Little Lick Creek Local Watershed Plan

December 2004
Meeting Summary

PROJECT PARTNERS

NC ECOSYSTEM ENHANCEMENT PROGRAM
(*www.nceep.net*)
Deborah Amaral

UPPER NEUSE RIVER BASIN ASSOCIATION
(*www.unrba.org*)
Chris Dreps

CENTER FOR WATERSHED PROTECTION
(*www.cwp.org*)
Sally Hoyt
Paul Sturm

TRIANGLE J COUNCIL OF GOVERNMENTS
(*www.tjcog.dst.nc.us*)
September Barnes
Ben Bearden
Sarah Bruce
John Hodges-Copple

DURHAM STORMWATER SERVICES
(www.ci.durham.nc.us/departments/works/stormwater.cfm)
John Cox
Bobby Logue
Chris Outlaw

DURHAM CITY/COUNTY PLANNING
(www.ci.durham.nc.us/departments/planning)
Cherri Smith

NC DIVISION OF WATER QUALITY
(*http://h2o.enr.state.nc.us*)
Stratford Kay
Kathy Paull

US GEOLOGICAL SURVEY
(*www.usgs.gov*)
Mary Giorgino
Silvia Terziotti

Little Lick Creek Local Watershed Planning Project Is Underway

On December 6, 2004, the NC Eystem Enhancement Program (NC EEP), the Upper Neuse River Basin Association (UNRBA), and the NC Division of Water Quality (NC DWQ) held a meeting at the Bethesda Ruritan Club in Durham to discuss a Local Watershed Plan for Little Lick Creek. Members of the area community, local governments, and state agencies came together to talk about the effort.

Chris Dreps of the UNRBA welcomed the attendees and went over the meeting agenda. Next, Deborah Amaral of the NC EEP discussed the local **watershed** planning process. NC EEP merges resources and functions of the NC Department of Environment and Natural Resources, NC Department of Transportation, and the US Army Corps of Engineers.

NC EEP conducts planning, project implementation, and monitoring & research. The overall goal of planning is to improve watershed functions such as water quality and habitat.

The local watershed plan will identify stream and wetland restoration, stormwater management, and land protection projects for NC EEP funding. The best projects for NC EEP implementation combine habitat and water quality improvements, mitigation of future NCDOT impacts, and the priorities of the local community.

Deborah also discussed how the plan will identify proactive watershed improvement projects that can be implemented and funded through local partnerships. NC EEP, UNRBA, and NC DWQ are teaming up with the City and County of Durham and a local **stakeholder** group to produce the local watershed plan.

(*continued on p. 2...*)

(Terms in bold are defined at the bottom of page 4.)

Twin Lakes Park in the Little Lick Creek Watershed

LWP is Underway (continued from p. 1)

This plan will help us understand what conditions are affecting Little Lick Creek and opportunities for restoring the creek.

Potential management strategies may include stream or wetlands restoration projects, local growth management initiatives, stormwater or agricultural **best management practices** (BMPs), water supply watershed protection, and education or technical assistance programs.

The 4 key ingredients of a successful local watershed plan

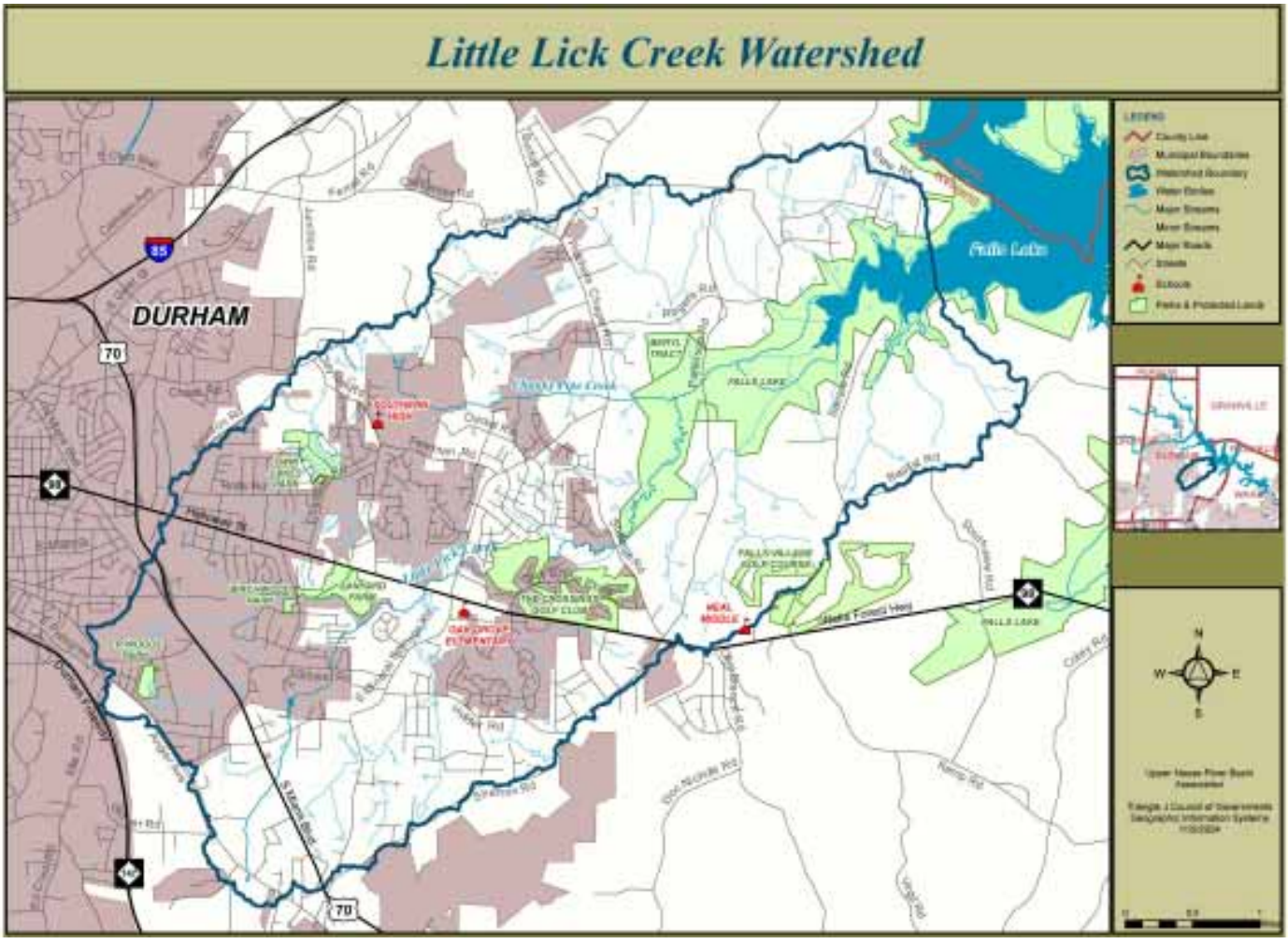
Local stake-holders and resource professionals	Watershed water quality monitoring data
Technical assessments/ consultant	Local partners in planning and implementation

Chris Dreps described watershed conditions and land uses in the Little Lick Creek watershed, which are currently dominated by forest (38.7%) and residential uses (33.8%). Chris also talked about the importance of the hydrologic cycle in how stormwater affects streams in terms of habitat destruction, delivery of pollutants such as sediment, and sewer/septic spills.

Chris also spoke about the steps in the watershed planning process:

1. Involve stakeholders
2. Analyze data
3. Identify project area
4. Set watershed management goals
5. Conduct fieldwork
6. Monitor water quality
7. Perform a watershed assessment
8. Recommend management strategies
9. Implement strategies

The local watershed plan will be completed within one year.



Division of Water Quality Findings

Dr. Stratford Kay of NC DWQ presented the results of analysis of existing water quality and aquatic biology stream sampling data. Between 1985 and 2004, samples have been taken at three different sites.

Little Lick Creek is classified as biologically impaired because it does not adequately support aquatic life. It has low diversity of **benthic macroinvertebrate** species (aquatic insects), low counts of individual aquatic organisms, or an absence of sensitive "indicator" species. Biological impairment can be caused by several factors, such as low **dissolved oxygen**, toxic chemicals, excessive sediment, or habitat disturbance. NC DWQ cannot determine the specific cause(s) of impairment from the data that are currently available.

Monitoring data from Little Lick Creek:

Agency	Monitoring type	# of sites	# of samples	Years sampled
DWQ	Benthic macroinvertebrates	2	8	1985 - 2000
City of Durham	Benthic macroinvertebrates	2	8	2001- 2004
USGS	Ambient water quality	2		1982 - 2001
City of Durham	Ambient water quality	3		2000 - 2004
DWQ	Habitat	3		2000 - 2001

Short-term monitoring recommendations:

1) Sample benthic macroinvertebrates at additional sites on Little Lick Creek and on tributaries 3rd order or greater.

2) Sample water quality at additional sites on Little Lick Creek and on major tributaries.

3) Test stormwater and sediment toxicity.

4) Visit and walk Little Lick Creek and its tributaries to identify potential causes of impairment.

5) Obtain more comprehensive habitat assessment data.

6) Conduct additional stream flow monitoring.

7) Periodically perform continuous monitoring of dissolved oxygen levels.

NC DWQ is creating a plan to gather additional data.

Attendees of the Kickoff Meeting on December 7, 2004

Technical Team members present:

The Technical Team was formed at the meeting. In this project, the Technical Team contributes technical know-how to the project, attends planning meetings, reviews staff findings, and makes recommendations that guide the watershed plan.

Chris Bouton, Durham Open Space and Trails
Jacob Chandler, John Cox, and Laura Webb-Smith, City of Durham Stormwater Services
Dale Crisp, City of Raleigh Public Utilities Dept.
Jane Korest and Glen Whisler, Durham County
Allen McNally, The Crossings Golf Club
Dean Naujoks, Neuse River Foundation
Chris Outlaw, City of Durham
Amy Poole, Rollingview Marina

Technical Team members who could not attend:

Eric Alsmeyer, US Army Corps of Engineers
Shari Bryant, Wildlife Resources Commission
Eddie Culberson, Durham Soil and Water Conservation Service
Kim Douglass, City of Durham
Jeff Masten, Triangle Land Conservancy
Scott Pohlman, NC Natural Heritage Program

Community Stakeholders present:

Community Stakeholders provide local knowledge to help make implementation effective and appropriate.

James Dantzler, Hayestown Lamplighters
David Gorackz, Westfield
Nellie and Bill Harward
David Johnson, Chandler-Breedlove Homeowners' Association
Scott Kershner, NC State Parks
Nancy Newell, City of Durham
Bill Mills, Civil-Consultants, Inc.
Bill and Lee Patrick
Gil Squires, Rhein
Nick Tennyson, Homebuilders Association of Durham and Orange Counties

Guests present:

Natasha Bumpass, Marilyn Snipes, Brenda Wilson, and Omega Wilson, West End Revitalization Association

Staff present:

Deborah Amaral, Bonnie Duncan, and Amy Lamson, NC EEP
Sarah Bruce, TJCOG
Chris Dreps, Upper Neuse River Basin Association
Stratford Kay and Kathy Paull, NC DWQ

Community Watershed Interests

In the second half of the meeting, those present broke into four groups to discuss two questions:

1) What are your major interests in the Little Lick Creek Local Watershed Plan project?

2) Are there any interests or groups who are not represented at this meeting and should be involved?

The breakout groups identified the following issues. Issues have been grouped by topic.

Make sure that the plan is effective (purpose-driven objectives and applications; realistic and practical plans; efforts show results; demonstration projects: gather data, see change over time; devise local mitigation opportunities)

Improve land use planning practices in the watershed (slow down clearcutting; better planning; future mistakes avoided)

Involve local communities in the project (more community involvement; citizen participation, e.g., organized cleanups)

Protect areas critical to water quality and habitat (proactive measures to protect existing resources; US ACE: wetlands, buffers)

Improve water quality in the watershed (identify sources of NPS pollution; restore water quality; improve water quality; decrease sedimentation and erosion)

Restore wildlife habitat (improve wildlife habitat; increase habitat for aquatic insects; Falls Lake State Park game-lands)

Identify potential restoration and stormwater retrofit opportunities (identify potential stormwater BMP retrofit locations; identify potential restoration sites; address existing eyesores; identify areas for BMP installation

Improve natural conditions for people living in the watershed (project aesthetics: projects as community assets; existing and new trails/open space: coordinate with Durham's master plans; projects and money should be spread across socioeconomic classes; environmental health/ mosquito control; floodwater protection/retrofits in light of increasing growth/development)

Protect or improve water quality in Falls Lake (better protection for Falls Lake watershed; improve source water protection)

Educate local communities about the project (improve citizen awareness; educate citizens about polluted runoff)

Additional interests or groups who are not represented at this meeting and should be involved (make a strong effort to involve local community members; are the races and ethnicities that live in the watershed or would be affected by the Plan involved/ represented?)

Definitions

benthic: occurring on or in the bottom sediment of wetland and aquatic ecosystems

benthic macroinvertebrates: bugs that can be seen with the naked eye

best management practices (BMPs): a practice or combination of practices that are an effective and practical means of preventing or reducing the amount of water pollution generated by non-point sources

dissolved oxygen (DO): one of the most important water quality characteristics, DO is the amount of oxygen available in a stream for fish to breathe. DO levels can be lowered if water temperature rises or if the stream has to break down (biodegrade) a lot of organic materials, such as nutrients

stakeholders: people who can affect or are affected by a project

watershed: the geographic area where all the water running off the land drains to a given stream, river, lake, wetland, or coastal water

Next Steps for the Little Lick Creek Local Watershed Planning Project

November and December (2004) — Form technical stakeholder group, set project goals, and start project monitoring

January and March (2005) — Conduct fieldwork and identify potential projects

For more information, contact
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Project website:
www.unrba.org/littlelick