



Development Concerns and Mitigation Steps

A Multi-Departmental Overview of Strategies

Development Impact Concerns



919.560.4137

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Volume of Development

As of 10.19.22

RESIDENTIAL UNITS IN SOUTHEAST DURHAM

Year(s)	2011-2019	2020	2021	2022	Total
Units Approved	2,671	580	3,059	566*	6,906
Units Pending Approval	-	-	-	2,143*	2,143*
Total Potential Units	-	-	-	2,739*	9,049*

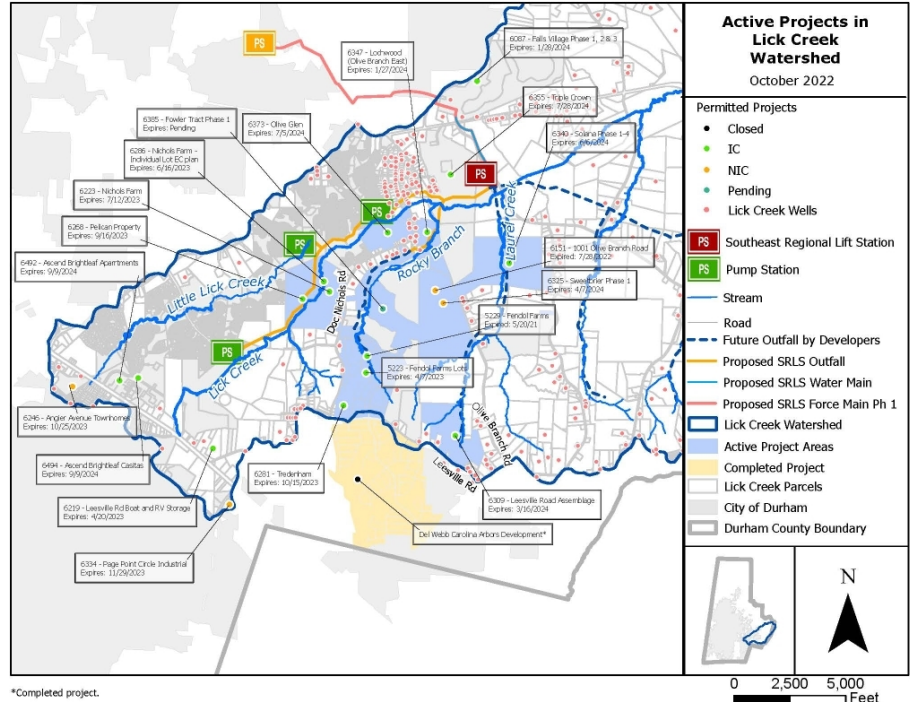


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*Completed project.



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Water Quality

City Stormwater Monitoring Stream Health Since 2004

Lick Creek in 2020:

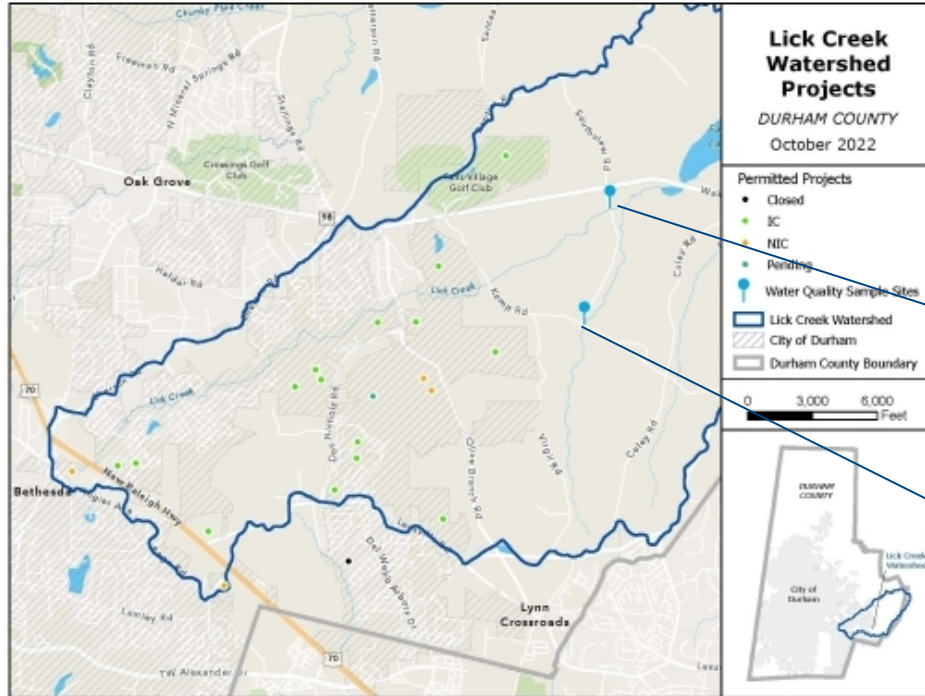
- WQI = 75 (out of 100)
- High Bacteria*
- Mod-High Turbidity
- Good-Fair Biota

Rocky Branch Creek in 2020:

- WQI = 87 (out of 100)
- Mod Bacteria**
- Low Turbidity

*Continuing trend of increasing bacteria

**Improving bacteria since 2012



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Water Quality

From City Stormwater Memo:

- “The state has a standard for **turbidity**. This standard is regularly exceeded in several Durham streams, including Lick Creek. The standard was exceeded prior to recent development.”
- “Very fine clay particles will stay suspended in water for days.”
- “In a special study that included Lick Creek...indicated that elevated turbidity during lower flows may be a result of instream conditions found in soils common to Durham.”



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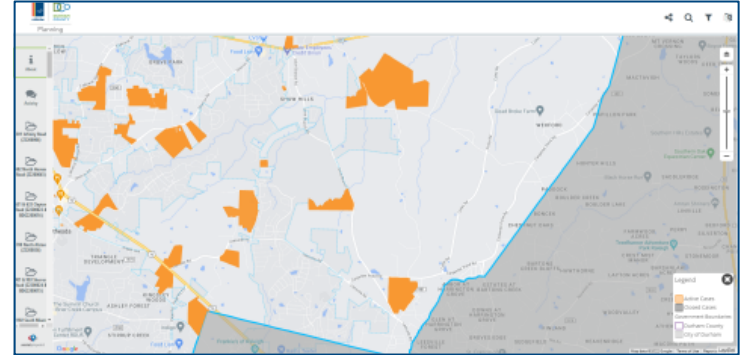
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Planning Strategies

Short-Term:

- Mechanism for County Input on Pending Annexation Cases (implemented)
- Development Plan Commitment Recommendations (implemented)
 - Additional erosion control measures
 - Maximum disturbed area
 - Additional open space
 - Expanded riparian buffers
 - Additional tree preservation
 - Higher stormwater standards



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Planning Strategies

Long-Term:

- Mass Grading and Tree Preservation UDO Text Amendment (in progress)
 - Propose limits on how much land can be graded at one time
 - Revise tree coverage standards to further incentivize preservation over replanting
 - Draft proposal ready for 11/30 JCCPC meeting



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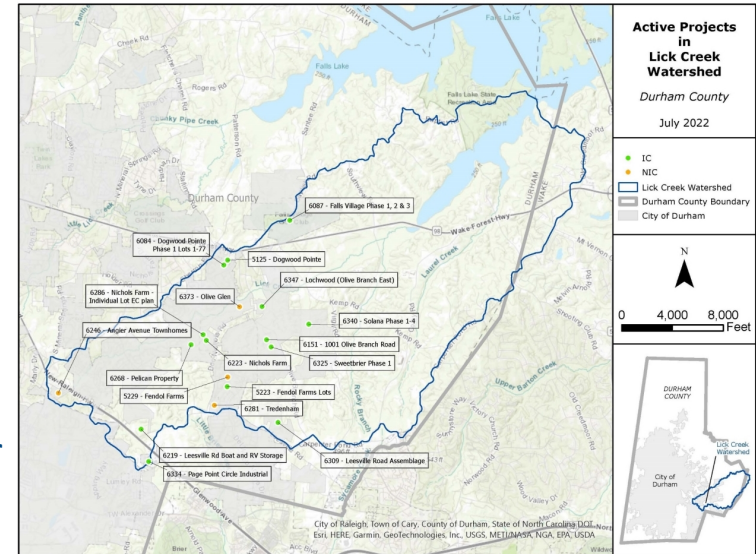
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Erosion Control Strategies

Short-Term:

- Work with sites to implement additional measures
 - Groundcover
 - Flocculants
 - Outlet Augmentations
 - Stream Crossing Installation
- Increase Inspections
 - New Erosion Control Technician started on October 17th



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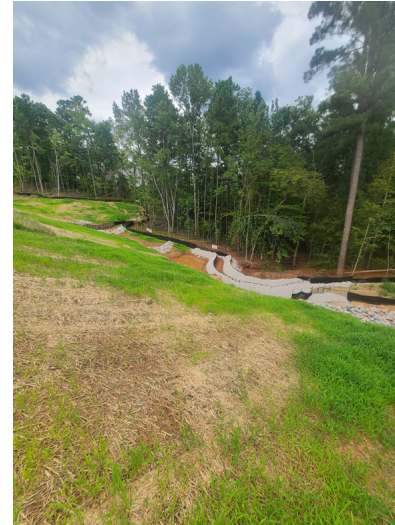


Example: Tredenham

June 2022



August 2022



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Example: Pelican Property Stream Crossing



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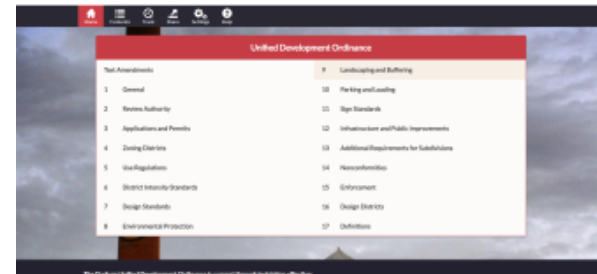
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Erosion Control Strategies

Long-Term:

- Amend Erosion Control Ordinance in UDO
- Proposed Amendments:
 - Double Row of Silt Fence in Sensitive Areas (already recommended by staff)
 - Triassic Soil-Specific Requirements:
 - Larger Sediment Basins and Slower Dewatering Times
 - Stricter Groundcover Requirements
 - Flocculants Required
 - Stop Work Orders
 - Ag Site Exemptions
- Amendments must go to Sedimentation Control Commission
 - DCo was on the 11/15 Agenda



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Environmental Health Potential Strategies

Short-Term:

- Well Water Sampling for Homeowners
 - 392 known wells in the Lick Creek watershed
 - Limited staffing – may require to be contracted
 - Could cost as much as \$150,000
 - Sampling is only for informational purposes - No Enforcement
 - Well age and construction must be considered

Long-Term:

- Continued monitoring of well water every two (2) years in line with State guidelines
 - Depends on County funding

DURHAM COUNTY Public Health

ENVIRONMENTAL HEALTH DIVISION
414 E. Main Street, Durham, NC 27701
PH 919.560.7800 Fax 919.550.7530 health@durhamcountync.gov

Water Analysis Application

Name: _____ Owner Tenant

Mailing Address: _____

Telephone Number: _____ Email Address: _____

Address to be SAMPLED: _____

Type of Test	Tests for	Cost	Check box that applies
Bacteriological	coliform and E-coli	\$135	<input type="checkbox"/>
Inorganic (includes Nitrate/Nitrite)	metals, pH and water hardness	\$135	<input type="checkbox"/>
Pesticide	traces of pesticide ingredients	\$135	<input type="checkbox"/>
Petroleum	traces of petroleum ingredients	\$135	<input type="checkbox"/>
	Total		

*Are you experiencing any problems with your well water?

Environmental Health Division
Human Services Building 1414 East Main Street, Durham, North Carolina 27701



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City and County Fire Marshal Potential Strategies

Short-Term:

- Educate Homeowners on their ability to file complaint with blasting company
 - Blasting permit requires liability insurance or bond
 - Homeowners may be compensated for damage
- Encourage Homeowners to participate in Permit-Required Pre-Blast Survey
 - May include assessment of their well and well water



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City and County Fire Marshal Potential Strategies

Long-Term:

- Amend the Blasting Permit Process
 - Require earlier notification
 - Expand pre-blast notification area from 750 to 1,000 feet
 - Require well testing after blast for turbidity in well water
 - Limit number of blasts per day and/or time of day when blasting is allowed
 - May require approval from Building Code Council
- Adopt a local ordinance to regulate blasting companies
 - Monitor safety track records
 - Would require approval from Building Code Council



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Next Steps

Work Underway:

- ✓ Increased Project Assistance
- ✓ Commissioner Input in Zoning
- ✓ Mass Grading and Tree Protection Ordinance Update
- ✓ Erosion Control Amendments
- ✓ City Water Quality Monitoring to Continue

Potential Additional Efforts:

- Well Water Sampling
- Homeowner Education on Blasting Permitting
- Update Blasting Requirements and Ordinance



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