

# N.C. Ecosystem Enhancement Program



*Restoring... Enhancing... Protecting Our State*

## LOWER CREEK LOCAL WATERSHED PLAN

### FACT SHEET

<b>Location:</b>	Near Lenoir, NC
<b>River Basin:</b>	Catawba
<b>Cataloging Unit:</b>	03050101
<b>14-digit Hydrologic Units:</b>	03050101080010, 03050101080020
<b>Counties:</b>	Burke, Caldwell
<b>Watershed Area</b>	99 square miles
<b>Planning Contact:</b>	Andrea Leslie - Ecosystem Enhancement Program (828) 337-3455 or <a href="mailto:Andrea.Leslie@ncdenr.gov">Andrea.Leslie@ncdenr.gov</a>
<b>Participants:</b>	Western Piedmont COG; Technical Advisory Committee
<b>Contractor Hired for Watershed Assessment</b>	MACTEC Engineering: Guy Winebrenner at (919) 465-2019 or <a href="mailto:ngwinebrenner@mactec.com">ngwinebrenner@mactec.com</a>

### Project Overview

The Lower Creek watershed is 99 square miles and is located in Burke and Caldwell Counties, including the towns of Lenoir and Gamewell. This watershed is in the foothills of the Southern Appalachians and is characterized by both rural and urban landscapes. Agriculture, residential development, and the furniture industry are major economic drivers of the area. Lower Creek and its receiving body, Lake Rhodhiss, are on North Carolina's 2006 303(d) list of impaired waters. Zack's Fork, Greasy Creek, Bristol Creek, and Spainhour Creek are major tributaries within the Lower Creek watershed, and are also on the 303(d) list.

Intensive field monitoring and GIS assessment have pinpointed major causes of degradation for watershed streams, which include stormwater pollution and scour, lack of riparian vegetation, channelization, sedimentation, chronically high fecal coliform bacteria, nutrients, floodplain encroachment, and toxicity. With the help of the Lower Creek Technical Advisory Committee, subwatersheds and streams were prioritized for restoration and preservation activities and a set of management recommendations was developed to conserve and restore water and habitat quality in the Lower Creek watershed. Key stressors and associated management strategies are listed in the table below.

Thirty-eight stream and wetland restoration and preservation projects were identified in priority subwatersheds. In addition, four stormwater BMPs were named specific examples of stormwater treatment retrofit locations. A number of institutional measures were named for consideration by Burke and Caldwell Counties and the municipalities of Lenoir



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and Gamewell. These measures were presented to each local government's governing body (county commission or town/city council) and officially endorsed as guidance by each. These institutional measures follow:

1. Adopt the Lower Creek *Watershed Management Plan* as a supplement to comprehensive plans.
2. Develop comprehensive stormwater management ordinances
3. Amend subdivision ordinances to promote Low Impact Development and other measures that limit development impacts
4. Adopt and enforce more comprehensive riparian buffer ordinances
5. Monitor compliance with and enforcement of erosion and sedimentation control ordinances
6. Develop steep slope ordinances
7. Amend ordinances to prohibit development in the 100 year floodplain
8. Develop a robust public education program
9. Adopt a comprehensive watershed-based land use plan for the Lower Creek watershed to protect Lake Rhodhiss

**Key Stressors for Watershed Streams and Applicable Management Strategies**

Stressor	Management Strategy
Stream bank erosion	Stream restoration, riparian buffers, livestock exclusion, sand dredging BMPs
Lack of adequate forested buffer	Stream restoration, riparian buffers
Stream channelization	Stream restoration
Impervious cover	Stormwater BMPs, stormwater ordinance, low impact development
Upland erosion	Agriculture & forestry BMPs, erosion and sedimentation control ordinance, subdivision ordinance modifications, steep slope ordinance, public education
Livestock access to streams	Livestock exclusion
Floodplain development	Floodplain development ordinance
Urban toxicants	Illicit discharge program, landfill strategy, watershed education program, stormwater BMPs
Nutrients	Illicit discharge program, ag BMPs, riparian buffers, watershed education program, stormwater BMPs, additional studies
Fecal coliform bacteria	Retrofit wastewater collection system, agricultural BMPs, illicit discharge program, watershed education program, stormwater BMPs

**Project Schedule**

An initial characterization of the watershed was finalized in May 2004, and the Watershed Assessment Report was completed in February 2006. A final Watershed Plan was completed in July 2006. Efforts to implement plan recommendations are on-going, coordinated through a stakeholder group named the Lower Creek Advisory Team. Caldwell County and both municipalities in the County's portion of the Lower Creek watershed, Lenoir and Gamewell, adopted a comprehensive stormwater and sedimentation control ordinance in October 2007. A stormwater wetland has been constructed in the Lower Creek floodplain in the City of Lenoir, with the help of a Clean Water Management Trust Fund grant. The Lower Creek Watershed Restoration Implementation Plan, conducted by the Burke and Caldwell County Soil and Water Conservation Districts and funded through a 319 grant, is implementing best management practices in the watershed (see <http://www.caldwellcountync.org/caldwell-county-nc-departments/soil-and-water-conservation/lower-creek-watershed-restoration-implementation-plan/>). EEP is currently pursuing stream restoration projects in the watershed.



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## **Planning Documents for Download**

[Preliminary Watershed Characterization: Findings and Recommendations for Lower Creek](#) (20 mb)

[Watershed Assessment Report](#) (2 mb; for appendices, contact EEP)

[Division of Water Quality Monitoring Report](#) (1 mb)

[Watershed Management Plan](#) (3 mb; for appendices, contact EEP)

[Watershed Management Plan Executive Summary](#) (<1 mb)

[Findings and Recommendations Summary](#) (<1 mb)

Planning documents and project updates are also available on the Lower Creek Local Watershed Plan website at <http://74.254.123.26/lowercreek2/>



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