



North Carolina Department of Environment and Natural Resources
Division of Water Resources

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Staff Summary of the Proposed Interbasin Transfer from the Catawba River and South Yadkin River Sub-Basins to the Rocky River Sub-Basin by the Cities of Concord, NC and Kannapolis, NC

I. Background

The Cities of Concord and Kannapolis are requesting an interbasin transfer (IBT) certificate from the North Carolina Environmental Management Commission (EMC) for a combined 48 million gallons per day (MGD) on a maximum day basis from the Catawba River Sub-Basin (3-1) and the Yadkin River Sub-Basin (18-1) to the Rocky River Sub-Basin (18-4). Maximum day IBT under the proposal would be up to 38 MGD from the Catawba River Sub-Basin and up to 10 MGD from the Yadkin River Sub-Basin.

Table 1: Summary of Requested IBT Quantities

Source River Sub-Basin	Max Day Transfer Out of Basin (MGD)
Catawba (3-1)	38
Yadkin (18-1)	10

Short-term demand increases would be met using interconnections with Charlotte (Catawba), Salisbury (Yadkin), and Albemarle (Yadkin). Long-term demands would be met by developing a raw water supply from Lake Norman (Catawba) to supplement flows to Lake Howell and Kannapolis Lake.

IBT occurs because of consumptive use in and discharge to the Rocky River Basin via Water and Sewer Authority of Cabarrus County's [WSACC] Rocky River Regional (RRR) Wastewater Treatment Plant. The IBT is being requested to meet a projected cumulative demand shortfall of 24 MGD in 2035.

II. Environmental Impacts - Source Basins

Catawba Sub-Basin

- No expected significant direct impacts
- Modified results from Duke Power's Computer Hydroelectric Operation and Planning Software (CHEOPS) show that no significant changes are predicted in lake levels, downstream flows, water supply withdrawals, and hydroelectric power generation
- Under normal and drought inflow conditions, Duke Power would manage the reservoirs of the Catawba-Wateree Project and power generation to offset increased water withdrawals to maintain the minimum release requirements and operating lake surface elevations

Yadkin Sub-Basin

- No expected significant direct impacts
- ALCOA analysis of impacts on lake levels shows impacts to be minor unless withdrawals reach 14 MGD from Tuckertown Reservoir, which is more than the proposed withdrawal
- Some potential to lose power generation capacity

III. Environmental Impacts – Receiving Basin (Rocky River Basin)

- Secondary and cumulative impacts on water quality and aquatic habitat due to urban growth and development
- Higher risk of flooding with development and increased impervious surface
- No increase in wastewater discharge permits required

IV. Environmental Impact Statement (EIS) Review Comments

The Wildlife Resources Commission and the Natural Heritage Program were the primary commenting agencies. Their comments included:

- Concerns concentrated on secondary and cumulative impacts in the receiving basin on aquatic habitat and water quality
- Mitigation measures were specified, such as stream buffers and development ordinances including low impact development measures (LIDs)

V. Proposed Mitigation Measures

A number of mitigation measures are proposed. They include:

- A Unified Development Ordinance (UDO) to be adopted by Concord, Kannapolis, Harrisburg, and Mount Pleasant designed to reduce development impacts
- Stream Buffers – 30 feet (20 feet undisturbed) for intermittent and 50 feet undisturbed for perennial streams
- Phase II Stormwater Permits and Water Supply Watershed Protection Programs required
- LID techniques encouraged but not required

VI. Other Considerations

- Population projections agree with Office of State Planning projections
- Projected per capita water use estimates are reasonable and consistent with other similar water systems
- Water Conservation and Drought Management Plans in 2002 Local Water Supply Plans for Concord and Kannapolis meet state requirements
- Adequate monitoring of IBT amounts is proposed

Staff Recommendations

Based on the draft EIS and other materials submitted by the applicant, the requested IBT certificate of up to the proposed quantity is reasonable with conditions to address cumulative and secondary impacts. The Division of Water Resources recommends proceeding with a public hearing and requesting comments on the following:

The public is invited to comment on the applicants' petition and supporting EIS. The Commission is considering and seeking comments on three options with regard to the interbasin transfer request. The options are: (a) grant the certificate for the interbasin transfer request; (b) deny the interbasin transfer request; or (c) grant the certificate including any conditions necessary to achieve the purposes of the statute or to provide mitigation measures. The public is invited to comment on the following possible conditions and to suggest any other appropriate conditions, including other limitations on the amount of the transfer.

1. The Cities of Concord and Kannapolis will enact the following buffer definitions as part of the Unified Development Ordinance:
 - A perennial stream buffer shall be an undisturbed area measured, at minimum, 50 feet from the top of stream bank plus 20 feet of vegetated setback, totaling 70 feet
 - An intermittent stream buffer shall be an undisturbed area measured from the top of stream bank perpendicularly for a distance of 20 feet with an additional 10 feet of vegetated setback, totaling 30 feet

The UDO shall require that within stream buffer areas, the following regulations will apply:

- No new on-site sewage systems utilizing ground adsorption
 - No new structures
 - Maintenance of stream buffer to maintain sheet flow and provide for diffusion and infiltration of runoff and filtering of pollutants
2. Prior to transferring water under the proposed IBT certificate, the holders of the certificate will work with the Division of Water Resources to develop a compliance and monitoring plan subject to approval by the Division. The plan will include methodologies and reporting schedules for reporting the following information: maximum daily transfer amounts, compliance with permit conditions, progress on mitigation measures, drought management and reporting. A copy of the approved plan will be kept on file with the Division for public inspection. The Division of Water Resources will have the authority to make modification to the compliance and monitoring plan as necessary to assess compliance with the certificate.
 3. If either the EIS were to be found at a later date to be incorrect or new information were to become available such that the environmental impacts associated with the proposed transfer were substantially different from the projected impacts that formed the basis for certifying the IBT, the Environmental Management Commission could reopen the certificate to adjust the conditions or to require new conditions to ensure that the detriments of the transfer continue to be mitigated to a reasonable degree.