

Response - NC DENR DWQ Comments on Draft EIS for the Cities of Concord and Kannapolis

TO: NC Division of Water Resources
NC Division of Water Quality

COPIES: City of Concord
City of Kannapolis

FROM: CH2M HILL

DATE: April 4, 2005

The NC Department of Environment and Natural Resources (DENR) Division of Water Quality (DWQ) issued comments dated March 17, 2005 on the Draft Environmental Impact Statement (EIS) and Interbasin Transfer (IBT) Petition being prepared for the Cities of Concord and Kannapolis (Attachment 1). In summary, the cities are requesting an average IBT of up to 24 million gallons per day (MGD) from a combination of sources, the Catawba and Yadkin River Basins, and transferring the water to the Rocky River Subbasin.

This memo includes responses to each of the topic/questions posed by DWQ as follows:

1. Water Resources

Nonpoint Source Pollution in the Rocky River Basin

Comment Summary: DWQ has noted the importance of nonpoint source pollution in the Upper Rocky River in the 2003 Basinwide (Yadkin-Pee Dee) Plan. They have noted that increased development would exacerbate problems associated with biological impairment, fecal coliform and turbidity. DWQ discussed the development of a TMDL to improve water quality in these streams and notes that best management practices (BMPs) are one way to improve water quality in the watershed. DWQ expressed concern that the EIS did not adequately describe currently impaired streams and requested maps to be included in the EIS. Dutch and Irish Buffalo Creeks were two of the Creeks mentioned as having notable impacts that were not identified. They also requested a table be included with major water resources within the service area based on the Basinwide Plan.

Response: The EIS will be modified to fully reflect the importance of nonpoint source pollution (NSP) including potential stormwater impacts. There was no intension of underplaying the importance of NSP in the EIS or petition. In fact there are pretty extensive discussions regarding habitat and pollution concerns and the proposed mitigation programs through the Unified Development Ordinances (UDO). Table 1 below shows a list of major water resources within the receiving basin including the use support rating and cause (i.e.

pollutant). Figure 1 depicts major water resources and the service areas of the communities that will be served through the IBT.

Three streams within the receiving basin service area are considered as having “notable” impacts by DWQ. These streams are Mallard Creek, Irish Buffalo Creek and Coldwater Creek. Mallard Creek is primarily in the service area for Charlotte-Mecklenburg Utilities.

Ambient water quality sampling in the Irish Buffalo Creek watershed have revealed high phosphorus and turbidity levels. Also, fecal coliform bacteria levels are often above water quality limits for primary recreation. Coldwater Creek is a tributary to Irish Buffalo Creek and includes Lake Concord. Fecal coliform bacteria levels in Coldwater Creek are also often above water quality limits for primary recreation. While the Irish Buffalo Creek watershed is developed, most of the Coldwater Creek watershed is rural.

Dutch Buffalo Creek is listed as supporting in the Basinwide Plan and is outside of the service area for requested IBT.

Further discussion of water resources is included in the EIS beginning on page 2-51 and this will be modified in the final EIS after public comment to reflect the above discussion.

TABLE 1
Receiving Basin Water Resources

Stream	Classification	Use Support Rating	Located in Service Area?
Rocky River	C	Impaired	Yes
Coddle Creek to reservoir	WS-II; HWQ	Not rated	Yes
Coddle Creek downstream of reservoir	C	Impaired	Yes
Irish Buffalo Creek	C	Supporting	Yes
Coldwater Creek	C	Supporting	Yes
Dutch Buffalo Creek	WS-II HQW; C	Supporting	No
Clarks Creek	C	Supporting	Yes
Mallard Creek	C	Supporting & Not rated	Yes

Source: NC DENR 2003

2. Alternatives Analysis

Comment Summary: The Alternatives Analysis section in the documents seems incomplete as the alternatives are described and not substantially analyzed. Alternative 4A

(withdrawing 24 MGD downstream in the Rocky River) and No Action Need more analysis and description.

Response: Additional information regarding analysis of alternatives will be provided in the EIS after the public comment period. The following addresses this issue in additional detail.

Alternative 4A includes the withdrawal of 24 MGD from the Rocky River downstream of the existing Water and Sewer Authority of Cabarrus County (WSACC) wastewater treatment facility. For this to be a practical alternative, the Rocky River would first have to be reclassified as a water supply watershed. This regulatory process typically takes at least three years to accomplish for a normal reclassification. Alternative 4A also represents a source that would represent indirect potable reuse for the Cabarrus County communities served by the system. While not entirely unique in the Southeast, the communities determined that other potential sources should be explored through the IBT process prior to developing this source. This source is perceived to be of lower quality than the other alternatives – particularly the preferred alternative. Alternative 4A, as included in the EIS, would also involve pumping back to Lake Howell (Coddle Creek Reservoir). Since the Rocky River would have to be classified as a Class WS-IV water supply, we would also have the policy issue of whether we could pump water to the Class WS-II Lake Howell. If not, additional offline storage would be required for this alternative, increasing the cost substantially. All of these issues could substantially impact the schedule for getting additional water supply and impact the feasibility of this alternative.

It is recognized that additional criteria should have been included to address this issue in the EIS and petition. Table 2 below shows added criteria related to source water quality. The discussion and additional criteria will be added to the EIS.

The No Action Alternative (NAA) would not provide additional water supply to the Cities. However, future population growth is still projected to occur. Growth without proper planning will lead to environmental impacts, both directly and with secondary and cumulative impacts. Secondary and cumulative impacts are of particular concern with the NAA because adequate infrastructure to provide potable water and sewer to avoid septic tank failures and groundwater impacts is important.

TABLE 2
Summary of Alternative Analysis

Alternative with Water Source(s) Listed	Capital Cost Rating	Source Water Quality	Environmental Consequences Rating	Secondary/Cumulative Impacts on Receiving Basin Rating	Impacts on Hydroelectric Power Generation Rating
Alt. 1 - Lake Norman/Catawba	Low	High	High	Lowest	Low
Alt. 2 – Tuckertown-Badin Lake/ Yadkin	Highest	High	Low	Low	Low
Alt. 3 - High Rock Lake/Yadkin	Low	High	Low	Lowest	Low

TABLE 2
Summary of Alternative Analysis

Alternative with Water Source(s) Listed	Capital Cost Rating	Source Water Quality	Environmental Consequences Rating	Secondary/Cumulative Impacts on Receiving Basin Rating	Impacts on Hydroelectric Power Generation Rating
Preferred Alternative	Lowest	High	Low	Lowest	Low
Alt. 4A – Indirect Reuse/Rocky River	High	Low	Lowest	Lowest	Lowest
Alt. 4B – Reverse IBT/Catawba	High	Low	Lowest	Lowest	Low
No Action	High	N/A	Lowest	N/A	Lowest

3. Project Impacts

Comment Summary: DWQ expressed concerns regarding the impact of the propped IBT on Blewett Falls Lake downstream. Blewett Falls Lake is downstream of the Rocky River and Pee Dee River confluence. Historical sampling indicates eutrophic conditions in this reservoir. DWQ requested some specific information to assist in evaluating potential downstream impacts. **Response:** The following provides information requested and will be added to the EIS after the comment period.

Land Use Related Information

The Cities of Concord and Kannapolis expect growth to occur both as infill development and development of currently vacant parcels. Included for the City of Concord are figures depicting vacant land and existing land uses as of March 2005. These maps are based on parcel boundaries, however for clarity reasons the parcel boundaries are not included in the figures. A majority of the City is already developed. Vacant land exists along US 29, along the Irish Buffalo Creek corridor, near Speedway Boulevard, and along I-85, totaling XXX acres. Much of the vacant land along US 29 is owned by Philip Morris and is expected to remain as open space. Growth is likely to occur along the I-85 corridor and near Speedway Boulevard due to surrounding existing commercial and industrial land uses that will spur further growth.

In the City of Kannapolis, approximately 7,200 acres of vacant land are currently available for development. This vacant land does not include approximately 600 acres of vacant land within undevelopable areas such as flood zones.

Both the Cities have undertaken significant land use planning efforts beyond that required by the state. Many factors contribute to this growth including proximity to I-85, the Charlotte metropolitan region, and the growing NASCAR industry in the area. The

availability of water, as facilitated by the IBT, is just one factor influencing the growth of the area and land use changes.

Land use changes will affect currently agriculture areas. Comparing existing and future land use maps, it is apparent that some land already cleared for agriculture use will be converted to other uses. Impacts to terrestrial natural resources such as forests and wildlife habitats will be limited by the open space requirements set forth in the Unified Development Ordinance (UDO). Based on development densities, subdivisions must set aside anywhere from eight percent where densities are less than two dwellings per acre to thirty percent of their total sizes within cluster developments. These values are above and beyond the setbacks required for floodway areas, wetlands, and open water. In both cases, vacant land within flood zones will not be developed. Clustering developments, in process setting aside larger tracts of open space, will limit habitat fragmentation, provide wildlife corridors, and present recreational opportunities.

Rocky River Wastewater Treatment Plant

The current permitted capacity of the Rocky River WWTP is 34 MGD (of which the current constructed capacity is 24 MGD). In addition, the Muddy Creek WWTP in the southern portion of the County has a permitted capacity of 0.3 MGD (of which the current constructed capacity is 0.075 MGD). According to the WSACC Master Plan, the additional water supply provided by the IBT will not require increases in permitted capacity of the WWTP facilities until the later part of the planning period for the IBT (after 2030).

4. Impact Mitigation

Comment Summary: DWQ has requested information regarding specific mitigation measures adopted by the local governments.

Response: The responses are included below by topic area. **Mitigation Implementation**

The Cities of Concord and Kannapolis have worked cooperatively to develop updates for their unified development ordinances (UDOs) that will further protect natural resources within their jurisdictions as development occurs. The UDO and planned updates are summarized in the EIS. These ordinances are planned for adoption before the IBT is in place and it is anticipated that maintaining the protection measures afforded by the UDOs will be a condition of the IBT Certificate.

Efforts to protect natural resources beyond what is currently regulated in the UDO are being planned by both Cities. Each City is developing a Stormwater Quality Management and Discharge Control Ordinance (Stormwater Ordinance), to be incorporated into each UDO that, when implemented, will protect both open space and water resources when new development occurs. These collaborative Stream Buffers efforts will limit the impacts of development in the service areas of the Cities.

Current stream buffer regulations set forth in the UDO will be enhanced to increase water quality and aquatic habitat benefits. Current County-wide buffers of USGS blue line streams will be replaced in the City of Concord with buffers along both perennial and intermittent streams. The City of Kannapolis's plan will be similar to that of the City of Concord's, and is still in development. The City of Concord's draft definitions are:

- A perennial stream buffer shall be an undisturbed area measured 50 feet from the top of stream bank with an additional 20 feet of vegetated setback.
- 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.

The proposed stream buffer regulation includes:

- No new on-site sewage systems, which utilize ground adsorption.
- No new structures, except those provided for in the Stormwater Technical Standards Manual.
- Maintenance of stream buffer to maintain sheet flow and provide for diffusion and infiltration of runoff and filtering pollutants to the maximum extent practicable.

In any annexation situation or where the Cities agree to provide utility services to land under the jurisdiction of the County, the mitigation measures proposed here will be required. Adoption of the above mentioned ordinance updates will occur before any of the IBT would occur, ensuring that measures to protect the service area's natural resources are in place well before the IBT, and the subsequent impacts, occur.

Another way that the City of Concord is furthering its environmental oversight during development is by entering into an agreement with Cabarrus County for the use of the County's Sediment and Erosion Control Program. Using the County's Program provides a greater level of local involvement and control for water quality protection. Also, the City of Kannapolis is currently considering using the County program.

Water Conservation Measures

Both the Cities of Concord and Kannapolis implemented water conservation measures during the drought and have kept them in place after water supplies returned to normal levels. These water conservation measures apply to their entire service areas and not just to the city limits. The water conservation measures were extremely effective during the drought of 1998 through early 2003. Concord and Kannapolis had already exceeded the Governor's requested reduction in demand when he made the request during the summer of 2002. In summary, these water conservation measures will be kept in place, regardless of the alternative chosen to provide future water supply. The communities' current drought management plans are included in the Petition and EIS and address community actions in response to drought.

Wetland Impacts

Under current rules, sites must comply with both federal and state 404 and 401 permitting regulations. Under federal rules, isolated wetlands are not considered jurisdictional. Because these waters are not offered protection under the Clean Water Act, there are currently no measures in place to protect isolated wetlands. If state regulations change to protect these waters, then protection will be provided by the Cities. These wetlands may be protected under other regulations, such as local floodplain protection ordinances.

5. Figures

Comment Summary: DWQ had several recommendations regarding figures.

Response: These will be addressed in the final EIS. Open space cannot really be adequately addressed on a map because of the land development process but this will be addressed by further description of the requirements for open space.

6. General

Comment Summary: DWQ suggested that Section sub-titles be numbered

Response: This will be considered for the final EIS.

This completes the responses to DWQ comments. Please contact Jaime Robinson/CH2M HILL at (704) 329-0073 x 293 or Bill Kreutzberger at (704) 329-0073 x 217 if further information is required.

Insert Figure 1

Attachment 1

DWQ Comment Memo