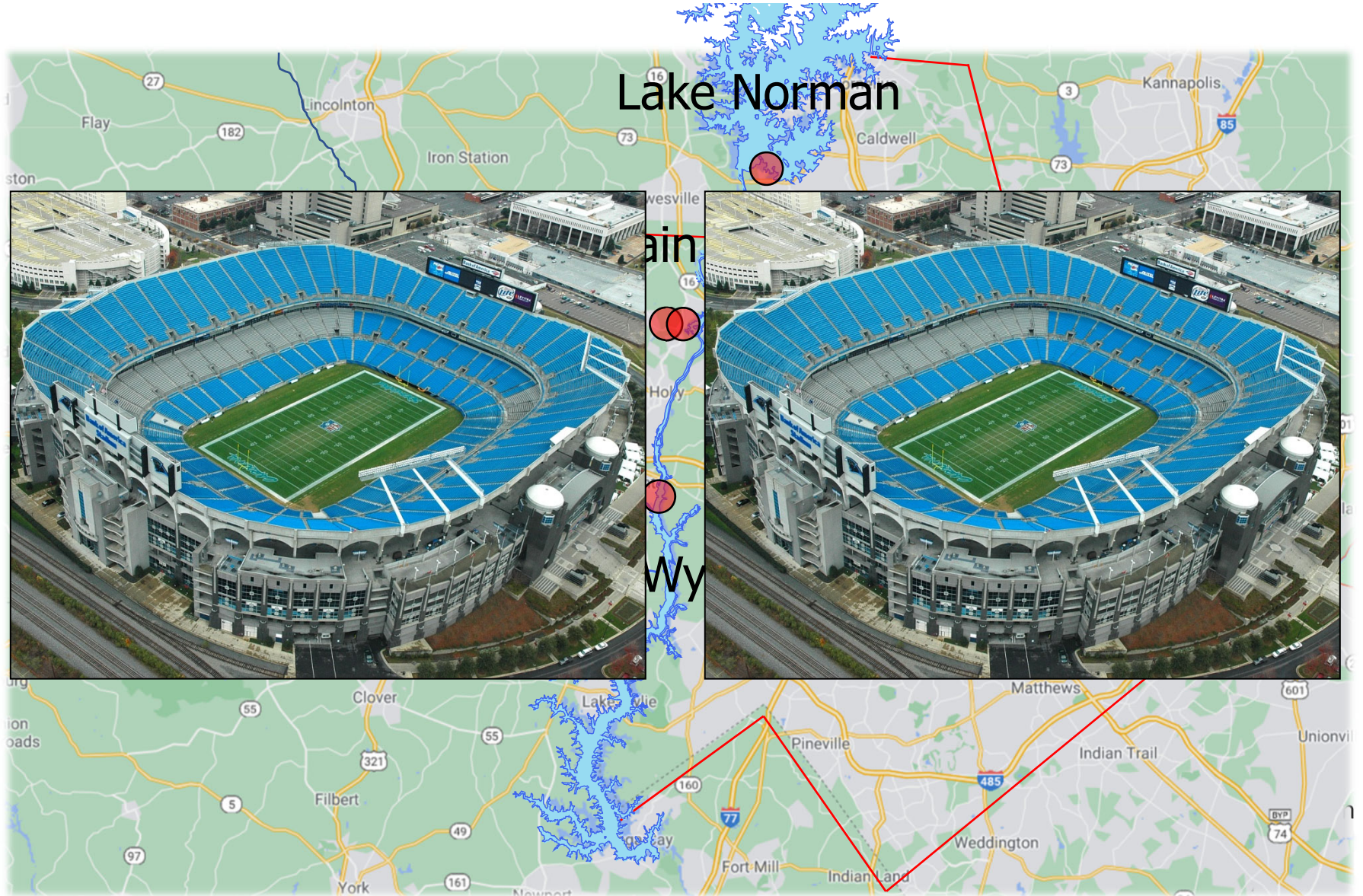


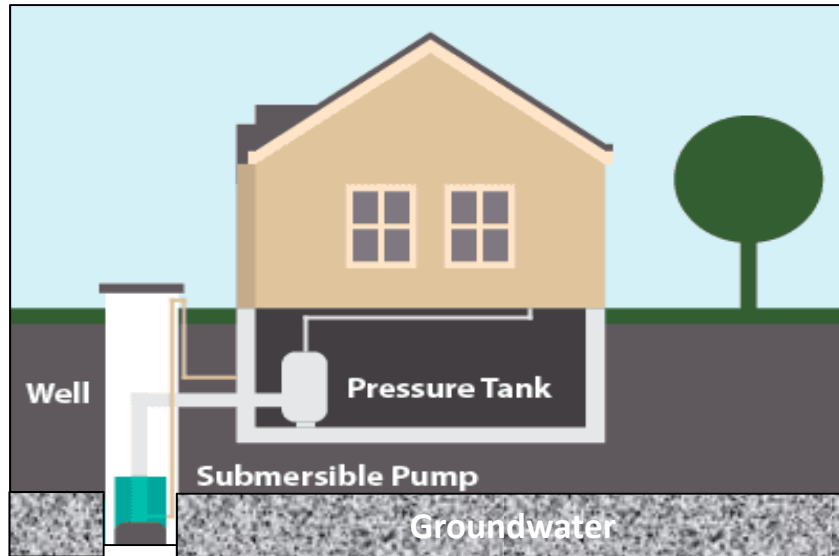
The Catawba River – Our Most Valuable Natural Resource



1. It sustains us by providing drinking water.



There are only 2 sources of drinking water, groundwater and surface water.



Wells pull water from fractures in rock beneath the ground surface. Not much water is available. Good for single-family residential and small neighborhoods.



Water intakes pull water from surface water supplies such as lakes and rivers. A significant volume of water is available for use. Good for cities and towns.



It's A Highly Desirable Place to Live & Recreate

- The Catawba draws a lot of development.
- Over 10 million people visit the Catawba River annually.
- Visitation is projected to increase by about 11% per decade through 2050.



3. Local governments have the authority to enact special protective measures beyond minimum State requirements.

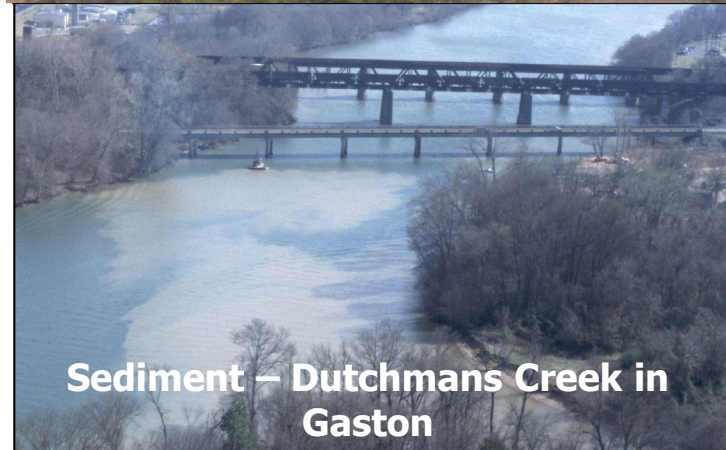
- **§ 113A-60**. Local erosion and sedimentation control programs. An ordinance adopted by a local government shall at least meet and may exceed the minimum requirements of this Article and the rules adopted pursuant to this Article.
- **§ 160A-174**. General ordinance-making power (post-construction ordinance). The fact that a State or federal law, standing alone, makes a given act, omission, or condition unlawful shall not preclude city ordinances requiring a higher standard of conduct or condition (1971, c. 698, s. 1.).

4. Mecklenburg County Examples

50 Years of Lake Monitoring & Protection

Examples:

1. Monthly monitoring of water quality conditions in Lake Norman, Mountain Island lake and Lake Wylie.
2. Developed and adopted water supply watershed rules 25 years ago.
3. Issue No Swimming Advisories as necessary.
4. Work with Charlotte Water in monitoring around their intakes.
5. Worked with US Fish & Wildlife on fish assessment for consumption advisories.

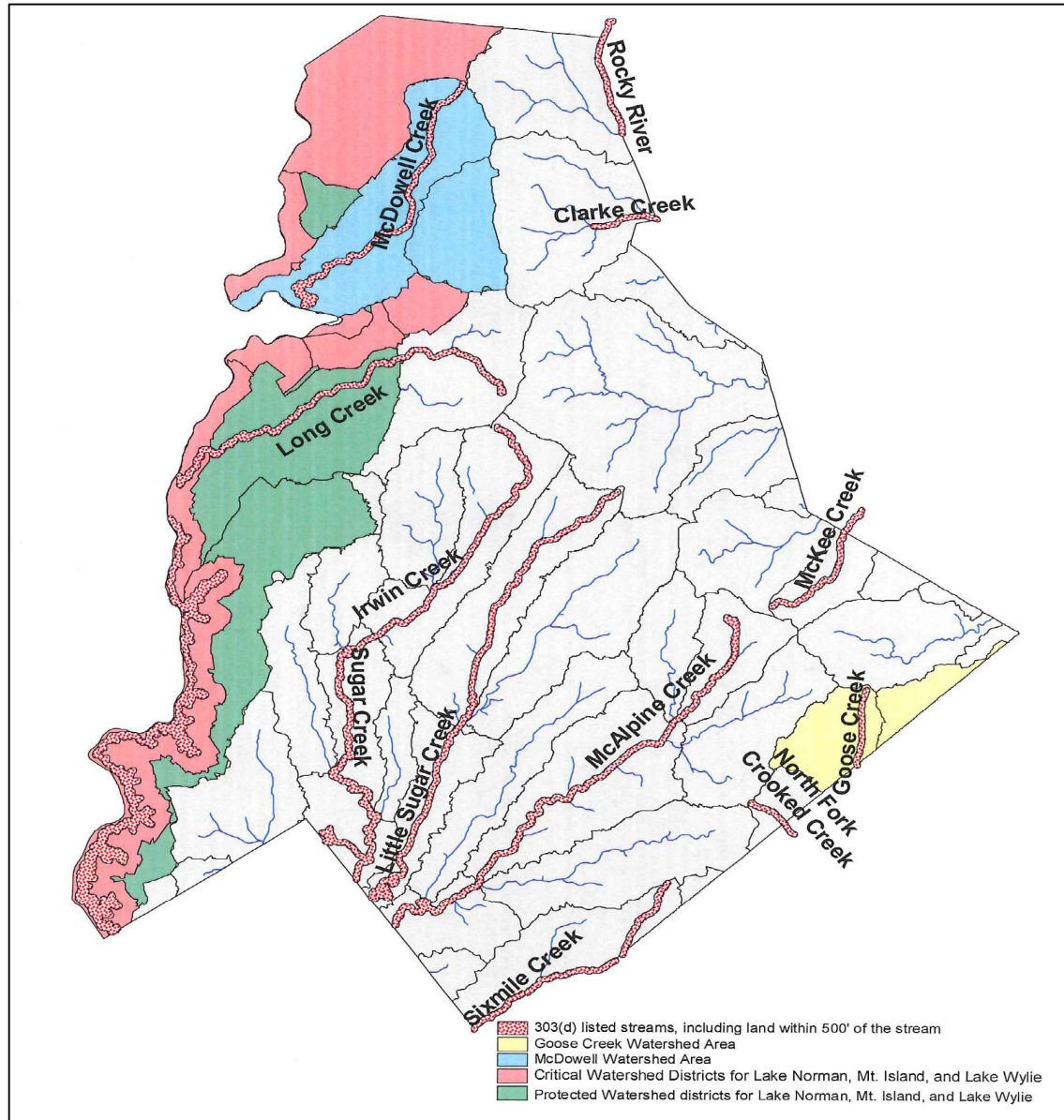


4. Mecklenburg County Examples

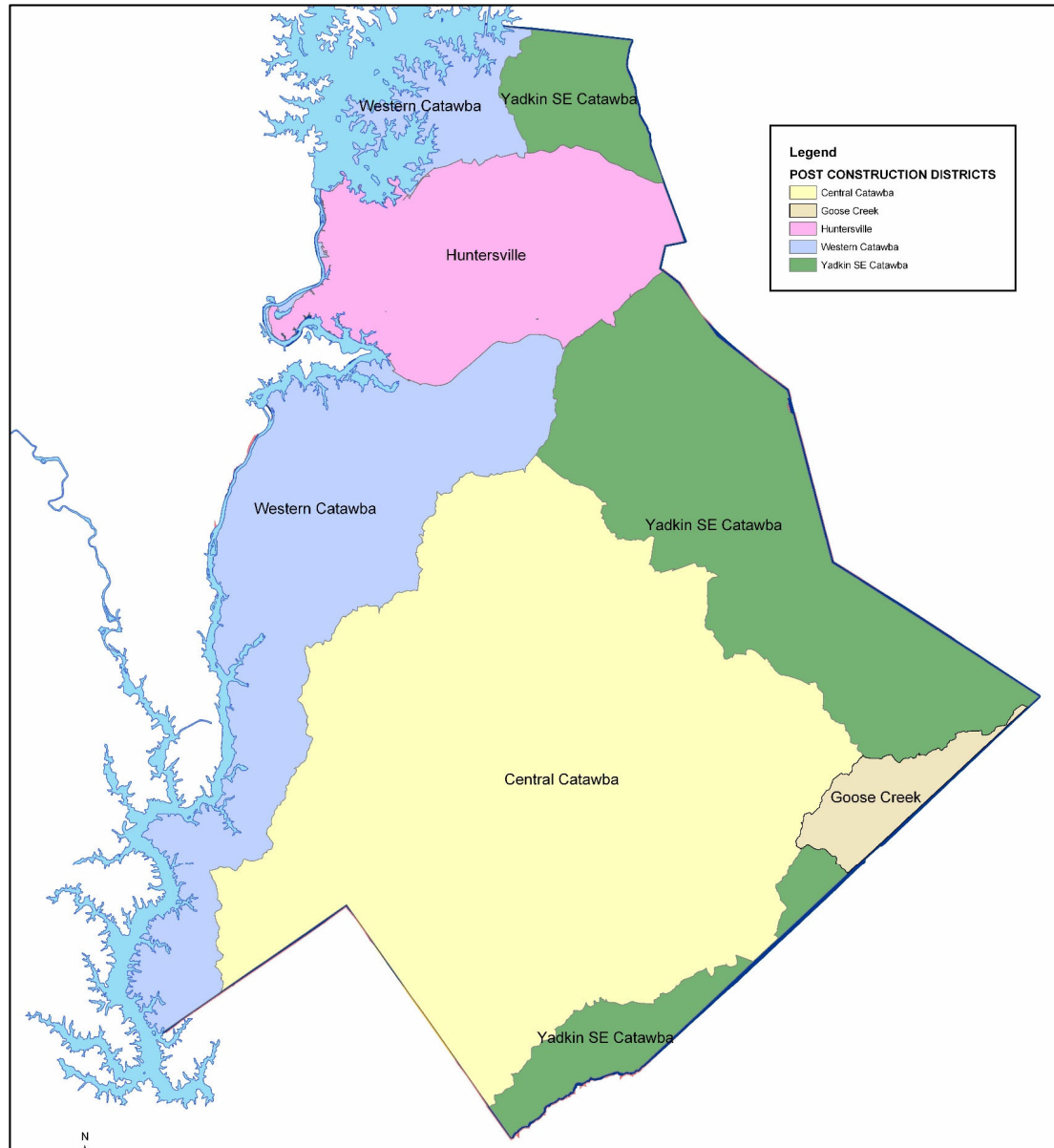
Enhanced Erosion Control Measures in Identified Critical Areas

Examples:

1. Enhanced sediment basins and silt fences.
2. Limited uncovered areas.
4. Minimum 10-foot buffer around all waterbodies.
5. Ground cover required within 7 days of last land disturbing activity.



4. Mecklenburg County Examples



Enhanced Post-Construction Control Measures in Identified Critical Areas

Examples:

1. Threshold for stormwater treatment at 12% BUA instead of 24%.
2. Wider buffers.
3. Nutrient removal required as part of stormwater treatment.

4. Mecklenburg County Examples

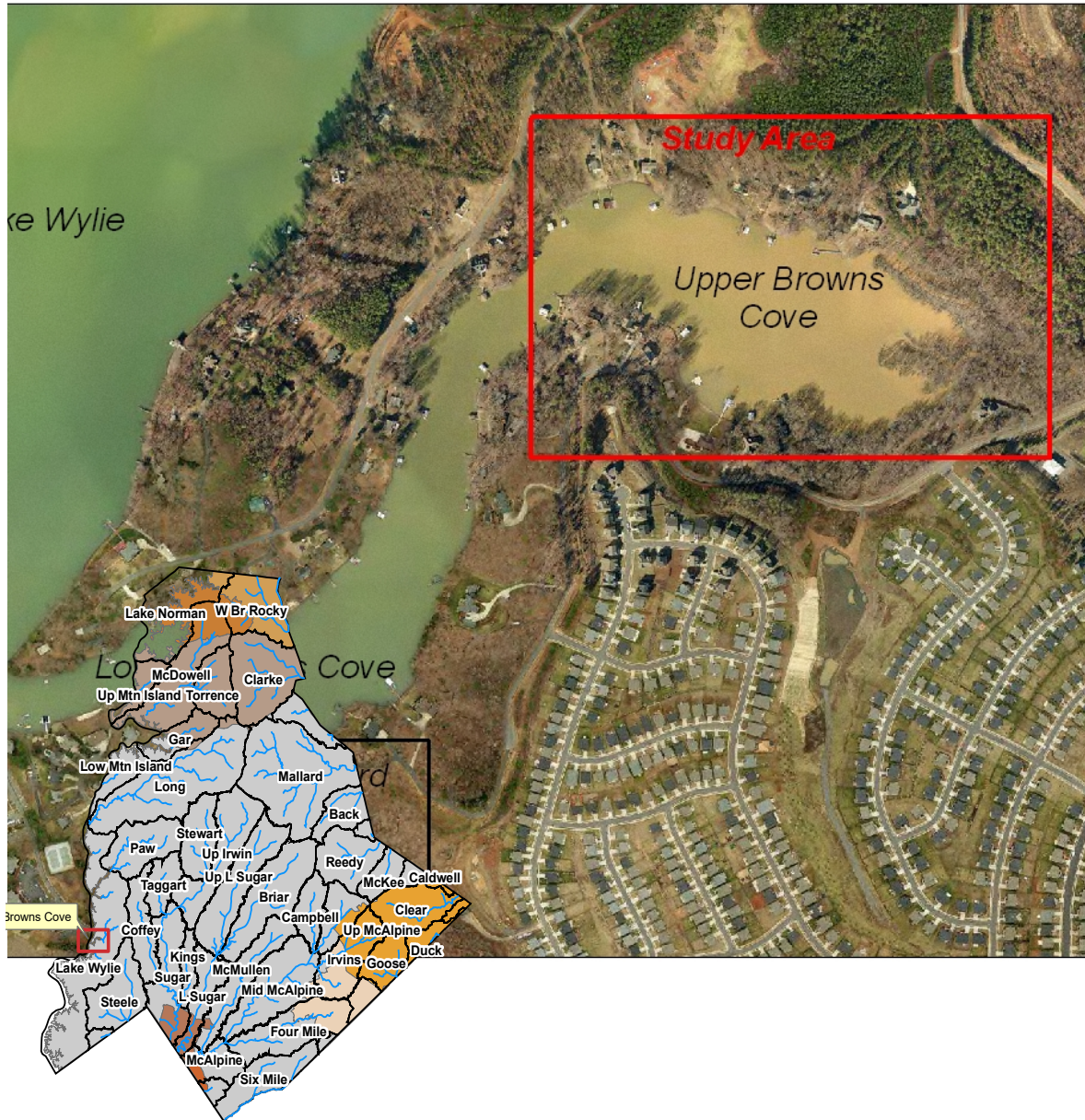


1500 Acre Palisades Development

Additional Protective Measures for Conditional Rezoning Around Catawba Lakes

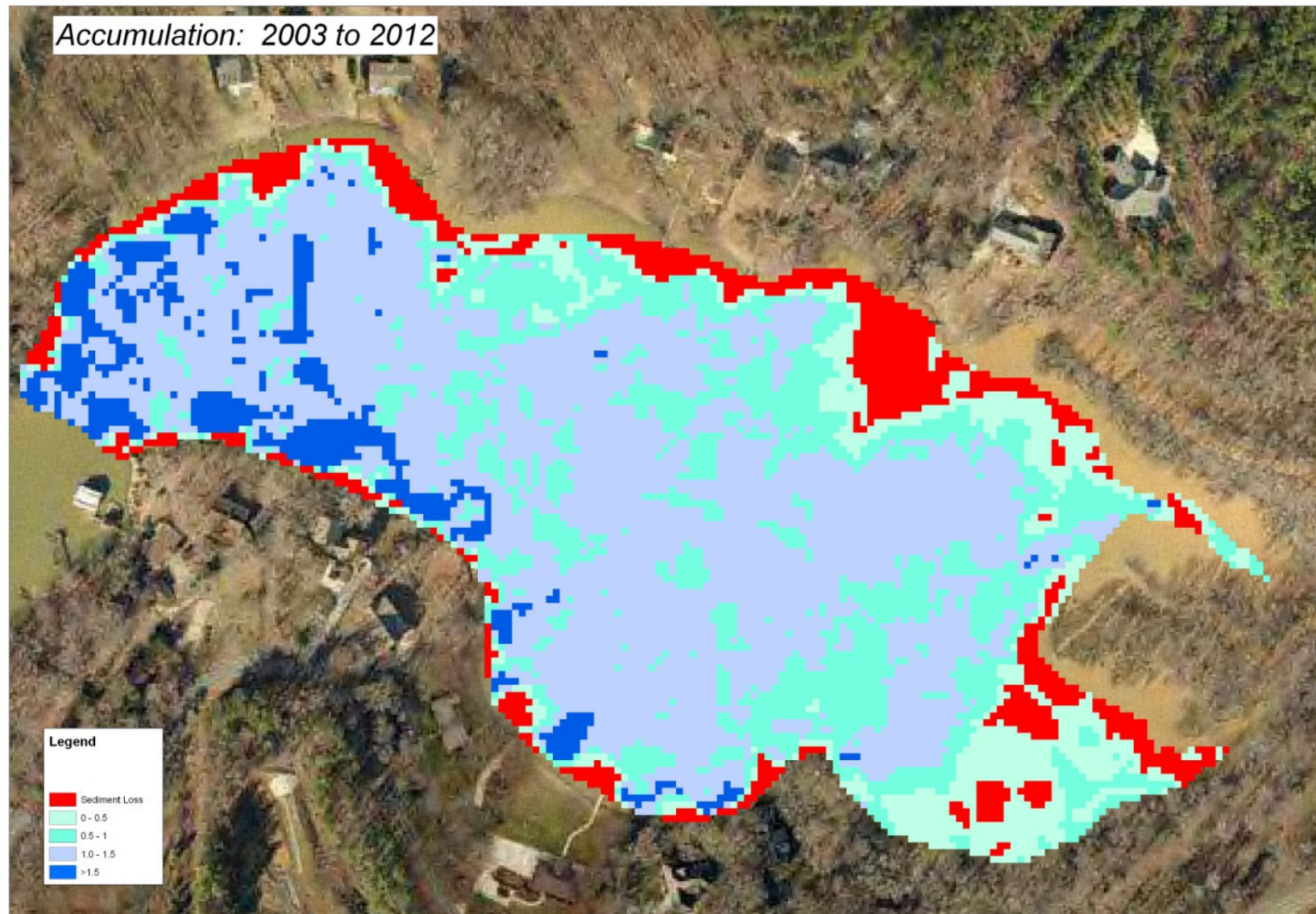
For the past 20 years, Mecklenburg County has worked with the City of Charlotte and Towns to require enhanced erosion control measures and monitoring for over 15 rezonings along lakes.

4. Mecklenburg County Examples



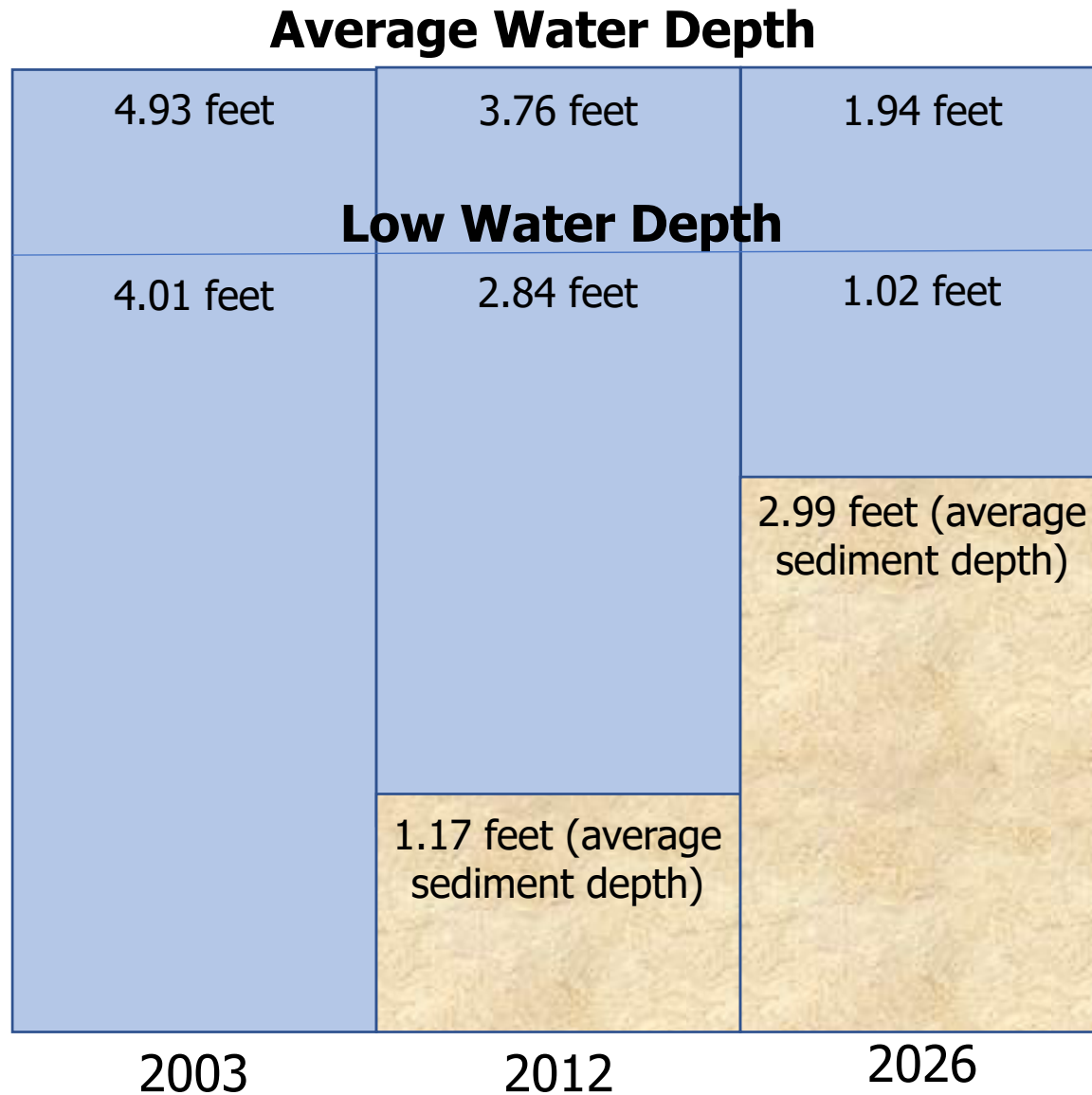
Browns Cove Rezoning

1. 3200-acre watershed in southwest Meck.
2. Between 2003 and 2012, 884 acres disturbed for an average duration of 2.6 years
3. Bathymetric surveys required by the rezoning showed sediment accumulations more than doubled in 9 years.



2003 to 2012 - Over 30,000 cubic yards of sediment discharged to cove.
Estimated that the cove would be unusable for recreation by 2026,
significantly affecting the 25 property owners around the cove.

Sediment Accumulation 2003 to 2026



Browns Cove Dredge



1. On May 2015, 15 land developers agreed to participate in funding a dredging operation.
2. Cost share based on # acres disturbed and # years of disturbance.
3. Administered by Mecklenburg Soil and Water Conservation.
4. A grant in the amount of \$187,873 was obtained from NCDEQ.
5. Initial stakeholder contributions totaling \$435,188.49, were paid into an escrow account.
6. Dredge lasted from Sept. 2015 to Feb. 2016 (110 days) with 29,000 cubic yards removed for \$500,000.
7. At the close of the project, shareholders were reimbursed 25% of their initial contribution by the escrow agent using the grant.

4. Mecklenburg County Examples



Continuous Automated Monitoring
Units Collect & Transmit Data Every
15 Minutes

Lesson Learned - Need an Early Warning System

1. Beginning in 2015, continuous automated monitoring systems began to be required in addition to the bathymetric surveys for rezonings along the lake front.
2. This combination is currently being employed to protect Fish Camp Cove located at Hwy 74 and Lake Wylie where a 150-acre development is planned immediately upstream.

4. Mecklenburg County Examples



1. Currently working to develop a comprehensive cove assessment and protection program that won't rely on rezonings to implement cove protection measures.
2. This program will likely include the installation of automated monitoring sites in identified coves of concern and ongoing bathymetric surveys.
3. It will also possibly include further enhancement of erosion control measures.

5. Cost vs. Benefit



**Double Row High Hazard Silt Fence
(with wire backing)**

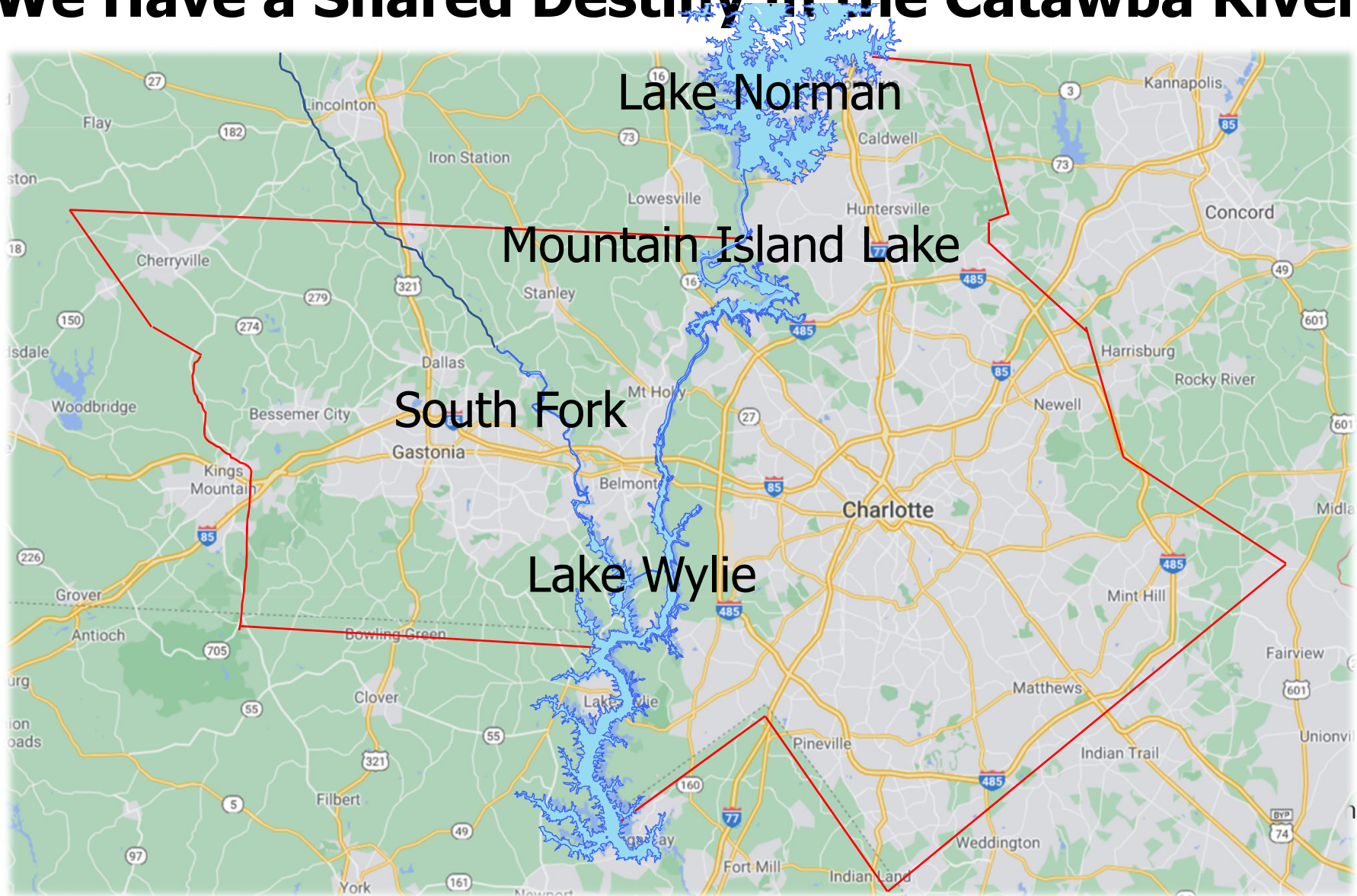
Cost

1. $\pm 25\%$ increase in erosion control and post-construction stormwater treatment costs (paid by developer).
2. \$26,000 start up costs for bathymetry and automated monitoring plus \$5,000 annually until project completion (paid by developer).

Benefit

1. Avoid future increases in water treatment costs (paid by jurisdiction).
2. Avoid negative impacts to recreational value (born by the community)

We Have a Shared Destiny in the Catawba River



What Divides Also Unites