

MINUTES
TECHNICAL COMMITTEE

FEBRUARY 18, 1992
RALEIGH, NC

CALL TO ORDER

The Technical Committee meeting was called to order at 10:15 a.m. by Dr. Ernie Carl, co-chairman. Co-chairman Bowman Crum was unable to attend the meeting. The attendees are listed in Attachment A. The agenda was modified to allow Mr. Jess Hawkins, Division of Marine Fisheries, to brief the Committee on a proposed action plan demonstration project. **Mr. Larry Saunders moved to adopt the agenda as modified; Mr. Jim Turner seconded the motion which passed.**

MINUTES OF NOVEMBER 6, 1991

Mr. Saunders moved to approve the November 6, 1991, Technical Committee minutes as distributed. Mr. Turner seconded the motion which was approved.

PROGRAM REPORTS

Project Officer

Mr. Ted Bisterfeld reported as follows:

- 1) Sediments for sediment toxicity testing were delivered to the Gulf Breeze Lab in mid-January. A report is due in a couple of months.
- 2) EPA Region IV has reviewed DEHNR's proposed scope of work for the use of Section 319 (non-point source) funding for FY 92-93.
- 3) Region IV has begun a review of North Carolina's water quality standards as a part of the triennial review required by the Clean Water Act.
- 4) EPA Headquarters has issued some **draft** final guidance on NEP funding for FY 92-93. Key points are:
 - March 15 is the target date for submittal of the annual work plans to EPA Headquarters.
 - Funding for the A/P Study for FY 92-93 will be \$550,000. Of that, \$300,000 may be used unrestricted for finishing tasks leading to the CCMP and for specific implementation assessment activities, and a \$250,000 incremental increase is specifically to formulate implementation aspects of the management plan. These tasks could be developing model ordinances

or local government regulations, refining the financing plans or working on state legislative recommendations. The match ratio remains at 75%/25%.

- EPA Regions are provided the authority to decide what action plan demonstration projects to fund among its management conferences. Region IV has \$268,000 this year for four eligible management conferences. APES is still eligible but must complete any project before the final CCMP.
 - Defines activities eligible for NEP funding after the CCMP is made final. These are: analyzing and reporting the effectiveness of actions taken and conducting reviews of federal development and regulatory actions for consistency with the CCMP.
 - Establishes the funding levels of NEPs after the CCMP. For APES target annual EPA funding is to be \$300,000.
 - Discusses constraints in use of funding mechanisms imposed by the Clean Water Act for NEPs having a completed CCMP.
- 5) Project Officer has interviewed relevant EPA programs to help in the program evaluations project.
 - 6) Project Officer participated in the December workshops on the development of the issue papers and is participating in the current user group workshops.
 - 7) Coastal America funds (\$100,000) for the anadromous fish obstruction removal project have been received at Region IV. The Regional Implementation Team selected this project for funding along with a project in Florida. A grant application will be prepared by the A/P Study office which will coordinate the intergovernmental activities on this project.

The Coastal America Office in Washington wishes to have some kind of ceremony this spring to mark the award of this grant to North Carolina.

There are no funds earmarked for Coastal America in FY 92-93 so the identity of the program may change from the present.

- 8) The North Carolina Division of Environmental Management has submitted a grant application and scope of work to EPA for

wetlands planning money (\$400,000) to do status and trends work, to develop a nationwide permit, and to develop a mitigation approach. The funding is competitive.

Project Director

Mr. Randall Waite circulated for information purposes a sample land use cover map from CGIA and a map of the study area indicating rivers, impoundments, roadways, municipalities, etc. There was some discussion regarding the boundaries of the Study. It was agreed that Mr. Waite would present the maps to the Policy Committee on March 4 or April 21 for a decision on the Study's specific boundaries.

Mr. Waite reported that following peer reviews, the two projects submitted by Dr. JoAnn Burkholder and Dr. Ed Noga (see 11/6/91 Technical minutes) have been funded for \$62,518.

Also the project submitted by The Nature Conservancy to utilize the GIS for natural community classification and critical areas planning (see 11/6/91 Technical minutes) has been funded for \$2500.

Mr. Charles Loeb has been contracted (\$5200) to (1) review the financing options developed by Apogee Research, Inc. for the CCMP; (2) evaluate technical, economic, legal, and political feasibility of each option; (3) recommend additional feasible options; and (4) develop a draft financial management plan for the CCMP. This work should be completed by mid-March.

Mr. John Glebe of UNC is investigating the potential benefits of sanitary or water management districts to centralize control of water withdrawals and disposal. The project is a Master's Paper under his program and is at no cost to APES.

Mr. Miaosong Yang, the director and senior engineer for the Water Quality Research Center in China and on a study/research visa sponsored by Dr. John Costlow at Duke, has been contracted (~\$3000) to draft the annual report for APES.

Mr. Waite reported that unless the Technical Committee and Policy Committee objected, he planned to provide an additional \$3000 to Dr. Stanley Riggs to complete work on a sediment quality survey of Northern Currituck Sound and North Landing River. This is a project that Mr. Yates Barber, Albemarle CAC member, had presented and which APES provided \$2000 toward with the County of Currituck providing \$5000. It was anticipated that the North Carolina Wildlife Resources Commission would provide the remaining \$3000. However, it appears that the Wildlife Resources Commission had never actually authorized the \$3000 toward that project and is unsure funds can be provided. There were no objections raised regarding APES providing the additional \$3000.

However, it was noted that if the Wildlife Resources Commission should have this money available that it reimburse APES.

Technical Coordinator

Ms. Jennifer Steel reported that two final reports are being printed: (1) Environmental Management Strategies (Center for Policy Negotiation/Bartholomew) and (2) Land Use and Water Quality Handbook (NCSU/Hoban).

Regarding the Coastal America project, several low head dam sites have been identified. Identification of other dam and culvert sites are still in progress. It had been hoped that the removal of one obstruction could have been completed before the upcoming spawning season; however, this will not occur because funds were not made available in time.

Drafts of several components of the financial management plan have been developed. The plan will contain a description of all 25 funding options presented in the Apogee report and an analysis of potential legal barriers, a description of interest groups which have a stake in each identified funding option and a summary of their responses, a revision of some of the projected revenues that Apogee presented with more detailed information and an analysis for those projections of revenues, and suggested strategies/conclusions of the feasibility of each and suggestions on contacts for implementation. A final draft should be available by March 16.

The Wetlands Subcommittee met and a draft rewrite of the Wetlands Section in the Critical Areas Chapter of the Status and Trends Report is expected March 16.

Public Involvement Coordinator

Mrs. Joan Giordano reported the following:

- 1) The CACS continue to meet regularly.
- 2) Mr. Derb Carter attended a national NEP CAC meeting in Washington, D.C. in January. This was a follow-up to the meeting held in Beaufort in November 1990. The group endorsed EPA involvement in forming a core office in each NEP to support implementation of the CCMPs.
- 3) The PSAs ("Yes, In Your Backyard"/Willard) are airing on eight stations.
- 4) The fact sheets (AEA, NCCF, PTRF, and Hampton Roads Planning District) are in various stages of development or finalization.

- 5) The poster "Life in the Estuary" (PTRF) is being reworked.
- 6) The education modules (Elizabeth City/Pasquotank County School District) are being reviewed and activities are being tested by children.
- 7) The "Advocate" newsletter is being produced on schedule with the next issue due out in mid-March.
- 8) The GIS video has been distributed to planners in 36 counties in the APES area.
- 9) The Pine Knoll Shore Aquarium exhibit "Precious Waters" should be completed by summer.
- 10) Outreach activities continue in both the Pamlico and Albemarle regions. The APES exhibit is being transformed from an Early Demonstration theme to a CCMP theme.
- 11) The Citizens' Water Quality Monitoring (CWQM) report is ready for review. A QA/QC workshop will be held in Washington in May for the CWQM program. A two-tier program is being considered for citizen water quality monitoring which will allow the more experienced monitors to conduct more extensive water quality monitoring.
- 12) The user group meetings for development of the CCMP have been very successful to date. Mr. Tom Ellis asked that it be relayed that the Department of Agriculture was very impressed and pleased with the "user group" workshop held in Rocky Mount with agricultural leaders and wished all the agricultural leaders in North Carolina could have participated.

CITIZENS' ADVISORY COMMITTEE REPORT

Dr. Ernie Larkin said there were no other CAC activities to report.

ACTION PLAN DEMONSTRATION PROJECT

Mr. Waite reported that EPA Region IV has action plan demonstration funds available again this year on a competitive basis. Any project submitted by APES must however be completed before the CCMP is finalized. Because it was felt a demonstration project on bycatch reduction could provide beneficial information to the A/P Study and could further the development of the CCMP, the Division of Marine Fisheries was asked to submit a proposal in this area. Mr. Jess Hawkins, Division of Marine Fisheries, briefed the Committee on the project "Bycatch Reduction Studies of Sciaenid Pound Nets and Long Haul Seines in Pamlico Sound" (\$4,050). The objectives of

the study are: (1) to construct and field test a culling device for the long haul seine and sciaenid pound net fisheries of Pamlico Sound and (2) preliminarily field test escapement or culling panels in sciaenid pound nets in Pamlico Sound. The work would be completed by the fall of 1992. An expansion of this project to conduct a post-mortality study on the culling device would require an additional \$11,000. An additional expansion of the project could add a third element which would test escapement panels in long haul seines. This element would substantially increase the cost of the project. It was noted that no other fisheries action plan demonstration projects have been conducted by APES. Dr. Michael Orbach moved to submit the Division of Marine Fisheries proposal as an action plan demonstration project to EPA, subject to review by the Technical Review Subcommittee. Mr. Jim Turner seconded the motion. The motion carried.

FY 92-93 WORK PLAN

Mr. Waite summarized the draft proposed budget for FY 92-93 (Attachment B). Of the \$925,000, \$550,000 is the EPA allocation and \$375,000 is the state allocation for the period October 1992 to June 1993. The budget was developed to reflect **draft** final guidance from EPA. Mr. Waite noted the EPA guidance is fairly specific regarding allowable activities: \$334,000 may go toward CCMP completion activities; further characterization is not acceptable; \$400,000 to track the success of implementation including administrative oversight, public outreach and data analysis; \$191,000 is unrestricted and could be used for monitoring and assessment, GIS outreach activities, etc. At least \$250,000 of the EPA funds must be spent by December 1992. There was concern expressed regarding this timeframe and the most effective utilization of the money. Mr. Waite said he planned to present the budget to the Policy Committee on March 4 for their approval in concept which will allow its inclusion in the work plan and then to submit specific projects later for approval underneath the budget structure. Since a draft work plan and budget are due at EPA on March 15, a decision on the budget would need to be made by the Policy Committee on March 4. Dr. Orbach moved to approve the budget in concept and recommend to the Policy Committee that the details of the action plans be worked out in consultation with staff and the appropriate subcommittee. Dr. Robert Holman seconded the motion which passed. It was also recommended that the budget be reformatted to more clearly group related items and to lump all action plan categories together.

CCMP UPDATE

Mr. Waite reported that workgroup sessions were held in December on the issue papers. Comments are being incorporated into the issue papers. Affected parties or user group meetings (local officials from the Albemarle and Pamlico area, agricultural/forestry, fisheries community, point-source

dischargers, developers, and environmental groups) are being held throughout February. Professional facilitators were hired to run the first six sessions to help with the flow of the meetings. Information gained from these meetings will be worked into the first draft of the CCMP. The North Carolina Coastal Federation (contracted to arrange these scoping meetings) will provide summaries of the meetings for distribution.

Mr. Waite noted that in the interest of time the action plans would not be discussed in depth but material had been distributed which summarized the management options under each action plan. Staff revised the goals and objectives by adding specific numbers as instructed by the Technical Committee. The numbers were developed and sent out through the issue papers in December. Many of the statements developed by the staff drew objections due to no substantiating data to confirm the statements. Staff will be contacting Technical Committee members for advice in several areas during development of the management plan.

Ms. Meg Scully noted that the information management plan outline was developed by Karen Siderelis of CGIA. Comments on that element should be sent back as soon as possible to Ms. Scully so that she may relay the information to Ms. Siderelis.

ADJOURNMENT

The meeting adjourned at 2:55 p.m.

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TECHNICAL COMMITTEE

FEBRUARY 18, 1992

ATTENDEES

ERNIE CARL
JIM TURNER
LARRY SAUNDERS
CARROLL PIERCE
ERNIE LARKIN
MIKE ORBACH
ANN DEWITT BROOKS
ROGER SCHECTER
ROBERT HOLMAN
RICHARD B. HAMILTON
DAVID W. ENGEL
JESS H. HAWKINS
MIKE WICKER
TOM QUAY
HOWARD NAPPER
TED BISTERFELD
RANDALL WAITE
JOAN GIORDANO
JENNIFER STEEL
MEG SCULLY
KRISTIN ROWLES
KATHY NORRIS

AGENCY

DEHNR
US GEOLOGICAL SURVEY
US ARMY CORPS OF ENGINEERS
DEHNR SOIL & WATER
PAMLICO CAC
ECU/COUNCIL ON OCEAN AFFAIRS
VA COUNCIL ON THE ENVIRONMENT
DEHNR COASTAL MANAGEMENT
WATER RESOURCES RESEARCH INSTITUTE
NC WILDLIFE RESOURCES COMMISSION
NMFS/NOAA
DEHNR MARINE FISHERIES
US FISH & WILDLIFE SERVICE
PAMLICO CAC
ECU/IMCR
EPA REGION IV
APES
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DRAFT PROPOSED BUDGET FY93

(2-18-92)

ADMINISTRATION	\$282,000
GIS DEVELOPMENT	\$93,000
PUBLIC OUTREACH	\$70,000
NEWSLETTER	\$40,000
MONITORING	\$180,000
TECHNICAL ASSISTANCE	\$60,000
PUBLIC INVOLVEMENT AND EDUCATION ACTION PLAN	\$40,000
HUMAN ENVIRONMENT ACTION PLAN	\$40,000
FISHERIES ACTION PLAN	\$40,000
WATER QUALITY ACTION PLAN	\$40,000
CRITICAL AREAS ACTION PLAN	\$40,000
TOTAL	<hr/> \$925,000



APES TARGET ENVIRONMENTAL GOALS AND OBJECTIVES

February 18, 1992

Concern I: Degradation of Water Quality: Turbidity,
Transparency, Sedimentation, and Salinity

Goal A: Protection of living aquatic resources from excessive or deleterious anthropogenic changes in the physical water quality regimes.

- Objective 1: Protection of SAV from excessive shading from epiphytic growth, planktonic turbidity, and floating macroalgae and from potentially toxic concentrations of nitrate.
- Objective 2: Protection of SAV, PNAs, and other living aquatic resources from deviations from natural salinity regimes due to enhanced drainage, manmade diversions and interconnections, and active pumping.
- Objective 3: Protection of freshwater inland ecosystems from increased landward flow of brackish water due to enhanced drainage or manmade diversions and interconnections.
- Objective 4: Reduce levels of sedimentation and associated contamination in streams.

Concern II: Bacterial Contamination: Closure of waters to the harvest of shellfish

Goal A: Improvement in the ability to test for potential human health hazards resulting from the ingestion of shellfish.

- Objective 1: Adoption or incorporation of new pathogen indicator species and associated standards as soon as they are developed by the National Indicator Study.

Goal B: Restoration to sufficiently low bacterial concentrations necessary to open to harvest by 2002 (a) any SA shellfish waters currently "prohibited" or "restricted" to the harvest of shellfish and (b) all non-SA waters that met the SA qualifications as of November 28, 1977.

- Objective 1: Improvement of the bacterial concentrations necessary to reduce the areal extent of permanent closures by 10% by 1997 and 20% by 2002. Improvement of the water quality necessary to reduce the long-term frequency of

temporary closures by 25% by 2002.

Concern III: Toxicants: Potential Effects on Fish and Other Biota

Goal A: Protection of estuarine flora and fauna and human health from the effects of toxicants, as defined with the state water quality standards text, within the A/P study area by the year 2002.

Objective 1: Elimination of contributions of and/or discharges of toxicants in toxic amounts to achieve no new habitat loss or toxicity to aquatic organisms.

Objective 2: Restore, where feasible, toxicant-degraded water and sediment habitats.

Concern IV: Cumulative Water Quality and Biological Degradation

Goal A: In all areas of the A/P region, maintain current levels of water quality or restore water quality to that necessary to protect biological integrity.

Objective 1: Achieve the objectives of the state antidegradation clause, promoting maintenance, protection, and enhancement of all waters in North Carolina.

Goal B: Protection of existing aquatic living resources, including threatened and endangered species.

Objective 1: Preservation of the current biological integrity, as measured and monitored by the yet-to-be-determined estuarine biotic index, in all estuarine systems of the A/P region.

Objective 2: In the Piedmont, restoration to or maintenance of a biological integrity rating of "fair" or better as determined through biotic indices (DEM macroinvertebrate and fish) by the year 2002.

Concern V: Nutrient Loading: Nuisance Algal Blooms and Other Deleterious Effects

Goal A: Basinwide protection of living aquatic resources from the toxic or otherwise deleterious effects of excessive nutrient loading or nutrient imbalance, by developing in-stream area-specific target nutrient concentrations:

Objective 1: Achieve the maximum nutrient reduction goals prescribed in the nutrient sensitive waters (NSW) management strategies (Chowan, Neuse, and

Tar-Pamlico Rivers). Revise these strategies as necessary to restore and/or protect nutrient sensitive river systems in the A/P area from excessive nutrient loading. Adopt nutrient standards or nutrient reduction goals for other basins within the A/P area.

Objective 2: Maintenance of the necessary concentrations of and balance of nutrients to minimize the possibility of: (1) bluegreen algae blooms (in fresh water) that have a range of deleterious toxic effects on the food web and users of the waters and (2) toxic dinoflagellate blooms (in saltwater) that may cause fish kills or disrupt the natural food web.

Objective 3: Protection of SAV from toxic concentrations of nitrate, and shading from epiphytic growth and floating algae.

Concern VI: Low Dissolved Oxygen: Fish and benthos kills

Goal A: Minimization of the incidence and severity of anoxia-related fish and benthos kills.

Objective 1: Minimization of the incidence and severity of anthropogenically exacerbated anoxic events and their contribution to fish and benthos kills.

Concern VII: Threatened sustainability of fisheries resources

Goal A: Restoration or maintenance of fisheries resources to allow for long-term maximum sustainable, public utilization.

Objective 1: Maintain sustainable fisheries resources through coordinated, comprehensive fishery management plans.

Objective 2: Reduction of inside trawl, long haul seine, and pound net bycatch.

Objective 3: Elimination of overfishing.

Objective 4: Restoration and/or maintenance of the following stocks of important commercial and recreational species to allow for long-term maximum, sustainable public utilization.

Concern VIII: Fish and benthos kills

Goal A: Reduction or elimination of the impact of any anthropogenic factors which are proven to have a causal relationship with anoxia-related and other fish kills.

Objective 1: Develop a management and study plan to address fish kills.

Concern IX: Finfish and shellfish disease

Goal A: Minimization of disease prevalence (the percent of a population infected with disease) and reduction of the areal extent of diseases in finfish and shellfish.

Objective 1: Develop a management and study plan to address finfish and shellfish diseases and reduce or eliminate the impact of any anthropogenic factors which are proven to have a causal relationship with the incidence and severity of finfish and shellfish diseases.

Objective 2: Prevention of increases in areal extent and severity of fish and shellfish disease outbreaks.

Concern X: Loss and Degradation of Fish and Shellfish Habitat

Goal A: Maintenance of an adequate quantity of areas functioning as primary nursery areas, secondary nursery areas, fish pathways, and spawning areas to support optimal finfish and crustacean populations

Objective 1: Designation of all areas currently functioning as primary or secondary nursery areas and spawning areas.

Objective 2: Protection of primary and secondary nursery areas, and spawning areas from permanent alteration.

Objective 3: Restoration, if possible, of any degraded primary and secondary nursery areas, altered or blocked spawning areas, and altered or blocked fish pathways to spawning areas.

Goal B: No-net-loss (measured on a broad scale, allowing for natural shifts in distribution) of SAV and shellfish beds and, where possible, restoration of lost or degraded beds with endemic species.

Objective 1: Designation of all areas currently functioning as SAV and shellfish habitat.

Objective 2: Cessation of losses of SAV and shellfish areas due to direct and indirect, solitary and cumulative physical disturbance or destruction.

Objective 3: Restoration, where feasible, of the physical habitat and water quality necessary to

repopulate known "lost" shellfish areas and of areas of "lost" SAV (e.g., Rose Bay, Swanquarter Bay, Pamlico River, South Creek, Currituck Sound, and Back Bay) with endemic species.

Objective 4: Management of non-indigenous species of SAV such as Hydrilla, Eurasian watermillfoil, Alligator weed, water hyacinth, Elodea, etc. for multiple uses (fish habitat, boating, etc.) and maintenance of navigational channels.

Concern XI: Habitat Loss and Degradation

Goal A: De-list or down-list 3 Federally- or State-ranked species per year.

Objective 1: Protection of essential habitat of Federally- and State-listed endangered and threatened species. Minimal habitat losses of State special concern (SC) species, G1-ranked species, Federal candidates (C1 and C2), and S1-ranked species.

Goal B: Protection of threatened unique habitat.

Objective 1: Identify for the protection and acquire at least 1000 acres per year, or 10,000 acres by 2002, of a variety of the State-ranked S1 and S2, and Globally-ranked G1 and G2 natural communities excluding barrier island natural communities. In addition, develop incentives to encourage protection of unpurchased S1, S2, G1, G2 natural communities.

Objective 2: Protect and acquire at least 200 acres per year, or a total of 1000 acres, by the year 1997 of a variety of top-priority maritime forest (top-priority maritime forests in the A/P region include Nags Head Woods, Buxton Woods, Kitty Hawk Woods, and Theodore Roosevelt Natural Area) and other barrier island S1, S2, G1, and G2 natural communities. In addition, develop incentives to encourage protection of unpurchased S1, S2, G1, and G2 barrier island natural communities.

Concern XII: Wetland loss and degradation

Goal A: Conservation and protection of the acreage, function, and value of wetlands from direct, secondary, and cumulative impacts, and the pursuit of opportunities to increase wetland acreage and enhance wetland function

Objective 1: Maintenance of the existing acreage and functional value of wetlands, through the use of mitigation to compensate for permitted losses that occur.

Objective 2: Expansion of the wetlands resource base through restoration efforts.

Concern XIII: Impact of human population growth and development on the Albemarle-Pamlico estuarine system

Goal A: Minimal adverse ecosystem impacts from land and water uses

Objective 1: Natural area preservation and conservation

Objective 2: No net addition of pollutants to surface and ground waters

Objective 3: Sustainable development of renewable natural resources

Objective 4: Recognition and implementation of public trust rights in natural resources of the A/P region

Concern XIV: Environmental protection in the A/P region can only be achieved if public education and involvement are promoted as a significant component of any management plan.

Goal A: Education of the public on the dimensions of estuarine resources management issues.

Objective 1: Enhancement of existing environmental education programs - schools at all levels, civic clubs, churches, local elected officials, and tourists.

Objective 2: Development of educational materials: posters, books, brochures, audio-visual aides, etc. This should include revitalization of existing efforts plus supplemental or new materials.

Objective 3: Improvement or establishment of educational facilities including state parks, estuarine resource center, National Estuarine Research Reserves, and utilization of Mattamuskeet.

Objective 4: Promotion of a cooperative understanding of the long-term human role in the A/P estuarine system and promotion of environmental stewardship through environmental education

Goal B: Increased involvement of greater segments of the public

in estuarine resource management policy making and
program implementation

- Objective 1: Enhancement of citizen involvement in data collection and monitoring.
- Objective 2: Improvement of public involvement in all levels of policy making including, but not limited to, recommendations regarding CRAC and PCAC/ACAC, and establishment of a formal organization.
- Objective 3: Advocacy - citizen empowerment programs, materials, and products.



WATER QUALITY MANAGEMENT OPTIONS
PLANNING

1. Promote basin-wide planning to ensure consideration of cumulative impacts
2. Expand and refine water quality classifications and criteria to provide additional resource protection (Total suspended solids, transparency, nitrate, total nitrogen, total phosphorus, and biotic indices) and add supplemental water quality classifications for SAV and shellfish areas

ENFORCEMENT

3. Develop and consistently implement standardized requirements and penalties for violation that are commensurate with the magnitude of the adverse impact

NONPOINT SOURCE POLLUTION CONTROL

4. Require stormwater control on all new land disturbing activities throughout the A/P area
5. Determine the minimally acceptable Best Management Practices and require their implementation on all existing land disturbing activities to minimize the quantity and maximize the quality of stormwater runoff
6. Employ setbacks and appropriately sized, designed, and maintained wooded or vegetated buffer strips along all waterways
7. Target local and regional sources of airborne nutrients for reduction.
8. More stringently regulate the density, placement, inspection, and maintenance of septic tanks

POINT SOURCE POLLUTION CONTROL

9. Require all new or expanding dischargers to submit acceptable proof to the Division of Environmental Management that the discharge will be harmless and beneficial for the public
10. Develop more stringent outlet/outfall siting regulations for new dischargers to encourage improvement of the quality of waste streams rather than discharge into larger bodies of receiving water
11. Develop more stringent effluent regulations in areas of high growth
12. Create sanitary districts to facilitate long-term regional planning for and management of domestic water extraction and wastewater disposal
13. Require counties to ensure the provision of adequate numbers of convenient pump-out facilities and dumping stations for sludge and septic disposal and the provision of adequate pump-out regulations and enforcement.
14. The CRC, EMC, and DMF should cooperatively develop and implement a more restrictive "marina" definition to better protect against cumulative impacts of marina development
15. Restore, where feasible, water quality and remediate, if possible, sites containing contaminated sediments.

HUMAN ENVIRONMENT MANAGEMENT OPTIONS

1. Require and fund development of local land and water use plans which promote natural area preservation and conservation, consider individual and cumulative environmental impacts of land and water use, and promote development of renewable natural resources.
2. Require vegetated buffer strips around critical areas and require restoration of floodplain vegetation to protect receiving waters from excessive quantities of pollutants.
3. Prohibit hard stabilization methods of erosion control from all estuarine shorelines.
4. Require runoff after land conversion to be of similar or better quality than runoff prior to conversion.
5. Develop a comprehensive public access plan and public trust legislation in cooperation with local governments to recognize and implement public trust rights.
6. Maintain a central database with state funding of all planning-related information for use in local planning efforts.



FISHERIES - MANAGEMENT OPTIONS

Responding to Fish Kills and Diseases

1. Collect data continuously on finfish and shellfish kills and diseases in an effort to determine causal factors.
2. Where human activities are proven to contribute to causes of diseases and kills, minimize human impacts.

Protecting Fish Habitat

1. Identify, designate, and protect submerged aquatic vegetation (SAV) beds, shellfish beds, spawning areas, and additional nursery areas.
2. Establish appropriate activity regulations to protect these critical habitats from physical disturbance.
3. Adopt appropriate water quality standards and regulations for the protection of these designated critical habitats.
4. Develop a comprehensive water management plan to meet the water quantity (flow) needs of critical habitat areas.
5. Expand efforts to gain state ownership and/or to encourage conservation measures by private landowners on lands associated with these designated critical habitats.
6. Restore, where feasible, finfish and shellfish critical habitats.

Controlling Overharvest

1. Develop and implement state fish management plans with targets to eliminate overfishing for important species.
2. Grant the Marine Fisheries Commission authority to limit entry to fisheries.
3. Develop regulatory strategies including size limits, gear restrictions, season and area closures, and quotas where necessary to reduce excessive harvest.

Protecting and Enhancing Stocks

1. Encourage private sector aquaculture with expanded technical support.
2. Prohibit the introduction of non-native species and disease infected organisms.
3. Conduct restocking efforts as needed.

Reducing By-catch

1. Expand efforts to develop by-catch reducing gear and require use of this gear as it is demonstrated to be practical.
2. Implement a cost-share program to encourage use of by-catch reducing gear.
3. Use areal and seasonal restrictions to reduce by-catch.
4. Reduce by-catch allowances and increase their enforcement.

Strengthening Fisheries Management Efforts

1. Initiate a long-term, coordinated, public education program.
2. Strengthen enforcement in existing management programs.

Critical Areas Management Options

Critical areas include wetlands, habitat essential to the survival of rare species, and rare natural communities.

1. Develop a statewide comprehensive wetlands protection policy with a goal of avoiding, minimizing, and compensating wetland impacts.
2. Develop a mitigation program of wetlands enhancement, restoration, and creation including; (a) a mitigation bank, (b) criteria for wetland creation, (c) monitoring standards and success criteria and (d) demonstration projects, and educational and technical materials.
3. Assign a centralized state agency with protection of critical areas and rare species.
4. Promote coordinated inventory and mapping of critical areas.
5. Prioritize critical areas for acquisition and encourage state and private acquisition programs.
6. Expand private protection incentives and strategies.
7. Encourage and assist local governments in critical areas preservation and conservation.
8. Strengthen enforcement (training, surveillance, fines) and protection strategies of existing programs (reevaluate, implement).
9. Require buffer zones for critical area protection.
10. Develop voluntary wildlife corridors through harvest areas.
11. Increase public education on critical areas protection.



**Components of an APES Long-Term Public Involvement
Plan**

- 1) Formal Organization (A/P Foundation, non-profit)
- 2) Interpretive Facilities (Estuarine Center/
Greenways)
- 3) Citizen Environmental Monitoring
- 4) Citizen Involvement in Environmental Policy
and Management
- 5) Education (School/Public)
- 6) Advocacy (Relationship with Existing
Environmental Organizations)



Information Management Plan

I. Background

- A. APES Data Management Program
- B. APES Database
- C. Center for Geographic Information & Analysis (CGIA)
- D. GIS Coordination in North Carolina

II. Recommendations for Future Information Management Activities

A. Overall approach

- goals and objectives
- primary users
- CGIA's ongoing role

B. Database

- content of database
- additional data needs
- data maintenance and updating strategy
- data custodians
- data documentation and cataloging

C. System Resources

- CGIA
- Connectivity with other computer systems

D. Custom Applications Software

E. User Training

F. User Access to the System

G. Distribution of Data to Users

H. Products

III. Relation of Information to Other APES Activities

A. Environmental Monitoring

B. Human Environment Monitoring

C. Research

IV. Funding and Costs



DRAFT PROPOSED BUDGET FY93

ADMINISTRATION	\$282,000
GIS DEVELOPMENT	\$93,000
PUBLIC OUTREACH	\$70,000
NEWSLETTER	\$40,000
MONITORING	\$180,000
TECHNICAL ASSISTANCE	\$60,000
PUBLIC INVOLVEMENT AND EDUCATION ACTION PLAN	\$40,000
HUMAN ENVIRONMENT ACTION PLAN	\$40,000
FISHERIES ACTION PLAN	\$40,000
WATER QUALITY ACTION PLAN	\$40,000
CRITICAL AREAS ACTION PLAN	\$40,000
TOTAL	<hr/> \$925,000



ALBEMARLE-PAMLICO ESTUARINE STUDY 1992
REVISED 2-3-92

DATES FOR 1992

FEBRUARY 4	ALBEMARLE & PAMLICO CAC MEETING
FEBRUARY 11	PAMLICO AREA ELECTED OFFICIALS MEETING
FEBRUARY 12	ALBEMARLE AREA ELECTED OFFICIALS MEETING
FEBRUARY 13	AGRICULTURE & FORESTRY LEADERS MEETING
FEBRUARY 18	TECHNICAL COMMITTEE MEETING
FEBRUARY 19	FISHERY LEADERS MEETING
FEBRUARY 20	POINT SOURCE DISCHARGERS LEADERS MEETING
FEBRUARY 21	DEVELOPMENT LEADERS MEETING
*FEBRUARY 25	ENVIRONMENTAL GROUP LEADERS MEETING
MARCH 3	ROUNDTABLE MEETING OF ALL COMMITTEES
MARCH 4	POLICY COMMITTEE MEETING
APRIL 21	POLICY COMMITTEE MEETING
MAY 5	ALBEMARLE & PAMLICO CAC MEETING
MAY 19	TECHNICAL COMMITTEE MEETING
JUNE 3	POLICY COMMITTEE MEETING
JUNE 8-17	CCMP PUBLIC MEETINGS
JULY 28	ALBEMARLE & PAMLICO CAC MEETING
JULY 30	TECHNICAL COMMITTEE MEETING
*AUGUST 4	ROUNDTABLE MEETING OF ALL COMMITTEES
AUGUST 5	POLICY COMMITTEE MEETING
SEPTEMBER 21-30	CCMP PUBLIC MEETINGS
OCTOBER 6	ALBEMARLE & PAMLICO CAC MEETING
OCTOBER 8	TECHNICAL COMMITTEE MEETING
NOVEMBER 12	POLICY COMMITTEE MEETING

*REVISED OR NEW MEETING DATES



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To <i>Randy Waite</i>	From <i>Joan Giordano</i>	
Co. <i>APES</i>	Co.	
Dept. <i>ENNR</i>	Phone # <i>916-6481</i>	
Fax # <i>793-9555</i>	Fax # <i>975-9716</i>	

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Department of Environment, Health, and Natural Resources
 ALBEMARLE-PAMLICO ESTUARINE STUDY
 Public Involvement Office
 1424 Carolina Avenue, Washington, North Carolina 27889

James G. Martin, Governor
 William W. Cobey, Jr., Secretary

Randall C. Waite, Director
 Joan Giordano, Public Involvement Coordinator

March 11, 1992

MEMORANDUM

TO: Citizens' Affairs Subcommittee of the Technical Committee
 Mike Orbach, Chair Tom Ellis
 Fred White ✓ Ernie Larkin
 John Stallings

FROM: Joan Giordano 

SUBJECT: Meeting - 3/20/92

To follow-up on our phone conversation today, please find enclosed a copy of the Public Involvement and Education Action Plan which will be discussed at our meeting on Friday, March 20th at Mike Orbach's home. (210 Longmeadow Drive, Greenville; Brookgreen sub-division) This action plan will become a part of the CCMP along with action plans pertaining to Critical Areas, Human Environment, Fisheries and Water Quality. Please review it for completeness, feasibility of implementation and likelihood for success.

The other part of our agenda on the 20th will deal with determining in what manner we wish to expend the dollars allocated to the public involvement component of the FY '92-'93 budget. (See attached budget) Of the total \$155,000 allocated, the Citizens' Monitoring and Newsletter portions are self-explanatory. The remaining \$70,000, allocated to public liaisons, contains provision for salaries for two individuals to assist me with general outreach and also includes approximately \$22,000 for "other outreach activities." A major part of our work will be to decide what other activities, projects, or products we wish to undertake during 1993. I've also enclosed a copy of summaries of all projects funded by APES to date to refresh us to what we've done in the past.

Thanks for your commitment and hard work. It is what will make us successful!

