

Morgan and Little Creeks Local Watershed Planning Initiative



Meeting Announcement & Summary

January 15, 2003 meeting at the Totten Center, NC Botanical Garden

**Next meeting:
February 20, 2003
2:00-4:00 pm**

Totten Center, NC Botanical Gardens

Directions to the Totten Center:

From I-40: Take exit 273 from the West, 273-B from the East. Turn right onto Highway 54 W, go 2.4 miles; turn left at the traffic light onto Finley Golf Course Road. Go 0.6 mile and curve right onto Old Mason Farm Road. Go 0.7 mile, see North Carolina Botanical Garden sign on left; turn left into parking lot.

From the 15-501 and 54 Bypass (Fordham Blvd.): Look for the brown landscaped wall on the south side of Fordham Blvd., 0.6 mile west of the Hwy 54 overpass. Turn onto Old Mason Farm Road at the east end of the wall. See North Carolina Botanical Garden wooden sign on immediate right and turn right into parking lot.

Maps can be found at the following URL:
<http://www.unc.edu/depts/ncbg/info.htm#Directions>

February Meeting Agenda

- ▶ Welcome and introductions
- ▶ Review and approval of January minutes
- ▶ Review of goals in charter
- ▶ Discussion of preliminary findings
- ▶ Specific team goals and tools
- ▶ Plans for next meeting

Team members present at 1/15/03 meeting:

Shari Bryant, N.C. Wildlife Resources Commission
Ren Ivins, Orange County Erosion Control
Tina Moon, Orange County Environment & Resource Conservation Dept.
Sharon Myers, UNC-Chapel Hill
Doug Nicholas, Triangle Land Conservancy
Philip Prete, Town of Carrboro
Johnny Randall, N.C. Botanical Gardens/Morgan Creek Valley Alliance
John Ann Shearer, U.S. Fish and Wildlife Service
John Thomas, U.S. Army Corps of Engineers
Ed Holland, Orange Water and Sewer Authority

Team Members Not Present:

Brent Bogue, Natural Resources Conservation Service
Jonathan Parkinson, Friends of Bolin Creek
Karen McAdams, N.C. Cooperative Extension Service
Fred Royal, Town of Chapel Hill
Richard Whisnant, UNC-Chapel Hill School of Government

Guests Present:

Misty Franklin, NC Botanical Gardens, Morgan Creek Valley Alliance
Brian McRae, NC Wildlife Resources Commission
Kat Oury, NC Cooperative Extension Service
Hollie Rennell, Orange County Erosion Control
Perry Sugg, Orange County Erosion Control

Support Staff Present:

Deborah Amaral, Cape Fear River Assembly
Jim Blose, NC Division of Water Quality
Sarah Bruce, Cape Fear River Assembly
Jon Butcher, Tetra Tech, Inc.
Jason Doll, Tetra Tech, Inc.
Bonnie Duncan, N.C. Wetlands Restoration Program
Don Freeman, Cape Fear River Assembly
Suzanne Klimek, N.C. Wetlands Restoration Program

Minutes to the 1/15/03 Meeting

Meeting Introduction / New Participants

Deborah Amaral of the Cape Fear River Assembly opened the meeting by welcoming the group and expressing appreciation for participants' time. Participants then introduced themselves before Deborah outlined the agenda items.

First on the agenda was approval of the minutes in the form of a newsletter for the October meeting. No additions or objections were made. Deborah emphasized that this step will become more crucial as the process evolves and proceedings become more complex. The minutes will be posted on the Internet and will be a public record of the decisions made by the Team during the planning process.

Group Charter

Next, the Team reviewed the Group Charter. Deborah read some of the key points from the Charter document, which included the importance of stakeholder input, roles played by Team participants, ground rules, expectations, and the working definition of consensus. The recommendations from this group should be completed by 2004. Proposed amendments to the Charter made by Fred Royal (representing Chapel Hill) and clarified by Bonnie Duncan (of the NCWRP) were approved by the group. A participant requested that the amendments be considered an addendum to the Charter so that paper would not be wasted. The amendment to the Group Charter (to be added to the end of the "Group Tasks" section) follows:

"Provide relevant information and participation to the discussion elements of the inter-jurisdictional Stormwater Work Group, to be implemented by the Town of Chapel Hill. Meetings of this group will be held separately from the Morgan/Little Creek Local Watershed Planning meetings, although the activities of this Work Group will include several of the Local Watershed Planning stakeholders and the work of the group will be reported to the Local Watershed Planning Team. This work group will primarily discuss and coordinate efforts in the water quality sampling and monitoring, illicit discharge identification and elimination, public education, flood mapping and sedimentation and erosion control programs."

Deborah then briefly discussed how the new stormwater management committee for Chapel Hill will fit with this project. Although some goals and some group participants may be common to both the Chapel Hill stormwater group and the Morgan and Little Creeks Local Watershed Planning team, the groups will meet separately. However, this team will work with other groups to achieve shared objectives.

Watershed Functions Review

Jason Doll of Tetra Tech, Inc., gave a short presentation on functioning and nonfunctioning riparian areas, floodplains, aquatic habitats and wetlands. Functioning riparian areas provide ecological services such as habitat and stormwater recharge. Examples shown included photos of streams that can easily flood their banks, have meanders, and have pool-and-riffle sequences. Riffles aerate stream water, and frequent overflows of streambanks maintain wetlands. Wetlands provide benefits of flood protection, flood water retention, and pollutant removal. Wetlands have unique types of vegetation that provide habitats for aquatic and terrestrial fauna.

Aggrade: to fill and raise the level of the bed of a stream by deposition of sediment

Degrade: to lower or wear by erosion or weathering

Nonfunctioning riparian areas can be identified by deep undercuts along stream banks, homogenous streambeds that don't provide a variety of habitat types, transport of excessive sediment, and lack of meanders. Streams are often straightened during utility construction to minimize problematic pipe crossings, which increases the velocity of streamwater.

Discussion and Review of Stakeholder Photographs

The meeting participants divided into three groups to review the photos taken after the October meeting. Each group chose 3 examples of "good" or functioning streams and 3 examples of "bad" or degraded streams. The following outline describes the photographs and functions that were selected by the groups.

Bolin Creek

Pictures of functioning streams depicted:

- Good habitat function, intact system
- Good meandering, good vegetative cover, access to the floodplain
- Cover present; meandering, in-stream habitat
- Estes Drive: office parking adjacent to creek, University Mall, loads of sediment in the stream, exposed tree roots

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Bolin Creek at University Mall

Pictures of impaired functions depicted:

- Stripped of vegetation, sewer crossing present, riprap, mowing to the creek, sediment is obvious
- Chapel Hill Golf Course: instream pollution, algae, evidence of nutrient inputs
- Severe bank erosion in Bolinwood

Lower Morgan Creek

Pictures of functioning streams depicted:

- Morgan Creek: Kings Mill, good-looking floodplain is forested
- Tom's Creek: behind the shopping center portions look good and stable, bedrock is visible

Pictures of impaired functions depicted:

- Meeting of the Waters: discolored water; found an illicit discharge coming from a laundry facility at UNC hospital – but it's on the way to being fixed; Pinetum has good function / habitat
- Wilson Creek: muddy / contains sediment; DOT construction site downstream from Southern Village – Orange County has no jurisdiction over DOT – they're "self-regulating"



Tom's Creek

Upper Morgan Creek

Pictures of functioning streams depicted:

- Prices Creek: Cypress Grove above University Lake an unusual site few cypress swamps in the piedmont (most are planted)
- Morgan Creek: upstream of Dairyland Road, riffles / pools, not too incised
- Wetland on Morgan Creek above Dairyland Road at Andrews

Pictures of impaired functions depicted:

- Unnamed tributary to Morgan Creek: incised banks although it's forested, stream is entrenched
- Dairy Farm: cattle in the stream, banks eroded.



Morgan Creek Tributary

Stakeholder Comments and Discussion

Functioning characteristics noted in "good" photos:

- accessible stream banks
- shaded stream bed
- meanders
- pool-and-riffle sequences
- intact/mature vegetation in riparian area
- stream bottom not buried under sediment

Common problems noted in "bad" photos:

- exposed sewer pipes
- denuded utility easements
- mowing up to stream edge, lack of buffer
- overfertilization
- rip-rap
- invasive species
- scoured banks
- undercutting
- sediment and other pollutants
- intrusion of incompatible uses (e.g., grazing, parking) into riparian area

A participant posed a question regarding how we might discern natural (benign) erosion from erosion caused by human activities, harmful to the riparian ecosystem. Jason Doll and Jon Butcher of Tetra Tech framed the answer in terms of the rate of change versus the capacity of the physiologic components of the stream to adjust and restabilize to those changes. If a large portion of the stream is in flux at any given moment, it is safe to say that anthropogenic forces are at work and some remediation is called for. Jason said that a stream will re-establish itself on its own given enough time, but we want to accelerate this process so that we get the benefits of improved water quality, habitat, and stormwater recharge in the meantime.

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