have experience with the Cape Fear River, I was a former executive director of the Sand hills area land trust here and for 13 years worked diligently in conserving over 15 miles, consecutive miles along the Cape Fear River so that our drinking water will be protected in perpetuity. So, it's very near and dear to my heart. My family also has a farm on the Cape Fear so I'm very familiar with its fluctuations and the dynamic forces of that river. I'm very proud to say I am a native of Fayetteville, so there again it is very near and dear. When I read in the paper today about this public hearing I was so shocked that this even up for discussion, I can go on record and say I am not in favor of this transfer because I have lived in many parts of this country and in almost all of the places I have lived this is an illegal practice, it is unheard of to do. But, North Carolina does do these inter basin transfers, and so here we are. I would like to point out first of all that 90% of our drinking supply water comes from the Cape Fear River for community and we take great pride in the fact that we put it back in to the river much cleaner than we even get it. So, that's a feather in Fayetteville's cap with PWS and I'm very grateful for the work that they do there. Whether you believe in climate change or global warming or whatever, we're all familiar with droughts and I'm very familiar having been a wildlife biologist for many, many years and having even worked for the wildlife commission here. The models are theoretical, I don't put a lot of faith in them, I think they are wonderful to have, it certainly gives you food for thought and it brings people to the table for discussion. Statistics, I have done them, I have altered them to suit whatever needed to be done with arguments, so I'm sorry to say I cannot put a lot of faith in the models. We do not know what is going to happen down the road, we cannot foresee what droughts or what conditions we will have, I know that I have known a number of droughts here and I have seen the water levels get to the point where I was concerned, we did have the algae blooms, we did have the fish kills, it's very evident, those are the things happen. I was very concerned in 2001 when it was agreed upon to transfer this water, but the only glimmer of hope we had was the promise that within 10 years that water would be returned back into the Cape Fear. I have yet to see that, and if it took 13 or 14 years for that to happen heaven help us as to what this next draw down and the impacts of it and would we ever see another drop. I think we have bound the hands of future generations by even considering this, that's just my personal opinion. That's the wonderful part about being a private citizen, I can say what I want and I don't have to represent any organization. I'd like to hear what benefit this would have to our community, I do not see it. I cannot imagine what the benefit would be. I think we have lived with what the aftermath of the decision in 2001 was, and I would only hope that we would give great thought to those that were in power as both Mr. Singleton and Mr. Bryan had said so eloquently to, there is a lot of money north of us on this river. All I can say is I hope they give great thought to that decision that they make will bear witness to those to the future generations that will have to live with that decision. That's all thank you. – End



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**RESOLUTION TO OPPOSE THE
PROPOSED INTERBASIN TRANSFER CERTIFICATE MODIFICATION
FOR THE TOWNS OF APEX, CARY AND MORRISVILLE, AND WAKE
COUNTY (FOR RTP SOUTH)
ALTERNATIVE 2A – INCREASE IBT TO MEET 2045 DEMANDS**

WHEREAS, Cape Fear River Watch feels the Interbasin Transfer (IBT) Certificate request submitted by the towns of Apex, Cary and Morrisville, and Wake County (for RTP South) is unnecessary and poses increased risks to the water supply of counties downstream; and

WHEREAS, the Cape Fear River is a tremendous resource providing a major source of water supply as well as affording many recreational opportunities, and it is the State's responsibility to maintain the highest level of certainty for the future water supply needs of the Cape Fear River watershed; and

WHEREAS, based on modeling results, it has been determined that the minimum flows from the Cape Fear River at Lillington and downstream will be reduced in the future, even with no increase in IBT, making it critical that treated wastewater be returned to the Cape Fear River Basin; and

WHEREAS, the NC Wildlife Resources Commission has indicated concern that increased withdrawals from Jordan Lake could negatively impact fish populations in the Cape Fear River and therefore negatively impact the river's ecosystem; and

WHEREAS, less discharge downstream due to IBT will pose water quality problems, particularly when natural flows are low which means higher concentrations of toxicants and more opportunities for algal bloom; and

WHEREAS, current requests for water supply from Jordan Lake do not allow for any water to be held in reserve; which could limit the ability of the lake to meet all of its intended uses, including water supply and flow downstream; and

WHEREAS, a water use decision of this magnitude seems premature given that the Cape Fear River Water Supply Plan, being prepared by DENR to determine whether or not all water supply needs can be met throughout the entire Cape Fear River Basin, has not been finalized; and

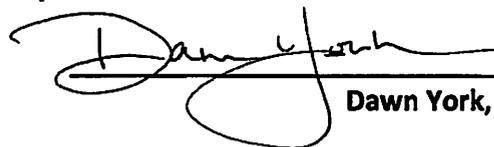
WHEREAS, this transfer request is based on a 30-year planning period, which is excessive and would compromise existing water users abilities to meet changes due to regulations, statutes, customer demands, climate changes, and regional needs; and a shorter planning period of 15 years would be more prudent; and

NOW, THEREFORE, BE IT RESOLVED THAT:

The Cape Fear River Watch recommends utilization of alternative 3A, as described in the Environmental Assessment for the proposed IBT. This option meets the requested water supply needs, and avoids interbasin transfer by sending additional untreated wastewater to the Western Wake Regional Water Reclamation Facility. The Western Wake Partnership has the infrastructure in place to allow the return of treated wastewater to the Cape Fear River. If wastewater is returned, an additional IBT would not be needed and existing conditions in the Cape Fear River would be preserved.

Adopted on this 5th day of February, 2015, at Wilmington, North Carolina.

Cape Fear River Watch



Dawn York, President

Protecting and improving the water quality of the Lower Cape Fear River Basin
through Education, Advocacy, and Action

We are a 501(c)3 nonprofit. Tax ID#58-2121884.

PART 3 – APPENDICES

APPENDIX A

TECHNICAL MEMORANDUM FOR “COMPARISONS FOR ENVIRONMENTAL ASSESSMENT ALTERNATIVES 2A AND 3A”

Response to NC Division of Water Resources Information Request – Comparisons for Environmental Assessment Alternatives 2a and 3a

PREPARED FOR: NC Division of Water Resources
PREPARED BY: CH2M HILL
DATE: February 12, 2015

The NC Division of Water Resources (DWR) requested an analysis of probable costs and environmental impacts for two of the alternatives that were presented in the *Environmental Assessment for the Towns of Cary, Apex and Morrisville, and Wake County Interbasin Transfer [IBT] Certificate Modification* (EA): Alternative 2a (IBT Certificate Modification) and Alternative 3a (avoid IBT Certificate Modification via raw wastewater transfer to the Western Wake Regional Water Reclamation Facility [WWRWRF]). In addition, DWR has requested a qualitative cost comparison for other alternatives included in the EA. This technical memorandum (TM) documents the planning level capital cost estimates for Alternatives 2a and 3a, a comparison of environmental impacts for Alternatives 2a and 3a, and relative cost information for all of the EA alternatives.

Executive Summary

Based on planning level capital costs, the estimated cost increase for Alternative 3a as compared to Alternative 2a (the requested IBT certificate modification) is between \$207 million and \$333 million, similar in magnitude to the \$290 million the Towns have already spent on the Western Wake Regional Wastewater Management Facilities (WWRWRF); including permitting, design and construction related to pipelines, pump stations, and the WWRWRF. Operating costs are also expected to be greater for Alternative 3a than for Alternative 2a.

Alternative 2a requires no construction activities outside of the current Cary/Apex water treatment facility site. Based on a very conceptual analysis, the approximately 20 miles of additional pipelines required for Alternative 3a could potentially impact about 1,500 feet of streams and 2.7 acres of wetlands and could be expected to adversely impact other natural resources (soils, wildlife, aquatic, farmland, forest land, air quality).

Analysis of Probable Costs for Alternatives 2a and 3a

Overview

Alternative 2a was selected by the Towns and County as a result of comprehensive, joint water resources management master planning. It was subsequently used as the basis for detailed infrastructure master planning and capital project planning for wastewater collection and treatment, potable water treatment and distribution, and reclaimed water supply. A similar level of detailed development for Alternative 3a would require revisiting all these master plans and would result in changes to capital projects related to water, wastewater, and reclaimed water.

Transfer of more wastewater than has been planned for in Alternative 2a from the North Cary WRF (NCWRF) and South Cary WRF (SCWRF) service areas, for treatment at the WWRWRF, would have significant impacts on other infrastructure. For example, beyond the need for

additional raw wastewater piping from the NCWRF and SCWRF service areas to the WWRWRF and expanded capacities for the Western Wake Regional Wastewater Management Facilities (WRF and conveyance), both reclaimed and potable water supply infrastructure needs would change. The Town of Cary’s reclaimed water master plan is based on using reclaimed water from the NCWRF to the maximum extent available; reducing the reclaimed water available would reduce future reclaimed water use and shrink the planned reclaimed water service area. Less reclaimed water use would increase potable water use, requiring additional supply from Jordan Lake (more than what has been requested in the Round 4 allocation process), more treatment capacity, and larger distribution lines. Comprehensive development of Alternative 3a would undoubtedly result in other impacts that would become apparent with the more detailed analysis.

Planning level capital cost estimates developed for Alternative 3a are based on conceptual level information and not updated master planning. Also, because of the uncertainty in factors such as required flow transfers between basins, pipeline routing options, the Towns’ historically observed unit costs for infrastructure construction, and the amount of underutilized facility capacity, the capital costs are presented as ranges.

Cost Comparison

The Town of Cary’s wastewater collection system is divided into three geographical basins: North Cary (includes part of Morrisville), South Cary and West Cary (includes part of Morrisville and RTP South). Wastewater within each basin is collected via a sewer system that conveys wastewater from that basin to a single WRF; NCWRF, South Cary (SCWRF) or the WWRWRF. Alternative 3a requires the transfer of raw wastewater from the North Cary and South Cary basins to the WWRWRF, thus returning water from the Neuse River Basin to the Cape Fear River Basin and reducing IBT as compared to Alternative 2a.

Tables 1 and 2 provide planning level capital cost estimates for Alternatives 2a and 3a, respectively. These costs do not include updating any of the Towns’ hydraulic models or master plans and do not include operating costs. Operating costs for Alternative 3a can be expected to be higher than for Alternative 2a, because of energy costs related to pumping more water over greater distances. Based on these planning level capital costs, the estimated cost increase for Alternative 3a as compared to Alternative 2a (the requested IBT certificate modification) is between \$207 million and \$333 million, similar in magnitude to the \$290 million the Towns have already spent on the Western Wake Regional Wastewater Management Facilities (including permitting, design and construction related to pipelines, pump stations, and the WWRWRF).

TABLE 1
 Alternative 2a Planning Level Cost Estimate

Cost Component	Cost (2014 dollars)	Note:
Water Supply/Treatment Expansion	\$55M ^a	Includes cost for the expansion of the Cary/Apex water treatment facility and increasing the Towns’ Jordan Lake water supply allocation.
Total	\$55M	

^a Data Source: Long Range Water Resources Plan (LRWRP) (CH2M HILL, 2013), escalated to 2014 dollars.

M = \$ million

TABLE 2
Alternative 3a Planning Level Cost Estimate

Cost Component	Cost Range (2014 dollars)	Note:
Water Supply/Treatment Expansion	\$55M - \$60M	Includes cost similar to Alt 2a. In addition this estimate includes the costs associated with additional water supply and treatment capacity that will be required to satisfy demands that are planned to be met by the Town of Cary's reclaimed water system (approximately 1 mgd on an average day basis, and 2 mgd on a max day basis), which will not likely be possible under Alternative 3a.
Raw wastewater transfer to WWRWRF from the North Cary sewer basin (transfer of 6 to 9 mgd) ^a	\$22M - \$32M	Includes costs for a regional pump station and approximately 6 miles of force main to convey raw wastewater from the North Cary basin to the West Cary basin for ultimate treatment at the WWRWRF.
Raw wastewater transfer to WWRWRF from the South Cary sewer basin (transfer of 4 to 6 mgd) ^a	\$27M - \$37M	Includes costs for a pump station and approximately 15 miles of force main to convey raw wastewater from the South Cary WRF to the WWRWRF.
Expansion of WWRWRF (11 mgd)	\$44M - \$88M	WWRWRF expansion costs for flows originating outside of the current facility service area, an area that was used to define the ultimate capacity of the WRF.
Expansion of the WWRWRF Effluent Pumping and Conveyance System	\$26M - \$36M	Expansion of the WWRWRF effluent pump station (28 mgd, peak hour capacity) and construction of approximately 12 miles of parallel effluent line to convey the portion of effluent for treated flows originating outside of the current facility service area used to define the ultimate capacity of the effluent conveyance system.
Value of underutilized capacity at the North Cary WRF (6 to 9 mgd)	\$48M - \$72M	With the transfer of raw wastewater from the North Cary basin to the WWRWRF, the North Cary WRF will have built capacity that will be underutilized.
Value of underutilized capacity at the South Cary WRF (4 to 6 mgd)	\$32M - \$48M	With the transfer of raw wastewater from the South Cary basin to the WWRWRF, the South Cary WRF will have built capacity that will be underutilized.
Value of underutilized capacity of the Town of Cary's existing reclaimed water system	\$8M - \$15M	With the transfer of raw wastewater from the North Cary basin to the WWRWRF, the North Cary WRF will not be able to satisfy the reclaimed water demand for the Town of Cary's defined reclaimed water service area. This will result in underutilized built system infrastructure (approximately 50 to 100% underutilized).
Total	\$262M - \$388M	

^a Cost for raw wastewater transfer from the North and South Cary basins is included due to the fact that during a maximum water demand month (basis of IBT certificate limitations) it is not guaranteed that the Towns will have enough wastewater flow from a single basin to offset the IBT to a level of 11 mgd.

M = \$ million

Definition of Planning Level Cost Estimates

The cost estimates contained in this TM are termed "planning level" or "order-of-magnitude" estimates by the American Association of Cost Engineers (AACE). A planning level estimate is made without detailed engineering data. The intended use of these estimates is for long-range planning, comparative alternative analyses and not for project control purposes. Planning level estimates are prepared with the use of previous estimates and historical data from comparable

work, costing curves, and estimating guides and handbooks. They have an expected accuracy of plus 50 percent and minus 30 percent of the estimated cost. These percentages should be viewed as statistical confidence limits and should not be confused with project contingencies.

Comparison of Environmental Impacts Associated with Alternatives 2a and 3a

The EA included a comparison of potential environmental impacts for each alternative in Exhibit 3-4. Table 3 below provides additional information related to the potential impacts (temporary or permanent) to wetlands and streams. Alternative 2a requires no construction activities outside of the current Cary/Apex water treatment facility site. For Alternative 3a, conceptual infrastructure locations were identified solely for the purpose of this TM and a geographic information system (GIS) analysis of potential wetland and stream impacts. This analysis focused solely on major wastewater transfer pipelines that would require a new easement. Alternative 3a requires a significant amount of new infrastructure and associated easement acquisition to transfer raw wastewater to the WWRWRF, including over 20 miles of pipeline, as described in the preceding section. Based on this very conceptual analysis, Alternative 3a could potentially impact approximately 1,500 feet of streams and 2.7 acres of wetlands, compared to no stream and wetland impacts for Alternative 2a.

Similarly, the impact to other natural resources (soils, wildlife, aquatic, farmland, forest land, air quality) will be much more significant with Alternative 3a, due to the additional new infrastructure that will cross the Towns’ entire service area from the eastern section of the North and South Cary sewer basins to the West Cary sewer basin.

TABLE 3

Comparison of Potential Wetland and Stream Impacts Associated with Construction Activities for Alternatives 2a and 3a

Alternative	Alternative Segment	Number of Stream Crossings	Names of Major Streams Crossed	Total Length of Stream Crossing in Infrastructure Easement (ft)	Wetland Area in Infrastructure Easement (acres)
Alt. 2a	N/A	0	N/A	0	0
Alternative 3a	North Cary transfer to WWRWRF	20	Panther Creek, Crabtree Creek	600	2.3
	South Cary transfer to WWRWRF	30	White Oak Creek, Big Branch, Little White Oak Creek, Middle Creek, Camp Branch	900	0.4
	Total	50		1,500	2.7

Data source for the GIS analysis was the Wake County GIS Department (detailed hydrology layer)

Relative Cost Comparison for all EA Alternatives

The EA included a summary comparison of alternatives in Exhibit 3-4 that also included relative cost information for each of the alternatives in comparison with Alternative 2a. This information has been updated in this TM to include relative cost comparison to Alternative 3a. Table 4 below provides the relative cost comparison of all EA alternatives to Alternatives 2a and 3a.

TABLE 4
Qualitative Cost Comparison of all Environmental Assessment Alternatives to Alternatives 2a and 3a

Alternative	Anticipated Cost of Alternative Relative to Alternative 2a – IBT Certificate Modification ^a	Anticipated Cost of Alternative Relative to Alternative 3a
1 – No Action	Lower	Lower
2a – Increase in IBT to Meet 2045 Demands - Proposed IBT Certificate Modification	N/A	Lower
2b – Increase in IBT to Meet 2045 Demands and Use Current Permitted Wastewater Capacity	Higher	Similar
3a – Avoid IBT Increase by Sending Additional Untreated Wastewater Effluent to the WWRWRF	Higher	N/A
3b – Avoid IBT Increase by Discharging Additional Treated Wastewater Effluent to the Cape Fear River Basin	Higher	Similar
3c – Avoid IBT Increase by Using a Water Source in the Neuse River Basin	Higher	Lower
3d – Avoid IBT Increase by Using Groundwater as a Source	Higher	Similar
3e – Avoid IBT Increase by Using Additional Water Resources Management Tools	Lower	Lower

^a As presented in Table 3-4 in the Towns of Cary, Apex and Morrisville and Wake County’s Interbasin Transfer (IBT) Certificate Modification Environmental Assessment

APPENDIX B

NOTICE OF PUBLIC HEARINGS

Interbasin Transfer Certificate Modification for the Towns of Apex, Cary and Morrisville, and Wake County (for RTP South)

NOTICE OF PUBLIC HEARING

January 7, 2015, 6:30 PM
Town of Apex Public Works
105-B Upchurch St.
Apex, NC 27502

The North Carolina Department of Environment and Natural Resources (NCDENR) will hold a public hearing to receive comments on the Towns of Apex, Cary and Morrisville, and Wake County (for RTP South) interbasin transfer (IBT) certificate modification request.

The Towns of Apex, Cary and Morrisville, and Wake County (for RTP South) have requested a modification of their current IBT certificate for three purposes:

- Modify the basis of their IBT certificate approved July 12, 2001 from a maximum day IBT calculation to IBT calculated as the daily average of a calendar month, per the changes to NC General Statute 143-215.22L based on Session Law 2013-388.
- Include, at the request of the NCDENR Division of Water Resources, transfers to the Cape Fear River subbasin, so that the modified certificate addresses transfers from the Haw River subbasin to both the Neuse River basin and Cape Fear River subbasin.
- Base the certificate term on a 30-year planning period, addressing the Towns' and County's IBT through 2045; resulting in a total of transfer of 33 mgd from the Haw River subbasin to the Neuse River basin and Cape Fear River subbasin on a daily average of a calendar month basis.

The public hearing will start at 6:30 p.m. on Wednesday, January 7, 2015, at the Town of Apex Public Works, 105-B Upchurch St., Apex, NC 27502. The public may review the supporting environmental document, starting on December 22nd, by searching "IBT Certificate" at www.townofcary.org

The purpose of this announcement is to encourage interested parties to attend and/or provide relevant written and verbal comments. Division of Water Resources staff requests that parties submit written copies of oral comments. Based on the number of people who wish to speak, the length of oral presentations may be limited.

If you are unable to attend, you may mail written comments to Harold Brady, Division of Water Resources, 1611 Mail Service Center, Raleigh, NC 27699-1611. Comments may also be submitted electronically to Harold.M.Brady@ncdenr.gov. Mailed and emailed comments will be given equal weight. All comments must be postmarked or emailed by February 5, 2015.

Interbasin Transfer Certificate Modification for the Towns of Apex, Cary and Morrisville, and Wake County (for RTP South)

NOTICE OF PUBLIC HEARING

January 22, 2015, 6:30 PM

Fayetteville City Hall
433 Hay Street
Fayetteville, NC 28301

The North Carolina Department of Environment and Natural Resources (NCDENR) will hold a public hearing to receive comments on the Towns of Apex, Cary and Morrisville, and Wake County (for RTP South) interbasin transfer (IBT) certificate modification request.

The Towns of Apex, Cary and Morrisville, and Wake County (for RTP South) have requested a modification of their current IBT certificate for three purposes:

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- Include, at the request of the NCDENR Division of Water Resources, transfers to the Cape Fear River subbasin, so that the modified certificate addresses transfers from the Haw River subbasin to both the Neuse River basin and Cape Fear River subbasin.
- Base the certificate term on a 30-year planning period, addressing the Towns' and County's IBT through 2045; resulting in a total of transfer of 33 mgd from the Haw River subbasin to the Neuse River basin and Cape Fear River subbasin on a daily average of a calendar month basis.

The public hearing will start at 6:30 p.m. on Thursday, January 22, 2015, at the Fayetteville City Hall, City Council Chambers, 433 Hay St., Fayetteville, NC 28301. The public may review the supporting environmental document by visiting <http://www.ncwater.org/?page=473>.

The purpose of this announcement is to encourage interested parties to attend and/or provide relevant written and verbal comments. Division of Water Resources staff requests that parties submit written copies of oral comments. Based on the number of people who wish to speak, the length of oral presentations may be limited.

If you are unable to attend, you may mail written comments to Harold Brady, Division of Water Resources, 1611 Mail Service Center, Raleigh, NC 27699-1611. Comments may also be submitted electronically to Harold.M.Brady@ncdenr.gov. Mailed and emailed comments will be given equal weight. All comments must be postmarked or emailed by February 5, 2015.

APPENDIX C

MODELING ANALYSIS FOR REDUCED RIVER INFLOW

Response to NC Division of Water Resources Information Request – Additional Hydrologic Modeling

PREPARED FOR: NC Division of Water Resources

PREPARED BY: CH2M HILL

DATE: February 10, 2015

Executive Summary

The NC Division of Water Resource (DWR) requested additional hydrologic modeling to review the sensitivity of the modeling evaluation results to the potential effects of a future reduced river inflow scenario. The modeling scenarios evaluated for the Towns of Cary, Apex and Morrisville and Wake County's Interbasin Transfer (IBT) Certificate Modification Environmental Assessment (EA) were repeated assuming a 10 percent reduction in daily river inflows within the Cape Fear-Neuse River Basin Hydrologic Model for the entire 80+ year period of record.

This evaluation demonstrated that even under a reduced river inflow scenario, the relative impact of the requested IBT Certificate Modification is similar to the original evaluation: there are no significant impacts on key hydrologic indicators. In addition, all water users downstream of Jordan Lake can meet projected 2045 water demands – without considering any potential Water Shortage Response Plan demand reductions - 100 percent of the time during the simulated period of record.

Introduction

DWR has requested the Towns and County perform additional hydrologic modeling of scenarios with river inflows reduced by 10 percent in the Combined Cape Fear Neuse River Basin Hydrologic Model (CFNRBHM). The scenarios are based on those presented in the EA, for the requested IBT certificate modification resulting in an increase in IBT of 11 million gallons per day (mgd), and for alternatives that avoid an increase in IBT.

This technical memorandum (TM) documents the assumptions used to evaluate the reduction in river inflows for the hydrologic modeling evaluation, a description of the scenarios modeled with that reduction, and the modeling results. Table 1 provides an overview of the hydrologic model scenarios representing each EA alternative, including those in the EA, and the new scenarios with river inflow reductions. The 2010 Baseline scenario represents existing conditions and is defined by DWR.

TABLE 1
Hydrologic Modeling Scenarios Representing EA Alternatives

Alternative Number ^a	EA Alternative ^a	EA Alternative Description ^a	Modeling Scenario Representing an EA Alternative ^a	Model Scenario To Evaluate 10 Percent River Inflow Reduction
Baseline		Baseline	2010 Baseline	Not applicable
2. Modify IBT certificate	2a	With an increase in IBT to meet 2045 demands (Proposed Alternative)	2045 Requested IBT	2045 Requested IBT -10% Inflow
	2b	With an increase in IBT to meet 2045 demands and fully use current permitted wastewater capacity in the Neuse River Basin	2045 Increased Neuse Discharge IBT	2045 Increased Neuse Discharge IBT -10% Inflow
1. No action & 3. Avoid IBT certificate modification	1	No Action		
	3a	Transferring untreated wastewater from the Neuse River Basin to the WWRWRF, which discharges to the Cape Fear River Basin		
	3b	Transferring treated wastewater effluent from the Neuse River Basin to the Cape Fear River Basin	2045 Baseline	2045 Baseline -10% Inflow
	3c	Using a water supply source in the Neuse River Basin		
	3d	Using groundwater as a water supply source		
	3e	Utilizing additional Water Resources Management Tools		

^a As presented in *Modeling Evaluation of the Effects of the Cary/Apex Water Supply Interbasin Transfer TM* (CH2M HILL, 2014)

Reduction in River Inflow within the CFNRBHM

The requested 10 percent reduction in daily river inflows, basin wide, was used for the modeling evaluation presented in this TM. This 10 percent reduction was achieved by applying a 0.9 factor to each of the river inflows within the CFNRBHM's *filter_inflows.ocl* file, which is the internal model file that specifies which historical daily flow time series goes to which inflow node. After this factor was added to the *filter_inflows.ocl* file the model was run for all model scenarios identified in Table 1.

Hydrologic Modeling Results, with Reduced River Inflow

For the evaluation results presented in this TM, the CFNRBHM, period of record, model assumptions (including the projected 2045 water demand for all Cape Fear and Neuse River basin water users), and the modeling process used for the evaluation presented in the *Modeling Evaluation of the Effects of the Cary/Apex Water Supply Interbasin Transfer TM* (CH2M HILL, 2014) were replicated. The only change to the CFNRBHM was an assumed 10 percent reduction in daily river inflows, as discussed in the preceding section, for the 2045 model scenarios. The results for the 2010 Baseline scenario are without the effect of reduced river inflows and are the same results presented in the *Modeling Evaluation of the Effects of the Cary/Apex Water Supply Interbasin Transfer TM* (CH2M HILL, 2014).

Each 2045 model scenario, as identified in Table 1, was run using the CFNRBHM, with the 10 percent reduction in river inflows basin wide, and the scenario results were compared. The model was run on a daily time step, included the Jordan Lake Drought Contingency Plan and, where applicable, the Water Shortage Response Plan for individual water users. None of the water users downstream of Jordan Lake have WSRPs included in the model due to the fact that their WSRPs do not have demand reduction triggers linked to river flows or any other parameters that are modeled.

Effect of Reduced River Inflow

Two figures are shown below to illustrate the effect of the 10 percent reduction in daily river inflows during the simulated 2007 drought, using the 2045 Baseline model scenario as presented in the *Modeling Evaluation of the Effects of the Cary/Apex Water Supply Interbasin Transfer TM* (CH2M HILL, 2014). Figure 1 presents a comparison of the Jordan Lake water surface elevation under the 2045 Baseline and 2045 Baseline -10% Inflow scenarios, and Figure 2 presents the same comparison for Cape Fear River flow at Lillington.

FIGURE 1

Comparison of the 2045 Baseline and 2045 Baseline -10 % Inflow Scenarios, Jordan Lake Water Surface Elevation during the 2007 Drought

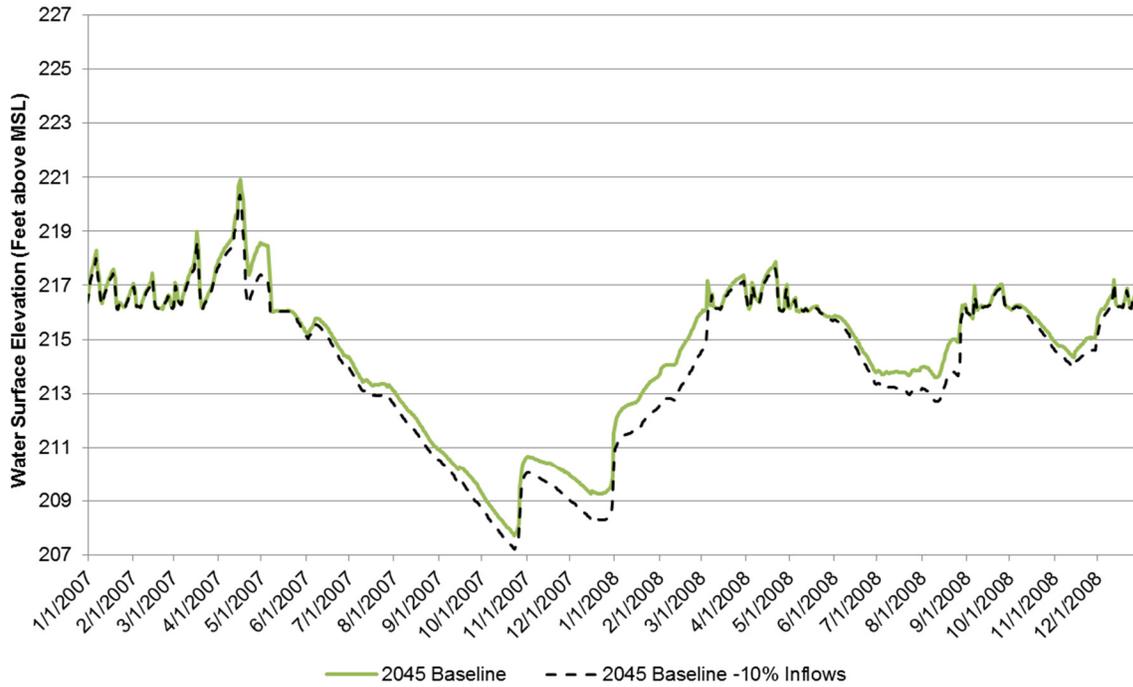
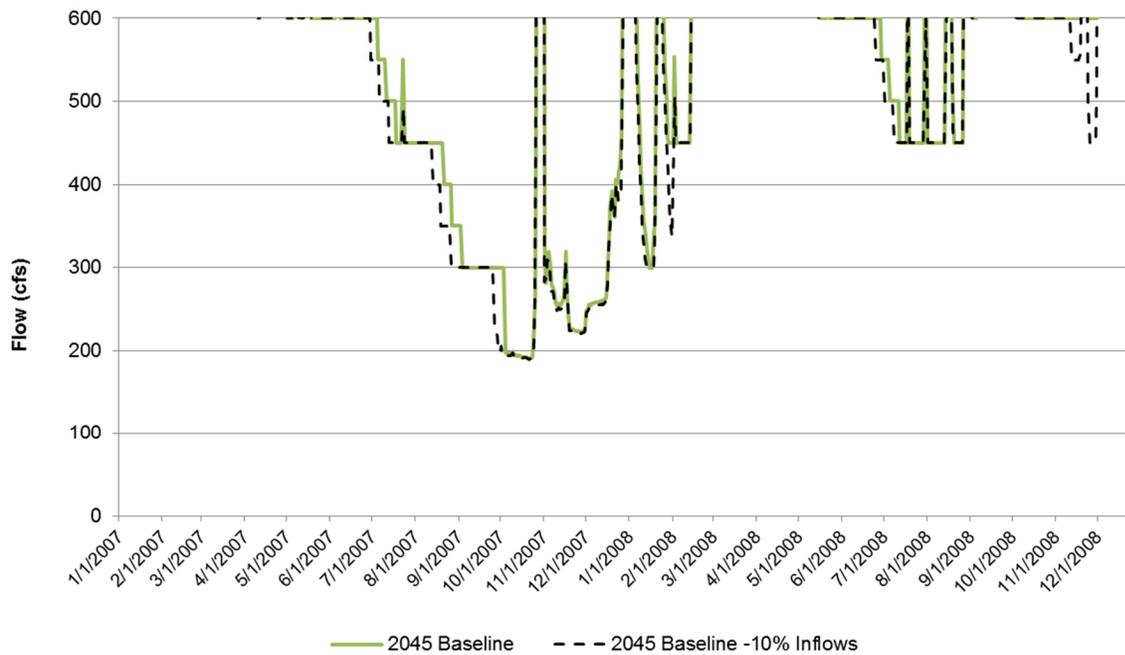


FIGURE 2

Comparison of the 2045 Baseline and 2045 Baseline -10% Inflow Scenarios, Cape Fear River Flow at Lillington below 600 cfs during the 2007 Drought



Based on the data presented in Figure 2, the model simulations indicate that the duration of low flows is slightly greater under the assumed 10 percent reduction in river inflow, but the minimum flows are mostly the same between the 2045 Baseline and 2045 Baseline -10% Inflow scenarios. These results indicate that the water quality pool portion of Jordan Lake's conservation storage, used by the US Army Corp of Engineers (USACE) in their operation of Jordan Lake to meet the target flow at Lillington, supports the maintenance of downstream flows for in-stream aquatic habitat and water withdrawals even under a future scenario that represents a 10 percent reduction in basin wide daily river inflows for the entire period of record.

Model Scenario Comparisons

The same key hydrologic indicators presented in the *Modeling Evaluation of the Effects of the Cary/Apex Water Supply Interbasin Transfer TM* (CH2M HILL, 2014) were evaluated by running the scenarios and doing a direct day to day comparison of Jordan Lake elevations and Cape Fear River flows for each scenario.

The key hydrologic indicators included:

- Jordan Lake elevation
- Water Quality Pool volume (%)
- Water Supply Pool volume (%)
- Cape Fear River flow at Lillington
- Cape Fear River flow at Fayetteville

Indicators were examined based on various combinations of flow/level duration curves, time series plots, and results during extreme conditions. In addition to the key hydrologic indicators, a review of downstream water users' water supply availability was also conducted.

Tabular comparisons and plots are provided in this section for key hydrologic indicators to illustrate the similarities or differences that were calculated between the model scenarios.

Tabular data includes details on the following:

- Entire simulation (80+ year period of record)
- 1950s drought
- 2002 drought
- 2007 drought

Time series plots are presented for the period of record and the 2007 drought to provide a visual comparison of the model scenarios.

Jordan Lake Elevation

A summary of the average and minimum reservoir water surface elevations for the period of record and the drought periods is provided in Table 2. Figures 3 and 4 present the time series plot for the period of record and the 2007 drought period, respectively.

TABLE 2
Model Scenario Comparison – Jordan Lake Water Surface Elevation

Scenario	Elevation Over the Period of Record (feet)		Elevation During the 1950s Drought (feet)		Elevation During the 2002 Drought (feet)		Elevation During the 2007 Drought (feet)	
	Average	Minimum	Average	Minimum	Average	Minimum	Average	Minimum
2010 Baseline	216.3	209.7	215.4	210.1	214.8	209.7	215.3	210.2
2045 Baseline -10% Inflow	215.6	207.2	214.5	207.2	214.0	207.9	214.1	207.2
2045 Requested IBT -10% Inflow	215.6	206.9	214.4	207.0	213.9	207.6	214.0	206.9
2045 Increased Neuse Discharge IBT -10% Inflow	215.6	206.8	214.4	207.1	213.9	207.4	213.9	206.8

FIGURE 3
Period of Record Jordan Lake Elevation Comparison

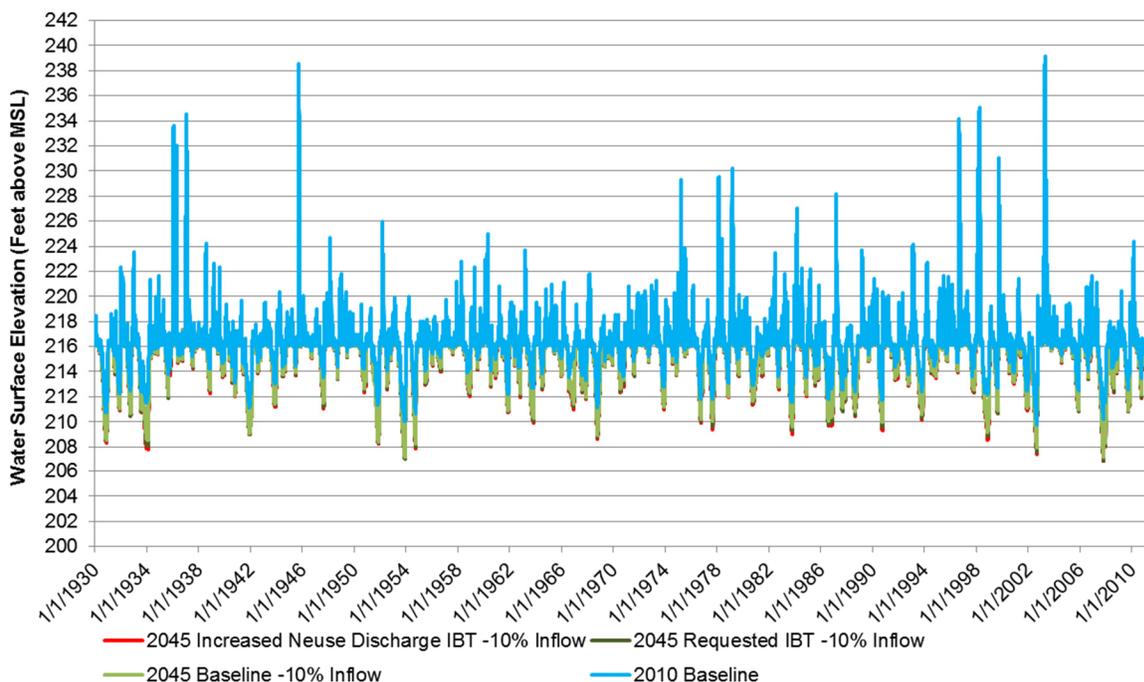
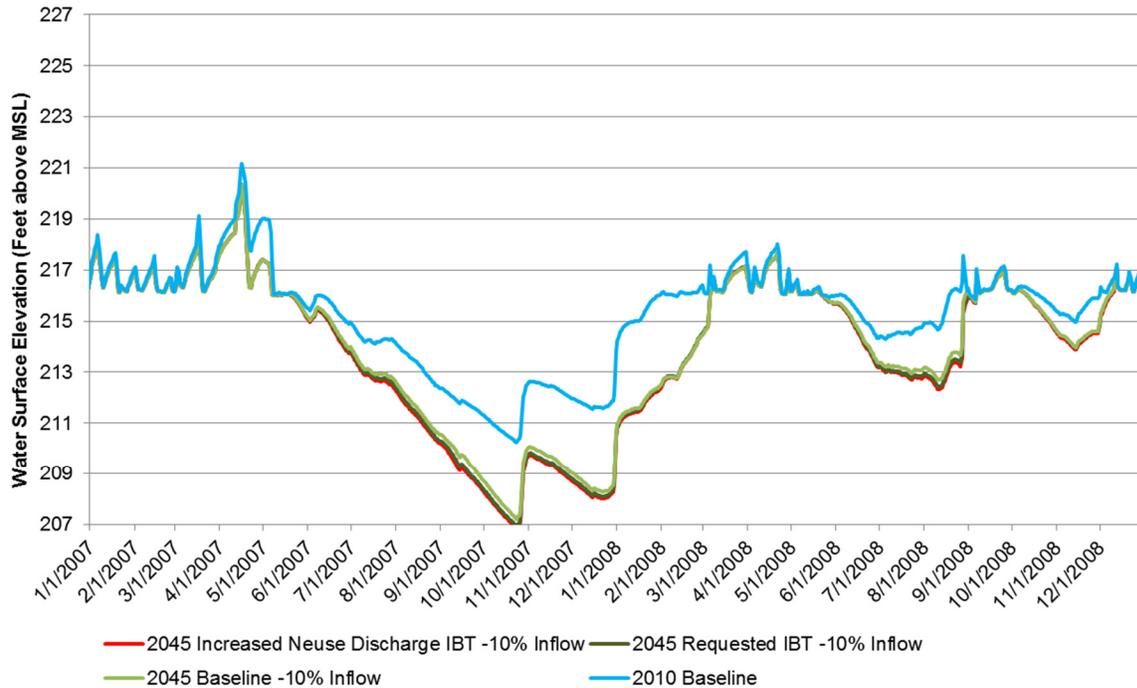


FIGURE 4
2007 Drought Jordan Lake Elevation Comparison



Water Quality Pool

Table 3 provides a summary of the average and minimum percentage of water quality pool storage volume during the period of record and drought periods. Figure 5 and 6 presents the time series plot for the period of record and the 2007 drought period, respectively.

TABLE 3
Model Scenario Comparison - Water Quality (WQ) Pool Percent of Storage Volume

Scenario	WQ Pool Storage Over the Period of Record		WQ Pool Storage During the 1950's Drought		WQ Pool Storage During the 2002 Drought		WQ Pool Storage During the 2007 Drought	
	Average	Minimum	Average	Minimum	Average	Minimum	Average	Minimum
2010 Baseline	93.3	21.0	85.3	22.3	80.7	21.0	85.6	26.7
2045 Baseline -10% Inflow	91.6	30.7	83.6	31.5	80.1	35.4	81.5	30.7
2045 Requested IBT -10% Inflow	91.2	29.2	83.8	30.7	79.5	34.2	80.8	29.2
2045 Increased Neuse Discharge IBT -10% Inflow	90.9	28.5	83.6	32.0	78.9	32.9	80.4	28.5

FIGURE 5
 Period of Record Water Quality Pool Storage Volume Percent Comparison

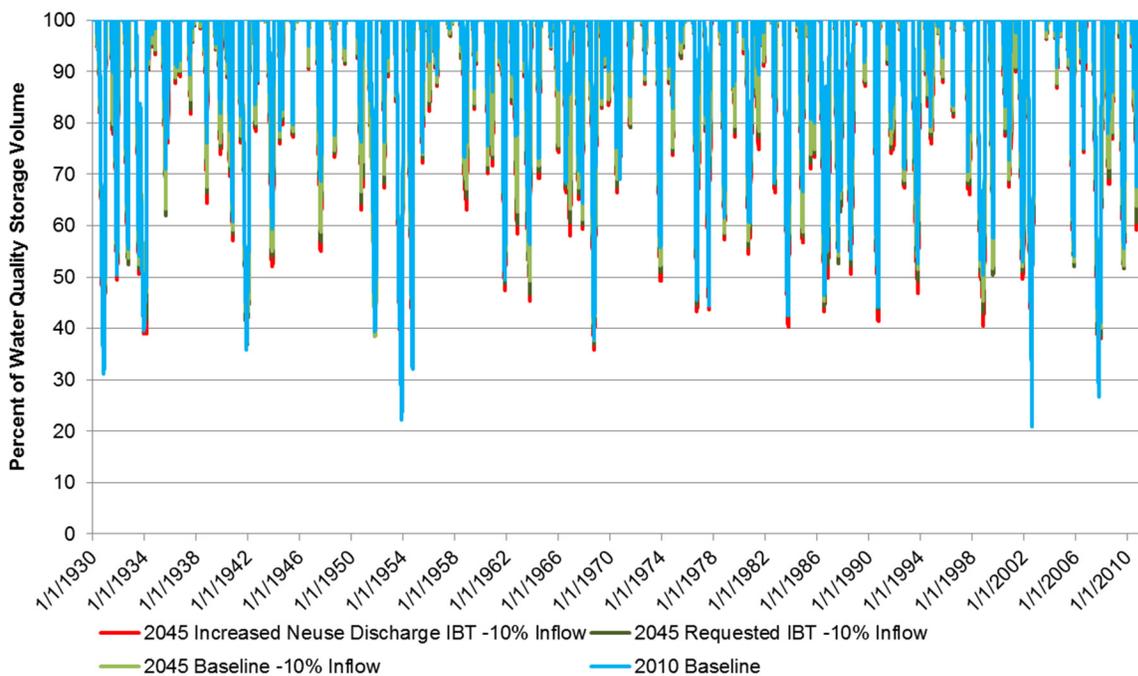
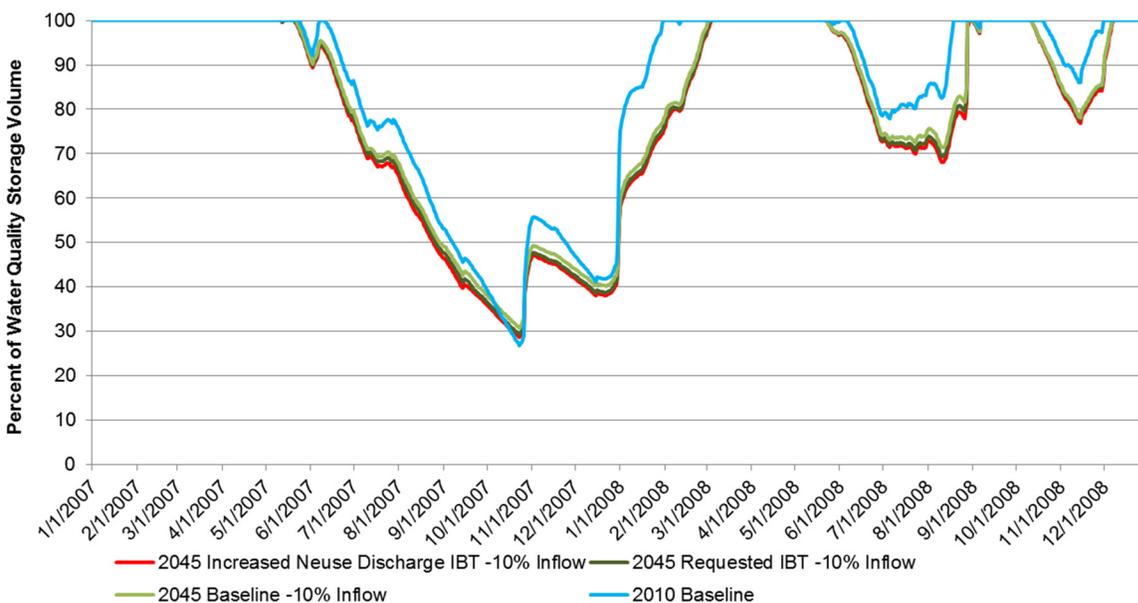


FIGURE 6
 2007 Drought Water Quality Pool Storage Volume Percent Comparison



Water Supply Pool

Table 4 provides a summary of the average and minimum percentage of water supply pool storage volume during the period of record and drought periods. Figure 7 and 8 presents the time series plot for the period of record and the 2007 drought period, respectively.

TABLE 4

Model Scenario Comparison - Water Supply (WS) Pool Percent of Storage Volume

Scenario	WS Pool Storage Over the Period of Record (percent)		WS Pool Storage During the 1950's Drought (percent)		WS Pool Storage During the 2002 Drought (percent)		WS Pool Storage During the 2007 Drought (percent)	
	Average	Minimum	Average	Minimum	Average	Minimum	Average	Minimum
2010 Baseline	99.8	90.7	99.2	90.7	99.3	93.8	99.7	94.4
2045 Baseline -10% Inflow	92.9	23.6	85.2	30.6	84.1	35.6	81.9	33.7
2045 Requested IBT -10% Inflow	92.5	25.1	84.3	29.3	83.5	31.7	81.0	30.9
2045 Increased Neuse Discharge IBT -10% Inflow	92.5	25.1	84.2	28.9	83.5	31.7	81.0	30.9

FIGURE 7

Period of Record Water Supply Pool Storage Volume Percent Comparison

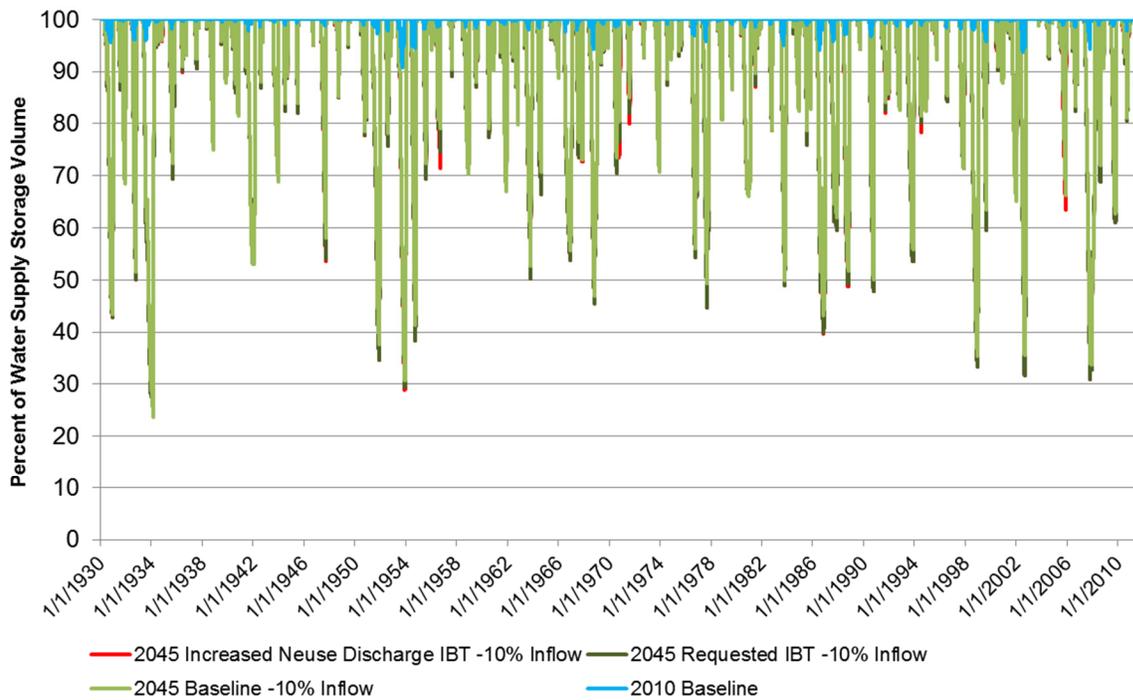
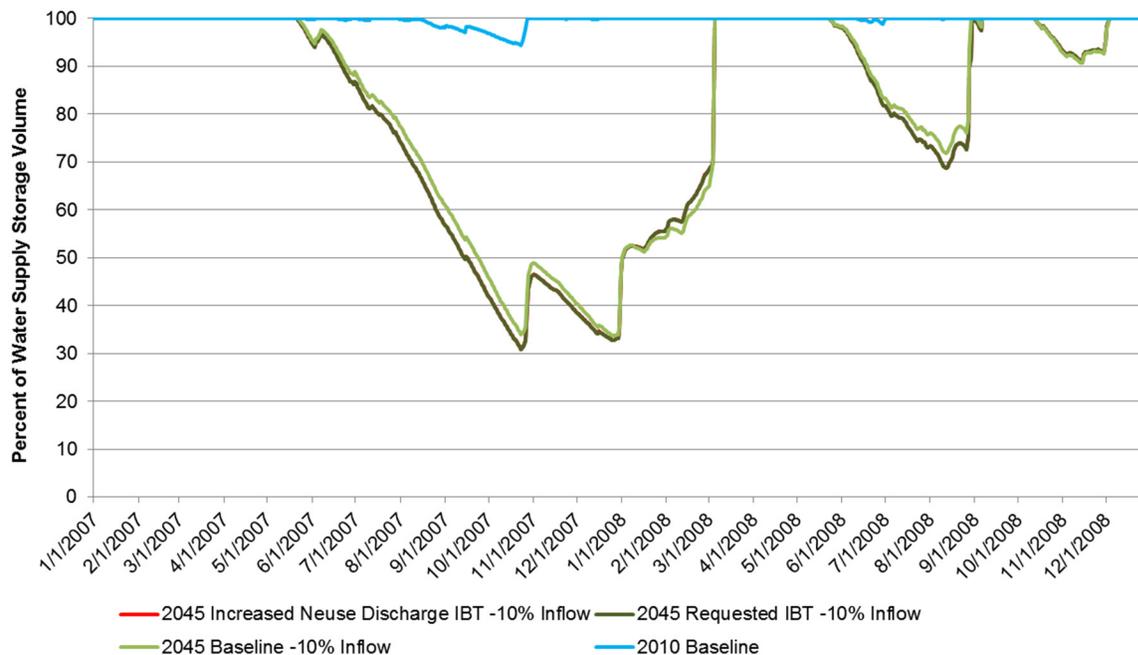


FIGURE 8
2007 Drought Water Supply Pool Storage Volume Percent Comparison



Cape Fear River Flows at Lillington and Fayetteville

Table 5 and 6 provide a summary of the Cape Fear River average flows and low flows at Lillington and Fayetteville, respectively, during the period of record and drought periods. Figure 9 and 10 presents the time series plot for flow at Lillington for the period of record and the 2007 drought period, respectively. Figure 11 and 12 presents the time series plot for flow at Fayetteville for the period of record and the 2007 drought period, respectively.

TABLE 5
Model Scenario Comparison – Cape Fear River Average and Low Flows at Lillington

Scenario	Average Period of Record Flow (cfs)	Percent of time below 550 & 250 cfs during the 1950's Drought		Percent of time below 550 & 250 cfs during the 2002 Drought		Percent of time below 550 & 250 cfs during the 2007 Drought	
		550 cfs	250 cfs	550 cfs	250 cfs	550 cfs	250 cfs
2010 Baseline	3,148	22.0%	0.0%	35.6%	0.0%	30.8%	0.0%
2045 Baseline -10% Inflow	2,720	25.8%	3.9%	38.2%	2.9%	38.0%	6.3%
2045 Requested IBT -10% Inflow	2,710	29.0%	3.9%	38.5%	3.5%	38.7%	8.9%
2045 Increased Neuse Discharge IBT -10% Inflow	2,699	29.7%	6.2%	38.7%	5.0%	39.4%	10.4%

NOTE: 550 cfs and 250 cfs were selected for presentation based on the Jordan Lake Drought Contingency Plan flow targets at the Lillington USGS gage.

TABLE 6
Model Scenario Comparison – Cape Fear River Average and Low Flows at Fayetteville

Scenario	Average Period of Record Flow (cfs)	Percent of time below 600 cfs during the 1950's Drought	Percent of time below 600 cfs during the 2002 Drought	Percent of time below 600 cfs during the 2007 Drought
2010 Baseline	4,190	12.5%	18.3%	16.4%
2045 Baseline -10% Inflow	3,667	15.0%	23.5%	19.0%
2045 Requested IBT -10% Inflow	3,658	15.1%	24.4%	19.0%
2045 Increased Neuse Discharge IBT -10% Inflow	3,645	15.7%	25.0%	19.6%

NOTE: 600 cfs was selected for presentation to provide an indication of the frequency of low flow events in the Cape Fear River near Fayetteville.

FIGURE 9
Period of Record Lillington Flows Comparison (Flow less than 600 cfs)

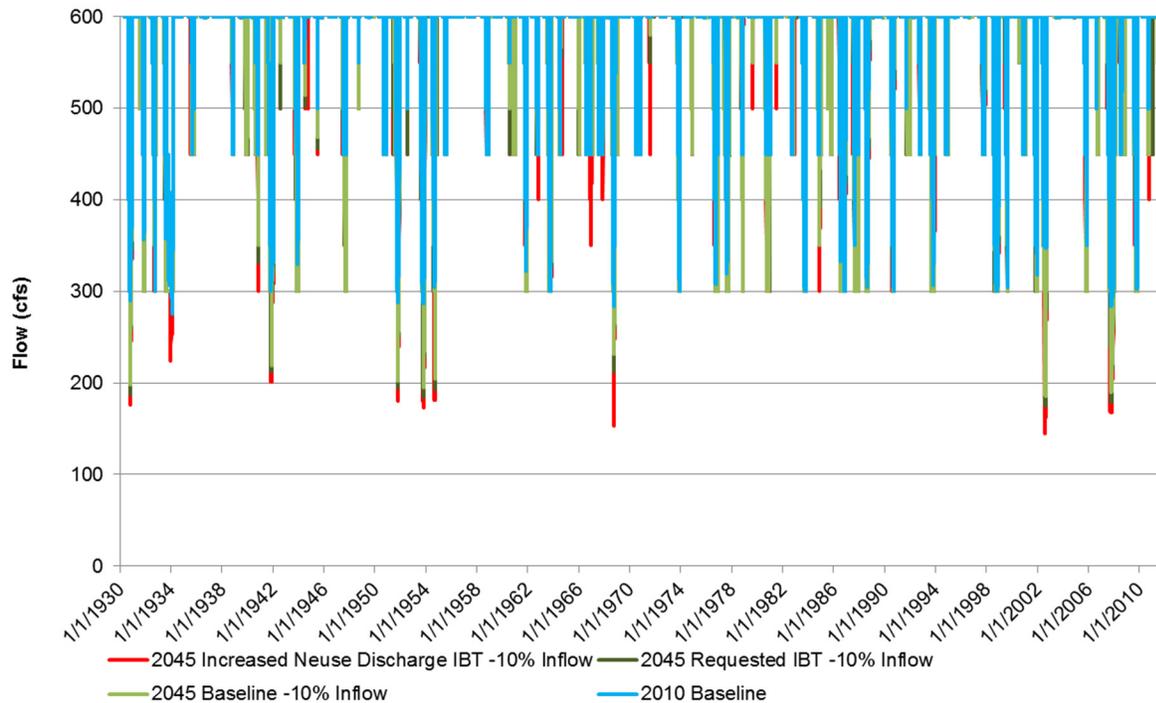


FIGURE 10
2007 Drought Lillington Flows Comparison (Flow less than 600 cfs)

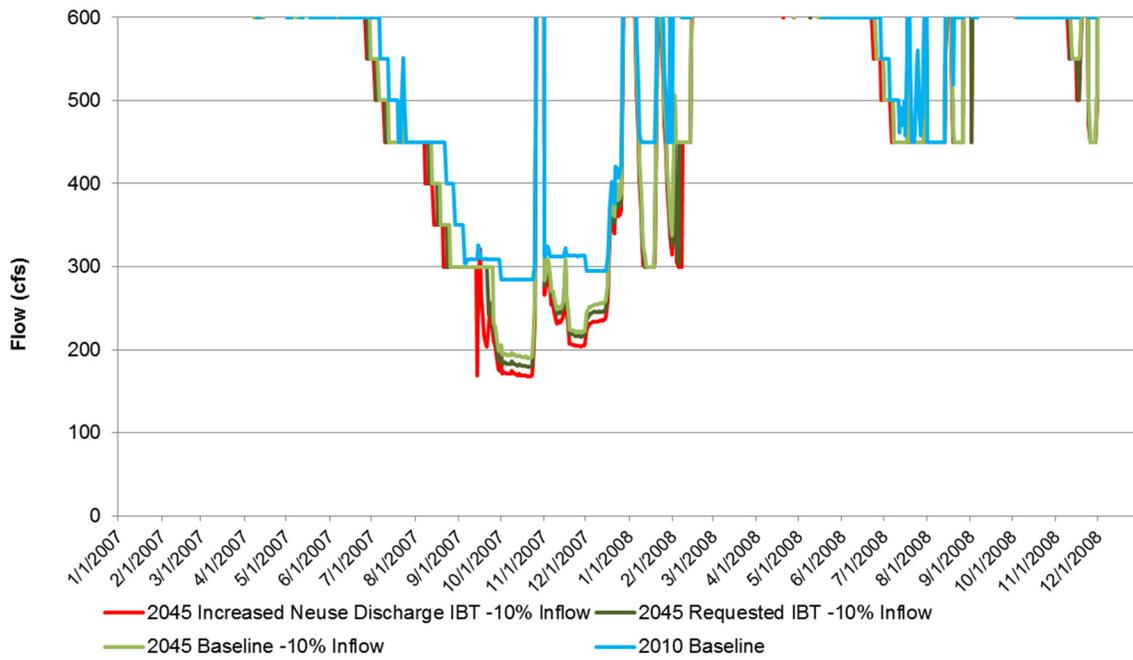


FIGURE 11
Period of Record Fayetteville Flows Comparison (Flow less than 600 cfs)

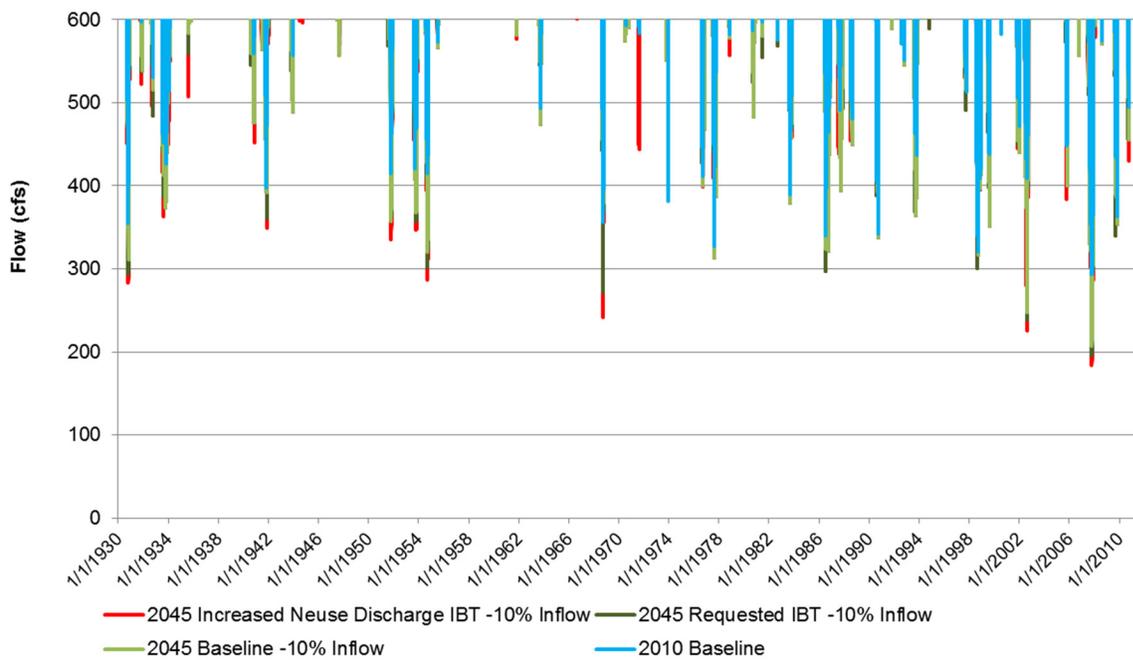
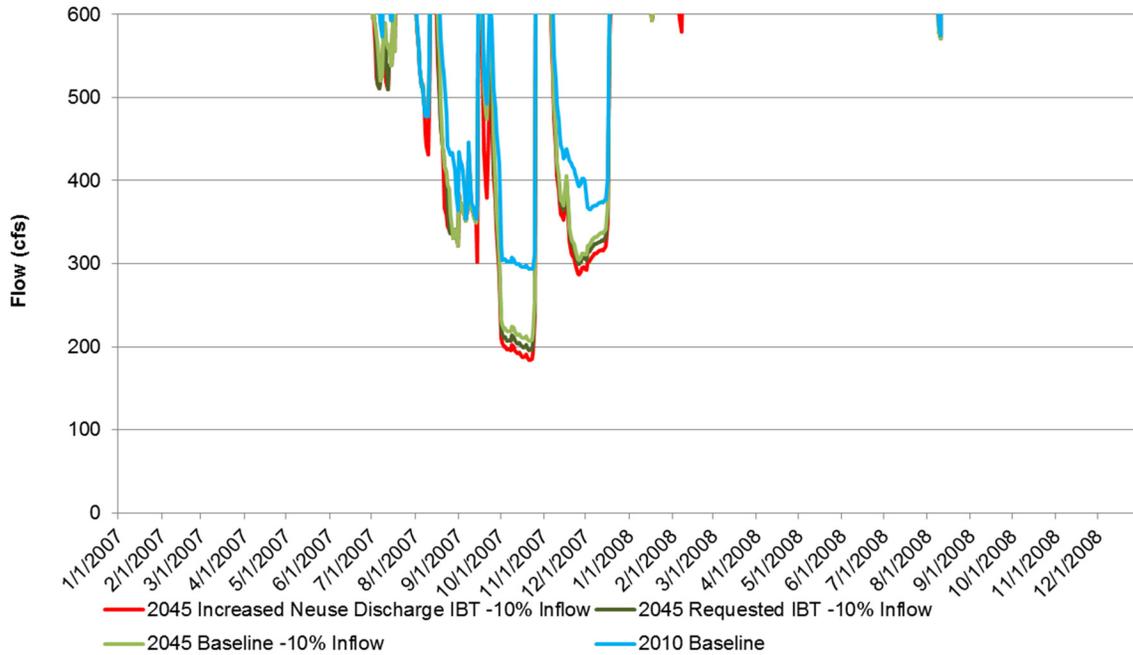


FIGURE 12
2007 Drought Fayetteville Flows Comparison (Flow less than 600 cfs)



Downstream Water Users’ Water Supply Availability

Using the CFNRBHM, the availability of water supply for users downstream of Jordan Lake was evaluated. Table 7 provides a summary of the percentage of the period of record water supply for each downstream user is available for full withdrawal. Based on the model results, all downstream demands were met 100 percent of the time for all scenarios even though the model does not trigger the demand reductions associated with any downstream user’s WSRP. No shortages were seen as a result of future demands or an increase in IBT.

TABLE 7
Comparison of the Downstream User Water Supply Availability

	Percentage of Time Full Water Supply Withdrawal is Available			
	2010 Baseline	2045 Baseline -10% Inflow	2045 Requested IBT -10% Inflow	2045 Increased Neuse Discharge IBT -10% Inflow
City of Sanford	100%	100%	100%	100%
Harnett County	100%	100%	100%	100%
Fayetteville PWC	100%	100%	100%	100%
City of Dunn	100%	100%	100%	100%
Smithfield Foods	100%	100%	100%	100%
Lower Cape Fear Water and Sewer Authority	100%	100%	100%	100%
Cape Fear Public Utility Authority	100%	100%	100%	100%

Summary

To summarize the results of the hydrologic modeling, Table 8 shows the frequency with which the following conditions occur for each model scenario:

- Jordan Lake Levels < 210 ft. MSL (lower limit for boat ramp use)
- Jordan Lake Levels < 210 ft. MSL (lower limit for boat ramp use), from Memorial Day to Labor Day
- Water Quality Pool < 80% (Stage 1 Drought trigger, per Jordan Lake Drought Contingency Plan)
- Water Quality Pool < 60% (Stage 1 Drought trigger, per Jordan Lake Drought Contingency Plan)
- Water Quality Pool < 40% (Stage 1 Drought trigger, per Jordan Lake Drought Contingency Plan)
- Water Quality Pool < 20% (Stage 1 Drought trigger, per Jordan Lake Drought Contingency Plan)
- Water Supply Pool < 50%
- Cape Fear River Flow at Lillington < 550 cfs (normal target flow is 600 ± 50 cfs)
- Cape Fear River Flow at Fayetteville < 600 cfs

TABLE 8
Comparison of the Percentage of the Period of Record that the Key Hydrologic Indicators are Met

Hydrologic Indicator	Scenario			
	2010 Baseline	2045 Baseline -10% Inflow	2045 Requested IBT -10% Inflow	2045 Increased Neuse Discharge IBT -10% Inflow
	Baseline	EA Alternative 1 & 3a-e No Action & Avoid IBT Certificate Modification	EA Alternative 2a Modify IBT Certificate (Proposed Alternative)	EA Alternative 2b Modify IBT Certificate (Increased Neuse Discharge IBT)
Jordan Lake Level < 210 ft. MSL	0.0%	2.3%	2.6%	2.9%
Jordan Lake Level < 210 ft. MSL, Memorial Day to Labor Day	0.0%	1.8%	1.8%	2.9%
Water Quality Pool <80%	13.5%	18.2%	18.9%	19.5%
Water Quality Pool <60%	5.6%	7.0%	7.6%	8.1%
Water Quality Pool <40%	0.9%	0.9%	0.9%	1.3%
Water Quality Pool <20%	0.0%	0.0%	0.0%	0.0%
Water Supply Pool <50%	0.0%	2.3%	2.8%	2.8%
Flow at Lillington < 550 cfs	13.9%	17.7%	18.4%	18.9%
Flow at Fayetteville < 600 cfs	5.9%	7.6%	7.8%	8.0%

For ease of reference, Table 9 (a copy of Exhibit 5-2 in the Towns of Cary, Apex and Morrisville and Wake County’s IBT Certificate Modification EA) presents the summary comparison of the key hydrologic indicators without the reduction in river inflows.

TABLE 9

Comparison of the Percentage of the Period of Record that the Key Hydrologic Indicators are Met (*Exhibit 5-2 from the Towns of Cary, Apex and Morrisville and Wake County’s Interbasin Transfer (IBT) Certificate Modification EA*)

Hydrologic Indicator	Scenario			
	2010 Baseline	2045 Baseline	2045 Requested IBT	2045 Increased Neuse Discharge IBT
	Baseline	EA Alternative 1 & 3a-e No Action & Avoid IBT Certificate Modification	EA Alternative 2a Modify IBT Certificate (Proposed Alternative)	EA Alternative 2b Modify IBT Certificate (Increased Neuse Discharge IBT)
Jordan Lake Level < 210 ft. MSL	0.0%	1.6%	2.0%	2.0%
Jordan Lake Level < 210 ft. MSL, Memorial Day to Labor Day	0.0%	0.2%	0.3%	0.4%
Water Quality Pool <80%	13.5%	15.8%	16.4%	16.9%
Water Quality Pool <60%	5.6%	5.9%	6.4%	6.5%
Water Quality Pool <40%	0.9%	0.5%	0.7%	0.8%
Water Quality Pool <20%	0.0%	0.0%	0.0%	0.0%
Water Supply Pool <50%	0.0%	1.6%	1.9%	1.9%
Flow at Lillington < 550 cfs	13.9%	15.6%	15.9%	16.4%
Flow at Fayetteville < 600 cfs	5.9%	6.1%	6.3%	6.7%

The following bullets provide a model scenario comparison summary for the key hydrologic indicators:

- 2045 Baseline vs. 2045 Baseline -10% Inflow
 - The modeling evaluation shows a limited difference in these two scenarios, especially for downstream Cape Fear River flows. During low flow conditions there is only about a 2 percent difference in minimum flow values, illustrating the benefit of the water quality pool, used by the USACE in their operation of Jordan Lake to meet target flows at Lillington. This provides about the same amount of water downstream of the reservoir even under the 10 percent reduction in basin wide daily river inflows for the entire period of record.
- 2045 Baseline -10% Inflow vs. 2010 Baseline
 - The modeling evaluation results indicate a potential for a decrease in Jordan Lake level and Cape Fear River flow from the 2010 to 2045 Baseline scenario. This is attributed to the full utilization of the Jordan Lake water supply pool, the increase in water

withdrawals upstream of Jordan Lake, as well as the assumed 10 percent reduction in daily river inflows.

- The 2045 Baseline -10% Inflow scenario results are indicative of the potential effects of EA Alternatives 1 (no action) and 3a through 3e – all of which represent no increase in IBT and the Towns’ continued operation under an Updated 2001 IBT Certificate, along with the 10 percent daily river inflow reduction.
- 2045 Requested IBT -10% Inflow and 2045 Increased Neuse River Discharge -10% Inflow vs. 2045 Baseline -10% Inflow
 - Under both the 2045 Requested IBT -10% Inflow and 2045 Increased Neuse River Discharge -10% Inflow scenarios, there is a very small increase in duration that the lake level, as compared to the 2045 Baseline scenario -10% Inflow, is below 210-ft MSL (0.3 percent increase in duration over the period of record), and both the water supply and water quality pools operate at lower levels for a very small percentage of the period of record (example: 0.7 percent increase in duration below 80 percent full for the water quality pool and 0.0 percent difference below 20 and 40 percent full, as compared to the 2045 Baseline -10% Inflow scenario).
 - For all scenarios, the water quality pool never goes below 20 percent.
 - Cape Fear River flows at Lillington and Fayetteville were determined to be only 0.4 percent different on average (8 to 12 cfs), and during drought periods the 2045 Requested IBT -10% Inflow scenario had a 0.0 to 3.2 percent increase in time below specific low flow targets (550 cfs and 250 cfs for Lillington; 600 cfs for Fayetteville) as compared to the 2045 Baseline -10% Inflow scenario.
- Downstream Users’ Water Supply Availability
 - Despite increases in water withdrawals to projected 2045 levels throughout the entire Cape Fear River basin and an assumed 10 percent reduction in daily river inflows all water users downstream of Jordan Lake water supply needs, as identified in the CFNRBHM, are met 100 percent of the period of record, inclusive of all historic drought periods.

The results of the scenarios evaluated in this TM demonstrate that the relative impact of the requested IBT Certificate Modification on any of the key hydrologic indicators, with an assumed 10 percent reduction in daily river inflows, is similar to the original evaluation – there are no significant impacts. In addition, even under the conditions of a 10 percent reduction in daily river inflows, the projected 2045 water demands of all water users downstream of Jordan Lake are met 100 percent of time during the 80+ year period of record.

APPENDIX D

NC STATUTES AND ADMINISTRATIVE RULES FOR WATER TRANSFERS

§ 143-215.22L. Regulation of surface water transfers.

(a) Certificate Required. – No person, without first obtaining a certificate from the Commission, may:

- (1) Initiate a transfer of 2,000,000 gallons of water or more per day, calculated as a daily average of a calendar month and not to exceed 3,000,000 gallons per day in any one day, from one river basin to another.
- (2) Increase the amount of an existing transfer of water from one river basin to another by twenty-five percent (25%) or more above the average daily amount transferred during the year ending 1 July 1993 if the total transfer including the increase is 2,000,000 gallons or more per day.
- (3) Increase an existing transfer of water from one river basin to another above the amount approved by the Commission in a certificate issued under G.S. 162A-7 prior to 1 July 1993.

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

(c) Notice of Intent to File a Petition. – An applicant shall prepare a notice of intent to file a petition that includes a nontechnical description of the applicant's request and an identification of the proposed water source. Within 90 days after the applicant files a notice of intent to file a petition, the applicant shall hold at least one public meeting in the source river basin upstream from the proposed point of withdrawal, at least one public meeting in the source river basin downstream from the proposed point of withdrawal, and at least one public meeting in the receiving river basin to provide information to interested parties and the public regarding the nature and extent of the proposed transfer and to receive comment on the scope of the environmental documents. Written notice of the public meetings shall be provided at least 30 days before the public meetings. At the time the applicant gives notice of the public meetings, the applicant shall request comment on the alternatives and issues that should be addressed in the environmental documents required by this section. The applicant shall accept written comment on the scope of the environmental documents for a minimum of 30 days following the last public meeting. Notice of the public meetings and opportunity to comment on the scope of the environmental documents shall be provided as follows:

- (1) By publishing notice in the North Carolina Register.
- (2) By publishing notice in a newspaper of general circulation in:
 - a. Each county in this State located in whole or in part of the area of the source river basin upstream from the proposed point of withdrawal.
 - b. Each city or county located in a state located in whole or in part of the surface drainage basin area of the source river basin that also falls within, in whole or in part, the area denoted by one of the following eight-digit cataloging units as organized by the United States Geological Survey:
 - 03050105 (Broad River: NC and SC);
 - 03050106 (Broad River: SC);
 - 03050107 (Broad River: SC);
 - 03050108 (Broad River: SC);
 - 05050001 (New River: NC and VA);
 - 05050002 (New River: VA and WV);
 - 03050101 (Catawba River: NC and SC);
 - 03050103 (Catawba River: NC and SC);

03050104 (Catawba River: SC);
 03010203 (Chowan River: NC and VA);
 03010204 (Chowan River: NC and VA);
 06010105 (French Broad River: NC and TN);
 06010106 (French Broad River: NC and TN);
 06010107 (French Broad River: TN);
 06010108 (French Broad River: NC and TN);
 06020001 (Hiwassee River: AL, GA, TN);
 06020002 (Hiwassee River: GA, NC, TN);
 06010201 (Little Tennessee River: TN);
 06010202 (Little Tennessee River: TN, GA, and NC);
 06010204 (Little Tennessee River: NC and TN);
 03060101 (Savannah River: NC and SC);
 03060102 (Savannah River: GA, NC, and SC);
 03060103 (Savannah River: GA and SC);
 03060104 (Savannah River: GA);
 03060105 (Savannah River: GA);
 03040203 (Lumber River: NC and SC);
 03040204 (Lumber River: NC and SC);
 03040206 (Lumber River: NC and SC);
 03040207 (Lumber River: NC and SC);
 03010205 (Albemarle Sound: NC and VA);
 06020003 (Ocoee River: GA, NC, and TN);
 03010101 (Roanoke River: VA);
 03010102 (Roanoke River: NC and VA);
 03010103 (Roanoke River: NC and VA);
 03010104 (Roanoke River: NC and VA);
 03010105 (Roanoke River: VA);
 03010106 (Roanoke River: NC and VA);
 06010102 (Watauga River: TN and VA);
 06010103 (Watauga River: NC and TN);
 03040101 (Yadkin River: VA and NC);
 03040104 (Yadkin River: NC and SC);
 03040105 (Yadkin River: NC and SC);
 03040201 (Yadkin River: NC and SC);
 03040202 (Yadkin River: NC and SC).

- c. Each county in this State located in whole or in part of the area of the source river basin downstream from the proposed point of withdrawal.
 - d. Any area in the State in a river basin for which the source river basin has been identified as a future source of water in a local water supply plan prepared pursuant to G.S. 143-355(l).
 - e. Each county in the State located in whole or in part of the receiving river basin.
- (3) By giving notice by first-class mail or electronic mail to each of the following:
- a. The board of commissioners of each county in this State or the governing body of any county or city that is politically independent of a county in any state that is located entirely or partially within the

source river basin of the proposed transfer and that also falls within, in whole or in part, the area denoted by one of the eight-digit cataloging units listed in sub-subdivision b. of subdivision (2) of this subsection.

- b. The board of commissioners of each county in this State or the governing body of any county or city that is politically independent of a county in any state that is located entirely or partially within the receiving river basin of the proposed transfer and that also falls within, in whole or in part, the area denoted by one of the eight-digit cataloging units listed in sub-subdivision b. of subdivision (2) of this subsection.
- c. The governing body of any public water system that withdraws water upstream or downstream from the withdrawal point of the proposed transfer.
- d. If any portion of the source or receiving river basins is located in another state, all state water management or use agencies, environmental protection agencies, and the office of the governor in that state upstream or downstream from the withdrawal point of the proposed transfer.
- e. All persons who have registered a water withdrawal or transfer from the proposed source river basin under this Part or under similar law in an another state.
- f. All persons who hold a certificate for a transfer of water from the proposed source river basin under this Part or under similar law in an another state.
- g. All persons who hold a National Pollutant Discharge Elimination System (NPDES) wastewater discharge permit for a discharge of 100,000 gallons per day or more upstream or downstream from the proposed point of withdrawal.
- h. To any other person who submits to the applicant a written request to receive all notices relating to the petition.

(d) Environmental Documents. – The definitions set out in G.S. 113A-9 apply to this section. The Department shall conduct a study of the environmental impacts of any proposed transfer of water for which a certificate is required under this section. The study shall meet all of the requirements set forth in G.S. 113A-4 and rules adopted pursuant to G.S. 113A-4. An environmental assessment shall be prepared for any petition for a certificate under this section. The determination of whether an environmental impact statement shall also be required shall be made in accordance with the provisions of Article 1 of Chapter 113A of the General Statutes; except that an environmental impact statement shall be prepared for every proposed transfer of water from one major river basin to another for which a certificate is required under this section. The applicant who petitions the Commission for a certificate under this section shall pay the cost of special studies necessary to comply with Article 1 of Chapter 113A of the General Statutes. An environmental impact statement prepared pursuant to this subsection shall include all of the following:

- (1) A comprehensive analysis of the impacts that would occur in the source river basin and the receiving river basin if the petition for a certificate is granted.
- (2) An evaluation of alternatives to the proposed interbasin transfer, including water supply sources that do not require an interbasin transfer and use of water conservation measures.

- (3) A description of measures to mitigate any adverse impacts that may arise from the proposed interbasin transfer.

(e) Public Hearing on the Draft Environmental Document. – The Commission shall hold a public hearing on the draft environmental document for a proposed interbasin transfer after giving at least 30 days' written notice of the hearing in the Environmental Bulletin and as provided in subdivisions (2) and (3) of subsection (c) of this section. The notice shall indicate where a copy of the environmental document can be reviewed and the procedure to be followed by anyone wishing to submit written comments and questions on the environmental document. The Commission shall prepare a record of all comments and written responses to questions posed in writing. The record shall include complete copies of scientific or technical comments related to the potential impact of the interbasin transfer. The Commission shall accept written comment on the draft environmental document for a minimum of 30 days following the last public hearing. The applicant who petitions the Commission for a certificate under this section shall pay the costs associated with the notice and public hearing on the draft environmental document.

(f) Determination of Adequacy of Environmental Document. – The Commission shall not act on any petition for an interbasin transfer until the Commission has determined that the environmental document is complete and adequate. A decision on the adequacy of the environmental document is subject to review in a contested case on the decision of the Commission to issue or deny a certificate under this section.

(g) Petition. – An applicant for a certificate shall petition the Commission for the certificate. The petition shall be in writing and shall include all of the following:

- (1) A general description of the facilities to be used to transfer the water, including current and projected areas to be served by the transfer, current and projected capacities of intakes, and other relevant facilities.
- (2) A description of all the proposed consumptive and nonconsumptive uses of the water to be transferred.
- (3) A description of the water quality of the source river and receiving river, including information on aquatic habitat for rare, threatened, and endangered species; in-stream flow data for segments of the source and receiving rivers that may be affected by the transfer; and any waters that are impaired pursuant to section 303(d) of the federal Clean Water Act (33 U.S.C. § 1313(d)).
- (4) A description of the water conservation measures used by the applicant at the time of the petition and any additional water conservation measures that the applicant will implement if the certificate is granted.
- (5) A description of all sources of water within the receiving river basin, including surface water impoundments, groundwater wells, reinjection storage, and purchase of water from another source within the river basin, that is a practicable alternative to the proposed transfer that would meet the applicant's water supply needs. The description of water sources shall include sources available at the time of the petition for a certificate and any planned or potential water sources.
- (6) A description of water transfers and withdrawals registered under G.S. 143-215.22H or included in a local water supply plan prepared pursuant to G.S. 143-355(l) from the source river basin, including transfers and withdrawals at the time of the petition for a certificate and any planned or reasonably foreseeable transfers or withdrawals by a public water system with service area located within the source river basin.

- (7) A demonstration that the proposed transfer, if added to all other transfers and withdrawals required to be registered under G.S. 143-215.22H or included in any local water supply plan prepared by a public water system with service area located within the source basin pursuant to G.S. 143-355(l) from the source river basin at the time of the petition for a certificate, would not reduce the amount of water available for use in the source river basin to a degree that would impair existing uses, pursuant to the antidegradation policy set out in 40 Code of Federal Regulation § 131.12 (Antidegradation Policy) (1 July 2006 Edition) and the statewide antidegradation policy adopted pursuant thereto, or existing and planned consumptive and nonconsumptive uses of the water in the source river basin. If the proposed transfer would impact a reservoir within the source river basin, the demonstration must include a finding that the transfer would not result in a water level in the reservoir that is inadequate to support existing uses of the reservoir, including recreational uses.
- (8) The applicant's future water supply needs and the present and reasonably foreseeable future water supply needs for public water systems with service area located within the source river basin. The analysis of future water supply needs shall include agricultural, recreational, and industrial uses, and electric power generation. Local water supply plans prepared pursuant to G.S. 143-355(l) for water systems with service area located within the source river basin shall be used to evaluate the projected future water needs in the source river basin that will be met by public water systems.
- (9) The applicant's water supply plan prepared pursuant to G.S. 143-355(l). If the applicant's water supply plan is more than two years old at the time of the petition, then the applicant shall include with the petition an updated water supply plan.
- (10) Any other information deemed necessary by the Commission for review of the proposed water transfer.

(h) Settlement Discussions. – Upon the request of the applicant, any interested party, or the Department, or upon its own motion, the Commission may appoint a mediation officer. The mediation officer may be a member of the Commission, an employee of the Department, or a neutral third party but shall not be a hearing officer under subsections (e) or (j) of this section. The mediation officer shall make a reasonable effort to initiate settlement discussions between the applicant and all other interested parties. Evidence of statements made and conduct that occurs in a settlement discussion conducted under this subsection, whether attributable to a party, a mediation officer, or other person shall not be subject to discovery and shall be inadmissible in any subsequent proceeding on the petition for a certificate. The Commission may adopt rules to govern the conduct of the mediation process.

(i) Draft Determination. – Within 90 days after the Commission determines that the environmental document prepared in accordance with subsection (d) of this section is adequate or the applicant submits its petition for a certificate, whichever occurs later, the Commission shall issue a draft determination on whether to grant the certificate. The draft determination shall be based on the criteria set out in this section and shall include the conditions and limitations, findings of fact, and conclusions of law that would be required in a final determination. Notice of the draft determination shall be given as provided in subsection (c) of this section.

(j) Public Hearing on the Draft Determination. – Within 60 days of the issuance of the draft determination as provided in subsection (i) of this section, the Commission shall hold

public hearings on the draft determination. At least one hearing shall be held in the affected area of the source river basin, and at least one hearing shall be held in the affected area of the receiving river basin. In determining whether more than one public hearing should be held within either the source or receiving river basins, the Commission shall consider the differing or conflicting interests that may exist within the river basins, including the interests of both upstream and downstream parties potentially affected by the proposed transfer. The public hearings shall be conducted by one or more hearing officers appointed by the Chair of the Commission. The hearing officers may be members of the Commission or employees of the Department. The Commission shall give at least 30 days' written notice of the public hearing as provided in subsection (c) of this section. The Commission shall accept written comment on the draft determination for a minimum of 30 days following the last public hearing. The Commission shall prepare a record of all comments and written responses to questions posed in writing. The record shall include complete copies of scientific or technical comments related to the potential impact of the interbasin transfer. The applicant who petitions the Commission for a certificate under this section shall pay the costs associated with the notice and public hearing on the draft determination.

(k) Final Determination: Factors to be Considered. – In determining whether a certificate may be issued for the transfer, the Commission shall specifically consider each of the following items and state in writing its findings of fact and conclusions of law with regard to each item:

- (1) The necessity and reasonableness of the amount of surface water proposed to be transferred and its proposed uses.
- (2) The present and reasonably foreseeable future detrimental effects on the source river basin, including present and future effects on public, industrial, economic, recreational, and agricultural water supply needs, wastewater assimilation, water quality, fish and wildlife habitat, electric power generation, navigation, and recreation. Local water supply plans for public water systems with service area located within the source river basin prepared pursuant to G.S. 143-355(1) shall be used to evaluate the projected future water needs in the source river basin that will be met by public water systems. Information on projected future water needs for public water systems with service area located within the source river basin that is more recent than the local water supply plans may be used if the Commission finds the information to be reliable. The determination shall include a specific finding as to measures that are necessary or advisable to mitigate or avoid detrimental impacts on the source river basin.
- (3) The cumulative effect on the source major river basin of any water transfer or consumptive water use that, at the time the Commission considers the petition for a certificate is occurring, is authorized under this section, or is projected in any local water supply plan for public water systems with service area located within the source river basin that has been submitted to the Department in accordance with G.S. 143-355(1).
- (4) The present and reasonably foreseeable future beneficial and detrimental effects on the receiving river basin, including present and future effects on public, industrial, economic, recreational, and agricultural water supply needs, wastewater assimilation, water quality, fish and wildlife habitat, electric power generation, navigation, and recreation. Local water supply plans prepared pursuant to G.S. 143-355(1) that affect the receiving river basin shall be used to evaluate the projected future water needs in the

receiving river basin that will be met by public water systems. Information on projected future water needs that is more recent than the local water supply plans may be used if the Commission finds the information to be reliable. The determination shall include a specific finding as to measures that are necessary or advisable to mitigate or avoid detrimental impacts on the receiving river basin.

- (5) The availability of reasonable alternatives to the proposed transfer, including the potential capacity of alternative sources of water, the potential of each alternative to reduce the amount of or avoid the proposed transfer, probable costs, and environmental impacts. In considering alternatives, the Commission is not limited to consideration of alternatives that have been proposed, studied, or considered by the applicant. The determination shall include a specific finding as to why the applicant's need for water cannot be satisfied by alternatives within the receiving basin, including unused capacity under a transfer for which a certificate is in effect or that is otherwise authorized by law at the time the applicant submits the petition. The determination shall consider the extent to which access to potential sources of surface water or groundwater within the receiving river basin is no longer available due to depletion, contamination, or the declaration of a capacity use area under Part 2 of Article 21 of Chapter 143 of the General Statutes. The determination shall consider the feasibility of the applicant's purchase of water from other water suppliers within the receiving basin and of the transfer of water from another sub-basin within the receiving major river basin. Except in circumstances of technical or economic infeasibility or adverse environmental impact, the Commission's determination as to reasonable alternatives shall give preference to alternatives that would involve a transfer from one sub-basin to another within the major receiving river basin over alternatives that would involve a transfer from one major river basin to another major river basin.
- (6) If applicable to the proposed project, the applicant's present and proposed use of impoundment storage capacity to store water during high-flow periods for use during low-flow periods and the applicant's right of withdrawal under G.S. 143-215.44 through G.S. 143-215.50.
- (7) If the water to be withdrawn or transferred is stored in a multipurpose reservoir constructed by the United States Army Corps of Engineers, the purposes and water storage allocations established for the reservoir at the time the reservoir was authorized by the Congress of the United States.
- (8) Whether the service area of the applicant is located in both the source river basin and the receiving river basin.
- (9) Any other facts and circumstances that are reasonably necessary to carry out the purposes of this Part.

(l) Final Determination: Information to be Considered. – In determining whether a certificate may be issued for the transfer, the Commission shall consider all of the following sources of information:

- (1) The petition.
- (2) The environmental document prepared pursuant to subsection (d) of this section.
- (3) All oral and written comment and all accompanying materials or evidence submitted pursuant to subsections (e) and (j) of this section.

- (4) Information developed by or available to the Department on the water quality of the source river basin and the receiving river basin, including waters that are identified as impaired pursuant to section 303(d) of the federal Clean Water Act (33 U.S.C. § 1313(d)), that are subject to a total maximum daily load (TMDL) limit under subsections (d) and (e) of section 303 of the federal Clean Water Act, or that would have their assimilative capacity impaired if the certificate is issued.
- (5) Any other information that the Commission determines to be relevant and useful.

(m) Final Determination: Burden and Standard of Proof; Specific Findings. – The Commission shall grant a certificate for a water transfer if the Commission finds that the applicant has established by a preponderance of the evidence all of the following:

- (1) The benefits of the proposed transfer outweigh the detriments of the proposed transfer. In making this determination, the Commission shall be guided by the approved environmental document and the policy set out in subsection (t) of this section.
- (2) The detriments have been or will be mitigated to the maximum degree practicable.
- (3) The amount of the transfer does not exceed the amount of the projected shortfall under the applicant's water supply plan after first taking into account all other sources of water that are available to the applicant.
- (4) There are no reasonable alternatives to the proposed transfer.

(n) Final Determination: Certificate Conditions and Limitations. – The Commission may grant the certificate in whole or in part, or deny the certificate. The Commission may impose any conditions or limitations on a certificate that the Commission finds necessary to achieve the purposes of this Part including a limit on the period for which the certificate is valid. The conditions and limitations shall include any mitigation measures proposed by the applicant to minimize any detrimental effects within the source and receiving river basins. In addition, the certificate shall require all of the following conditions and limitations:

- (1) A water conservation plan that specifies the water conservation measures that will be implemented by the applicant in the receiving river basin to ensure the efficient use of the transferred water. Except in circumstances of technical or economic infeasibility or adverse environmental impact, the water conservation plan shall provide for the mandatory implementation of water conservation measures by the applicant that equal or exceed the most stringent water conservation plan implemented by a public water system that withdraws water from the source river basin.
- (2) A drought management plan that specifies how the transfer shall be managed to protect the source river basin during drought conditions or other emergencies that occur within the source river basin. Except in circumstances of technical or economic infeasibility or adverse environmental impact, this drought management plan shall include mandatory reductions in the permitted amount of the transfer based on the severity and duration of a drought occurring within the source river basin and shall provide for the mandatory implementation of a drought management plan by the applicant that equals or exceeds the most stringent water conservation plan implemented by a public water system that withdraws water from the source river basin.

- (3) The maximum amount of water that may be transferred, calculated as a daily average of a calendar month, and methods or devices required to be installed and operated that measure the amount of water that is transferred.
- (4) A provision that the Commission may amend a certificate to reduce the maximum amount of water authorized to be transferred whenever it appears that an alternative source of water is available to the certificate holder from within the receiving river basin, including, but not limited to, the purchase of water from another water supplier within the receiving basin or to the transfer of water from another sub-basin within the receiving major river basin.
- (5) A provision that the Commission shall amend the certificate to reduce the maximum amount of water authorized to be transferred if the Commission finds that the applicant's current projected water needs are significantly less than the applicant's projected water needs at the time the certificate was granted.
- (6) A requirement that the certificate holder report the quantity of water transferred during each calendar quarter. The report required by this subdivision shall be submitted to the Commission no later than 30 days after the end of the quarter.
- (7) Except as provided in this subdivision, a provision that the applicant will not resell the water that would be transferred pursuant to the certificate to another public water system. This limitation shall not apply in the case of a proposed resale or transfer among public water systems within the receiving river basin as part of an interlocal agreement or other regional water supply arrangement, provided that each participant in the interlocal agreement or regional water supply arrangement is a co-applicant for the certificate and will be subject to all the terms, conditions, and limitations made applicable to any lead or primary applicant.

(o) Administrative and Judicial Review. – Administrative and judicial review of a final decision on a petition for a certificate under this section shall be governed by Chapter 150B of the General Statutes.

(p) Certain Preexisting Transfers. – In cases where an applicant requests approval to increase a transfer that existed on 1 July 1993, the Commission may approve or disapprove only the amount of the increase. If the Commission approves the increase, the certificate shall be issued for the amount of the preexisting transfer plus any increase approved by the Commission. A certificate for a transfer approved by the Commission under G.S. 162A-7 shall remain in effect as approved by the Commission and shall have the same effect as a certificate issued under this Part. A certificate for the increase of a preexisting transfer shall contain all of the conditions and limitations required by subsection (m) of this section.

(q) Emergency Transfers. – In the case of water supply problems caused by drought, a pollution incident, temporary failure of a water plant, or any other temporary condition in which the public health, safety, or welfare requires a transfer of water, the Secretary of Environment and Natural Resources may grant approval for a temporary transfer. Prior to approving a temporary transfer, the Secretary shall consult with those parties listed in subdivision (3) of subsection (c) of this section that are likely to be affected by the proposed transfer. However, the Secretary shall not be required to satisfy the public notice requirements of this section or make written findings of fact and conclusions of law in approving a temporary transfer under this subsection. If the Secretary approves a temporary transfer under this subsection, the Secretary shall specify conditions to protect other water users. A temporary

transfer shall not exceed six months in duration, but the approval may be renewed for a period of six months by the Secretary based on demonstrated need as set forth in this subsection.

(r) Relationship to Federal Law. – The substantive restrictions, conditions, and limitations upon surface water transfers authorized in this section may be imposed pursuant to any federal law that permits the State to certify, restrict, or condition any new or continuing transfers or related activities licensed, relicensed, or otherwise authorized by the federal government. This section shall govern the transfer of water from one river basin to another unless preempted by federal law.

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

(t) Statement of Policy. – It is the public policy of the State to maintain, protect, and enhance water quality within North Carolina. It is the public policy of this State that the reasonably foreseeable future water needs of a public water system with its service area located primarily in the receiving river basin are subordinate to the reasonably foreseeable future water needs of a public water system with its service area located primarily in the source river basin. Further, it is the public policy of the State that the cumulative impact of transfers from a source river basin shall not result in a violation of the antidegradation policy set out in 40 Code of Federal Regulations § 131.12 (1 July 2006 Edition) and the statewide antidegradation policy adopted pursuant thereto.

(u) Repealed by Session Laws 2013-388, s. 2, effective August 23, 2013.

(v) Modification of Certificate. – A certificate may be modified as provided in this subsection:

- (1) The Commission or the Department may make any of the following modifications to a certificate after providing electronic notice to persons who have identified themselves in writing as interested parties:
 - a. Correction of typographical errors.
 - b. Clarification of existing conditions or language.
 - c. Updates, requested by the certificate holder, to a conservation plan, drought management plan, or compliance and monitoring plan.
 - d. Modifications requested by the certificate holder to reflect altered requirements due to the amendment of this section.
- (2) A person who holds a certificate for an interbasin transfer of water may request that the Commission modify the certificate. The request shall be considered and a determination made according to the following procedures:
 - a. The certificate must have been issued pursuant to G.S. 162A-7, 143-215.22I, or 143-215.22L and the certificate holder must be in substantial compliance with the certificate.
 - b. The certificate holder shall file a notice of intent to file a request for modification that includes a nontechnical description of the certificate holder's request and identification of the proposed water source.
 - c. The certificate holder shall prepare an environmental document pursuant to subsection (d) of this section, except that an

environmental impact statement shall not be required for the modification of a certificate unless it would otherwise be required by Article 1 of Chapter 113A of the General Statutes.

- d. Upon determining that the documentation submitted by the certificate holder is adequate to satisfy the requirements of this subsection, the Department shall publish a notice of the request for modification in the North Carolina Register and shall hold a public hearing at a location convenient to both the source and receiving river basins. The Department shall provide written notice of the request for the modification and the public hearing in the Environmental Bulletin, a newspaper of general circulation in the source river basin, a newspaper of general circulation in the receiving river basin, and as provided in subdivision (3) of subsection (c) of this section. The certificate holder who petitions the Commission for a modification under this subdivision shall pay the costs associated with the notice and public hearing.
- e. The Department shall accept comments on the requested modification for a minimum of 30 days following the public hearing.
- f. The Commission or the Department may require the certificate holder to provide any additional information or documentation it deems reasonably necessary in order to make a final determination.
- g. The Commission shall make a final determination whether to grant the requested modification based on the factors set out in subsection (k) of this section, information provided by the certificate holder, and any other information the Commission deems relevant. The Commission shall state in writing its findings of fact and conclusions of law with regard to each factor.
- h. The Commission shall grant the requested modification if it finds that the certificate holder has established by a preponderance of the evidence that the requested modification satisfies the requirements of subsection (m) of this section. The Commission may grant the requested modification in whole or in part, or deny the request, and may impose such limitations and conditions on the modified certificate as it deems necessary and relevant to the modification.
- i. The Commission shall not grant a request for modification if the modification would result in the transfer of water to an additional major river basin.
- j. The Commission shall not grant a request for modification if the modification would be inconsistent with the December 3, 2010 Settlement Agreement entered into between the State of North Carolina, the State of South Carolina, Duke Energy Carolinas, and the Catawba River Water Supply Project.

(w) Requirements for Coastal Counties and Reservoirs Constructed by the United States Army Corps of Engineers. – A petition for a certificate (i) to transfer surface water to supplement ground water supplies in the 15 counties designated as the Central Capacity Use Area under 15A NCAC 2E.0501, (ii) to transfer surface water withdrawn from the mainstem of a river to provide service to one of the coastal area counties designated pursuant to G.S. 113A-103, or (iii) to withdraw or transfer water stored in any multipurpose reservoir constructed by the United States Army Corps of Engineers and partially located in a state

adjacent to North Carolina, provided the United States Army Corps of Engineers approved the withdrawal or transfer on or before July 1, 2014, shall be considered and a determination made according to the following procedures:

- (1) The applicant shall file a notice of intent that includes a nontechnical description of the applicant's request and identification of the proposed water source.
- (2) The applicant shall prepare an environmental document pursuant to subsection (d) of this section, except that an environmental impact statement shall not be required unless it would otherwise be required by Article 1 of Chapter 113A of the General Statutes.
- (3) Upon determining that the documentation submitted by the applicant is adequate to satisfy the requirements of this subsection, the Department shall publish a notice of the petition in the North Carolina Register and shall hold a public hearing at a location convenient to both the source and receiving river basins. The Department shall provide written notice of the petition and the public hearing in the Environmental Bulletin, a newspaper of general circulation in the source river basin, a newspaper of general circulation in the receiving river basin, and as provided in subdivision (3) of subsection (c) of this section. The applicant who petitions the Commission for a certificate under this subdivision shall pay the costs associated with the notice and public hearing.
- (4) The Department shall accept comments on the petition for a minimum of 30 days following the public hearing.
- (5) The Commission or the Department may require the applicant to provide any additional information or documentation it deems reasonably necessary in order to make a final determination.
- (6) The Commission shall make a final determination whether to grant the certificate based on the factors set out in subsection (k) of this section, information provided by the applicant, and any other information the Commission deems relevant. The Commission shall state in writing its findings of fact and conclusions of law with regard to each factor.
- (7) The Commission shall grant the certificate if it finds that the applicant has established by a preponderance of the evidence that the petition satisfies the requirements of subsection (m) of this section. The Commission may grant the certificate in whole or in part, or deny the request, and may impose such limitations and conditions on the certificate as it deems necessary and relevant. (1993, c. 348, s. 1; 1997-443, ss. 11A.119(a), 15.48(c); 1997-524, s. 1; 1998-168, s. 4; 2001-474, s. 28; 2007-484, s. 43.7C; 2007-518, s. 3; 2008-125, s. 1; 2008-198, s. 11.5; 2010-155, ss. 2, 3; 2011-398, s. 50; 2013-388, s. 2; 2014-120, s. 37.)

SECTION .0400 - REGULATION OF SURFACE WATER TRANSFERS

15A NCAC 02E .0401 APPLICABILITY

(a) Pursuant to G.S. 143-215.22G(3), the amount of a transfer shall be determined by the amount of water moved from the source basin to the receiving basin, less the amount of the water returned to the source basin.

(b) Pursuant to G.S. 143-215.22G(3)(a) and 143-215.22G(3)(b), and notwithstanding the definition of basin in G.S. 143-215.22G(1), the following are not transfers:

- (1) The discharge point is situated upstream of the withdrawal point such that the water discharged will naturally flow past the withdrawal point.
- (2) The discharge point is situated downstream of the withdrawal point such that water flowing past the withdrawal point will naturally flow past the discharge point.

(c) The withdrawal of surface water from one river basin by one person and the purchase of all or any part of this water by another party, resulting in a discharge to another river basin, shall be considered a transfer. The person owning the pipe or other conveyance that carries the water across the basin boundary shall be responsible for obtaining a certificate from the Commission. Another person involved in the transfer may assume responsibility for obtaining the certificate, subject to approval by the Division of Water Resources.

(d) Under G.S. 143-215.22I(b), a certificate is not required to transfer water from one river basin to another up to the full capacity of a facility to transfer water from one basin to another if the facility was existing or under construction on July 1, 1993. The full capacity of a facility to transfer water shall be determined as the capacity of the combined system of withdrawal, treatment, transmission, and discharge of water, limited by the element of this system with the least capacity as existing or under construction on July 1, 1993.

History Note: Authority G.S. 143-215.22G; 143-215.22I; 143B-282(a)(2);
Eff. September 1, 1994.