



New Hanover County  
Local Watershed Planning Group

## MEETING SUMMARY

For Monday, October 30, 2000 meeting held at the Cape Fear Riverwatch Educational Ctr.

### Next Meeting scheduled for Wednesday, December 6, 2000

- Come prepared to discuss your positions and interests with respect to water quality management in the watershed and what you want to get out of this process. At the beginning of the meeting, each person will have a couple of minutes to share their thoughts on this.
- Scott McLendon with the U.S. Army Corps of Engineers and Joanne Steenhuis N.C. Division of Water Quality will provide information about 401 and 404 permitting processes.
- The group will also brainstorm issues of concern in the watershed.

The meeting will be held at the Cape Fear Riverwatch Educational Center from 6:30 p.m. - 8:30 p.m. The

#### Group Members/alternates present:

Jim Bordeaux, Castle Hayne Steering Committee  
Don Cooke, CP&L  
Jabe Hardy, Cameron Company  
Curt Hensyl, Local watershed resident  
Matt Hayes, City of Wilmington  
Marian McPhaul, Lower Cape Fear River Program  
Karen Moorefield, Carolina Heights Neighborhood  
Chris O'Keefe, New Hanover Co. Planning  
Michael Pope, Sierra Club, Wrightsboro Community  
Stacy Smaltz/Bouty Baldrige, Cape Fear River Watch  
Robert Southerland, NC Marine Fisheries Commission  
Tommy Tew, Corbett Timber Co.  
Randy Turner, NCDOT

#### Group members not present:

Curtis Wright, Council of Neighborhood Assoc.

#### Support staff & guests present:

Aldyth Baker, guest  
Bonnie Duncan, NC WRP  
Suzanne Klimek, WECO/NCSU  
Scott McLendon, USACE  
Christy Perrin, WECO/NCSU  
Kevin Schneider, Cape Fear River Watch volunteer  
Joanne Steenhuis, Wilmington Regional DWQ

### Purpose and Charter Discussion

Christy reviewed the purpose that the group agreed upon at their last meeting:

*The primary purpose of the New Hanover County Local Watershed Planning Group is to recommend actions to improve water quality through identifying issues such as flood prevention, fisheries, wildlife habitat and recreation opportunities in the watershed. To accomplish this, the group may recommend tapping into available resources including but not limited to the NCWRP, the Clean Water Management Trust Fund, local government programs and others. Some of the projects initiated by the NCWRP may be used to meet compensatory mitigation requirements.*

The group then finished reviewing the charter that will guide their work.

### Decision: The working charter was accepted.

An updated version of the charter is enclosed with this mailing of the minutes. Members of the watershed planning group can add them to their notebook.

### Current Research in this Watershed, Presentation by Dr. Mike Mallin, *UNC- Wilmington, Center for Marine Science*

Dr. Mallin presented the group with a summary of the research being conducted in the watershed. Two projects currently sample and analyze water quality in the watershed- The Wilmington Watersheds Program, and the Lower Cape Fear River Program

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### 1. *Wilmington Watersheds Program:*

Three water bodies are sampled within the watershed:

- Burnt Mill Creek at four locations (three at or near Ann McCrary Pond and one at the Princess Place Bridge).
- Two stations in Smith Creek (one at Castle Hayne Rd. bridge and one at 23<sup>rd</sup> Ave. bridge)

Summary of research:

The large Ann McCrary wet detention pond does a reasonably good job of reducing some pollutants in the creek. However, by the time the creek reaches the Princess Place Bridge it is highly polluted. The water has low dissolved oxygen concentrations and high fecal coliform concentrations. In addition, the creek bottom sediments contain levels of several EPA Priority Pollutant metals (copper, lead, and zinc) that can be injurious to aquatic organisms.

### *Lower Cape Fear River Program (LCFRP)*

As part of the LCFRP, the Northeast Cape Fear River is sampled in two locations in the watershed:

- in the Northeast Cape Fear River at Castle Hayne
- approximately six miles upstream from Wilmington near the GE (General Electric) dock.

Summary of research:

The two areas sampled in the lower NE Cape Fear River (particularly near Castle Hayne) have chronically low dissolved oxygen (DO) levels in summer. Under normal conditions summer DO values are between 4 and 5 ppm (parts per million); however, following events such as animal waste spills and hurricanes these areas are severely hypoxic (low dissolved oxygen) or anoxic (no dissolved oxygen).

After each of the hurricanes this area

experienced some of the worst water quality system-wide, including large fish kills. The heavy proliferation of hog farms upstream contributes in part these problems. Also, several sewage treatment plants upstream regularly fail after hurricanes and contribute to the problem. More details of this can be found in the LCFRP reports (accessible on the web) at:

<http://www.uncwil.edu/cmsr/aquaticceology/lcfrp/>

### **Questions and Answers for Dr. Mallin**

*Q: In regards to the low oxygen being a problem for water quality, what puts oxygen INTO water?*

A: Two processes; 1) A physical process that occurs through the surface of water allows for oxygen to enter into the water column; and 2) Photosynthesis by aquatic plants adds oxygen. But there are other factors, for example the NE Cape Fear is a blackwater stream, which is stained by swamp vegetation. Sunlight cannot penetrate this kind of water. This stream is prone to low dissolved oxygen in the summer, since warm water holds less oxygen than cool water.

*Q: Is the data you refer to summarized in forms other than yearly reports that show trends?*

A: Each report has an executive summary. Figures within the reports show changes that occur over years.

*Q: What should we focus upon for the most good?*

A: This is challenging since you need to know where the pollutants are coming from, and the sources are unknown.

*Q: Are there other water sampling programs? Is there any comprehensive look at the data?*

A: The NC Division of Water Quality (DWQ) has sampling stations on the Cape Fear. The state takes bacteria counts in shellfish areas. There are no state programs sampling the creeks.

All data goes to a central facility in Raleigh.

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*Q: Concerning the bacteria between the pond and Princess Place Bridge, what has been done to locate its source?*

A: Nothing. Somebody would need to do intense sampling to determine the source.

*Q: Is fecal coliform bacteria the biggest problem in Burnt Mill Creek?*

A: Bacteria is a big problem in the city. In a lot of cases it is a result of animal waste. There will also be an occasional sewage spike. Some suspect waterfowl as a source, but that's not the case in Burnt Mill Creek and Smith Creek.

*Q: Have the detention ponds upstream from Greenfield Lake been checked?*

A: Yes, the pond on 17<sup>th</sup> Street has been checked and is the best functioning pond that I've seen.

*Q: Are chemicals a problem or is it just organic matter that is a problem?*

A: There has been no pesticide testing in the city. There has been some testing in the tidal creeks. There are possible toxins coming from parking lots.

*Q: What are the maximum allowable fecal coliform standards?*

A: 14 CFU/100 mm of water is the shellfishing standard. In North Carolina the health standard is 200 CFU/100 mm of water. The reason the standard is lower for shellfishing areas is because shellfish are filter feeders, and therefore concentrate the bacteria (increasing the amount of bacteria being stored in the shellfish).

*Q: Is a fecal coliform level of 200 CFU dangerous?*

A: Fecal coliform themselves may or may not be contagious. They are used as a method of measuring bacteria based upon studies.

*Q: What is the standard for areas classified as non-swimming areas?*

A: The maximum number is 200 CFU/100 mm of water across the board. It is not sampled as rigorously in non-swimming areas. As an example, Burnt Mill Creek may be used for

swimming, even though it is not classified for swimming.

*Q: What is the quality of the water at the G.E. Dock in the NE Cape Fear River?*

A: It has low dissolved oxygen. There are not usually fecal coliform problems except after hurricanes. Near Castle Hayne, we have seen occasional fecal coliform problems.

*Q: What causes dissolved oxygen to fluctuate?*

A: The seasonal change in water temperature, and the tide brings in higher quality water.

*Q: Are there projections on salt water intrusion after dredging?*

A: Models say it won't change.

A: (Scott McLendon, US Army Corps of Engineers): The USACE is sponsoring research on wetlands, being conducted by Dr. Courtney Hackney at UNC-Wilmington.

## **North Carolina's Basinwide Planning Program**

### **Cam McNutt, NC Division of Water Quality**

Cam McNutt described the state's Basinwide Planning Program, and showed the group maps of the watershed's hydrology and land uses. He brought copies of the Cape Fear River Basin Basinwide Plans for the group members. The information he presented is located within the Plan, and is also provided as a handout of his presentation. This presentation handout accompanied the mailing of this meeting summary and is available upon request.

### **Questions and Answers for Cam McNutt**

*Q: Have efforts been made to identify non-point sources?*

A: We don't have a good handle on the sources. There is what we refer to as a "general urban non-point source" problem in the Cape Fear River basin. This is related to

