

**Little Lick Creek Local Watershed Plan  
DRAFT Summary of Technical Team Meeting #3  
May 25, 2005**

Prepared May 27, 2005

**Introductions, Agenda, and Announcements**

The Technical Team guiding the Little Lick Creek Local Watershed Plan met at 2:00 P.M. on Wednesday, May 25, 2005 in the Rollingview Community Center on Falls Lake.

Meeting attendees are listed below.

Name	Technical Team or Community Stakeholder	Organization	E-mail address or phone number
Laura Webb Smith	TT	Durham Stormwater Services	<a href="mailto:Laura.smith@durhamnc.gov">Laura.smith@durhamnc.gov</a>
John Cox	TT	Durham Stormwater Services	<a href="mailto:John.cox@durhamnc.gov">John.cox@durhamnc.gov</a>
Joe Pearce	TT	Durham County Engineering	<a href="mailto:Jpearce@co.durham.nc.us">Jpearce@co.durham.nc.us</a>
Joe Albiston	TT	Durham County Engineering	<a href="mailto:Jalbiston@co.durham.nc.us">Jalbiston@co.durham.nc.us</a>
Eric Alsmeyer	TT	US Army Corps of Engineers	<a href="mailto:Eric.c.alsmeyer@usace.army.mil">Eric.c.alsmeyer@usace.army.mil</a>
Allen McNally	TT	The Crossings Golf Club	<a href="mailto:Amcnally2@nc.rr.com">Amcnally2@nc.rr.com</a>
Andy McDaniel	TT	NC DOT Highway Stormwater	<a href="mailto:Amcdaniel@dot.state.nc.us">Amcdaniel@dot.state.nc.us</a>
Deborah Amaral		NC Ecosystem Enhancement Program	<a href="mailto:Deborah.amaral@ncmail.net">Deborah.amaral@ncmail.net</a>
Amy M. Poole	TT	Rollingview Marina	<a href="mailto:Rollingview@aol.com">Rollingview@aol.com</a>
Perry Allen	TT*	City of Raleigh Pub. Utilities	<a href="mailto:Perry.allen@ci.raleigh.nc.us">Perry.allen@ci.raleigh.nc.us</a>
Dean Naujoks	TT	Neuse River Foundation	<a href="mailto:Dean.nrf@att.net">Dean.nrf@att.net</a>
Steve Kroeger	TT	NC Division of Water Quality	<a href="mailto:Steve.kroeger@ncmail.net">Steve.kroeger@ncmail.net</a>
Stratford Kay	TT	NC Division of Water Quality	<a href="mailto:stratford.kay@ncmail.net">stratford.kay@ncmail.net</a>
Cherri Smith	TT	Durham City/County Planning	<a href="mailto:Cherri.smith@durhamnc.gov">Cherri.smith@durhamnc.gov</a>
Mitch Woodward	TT	NCSU Cooperative Extension	<a href="mailto:mitchell_woodward@ncsu.edu">mitchell_woodward@ncsu.edu</a>
Sally Hoyt		Ctr. for Watershed Protection	<a href="mailto:sch@cwsp.org">sch@cwsp.org</a>
Chris Dreps		UNRBA	<a href="mailto:dreps@tjcog.org">dreps@tjcog.org</a>
Sarah Bruce		UNRBA	<a href="mailto:sbruce@tjcog.org">sbruce@tjcog.org</a>

\*Attended in place of a technical team member

Chris Dreps presented the agenda (decision items marked with \*):

- 2:10 Update: Water Monitoring
- 2:25 Findings: Upland Site Reconnaissance
- 2:45 Subwatershed characterization (continued)\*
- 3:30 Critical Lands Protection Analysis\*

There were several announcements:

- 1) Sarah Bruce asked members of the Technical Team to let her know if they needed a Little Lick Creek project notebook. She also asked them to let her know if they had experienced any difficulties with the website.

- 2) Laura Webb Smith of Durham Stormwater Services announced that the storm drainage labelling project with local Girl Scouts was very successful. In one day, more than 100 flyers were distributed to homes and 33 storm drains were labelled in Little Lick's watershed.
- 3) Mitch Woodward of NCSU Cooperative Extension announced that his organization is conducting workshops on NPDES Phase II requirements for local governments.
- 4) Mitch also announced that his organization needs to install 30 rain gardens by September 3rd of this year. He asked anyone who knows of good opportunities to do rain gardens for small or public facilities to contact him ASAP at 250-1112 or [mwoodward@co.wake.nc.us](mailto:mwoodward@co.wake.nc.us).
- 5) Dean Naujoks announced that there is a bill in the NC Senate that would move \$2 million from the Neuse Buffer Mitigation Fund into the general fund to help cover budget shortfalls. Dean asked participants to consider lobbying decisionmakers to spend the money on projects with water quality benefits, such as funding retrofits or preservation.
- 6) Chris Dreps announced that UNRBA submitted an application to the NC Division of Water Quality (NCDWQ) for Clean Water Act Section 319 grant funds to do a watershed restoration plan for neighboring Lick Creek, which would be very similar to the Little Lick Creek Local Watershed Plan. UNRBA is also investigating EEP funding for the project.
- 7) Andy McDaniel of NC DOT announced that his organization is interested in identifying "high quality stormwater retrofit sites" associated with state roadways. Potential projects must involve runoff from a state road. Andy is a contact for this should we identify any potential projects.
- 8) Later in the meeting, Andy McDaniel mentioned the DWQ universal stormwater program, a unified program that local governments could use instead of their multiple, confusing, and sometimes conflicting regulatory directives. John Cox agreed to provide information to the group on this new initiative. Bradley Bennett at NC DWQ is currently accepting comments on the program.

## **Water Monitoring Update**

Stratford Kay with the NC Division of Water Quality presented preliminary results of water quality monitoring in Little Lick Creek. Stratford emphasized that the data shown were uncorrected (anomalous data points had not yet been discarded).

Benthic macroinvertebrate monitoring and habitat assessments on the mainstem of LLC and selected tributaries have been completed. Monthly baseflow monitoring on main stem of LLC and major tributaries and continuous monitoring of dissolved oxygen, water temperature, specific conductivity, turbidity, and pH in LLC and a reference stream is currently in progress. Sediment toxicity testing is being conducted at all benthic macroinvertebrate stations.

Base flow was sampled three times at each of the 11 sites. Oxygen, pH, temperature, and specific conductivity field variables were sampled 6 times. Samples analyzed for turbidity, fecal coliform, nutrients, and metals were collected on 3 dates. Most parameters showed conditions at the reference site to be better than the other monitoring sites.

Stratford noted that habitat scores in Triassic Basic creeks are usually low.

### **Upland Site Reconnaissance Findings**

Sally Hoyt of the Center for Watershed Protection presented a brief summary of the second phase of fieldwork, upland subwatershed and site reconnaissance (USSR). This phase indentified potential causes and sources of degradation outside the stream channel, focusing on pollution "hot spots" and potential stormwater retrofit opportunities.

50 sites were investigated as potential pollution hotspots. Each site was assigned into a category: severe, confirmed, potential, or no score. The most common type of hotspot in Little Lick's watershed is auto maintenance and repair. Another common source is gas stations, particularly those with uncovered diesel fueling areas. Outdoor materials storage associated with auto shops and construction companies is also an issue. Other types of hotspots are associated with restaurants and dumpsters.

Sally also presented an inventory of potential stormwater retrofit locations. Preliminary opportunities for retrofit locations in residential areas that were identified included:

- Using on-lot stream buffers and rain gardens in older neighborhoods.
- Preserving existing forests and wetlands as filter areas. Converting existing dry ponds to wet ponds or stormwater wetlands.
- Constructing stormwater controls for apartment complexes and mobile home communities.

Sally noted that in single-family residential areas, common open space and homeowners associations are scarce, which means that residential retrofits will likely have to be on individual lots, raising potential maintenance and enforcement issues.

Retrofit opportunities for commercial, institutional, and public lands could be addressed through;

- On-site controls and pollution source control measures, such as education;
- Using the three public schools as demonstration/education sites; and
- Outreach to churches to maintain and enhance sheet flow off of parking lots.

A Technical Team member asked why in-stream restoration projects had not been discussed. Sally responded that in-stream restoration projects had not been investigated as part of the first phase of field work, the unified stream assessment.

### **Subwatershed Characterization**

Next, Sally Hoyt presented some of the results of the preliminary watershed characterization. She encouraged participants to look for trends in subwatershed characteristics in upper vs. lower reaches of Little Lick. (Little Lick Creek headwaters are in more highly developed areas, and therefore they consistently show greater impacts than tributaries located closer to Falls Lake.)

Sally's slides showed a series of brief tables for each subwatershed (1–13) summarizing fieldwork, hotspots, and retrofit opportunities.

Chris Dreps spoke briefly on how this information fits with the previous analyses, which, taken together, will begin to suggest a suite of management strategies. Chris passed around a sample document summarizing subwatershed information and asked if the format was a good one with which to present this information. Participants are welcome to email suggestions to Chris Dreps or Sarah Bruce on how they would like to see this information presented.

### **Critical Lands Protection Analysis**

Chris Dreps reviewed comments received on the draft Critical Lands Protection Analysis memo. Many team members contributed valuable comments, particularly in regard to the selection criteria.

Chris described the criteria as being of two general types:

- Landscape Analysis Criteria, which are “functional” criteria, or criteria based primarily on their value to the functioning of the watershed; and
- Parcels-Level Criteria to determine a parcel’s feasibility for protection (e.g. parcels size, prime farmlands, historic sites).

A general discussion of how to identify parcels that are “developable” and/or “threatened by development” ensued. Chris Dreps said that traffic analysis zones (TAZ) data provide growth predictions to show which general areas are under the greatest development pressures.

The group discussed what constitutes a “steep slope” in Durham. Durham ordinances protect steep slopes of 25% or more, which is very high and rare in the Triassic Basin. Joe Albiston said that 1:4 is the steepest slope that can be created without using a retaining wall. Cherri Smith said that 15% would be a good definition of steep slope. The landscape analysis will combine slope with an indicator of erosion potential (K-factor).

John Cox suggested that the analysis should identify platted lots of record in floodplains, as these are exempt from several important protections.

Joe Albiston raised the issue of whether wetlands would be maintained as wetlands or whether they would be allowed to be used for stormwater treatment.

The group discussed how public ownership is less a concern with preservation/acquisition projects than it is with restoration/repair projects. Preservation will be especially important upstream of restoration projects to ensure that new developments do not blow out new restoration projects. Deborah emphasized the desirability of “clustering” projects to achieve maximum localized benefits.

Cherri Smith said that the group should meet with Durham County’s Open Space and Real Estate planners before any landowners were consulted.

Deborah Amaral suggested that the TJCOG and UNRBA run some sample scenarios using various criteria weights. Chris Dreps responded that this will be done.

Deborah also said that it would be good to differentiate between the projects that meet current EEP criteria and those that provide the best water quality benefits. Chris Dreps responded that the Upper Neuse Site Evaluation Tool may help the group analyze projects according to their various benefits.

### **Next Steps**

The next meeting of the Technical Team will be scheduled via email for the first, second, or third Wednesday in July.