TETRA TECH

Brunswick County Proposed Interbasin Transfer

Public Meetings

April 16, 2009 – Bolivia April 21, 2009 – Leland April 23, 2009 – Carolina Shores April 28, 2009 – Elizabethtown



Presentation Outline

- Brunswick County Water System
- Need for Project and Interbasin Transfer
- Interbasin Transfer Co-Applicants
- Environmental Impact Statement Preliminary Alternatives
- Next Steps
- Public Comment





About Brunswick County's Water System

- Northwest Water Treatment Plant
 - Water Source = Cape Fear River Above Lock and Dam 1 (LCFWSA)

• 24 MGD

- 211 Water Treatment Plant
 - Water Source = Groundwater well; Castle Hayne Aquifer
 - 6 MGD



Courtesy of Google Earth



About Brunswick County's Water System

Water provided to:

•11 wholesale customers

 Bald Head Island, Boiling Spring Lakes, Caswell Beach, Holden Beach, North Brunswick SD, Northwest, Oak Island, Ocean Isle Beach, Shallotte, Navassa, and Southport

- 30,500 retail and industrial customers
 - Within County jurisdiction
 - Retail customers residing in Sunset Beach, Carolina Shores, Bolivia, Calabash, and Varnamtown







Project Need

 Northwest WTP approaching 80% capacity on peak days

 Need for increased treatment capacity to meet demand



Figure 1 - NWTP Flow Rates (2005-2007)

From Hazen and Sawyer



Water Treatment Demand Projection – Total System



Grandfathered Transfer Capacity

Transfer Capacity as of July 1, 1993

| Water Transfer Element | Capacity (MGD) | |
|----------------------------------|----------------|--|
| Water Treatment Plant | 24 | |
| Transmission/Distribution System | 18 | |
| Discharge Capacity | 10.44 | |
| Transfer Capacity | 10.44 | |



Interbasin Transfer in Brunswick County

 Maximum Daily Water Transfer: Actual 2006; Projected 2010 – 2040; in MGD

| Year | Withdrawal from Source | Total Return to Source Basin | Interbasin Transfer – Shallotte | Interbasin Transfer – Waccamaw | Total Interbasin Transfer |
|------|---------------------------|---------------------------------------|---------------------------------------|--------------------------------------|---------------------------------|
| 2006 | 18.2 | 9.18 | 8.37 | 0.65 | 9.02 |
| 2010 | 20.04 | 10.06 | 9.24 | 0.75 | 9.99 |
| 2012 | 21.02 | 10.58 | 9.68 | 0.76 | 10.44 |
| 2020 | 24.96 | 12.24 | 11.92 | 0.80 | 12.72 |
| 2030 | 31.23 | 15.02 | 15.35 | 0.87 | 16.21 |
| 2040 | 37.50 | 18.21 | 18.35 | 0.94 | 19.29 |



Co-applicants for IBT Certificate

- 55 Public Water Supply Systems as defined by DEH in Brunswick County
 - •40 on groundwater
 - Of the remaining surface water systems,7 are located in the receiving river basins
 - 2 of the 7, a hospital and a mobile home park
- Brunswick County (lead applicant)
- Co-applicants: the towns of Oak Island, Shallotte, Holden Beach, and Ocean Isle Beach



EIS - Preliminary Alternatives

1. No action

- 2. Increase in interbasin transfer to meet water demand in receiving river basins
- 3. Avoid interbasin transfer by using water source in receiving river basins
- 4. Avoid interbasin transfer by returning wastewater to the source river basin





Next Steps

 Current: Public Meetings, Public Comment, and Scoping

Next:

- IBT-EIS study plan with DWR
- Prepare Environmental Impact Statement (EIS)
- Public Review of Draft EIS

IBT Petition to the EMC



Comments

Oral comments at four public meetings

Written comments can be mailed to:

- Brunswick County Public Utilities Department Attn. Jerry Pierce, P.E.
 P.O. Box 249
 Bolivia, NC 28422
- Or emailed to jpierce@brunsco.net
- Comments accepted through May 29, 2009

Presentations and other documents available at: http://www.ncwater.org/Permits_and_Registration/Interbasin_Transfer/

