



STATE OF NORTH CAROLINA
DEPARTMENT OF JUSTICE

ROY COOPER
ATTORNEY GENERAL

P.O. BOX 629
RALEIGH, NC 27602

REPLY TO: JENNIE WILHELM HAUSER
ENVIRONMENTAL DIVISION
TEL: (919) 716-6600
FAX: (919) 716-6767
jhauser@ncdoj.gov

November 13, 2015

Christy Lipscomb, Director
Kerr Lake Regional Water System
134 Rose Ave.
Henderson, N.C. 27536

Certified Mail/Return Receipt Requested
and Via E-mail at
clipscomb@ci.henderson.nc.us

Re: Certification of Interbasin Transfer for Kerr Lake Regional Water System

Dear Ms. Lipscomb:

Enclosed is the Certificate Authorizing the Kerr Lake Regional Water System to transfer water from the Roanoke River Basin to the Tar Fishing Creek and Neuse River Basins. This decision was heard at the Environmental Management Commission meeting on November 5, 2015.

According to North Carolina General Statutes § 22L(o) and § 150B, the Kerr Lake Regional Water System may seek judicial review of the Commission's decision in the appropriate Superior Court by filing a petition within 30 days of receipt of the written copy of the Final Agency Decision. A copy of the judicial review petition must be served on the Commission's agent for service of process at the following address:

Sam M. Hayes, General Counsel
Dept. of Environmental Quality
1601 Mail Service Center
Raleigh, NC 27699-1601

If you choose to file a petition for judicial review, I request that you also serve a copy of the petition for judicial review on me at the address listed in the letterhead.

Sincerely,

A handwritten signature in blue ink that reads "Jennie Wilhelm Hauser".

Jennie Wilhelm Hauser
Special Deputy Attorney General
Counsel for the Environmental Management Commission

Christy Lipscomb
November 13, 2015
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cc: Gerard P. Carroll, Chair, EMC (electronically)
Lois Thomas-Spence, Recording Clerk, EMC (electronically)

Kim Nimmer, DWR (electronically)

**CERTIFICATE AUTHORIZING THE KERR LAKE REGIONAL WATER SYSTEM
TO TRANSFER WATER FROM THE ROANOKE RIVER BASIN TO THE TAR,
FISHING CREEK, AND NEUSE RIVER BASINS
UNDER THE PROVISIONS OF N.C.G.S. §143-215.22L(w)**

On January 2, 2009, the Kerr Lake Regional Water System (KLRWS) filed a notice of intent with the Environmental Management Commission (EMC) to request an interbasin transfer (IBT) certificate. The requested IBT certificate will increase the authorized transfer from 10 million gallons per day (MGD) (the grandfathered amount) to 14.2 MGD. The permitted transfer amount shall not exceed 10.7 MGD from the Roanoke River Basin to the Tar River Basin, 1.7 MGD from the Roanoke River Basin to the Fishing Creek Basin, and 1.8 MGD from the Roanoke River Basin to the Neuse River Basin, calculated as a daily average of a calendar month basis. These transfer amounts are based on water use projections to 2045. IBT basins are defined in N.C.G.S. §143-215.22G.

A public hearing on the Interbasin Transfer Certificate for the Kerr Lake Regional Water System was held on March 31, 2015 in the City of Henderson pursuant to N.C.G.S §143-215.22L(w)(3). See Appendix A for the public notice of the hearing. A total of 15 oral comments were received. There were 235 individuals who submitted written comments, which included 1,419 petition signatures.

The EMC considered the KLRWS's request at its regular meeting on November 5, 2015. According to N.C.G.S. §143-215.22L(w)(7), the EMC shall grant the certificate if it finds that the KLRWS has established by a preponderance of evidence that the petition satisfies the requirements of subsection (m) of N.C.G.S. §143-215.22L. Subsection (m) requires that (1) the benefits of the proposed transfer outweigh the detriments of the proposed transfer; (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; and that (4) there are no reasonable alternatives to the proposed transfer. See Appendix B for the North Carolina statutes and administrative rules which govern surface water transfers in the state.

Pursuant to N.C.G.S. §143-215.22L(w)(7), the EMC may grant the requested certificate in whole or in part, or deny it, and may grant a certificate imposing such limitations and conditions as it deems necessary and relevant. Pursuant to N.C.G.S. §143-215.22L(w)(6), in making its final determination, the EMC specifically considered the factors set out in N.C.G.S. §143-215.22L(k):

1. The necessity and reasonableness of the amount proposed to be transferred and its proposed uses,
2. The present and reasonably foreseeable future detrimental effects 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 N.C.G.S. §143-355(1),
4. The present and reasonably foreseeable future beneficial and detrimental effects on the receiving river basin,
5. The availability of reasonable alternatives to the proposed transfer,
6. If applicable, the applicant's present and proposed use of impoundment storage capacity and the applicant's right of withdrawal under N.C.G.S. §§143-215.44 through 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 applicant's service area is located in both the source and receiving river basins, and
9. Any other facts or circumstances which are reasonably necessary to carry out the purposes of this part.

The Commission Finds:

The members of the EMC reviewed and considered the record, including the applicant's notice of intent to request an interbasin transfer certificate, the petition, the environmental assessment (EA), the Hearing Officer's Report and all other sources of information required by N.C.G.S. §143-215.22L(1). Based on the record, the Commission makes the following findings of fact.

Findings of Fact

(1) Necessity, Reasonableness, and Uses of the Proposed Transfer.

The Kerr Lake Regional Water System (KLRWS) currently provides water directly or indirectly to municipal and county systems in four counties and three river basins in northeastern North Carolina. The water supply for the system is John H. Kerr Reservoir (Kerr Lake) on the Roanoke River, and the water is used in the Roanoke, Tar-Pamlico, and Neuse River basins. The KLRWS has a grandfathered capacity to transfer up to 10 million gallons a

day (MGD). The owners of the KLRWS and primary bulk customers served by the system are the City of Henderson, the City of Oxford, and Warren County, known as the “Partners.” They also currently sell water to secondary bulk customers that include communities in Warren, Vance, Franklin, and Granville Counties. These customers include the Towns of Stovall, Warrenton, Kittrell, and Norlina, as well as Granville County, Vance County, and Franklin County. Future sales will occur from the City of Oxford to South Granville Water and Sewer Authority (SGWSA) for use by the Town of Creedmoor and its customer, the Town of Wilton. Franklin County now owns the Town of Youngsville water system and also sells water to the Town of Bunn and Lake Royale community. Figure 1 illustrates the movement of water from the water treatment plant at Kerr Lake, operated by the City of Henderson, to the Partners and bulk customers. Table 1 identifies the three partners, their respective bulk customers, and the river basins in which their service areas are located.

Table 1. Percentage of KLRWS Service Area in Individual River Basins

System	River Basin			
	Roanoke	Tar	Neuse	Fishing Creek
Oxford		100%		
Granville Co.		100%		
Stovall	100%			
SGWASA			100%	
Wilton			100%	
Henderson	30%	70%		
Franklin Co.		85%	15%	
Bunn		100%		
Lake Royale		100%		
Vance Co.	50%	50%		
Kittrell		100%		
Warren Co.	38%			62%
Warrenton				100%
Norlina	50%			50%

KLRWS is actively planning to meet the Partners’ and their customer’s systems needs for a safe, reliable water supply into the future. Using a typical 30-year water supply planning period to 2045, KLRWS shows a projected average day of a maximum month demand (MMD) of 17.4 MGD. It is projected that 3.2 MGD will be returned to the Roanoke River Basin, with the other 14.2 MGD transferred out of the basin. Future demand is based on population projections, service area expansion plans, planned connections to the water supply, and Local Water Supply Plans (LWSPs) developed by the customers of this regional water supplier. In addition to serving future population and commercial growth, the Partners and their customer systems are extending water service areas and obtaining new customers who are currently served by private wells. This will be especially widespread in Vance and Warren Counties, where residents have voiced concerns about the quality of their well water caused by a high mineral content, which creates taste and odor issues. In addition, many private wells have shown to be unreliable during the recent episodes of droughts in the region.

To meet future water demands within the entirety of the service area, the Partners intend to increase their withdrawal from Kerr Lake in the Roanoke River basin by expanding their existing 10 MGD water treatment plant (WTP) to 20 MGD. An authorization to construct (ATC) the WTP was granted to KLRWS by the NC Department of Environment and Natural Resources - Public Water Supply Section on March 23, 2006; PWSS Plan Review Project Serial No. 05-01344. Among other approvals, the issuance of a FONSI related to the environmental assessment document preceded the granting of the ATC. Several extensions have been granted since the 2006 approval. An ATC extension has been granted for the current design of the proposed WTP expansion through December 19, 2016.

Both the expansion and increased withdrawal can be accommodated by the KLRWS's current annual average day water supply storage allocation of 20 MGD in Kerr Lake, issued by the U.S. Army Corps of Engineers (USACE) in 2005. In 2013, the population of the KLRWS service area was 186,000, with an average day maximum month demand (MMD) of 7.7 MGD. The projected service area population in 2045 is nearly 224,000 with a MMD of 17.4 MGD. Table 2 presents the projected population growth through 2045 for the KLRWS service area.

Table 2. Past and Projected Annual Population Growth for KLRWS Service Area

County	2000	2005	2010	2013	2015	2020	2025	2030	2035	2040	2045
Franklin	47,260	53,880	60,813	62,697	63,433	66,009	68,611	71,211	74,151	77,916	81,680
Granville	48,498	53,090	57,577	57,910	59,310	61,336	63,361	65,388	69,149	71,819	74,489
Vance	42,954	43,192	45,358	45,056	45,583	45,692	45,802	45,913	47,021	47,532	48,043
Warren	19,972	20,072	20,939	20,453	20,456	20,088	19,855	19,705	19,878	19,800	19,723

More information about the future population growth and water demand projections may be found in Section 2.1 of the EA.

The proposed certificate is to allow the transfer of up to 14.2 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, expanded service area, and water supply needed for the economic growth of the area serviced by the KLRWS over the next 30 years.

Based on the record, the Commission finds that current grandfathered water supply transfer rate is insufficient to supply the Kerr Lake Regional Water System and its related service areas for the reasonable 30-year planning horizon through the year 2045. Providing water for the anticipated growth of these communities is necessary to support continued growth in this region. The requested IBT certificate for the transfer of 14.2 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.

(2) Present and Reasonably Foreseeable Future 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 North Carolina Division of Water Resources (DWR) Roanoke River Basin Hydrologic Model (model), updated in 2014. A hydrological model for a river basin can be used to assess changes in hydrological indicators for current and future conditions based on a time series of hydrological inputs to the basin. Key indicators that the model can estimate are river flows at various points within the river basin, reservoir water levels, and changes in hydroelectric power generation. The model considers all major water withdrawals and discharges within the Roanoke River basin. As required under N.C.G.S. § 143-215.22L(k)(2), data from local water supply plans 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 reported from the 2010 calendar year for both North Carolina and Virginia. 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 individual local water supply plans, registered water withdrawers, and as provided by Virginia Department of Environmental Quality.

For model development, USGS gage data covering their individual period of record was utilized to establish flow conditions. Lake levels were evaluated for each of the reservoirs in the Roanoke River basin for the period of record and specifically during periods of extreme drought. In evaluating this alternative, lake levels for three different bases of comparison were used:

- Lake levels during the modeling simulation period, 1930 through 2011, based on estimated water demands and returns during 2010, when the IBT was about 4.6 mgd – referred to as the 2010 Baseline;
- Lake levels with all water demands in the basin projected to 2045 and with the KLRWS IBT capped at the grandfathered amount (10 mgd) – referred to as the 2045 Baseline;
- Lake levels with all water demands in the basin projected to 2045 and with the KLRWS IBT at 14.2 mgd MDD – referred to as the 2045 IBT.

The detailed modeling analysis (presented in Appendix D of the EA) indicates that lake level estimates are fairly insensitive to changes in demand due to the large inflows from the watershed and volume of the reservoir. Changes to elevation are relatively insensitive even during drought periods but show the largest change due to overall increase in demand in comparing the 2010 to 2045 Baseline results.

Table 3 summarizes the average changes in elevation during the simulation period and during two recent extreme drought periods, 2002 and 2007, for three reservoirs in the Roanoke system: Kerr Lake, Lake Gaston, and Roanoke Rapids Reservoir. None of the reservoirs showed a discernible difference in elevation between the 2045 baseline and 2045 IBT scenarios during the 2002 and 2007 droughts.

Kerr Lake was the only reservoir that showed any differences, albeit slight, during the exceptional drought periods. The model runs simulate the operation of the reservoirs based on the guide curves specified for each reservoir. This operational mode tends to maintain the reservoir level by regulating releases. For this reason, average lake elevation is usually the same for the different scenarios. When the IBT was superimposed on the 2045 Baseline elevation under 2002 drought conditions, the lake elevation dropped an additional 0.2 feet (2.4 inches). Under the 2007 drought conditions, the elevation dropped 15.2 feet from the average 2045 Baseline elevation to 284.6 feet. When the IBT was superimposed on the 2007 drought conditions, the lake elevation dropped an additional 0.1 feet (1.2 inches). These modeling results indicate that even during exceptional drought conditions, the proposed IBT increase will have negligible effects on the elevation of Kerr Lake.

Table 3. Lake Level Difference for Proposed 2045 IBT for Entire Simulation Period and During 2002 and 2007 Droughts

Scenario Comparison	Results (feet)	Roanoke River Reservoirs		
		Kerr	Gaston	Roanoke Rapids
2045 Baseline versus 2045 IBT	Average Baseline Elevation	299.8	200.0	132.0
	Average Elevation during 2002 Drought	284.8	200.0	132.0
	Average Difference with IBT during 2002 Drought	-0.2	0.0	0.0
	Average Elevation during 2007 Drought	284.6	200.0	132.0
	Average Difference with IBT during 2007 Drought	-0.1	0.0	0.0

Reservoir releases were also evaluated for each of the main stem reservoirs in the Roanoke River basin for the period of record and during the period of extreme drought. As with lake level, there were no projected changes in releases for reservoirs upstream of Kerr Lake. Detailed modeling results for these reservoirs are shown in Appendix D of the EA. Table 4 summarizes differences in water releases for three reservoirs in the system: Kerr Lake, Lake Gaston, and Roanoke Rapids Reservoir.

Table 4. Reservoir Release Differences for the Entire Simulation Period and During the 2002 and 2007 Droughts

Scenario Comparison	Results (cfs)	Roanoke River Reservoirs		
		Kerr	Gaston	Roanoke Rapids
2045 Baseline versus 2045 IBT	Average Baseline Discharge	7,443.5	7,888.8	7,491.5
	Average Discharge during 2002 Drought	3,077.3	3,247.8	2,921.0
	Average Difference during 2002 Drought	5.0	4.9	5.2
	Average Discharge during 2007 Drought	2,691.2	2,989.8	2,681.7
	Average Difference during 2007 Drought	-8.1	-8.1	-8.1

2002 Drought – 6/18/2002 through 10/15/2002
 2007 Drought – 10/16/2007 through 3/10/2008

The modeling results indicate that most of the changes resulting from the IBT are predicted to occur as outflow from Kerr Lake. The average difference in release from Kerr Lake is approximately 5.0 mgd, which is less than the average IBT. Since the model is balancing water, this is likely due to very small changes in lake elevation predicted as a result of the IBT (less than 0.05 foot, which is rounded to 0.0 in Table 3). The reductions in release are predicted to be identical in Lake Gaston and Roanoke Rapids Reservoir to those occurring from Kerr Lake, indicating that the changes as a result of the IBT are occurring in outflow or storage in Kerr Lake. The actual changes in the flows as a result of the IBT are quite small, representing 0.07 percent on average, 0.16 percent during the 2002 drought conditions, and 0.30 percent during the 2007 drought conditions. According to the 2005 U.S. Army Corps of Engineers Reallocation Report for Kerr Lake, the average annual release from Kerr Dam is 8,000 cubic feet per second (cfs) which equates to 5,170 mgd. The maximum proposed IBT allowed under the requested certificate is 14.2 mgd, which represents approximately one-quarter of one percent of the average annual release from the Kerr Dam.

The Environmental Assessment concluded that the proposed IBT would likely not have a noticeable effect on the source basin. The predicted direct impacts to lake levels, all less than 0.2 feet, are not expected to secondarily impact other features of the reservoirs, such as boat ramps, docks, or water intake structures. Additional modeling and analyses were conducted for the Hearing Officer's report in order to estimate the additional time boat launches might be closed due to low water conditions as a result of the requested IBT. Of the 38 boat launches on Kerr Lake, the lowest 26 launches (with elevations between 287.5 feet and 293.5 feet) showed no functional difference between the 2045 baseline and 2045 IBT scenarios. The highest 12 launches (with elevations between 294.5 feet and 296.5 feet) show less than a day's difference on an average annual basis between the future scenarios with and without the IBT. See Appendix C for more detailed results and analyses of possible impacts to boat launches as a result of the requested IBT. Water levels are not predicted to decrease by such an amount that the water intake structures would be impacted, and the guide curves in place aid in the balancing of water levels among the reservoirs. These existing structures are not likely to be impacted by the proposed project.

Other water quality secondary and cumulative impacts to the Roanoke River basin, particularly to Kerr Lake, could result from the proposed project. The watershed of Nutbush Creek includes a portion of the City of Henderson and is the receiving stream for the City of Henderson's wastewater discharge. This stream is on the 303(d) list for biological impairment and urban stormwater impacts are a factor. According to the North Carolina Department of Environmental Quality (NCDEQ), this project would not significantly impact the ability of Nutbush Creek to meet the metrics for standard Class C waters. Impacts would not be significantly different from those of the No Action Alternative. The proposed IBT is not projected to result in increased water quality issues in Nutbush Creek, beyond the existing impairments, and will not require an increase to current permit limits.

Based on the record, the Commission finds that the detrimental effects on the source basin described in N.C.G.S. § 143-215.22L(k)(2) will be very small and difficult to perceive. Additionally, the Commission finds that it is advisable to mitigate the impacts of secondary and cumulative effects caused by growth in the region serviced by the Kerr Lake Regional Water System through the implementation of local ordinances for jurisdictions that are within the Kerr Lake watershed for the protection of the lake. The Commission also finds that state permitting programs will continue to protect water quality in Nutbush Creek.

(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 Roanoke River Basin Hydrologic Model (model scenarios). The model was used to evaluate current and future scenarios of basin water use. Details of the application of this model and the results of analyses of a wide range of scenarios are included in Appendix D of the Environmental Assessment document.

A comparison of Kerr Lake levels projected for the 2045 Baseline and 2045 IBT scenarios was made, utilizing drought conditions projected from the exceptional 2002 and 2007 drought events. Based on the model simulations, the average 2045 Baseline lake elevation was 299.8 feet. Under the 2002 drought conditions, the elevation dropped 15 feet to 284.8 feet. When the IBT was superimposed on the 2002 drought conditions, the lake elevation dropped an additional 0.2 feet (2.4 inches). Under the 2007 drought conditions, the elevation dropped 15.2 feet from the average 2045 Baseline elevation to 284.6 feet. When the IBT was superimposed on the 2007 drought conditions, the lake elevation dropped an additional 0.1 feet (1.2 inches) (Table 3). These modeling results indicate that even during exceptional drought conditions, the proposed IBT increase will not have a noticeable effect on the elevation of Kerr Lake. The two reservoirs downstream of Kerr Lake in the Roanoke River Basin, Lake Gaston and Roanoke Rapids Reservoir, are operated by the U.S. Army Corps of Engineers to maintain constant elevations; modeled lake levels for these reservoirs were unaffected by either drought or IBT conditions.

The detailed modeling analysis presented in Appendix D of the EA indicates that lake level estimates are fairly insensitive to changes in demand due to the large inflows to Kerr Lake from the watershed and volume of the reservoir. Changes to elevation are relatively insensitive even during drought periods; the largest change is due to the overall increase in demand when comparing the 2010 to 2045 Baseline results. A comparison of discharges, or reservoir releases, under the baseline and IBT scenarios was performed for the 2030, 2040, and 2060 demand conditions. No difference was seen in the average discharge from the three reservoirs upstream of Kerr Lake in the Roanoke River Basin. This indicates that the proposed IBT would not require upstream releases to maintain the elevation of Kerr Lake and the lower reservoirs, even during periods of drought.

The total amount of water leaving the Roanoke River basin is considered as part of the cumulative impacts analysis for the proposed project. In addition to this IBT request, the City of Virginia Beach, Virginia has an intake in Lake Gaston and has permission to transfer a maximum of 60 mgd, with recent transfers averaging 25.7 mgd (as reported in 2010).

Virginia Beach's transfer (also referred to as the Lake Gaston Project) does not impact Lake Gaston levels because lake levels are controlled by both FERC licensing and Virginia Power. However, Kerr Lake releases are impacted by the Lake Gaston Project. Downstream flows are reduced by approximately 1 percent; during drought this impact could approach 3 to 4 percent. Also during droughts, downstream flow must be maintained to protect instream habitats and when necessary augmented flows from the storage purchased in Kerr Lake are used. This amounts to an impact to Kerr Lake water levels of 2 to 4 inches, which is separate from the estimated 1.2 to 2.4-inch decrease in water level from the IBT. Cumulatively, these impacts are not significantly different from that previously approved for the Lake Gaston Project and the City of Virginia Beach. Cumulatively with this proposed IBT, downstream flows in the Roanoke River would not be impacted beyond the 1 percent anticipated for the City of Virginia Beach withdrawal.

The City of Henderson's wastewater treatment plant discharges to Nutbush Creek, a 303(d)-listed stream for biological impairment, which empties into Kerr Lake. The City's current national pollutant discharge elimination system (NPDES) permit includes a provision to allow expansion of the discharge to 6.0 mgd. The facility has not had a violation or penalty since 2001 and thus has a long track record of compliance; continued compliance, should expansion to 6.0 mgd occur, will be important to the continued protection of water quality in Nutbush Creek and Kerr Lake. Increased impacts to Nutbush Creek are not expected with the increased wastewater discharge. The NPDES permit has already been approved to 6.0 mgd; the limits in the permit are designed to preserve instream water quality of Nutbush Creek. In summary, water quality in the Roanoke River basin would likely not be impacted by the proposed IBT.

Based on the record, the Commission finds that the proposed IBT represents a small transfer within a large river system. The cumulative effects of this proposed water transfer and consumptive water uses as described in N.C.G.S. §143-215.22L(k)(3) will not have a noticeable effect on the source basin. The provisions for drought management, water conservation, and monitoring and compliance reporting required by N.C.G.S. §143-215.22L(n) will provide additional protection to the source basin and, therefore, those provisions are incorporated into this certificate.

(4) Present and Reasonably Foreseeable Future Beneficial and Detrimental Effects on the Receiving Basins.

The receiving basins, to which water is transferred from Kerr Lake via both consumptive use and wastewater discharge, include the Tar and Neuse River basins as well as the Fishing Creek basin. See Finding No. 1 for reasonably foreseeable future beneficial effects on the receiving basins.

There would be no anticipated detrimental effects to public water supply in the Tar River, Neuse River and Fishing Creek. Other municipalities do use the Tar River for water supply; however, because the initial withdrawal is from the Roanoke River basin, the available water supply in the Tar River would not be reduced by the IBT. Because stream flows in the receiving basins are not expected to change significantly due to the proposal, no detrimental effects are likely to occur to navigation, recreation, or flooding. No construction activities directly associated with the proposed increase in IBT are anticipated in the receiving basins. As documented in the EA, within the receiving basins, 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.

Primary detrimental effects to water quality from the IBT would originate from operation of existing wastewater treatment plants (WWTPs). Wastewater discharges are expected to increase, but as documented in the EA are within the limits of the current NPDES permitted flows. The increased transfer of water to the Neuse River, Tar River, and Fishing Creek basins would translate into an increase in wastewater discharges at the Town of Butner, City of Oxford, Town of Warrenton, Town of Bunn, and Franklin County WWTPs.

The Tar-Pamlico River basin has a nutrient management strategy in place; Phase III is currently underway. Phosphorus and nitrogen reduction goals are the focus, with trading and other mechanisms set up to cost-effectively reduce nutrient loading. The four WWTPs associated with this project, listed above, are owned by members of the Tar-Pamlico Basin Association (Association) and have nutrient monitoring without limits as part of their permits; instead, there is an overall nutrient loading cap for the Association.

The Association has a cap for total nitrogen and total phosphorus loading, which has not been exceeded since the inception of the program even though flows have increased, as shown in annual reports documenting monthly mass loadings of nutrients. The Association has accomplished this performance by instituting biological nutrient removal at individual facilities and monitoring water quality at over 35 stations throughout the basin, including upstream and downstream of these WWTPs. In addition, nitrogen offset credits have been banked and can be used against future nutrient exceedances. The loading cap and other efforts by the Association would minimize any potential detrimental effects to downstream water quality as a result of this project. Therefore, the Pamlico Sound would not likely see

additional nutrient impacts due to the increased wastewater discharge that could result from this project.

These NPDES permits were issued to protect instream water quality while allowing for flexibility with adaptive management strategies. The permitting process for each of these facilities has complied with the North Carolina Environmental Policy Act requirements. DWR's antidegradation policy requires that only the alternative that causes the least amount of environmental damage can be permitted under the NPDES program. Direct impacts related to flooding and streambank erosion due to an increase in stream flow (from treated effluent) could be minor. The permitted NPDES flows would accommodate the proposed IBT flow amounts without creating additional significant impacts.

Secondary and Cumulative Impacts

Urban development of the receiving basins could adversely affect water quality. Indirect or secondary impacts on water quality and aquatic habitat in areas adjacent to and downstream of these areas could occur with full urbanization. Urbanization is most likely in Franklin County, with lower densities of development occurring in Granville and Vance Counties.

Short-term declines in water quality from installation of sewer and water lines, as well as public facility construction projects, and long-term declines in water quality from land use changes could have significant impacts on water quality and subsequent impacts on aquatic habitat, wetlands, and sensitive aquatic and amphibian species in the service area and downstream within the study area. However, with the existing regulatory and non-regulatory environmental protection programs in effect at the local, state, and federal levels, the impacts of the proposed IBT would be minimal when compared to those of the no action alternative. See Section 6 of the Environmental Assessment for the local, state, and federal regulations and programs that will serve to mitigate detrimental effects from the proposed IBT. While no new construction is directly associated with this proposed IBT project, other water system expansion projects, unknown at this time, could include additional infrastructure. Connections between the Partners and their customers are currently in place and of adequate capacity to accommodate projected sales to 2045.

Changes in land use can have a major effect on both the quantity and quality of stormwater runoff. Land use changes associated with urbanization, for example, if not properly planned and managed, can dramatically alter the natural hydrology of an area. Impervious surfaces increase the volume and rate of stormwater runoff. These changes lead to more frequent and severe flooding and also to degradation of water quality from the various stormwater pollutants that wash off impervious areas during rain events (for example, sediments, nutrients, pathogen-indicators).

The population projections for Warren County, including the Fishing Creek watershed, show almost flat growth; therefore, no development-related secondary and cumulative impacts

would likely occur in this basin. Some industrial growth could occur, however it is not expected to be significant enough to influence population growth projections.

Based on the record, the Commission finds that detrimental effects on the receiving basins as described in N.C.G.S. § 143-215.22L(k)(4) will be avoided due to the implementation of existing federal, state, and local regulations and protection programs. The transfer will support continued population growth and result in indirect and cumulative impacts from 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 are projected to be mitigated as a result of federal, state, and local protection programs.

(5) Reasonable Alternatives to the Proposed Transfer.

Several alternatives to the proposed project were defined and evaluated for their ability to meet the Kerr Lake Regional Water System's water supply needs through 2045. The following information regarding water supply alternatives is from Section 3.1 of the EA document. The following six categories of alternatives, with a total of nine different water supply alternatives, were evaluated and are summarized below:

1. **Alternative 1 - No action (Not to exceed grandfathered IBT of 10 mgd)**

Under this alternative, KLRWS would continue to provide water to customers in Warren, Vance, Franklin, and Granville Counties. KLRWS would not exceed the grandfathered IBT of 10 mgd to the Tar River, Neuse River, and Fishing Creek basins. However a request would be made to update the certificate to reflect the average day of a calendar month compliance measure that was incorporated in statute through Session Law 2013-388. This alternative would preclude KLRWS from providing additional water service to its Partners and the public water systems that have contracts with the Partners. This alternative is deficient because it would limit the ability of KLRWS to meet future peak day demands and would provide KLRWS with no resilience to drought. In addition, planned connections to users who currently have individual wells would not occur. This alternative would not meet the project purpose and need.

2. **Alternative 2 – Increase in IBT to meet 2045 demands (Proposed IBT Certificate)**

This alternative would result in an increased IBT to the Tar, Fishing Creek, and Neuse River basins. Under this alternative, KLRWS would continue to be a regional provider of water and would serve its customers in Granville, Franklin, Vance, and Warren Counties. This would involve expanding the existing WTP to 20 mgd initially and meeting all contracted and future demands of the system within the planning period. To distribute water to the expanded system, the KLRWS would need an increase in its authorized IBT to 14.2 mgd on a maximum month basis from the Roanoke River basin (Kerr Lake) to the Tar River basin (10.7 mgd), to the Fishing Creek basin (1.7 mgd), and to the Neuse River

basin (1.8 mgd). Essentially no new infrastructure would be built as part of this alternative; major transmission mains are already in place.

3. Avoid IBT increase by finding alternative surface water sources:

• **Alternative 3a – Avoid Additional IBT by using a surface water withdrawal from the Tar River Basin**

This alternative would eliminate the need for an increased IBT between the Roanoke and Tar River basins. A new WTP or additional infrastructure and an expansion of an existing WTP would be necessary.

One potential water source is Lake Devin, which historically had been the City of Oxford's water source. Lake Devin lies on Hatcher's Run at a point which drains 1.55 square miles. USGS has estimated that the 20-year safe yield from Lake Devin is approximately 2 mgd. This water supply source would not result in adequate water to meet the long-term needs. Additionally, installation of new infrastructure would be required to resume use of Lake Devin as a water supply source. Therefore, this alternative does not meet the project purpose and need.

Another potential water source is the main stem of the Tar River. The Town of Louisburg could expand its water supply intake to meet the needs of KLRWS's Franklin County customers or a parallel intake could be constructed. A review of USGS stream gage data from January 1, 2000 through December 29, 2009 indicates that flows occasionally fell below target levels for aquatic habitat during summer months. A spreadsheet model was developed to evaluate how often the projected flow needs would be met by the Tar River. It was assumed that 11.5 cfs (7.4 mgd) should be maintained at the USGS flow gage based on a 1995 instream flow study conducted by DWR. For 2 percent of the estimated period of record, no withdrawals would be allowed in efforts to meet the recommended instream passing flow of 11.5 cfs. Therefore, it appears the Tar River is not a viable source to meet long-term water supply needs as a run-of-the-river source.

• **Alternative 3b – Avoid IBT by constructing a new water supply reservoir on the Tar River**

A new reservoir could be built in the upper reaches of the Tar River in Granville County. Building a new reservoir typically has greater environmental impact than other alternatives. A new reservoir would modify the flow regime in the river, would impact many acres of wetlands, and would modify instream habitat. This has the potential to significantly impact aquatic species such as the federally endangered Tar River spiny mussel and dwarf wedgemussel.

An impoundment and associated pumping and conveyance infrastructure could be constructed in Franklin County on the Tar River to meet County demands. A new supply

of approximately 3.3 mgd on an average day demand basis would be needed to serve the Tar and Neuse River basins. In order to meet future needs and comply with the instream flow requirement of 11.5 cfs in the Tar River at Louisburg, approximately 980 acre-feet of storage would be required. Assuming an average depth of 6 feet, a depth similar to the average depth of Lake Devin in Oxford and Tar River Reservoir in Rocky Mount, results in a reservoir that is approximately 160 acres which would likely result in significant impacts to aquatic habitat and federally listed species.

- **Alternative 3c – Avoid IBT by using a water withdrawal with offline storage in the Tar River Basin**

An offline reservoir which uses the Tar River as a water supply source could be used. During low flow conditions as discussed under Alternative 3a, water could not be withdrawn based on the instream flow targets. The use of offline storage was considered to determine if the Tar River plus offline storage would meet the 2045 water supply needs of KLRWS. The benefits of offline storage include the ability to withdraw flows at greater rates when water levels are high and to rely on the storage volume to manage peak demands and extended periods of low river flow. Both yearlong and seasonal withdrawal scenarios were considered.

Cost and availability of sites to build the storage remain significant limitations. Offline storage options include damming a tributary to the Tar River, using aboveground storage tanks, or filling abandoned quarries. Damming tributaries to the Tar River would require approximately 2,600 acre-feet of usable water supply storage covering approximately 4,200 acres assuming an average depth of 6 feet. This depth is similar to the average depth of Lake Devin in Oxford and Tar River Reservoir in Rocky Mount. The total storage requirement could be accomplished cumulatively in more than one tributary drainage area; however, this alternative presents similar challenges as described for Alternative 3b.

Aboveground tanks would be costly. The cost to develop storage ranges from \$0.50 to \$1.00 per gallon depending on the cost of land. Other alternatives have costs which are two orders of magnitude lower. There are four quarries registered with the NCDEQ Division of Energy, Mineral, and Land Resources, three of which are used to mine sand, and as such would not likely support water storage or have sufficient storage capacity. A crushed stone quarry was originally issued a permit in 2005, and would likely still be in use in 2045. Finally, quarries are privately owned, and their availability for future use is not guaranteed. There are no known quarries which provide a feasible storage option.

- 4. **Alternative 4 – Avoid Additional IBT by Finding Alternative Groundwater Sources**

Under this alternative, a groundwater source would be used to supply water to meet future needs in the Tar and Neuse River basins, equivalent to approximately 3.0 mgd on an

average daily demand (ADD) basis. The current grandfathered IBT would be used to meet needs in the Fishing Creek watershed. There would be some environmental impacts around any proposed well field, and there could be impacts to groundwater resources in the area. The USACE evaluated this alternative when reviewing the request for additional allocation from Kerr Lake to the KLRWS. In 2005, the USACE found that well yields in the region are low; the maximum yield is 100 gallons per minute (gpm), which is the equivalent of 0.144 mgd, and the best producing well that the Town of Bunn operated had a capacity of 40 gpm. Based on the maximum yield of 100 gpm, KLRWS would need to install 21 wells to meet the 2045 average day demand and 24 wells to meet the maximum day demand; this assumes that the grandfathered 10-mgd IBT would continue. Since well yields would likely not be at the maximum levels, more wells would likely be required to meet 2045 demands. The USACE concluded that expected well yields would not produce an adequate supply of water to meet future needs.

In addition to problems with well yield, Vance County has indicated that many of its residents have complained about odor and discoloration issues with their private wells. Given these concerns, the potential water supply from groundwater is likely inadequate to meet the project purpose and need, and may not provide adequate water quality without additional treatment.

5. Alternative 5 – Minimize IBT by Discharging to Roanoke River Basin

This alternative could be accomplished by either: (1) returning raw wastewater to the Roanoke River basin for treatment at the City of Henderson's WWTP and discharging to the Nutbush Creek arm of Kerr Lake, or (2) returning treated effluent to the Roanoke River basin. Given the advantages of returning treated effluent, rather than raw wastewater, to the source basin, the treated effluent option was the alternative that was considered.

This alternative would require the construction of new wastewater effluent force mains and pump stations to convey treated wastewater from one or more of the WWTPs in the service area that discharge to the Tar River, Neuse River (once sales begin to Southern Granville Water and Sewer Authority) or Fishing Creek basins. Costs of this infrastructure and associated operational and maintenance costs would be significant. There would be direct environmental impacts associated with this alternative because new infrastructure would be built to convey the treated effluent back to the Roanoke River basin.

This alternative would not eliminate IBT due to the large amounts of consumptive use in the receiving basins. Approximately 8.3 mgd could be returned to the Roanoke River under this alternative, but there would remain an IBT of approximately 3.9 mgd. This alternative would minimize the IBT and likely keep it under the grandfathered IBT amount. It would meet water demands, require construction of new transmission lines

back to the Roanoke River basin, and continue to promote the partnerships created by the local governments. While this alternative meets the purpose and need of the project, significant infrastructure costs would be necessary and direct environmental impacts would occur with construction.

6. Use Coastal Water as a Source

- **Alternative 6a - Avoid an increase in IBT by using coastal water as source water through desalination technology**

Estuarine water would need to come from the Pamlico Sound to avoid an IBT and meet the purpose of this alternative. Water would need to undergo a desalination treatment process before it could be used as a drinking water source. In general, it is better to site the plant near the water source, which would not allow use of the current treatment facility. One reason for this is that the wastewater from the treatment process needs to be discharged, and there would be problems in permitting a brackish discharge near Kerr Lake. Pumping saline water long distance would also pose O&M issues for conveyance and pumping infrastructure, since saline waters are highly corrosive.

In addition to high costs, using coastal estuary water would have significant direct environmental impacts. Transmission infrastructure would need to be built from the coast to the KLRWS service area, resulting in land use, wetlands, aquatic and terrestrial resource, and many other impacts because of the distance from the service area. In addition, energy-intensive pumping of the water back would result in higher greenhouse gas emissions than the proposed alternative. A new water treatment plant would also be required, along with desalination technology. This alternative would not impact water supply or hydropower use in the Roanoke River basin, but it would require a new wastewater discharge to the estuary. Using coastal estuary water does not meet the purpose and need and has potential significant direct environmental impacts.

- **Alternative 6b - Avoid an increase in IBT by using groundwater from the coastal area**
Using water from the PCS Phosphate Mine in Aurora, North Carolina was also evaluated. PCS Phosphate uses multiple wells to relieve artesian pressure on the mining floor. Thus, they produce a large quantity of groundwater that could be used as a drinking water supply. Eagle Water Company has contracted with PCS Phosphate for 58 mgd of water that it could sell. The transmission infrastructure would result in impacts to land use, wetlands, aquatic and terrestrial resource, and many other impacts because of the distance of the required pipeline route. This alternative would result in higher greenhouse gas emissions associated with pumping the water. There would be no impacts on water supply or hydropower in the Roanoke River basin. Costs related to this alternative, which include transmission mains, pump stations, and costs associated with obtaining access to the water from the mine, are an order of magnitude higher than the costs to pump wastewater back to the Roanoke River basin. Additionally, the water supply source may not be viable once mining is discontinued. The KLRWS would not have control over the mining operation or schedule for operation. Thus this alternative does not meet the purpose and need of the project.

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 2) to be the most feasible for meeting the KLRWS's water supply needs while minimizing detrimental environmental impacts and that the applicant's need for water cannot be satisfied by alternatives within the receiving basins.

(6) Applicants' Use of Impoundment Storage Capacity.

Based on the record, the Commission finds that this item is not applicable.

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

John H. Kerr Reservoir (Kerr Lake) was constructed in 1952 to provide flood control, generation of hydroelectric power, mosquito control, pollution abatement, conservation of fish and wildlife, low water control navigation, and recreation. Reallocation of the lake's conservation storage pool to include water supply occurred in 1958. The reservoir has 2,262,421 acre-feet (AF) of usable storage, which the US Army Corps of Engineers (USACE) actively manages for power production, flood control, stream flow regulation, recreation, water supply, and fish and wildlife management.

Of Kerr Lake's usable storage, approximately 57% (1,282,367 AF) is dedicated to flood control storage and the other 43% (980,054 AF), referred to as the conservation pool, and is reserved for hydropower generation and water supply. Table 5 presents the allocation of water storage in Kerr Lake. The City of Clarksville, City of Virginia Beach, Virginia Department of

Corrections, Mecklenburg Co-Generation facility (Dominion Resources), and the City of Henderson, NC (KLRWS), are existing users of water from Kerr Lake for municipal and industrial water supply.

Table 5. Kerr Lake Water Storage Allocation

Drainage Area (square miles)		7,800
Storage ^a (AF)	Total Usable Pool (Elevation 268-320 ft msl)	2,262,421
	Flood Control Pool (Elevation 300-320 ft msl)	1,282,367
	Conservation Pool (Elevation 268-300 ft msl)	980,054
	Hydropower	958,939
	Water Supply	21,115

^a Storage remaining after 100 years of sedimentation from July 1953
Source: 2005 USACE Reallocation Report

The KLRWS began withdrawing water from Kerr Lake in 1978. In 2005, the KLRWS requested from the USACE a reallocation of 10,292 acre-feet (AF) from Kerr Lake’s usable conservation pool storage for water supply. The reallocation of 10,292 AF of storage to satisfy this request increased the total water supply storage allocation for all Kerr Lake water supply agreements to 21,115 AF and leaves 28,885 AF of storage remaining for reallocation. This reallocation finalized the conversion of an original 20 million gallon per day (mgd) ‘water use’ agreement to a ‘storage agreement.’ According to the USACE’s analysis of the request, operation of the reservoir with a 20 mgd water withdrawal during the critical low flow period (2002 drought conditions) would result in an elevation at Kerr of 0.26 feet (3.1 inches) lower than what would be expected without any withdrawal. According to the USACE, normal reservoir operations and recreation activities (fishing, boating, swimming, etc.) would not be adversely impacted by this change. The 20 mgd withdrawal (not expected to be reached before the year 2060) is not significant enough to alter reservoir operation; this volume equates to approximately 31 cubic feet per second (cfs), which represents only 0.38% of the 8,000 cfs average annual release from Kerr Dam. The volume of Kerr Lake is too large compared to KLRWS’s maximum allowed withdrawal amount for that withdrawn to have a noticeable effect.

As previously noted, the 20 mgd that the KLRWS is approved by the USACE to withdraw from Kerr Lake is not expected to be reached until at least 2060. For the 30-year planning window utilized for this IBT certificate request, it is expected that by 2045 approximately 17.4 mgd will be withdrawn in order to meet the average day maximum month demand, and of that 14.2 mgd will be transferred outside the Roanoke River basin.

Based on the record, the Commission finds that the water storage allocation and proposed interbasin transfer are consistent with the federally authorized project purposes of Kerr Lake.

(8) Whether KLRWS's Service Area is Located in Both the Source and Receiving River Basins.

The service areas for the Kerr Lake Regional Water System are within the Roanoke River basin (source), the Tar River basin (receiving), the Neuse River basin (receiving), and the Fishing Creek basin (receiving) as illustrated in Figure 1. The percentages of land area served by KLRWS within each river basin are presented in Table 1.

The Commission finds that the Kerr Lake Regional Water System's service area population is located 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 Reasonably Necessary to Carry Out the Purposes of the Statute.

The Commission finds that to protect the source basin during drought conditions, and to mitigate the future need for allocations of the limited resources of this basin, a drought management plan is appropriate. The plan shall describe the actions that the Kerr Lake Regional Water System and their secondary bulk customers will take to protect the Roanoke River Basin during drought conditions. The provisions for drought management, water conservation, and monitoring and compliance reporting as required in N.C.G.S. §143-215.22L(n) and specifically incorporated into this certificate will provide additional protection to the source basin and these provisions shall convey to all bulk water customers of KLRWS, as identified in this IBT certificate.

Decision

Based on the Findings of Fact stated above, the Commission has determined that (1) the benefits of the proposed certificate outweigh the detriments of the certificate; (2) any detriments of the proposed certificate will be mitigated to the maximum degree practicable under the conditions of this Certificate; (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; and (4) there are no reasonable alternatives to the proposed transfer. Therefore, and by duly made motions, the Commission grants the Kerr Lake Regional Water System's request to transfer water from the Roanoke River basin to the Tar River, Fishing Creek, and Neuse River basins. The permitted transfer amount shall not exceed a maximum of 10.7 million gallons per day from the Roanoke River Basin to the Tar River Basin, 1.7 million gallons per day from the Roanoke River Basin to the Fishing Creek basin, and 1.8 million gallons per day from the Roanoke River Basin to the Neuse 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 N.C.G.S. § 143-215.22L. The Kerr Lake Regional Water System 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 Interbasin Transfer Certificate, the Kerr Lake Regional Water System shall prepare and submit a water conservation plan subject to approval by the Division of Water Resources (Division) that specifies the water conservation measures, including a rate pricing structure, to be implemented by the partners 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. All bulk water customers of Kerr Lake Regional Water System, as identified in this Interbasin Transfer Certificate, shall implement a water conservation plan at least as stringent as the requirements imposed on the Kerr Lake Regional Water System. The Certificate Holders shall not transfer any water to any other unit of local government unless that unit of local government agrees to be bound by this condition in full.
2. Within 90 days of receipt of the Interbasin Transfer Certificate, the Kerr Lake Regional Water System shall prepare 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 (Roanoke 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 Kerr Lake Regional Water System that equals or exceeds the most stringent drought management plan implemented by a public water system that withdraws water from the source river basin. All bulk water customers of Kerr Lake Regional Water System, as identified in this Interbasin Transfer Certificate, shall implement a drought management plan at least as stringent as the requirements imposed on the Kerr Lake Regional Water System. The Certificate Holders shall not transfer any water to any other unit of local government unless that unit of local government agrees to be bound by this condition in full.

3. Within 90 days of receipt of the Interbasin Transfer Certificate, the Kerr Lake Regional Water System shall 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 certificate 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 Kerr Lake Regional Water System 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 KLRWS's actual future water needs are significantly less than the KLRWS's projected water needs at the time the certificate was granted.
6. The KLRWS 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 information in the record material to its Findings of Fact, pursuant to N.C.G.S. § 143-215.22L(k), was erroneous, incomplete, or otherwise

contained material misrepresentations, misstatements, or misinterpretations the Commission may reopen and modify or revoke this Certificate to ensure continued compliance with N.C.G.S. Chapter 143, Article 21, Part 2A.

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 N.C.G.S. §143-215.6A.

This is the 9TH day of November, 2015.



Gerard P. Carroll, Chairman

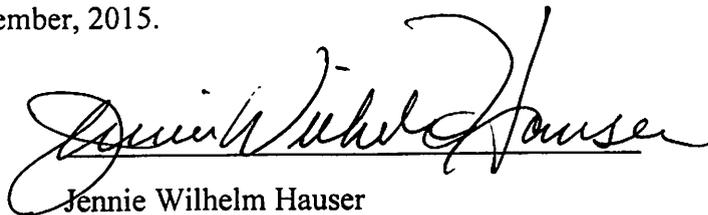
CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing CERTIFICATE AUTHORIZING THE KERR LAKE REGIONAL WATER SYSTEM TO TRANSFER WATER FROM THE ROANOKE RIVER BASIN TO THE TAR, FISHING CREEK, AND NEUSE RIVER BASINS UNDER THE PROVISIONS OF N.C.G.S §143- 215.221(W) on the persons named below by depositing a copy thereof in the United States mail and by sending a copy via electronic mail:

Christy Lipscomb, Director
Kerr Lake Regional Water System
134 Rose Ave.
Henderson, N.C. 27536

Certified Mail/Return Receipt Requested
and Via Electronic mail
clipscomb@ci.henderson.nc.us

This the 13th day of November, 2015.



Jennie Wilhelm Hauser
Special Deputy Attorney General
Counsel for the Environmental Management Commission

N.C. Department of Justice
Environmental Division
Post Office Box 629
Raleigh, NC 27602