

**Little Lick Creek Local Watershed Plan  
Summary of Technical Team Meeting #4  
July 20, 2005**

Prepared July 25, 2005

**Introductions, Agenda, and Announcements**

The Technical Team guiding the Little Lick Creek Local Watershed Plan met at 1:30 P.M. on Wednesday, July 20, 2005 in the snack bar at The Crossings Golf Course.

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>
David Johnson		Chandler-Breedlove HOA	n/a
John Cox	TT	Durham Stormwater Services	<a href="mailto:John.cox@durhamnc.gov">John.cox@durhamnc.gov</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>
Deborah Amaral		NC Ecosystem Enhancement Program	<a href="mailto:Deborah.amaral@ncmail.net">Deborah.amaral@ncmail.net</a>
Kristie Corson		NC Ecosystem Enhancement Program	<a href="mailto:Kristie.Corson@ncmail.net">Kristie.Corson@ncmail.net</a>
Zack Mondry		NC Ecosystem Enhancement Program	<a href="mailto:zack.mondry@ncmail.net">zack.mondry@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>
Kathy Paull	TT	NC Division of Water Quality	<a href="mailto:katherine.paull@ncmail.net">katherine.paull@ncmail.net</a>
Cherri Smith	TT	Durham City/County Planning	<a href="mailto:Cherri.smith@durhamnc.gov">Cherri.smith@durhamnc.gov</a>
Shari Bryant	TT	NC Wildlife Resources Commission	<a href="mailto:bryant5@earthlink.net">bryant5@earthlink.net</a>
Mitch Woodward	TT	NCSU Cooperative Extension	<a href="mailto:mitchell_woodward@ncsu.edu">mitchell_woodward@ncsu.edu</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 \*):

- 1:45 Critical Lands Protection Analysis\*
- 2:30 Field Trip: Potential Restoration Project
- 3:15 Prioritizing Restoration Projects\*

There were two announcements:

- 1) Chris Dreps announced that the Neuse River Foundation is seeking proposals for restoration projects in the Upper Neuse River Basin to address nonpoint source pollution that may not meet section 319 or EEP criteria. If you have a project in mind, please contact Jackie Murphy-Miller at [jackie.nrf@att.net](mailto:jackie.nrf@att.net).

2) Sarah Bruce asked members of the Technical Team to let her know if they needed a Little Lick Creek project notebook. All meeting materials and memoranda are available on the project website, [www.unrba.org/littlelick](http://www.unrba.org/littlelick).

**Critical Lands Protection Analysis**

Chris Dreps first gave an overview of the critical lands protection analysis process. The following table summarizes this process:

Step (Action)	Product
Step 1: Set goals	Watershed management goals
Step 2: Establish landscape analysis criteria & prepare data	Data for landscape analysis
Step 3: Perform landscape analysis	Scored potential land protection sites
Step 4: Perform parcels-level analysis	Flagged parcels
Step 5: Overlay landscape analysis results with flagged parcels	Spreadsheet and map of high resource-value tracts

After the critical lands protection analysis is completed, UNRBA will present findings to the Technical Team and field-verify the findings.

Landscape Analysis

Chris Dreps used Subwatershed 8 as an example to illustrate the weighting scheme. The Technical Team discussed the following:

- Wetlands: John Cox asked about the source of the data. Chris Dreps responded that EEP did a Falls Lake Functional Wetlands Assessment that considered NWI and USACE data and was field verified.
- Floodplains: John Cox asked about the date of the data. Chris Dreps responded that the data used were from the recently flown LIDAR data but that he would have to check the exact date and adoption status of the data. (The floodmaps were obtained from the NC Floodplain Mapping Program and are dated November 17, 2004).
- Steep slopes: The Technical Team decided previously to define steep slopes as slopes greater than 15%, since the Team felt that the City of Durham’s regulations protecting slopes greater than 25% is not sufficiently protective of the highly erosive soils in Little Lick Creek.
- Erosive soils: Soil surveys were used instead of overall soil erosion potential because slope was factored in separately.
- Forested areas: These data are from 5-year-old land use/land cover data, so they could underestimate or overestimate forest cover (the latter is more likely). John Cox noted that the City of Durham just received new color satellite imagery. These could be used for verification of results.

Chris Dreps asked Technical Team members to reflect on the weighting scheme presented (see handout) and respond to him with feedback about the relative importance of the different criteria. He said that staff are prepared to go back and do additional analysis if the Technical Team would like to test out adjustments to the weighting scheme.

Mitch Woodward commented that ideal BMP retrofit sites are often found in watersheds that are not threatened by development, and that threatened watersheds are often changing too quickly to offer good retrofit opportunities.

John Cox discussed the possibility of areas identified through the landscape analysis being considered in the development processes by implementing incentives to include them in the development's tree-save areas (i.e., a bonus on buildable area if sensitive areas are protected). Cherri Smith echoed John's suggestion, saying that currently there are no criteria for tree-save areas, with the result that the areas often contain only low-value vegetation.

There was some discussion about consideration of local watershed rules. Chris Dreps reminded the group that they had previously agreed to consider landscape criteria in isolation and to consider other questions specific to land's protected uses as part of the parcels-level analysis. However, the group agreed that it is crucial nonetheless to determine whether a given area is protected under existing rules to facilitate effective prioritization in the critical lands protection process.

The Technical Team generally discussed the need to include policy recommendations in the final report to help ensure that sensitive areas are protected from future development regardless of action on the part of land trusts and other land preservation organizations.

#### *Parcels-Level Analysis*

Next, Chris Dreps discussed the parcels-level analysis. This analysis "flags" parcels that:

- contain areas identified through the landscape analysis;
- are larger than 10 acres;
- are adjacent to protected lands;
- contain prime farmlands;
- contain historical or cultural features;
- have significant creek frontage (more than ¼ mile);
- contain planned trails;
- are developable; or
- contain stream buffers or floodplains that would lack current protections if developed (i.e., the site is subdivided prior to adoption of UDO with new protections).

Chris solicited feedback from the Technical Team on how to consider a parcel's size in the analysis. (Large parcels enable larger areas to be protected more easily, but they may not coincide with the most critical areas.) Chris said that one way in which the issue of identifying a suitable number of parcels was resolved for another project the UNRBA is doing was to *start* with a target number of parcels to be identified and to adjust the criteria to produce that target outcome.

Dean Naujoks asked where all of this analysis is leading. Chris Dreps responded that it will be used to produce informational presentations to decisionmakers in the city and county, passed on to recreation and open space planners to help plan greenways, and disseminated to local landowners to encourage them to donate easements and pieces of land.

Cherri Smith added that the Lick and Little Lick Open Space Plan, currently being developed, will consider recommendations from this analysis. The Open Space Plan, once adopted, will be enforced through Durham's Unified Development Ordinance.

### **Field Trip**

Kristie Corson of the NC Ecosystem Enhancement Program led a tour of Little Lick Creek in The Crossings Golf Club (taken on golf carts provided by The Crossings). Ms. Corson pointed out several potential restoration sites and the group discussed the issues they saw associated with those sites (e.g., floodplain access, bank stability, sedimentation). This reach of the stream appears to have re-established a meander and to be relatively stable and well suited for restoration.

### **Prioritizing Potential Restoration Projects**

Chris Dreps asked the group to divide into teams of three to discuss criteria for prioritizing potential restoration projects. The three teams were to discuss project criteria relating to environmental benefits, community benefits or support, and project feasibility (from draft Technical Memorandum #3, circulated via email on 7/19/05), add additional criteria, and weigh the relative importance of all the criteria under their categories. (The Technical Team generally agreed to keep using the same basic prioritization scheme: High/Medium/Low.)

The results of these three teams' discussions are here transcribed. Where the team changed the wording of the criteria in the memorandum or added a criterion, edits are shown.

#### ***Environmental Benefits*** (organized by Little Lick Creek Project Goals 1–4)

##### *Goal 1: Hydrology*

- High Priority: Improve hydrology by removing or reducing impervious cover, reducing the directly connected impervious area, or promoting infiltration
- High Priority: Provide channel protection – peak
- High Priority: Provide channel protection – volume [new criterion]
- High Priority: Reduce channel erosion

##### *Goal 2: Aquatic and Riparian Habitat*

- High Priority: Buffers
- High Priority: Restore or protect aquatic or riparian habitat
- Medium Priority: Benthic macroinvertebrate ratings

##### *Goal 3: Water Quality*

- High Priority: Improve water quality at this location
- High Priority: Improve water quality / pollutant removal efficiency
- High Priority: Onsite and offsite water quality benefit

*Goal 4: Falls Lake*

- High Priority: Reduce nutrients flowing into the lake (may be difficult to measure; at least reduce nutrients at project site)
- Uncertain Priority: Remove toxics or pathogens (team felt that data was needed on urban and rural areas to guide prioritization of this criterion)

***Community ~~Acceptance~~ Benefits or Support*** (organized by Little Lick Creek Project Goals 5 and 6)

Goal 5: Improve natural conditions for people living in the watershed

- High Priority: Reduce flooding impacts (impacts of concern to residents are different from environmental impacts of flooding)
- High Priority: Aesthetic improvements are an important consideration if the project is highly visible, if the public will interact with it, or if it will improve property values [subgroup combined criteria]
- Medium Priority: Better protect public health if human contact with fecal coliform is an issue in a particular area or public perceives a water quality problem

Goal 6: Foster community stewardship of the watershed

- High Priority: Public involvement in long-term watershed stewardship sustainability ~~of watershed restoration~~ through monitoring, maintenance, or watchdog efforts (stewardship to involve public beyond aesthetic improvements)
- Medium Priority: Educate watershed residents (especially children)
- Low Priority: Help homeowners' associations understand their responsibilities with regard to BMP maintenance (new criterion)
- Low Priority: Citizen involvement in implementation of projects (not a good criterion for project selection; just do it if feasible for the projects selected)
- Not a Priority: Community credit under Phase I requirements (may be a feasibility concern?)

***Implementation Feasibility***

- High Priority: Unit cost/benefit of project
- High Priority: Meet NC EEP criteria
- High Priority: Anticipated impacts on existing utilities
- High Priority: Landowner cooperation [new criterion]
- High Priority: Access for construction and maintenance
- Medium Priority: Maintenance burden
- Low Priority: Number of public agencies involved

The results of this exercise will be used to revise Technical Memorandum #3—Setting Priorities for Watershed Restoration Projects. The UNRBA and the Center for Watershed Protection will create a draft set of weighted project prioritization criteria (in the form of questions) for review by the Technical Team.

**Next Steps**

Chris Dreps discussed delays in the monitoring and critical lands protection analysis tasks. These delays will further delay other tasks and may necessitate two additional task group

meetings (for review of subwatershed information and project prioritization). The Technical Team agreed to hold as many meetings as were necessary to accomplish the tasks.

The next Little Lick Creek Local Watershed Planning Technical Team meeting was scheduled for August 31st.

**Addendum:  
Little Lick Creek DRAFT Critical Lands Protection Landscape Analysis Criteria**

*Date of draft: 7/20/05*

Landscape Analysis Criteria (the presence of)	Priority Level	Data Set	Score	Percent of Total Score
Endangered, threatened or rare species or natural communities	High	Natural Heritage element occurrence in the Little Lick Creek Watershed	3	11.54%
NC Natural Heritage Areas	High	Little Lick Creek Natural Heritage areas	3	11.54%
Wetlands	High	Falls Lake functional wetland data for Little Lick Creek Watershed	3	11.54%
Floodplains	High	Little River flood hazard polygons	3	11.54%
Steep slopes: over 15%	High	Slopes in the Little River Watershed derived from 20-ft DEM	3	11.54%
Highly Erosive Soils	High	Little River Watershed soils data with K-values: A > 1.6	3	11.54%
	Medium	Little River Watershed soils data with K-values: A = 1.2-1.6	2	
	Low	Little River Watershed soils data with K-values: A = 0.8-1.2	1	
Outstanding geologic characteristics	Medium	Generalized geologic data for Little Lick Creek Watershed - Diabase Formation	2	7.69%
Significant forest cover: deciduous	High	Little River Watershed EPA landcover classes, 15 meter resolution - Landuse Code 310 (Woody-Deciduous) and 620 (Woody Wetland)	3	11.54%
Significant forest cover: mixed deciduous/pine	High	Little River Watershed EPA landcover classes, 15 meter resolution - Landuse Code 330 (Woody-Mixed)	3	
Significant forest cover: pine	Medium	Little River Watershed EPA landcover classes, 15 meter resolution - Landuse Code 320 (Woody-Evergreen)	2	
Area close to Little Lick Creek or tributaries: 50 feet	High	50-ft buffer of Little Lick Creek and tributaries derived from combined Durham Hydro and USGS 1:24K	3	11.54%
Area close to Little Lick Creek or tributaries: 100 feet	Medium	100-ft buffer of Little Lick Creek and tributaries derived from combined Durham Hydro and USGS 1:24K	2	
Area close to Little Lick Creek or tributaries: 330 feet	Low	330-ft buffer of Little Lick Creek and tributaries derived from combined Durham Hydro and USGS 1:24K	1	
<b>Total</b>			<b>26</b>	<b>100.00%</b>