

Yadkin River Water Supply Project

Collaborative Leadership

AARO

Catalyst Summit 2024



Delivering an *Impossible* Project Requires Leadership: *that is:*

- Visionary
- Trusted
- Collaborative
- Committed to the Cause
- Community-Focused

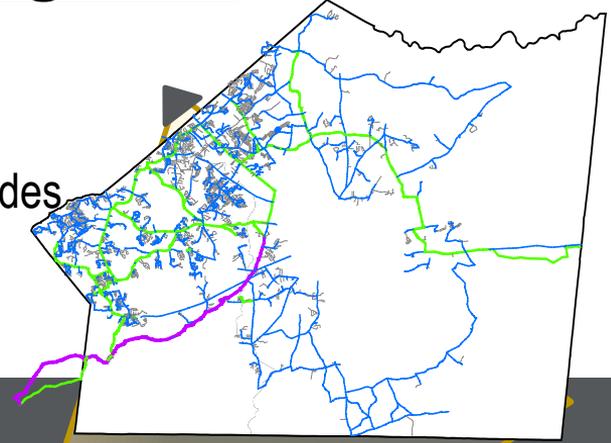




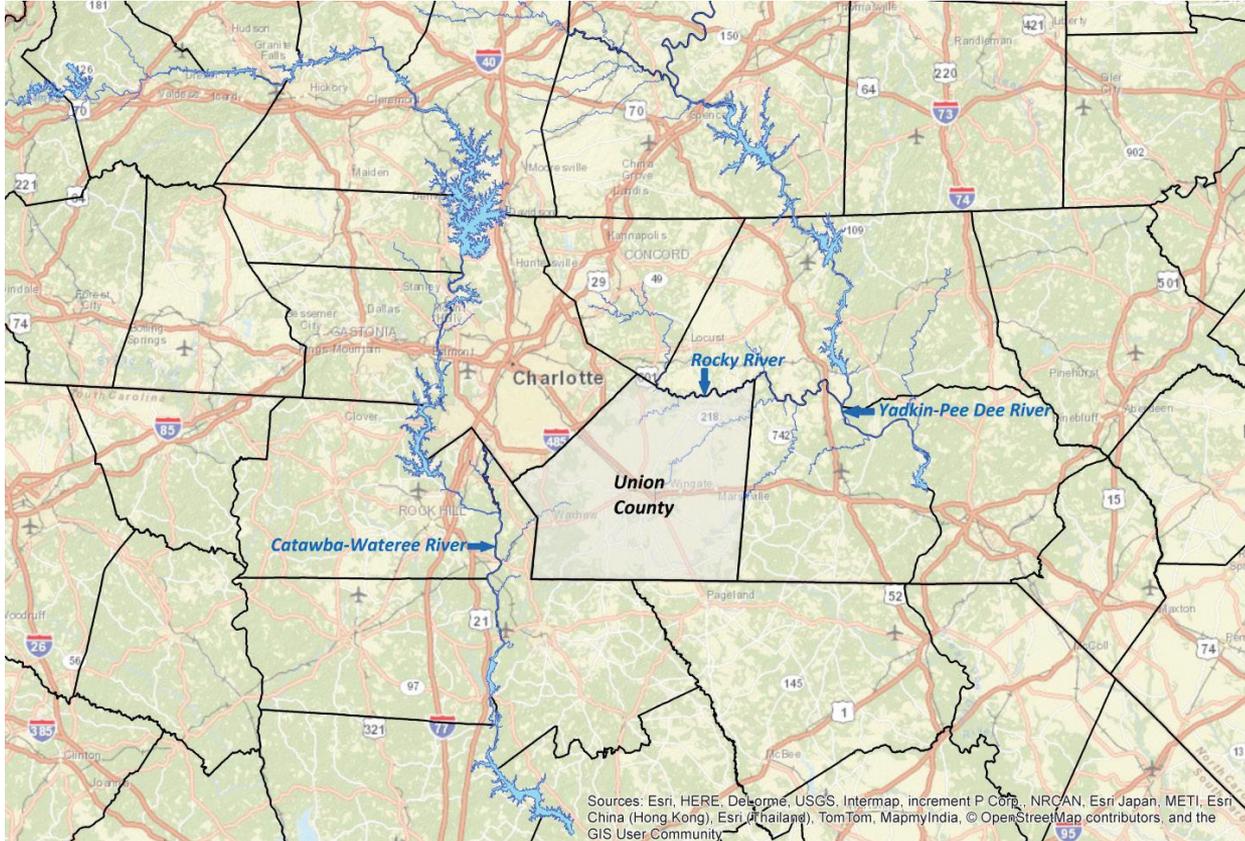
01 Project History and Background

Union County, NC has experienced rapid growth over the past 30 years

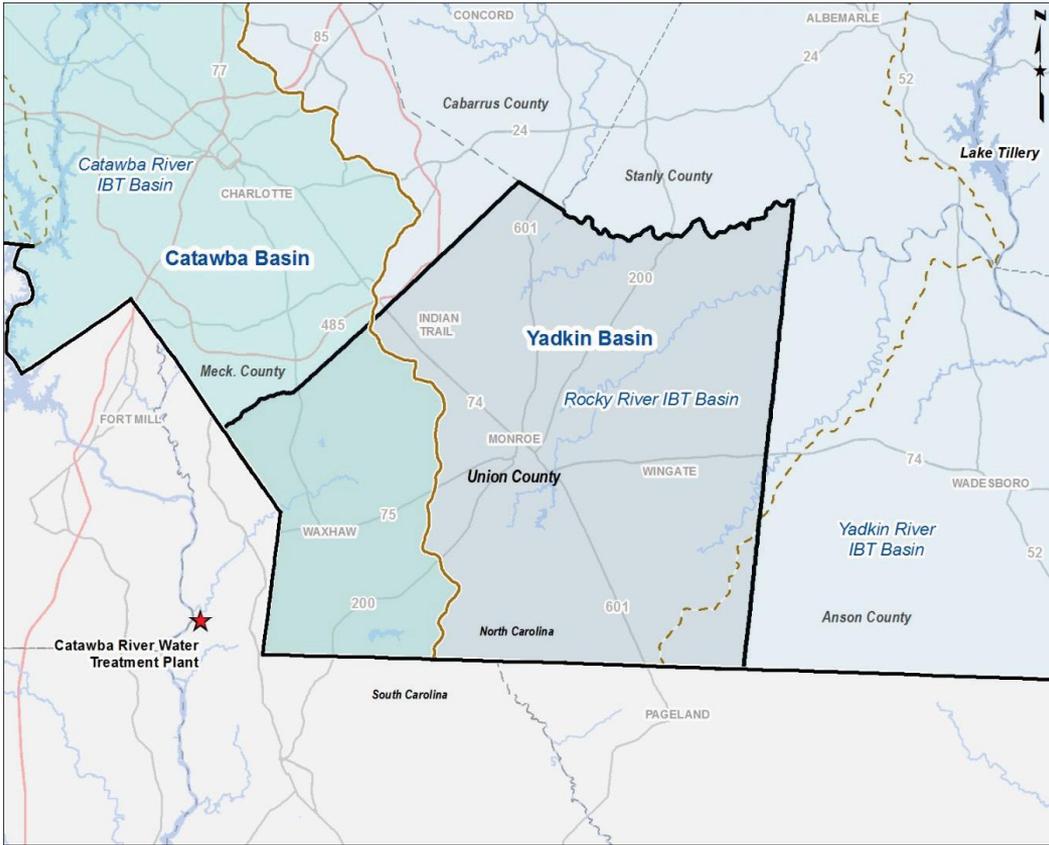
- Located adjacent to Charlotte
- One of the fastest growing counties (NC and US) over the past decades
- County's water system serves over ½ the County



Union County's service areas are not near major river basin water sources



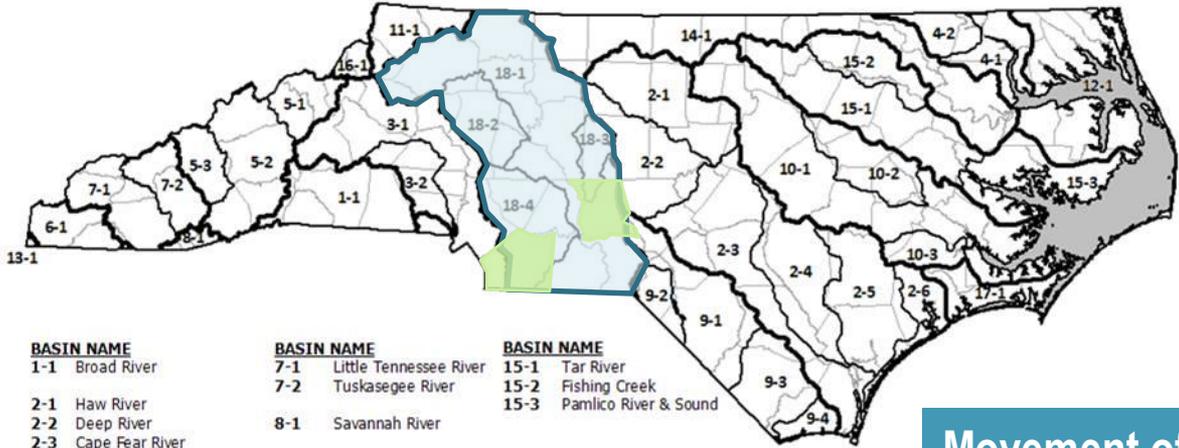
Designated basin boundaries necessitate an IBT Certificate



Backdrop: US Supreme Court Case

Inter-basin Transfer of surface water is complex and costly in NC

Designated Interbasin Transfer River Basins
As defined in G.S. §143-215.22G



<u>BASIN NAME</u>	<u>BASIN NAME</u>	<u>BASIN NAME</u>
1-1 Broad River	7-1 Little Tennessee River	15-1 Tar River
2-1 Haw River	7-2 Tuskasegee River	15-2 Fishing Creek
2-2 Deep River	8-1 Savannah River	15-3 Pamlico River & Sound
2-3 Cape Fear River	9-1 Lumber River	16-1 Watauga River
2-4 South River	9-2 Big Shoe Heel Creek	17-1 White Oak River
2-5 Northeast Cape Fear River	9-3 Waccamaw River	18-1 Yadkin River
2-6 New River	9-4 Shallotte River	18-2 South Yadkin River
3-1 Catawba River	10-1 Neuse River	18-3 Uwharrie River
3-2 South Fork Catawba River	10-2 Contentnea Creek	18-4 Rocky River
4-1 Chowan River	10-3 Trent River	
4-2 Meherrin River	11-1 New River	
5-1 Nolichucky River	12-1 Albemarle Sound	
5-2 French Broad River	13-1 Ocoee River	
5-3 Pigeon River	14-1 Roanoke River	
6-1 Hiwassee River		

Movement of water across any of these basin boundaries is considered an IBT under NC Law

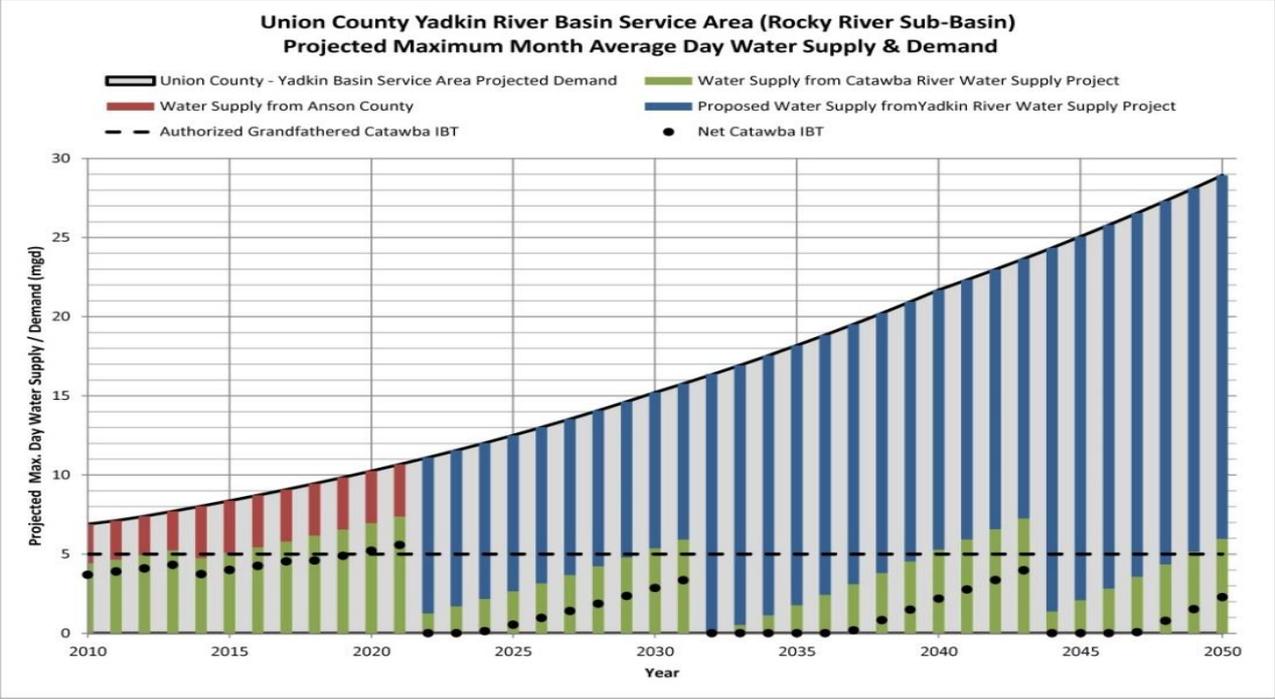
The need for a new water supply for the County's Yadkin River Basin service area was studied since 2003

- 2004 – Rocky River Water Supply Feasibility Study
- 2005 – Water Supply Master Plan
- 2008 – Eastern Water Supply PER
- 2011 – Eastern Water Supply Feasibility Study and Project Partner Assessment
- 2011 – Comprehensive Water and Sewer Master Plan

Moratorium Imposed on Growth



Union County's water demands expected to grow significantly by 2050 and needed a new raw water source



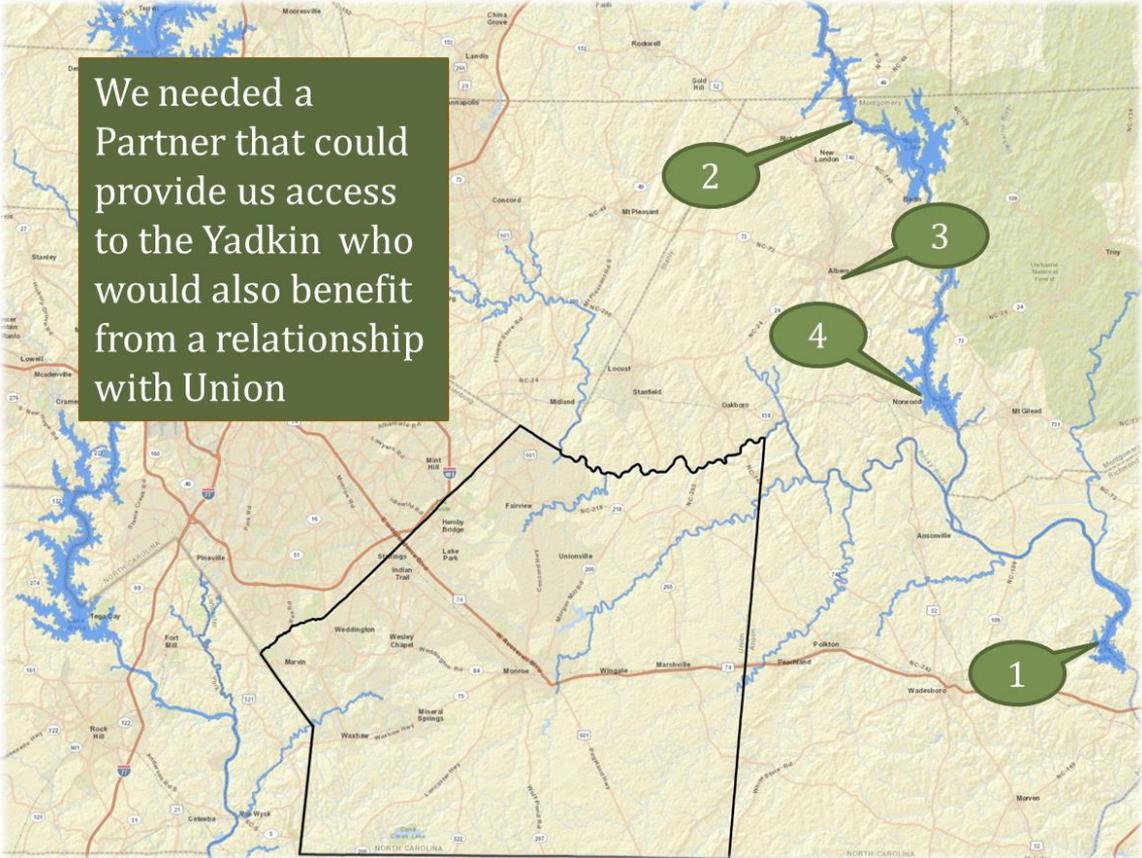
Engineering only solutions were not sufficient to bring this program to fruition

- Project partner assessment indicated a marginal interest in financial participation by others
- Comprehensive Water and Wastewater Master Plan (2011) pointed to a partnership with Anson Co.
- NC statutes prohibit ownership of facilities in another County without that County's specific authorization
- Water withdrawal requires property rights on the water way

Trusted Relationships Were Needed

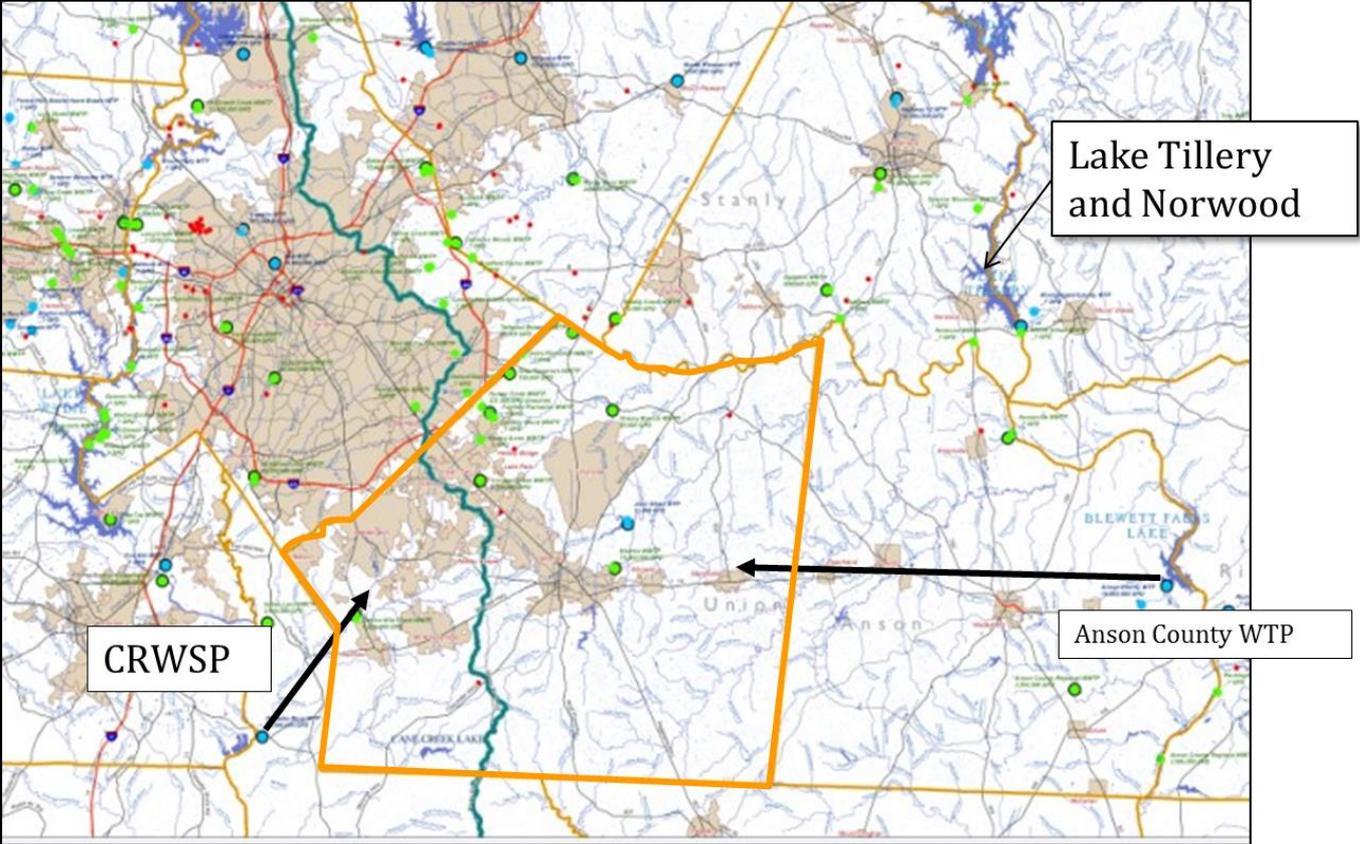


Securing a water supply meant securing a long-term partner (~2011-2012)



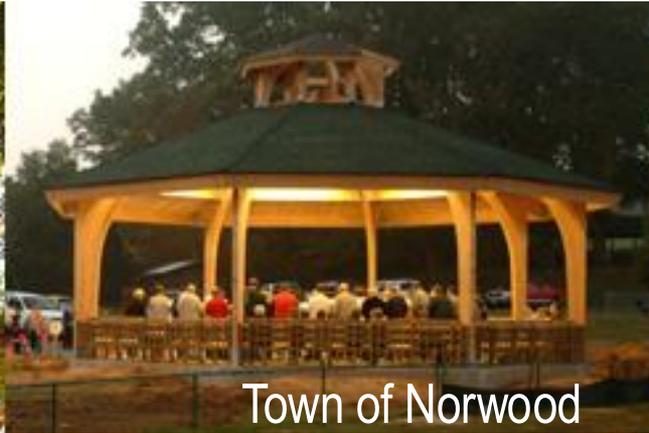
We needed a Partner that could provide us access to the Yadkin who would also benefit from a relationship with Union

Town of Norwood owns and operates a 2 mgd WTP with associated raw water pumping station on Lake Tillery



Union County chose to secure a partner in advance of an IBT pursuit

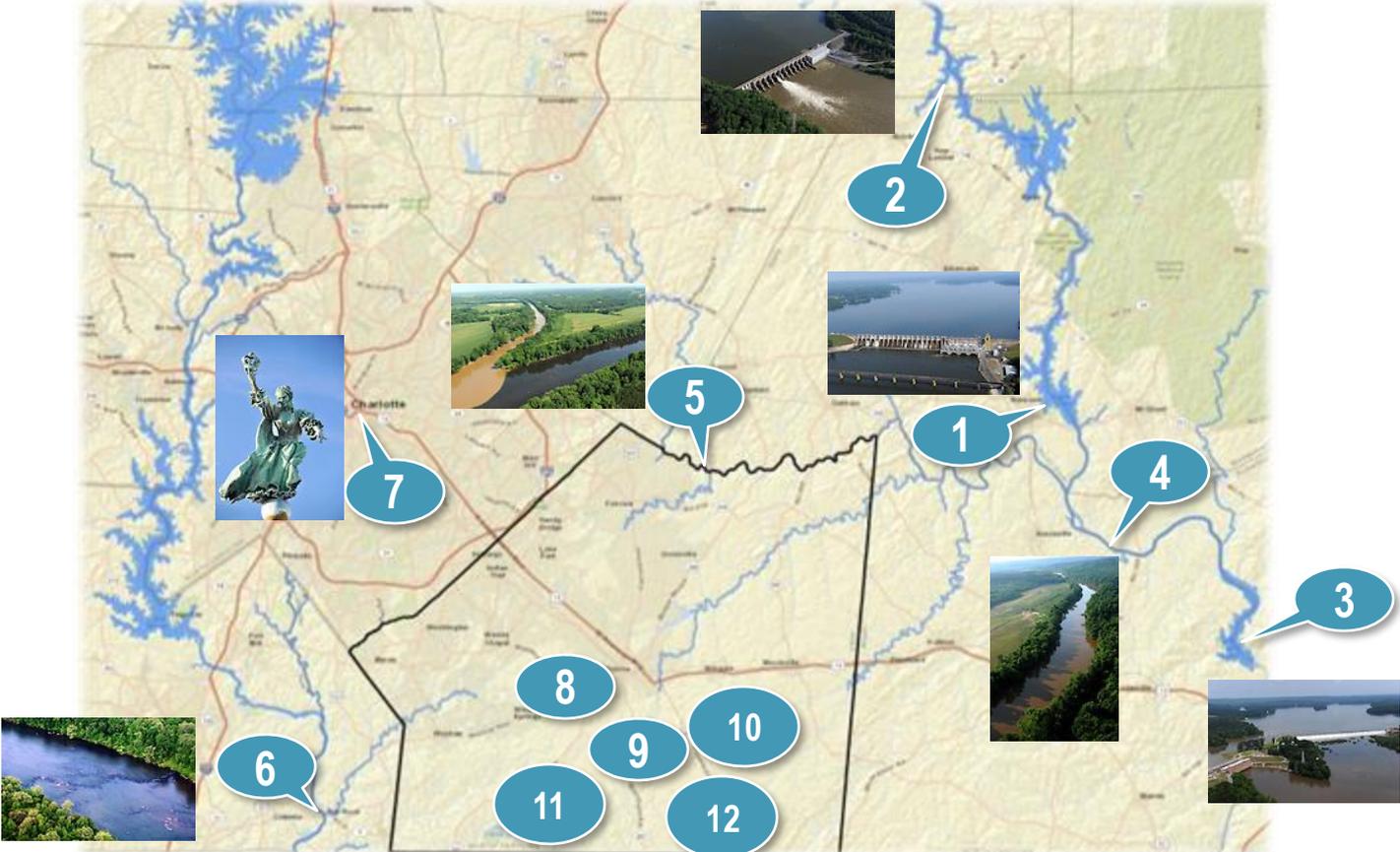
- ~ 18 months of negotiations
- Attorneys and engineering consultants
- Board meetings, Council/Commissioner involvement
- Board approvals
- Union County 20x the size of Norwood



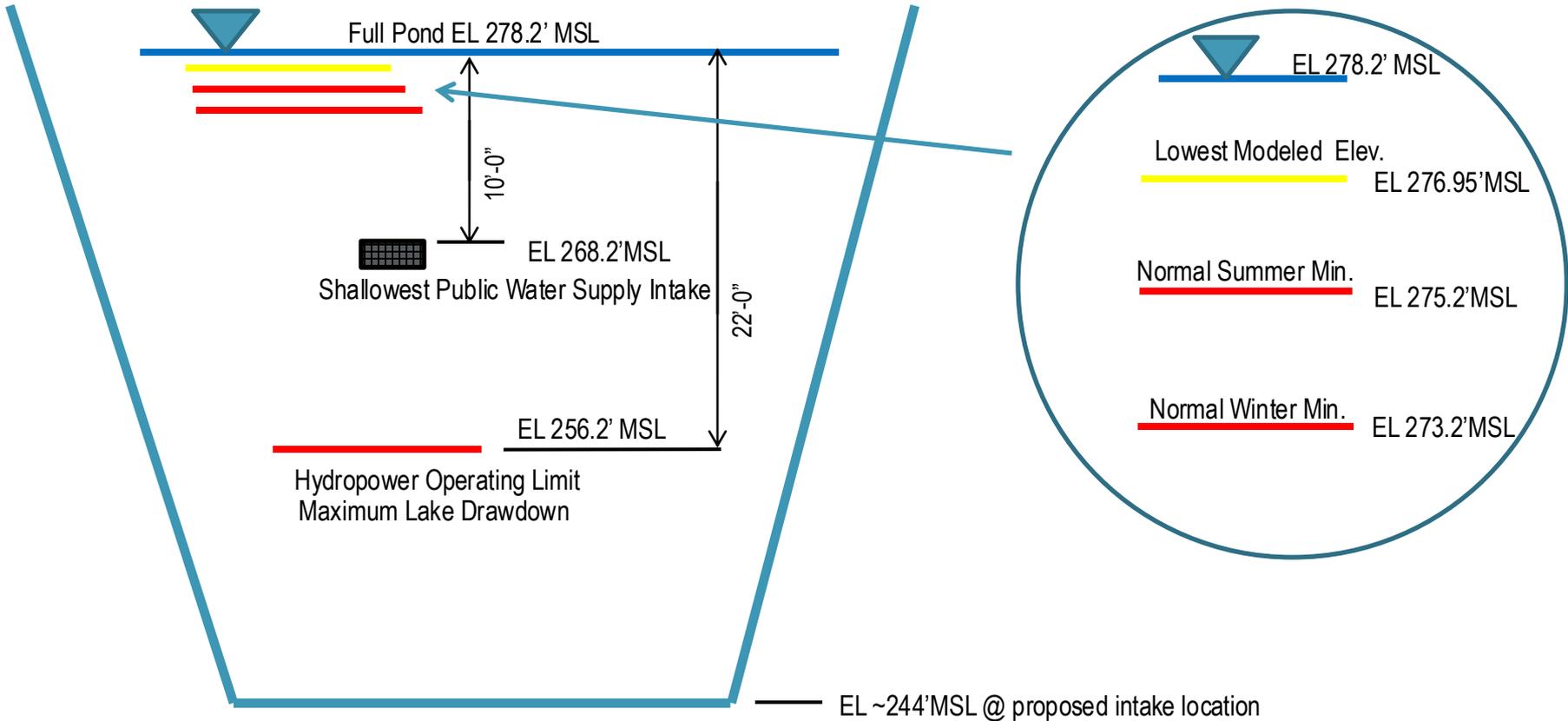
The EIS evaluated numerous alternatives to meet Union County's Yadkin River service area demands (4-5 years)

1. Lake Tillery IBT (sub-basin)
2. Tuckertown Reservoir IBT (via Albemarle)
3. Blewett Falls Lake IBT (via Anson County)
4. Main Stem Yadkin IBT
5. Rocky River withdrawal in Union County
6. Catawba River IBT Increase – via the Catawba River Water Supply Project
7. Catawba River IBT through interconnection with Charlotte Water
8. Groundwater supply
9. Demand management and conservation
10. Direct potable reuse
11. No action
12. Water Returns to the Yadkin River

The EIS evaluation considered water quantity, water quality, environmental, and other impacts for ALL stakeholders



Lake Level Impacts – Significant Stakeholder Concern





WATER SUPPLY

Alternative 1A can supply the 28.9 mgd needed for current and future needs.



COST

Alternative 1A represents one of the lowest cost alternatives and is a financially feasible option for this water supply.



LAKE IMPACTS

Alternative 1A has less impact on lake aesthetics, other water needs, and hydropower than the other alternatives evaluated.



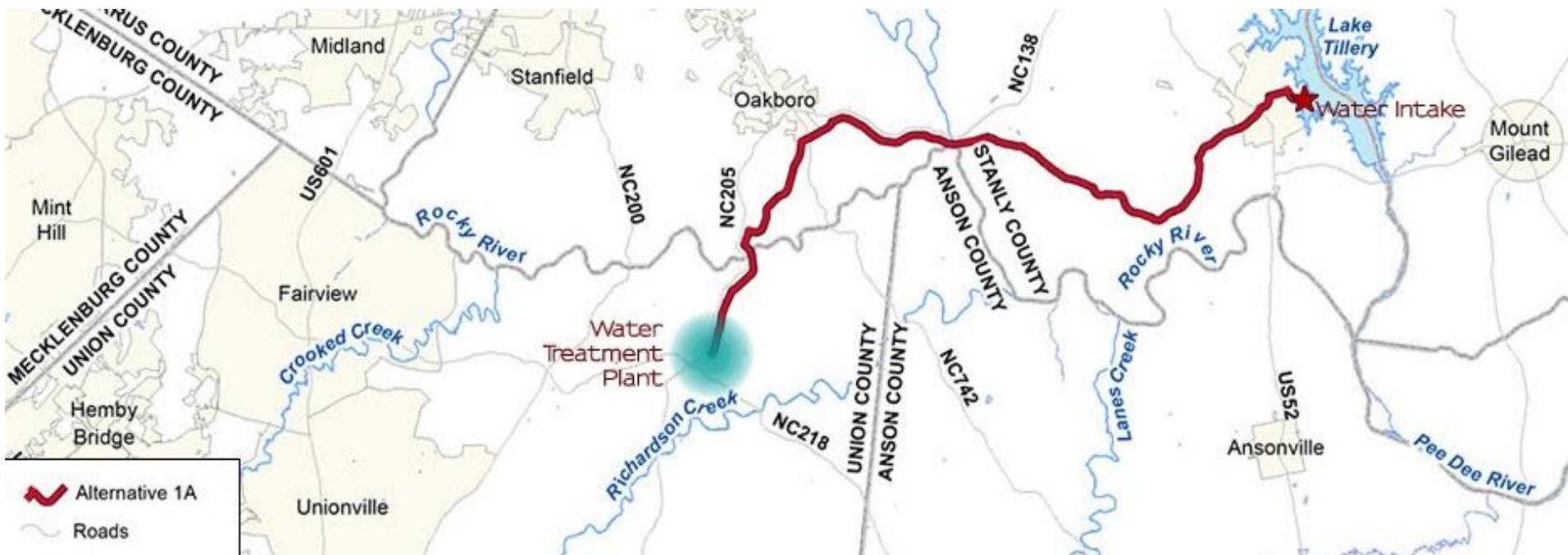
ENVIRONMENTAL

The environmental impacts of Alternative 1A are similar, or significantly less, than the other alternatives evaluated.



COMMUNITY

The water supply partnership between the Town of Norwood and Union County makes 1A the most politically acceptable alternative.



-  Alternative 1A
-  Roads
-  Streams
-  Waterbody
-  NC Municipality
-  County Boundary

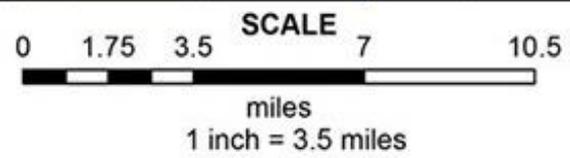


Figure 3-1a:
Alternative Map
 Alternative 1A
 Yadkin River Water Supply Project
 Union County, North Carolina

02 Leadership and Vision

Project Branding – Regional Collaboration – Proactive Stakeholder Engagement



www.yadkinwater.com

Yadkin Water for Yadkin
Needs

Difficult to Impossible

- Interlocal Agreement – Political Support in Perpetuity CPR – Town Manager
CPR – Executive Director, County Manager
- IBT Certificate – NC/SC, Duke Energy, and Other Stakeholders CPR – Executive Director, County Manager
- Easement Acquisition
- Infrastructure Funding CPR – Executive Director, County Manager
- COVID – 19
- Construction Pricing CPR – Executive Director 2, County Manager 2



yadkin
REGIONAL WATER SUPPLY PROJECT

YADKIN REGIONAL WATER SUPPLY PROJECT
RAW WATER INFRASTRUCTURE IN

OWNER: YADKIN COUNTY

OWNER'S REPRESENTATIVE: HDR

DESIGN ENGINEER: Hazen

GENERAL CONTRACTOR: Garity

MICROTUNNELING CONTRACTOR: HUXTED TUNNELING



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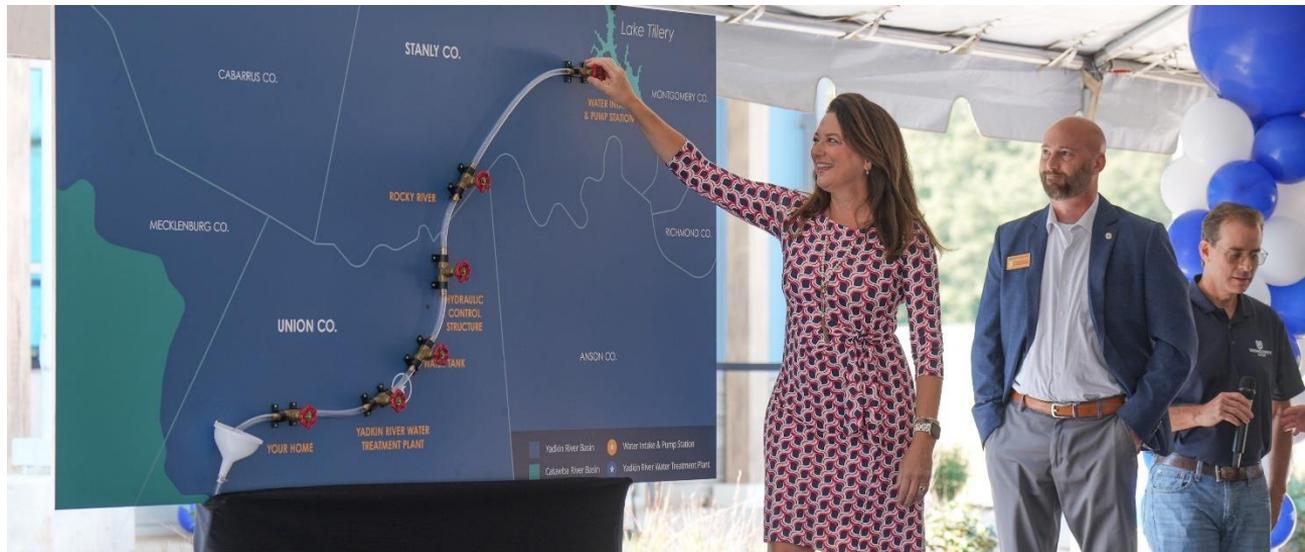
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Raw Water Ribbon Cutting



Q & A



HDR

The IITA was founded on mutual benefits for both Union County and the Town of Norwood

- Town of Norwood
 - New and improved raw water intake
 - Protection against future regulatory issues impacting intakes
 - Steady income stream tied to Union County's water use
 - Shared O&M costs for new, expanded intake
 - Future potential to buy wholesale water from the County

Event	Payment
Execution of Agreement	\$150,000
Year 1	\$75,000
Year 2, 3...x	\$75,000 each yr
Completion of Property Acquisition	\$100,000
Guaranteed Total	\$1,000,000
Balance Paid After Start-Up	

Raw Water Transmission Payments	
Raw Water	\$.05/1000 gal
Minimum annual	\$125,000

To close the deal we had to build trust between the parties

- Union County is 10 x the size of Norwood
- Negotiations required complete transparency – identifying pros and cons of all issues to both parties
- We needed to understand their issues and how we would address them
- Ultimately this was a deal between the people involved – not two organizations

