PAMLICO CITIZENS' ADVISORY COMMITTEE
BEAUFORT COMMUNITY COLLEGE
WASHINGTON, NC
FEBRUARY 7, 1989

MINUTES

PRE-MEETING 3:00 PM

ATTENDANCE - SEE ATTACHMENT A

In Chairman Carter's absence, Vice Chairman Ernie Larkin welcomed the committee and divided those present into two groups in order to evaluate and discuss the technical and public participation proposals which were received through the third cycle "Request for Proposals" (RFP).

Shortly thereafter, upon Chairman Carter joining the group, those deliberating the public participation proposals adjourned to another room.

Deliberations continued in both areas until 6:30 pm when it was decided to have dinner brought in rather than break for dinner as was previously planned. At 7:45 pm the two groups were brought together for the regular business portion of the P-CAC meeting.

AGENDA

ATTENDANCE - SEE ATTACHMENT B

Chairman Carter reconvened the meeting and thanked those present for the preceding 4 hours work. He asked for approval of the minutes from the last meeting (November 9, 1988), which were accepted as written. He then called upon Bob Holman, Program Director for a program update and short slide presentation. See Attachment C. Discussion ensued pertaining to the program's milestones. See Attachment D.

Discussion then turned to the CAC representation on the Technical and Policy Committees. It was restated that the CAC chairmen (Derb Carter, P-CAC, Dr. Chesson, A-CAC) both were voting members of the Policy Committee and Dr. Larkin P-CAC and John Stallings, A-CAC, were voting members of the Technical Committee. Mention was made of the vacancy on the Policy Committee due to Dr. Dirk Frankenburg's resignation. Chairman Carter stated he would gladly entertain recommendations from the CAC members of persons nominated to fill that vacancy. Dick Leach nominated David Owens former Division head of Coastal Management. Chairman Carter asked that other names be submitted to him before the Policy Committee meeting scheduled for February 28th in New Bern.

Attention then turned to a bill which Chairman Carter reported as having been submitted to the N.C. House of Representatives (House Bill 33) dealing with the establishment of a Legislative A/P Study oversight committee whose responsibility it would be to oversee the A/P Study, its progress, and to provide liaison to the N.C. Legislature. The bill is the effort of the Water Quality Study Committee of the Legislature. In further discussion, the question of whose responsibility it would be to implement and be held accountable for the Comprehensive Conservation and Management Plan (CCMP) after the 5 year study is complete, was raised. As it stands now, there is no formal body or mechanism to achieve that end. Chairman Carter stated that perhaps the establishment, by the N.C. Legislature, of a commission, similar to the Coastal Resources Commission, Environmental Management Commission, etc. may be in order, to ensure the implementation of the CCMP.

PROPOSAL RECOMMENDATIONS: Vice Chairman Larkin reported on the CAC's recommendation for Technical Proposals. They were broken down into three groups: Critical Areas, Water Quality and Fisheries.

Under Critical Areas, proposals numbered 301, 335, 336 and 343 were endorsed. A motion by Luther Daniels, seconded by Willy Phillips, to accept the package passed with 1 dissenting vote.

Under Water Quality, proposals numbered 311, 344, 305, 317 and 318 were endorsed. Also mentioned were numbers 356 and 357, but they fell below the funding line dedicated to Water Quality. A motion by Ralph Jarvis, seconded by Dick Leach, to accept the package passed unanimously.

Under Fisheries, proposals numbered 320, 360 and 315 were endorsed. A motion by Tim Hodges, seconded by Scott Whitford, to accept the package passed unanimously.

Discussion of the Early Implementation proposals followed. See Attachment E. The committee successfully endorsed as their first choice, the Animal Waste Management proposal from the N.C. Association of Soil & Water Conservation Districts - Area 5 for $40,000; the second choice went to the Urban BMPs proposals submitted by the City of Greenville and the Town of Manteo. The Greenville proposal is for $150,000 and the Manteo proposal did not stipulate a cost. (Further submittal of information on the Manteo proposal is due to Dr. Holman.) The group's third choice for Early Implementation funding was the Acquisition of Land-Critical Areas.

Dick Leach reported on the results that the group evaluating the Public Participation and Human Environmental proposals recommended for funding.

Under Human Environment, proposals numbered 350, 330, 353, 326 and 346 were endorsed. Proposal 358 received no ranking and was sent to committee. The group also felt proposals numbered 307 and 308 were "hybrids" and were also sent to the full committee.

Under Public Participation the group endorsed proposals numbered: 329, 351, 328, 303, 352, 332, 322, 302, 312, 310 and 342. They recomended that proposal number 311 (Citizens' Monitoring) be funded from Technical Acquisition funds. A motion by Billy Jackson, seconded by Doug Nelson, to accept the Human Environment and Public Participation proposal package passed, with Todd Miller abstaining. Another motion to accept the priortization of all the proposals as stated was made by Todd Miller and seconded by Jeff Smith. Motion passed.

A motion to accept a substitute Early Implementation proposal for (FY 88-89) in place of an earlier proposal, Primary Nursery Area Protection, was passed by acclamation. The substitute proposal is for Agricultural BMPs in Virginia and North Carolina.

NEW BUSINESS

Chairman Carter distributed the proposed P-CAC meeting schedule. See Attachment F.

PUBLIC INVOLVEMENT PLAN: Joan Giordano reported that very few comments were forthcoming on the second draft of the Public Involvement Plan (PIP) she wrote and distributed for final approval. Todd Miller recommended that a joint meeting with the A-CAC be convened to finalize the PIP. Mrs. Giordano stated she would plan the meeting and invite both CACs to participate. **NOTE**: The date was set for February 24, but was "snowed-out". The substitute date of March 8th has been decided upon and all interested CACs have been invited.

In other business, Dr. Clark Rodman petitioned the committee for endorsement of his previously submitted resolution on inshore trawling. See Attachment G. After much discussion, Dr. Rodman agreed to rewrite his resolution in a "softer fashion" for re-submission to the P-CAC at their next meeting. In a substitute motion, however, Todd Miller motioned that the P-CAC request that research be conducted on the impact of inshore trawling on water quality and fisheries and habitat. Jeff Smith seconded the motion. Motion passed. Recommendation of such will be brought to the Policy Committee by Chairman Carter.

P-CAC member Grace Evans asked that a newsletter from the Home on the Range group in Oriental be distributed. It was done. See Attachment H.

Lastly, the Roundtable Meeting of all A/P Study committees, scheduled for February 27 and 28 in New Bern was discussed. Dr. Holman asked that anyone wishing to bring business to that meeting please contact him prior to February 21 to be sure it would be included on the agenda.

There being no further business, the meeting was adjourned at 10:45 pm. The next meeting is scheduled for March 16th at the Duke Marine Lab in Beaufort at 7:00 pm.

To: Pamlico Citizens' Advisory Committee Members
From: Derb Carter, Chair
Re: 1989 Meeting Schedule
Date: February 6, 1989

Date	Location	Program
February 7 7 pm Tues.	Washington Beaufort Community College	Evaluate proposals and develop recommendations for funding third year projects and research
February 27 5 pm Mon.	New Bern Sheraton	Roundtable meeting of Policy, Technical, and Citizens' Advisory Committees; Policy Committee meeting on following morning
March 16	Beaufort Duke University Marine Lab	Mary Joan Pugh, Asst. Secretary, NRCD Designation and protection of coastal outstanding resource waters Rep. Bruce Ethridge Coastal legislation in the 1989 General Assembly
April 19 7 pm Thur.	Washington Civic Center	Dr. Edward Noga, NCSU Incidence and possible causes of fish and crab disease in the Pamlico River and other estuarine waters Dr. Stan Riggs, ECU Heavy metal pollutants in the Pamlico River
May 17 7 pm Wed.	Swan Quarter Courthouse	Jim Cummings, NRCD Best management practices and the NC agricultural cost share program Dr. Jerad Bales, USGS Offsite effects of best management practices
June 17 2 pm Sat.	Hatteras *	Donna Moffitt, Oil and gas development off North Carolina's coast Rich Shaw, Office of Coastal Management Location and management of maritime forests in coastal North Carolina

*Place to be arranged

PAMLICO CITIZENS' ADVISORY COMMITTEE SUBCOMMITTEES

February 1989

Environmental Issues/
Technical Review

Ernie Larkin, Chair
Ralph Jarvis
Todd Miller
Doug Nelson
David O'Neal
Willy Phillips
Tom Quay
Clark Rodman
Jerry Schill
Jeffrey Smith

Public Awareness/
Governmental Relations

Alton Ballance, Chair
Fred Bonner
Rann Carpenter
Ann Carter
Luther Daniels
Don Ensley
Grace Evans
John Green
Bill Jackson
Neal Lewis
John Spagnola
Stanford White

Program Review

Frank Sommercamp, Chair
Ralph Buxton
Tim Hodges
Susan King
Dick Leach
Stuart Shinn
Scott Whitford

Executive Committee

Derb Carter, Chair
Alton Ballance
Rann Carpenter
Susan King
Ernie Larkin
David O'Neal
Willy Phillips
Frank Sommercamp

ATTACHMENT A

P-CHC Meeting
Feb. 7, 1989
Attendance

3:00 pm

1. Donald E. Dudley
2. Ann H. Carter
3. Grace B. Evans
4. JOHN T. SPAGNOLO
5. David M. O'Neal
6. Todd Miller
7. John Gust
8. WILL PHILLIPS
9. Clark Rodgers
10. Ralph Buxton
11. Ruthie H. Daniels
12. Jeffrey Smith
13. Susan B. King
14. Scott Whitford
15. Mary P. Jarvis
16. Mike Swope
17. Dick Leach
18. Tim Hodges
19. Dale Carter
20. Ernie Larkin
21. Bob Kalman
22. Joan Giordano

ATTACHMENT B

Recirculated P-CAC 2-7-89
attendance

7:00 pm

1. Scott Whitford
2. Donald Ousley
3. Jerome Kohl
4. Ralph Jarvis
5. Dan Slate
6. Dick Leach
7. William Phillips
8. Jeffrey Smith
9. Todd Miller
10. Billy Jackson
11. Ralph Buxton
12. Luther H. Daniel
13. John L. Greene
14. Doug Nelson
15. Clark Rodman
16. Timothy H Hodges
17. Ernie Larkin
18. David O'Neal
19. JOHN T. SPAGNOLO
20. Joan Giordano
21. Bob Holman
22. Jesse D. Evans
23. Derb Carter

Pamlico Citizens' Advisory Committee
Beaufort Community College
Washington, NC

February 7, 1989

3:00 pm & 7:00 pm

Pre-Meeting Agenda	Beaufort Community College
3:00 pm - 6:00 pm	New members' sub-committee assignments Public Awareness/Governmental Relations & Technical Review Sub-committee Meeting
6:00 pm - 7:00 pm	Dinner break on your own

A G E N D A

7:00 pm - 9:00 pm	Meeting of Pamlico CAC - Beaufort Community College
1. Welcome	Derb Carter
2. Consideration of Minutes	Derb Carter
3. A/P Study Slide Show Presentation	Dr. Holman
4. Recommendations of Technical & Public Participation proposals	Ernie Larkin Alton Ballance
5. New Business	
a.) Proposed P-CAC Meeting Schedule	Derb Carter
b.) Public Involvement Plan	Joan Giordano
6. Public Comment	

Adjourn

PROGRAM STATUS REPORT - DIRECTOR

1) PROPOSALS

a) 59 received

Information Acq.	Public Participation
Res. Critical (9)	(15)
Water Quality (17)	
Human Environ. (10)	
Fisheries (8)	

b) Review Process

-- CACs	Feb. 7-8
-- Citizens' Affairs	Feb. 10
-- Monitoring	Feb. 13
-- Technical Review	Feb. 14-15
-- Technical Committee	Feb. 21
-- Policy Committee	Feb. 28
-- Proposal Revisions Month	March
-- Assemble Cooperative Agreements	April
-- OMEP Presentation	April

2) Roundtable meeting
New Bern, February 27
Agenda sent out February 21, 1989
Six topics

3) Early Implementation
Last year/New
a) Replacement of Primary Nursery Proposal
b) Five new proposals

4) Publication List - 14 documents available

5) Public Participation Plan - Update final plan review February 24, 1989

6) WRAL Coastal Celebration - April 8-9, 1989

7) Data Management - Individual hired to start in March

8) Pamphlet - Printed by EPA - no charge to program (available early April)

9) Work Plan Update - **Standard Operating Procedures Subcommittee** - Modeled after 20 milestones in work plan). To be presented to Policy Committee on February 28

10) Status & Trend Project - EPA Cooperative Agreement due NCSU by end of February

11) EMC Presentation - December 8, 1988

12) Bill in NC Legislature - Commission to Oversee A/P Study

ATTACHMENT D

STATE/EPA CONFERENCE AGREEMENT FOR NATIONAL ESTUARY PROGRAM DESIGNATION UNDER THE WATER QUALITY ACT OF 1987

ALBEMARLE PAMLICO SOUNDS SELF-EVALUATION
September 22, 1987

Milestone	Due date	Status
Complete and disseminate the final list of priority environmental concerns	12/87	Included in status report but no public comment
Inventory of existing monitoring programs developed	1/88	Yes
Baseline monitoring plan developed for April-Sept monitoring	3/88	Yes
Report completed identifying potential contributions to APES from other federal agencies	4/88	No
Best information on status and trends of priority environmental concerns identified	6/88	No (partial water quality data)
Technical feasibility report for Data and Information Management System	7/88	No
EPA Region negotiates scope of Data and Information System	7/88	Yes
Final list of best information on status and trends of environmental concerns prepared based on scientific review and comment	8/88	No (delayed to 2/89)
Final report on Data and Information Management System with implementation schedule and funding requirements	9/88	No (delayed to 2/89)
Priority environmental concerns reassessed by Policy Committee based on status and trends assessment	12/88	No
Potential use options for Sounds selected	12/88	No

ATTACHMENT E

State of North Carolina
Department of Natural Resources and Community Development
ALBEMARLE-PAMLICO ESTUARINE STUDY
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

Robert E. Holman, Director

January 27, 1989

MEMORANDUM

TO: Policy Committee
Technical Committee
Citizens' Advisory Committees

FROM: Robert E. Holman, Ph.D.

SUBJECT: FY 1989-90 Early Implementation (Early Demonstration) Proposals

Enclosed are five proposals for possible funding during FY 1989-90 budget cycle. These proposals include two urban Best Management Practices (BMP), one agricultural BMP, one bay scallop propagation project and one erosion control structure. The Environmental Protection Agency (EPA) has not set a funding level for each estuarine program but the proposals selected by each program will be competitively chosen from all the estuarine programs. To give you some idea of the expected funding level, last year's two early implementation projects were funded at $350,000.

Also enclosed under a separate letter is a substitute North Carolina/Virginia early implementation project from last year.

All of these proposals need to be reviewed and discussed at your next meeting. Your recommendations will be incorporated into the overall budget package to be submitted to the Policy Committee for their consideration on February 28, 1989.

If you have any specific questions about any of the proposals, please contact the project office.

Also, I have included with this material February's calendar of events.

REH:kn

Enclosures

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-0314

Wilmington

URBAN BMPs; A STORMWATER CONTROL DEMONSTRATION PROJECT

City of Greenville, North Carolina

205K

Objective: To rectify an existing stormwater problem and improve an unsightly area by implementing a water quality sensitive stormwater technology, monitoring its effectiveness, and providing an area for passive recreation in a low and moderate income residential neighborhood.

Why: Urban nonpoint source pollution is a major water quality problem in the Pamlico-Tar River watershed. As the largest community in the basin, Greenville no doubt, is a major contributor to the nonpoint problem. However few (if any) communities in the watershed (Greenville included), have implemented water quality sensitive stormwater controls (urban BMPs). Little information is available regarding the performance and cost of these techniques when used in the North Carolina coastal plain. Before local infrastructure managers are likely to advocate use of these nontraditional technologies, better information is needed on their design, construction, and effectiveness in coastal situations.

What: This project proposes the construction of an extended detention pond on land owned by the Greenville Housing Authority. The pond will collect the first 1/2 inch of rainfall from a drainage area of approximately 200 acres. The drainage area is developed with a mix of medium density residential and commercial uses. A ditch currently drains the area directly into the Tar River. At the project site, the ditch is severely eroded and the water is of questionable quality. The area is littered and overgrown. Adjoining property owners have been seeking improvements to the area for a number of years and have expressed their willingness to work with the City on this project.

By detaining the first flush of stormwater for 48 to 72 hours, the pond is projected to remove 62% of total suspended solids in the stormwater flow. Some heavy metal removal is also expected when metals absorb to settleable solids. Slow discharge of the stormwater through a hardwood swamp is likely to result in additional nutrient removal. Water quality monitoring (for sediments, metal, nutrients, BOD and bacteria) will occur at the pond inlet and outlet. Total project cost is estimated at $205,000 with approximately 25% of project costs paid through in-kind services by the City.

Who: A Stormwater Project Committee has been meeting weekly since December to develop this grant proposal and the duties and responsibilities of participating parties are now well-defined. The City of Greenville Development Department will coordinate the project. The Planning Division will facilitate planning and design meetings, research land use, serve as the public information contact, and prepare the final project report. The Engineering Division, with the assistance of the Public Works Department and outside consultants as necessary, will develop the final project design. The Public Works Department will have responsibility for constructing the facility and for on-going maintenance when built. The Greenville Utilities Commission, with the guidance of the State Department of Environmental Management, will perform water quality sampling and analysis at the site.

#7.

TOWN OF MANTEO: INSTALLATION

OF BEST MANAGEMENT PRACTICES (BMPs)

Why: The Town of Manteo is a full service community located in the Outer Banks of Northeastern North Carolina in the Albemarle-Pamlico Estuarine Study area. The Town receives heavy annual rainfall. The Town has deficient stormwater facilities and permits rainfall to flow unchecked into Shallowbag Bay. The stormwater contains unfiltered sediments including materials incompatible and detrimental to the aquatic life contained in area wetlands necessary to the proliferation of shellfish and fish species. The Town does not have sufficient resources to implement a stormwater management program that attempts to reduce the amount of incompatible sediments flowing into the bay. The proposed project will institute a system to contain light stormwater runoff in a detention area permitting small particle sedimentation to be filtered and retained and then allow the treated stormwater to flow into the bay. The Town's existing stormwater management plan (1982) will be used for the proposed project.

Who: The Town of Manteo will administer the program. Funds will be administered in compliance with all N.C. Natural Resources and Community Development guidelines and regulations.

What: The specific environmental objective is to reduce the amount of detrimental sediments containing chemicals or organic materials such as motor oil and grease, an excessive fecal coliform count, high phosphate levels from soaps and detergents, gas and automotive cleaning solvents and gardening pesticides and fertilizers from flowing directly and unchecked into Shallowbag Bay. Project success will be measured by samples taken at discharge points for project and non-project (or before and after project implementation) stormwater runoff.

Where: The project will include a part or the entire stormwater system that discharges directly into Shallowbag Bay from the Manteo business district.

When: Following project approval, a committee of Town officials will determine a location for BMP installation and then allocate appropriate funds. The program operates under a 75:25 cost share to which the Town will adhere.

Wilms Choice

$140K

ALBEMARLE-PAMLICO ESTUARINE SYSTEM

Innovative Approach to Animal Waste Management

Area 5 of the N. C. Association of Soil and Water Conservation Districts recognizes that poor animal waste management practices have resulted in the degradation of water quality in both the Albemarle and Pamlico Drainage Basins. The Albemarle District has written that "animal waste is a major pollutant" in the Albemarle and that proper waste management procedures are needed to improve water quality in the Basin.

The Albemarle District and other Districts have requested that "solid-set waste management systems" (SSWMS) be included in the North Carolina Agriculture Cost Share Program (NCACSP) as a Best Management Practice (BMP). The Technical Review Committee for NCACSP has reviewed these requests and determined that additional information needs to be developed prior to acceptance of the proposed SSWMS as a BMP.

The Bertie District has recently been approved to be the first site for this type of innovative approach to animal waste management. Jim Cummings, NPS Section Chief has worked diligently with all Districts in Area 5 and has agreed to assist with an expanded early implementation project.

Area 5 has a variety of soil types and soil related problems such as high water tables and heavy textured subsoils. Several Districts would like to install SSWMS on eight additional sites to test the effectiveness of these systems on a variety of soils under varied vegetative conditions. All of these Districts have been very active in the NCACSP.

The Soil and Water Conservation Districts along with the USDA, Soil Conservation Service, will provide technical assistance to the landowners in planning, installation and management of the systems. Area 5 would like for the Division of Soil and Water (NPS Section) to assist the Districts with the administration of the program. A request will be made to the Division of Environmental Management to conduct pre and post off-site monitoring to more accurately determine the protection offered by the SSWMS.

A preliminary budget has been developed and $140,000 is being requested to help provide the structural measures, construction and pumps needed for the eight sites located in the counties of Hyde, Tyrrell, Beaufort, Washington, Currituck, Pasquotank, Chowan, and Perquimans. The landowners have agreed to provide 25% of the cost of implementing the SSWMS in accordance with the cost sharing established in the NCACSP.

Tom Burns

Tom Burns, Area 5 Chairman
N. C. Association of SWCDs

Attachment 1

ALBEMARLE-PAMLICO ESTUARINE STUDY

320

PROPOSAL SUMMARY
(Must be first page of proposal)

A. TITLE: Mitigation for the losses of North Carolina bay scallops to the 1987-88 red tide outbreak

B. DURATION (entire project period): From: Oct 1, 1988 To: Sept 30, 1990

C. A/P STUDY FUNDS: $ 58,406

D. OTHER FUNDS*: $ 63,397 (previous year's A/P funds)

E. PRINCIPAL INVESTIGATOR(S), University/Organization, City, State, Zip Code and Telephone Number

Dr. Charles H. Peterson, University of North Carolina at Chapel Hill,
Institute of Marine Sciences, Morehead City, NC 28557
Telephone: 919/726-6841

F*. OTHER FUNDING RECEIVED (previous year A/P Study funding) OR PENDING FOR THIS AND RELATED PROJECTS:

Received: $63,397 from A/P for first year of this 2-year project; $23,300 from NC legislature through Sea Grant to evaluate the aquaculture potential for bay scallops; $21,133 from Sea Grant to study habitat requirements of NC hard clams and winter mortality of bay scallops.

G. ENVIRONMENTAL PROBLEM, NEED FOR INFORMATION, ETC.

The 1987-88 outbreak of red tide in coastal NC closed shellfishing from the Cape Fear River to Avon for ~4 months. This delayed 1987-88 harvest of oysters and clams but actually killed bay scallops. Over 50% of adults died, but by far the greatest impact fell upon the new recruits, with numbers reduced to about 2% of normal years over all of Bogue and Back Sounds, where most of the commercial harvest occurs. Our fall 1988 recruitment survey shows that the natural 1988 recruitment of bay scallops did not suffice to spread the population back into Bogue Sound.

H. EXPECTED RESULTS, BENEFITS, UTILIZATION OF INFORMATION, ETC.

This project first tests, then implements, methods to mitigate in kind for the biological and economic losses of bay scallops. In the first year we began and early in the second year we will conclude tests of the feasibility of collecting recruits on spat collectors temporarily deployed in surviving scallop beds in Core and Pamlico Sounds. During the first 7-week deployment in fall 1988, these spat collectors accumulated up to 120 recruits per bag; using over 800 this yields nearly 100,000 scallops at minimal cost with reusable materials. Over the next 21 months of our A/P project, we will restock depleted scallop grounds with these recruits and thereby implement and test the effectiveness of restocking juvenile bay scallops. We will also transplant adult bay scallops back into western Bogue Sound prior to spawning, which our first year A/P results demonstrate is necessary to hasten repopulation of this traditionally most productive area in NC. This measure will be both implemented and tested in the second year A/P project. Finally, we will complete in the second year our mapping of the bay scallop resource in NC, which in conjunction with the previously funded A/P seagrass mapping by NMFS will be of vital importance to proper designation of ORW's (Outstanding Resource Waters) within NC.

Attachment 1

ALBEMARLE-PAMLICO ESTUARINE STUDY

PROPOSAL SUMMARY
(Must be first page of proposal)

321

A. TITLE: Marsh Grass Protection iwth Low-Cost Breakwater Shoreline Erosion Control Demonstration

B. DURATION (entire project period): From: August 1989 To: August 1991

C. A/P STUDY FUNDS: $ 54,158

D. OTHER FUNDS*: $ 21,750

E. PRINCIPAL INVESTIGATOR(S), University/Organization, City, State, Zip Code and Telephone Number

Spencer M. Rogers, Jr., Department of Civil Engineering, NCSU, and
UNC Sea Grant Marine Advisory Service
P.O. Box 130, Kure Beach, NC 28449, 919/458-5780

F*. OTHER FUNDING RECEIVED (previous year A/P Study funding) OR PENDING FOR THIS AND RELATED PROJECTS:

N/A

G. ENVIRONMENTAL PROBLEM, NEED FOR INFORMATION, ETC.

Shoreline erosion

Impact of erosion control structures

Incentives to encourage erosion control structures that are environmentally desirable

H. EXPECTED RESULTS, BENEFITS, UTILIZATION OF INFORMATION, ETC.

Increased marsh area in the estuary

Lower cost erosion control options for property owners

A design guide for landowners and marine contractors

Decrease sediment loading to estuaries

State of North Carolina
Department of Natural Resources and Community Development
ALBEMARLE-PAMLICO ESTUARINE STUDY
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

Robert E. Holman, Director

January 27, 1989

MEMORANDUM

TO: Policy Committee
Technical Committee
Citizens' Advisory Committees

FROM: Robert E. Holman, Ph.D. REH/kn

SUBJECT: FY 1988-89 Substitute Early Implementation Proposal

The Albemarle-Pamlico Estuarine Study (A/P Study) funded two early implementation projects that dealt with agricultural Best Management Practices (BMP). These projects were the Merchant Millpond State Park and Primary Nursery Area Protection studies. The Merchant Millpond project is progressing smoothly; however, the Primary Nursery Area project ran into many serious questions that have not been answered. These questions stemmed from the actual structure that would be constructed in a canal upstream of a primary nursery area. Since questions involving site locations, landowner cooperation, structure design, long-term structure maintenance, possible permits and structure ownership were not answered, the Technical Committee voted at their November 10, 1988 meeting to delay funding of this project until these questions could be answered.

A substitute project involving agricultural BMPs both in Virginia and the North Carolina portion of the watershed was explored. After several meetings with the two state's Soil and Water Divisions, the concept was formed. This project concept was presented to all the administrative boards at their November, 1988 meetings. All committees agreed with the concept and wanted to see the full proposal. Enclosed is the joint proposal from NC/VA Soil and Water Divisions for your review. Please be prepared, during your February, 1989 meetings, to discuss and take action on this joint proposal to replace the Primary Nursery Area Protection Project for FY 1988-89 funding.

If you have any questions about the NC/VA proposal, please contact the program office at (919) 733-0314.

REH:kn

Enclosure

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-0314

STATE OF NORTH CAROLINA

CHOWAN RIVER BASIN
AREA 5 SOLID-SET WASTE MANAGEMENT SYSTEMS
Initial Proposal - January 18, 1989

According to the North Carolina Department of Natural Resources and Community Development, Division of Environmental Management (DEM) 1986-1987/305B Report (July, 1988), 320 of the 760 miles of streams in the Chowan River Basin are being degraded by agricultural nonpoint source pollution. Area 5 of the North Carolina Soil and Water Conservation Districts (Attachment A) recognizes this problem and realizes that poor animal waste management is a contributor of nutrients to the stream systems of the region. Area 5 feels that a possible solution to the waste management problem is the use of solid-set waste management systems (SSWMS). See Attachment B.

Recently, several Districts in Area 5 requested that the Technical Review Committee (TRC) of the NC Agriculture Cost Share Program (NCACSP) review and approve these SSWMS as an accepted best management practice (BMP) in the Program. The TRC met on January 3, 1989 and requested that additional information be developed before SSWMS can be approved as an acceptable BMP.

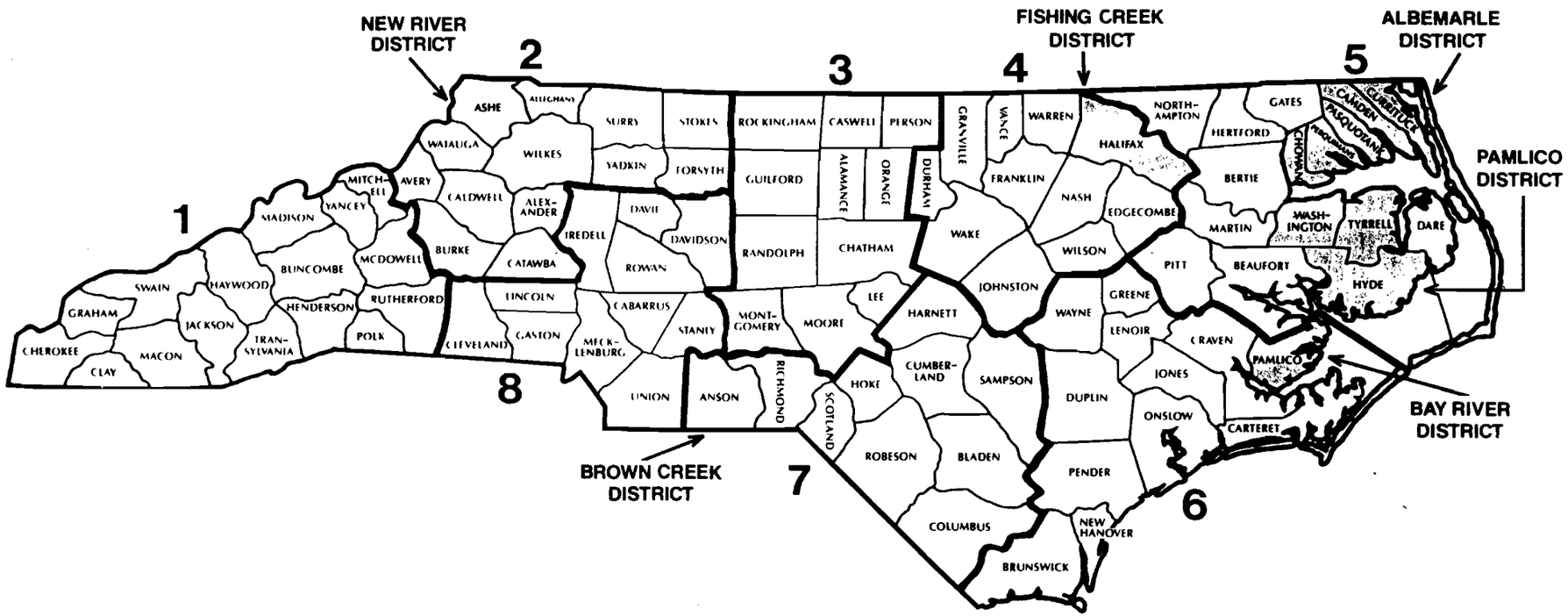
Eight sites in Beaufort, Chowan, Currituck, Hyde, Pasquotank, Perquimans, Tyrrell, and Washington Districts have been selected as possible locations for SSWMS. Each site will involve between 5 and 10 acres and all drain into the Albemarle-Pamlico estuarine system. Varying soil types and textures, water tables and vegetative conditions will test the impact of the SSWMS on the waters of this area. A preliminary request has been made of DEM to conduct pre and post off-site monitoring to more precisely test the soundness of the SSWMS. A verbal agreement to monitor, gratis, has been made on the condition that they be provided with further details of the Project.

Approximately $140,000.00 is being requested to aid in the implementation of the SSWMS (structural measures, construction, and pipes) and landowners have agreed to be responsible for 25% of the cost of installing these systems. The eight Districts and the USDA Soil Conservation Service will provide engineering and technical support to the landowners.

The Division of Soil and Water Conservation and the Districts will administer the Project following the same guides presently being used to operate the NCACSP. These Districts have been actively involved in the NCACSP since 1987 (one District has been in since 1984) and have spent $2.2 million in the planning and installation of best management practices, thus are very familiar with the Program and its workings.

Kathy Miller, NPS Section
Division of Soil and Water

A.



Areas of North Carolina Association of Soil and Water Conservation Districts

Serving the Counties of:
CURRITUCK
CAMDEN
PASQUOTANK
PERQUIMANS
CHOWAN

104 Dobbs Street
Hertford, NC 27944
Phone: (919) 426-5545

December 20, 1988

Mr. Jim Cummings
Agricultural NPS Cost Share Coordinator
Division of Soil & Water Conservation
Department of NR&CD
P.O. Box 27687
Raleigh, North Carolina 27611

Dear Mr. Cummings:

We, the Albemarle District Supervisors feel that animal waste is a major agricultural pollutant throughout the district and state wide. Although many lagoons have been renovated or constructed with the help of the cost share program, animal waste utilization is still minimal.

The construction of a lagoon is not the final step in animal waste management. Land application of the waste in an enviromentally safe manner is the ultimate goal.

We, therefore request that the cost share program help pay for permanent underground PVC pipe that is to be used in a solid set system or as a hook up point for a traveling gun for the sole purpose of pumping the effluent from a lagoon.

Your timely consideration of this matter will be greatly apreciated.

Sincerly,

Floyd Mathews

Floyd Mathews, Chairman
Albemarle Conservation District

Re: Enclosed is an article which illustrates this type of permanent system.

Enclosures:

Forage gains rapid on hog lagoon water

By JIM HUDSON
Farm Press Editorial Staff

ROSEBORO, N.C. — Spray hog lagoon water on Coastal bermudagrass and you can produce an outstanding forage crop.

Ronnie Warren has gotten outstanding gains from stocker steers grazed through the last two summers on lagoon-waste-irrigated bermudagrass.

In 1987, 34 steers gained an average of 2.10 pounds per head per day from March 28 through Aug. 18 on the 5.25 acres of bermudagrass. That's nearly a ton of beef per acre, produced on bermudagrass alone.

This year Warren increased his stocking rate to 61 steers, over 11 steers per acre. They gained an average of 1.61 pounds per head per day with no supplemental feeding.

Frequent lagoon water irrigation

The secret to Warren's successful forage production is frequent irrigation with nutrient rich hog lagoon water. Until last year he considered the lagoon, which was filling much faster than he anticipated, a major liability. The lagoon takes waste from two finishing houses which handle a total of 1,200 hogs.

He planned to grow bermudagrass simply as a place to dispose of excess lagoon water. But the grass grew so quickly Warren had to go into the hay business or buy cows to keep the grass grazed.

With portable fence posts and electric fencing, he has developed a controlled grazing program that allows his cattle to get the most out of this warm season grass.

Warren installed a solid-set irrigation system and sprayed his first lagoon water in April of 1987. The bermudagrass grew so quickly his 34 steers could not keep up with it. He bought 10 Holstein steers to eat more of the grass and still wound up cutting "a lot of hay."

Generally adequate rainfall this summer caused Warren to irrigate less frequently than he did in 1987. Analysis of his lagoon water showed an average of 70 pounds to 80 pounds of nitrogen in each inch of lagoon irrigation water. He irrigated six times this summer.

"I don't know why there was such a difference in average daily gain this year. But I wonder if it had anything to do with the amount of nitrogen the grass received. There was always plenty of grass for the cattle, but it was not as highly fertilized as last year," Warren noted.

"It could have been the cattle. It could have been how often I moved them. Or, it could have been the nutrient content of the grass. The bottom line, though, is the stocking rate. I thought that was outstanding last year and even better this year."

To get the most out of his grass, Warren cuts the pasture into half acre or smaller blocks, using temporary electric fencing. Last year he moved his cattle every two or three days. This year he moved them every day.

Plastic coated wire

He used a plastic coated wire that was very easy to roll up and move to change paddock sizes. Portable fence posts made the job very easy.

"Changing the cows from one paddock to another is as simple as walking across the pasture and moving the wire. It takes only a few minutes," Warren said.

He likes to keep the paddocks small enough so the cattle will eat all the available grass before he moves them to another paddock.

"If they are in a larger paddock they will waste more grass. They eat everything in the small paddocks," he said.

How easy is it to move cattle from one paddock to the next?

"When you move them once, they expect you to move them the next day. They are ready every afternoon when I'm ready to move them," Warren noted.

He says he could not have carried 20 steers on this five-acre pasture without cross fencing. With the temporary fencing he more than adequately fed 61 steers.

When excellent growing conditions allow a portion of his pasture to grow more rapidly than the cows can eat it, Warren simply skips a paddock, moving the cattle onto good grazing grass and cutting the remaining paddock for hay.

"If you're going to pump manure on Coastal, you've either got to cut hay or feed cattle. I believe there is more money in feeding cattle," Warren concluded.

PUMPING WATER from his hog waste lagoon onto his bermudagrass pasture is a simple process for Ronnie Warren.

A SOLID SET IRRIGATION system allows Warren to dispose of hog lagoon waste and feed and water his pasture at the same time. Frequent rainfall held his irrigations to only six for this past summer.

WITH PORTABLE fence posts and a roll of plastic covered wire, Warren can quickly move steers from one block of bermudagrass to the next.

State of North Carolina
Department of Natural Resources and Community Development
Division of Soil and Water Conservation
512 North Salisbury Street • Raleigh, North Carolina 27611

James G. Martin, Governor
S. Thomas Rhodes, Secretary

David W. Sides
Director

January 4, 1989

Mr. Floyd Mathews, Chairman
Albemarle Conservation District
104 Dobbs Street
Hertford, North Carolina 27944

Dear Mr. Mathews:

As you requested in your letter dated December 20th, the issue of cost-sharing on permanent underground PVC pipe was brought before the January 3rd meeting of the Technical Review Committee (TRC). Attached for your information is a copy of the minutes taken at that meeting.

The TRC voted to review this issue at its March 1989 meeting. At the March meeting we are to provide the TRC with information as outlined below.

1. How much money involved.
2. Installation Costs (include prices of pipe)
3. Diagram illustrating water quality benefits
4. Pros & cons of limiting maximum number of feet or amount of funds cost shared.

In order to prepare for the March TRC meeting, please provide the aforementioned information on or before February 20, 1989. I would also like to take this opportunity to invite you and/or appropriate SCS employees to the March meeting if you think it might simplify presenting the requested information.

Thank you for all your diligent work and helping make the North Carolina Agriculture Cost Share Program a success. If I can be of any assistance to you, please do not hesitate to call.

Sincerely,

Jim Cummings

cc: Albemarle District Offices
Sandra Wood

P.O. Box 27687, Raleigh, North Carolina 27611-7687 Telephone 919-733-2302

STATE OF VIRGINIA

Virginia Animal Waste Management Proposal for the CHOWAN RIVER BASIN

Nottoway, Blackwater, and Meherrin River watersheds in the Peanut and J. R. Horsley Soil and Water Conservation Districts

Priority areas of consideration are the Chowan Basin, the Dismal Swamp/Pasquotank River basin, and the Currituck/Back Bay basin.

Currituck/Back Bay Basin

The Back Bay drainage of southeastern Virginia is made up of low-lying, mostly swampy areas that drain to Currituck Sound in North Carolina.

Agricultural crop lands contribute to nonpoint source pollution in the form of nutrients and pesticides. The Back Bay Restoration Foundation has initiated remedial measures that are now being funded by the Virginia Division of Soil and Water Conservation in a project that provides $50,000 annually for two years to install water control structures. The first formal signup is nearly complete with $30,000 requested.

The Virginia Cooperative Extension Service no longer considers animal waste to be a significant problem in this watershed since all hog operations are now in controlled confinement with the waste that is contained in pits or lagoons being land applied in an acceptable manner.

In addition to funds allocated to water control structures, approximately $7,096 is allocated in 1989 to this area under the Virginia Agricultural BMP Cost-Share Program. These funds will be administered for other needed conservation and water quality practices by the Virginia Dare Soil and Water Conservation District.

The urban runoff program is being assisted by the so-called "Greenline" which designates certain areas for development with other areas remaining essentially rural. The City of Virginia Beach is in the planning stages of a large stormwater management demonstration at their municipal complex to accelerate their urban water quality program. This project is at least two years away from construction.

It would, therefore, appear that no additional funding could be readily expended in the Currituck/Back Bay basins at this time.

Dismal Swamp

The Dismal Swamp and a small upland area to its West drains to the Pasquotank River in North Carolina. This basin is not considered to be nutrient sensitive from controllable non-point sources since it is a natural, undeveloped wetlands area with release being controlled by the U. S. Army Corps of Engineers to maintain the integrity of the wetlands. The small upland area that drains to the Dismal Swamp is virtually undeveloped with no known pollution problems.

Chowan Basin

The Chowan Basin includes the Blackwater, Nottoway, and Meherrin rivers as its major tributaries, which then merge below the North Carolina line to form the Chowan River.

The Chowan Basin has been a participant in the Virginia state Cost-Share Program for non-point source pollution abatement since 1983. This was the first area of the State to receive agricultural BMP cost-share assistance. The entire basin has received $540,718 since that time.

The Peanut and J. R. Horsley Soil and Water Conservation Districts within this area realize the need to further accelerate the installation of BMP's and to target funding for special areas of concern within the Blackwater and Nottoway and Meherrin River Watersheds.

The Chowan River has been subject to declining eutrophic water quality conditions generally attributed to agricultural nonpoint source runoff and point source discharges within the basin. North Carolina has classified the River as nutrient sensitive waters. The Virginia State Water Control Board and other agencies have conducted extensive research into the water quality problems existing in the Virginia portion of the basin and have developed management strategies for improving water quality both within Virginia and North Carolina. (Chowan River Basin 208 Project --Virginia State Water Control Board - 1983.)

Land use in the Chowan Basin is intensely agricultural with Southampton and Sussex counties, which comprise most of the basin, being ranked 1 and 2 for total planted cropland in the State. A 1984 study by the Division of Soil and Water Conservation that was used to develop the Chowan/Chesapeake Bay Agricultural Pollution Control Plan lists swine as 52,665 animal unit equivalents in the entire basin. A Soil Conservation Service 1982 work load analysis estimated that 54% of the confinement wastes were adequately treated, however, recent observations have revealed a serious problem of pit and lagoon overflow, primarily in the Blackwater, Nottoway and Meherrin drainage areas of the Peanut and J. R. Horsley Soil and Water Conservation Districts. A

portion of the targeted funds will be used to land apply pit and lagoon wastes through reel type irrigation systems from the problem lagoons. An animal waste utilization plan and individual management education will accompany each cleanout since this will be the first effort of this type in the Virginia Chowan Basin. Cost-share will be at the rate of $2/1000 gallon to pump down to the level of the surrounding water table, where the wastes are used for irrigation on the site. Approximately 1/2 the sites will require removal of the wastes by honey wagons at a cost share of $4/1000 gallon. The goal of the project will be to pump down a total of (25) of these lagoons.

Another primary area of concern is the number of swine that continue to be raised in the woods and swamps. SCS estimates that 10 waste holding systems could be installed within the project scope if funds were available. The second goal of this project will be the construction of (6) new waste holding systems.

The remaining funds will be used to supplement the existing Virginia Agricultural BMP Cost-Share Program. The following practices are being offered to the entire Chowan Basin at present.

BMP	UNIT	STATE RATE
Animal Waste Control Facilities	no. of systems	75%
Buffer Stripcropping	acre	$15/AC
Diversions	feet	75%
Grass filter strips	lin. ft.	$0.10/ft.
Grazing land protection	acre	75%
Intensive Rotational Grazing System	acre	50%
Legume Cover Crop	acre	$25/AC
No-till Cropland	acre	$15/AC
No-till pastureland and Hayland	acre	$25
Permanent Vegetative Cover on Critical acres	acre	75%
Protective Cover for Specialty Cropland	acre	$10/AC
Reforestation of Erodible Crop and Pastureland	acre	$75/AC
Drop Structures	no. of	75%

	systems	
Sod Waterways	acre	75%
Stream Protection	feet	75%
Stripcropping Systems	acre	$30/AC +75% of eligible components
Terrace Systems	Feet	75%
Water Table Control Structure	acre	75%
Woodland Buffer Filter Area	acre	$100/AC
Woodland Erosion Stabilization	acre	75%

The Peanut and J. R. Horsley Soil and Water Conservation Districts will administer the program under the same rules established for the 1989 Virginia Agricultural BMP Cost-Share Program except that these funds will be available only to those portions of the districts that drain to the Nottoway, Blackwater and Meherrin Rivers. While the 75% cost share rate will remain in effect, the existing $7,500 annual limit on animal waste practices will not be applied to these waste application and storage practices. Funds will be released to the two soil and water conservation districts to pay landowners when BMPs have been installed.

All practices are designed and installed in accordance with SCS and Department of Forestry standards and specifications and are certified by those agencies prior to cost-share payment. The standards include maintenance agreements which will be spot checked by DSWC personnel for the life of the practice.

As in the past, the Virginia State Water Control Board will be conducting monitoring of the Chowan Basin throughout the project period.

The project period is 10-1-88 to 9-30-90 with a draft of the final report presented by February 1990 and a final report by June 1990. Quarterly status reports will be submitted to Robert Holman, (APES Coordinator) and also Ted Bisterfeld, (EPA Project Officer) to insure adequate and timely progress. These reports will be made within 30 days of each quarters end. Installation schedule and estimated practices cost are given in Table I.

TABLE I

Chowan River Basin Project
Installation Schedule & Estimated Practice Costs

Practice	Unit	Unit Cost	Estimated Total Costs
1. Land Application of Swine Lagoon Waste			
A. By irrigation	5,125,000 gl.	$2.00/1000 gl.	$10,250.00
B. Honey wagon hauling	5,125,000 gl.	$4.00/1000 gl.	$20,500.00
2. Animal Waste Management Systems	6	$13,000	$78,000.00
		Federal Subtotal - - - - - - - -	$108,750.00
3. J. R. Horsley Soil & Water Conservation District			
A. BMP Allocation			$ 29,167.00
B. Technical Assistance Allocation			$ 7,083.00
		State Subtotal - - - - - - - -	$ 36,250.00
		Total - - - - - - - - -	**$145,000.00**

Since the project period only allows one construction year (Spring 1989 thru fall of 1989) it is anticipated that approximately 6 systems could be pumped in the spring of 1989, leaving 15 for the fall of 1989, following corn harvest. Installation of the 10 animal waste systems and BMPs can be continuous throughout the 1989 construction year.

To: Pamlico Citizens' Advisory Committee Members
From: Derb Carter, Chair
Re: 1989 Meeting Schedule
Date: February 6, 1989

Date	Location	Program
February 7 7 pm Tues.	Washington Beaufort Community College	Evaluate proposals and develop recommendations for funding third year projects and research
February 27 5 pm Mon.	New Bern Sheraton	Roundtable meeting of Policy, Technical, and Citizens' Advisory Committees; Policy Committee meeting on following morning
March 16 7 pm Thur.	Beaufort Duke University Marine Lab	Mary Joan Pugh, Asst. Secretary, NRCD Designation and protection of coastal outstanding resource waters Rep. Bruce Ethridge Coastal legislation in the 1989 General Assembly
April 19 7 pm Thur.	Washington Civic Center	Dr. Edward Noga, NCSU Incidence and possible causes of fish and crab disease in the Pamlico River and other estuarine waters Dr. Stan Riggs, ECU Heavy metal pollutants in the Pamlico River
May 17 7 pm Wed.	Swanquarter Courthouse	Jim Cummings, NRCD Best management practices and the NC agricultural cost share program Dr. Jerad Bales, USGS Offsite effects of best management practices

June 17 2 pm Sat.	Hatteras *	Donna Moffitt, Oil and gas development off North Carolina's coast Rich Shaw, Office of Coastal Management Location and management of maritime forests in coastal North Carolina
July 11 7 pm Tues.	Washington Civic Center	Steve Tedder, Division of Environmental Management Albemarle Pamlico water quality monitoring program Tom Perlic, Pamlico Tar River Foundation Citizen Water Quality Monitoring
August 9 7 pm Wed.	New Bern *	Dr. Hans Paerl, UNC Potential for eutrophication and nuisance algae blooms in Albemarle and Pamlico Sounds Division of Environmental Management Sources and control of nutrients in coastal waters
September 14	[TBA]	Annual Researchers Review Meeting
September 29	[TBA]	Roundtable meeting of Policy, Technical, and Citizens' Advisory Committees
October 6	[TBA]	Annual Public Meeting

November 15 7 pm Wed.	Oriental	Charles Roe, NC Natural Heritage Program Inventory and protection of natural areas in the coastal region Dr. Doug Rader, Environmental Defense Fund Alternative strategies for wetland protection
December 7 7 pm Thurs.	Manteo NC Aquarium	

RESOLUTION

ATTACHMENT G

Whereas there has been much recent publicity with respect to the possible adverse or harmful effects of widespread trawl netting on the fish and shellfishing populations in the inland waters of North Carolina and whereas a large group of citizens have expressed their concern that significant damage to our fisheries resources has already occurred and continues to occur as a result of this activity and whereas the state director of Marine Fisheries, William Horvath, has publically stated, that in his opinion, no significant damage to our fisheries resource has occurred as a result of trawl netting activities and where as to our knowledge no reliable or appropriate research has heretofore been reported to evaluate these factors mentioned and others. Therefore, the PCAC of the APES recommends to The Policy and Technical Committees that a research study, in depth, be initiated and carried out without undue delay to determine the possible adverse effects on water quality produced by widespread trawl netting in inland waterways - and should include accurate estimates of immature and nursery fish kills, total fish destruction, disruption of shellfish habitats, effects on the recreational fish species population and in addition to investigate adverse effects produced by the almost continuous agitation of the sound bottoms by several hundred large trawlers with respect to growth of seaweed and salt water grasses, the possibility of bringing about suspension of heavy metals or other toxic substances present in bottom sediments. There is a pressing need for answers to these mentioned questions and others which may be related to this type of commercial fishing activities.

I recommend that this resolution be adopted by the PCAC of the Albemarle-Pamlico Estuarine Study Program.

CLARK RODMAN

ATTACHMENT H

HOME ON THE RANGE, INC.
Post Office Box 740
Oriental, NC 28571
(919) 249-2770

Pamlico County Taskforce on MAEWR
(Mid-Atlantic Electronic Warfare Range)

HOME ON THE RANGE, a group of concerned citizens, was formed in August, 1988, to facilitate a complete examination of the MID ATLANTIC ELECTRONIC WARFARE RANGE (MAEWR) military proposal; to identify any and all hazards to health, environment, economic vitality, and the quality of life in Pamlico County; to serve as a public information resource, and to become politically active if necessary.

Our concerns are: 1. Noise from low level, high speed jet aircraft.
2. Increase of potential airplane crashes due to increased number of low altitude flights, and crashes due to bird strikes, since the electronic warfare range lies within the Mid-Atlantic Flyway of migrating birds (3,000,000 birds annually).
3. Radiomagnetic emissions from the various radar and "threat emitters" used in the project, and from the aircraft themselves.
4. Loss of valuable estuarine resources and danger to the fishing industry.
5. Greater restriction on public trust waters.
6. Losing the quality of recreational boating on Pamlico Sound and its tributaries.
7. The "chilling effect" on prospective property buyers. According to G.S. 93A-6(a)(1), real estate brokers have the duty to fully disclose material facts in real estate transactions.

In the months since August, we have worked with officials at Cherry Point Marine Corps Air Station, local and national representatives and senators, individuals in the State departments of Human Resources, NRCD, Commerce, Transportation, Attorney General, and the office of the Governor. We are also in contact with officials in the national departments of Defense, Interior, EPA, and others.

We have also been working closely with the Albemarle Commission and Carteret Crossroads, which have similar concerns for their areas.

There have been two supplements to the original Environmental Impact Statement: one on noise and the other on electromagnetic radiation emissions, These have not lessened our concerns. (The final EIS should be available in May).

HOME ON THE RANGE was asked by the military to comment on and ask questions during the scoping process on MAEWR, Core MOA, and Cherry MOA (see SUA map) although the military has insisted that the three are not related. We were also asked to comment on the proposed acquisition of 39,000 acres adjacent to Camp Lejeune in Onslow County. In addition we requested information on the proposed additional 4,000 acre expansion in Jones County for an AV8B (Harrier) Forward training facility.

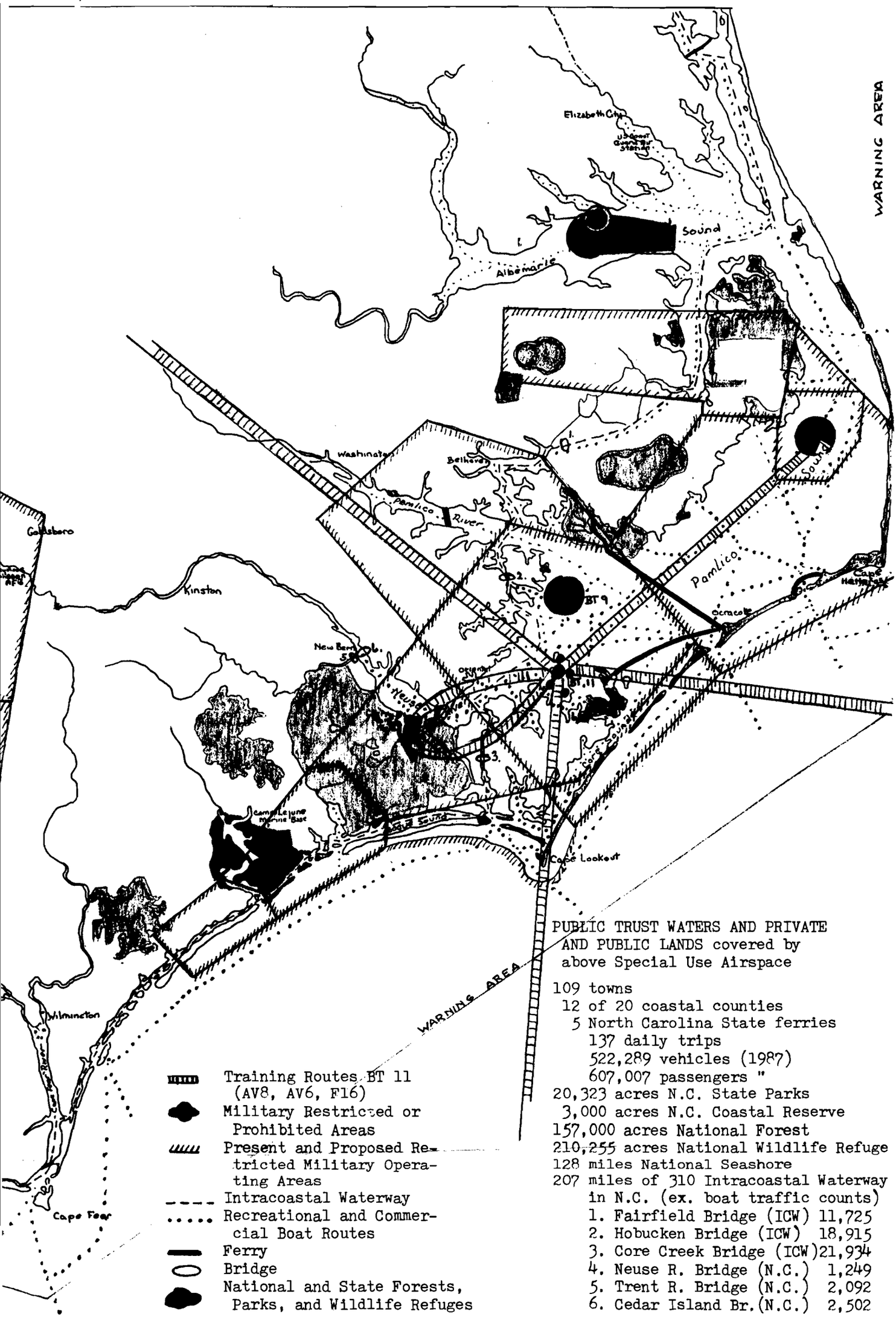
While attempting to understand the ramifications of these increases in military operating areas (MOAs), restricted and prohibited airspace, zero to ceiling flying space over Pamlico Sound, the lack of definitive knowledge and conflicting reports on the results of electromagnetic radiation emissions on humans and fish and wildlife; the effects of noise on marine creatures (such as the present explosions of 500 pound bombs on dolphin), or on game fowl, and on the endangered eagle, pelican, and red cockaded woodpecker in the proposed military expansion areas, we have come to realize that MAEWR is not an isolated proposal.

There are so many new military proposals in North Carolina that Governor Martin has requested that all the branches of the military produce a cumulative Environmental Impact study. He and our Congressional delegation have also asked that the military and the FAA take responsibility for the environmental impacts created by them in the Special Use Airspaces and have requested compliance with the National Environment Policy Act.

We want you to be aware of this situation on the coast of North Carolina at the present time. We will be glad to provide you with any additional information.

Any suggestions or information you may have that would be helpful in our quest for assurances on the above seven stated concerns would be appreciated.

HOME ON THE RANGE

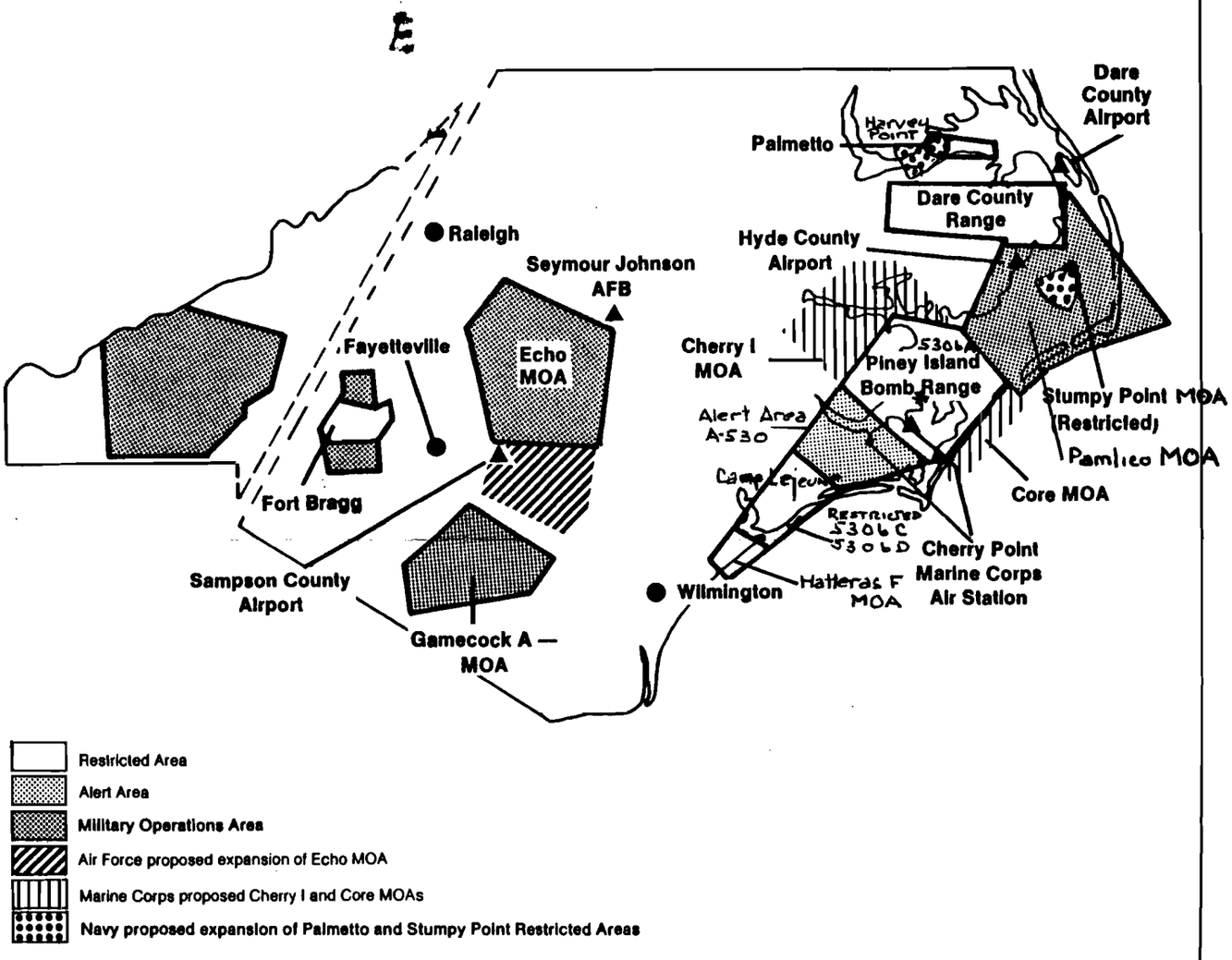


PUBLIC TRUST WATERS AND PRIVATE AND PUBLIC LANDS covered by above Special Use Airspace

109 towns
12 of 20 coastal counties
5 North Carolina State ferries
137 daily trips
522,289 vehicles (1987)
607,007 passengers "
20,323 acres N.C. State Parks
3,000 acres N.C. Coastal Reserve
157,000 acres National Forest
210,255 acres National Wildlife Refuge
128 miles National Seashore
207 miles of 310 Intracoastal Waterway in N.C. (ex. boat traffic counts)
1. Fairfield Bridge (ICW) 11,725
2. Hobucken Bridge (ICW) 18,915
3. Core Creek Bridge (ICW) 21,934
4. Neuse R. Bridge (N.C.) 1,249
5. Trent R. Bridge (N.C.) 2,092
6. Cedar Island Br. (N.C.) 2,502

(The above information is taken from the AIRCRAFT NOISE SUPPLEMENT TO DRAFT ENVIRONMENTAL IMPACT STATEMENT (MAEWR), the 1989 N.C. State Highway Map, the 1989 Coastal Boating Guide map, the CHARLOTTE Sectional Aeronautical Chart, and information provided by NC. DOT divisions of ferries and bridges.)

Existing and Proposed Special Use Airspace in North Carolina



MILITARY ACTIVITIES RELATED TO SPECIAL USE AIRSPACE EXPANSIONS IN EASTERN NORTH CAROLINA
(Effective December 16, 1988)

Proposal	Sponsoring Agency & Type of Action	NEPA Process							FAA Process			Coastal Consistency	Affected Area
		Scoping	EA	FONSI	DEIS	Supplmts.	FEIS	CEQ Refer.	Notice	Designation	Appeal		
Harvey Point (Albemarle)	Navy Restricted Area Amend.								*			Initially denied, now complete	Tyrell, Washington, Chowan, Perquimans, and Pasquotank
Stumpy Point	Navy Restricted Area Amend.								*			Initially denied, now complete	Dare
Core	Marine Corps MOA Creation	*			*		*	*					Carteret
Cherry I	Marine Corps MOA Creation	*			*		*						Beaufort, Craven, Hyde, & Pamlico
F-15E Beddown (Seymour Johnson)	Air Force Aircraft Replacement and Training Changes	*			*		*		N/A			May not be required	Wayne, Dare, Tyrell, and Washington (and MTR routes)
ECHO 1 & 2	Air Force MOA Amendment	*							*			N/A	Johnston, Wayne, Duplin Sampson & Harnett
MAEWR	Navy Facility Upgrade	*			*	*			N/A				Carteret and Pamlico
Harrier Forward Training Facility	Marine Corps New Facility	*							Unknown			May not be required	Unknown (maybe Jones)
Camp Lejeune	Marine Corps 39,000 Acre Expansion	*							Unknown				Onslow