Status of Interbasin Transfers in NC

Regulation of Surface Water Transfers

*The Schizophrenic Statute -- What Is It?*

An Environmental Permit or Pseudo-Rule Making or a Policy Statement or a Pseudo-Property Right?

Tom Fransen

Water Allocation Section

North Carolina Division of Water Resources
Water Supply Management Program Relationships

Data
- Aquifer
- Streamflow
- Water Use

Adequate Supply Of Water For All Users

Analysis/Planning
- Aquifer, River & Habitat Models
- Water Use Projections
- Local & State Water Supply Plans

Water Allocation (Regulation)
- Water Use Act
- Interbasin Transfer Act
- Instreamflow Rule
Planning & Data

September 27, 2005
Released September 29, 2005

Public Water Supply Systems Status
Overlay
October 3, 2005
Relationship of DENR Water Programs

Water Source/Supply
Division of Water Resources

Water Supply Treatment
Division of Environmental Health

Transfer Of Water Between Basin
Division of Water Resources

Waste Water Treatment
Division of Water Quality
What is an Interbasin Transfer?

An interbasin transfer is the movement of *surface water* from one river basin into another.

The purpose of the Interbasin Transfer Law is the take a pause to be sure it is good public policy to move the water from one river basin into another.

The Interbasin Transfer Law does **NOT** prohibit transfers.
The image most people have when they think about interbasin transfer.
The NC reality.
Another Example of the NC Reality
Regulation of Surface Water Transfers

- North Carolina Administrative Code Section T15A:02G.0400

Effective January 1994
   Modified in 1997 & 1998

EMC certification required for:
   New transfers of 2 MGD or more (maximum daily demand)
   Increase in existing transfers of 25% or more based on the year ending 7/1/1993,
       if 2 MGD or more
   Increase in transfer capacity that existed or under construction on 7/1/1993
   Owner of the pipe crossing the basin boundary is responsible for obtaining the certification

Sound basis for evaluating transfer requests
   public notice
   public hearing
   technical documentation

Two certifications issued since enacted
   1998 Greensboro Emergency Certification (never used)
   July 2001 Cary/Apex/Morrisville/Wake County (for RTP South)
   March 2002 Charlotte-Mecklenburg Utilities

North Carolina Administrative Code Section T15A:02G.0400
Interbasin Transfer Basin Definitions

Major River Basins & Sub-Basins in North Carolina

Legend
- Sub-Basin River Boundary
- Major River Basin Boundary
- County Boundary

Division of Water Resources
919-715-4604
**Transfer = Withdrawal - Return**

143-215.22G(3) "Transfer" means the withdrawal, diversion, or pumping of surface water from river basin and discharge of all or any part of the water in a river basin different from the origin.

T15A:02G.0401(a) The amount of the transfer shall be determined by the amount of water moved from the source basin to the receiving basin, less the amount of water returned to the source basin.
T15A:02G.0401(c) The person owning the pipe or other conveyance that carries the water across the basin boundary shall be responsible for obtaining the certificate.

**Example - 1**
Town A owns pipeline at basin divide. Town A responsible for certification.

**Example - 2**
Town B owns pipeline at basin divide. Town B responsible for certification.

**Example - 3**
Town A owns pipeline at basin divide. Town A responsible for joint certification, including towns A, B, and C.
143-215.22G(3) The following are not transfers:
- The discharge of water upstream from the point where it is withdrawn.
- The discharge of water downstream from the point where it is withdrawn.

T15A:02G.0401(b) The following are not transfers:
(1) The discharge point is situated upstream of withdrawal point such that the water discharges will naturally flow past the withdrawal point.
(2) The discharge point is situated downstream of the withdrawal point such that the water flowing past the withdrawal point will naturally flow past the discharge point.
Interbasin Transfer Certification Process

1. Notification/Consultation
   Determine Grandfathered Capacity

2. SEPA Draft EA/EIS
3. Petition to EMC

4. EMC Approval for Public Hearing
5. Public Comment/Hearing
6. Final EA/EIS
7. EMC Decision on Petition
Transfer Documentation

- Conservation measures
- Necessity, reasonableness, and beneficial effects
- Present and future detrimental effects
  - water supply needs
  - wastewater assimilation
  - water quality
  - fish and wildlife habitat
  - recreation
  - navigation
- Reasonable alternatives
- Drought Management Plan
Purpose of EA/EIS

- Support document to IBT petition
- Assess direct and indirect impacts
- Evaluate reasonable alternatives
- Mitigation measures
Public Hearing Notice

Published in:
NC Register
Newspapers

First-class mail to:
Registered withdrawals
Other transfer certificate holders
NPDES dischargers downstream
County Commissioners
Public water systems
EMC Criteria

• Necessity, Reasonableness, and Beneficial Effects
• Detrimental Effects on the Source and Receiving Basins
  – Public, Industrial, Agricultural Water Supply Needs
  – Wastewater Assimilation
  – Water Quality, Fish and Wildlife Habitat
  – Hydroelectric Power Generation
• Reasonable Alternatives
• Purposes and Storage Allocations of Army Corps of Engineers Reservoirs Established by US Congress
EMC Options

- Approve the IBT Request
- Deny the IBT Request
- Approve the Request with Conditions
Summary of Petition Conditions

- **Common Conditions in All Certificates**
  - *Conditions on compliance and monitoring plan.*
  - Reopener
  - Water shortage response plan requirement.
- **Cary/Apex**
  - *After 2010, water supplied from the Haw River Basin used in the Neuse River Basin shall be returned to either the Haw or Cape Fear basins.*
  - Manage Transfer in such a way that all certificate holders can fully utilize their Jordan Lake allocations.
  - Guidelines for determining individual transfer amounts, if cooperative service agreement is discontinued.
  - Access to intake conditions.
  - Buffer requirements around Jordan Lake.
- **CMU**
  - 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.
  - *A moratorium on the installation of new 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.*
What is the amount of the transfer?

10.0 MGD withdrawal
- 0.0 MGD in basin consumption
- 0.0 MGD return

10.0 MGD transfer from the Tar to the Roanoke.
1. Who is responsible for obtaining the certification?
   Wolfpack City

2. What is the amount of the transfer?
   - 30.0 mgd withdrawal
   - 3.5 mgd in basin consumption
   - 14.0 mgd discharge
   - 12.5 mgd transfer from the Roanoke to the Tar.
Exhibit 1
Grandfathered Interbasin Transfer Worksheet

Date: August 30, 1999
Water System: Charlotte-Mecklenburg Utilities Prepared By: CH2M HILL

Section A. Average Daily Transfer (ADT) Amount for the Year Ending July 1, 1993

- Amount of Surface Water Transferred from 7/1/92 to 6/30/93: 1,825 million gallons.
- Total Number of Days that Transfers Occurred during the year (7/1/92 to 6/30/93): 365 days.
- ADT Amount for the Year: 5 million gallons per day (MGD)
- 25% increase in ADT Amount for the Year Ending 6/30/93: 6.25 MGD

1 If the transfer includes both surface and ground water, include only the surface water portion of the transfer.

Section B. Transfer Capacity as of July 1, 1993

- Capacity of Transfer System Elements (existing or under construction as of July 1, 1993):
  - Water Treatment Plant (permitted capacity): 121.3 MGD
  - Transmission/Distribution System: 41.1 MGD
  - Discharge Capacity (in receiving basin) [Sum of a, b, and c]: 16.12 MGD
    a. Max Day WWTP Permitted Capacity: 10.38 MGD
    (permitted capacity _6.92_ x max day/max month ratio _1.5_)
    b. Max Day Consumptive Loss: 5.25 MGD
    (excluding WWTP flows)
    c. Other (specify) Union County Contract = 0.5 MGD
- Transfer Capacity: 16.12 MGD

Section C. Estimating Certification Requirements

- Estimate the Year when Certification will be required based on a 25% increase in ADT: 1998
  (This is the year the average daily transfer exceeds the amount listed in 5. Attach an average daily transfer water balance table starting in 1993.)
- Estimate the Year when Certification will be required based on Transfer Capacity: 2000
  (This is the year the daily maximum transfer exceeds the amount listed in 6. Attach a maximum daily transfer water balance table starting in 1993.)
**Sample Water Balance Table**

**Water System:** Pirateville  
**Source Basin:** Cape Fear  
**Receiving Basin(s):** Neuse  
**Date:** April 1, 1999  
**Prepared By:** Water Manager

### Water Balance Table - Average Daily Values \(^1,2\)

<table>
<thead>
<tr>
<th>Year</th>
<th>Water System</th>
<th>Withdrawal from Cape Fear</th>
<th>Consumptive Loss (^3)</th>
<th>Wastewater Discharge</th>
<th>Total Return to Cape Fear</th>
<th>Transfer Cape Fear to Neuse (^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(A)</td>
<td>(B)</td>
<td>(C)</td>
<td>Cape Fear (D)</td>
<td>Neuse (E)</td>
<td>Cape Fear (F)</td>
</tr>
<tr>
<td>1993</td>
<td>Pirateville</td>
<td>2.70</td>
<td>0.52</td>
<td>0.34</td>
<td>0.00</td>
<td>1.84</td>
</tr>
<tr>
<td>1997</td>
<td>Pirateville</td>
<td>3.30</td>
<td>0.67</td>
<td>0.43</td>
<td>0.00</td>
<td>2.20</td>
</tr>
<tr>
<td>2000</td>
<td>Pirateville</td>
<td>4.00</td>
<td>0.80</td>
<td>0.52</td>
<td>0.00</td>
<td>2.68</td>
</tr>
<tr>
<td>2010</td>
<td>Pirateville</td>
<td>5.30</td>
<td>1.07</td>
<td>0.69</td>
<td>0.00</td>
<td>3.54</td>
</tr>
<tr>
<td>2020</td>
<td>Pirateville</td>
<td>6.70</td>
<td>1.33</td>
<td>0.87</td>
<td>0.00</td>
<td>4.50</td>
</tr>
</tbody>
</table>

\(^1\) All numbers are expressed in million gallons per day (MGD) rounded to two decimal places.  
\(^2\) Complete the table for both average and maximum daily demands.  
\(^3\) Consumptive losses include all water use that is not directly discharged into a receiving stream, such as landscape irrigation and septic systems.  
\(^4\) If there is more than one receiving basin, add additional columns for each basin.
How Has Water Supply Planning Changed?

- Higher Costs – How Much?
  - Potentially higher cost alternatives.

- Better Documentation
  - Local Water Supply Plans
  - Determination of grandfathered capacity

- Permit Process
  - Coordination with other agencies
    - SEPA
  - More time and cost

- Compliance Monitoring
  - Reporting of water-use and wastewater information
    - Modified billing system to include basin information
Summary of Current Interbasin Transfer Requests

- Concord/Kannapolis
- Union County
- Kerr Lake Regional Water System
- Greenville Utilities
# North Carolina Interbasin Transfers of 2 MGD or Greater, 1997 LWSP Data

## Transfers Between Major River Basins

<table>
<thead>
<tr>
<th>Water System</th>
<th>Source Basin</th>
<th>Receiving Basin</th>
<th>Estimated Average</th>
<th>Estimated Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1King's Mountain</td>
<td>Broad (1-1)</td>
<td>Catawba (3-1)</td>
<td>1.2</td>
<td>1.9</td>
</tr>
<tr>
<td>2Brunswick Co</td>
<td>Cape Fear (2-3)</td>
<td>Shalote (9-4)</td>
<td>1.9</td>
<td>3.0</td>
</tr>
<tr>
<td>3Charlotte Mecklenburg</td>
<td>Catawba (3-1)</td>
<td>Rocky (18-4)</td>
<td>9.0</td>
<td>14.4</td>
</tr>
<tr>
<td>4Union County</td>
<td>Catawba (3-1)</td>
<td>Rocky (18-4)</td>
<td>5.6</td>
<td>9.0</td>
</tr>
<tr>
<td>5High Point</td>
<td>Deep (2-2)</td>
<td>Yadkin (18-1)</td>
<td>4.4</td>
<td>7.0</td>
</tr>
<tr>
<td>6Cary/Apex/Mrsvl/HS/RTD</td>
<td>Haw (2-1)</td>
<td>Neuse (10-1)</td>
<td>9.5</td>
<td>15.2</td>
</tr>
<tr>
<td>7Durham</td>
<td>Neuse (10-1)</td>
<td>Haw (2-1)</td>
<td>18.0</td>
<td>25.8</td>
</tr>
<tr>
<td>8Kerr Lake RWS</td>
<td>Roanoke (14-1)</td>
<td>Tar (15-1)</td>
<td>1.3</td>
<td>2.1</td>
</tr>
<tr>
<td>9Asheboro</td>
<td>Uwharrie (18-3)</td>
<td>Deep (2-2)</td>
<td>4.6</td>
<td>7.4</td>
</tr>
<tr>
<td>10Concord/Kannapolis</td>
<td>Catawba (3-1)</td>
<td>Rocky (18-4)</td>
<td>15.0</td>
<td>24.0</td>
</tr>
</tbody>
</table>

**Estimated Total Transfer between Major Basins**

<table>
<thead>
<tr>
<th>Estimated Average</th>
<th>Estimated Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>70.5</td>
<td>112.9</td>
</tr>
</tbody>
</table>

## Transfers Between Subbasins

<table>
<thead>
<tr>
<th>Water System</th>
<th>Source Basin</th>
<th>Receiving Basin</th>
<th>Estimated Average</th>
<th>Estimated Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1Dunn</td>
<td>Cape Fear (2-3)</td>
<td>South (2-4)</td>
<td>1.2</td>
<td>1.9</td>
</tr>
<tr>
<td>2Sanford</td>
<td>Cape Fear (2-3)</td>
<td>Deep (2-2)</td>
<td>1.6</td>
<td>2.6</td>
</tr>
<tr>
<td>3Wilmington</td>
<td>Cape Fear (2-3)</td>
<td>Northeast Cape Fear (2-5)</td>
<td>4.6</td>
<td>7.4</td>
</tr>
<tr>
<td>4Gastonia</td>
<td>Catawba (3-1)</td>
<td>South Fork Catawba (3-2)</td>
<td>8.4</td>
<td>13.4</td>
</tr>
<tr>
<td>5Hickory</td>
<td>Catawba (3-1)</td>
<td>South Fork Catawba (3-2)</td>
<td>5.1</td>
<td>8.2</td>
</tr>
<tr>
<td>6Longview</td>
<td>Catawba (3-1)</td>
<td>South Fork Catawba (3-2)</td>
<td>1.3</td>
<td>2.1</td>
</tr>
<tr>
<td>7Kannapolis</td>
<td>South Yadkin (18-2)</td>
<td>Rocky (18-4)</td>
<td>4.5</td>
<td>7.2</td>
</tr>
<tr>
<td>8Albemarle</td>
<td>Yadkin (18-1)</td>
<td>Rocky (18-4)</td>
<td>8.5</td>
<td>13.7</td>
</tr>
<tr>
<td>9Statesville</td>
<td>Yadkin (18-1)</td>
<td>South Yadkin (18-2)</td>
<td>5.0</td>
<td>8.0</td>
</tr>
</tbody>
</table>

**Estimated Total Transfer between Subbasins**

<table>
<thead>
<tr>
<th>Estimated Average</th>
<th>Estimated Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>40.2</td>
<td>64.3</td>
</tr>
</tbody>
</table>
Catawba Average Day Transfers

- **2005 – 5 MGD**
  - **2030 – 8 MGD**

- **2005 – 19 MGD**
  - **2030 – 30 MGD**

- **2005 – 1 MGD**
  - **2030 – 1 MGD**

- **2005 – 2 MGD**
  - **2030 – 3 MGD**

- **2005 – 25 MGD**
  - **2030 – 71 MGD**

- **2005 – 5 MGD**
  - **2030 – 8 MGD**

- **2005 – 1 MGD**
  - **2030 – 1 MGD**

- **2005 – 2 MGD**
  - **2030 – 3 MGD**
Proposed Transfer Quantity

- Catawba to Rocky
  - 38 Million Gallons per Day
- Yadkin to Rocky
  - 10 Million Gallons per Day

- Transfer Limits on MAX DAY BASIS
- 24 MGD Average Day Shortfall through 2035
Additional Information
http://www.ncwater.org/Permits_and_Registration/Interbasin_Transfer/
Questions?

Information that can be found on the WEB at the Division’s Home page: http://www.ncwater.org/

or

http://www.ncwater.org/Permits_and_Registration/Interbasin_Transfer/