

Chapter 1 - Current Water Quality Initiatives

1.1 Workshop Summaries

In October 2000, there were two workshops held by DWQ in the White Oak River basin at Beaufort and Jacksonville. There were 50 people in attendance representing a variety of interests.

DWQ staff gave presentations about general water quality in the White Oak River basin, basinwide planning and the Wetlands Restoration Program. Participants at each workshop also gave brief presentations about local water quality initiatives. Workshop attendees were asked to discuss the following questions in small groups:

1. What are the main threats to water quality in the White Oak River basin?
2. Where are the problem areas or waters? And what recommendations do you have for addressing these problems/waters?
3. What local agencies or organizations should be involved in addressing the problems?

A detailed outline of each small group's discussion of these questions is provided in Appendix V. Good discussion was generated at each workshop, and all of the information was considered, and in some cases incorporated, into this draft plan. The most frequently cited threats to water quality identified by workshop participants are listed below.

Important Issues Basinwide

- Sedimentation
- Nonpoint source pollution (agriculture, urban runoff, silviculture)
- Lack of local planning
- Wastewater treatment (collection system failures, discharges, failing septic systems)
- Closed shellfish harvest areas

1.2 Federal Initiatives

1.2.1 Section 319 – Base Program

Section 319 of the Clean Water Act provides grant money for nonpoint source demonstration projects. Approximately \$1 million is available annually for demonstration and education projects across the state. Project proposals are reviewed and selected by the North Carolina Nonpoint Source Workgroup, made up of state and federal agencies involved in regulation or research associated with nonpoint source pollution. Information on the North Carolina 319 grant program, including application deadlines and requests for proposals, are available online at <http://h2o.enr.state.nc.us/nps/bigpic.htm>.

Table C-1 319 Projects in the White Oak River Basin

Funding Year	Project	Contractor	Grant
FY 1998	Bear Creek Shellfish Restoration Project	NC Cooperative Extension Service	\$100,000
FY 1997	BMP Demonstration Project	NC Cooperative Extension Service	\$120,000

Bear Creek Shellfish Restoration Project (Subbasin 03-05-01)

The objective of this project is to reduce fecal coliform levels in Bear Creek sufficiently to enable opening of its SA waters to shellfishing with greater frequency and to maintain acceptable fecal coliform levels on a long-term basis. Residential, agricultural, roadway and forestry best management practices will be installed and evaluated for their ability to reduce fecal coliform, sediment and nutrient loads. Potential indicators of success will be an increase in the number of shellfish acres conditionally approved-open or to increase the amount of rainfall required for closure of conditionally approved-open shellfish areas.

Best Management Practice (BMP) Demonstration Project (Subbasin 03-05-01, 03-05-02 and 03-05-03)

A primary water quality concern along the coast and in the White Oak River basin is the condition of shellfishing waters. This 319 project is aimed at this issue. It addresses sedimentation and shellfish closures in the White Oak River basin by demonstrating and quantifying the effectiveness of urban and agricultural best management practices (BMPs) to reduce sediment, nutrients and pathogen loading.

Pollution sources will be inventoried using a geographic information system, which will facilitate the coordination and development of a comprehensive system of BMPs and educational programs. Three agricultural/forest runoff demonstration sites, one each in the New, Newport and White Oak Rivers, will be selected to demonstrate bacterial, nutrient and sediment reduction resulting from detention ponds, livestock exclusion, streambank restoration and/or wetland construction. Two urban runoff demonstration sites, one each in the New and White Oak River watersheds, will be used to demonstrate the effectiveness of urban BMPs. Water quality monitoring will be used to evaluate effectiveness in reducing sediment, nutrients and pathogen loads.

The project’s educational component includes conducting workshops to inform local elected officials, agency officials, the development community, students, local leaders and citizens about the purpose and effectiveness of BMPs. It also includes production of newsletters and fact sheets to promote BMP implementation in the watershed.

1.2.2 Clean Water Act Section 319 (h) – Incremental Program

In 1998, the President’s Clean Water Action Plan Initiative required states to compile and rate water quality conditions at the 8-digit hydrologic unit scale. This evaluation by the state resulted in the identification of 23 HUs as 'needing restoration'. The Category I rating makes these areas

eligible for additional funding through the incremental 319 program. There are two 8-digit hydrologic units within the White Oak River basin (Table C-2), both of which were rated as needing restoration in the 1998 Unified Watershed Assessment.

Table C-2 Hydrologic Units within the White Oak River Basin

HU Name	HUC	UWA Rating
White Oak River	03030001	Category I
New River	03020106	Category I - High Priority

Funding for implementation of the Clean Water Action Plan Initiative is provided through the Section 319 Incremental Grant Program. With a separate funding source, these grant resources are to be allocated by the state for assessment and implementation in hydrologic units defined as "Needing Restoration" in the 1998 North Carolina Unified Watershed Assessment. This funding was first available for FY 1999, and continued funding of this program will be decided by Congress. Project proposals are reviewed and selected by the North Carolina Nonpoint Source Workgroup, made up of state and federal agencies involved in regulation or research associated with nonpoint source pollution. Information on the North Carolina 319 grant program, including application deadlines and requests for proposals, are available online at <http://h2o.enr.state.nc.us/nps/bigpic.htm>.

1.3 State Initiatives

1.3.1 NC Wetlands Restoration Program

The North Carolina Wetlands Restoration Program (NCWRP) is a nonregulatory program responsible for implementing wetland and stream restoration projects throughout the state. The focus of the program is to improve water quality, flood prevention, fisheries, wildlife habitat and recreational opportunities. The NCWRP is not a grant program. Instead, the program funds wetland, stream and riparian area projects directly through the Wetlands Restoration Fund.

Restoration sites are targeted through the use and development of the Basinwide Wetlands and Riparian Restoration Plans. These plans were developed, in part, using information compiled in DWQ's Basinwide Water Quality Plans. The Basinwide Wetlands and Riparian Restoration Plans are updated every five years on the same schedule as DWQ's Basinwide Water Quality Plans.

The NCWRP is also working to develop comprehensive Local Watershed Restoration Plans within the some targeted local watersheds. These more locally-based plans will identify wetland areas, contiguous reaches of stream, and contiguous strips of buffer vegetation that, once restored, will provide significant water quality and other environmental benefits to watersheds. The NCWRP will coordinate with local community groups, local governments and others to develop and implement these plans.

The NCWRP can perform restoration projects cooperatively with other state or federal programs or environmental groups. For example, the NCWRP's efforts can complement projects funded through the Section 319 Program. Integrating wetlands or riparian area restoration components with 319 funded or proposed projects will often improve the overall water quality benefits of the project. The NCWRP actively seeks landowners within the White Oak River basin who have restorable wetland, riparian and stream sites.

For more information about participating in the NCWRP, please contact Crystal Braswell at (919) 733-5208 or visit the website at <http://h2o.enr.state.nc.us/>, then click on Wetlands Restoration Program.

1.3.2 Clean Water Management Trust Fund

The Clean Water Management Trust Fund offers approximately \$40 million annually in grants for projects within the broadly focused areas of restoring and protecting state surface waters and establishing a network of riparian buffers and greenways. In the White Oak River basin, nine projects have been funded for a total of \$10,086,141. For more information on the CWMTF or these grants, call (919) 733-6375 or visit the website at <http://www.cwmtf.net/>.

Table C-3 Projects in the White Oak River Basin Funded by the Clean Water Management Trust Fund (as of July 1999)

Stream or Watershed	Project	Project Lead	Amount Funded
New River	Stormwater Improvements	Jacksonville	\$572,043
White Oak River	Land Acquisition-Buffers	NC Coastal Federation	\$2,134,818
White Oak River	Land Acquisition-Buffers	NC Coastal Federation	\$100,000
Hoop Pole Creek	Land Acquisition-Buffers	NC Coastal Federation	\$2,520,000
North River	Restoration	NC Coastal Federation	\$1,250,000
Bear Island	Land Acquisition-Buffers	NC Division of Parks and Recreation	\$1,480,000
Jumping Run Creek	Stormwater Improvements	NC Sea Grant	\$200,000
White Oak River	Wastewater Improvements	Swansboro	\$1,740,000
White Oak River	Wastewater Improvements	Maysville	\$71,280
Total to Date			\$10,086,141

Jacksonville Stormwater Project (Subbasin 03-05-02)

The NCWRP with the City of Jacksonville and CWMTF is restoring five acres of brackish marsh adjacent to Wilson Bay to treat stormwater from this urban watershed before it enters Wilson Bay. Sturgeon City is in the former site of the Wilson Bay WWTP. The overall project and associated environmental education center is aimed at returning sturgeon to the New River. More information is available at the following website <http://www.sturgeoncity.org/>.

White Oak Buffer Acquisition (Subbasin 03-05-01)

The White Oak River is a relatively pristine coastal river system. However, human activity is threatening the water quality along the 48-mile river. The NCCF received a \$2.1 million grant from the CWMTF to purchase a 780-acre parcel of river front land. A portion of the property will be used to demonstrate appropriate development that is compatible with maintaining a healthy river system. Funds derived from remarketing land will be used for additional land purchases along the river. The NCCF was also awarded \$100,000 from the CWMTF to identify and secure purchase options for property along the White Oak River in 1999.

Hoop Pole Creek Buffer Acquisition (Subbasin 03-05-03)

NCCF became the first organization to buy land with a grant from the new North Carolina Clean Water Management Trust Fund. With a \$2.5 million grant, a 31-acre water quality buffer was purchased in Atlantic Beach to protect shellfish water from urban development. The property known as Hoop Pole Creek is permanently protected from development.

North River Restoration Project (Subbasin 03-05-04)

NCCF has completed acquisition of 1,981 acres of prior converted wetlands next to the North River in Carteret County with a grant from the CWMTF for \$1.25 million. The NCCF will conduct a number of water quality enhancement projects, which will restore the property to its original state. The property will treat runoff from another 10,000 acres of cropland. It will be one of the largest habitat and water quality restoration projects in the country.

Bear Island Buffer Acquisition (Subbasin 03-05-01)

NCCF with the State Parks and Recreation is obtaining a grant from the Clean Water Management Trust Fund to purchase Huggins Island in Bogue Sound. Under heavy pressure to be developed, the island was incorporated into the Park System and permanently protected. Huggins Island, a 110-acre "developable" island is located in the estuarine waters of the White Oak River.

Jumping Run Creek Stormwater Project (Subbasin 03-05-03)

This project is part of a watershed wide effort to test techniques to decrease closures of shellfish harvesting waters. The project will restore wetlands in the watershed to treat stormwater. The site was donated by Craven Carteret Electric Cooperative (see below) with NCWRP and DWQ 319 program participation.

Swansboro WWTP Improvements (Subbasin 03-05-01)

The Swansboro received a CWMTF grant to improve WWTP operations and start land application of wastewater.

Maysville WWTP Improvements (Subbasin 03-05-01)

Maysville received \$70,281 to evaluate the sewer system for extraneous flow. This project is currently under way. The town is also refurbishing the WWTP to help improve operating conditions while a long-term solution to address high flows is pursued.

Queens Creek (Subbasin 03-05-01)

In 1999, NCCF closed on the purchase of conservation easements on 104 acres of Queens Creek shoreline in Onslow County. The property owner also drafted a conservation easement on 142 acres of interior land limiting it to 20 single family homes with the same minimum lot size.

1.3.3 NC Agricultural Cost Share Program

The North Carolina Agriculture Cost Share Program was established in 1984 to help reduce the sources of agricultural nonpoint source pollution to the state's waters. The program helps owners and renters of established agricultural operations improve their on-farm management by using Best Management Practices (BMPs). These BMPs include vegetative, structural or management systems that can improve the efficiency of farming operations while reducing the potential for surface and ground water pollution. The Agriculture Cost Share Program is a voluntary program that reimburses farmers up to 75 percent of the cost of installing an approved BMP. The cost share funds are paid to the farmer once the planned control measures and technical specifications are completed. The annual statewide budget for BMP cost sharing is approximately 6.9 million.

In Onslow County, \$294,839 was expended from 1995 through 1999 on a wide variety of nonpoint source pollution reduction projects.

Soil and Water Conservation District contacts for the White Oak River basin are included in Appendix VI or visit the website at <http://www.enr.state.nc.us/DSWC/files/acs.htm> for more information.

1.4 Local Initiatives

1.4.1 White Oak River Advisory Board

The White Oak River Advisory Board is a 25-citizen stakeholder-based organization coordinated by the Watershed Education for Communities and Officials (WECO). The board reviews technical water quality and policy information to develop consensus-based management strategies and policy options targeted at water quality problems in the river. For more information, contact Christy Perrin by email Christy_perrin@ncsu.edu.

1.4.2 Onslow County Water Quality Study

The Onslow County Commissioners, NC Cooperative Extension Service, Onslow County Health Department, researchers, environmental groups and others have established 30 monitoring sites in Onslow County along the New River and western tributaries of the White Oak River. The end

goal of the study is to make recommendations for managing and maintaining the recreational and commercial uses of Onslow County's waterways. For more information, visit the website at <http://www.ces.ncsu.edu/onslow/staff/drashash/enved/OnslowWQ.html>.

1.5 Corporate Initiatives

1.5.1 Craven County Electric Cooperative

The Craven County Electric Cooperative donated 4.4 acres of property on Jumping Run Creek for a project with NCWRP and others to restore a cypress-gum swamp to treat stormwater runoff.

1.6 Citizen Efforts

1.6.1 The Stewards of the White Oak River Watershed

This local group is dedicated to cleaning trash from the White Oak River as well as educating and recruiting more people to help clean up and prevent further trashing. For more information on this effort, contact Elmer Eddy at eeddy@ee.rr.com or call (910) 325-0819.

1.6.2 New River Foundation and New Riverkeeper

This organization monitors water quality in the New River using boats and fly overs to find pollution and polluters. The Riverkeeper participates in events and with groups to educate residents and local officials of the importance of the New River as a resource in coastal North Carolina. For more information, contact Tom Mattison, New Riverkeeper, at newriver@onslowonline.net or (910) 353-3352.

1.7 Regional Activities

1.7.1 North Carolina Coastal Federation

The North Carolina Coastal Federation (NCCF) is the state's largest non-profit organization working to restore and protect the coast. Formed in 1982, the NCCF has grown to serve more than 7,000 members and 200 member groups. The Coastal Federation publishes a quarterly newsletter, the Coastal Review, and an annual State of the Coast Report. The NCCF focuses on three main areas of work including habitat restoration and protection, environmental education, and the encouragement of sound environmental programs and their enforcement.

NCCF is working towards restoration of estuarine shoreline through alternative methods of erosion control. A newly developed cost share program encourages landowners to install vegetated marshes and small stone sills to prevent erosion on their properties instead of ecologically harmful bulkheads. Alternative erosion control projects have already been implemented at Hammock's Beach State Park and other sites in the White Oak River Basin. A brochure, *Erosion Control: Non-structural alternatives, A shorefront Property Owner's Guide*, is available free to the public. For more information, visit <http://www.nccoast.org/>.