

ENVIRONMENTAL MANAGEMENT COMMISSION

Certificate Authorizing the Charlotte-Mecklenburg Utilities to Increase Their Transfer of Water from the Catawba River basin to the Rocky River basin under the Provisions of G.S. 143-215.22I

In August 2001, the Charlotte-Mecklenburg Utilities (CMU) petitioned the Environmental Management Commission (EMC) for an increase in interbasin transfer (IBT) from the Catawba River Basin to the Rocky River Basin. CMU requested an increase from the grandfathered IBT of 16.1 million gallons per day (mgd) to 33 mgd (maximum day basis). The proposed IBT is based on additional water withdrawals from Lake Norman and Mountain Island Lake in the source basin (Catawba River Basin). The IBT will increase due to transfer of the water to the receiving basin (Rocky River Basin) via consumptive use in eastern Mecklenburg County and existing discharges at Mallard Creek Wastewater Treatment Plant [WWTP] and Water and Sewer Authority of Cabarrus County's [WSACC] Rocky River Regional (RRR) WWTP. CMU requested an increase to 33 mgd, will allow CMUD to meet projected water supply demands through the year 2030 in eastern Mecklenburg County. *This IBT does not include transfers associated with water or wastewater service provided to the Goose Creek watershed in the Town of Mint Hill in Mecklenburg County.* Public hearings on the proposed transfer increase were held in Huntersville on December 11, 2001 pursuant to G.S. 143-215.22I.

The EMC considered the petitioner's request at its regular meeting on March 14, 2002. According to G.S. 143-215.22I (g), the EMC shall issue a transfer certificate only if the benefits of the proposed transfer outweigh the detriments of the proposed transfer, and the detriments have been or will be mitigated to a reasonable degree.

The EMC may grant the petition in whole or in part, or deny it, and may require mitigation measures to minimize detrimental effects. In making this determination, the EMC shall specifically consider:

1. The necessity, reasonableness, and beneficial effects of the transfer.
2. Detrimental effects on the source river basin.
- 2a. The cumulative effect on the source major river basin of any water transfer or consumptive water use.
3. Detrimental effects on the receiving basin.
4. Reasonable alternatives to the proposed transfer.
5. Use of impounded storage.
6. Purposes and water storage allocations in a US Army Corps of Engineers multi-purpose reservoir.
7. Any other facts or circumstances necessary to carry out the law.

In addition, the certificate may require a drought management plan. The plan will describe the actions a certificate holder will take to protect the source basin during drought conditions.

The members of the EMC reviewed and considered the complete record which included the hearing officer's report, staff recommendations, the applicant's petition, the Final Environmental Assessment, the public comments relating to the proposed interbasin transfer, and all of the criteria specified above. Based on that record, the Commission makes the following findings of fact.

Finding of Fact

THE COMMISSION FINDS:

(1) **Necessity, Reasonableness, and Benefits of the Transfer**

The proposed transfer will provide water to Mecklenburg County, City of Charlotte, and other communities in the county. The current population served is about 636,000 with a maximum day water use of about 154 million gallons per day (mgd). Projections assume a 2.6 percent annual increase through 2010 decreasing to 1.3 percent by 2030. The projected 2030 serve population is 1,101,000 with a maximum day water use of about 245 mgd.

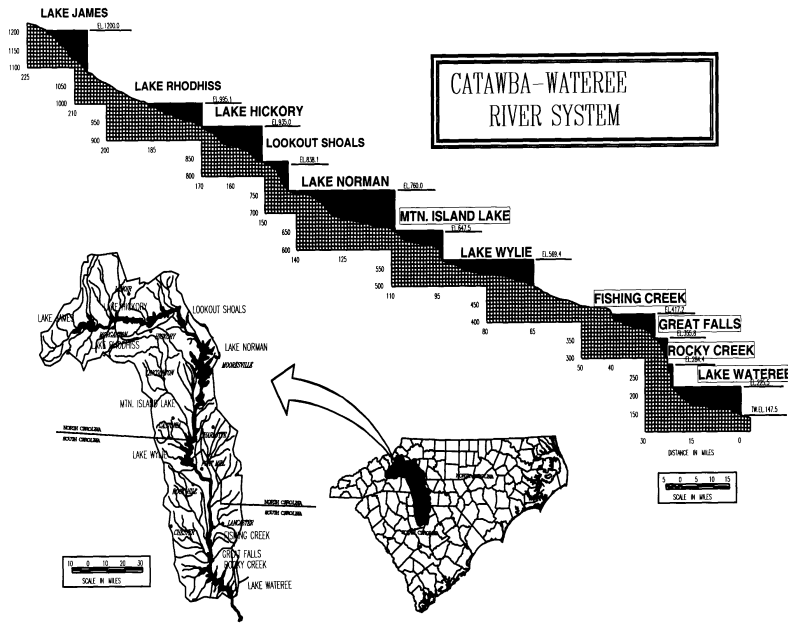
The western boundary of Mecklenburg county includes Lake Norman and Mountain Island Lake which are CMU's two water sources. CMU's current combined withdrawal capacity from both lakes is adequate to meet average day demands until about 2020. CMU has requested an increase from the Federal Energy Regulatory Commission (FERC) to increase their Mountain Island Lake withdrawal capacity. The requested increase from 165 mgd to 330 mgd (instantaneous maximum) will meet projected 2030 demands and add pumping flexibility.

The transfer of water will benefit the Mecklenburg County region by guaranteeing water to support the economic development and associated population growth that has occurred and projected to occur in this region of the State.

Based on the record the Commission finds the transfer is necessary to supply water to the growing communities of this area. Water from the source basin is readily available and within a short distance from the service area. Therefore the transfer is a reasonable allocation to these communities. The transfer will greatly benefit these communities by providing raw water of high quality for residential and industrial purposes.

(2) **Detrimental Effects on the Source Basin**

In order to assess the direct impacts of the proposed transfer on the source basin, the petitioners utilized Duke Energy’s Hydro-Electric Operations and Planning Model of the Catawba-Wateree Project. The Catawba-Wateree model simulates reservoir operations and withdrawals from Lake James in North Carolina to Lake Wateree in South Carolina (see the following figure the *Catawba-Wateree River System*). Details of the modeling analysis are included in this report Part V Applicant Supplemental Information.



As required under G.S. 143-215.22I(f)(2), local water supply plans were considered in developing the model. In addition, industrial and agricultural withdrawals were model inputs. Model runs were evaluated for present conditions, 2030 CMU water demands, and cumulative 2030 water demands.

As seen in the following table, a summary of daily releases from Lake Wylie, the transfer will have minimal impact on low flows. Similarly the model results show minimal impacts to both lake levels and hydropower generation.

Percent of Time that Daily Flow Releases from Lake Wylie Would Equal or Exceed Selected Average Daily Flow Thresholds During the Entire Year							
	400 cfs	500 cfs	700 cfs	1,000 cfs	1,250 cfs	1,500 cfs	2,00 cfs
Average Year							
Existing 2000	100%	100%	97%	87%	82%	82%	79%
CMU 2030	100%	100%	96%	87%	82%	82%	78%
Cumulative 2030	100%	100%	96%	87%	82%	82%	79%
Dry Year							
Existing 2000	100%	95%	88%	81%	76%	73%	61%
CMU 2030	100%	95%	88%	81%	76%	72%	60%
Cumulative 2030	100%	95%	88%	81%	75%	70%	59%
Drought Year							
Existing 2000	100%	85%	82%	70%	52%	39%	29%
CMU 2030	100%	84%	82%	62%	44%	35%	28%
Cumulative 2030	100%	84%	79%	55%	41%	32%	26%

Based on the modeling results the Commission finds that the detrimental effects on the source basin described in G.S. §143-215.22I(f)(2) will be insignificant.

(2a) **Cumulative effect on Source Basin of any transfers or consumptive water use projected in local water supply plans**

Local water supply plan data, including current and projected water use and water transfers, were used to develop the input data sets for the model discussed in Finding Number 2. The model was used to evaluate current and future scenarios of basin water use.

The safe yield of the reservoir system has not been determined. Duke Power does not have a policy on reallocation of power pool storage to water supply, for example unlike the Corps of Engineers. However, based on two 2030 model scenarios and current drought operations, the safe yield is at least as large or larger than the cumulative 2030 scenario of 624 mgd.

Based on the modeling discussed in Finding No. 2, the Commission finds the cumulative effects of this and other future water transfers or consumptive uses as described in G.S. §143-215.22I(f)(2a) will be insignificant.

(3) **Detrimental Effects on the Receiving Basin**

The proposed transfer will utilize existing permitted wastewater discharges to the Rocky River basins; therefore no additional permitted capacities will be required. Previous studies for the existing plant indicated no significant direct water quality or wastewater assimilation on the receiving stream. Additional growth and development in the receiving basin may impact water quality, stormwater runoff, frequency and intensity of flooding, and land use.

The Goose Creek watershed in Mecklenburg County was removed from the area to be served by this transfer certificate until the impacts of additional urban growth on Federally listed endangered mussel species are fully evaluated.

Based on the record the Commission finds the transfer will support continued population growth and the attendant impacts of that growth. These impacts include effects on wastewater assimilation, fish and wildlife habitat, and water quality. However, these impacts will be minimal. Reasonable mitigation includes:

- 1. Require the County to evaluate the feasibility of each element of the Surface Water Improvement and Management Program (SWIM) on an annual basis.*
- 2. Require the County and the Town of Mint Hill to consider the conclusions of Wildlife Resources Commission's Goose Creek watershed study when complete.*
- 3. Require Mecklenburg County and the City of Charlotte to continue the stakeholder process to investigate water quantity control from single-family development and water quality control for all development.*
- 4. The Goose Creek subbasin in Mecklenburg County is removed from the area to be served by the IBT. A moratorium on the installation of new IBT water lines into Goose Creek subbasin is in effect until the impacts of additional growth urban growth on the endangered species are fully evaluated.*

(4) **Alternatives to Proposed Transfer**

The petitioners evaluated three alternatives to the proposed transfer. The alternatives considered included:

1. No Action – Growth would be served by individual wells and septic tanks. The region is already experiencing water quality problems related septic tanks and package sewage plants. Also, a number of individual wells in this region have both low yields and poor water quality.
2. Obtain Water from the Rocky River – New reservoir project. Development of new impoundments for water supply in rapidly developing urban area face significant regulatory requirements and considerable public controversy.
3. Return wastewater discharge to the Catawba – Return wastewater to the McAlpine WWTP. Returning water to the Catawba would increase McAlpine's discharge by 17 mgd. SC DHEC considers the McAlpine plant to be a significant contributor to phosphorus in the Catawba basin already at it's current discharge level.
4. Proposed Action. The proposed action of using the Mallard Creek WTTP and the Rocky Regional WTTP increases the existing discharge of 8 mgd to 18 mgd by 2030 into the Rocky River.

Based on the information provided in the EA and the petition, the Commission finds that the proposed alternative is the most feasible means of meeting the petitioners' long-term water supply needs while minimizing overall impacts and cost.

(5) **Impoundment Storage**

This criterion is not applicable, as the petitioners do not have an impoundment.

(6) **The water to be withdrawn or transferred is stored in a multipurpose reservoir constructed by the United States Army Corps of Engineers**

This criterion is not applicable, as the petitioners are using storage in Duke Power reservoirs.

(7) **Other Considerations**

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. § 143-215.22I(h), a drought management plan is appropriate. The plan should describe the actions that the Charlotte-Mecklenburg Utilities will take to protect the Catawba River Basin during drought conditions.

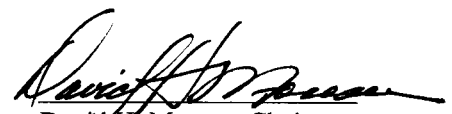
The Commission notes that future developments may prove the projections and predictions in the EIS to be incorrect and new information may become available that shows that there are substantial environmental impacts associated with this transfer. Therefore, to protect water quality and availability and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

Decision

Based on the hearing record and the recommendation of the hearing officers, the Commission, on March 14, 2002 by duly made motions concludes that by a preponderance of the evidence based upon the Findings of Fact stated above that (1) the benefits of the proposed transfer outweigh the detriments of the proposed transfer, and (2) the detriments of the proposed transfer will be mitigated to a reasonable degree. Therefore, and by duly made motions, the Commission grants the petition of the Charlotte-Mecklenburg Utilities (with conditions) to increase their transfer of water from the Catawba River basin to the Rocky River basin. The permitted transfer amount shall be 33 million gallons per day (mgd) on a maximum day basis from the effective date. This certificate is effective immediately. The certificate is subject to the following conditions, imposed under the authority of G.S. § 143-215.22I:

1. Require Mecklenburg County to summarize progress in implementation of watershed management approaches of the Surface Water Improvement and Management Program (SWIM) on an annual basis. The Division of Water Resources shall have the authority to approve modifications to and need for continued reporting as necessary.
2. Require Mecklenburg County and the City of Charlotte to continue the stakeholder process to investigate water quantity control from single-family development and water quality control for all development until completed. To accomplish this end, the stakeholder group should consider evaluating the feasibility of single-family detention and recommending ordinance revisions based on technical, political, long-term maintenance, cost, and benefits related to the proposed ordinance changes.
3. The Goose Creek subbasin in Mecklenburg County is removed from the area to be served by the IBT. A moratorium on the installation of new interbasin transfer water lines (water lines crossing the ridgeline) into Goose Creek subbasin is in effect until the impacts of additional growth urban growth on the endangered species are fully evaluated. This moratorium will not impact Charlotte-Mecklenburg Utility's ability to fully utilize existing water lines. The Division of Water Resources shall have the authority to grant exemptions for reasons of public health and safety for dwellings existing on or before March 14, 2002.
4. If either the EA is found at a later date to be incorrect or new information becomes available such that the environmental impacts associated with this transfer are substantially different from those projected impacts that formed the basis for the above Findings of Fact and this certificate, the Commission may reopen the certificate to adjust the existing conditions or require new conditions to ensure that the detriments continue to be mitigated to a reasonable degree.
5. Require the applicant to develop a compliance and monitoring plan for reporting maximum daily transfer amounts, compliance with certificate conditions, progress on mitigation measures, and drought management activities. The Division of Water Resources shall have the authority to approve modifications to the compliance and monitoring plan and drought management plan as necessary.

This is the 14th day of March, 2002.


David H. Moreau, Chairman