

PASQUOTANK RIVER BASIN REGIONAL COUNCIL

USFWS Fish Hatchery
1104 West Queen Street
Edenton, North Carolina

February 24, 2000

MINUTES

The meeting was called to order by Vice-Chairman Yates Barber. After roll call, the minutes from the December 9, 1999 meeting were approved.

Attendees:

Guy Stefanski	APNEP
Carl Parrott	Dare County – At Large
Nelson Smith	Tyrrell County
Rodney Johnson	Albemarle RC&D
Cheryl Byrd	Dare County
Yates Barber	Pasquotank County – Environmental Science
Jack Simoneau	Currituck County
Ray Davenport	Tyrrell County – Commercial Fishing
Erie Haste, Jr.	Perquimans County (Municipal Rep)
George Wood	Environmental Professionals, Inc.

Election of 2000 Officers

Erie Haste, Jr. and Yates Barber were unanimously elected to serve as Chairman and Vice-Chairman respectively for another term. There were no nominations for the Office of Secretary. That position will officially remain vacant until a member agrees to serve.

Demonstration Project

Rodney Johnson (Albemarle RC&D) presented a draft proposal titled “Winfall Water Quality Demonstration Project” for consideration by the Pasquotank Regional Council as a demonstration project. The project will demonstrate the effectiveness of a constructed wetland in removing contaminants from backwash water of a water treatment plant for the small town of Winfall in Perquimans County. Upon conclusion of his presentation, a motion was passed to “approve the Winfall Water Quality Demonstration Project as presented to the PRBRC on February 24 th, and associated funding up to \$26,080 if needed”. **The proposal has been submitted to the APNEP Coordinating Council for their review and approval.** (Albemarle RC&D March 2000 newsletter -- Attachment A).

NC Estuarine Shoreline Protection Stakeholders Report

George Wood (Environmental Professionals, Inc. and Kill Devil Hills resident) presented the findings of the NC Estuarine Shoreline Protection Stakeholders – whose mission was

to “Make recommendations to improve water quality within the 20 coastal counties subject to CAMA including recommendations which may address activities and policy affecting coastal water quality beyond CAMA jurisdictional lines”. A summary of Mr. Wood’s presentation is provided as Attachment B.

There was not ample time to hear Cheryl Byrd’s presentation on “Sustainable Development and Livable Communities in the Albemarle Region”. This was tabled and will be included on the agenda for our next meeting.

New Business and Public Comment

Ray Davenport (Commercial Fishing Rep from Tyrrell County) reported that muddy and foul-smelled conditions existed in the Scuppernong River three days after Hurricane Floyd. He suspects that these conditions were caused by the flooding of local land irrigation spray fields and believes this may have been the cause of low fish catches in the river during that time. He contacted inspectors from the Division of Water Quality (Washington Regional Office) and, apparently, became upset by their slow response (e.g., no immediate response to phone calls or from inspectors to sample on-site conditions). **(Due to post-hurricane flooding conditions, DWQ was overwhelmed with public inspection requests. Apparently, DWQ conducted an inspection and sampling of the Scuppernong site on February 15th. The results were sent to Ray Davenport on March 24th. We will discuss this situation further at our next meeting).**

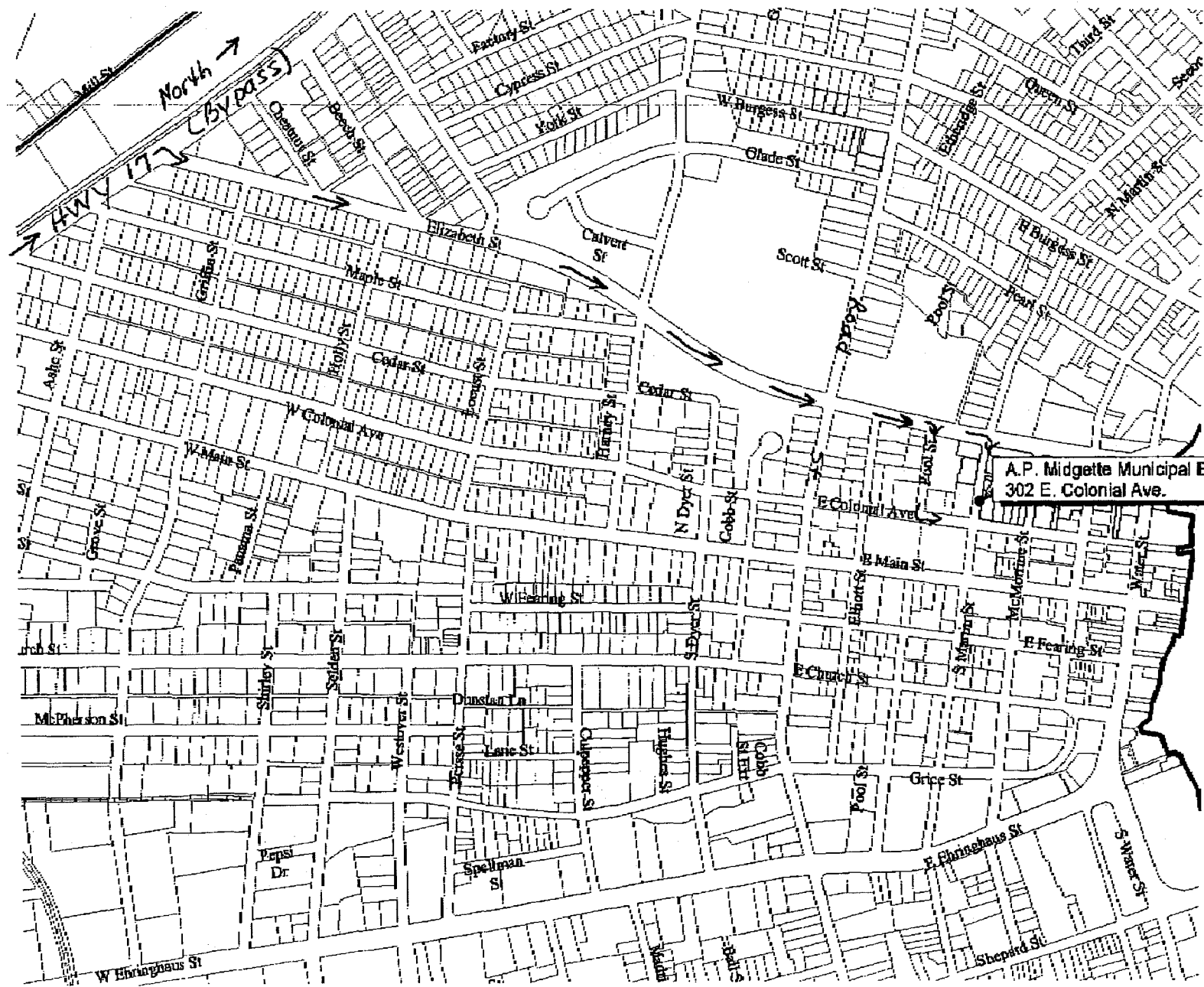
Vice-Chairman Yates Barber reported that funds for the Army Corps of Engineers (ACOE) to conduct a general investigative study of Currituck Sound is included in the President’s budget. As you may recall, last November Chairman Erie Haste signed a resolution by the PRBRC supporting the study (Attachment C). This resolution was submitted to Congress representatives John Edwards, Jesse Helms, Walter B. Jones, Jr. and Eva Clayton; Senator Marc Basnight and Representative William Owens, Jr.; Speaker of the House James Black; NCDENR Secretary Bill Holman; Currituck County Manager Bill Richardson; Hampton Roads Planning District Director John Carlock and Col. Delany with the ACOE in Wilmington.

Chairman Haste asked staff to check the status of this resolution and identify key contacts regarding this initiative.

The next meeting date was set for May 4th at the Town Hall in Elizabeth City. There being no further business, the meeting was adjourned.

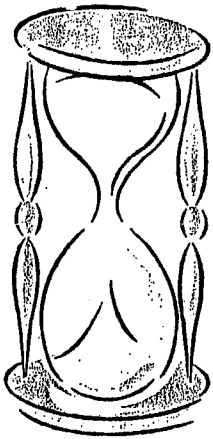
Minutes prepared by: Guy Stefanski
APNEP Coordinator

Location of A.P. Midgette Municipal Building



Directions from Highway 17 S.
 Take Hwy 17 S. Into Elizabeth City
 Turn right on Elizabeth St.
 Go through one stoplight
 Take the second right
 onto Pool St. the A.P. Midgett
 Municipal Building will be on
 the left hand corner at the
 intersection of Pool St and
 Colonial Ave.

**A.P. Midgette Municipal Bldg.
 302 E. Colonial Ave.**



“THREE MINUTE UP-DATE”

ALBEMARLE RC&D COUNCIL
“MAKING THINGS HAPPEN”

IN

CAMDEN, CHOWAN, CURRITUCK, DARE, GATES,
HYDE, PASQUOTANK, PERQUIMANS, TYRRELL AND
WASHINGTON COUNTIES

412 West Queen Street, Edenton NC 27932

252.482.7437

IN THIS ISSUE:

Canoe launch projects
funded...

New recreation complex in
Perquimans....

Floyd clean-up
assistance....

Projects update.....

Johnson To Help In Flood Damaged Areas

Our director will be

GRANT RECEIVED FROM PASQUOTANK RIVER BASIN COUNCIL

A \$26,000 grant was approved in March for the Town of Winfall to construct a wetland system for filtering the backwash water from the Water Treatment Plant. This demonstration project will provide water quality benefits for the Perquimans River and educational opportunities for the elementary school (located beside the project) through the Perquimans Soil and Water District. Many thanks to the Pasquotank River Basin Advisory Council for the grant.

ASSISTANCE PROVIDED TO PERQUIMANS FOR NEW RECREATION COMPLEX

A new recreation complex with a gymnasium, baseball and soccer fields, restrooms and a concession stand will become a reality if a Parks and Recreation Trust Fund Grant is

Director, and Executive Director Rodney Johnson prepared this \$250,000 grant application during December and January. The project will be located in Winfall adjacent to the existing

Joan Giordano
NCDENR
943 Washington Square Mall
Washington, NC 27889



Projects Update At A Glance....

Camden - The lights are here for Camden Community Parks ball fields. This will complete this outstanding and well used project. The Senior Center Boardwalk to Sawyer's Creek will be bid out during March or early April.

Chowan - Work continues on the Edenton Airport Clean Water Management Trust Fund project with seeding and final grading scheduled during March. Edenton received a \$3.2 million Clean Water Trust Fund Grant to purchase fragile lands and create greenways around town. A new Agriculture Service Center is under construction and will house the new RC&D office.

Currituck - Mike Doxey, Currituck Soil and Water continues to work on the Guinea Mill Canal Water Quality project easements. Construction should begin this summer.

Dare - Frisco Ditch will be cleaned out by the end of April under a contract approved for Richard Twiddy of Currituck. Final plans and specs for the Baum Center Drainage and Flood Prevention project were delivered to Terry Wheeler, County Manager, in February. He hopes to get it in next year's budget. There is much interest in Avon and Buxton in getting old mosquito control ditches cleaned out. A study will be conducted by RC&D and NRCS to determine needs and estimated cost.

Gates - Gatesville Town Park Wetland Boardwalk and Canoe Launch Platform should be under construction this spring.

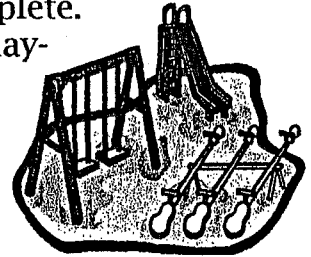
Hyde - Executive Director Johnson and Dallis Tucker, Recreation Resource Specialist, have been meeting with the Engelhard Development Corporation to plan and develop a recreation area at the old

Davis Elementary School. If approved by the Commissioners, a PARTF grant will be applied for next January. A county-wide recreation plan is being developed with RC&D assistance.

Pasquotank - Clearing and snagging has begun on Newland Canal and the upper Pasquotank River and should be complete by mid-April.

Perquimans - The picnic shelter and restrooms are under construction at Winfall Landing Park and the area has been hydro seeded. All of the boardwalk is now complete.

Construction of playground equipment is all that remains to be done to complete this project.

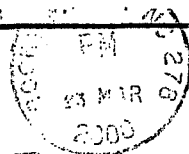


Tyrrell - Director Johnson has met with the Tyrrell Recreation Commission several times to plan a recreation complex for the county. A site is being located and after the commissioners approve the project, a PARTF grant will be applied for next January. A county-wide recreation plan is also being developed with RC&D assistance.

Washington - Boardwalk construction should begin at Roper Heritage Park this spring once all the permits are in hand.

Executive Board and Staff

Mike Martin—Chairman
Wayne Howell—Vice-Chairman
H. B. Briggs—Secretary/Treasurer
Steve Bryan—At-Large Member
Sam Cox—Past Chairman
Rodney Johnson—Executive Director
Nan Laughton—Administrative Assistant



CHAPTER I PROJECT OBJECTIVES AND BACKGROUND

A. Background

The 4,000 miles of estuarine shoreline is one of North Carolina's most precious natural resources. It is a cornerstone of the fine quality of life led by area residents. It is a vacation paradise for Americans nationwide. It is an economic driver that provides for access to fertile markets, transport of goods and materials and an attractive business environment for corporate entities.

In recent years, the estuarine resource has exhibited serious signs of stress. Algal blooms, sediment plumes, increasing shellfish area closures and outbreaks of *pfisteria* have all made the headlines. Each sign is evidence of the increasing pressures that economic growth places on the resource.

In response to these and other pressures, the Coastal Futures Committee examined many of the issues surrounding the degradation of the resource. In 1994, they noted that the existing shoreline protection regulatory framework was not adequate for protecting water quality.

The Coastal Resources Commission (CRC) has since spent enormous time and energy examining the environmental stressors and looking for solutions. In late 1998, the CRC released draft proposals for protecting the resource in the form of the "Coastal Shoreline Protection Initiative." These proposals were controversial and began several months of heated debate between and among affected parties up and down the coast.

In early 1999, the Division of Coastal Management (DCM), as the staff of the CRC, recognized the difficulty in gaining acceptance of the Coastal Shoreline Protection Initiative. The CRC directed DCM to begin a stakeholder process to develop mutually agreeable public policy for the protection of the coastal resource. Specifically, the CRC asked DCM to have a "facilitator" charged with:

"the mandate not just to come back with rules that the CRC could adopt (though that may very well be some of the things that he does with the stakeholders), but that he engage the stakeholders in as broad a based attempt as possible to bring to the CRC a full set of actions that the CRC could take, the General Assembly could take and the Environmental Management Commission (EMC) or any other commission could take to not just hold the line as best we can but to improve water quality. The CRC said when the facilitator brought those to the CRC through the stakeholder process which had been fairly well outlined, the CRC would take those and pass them along to the General Assembly and to any other commission that could work on those things. The CRC stated that would basically be the facilitator's goal to bring the CRC workable solutions to water quality no matter who had to basically pass the rule."

CRC-825
March 26, 1999

The stakeholders were to be asked to present their recommendations at the July meeting of the CRC - less than four months later.

B. The Stakeholder Group

With that charge, the process began for forming the stakeholder group. Per the instructions of the CRC, the "selection committee" was comprised of the Chairman of the CRC, the Chairman of the Coastal Resources Advisory Council (CRAC), the Director of the Division of Coastal Management (DCM) and the facilitator.

The stakeholder group would be established with two elements of "balance" in mind: geographic and constituency. First, recognizing that the geography of North Carolina lends itself to different causes, effects and, potentially, policy solutions, the selection committee sought balance in residence between the Northern, Central and Southern coastal regions. Second, recognizing that balance is an important element among particularly vocal interested constituencies, the selection committee sought equity in numbers among representatives of the development interest, the environmental community, local government and state government.

Further, all "nominees" were put through a screen of four criteria before appointment:

- Rationality - the ability to explain perspectives and listen to those of others
- Familiarity with estuarine issues
- Representation of a broader interest group; and,
- Accountability to those larger interests.

This resulted in the following distribution of stakeholders:

	Raleigh (4)	North (6)	Central (9)	South (9)
Agriculture		X		
Banking	X			
Citizen		X	X	
Commercial Fishing			X	
CRC				X
Development		X	X	X
Environmental	X	X	X	X
Forestry				X
Homebuilding			X	
Local Gov't - Town				2X
Local Gov't - Count		X		X
Local Gov't - Urban			X	
Marine Trades			X	
Real Estate				X
Sport Fishing		X		X
State Govt. - Coastal Mgmt	X			
State Govt. - Fisheries			X	
State Govt. - Shellfish & San'n			X	
State Govt. - Water Quality	X			

Additionally, other government entities were invited to participate including:

- The U.S. Army the Corps of Engineers

- The U.S. Environmental Protection Agency
- The U.S. Department of Commerce;
- The NC Department of Transportation; and,
- The NC Department of Commerce

Each declined the invitations to be a part of the stakeholder group, though the NC Department of Transportation provided a representative who attended several meetings. The U.S. Army Corps of Engineers provided someone who attended all of the meetings.

Finally, the stakeholder group was intentionally formed without the nomination of scientific experts. The intent was to hold the scientific community out above the policy debate. Scientific perspectives were brought in from outside the process to inform those inside the process.

C. Adopted Mission and Principles

One of the many concerns heard up and down the coast related to the fear of this being another “regulatory overlay” to existing governmental control. The group was very conscious of the many ways to maintain and improve the environment without excessive reliance on the heavy hand of government. For that reason, the group formally adopted the CRC charge and refined their own mission to:

"Make recommendations to improve water quality within the 20 coastal counties subject to CAMA including recommendations which may address activities and policy affecting coastal water quality beyond the CAMA jurisdictional lines. We are permitted to recommend any one or several of the tools available including but not limited to:¹

*Statutory Change
Regulatory/Rulemaking Alternatives
Voluntary Programs
Best Management Practices
Research*

It was further accepted that wherever possible, if government intervention was required, that the intervention take place at the lowest possible level – the government body with the necessary “capacity” that exists closest to the people.

The stakeholder group further worked from the perspective that whatever came out of the process would have to be built on the foundation of good scientific evidence.

D. The Roadmap to Public Policy

Developing public policy is hard. Developing good public policy is even harder. It begins with establishing a transparent and consistent process. It continues with balanced and equitable participation among participants and is informed by experts and affected individuals. It ends with dialogue... and sometimes compromise.

¹ Another “tool” was later added: Conservation. For definitions for these terms, please see Appendix C.

The stakeholder group identified and unanimously adopted its own evaluative process. It involved asking six questions:

1. Where are we today?
 - a. What is water quality/ degradation?
 - b. Where does degradation come from?
 - c. What's being done today?

2. Where do we want to be?
 - a. What are ideal water quality conditions?
 - b. What are the alternatives for getting there?
 - c. What is the preferred alternative?

The stakeholder group was further instructed to keep in mind particular elements of public policy including (but not limited to): Economics; Funding; Science; Regulatory Controls; Infrastructure; and Grandfathering.

Once the model was adopted, the stakeholder group identified dozens of issues relevant to each of the three geographic regions. They soon realized that it would be impossible to learn all that was necessary to responsibly craft good public policy.

Consequently, the plenary group of 28 stakeholders “split” into three geographically assigned regions: North, Central and South. The charge to the Workgroups was to apply the analytical model to:

- a “Pollutant of Concern” adopted by each region
- the Basinwide Water Quality Management Plans associated with each region

This approach resulted in the following minimum workgroup assignments:

	Pollutant of Concern	Applicable Basinwide Water Quality Management Plans
North	Sediments and Toxics	Chowan River Pasquotank River Roanoke River
Central	Nutrients	Neuse River Tar-Pamlico
South	Fecal Coliform	Cape Fear White Oak Lumber

The groups met independent of the plenary process to make progress on each of these issues.

The Workgroups solicited the input of leading scientists and public policy researchers. They gathered the input of local residents. They researched and read the latest data (please reference the Bibliography in Appendix B).

Every three weeks, they reported back to the plenary noting critical issues, policy alternatives generated and problems faced. In that way, the plenary was kept constantly informed of new

developments. They were also able to bring all of their experience to bear on all emerging issues.

It is important to note that these Workgroups did NOT have the same balance among constituency groups as did the larger plenary. For that reason, recommendations could only be "sent up" to the plenary for inclusion in this white paper. No policy recommendations could be brought forward into the white paper without an approved decision from the plenary.

Plenary sessions were dedicated to:

- Educating all stakeholders on a wide range of concepts;
- Conveying information across Workgroups;
- Developing products used by all Workgroups (e.g., the matrix of State and Federal Agency Programs Which May Affect Water Quality - Appendix D);
- Strategic planning; and,
- Decision-making

The remainder of this text is comprised of the recommendations that evolved in this process. All of the recommendations contained herein were adopted with at least a 75% approval of the stakeholder group (the decision rule adopted by the stakeholders). In many cases, the recommendations were accepted with 100% consensus.

CHAPTER II RECOMMENDATIONS OF THE STAKEHOLDER GROUP

The stakeholder group's recommendations fell into five categories:

- A. Basinwide Planning
 - 1. Institutional Structure
 - 2. Land Use Planning
 - 3. Protection of High Water Quality
 - 4. Restoration of Impaired Waters
 - 5. Elements of Implementation
 - 6. Small Watershed Implementation Plans

- B. Pollutant Sources of Concern
 - 1. Point Source Pollution-surface waters
 - 2. Non-Point Source- surface waters
 - 3. Aerial Deposition

- C. Research

- D. Institutional Coordination
 - 1. Institutional Communication
 - 2. Funding of Existing Programs
 - 3. Recommendations for the Environmental Review Commission
 - 4. Annual Progress Review by NCESP Stakeholders

- D. Pollution Prevention Through Education
 - 1. Enhanced Funding
 - 2. Local Government Education Programs
 - 3. Public Education Programs
 - 4. Education on BMP's

A. Basinwide Planning

The federal Clean Water Act requires that the state implement water quality goals and programs to achieve those goals. The North Carolina Environmental Management Commission (EMC) is responsible for establishing goals, developing programs, and mandating rules to accomplish the state's goals. The North Carolina Division of Water Quality (DWQ) is responsible for evaluation, research and monitoring, enforcement, and assistance for local governments through its basinwide planning process. Local government implementation and citizen participation are crucial to achieving these goals. The North Carolina Coastal Resources Commission (CRC), concerned with strong evidence that coastal water quality continues to decline, has mandated that procedures be developed to improve degraded waters and prevent further decline of coastal water quality. Enhanced basinwide planning, land use planning, and local participation

are key elements to achieve the overall goal of enhanced coastal water quality. In order to accomplish these goals, the North Carolina Estuarine Shoreline Protection (NCESP) stakeholder group recommends that:

1. *Institutional Structure*

The CRC immediately assign the Division of Coastal Management (DCM) to prepare a rule making petition, where appropriate, to the EMC requesting that it:

- a. Adopt water quality management goals for the primary pollutants of concern in each of the eight river basins draining to the coastal areas.
- b. Develop a program to assist local governments in establishing local water quality planning and implementation committees to develop strategies to meet these goals. These committees should consist of a full array of stakeholder interests.
- c. Determine what incentives and enforcement measures will be used to assure that the water quality goals are met.

2. *Land Use Planning*

- a. The local government land use planning process be extended throughout river basins draining to coastal North Carolina. The land use plan development, review, update, and approval process should be uniform.
- b. The General Assembly identify and fund the appropriate state agencies to provide the mechanisms for extension of the land use planning process. In addition the stakeholder group recommend that the aforementioned state agencies:
 - Require that land use plans address strategies and requirements necessary to protect water quality.
 - Provide financial and technical assistance to local governments preparing and updating land use plans.
 - Link State funding for infrastructure improvements to preparation and implementation of land use plans.
- c. Actions by federal and state agencies that impact coastal waters be consistent with local government land use plans.

3. *Protection of High Water Quality*

- a. State and local governments be encouraged to protect "waters with quality higher than the standards" by developing appropriate incentives and other management strategies.
- b. The CRC work with its Land Use Planning Review Team to amend its CAMA Planning guidelines in the next 12 months to provide for the development of land use plans that promote policies that maintain and improve water quality in areas of the coast that are classified as approved or conditionally approved for the harvest of shellfish. The CAMA Land Use Planning Review Team should

develop options that the CRC can take to encourage local government to implement locally adopted plans.

4. *Restoration of Impaired Waters*

DWQ, in conjunction with the Division of Coastal Management (DCM), accelerate the water quality restoration program for impaired waters and conditionally approved shellfish waters, incorporating scientific analysis, local involvement and public participation in a process similar to that used for the Neuse River Management Plan. Priority decisions must be made to properly allocate resources for this effort.

5. *Elements of Implementation*

- a. *Best Management Practices (BMP's)* - State agencies are to encourage the use of BMP's for principal land uses (e.g., agriculture, forestry, development, urban, suburbs) to improve water quality in a watershed. In particular, NCESP stakeholders recommend that:
 - DENR provide BMP criteria to give guidance in achieving water quality goals.
 - Appropriate state agencies create incentives to promote BMP compliance.
 - The General Assembly provide adequate resources to the NC Division of Land Resources to conduct annual evaluations of compliance with forestry BMP's.
 - The General Assembly provide adequate resources to DENR to evaluate the success of implementation of BMP's in the eight river basins draining to the coastal area.
- b. *Mandatory Nutrient Reduction Goals* - Beginning in the year 2000, the General Assembly provide resources to develop and implement mandatory, scientifically determined nutrient reduction goals for agriculture, as appropriate for each of the eight river basins draining into the coastal waters. This process must include analysis, public participation and leadership by local government entities. In addition, we recommend that the General Assembly:
 - Support efforts of local committees to educate farmers on the proper use of forested buffers, fertilizer, pesticides, and animal wastes.
 - Provide adequate resources, including staffing, to monitor compliance with BMP's and penalties for non-compliance.
 - Provide incentives for compliance including cost share programs (with particular emphasis on engineering services for watershed scale planning) and recognition.
- c. *Addition to DOT's BMP toolbox* - NC DOT is developing a BMP toolbox as part of their National Pollutant Discharge Elimination System (NPDES) stormwater permit requirements. The NCESP stakeholders recommend that NC DOT incorporate BMP design criteria to enhance BMP's for management of fecal coliform bacteria.
- d. *Local Government Initiatives to protect Sensitive Areas* - Local governments should amend land development ordinances to encourage development strategies that protect sensitive waters and meet water quality and land use plan goals. To realize

this goal, the NCESP stakeholders recommend that:

- Local governments identify sensitive areas which local governments want to preserve
 - Development strategies can be mandatory or optional. Where development strategies are optional, local governments should consider providing incentives in order to promote their use (i.e. density bonuses, streamline review process, lower fees, etc.). Examples of development strategies that preserve sensitive lands include cluster regulations provided in the Open Space Design Guidebook Albemarle-Pamlico Estuarine Region, and Blueprints to Protect Coastal Water Quality.
- e. *Buffers* - Local governments, in partnership with the EMC, expeditiously establish stormwater management strategies including riparian buffers, in order to address pollutants of concern in the eight coastal river basins as scientifically determined to be appropriate. The stakeholder group recommends that the CRC assign DCM to:
- Prepare a rule-making petition to the Environmental Management Commission (EMC) requesting stormwater management strategies and Riparian Buffer strategies be applied equitably using scientifically based principles appropriate to each of the eight coastal river basins.
 - Invite the Marine Fisheries Commission (MFC) and Wildlife Resources Commission (WRC) to become parties to the petition. The CRC should vote as soon as possible thereafter to formally submit this rule-making petition to the EMC.
- f. *Stormwater* - The Coastal Resources Commission (CRC) immediately assign DCM to:
- Prepare a rule-making petition to the EMC to extend stormwater control strategies for controlling pollutants of concern from all eight coastal river basins.
 - Invite the MFC and WRC to become parties to the petition. The CRC should vote as soon as possible thereafter to formally submit this rule-making petition to the EMC.

6. *Small Watershed Implementation Plans*

The State provide incentives to local committees or governments to work with appropriate agencies to develop integrated restoration/protection plans for important small watersheds (e.g., nursery areas), including financial resources to implement such plans.

B. Pollutant Sources of Concern

Pollutants reach our coastal waters through three main sources: point source, non-point source and aerial deposition. Discharges from public and private wastewater treatment facilities are point source discharges. These discharges have tremendous potential to adversely impact receiving waters if proper treatment does not occur.

Non-point source (NPS) is the vehicle for a variety of pollutants to enter receiving waters in stormwater runoff. Aerial emissions from large animal operations including hogs, cattle and poultry are a major source of excess nitrogen in eastern North Carolina. Excess nitrogen has been clearly shown to cause algae blooms, fish kills, and depletion of dissolved oxygen in North Carolina's coastal waters. Unlike point source pollution, NPS pollution is diffuse in nature and occurs at random intervals dependent upon rainfall events. Controlling non-point source pollution requires management strategies that target specific areas of concern.

To address these sources of pollution, the NCESP stakeholder group recommends that:

1. *Point Source Pollution - surface waters*

- a. DENR monitor recently implemented enforcement actions related to wastewater collection and treatment for effectiveness and, as necessary, strengthened to encourage prompt, effective remedy of violations.
- b. DENR, (in addition to existing remedies for violations (fines, etc.)) work with wastewater dischargers to develop incentives and other mechanisms to improve compliance with point source regulations. Particular attention should be directed to maintenance and operation of collection and treatment systems to detect and eliminate leaks.

2. *Non-Point Source - surface waters*

- a. The General Assembly strengthens the Sediment Control Program according to the Plan of Action developed by the Sediment Control Commission in November 1997.
- b. The General Assembly allows an agricultural exemption from the Sedimentation and Pollution Control Act (SPCA) and the Coastal Area Management Act (CAMA) permitting requirements only if the site being farmed has a current conservation plan approved by the Soil and Water Conservation District.
- c. DENR ensure communication and coordination with DOT to provide efficient use of existing resources and adequate progress on water quality issues.
- d. DOT mitigation efforts be directed to seek opportunities to restore degraded waters in the same watershed as the project requiring mitigation.

3. *Aerial Deposition*

The stakeholder group recommends that:

- a. The General Assembly extends the moratorium on new/expanded hog operations.
- b. A public/private partnership be established to address large hog operations which could include using cost effective technology to:
 - Capture and treatment of waste gases from within hog barns.
 - Capture and treatment of waste gases from within hog waste lagoons.
 - Collection and treatment of hog waste without using lagoons or spray fields.

C. Research

Adequate knowledge and understanding are essential for improvements in water quality. The stakeholder team benefited tremendously from information provided by professionals from state agencies and universities. With their assistance, the stakeholders' understanding of water quality related issues has grown deeper and broader. However, it is apparent that knowledge gaps remain in the current understanding of North Carolina's water quality issues. The group endorses efforts to bridge those gaps and recommends that adequate funding be provided for the research and monitoring needed to enhance and improve decision making to improve water quality. The stakeholders specifically recognize the need for research regarding:

- Toxic substances;
- Contaminated sediments;
- Effects of dredging operations;
- Non-agricultural buffers; and,
- Sources of nutrients entering the watershed via aerial deposition with respect to improving water quality

D. Institutional Coordination

The stakeholders developed a matrix of existing water quality programs (see Appendix D) Through the evaluation of this matrix and the programs that address coastal water quality issues, it was determined that there is a significant need for improved institutional coordination, communication and efficiency at all levels of government. We recommend that to improve institutional coordination and efficiency:

1. Institutional Communication

- a. Within North Carolina state government (boards and agencies):
 - The DENR Secretary reprioritize resources to accelerate coastal habitat protection plan design and implementation.
 - The DENR secretary work with the chairs of the EMC, CRC, MFC, WRC, and the Sedimentation Control Commission (SCC) to establish a formal and effective liaison mechanism.
- b. Among levels of government working in North Carolina:
 - The DENR Secretary establish monthly technical review meetings of federal and state regulatory agencies to coordinate permit reviews and discuss projects.
 - The DENR Secretary review options to improve interstate coordination in coastal river basins.
 - The DENR Secretary, in partnership with local governments, develop a program among municipalities, counties and state government to enhance local government participation in the development of water quality rules and policies, provide direction, enhance communications and evaluate the effectiveness of water quality programs.

2. Funding of Existing Programs

The General Assembly fund full implementation of existing regulatory programs designed to maintain and improve water quality and deemed effective by the Environmental Review

Commission (ERC). Full implementation includes adequate funding and resources to issue permits in a timely manner, perform compliance inspections, provide technical support perform monitoring and analysis, conduct stakeholder processes and take enforcement actions. Existing regulatory programs that could have a significant impact in improving water quality if fully implemented include:

- Erosion and Sediment Control
- DWQ Stormwater Management
- NPDES Stormwater
- DEH Onsite Wastewater
- Coastal Habitat Protection Program

3. Recommendations for the Environmental Review Commission

Recommendations forwarded to the CRC from the NCESP stakeholder group concerning coastal water quality be presented to the Environmental Review Commission with a suggestion that it form a special study group to:

- a. Work with the DENR Secretary, the DENR Science advisory committee and outside resources as needed to review the effectiveness and efficiency of water quality programs in NC.
- b. Consider possible legislation based on the recommendations of the stakeholder group as endorsed by the CRC.

4. Annual Progress Review by Stakeholders

The NCESP stakeholder group reconvene annually to review the progress made on the final recommendations of this committee. The existing members of the NCESP group shall serve in this review capacity to the extent possible. Present members that are not able to participate should be replaced by the selection committee earlier referenced (CRC Chairman, CRAC Chairman, Director – DCM and the facilitator) in order to maintain the balance and integrity of the stakeholder process. The annual review shall provide an in-depth analysis of all elements of the recommendations to determine if designated milestones have been met and what progress has been made in achieving the recommendations of the stakeholder group. Follow-up recommendations shall be submitted to the CRC, the General Assembly and local government officials for additional action on implementation of the stakeholder recommendations.

E. Pollution Prevention Through Education

The NCESP stakeholders identified a significant need to educate citizens and elected officials on the impacts of human activities on water quality and actions they can take to minimize those impacts. Providing coordinated water quality education programs for both the public and government officials are key to integrating regulatory requirements and incentives for improving coastal water quality. We recommend that:

1. *Funding and Incentives*

The General Assembly enhance funding and provide incentives for water quality education.

2. *Local Government Education Programs*

UNC Institute of Government, in conjunction with DENR, develop appropriate local government water quality education programs. The programs should provide officials with a solid understanding of the causes and effects of pollution; tools to manage such pollution; model ordinances, and techniques to invite public input and commitment.

3. *Public Education Programs*

DENR coordinate statewide water quality education programs to inform the public about their impacts on water quality and how they can minimize and mitigate those impacts. To be effective, the NCESP stakeholders recommend that:

- a. The NPDES stormwater program be a major vehicle for this effort.
- b. DENR Division of Environmental Health (DEH) provide increased public education on the maintenance of onsite wastewater treatment systems (septic tanks, etc.) and the availability of solutions for failing and poorly performing systems. This activity should be developed in coordination with local health departments and other interested agencies.

4. *Education on BMP's*

Soil and Water Conservation Districts and the NC Cooperative Extension Service work with landowners to provide education on the proper use of Best Management Practices (BMP's) to address water quality problems.

Chapter III Conclusions

The stakeholder group believes that each of the aforementioned recommendations will jointly and severally go a long way toward protecting and restoring the resource well into the 21st century. We urge the respective authorities to implement the recommendations holistically and not simply by picking and choosing among them.

In retrospect, the stakeholder group has noted a weakness in the product. The participants see now that only in a very few sections of this document are there specific references to the importance of and the protection of wetlands.

This should not minimize their importance. All recognize that the North Carolina wetlands are an integral part of the health of the resource. The fact that they have not been addressed directly was a function of the short timeframe that this group was operating under.

The group does, however, believe that many of the recommendations noted herein will yield indirect benefits for these valuable portions of the environment. It is via those indirect benefits that we hope the wetlands flourish and grow.

Attachment C.

November 9, 1999

The Honorable John Edwards
825 Hart Senate Office Building
Washington, DC 20510

Dear Senator Edwards:

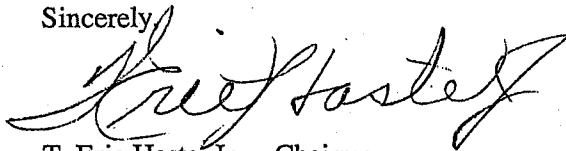
As Chairman of the Albemarle-Pamlico National Estuary Program's (APNEP) Pasquotank River Basin Regional Council (PRBRC), I am enclosing a resolution prepared by our Council entitled "Resolution Supporting A General Investigative Study of Currituck Sound by the US Army Corps of Engineers." Also enclosed are state and federal supporting documents and background papers, which clearly demonstrate the need for such a study.

The APNEP was begun as the Albemarle-Pamlico Estuarine Study (APES) spearheaded by Congressman Walter B. Jones, Sr. in 1986 and was designated as the first of 28 National Estuary Programs around the nation. The purpose of the APNEP Regional Councils (there are 5 in northeastern North Carolina) is to advise and consult with local, state and federal agencies responsible for environmental management on concerns/issues relevant to that basin. They also participate in the implementation of environmental management strategies outlined in the APES Comprehensive Conservation and Management Plan (CCMP) endorsed by EPA Administrator Carol Browner and Governor Hunt in 1994.

The PRBRC is composed of local government officials and interest-group delegates representing each of the 10 counties in the Pasquotank River basin. There has been strong support among PRBRC members, citizenry of the basin, and through collection of state and federal data, for the implementation of this study. For these reasons, I am requesting your assistance in bringing this project to completion.

Should you have questions or require additional information, please do not hesitate to contact me at (252) 426-5211. Thank you in advance for your support and commitment to protecting the valuable natural resources of North Carolina.

Sincerely,



T. Erie Haste, Jr. -- Chairman
Pasquotank River Basin Regional Council

cc: The Honorable Walter B. Jones, Jr.
The Honorable Eva M. Clayton
The Honorable Jesse Helms
The Honorable Marc Basnight
The Honorable James B. Black, NC Speaker of the House
The Honorable William C. Owens, Jr.
Bill Holman, Secretary, NCDENR
Bill Richardson, Currituck County
John Carlock, Hampton Roads Planning District
Colonel Delony, USACOE, Wilmington District

**RESOLUTION SUPPORTING A GENERAL INVESTIGATIVE STUDY OF CURRITUCK
SOUND BY THE US ARMY CORPS OF ENGINEERS**

WHEREAS, the Currituck Sound is a vital natural resource for the people of North Carolina and in the past has supported a thriving freshwater fishery and provided nursery grounds for many recreational and commercial fish species; and

WHEREAS, the Currituck Sound is a major flyway for migrating water fowl; and

WHEREAS, fluctuating salinity levels have caused a marked decline in the fisheries that are most important to the local and state economy; and

WHEREAS, a number of potential causes of the salinity changes have been identified; and

WHEREAS, to restore the Currituck Sound to its former state of productivity the development of effective management strategies need to be implemented and the first step to accomplishing this is to better understand the hydrodynamic and ecological functions of the Sound through study; and

WHEREAS, the NC Department of Environment and Natural Resources (NCDENR) supports a House resolution authorizing the US Army Corps of Engineers (ACOE) to do a General Investigative Study of Currituck Sound, beginning in fiscal year 1999 (Attachment A with background paper);

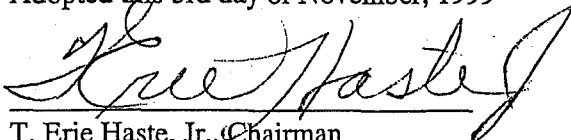
WHEREAS, the County of Currituck adopted a resolution on October 20, 1997 supporting NCDENR's request for Congress to authorize the ACOE to begin a General Investigative Study of Currituck Sound (Attachment B);

WHEREAS, the Committee on Transportation and Infrastructure of the US House of Representatives adopted a resolution on March 11, 1998 requesting that the Secretary of Army begin this process (Attachment C).

NOW, THEREFORE BE IT RESOLVED, that the Pasquotank River Basin Regional Council, a basinwide board of local government officials and interested citizens, whose establishment is mandated through Executive Order of James B. Hunt, Jr., Governor of NC, and whose charge and responsibility is to advise the NC Department of Environment and Natural Resources and others on environmental protection, do hereby endorse the US Army Corps of Engineers and the State of North Carolina to engage in a comprehensive study of the Currituck Sound for the purpose of providing the most efficient assessment of Sound conditions.

IT IS FURTHER RESOLVED, that such information as is gained from this effort will result in production of a model designed specifically for the restoration and benefit of the Currituck Sound.

Adopted this 3rd day of November, 1999



T. Erie Haste, Jr., Chairman
Pasquotank River Basin Regional Council