

PROPOSED WORK PLAN

for the

**COOPERATIVE AGREEMENT BETWEEN
THE US ENVIRONMENTAL PROTECTION AGENCY
AND
NC DEPARTMENT OF ENVIRONMENT AND NATURAL
RESOURCES**

ALBEMARLE-PAMLICO NATIONAL ESTUARY PROGRAM

OCTOBER 1, 2002 THROUGH SEPTEMBER 30, 2003

(Federal Fiscal Year 2003)

PROPOSED – July 2002

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INTRODUCTION

Purpose: The purpose of this agreement is to provide support to the NC Department of Environment and Natural Resources (DENR) from the US Environmental Protection Agency (EPA) for continuing demonstration of implementation of the unique management strategies recommended in the Albemarle-Pamlico National Estuary Program's Comprehensive Conservation and Management Plan (APNEP CCMP). This agreement represents a funding increase and time extension to Cooperative Agreement #CE994645-94-9.

Contents of this document: A progress report, detailing APNEP accomplishments and project updates for FY 2002, is provided on pages **7 through 28**. The APNEP FY 2003 Work Plan and budget items are presented on pages **29 through 43**.

Period of Performance and Principal Contacts: The period of performance under this agreement is from October 1, 2002 through September 30, 2003.

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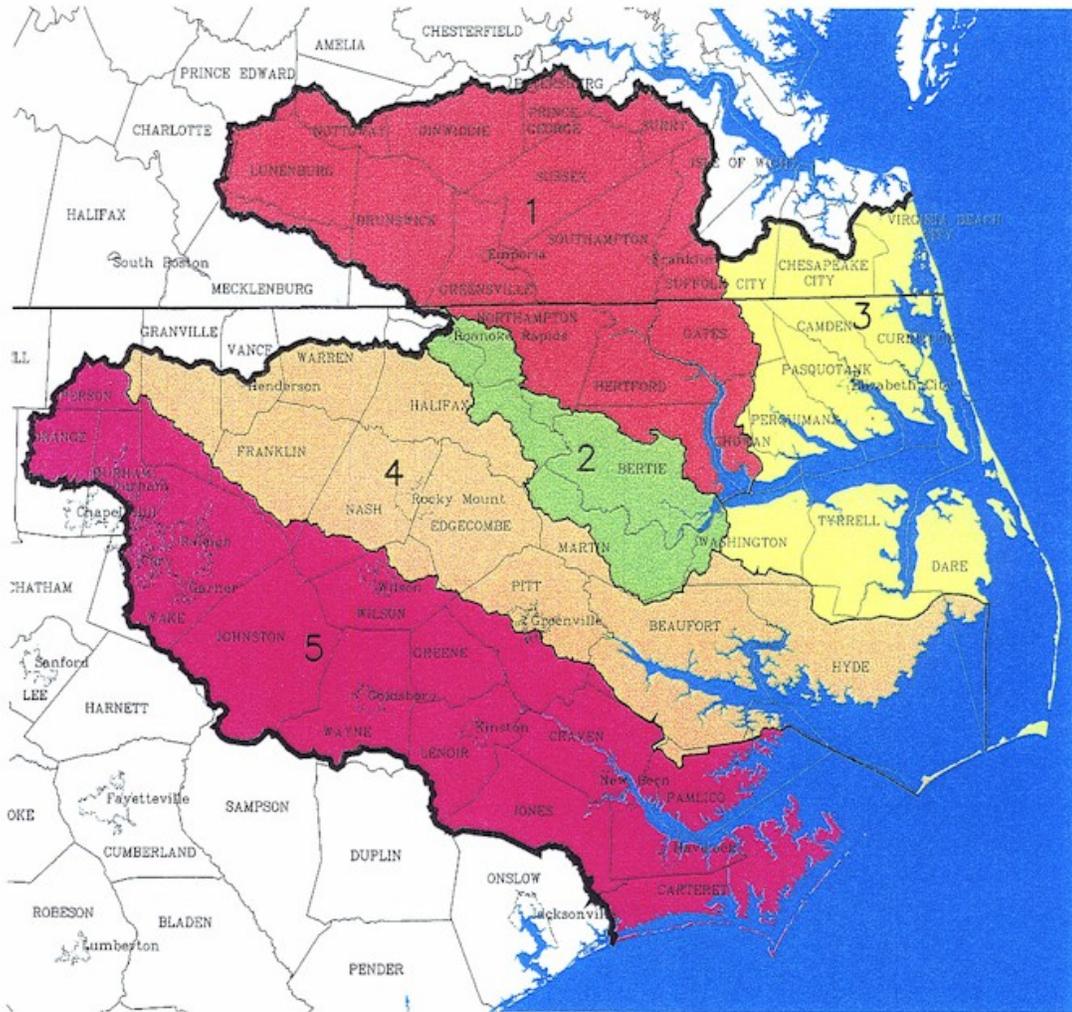
BACKGROUND

The Albemarle and Pamlico Sounds represent the nation's second largest estuarine system – second only to the Chesapeake Bay. The system is composed of seven sounds and five major river basins draining over 30,000 square miles of watershed in northeastern North Carolina and southeastern Virginia. The sounds, rivers, creeks, wetlands and terrestrial areas provide habitat for an abundance of animal and plant species. People depend on the system for residential and resort development, food, recreation, mining, forestry, agriculture, business and industry.

The Albemarle-Pamlico National Estuary Program (APNEP), a part of the US Environmental Protection Agency's National Estuary Program (NEP) since 1987, developed an approved Comprehensive Conservation and Management Plan (CCMP) that was ratified by the Governor of North Carolina and the US EPA in November 1994. The CCMP is intended as a practical, cost-effective and equitable approach to managing the valuable resources of the Albemarle-Pamlico region.

Since 1995, the APNEP has been located within the NC Department of Environment and Natural Resources, Division of Water Quality and has received annual funds since 1994 from the US EPA to demonstrate implementation of the CCMP's management actions. In July of 2002 the APNEP was moved to the Office of Conservation and Community Affairs, within the NC Department of Environment and Natural Resources.

ALBEMARLE-PAMLICO NATIONAL ESTUARY PROGRAM REGION



- 1 - Chowan River Basin
- 2 - Roanoke River Basin
- 3 - Currituck Sound & Pasquotank River/Albemarle Sound Drainage Basin
- 4 - Tar-Pamlico River & Pamlico Sound Drainage Basin
- 5 - Neuse River Basin & Core Sound/Bogue Sound Drainage Basin



Map prepared April 30, 1999 by the NC Center for Geographic Information & Analysis

GOALS AND ACCOMPLISHMENTS FY 2002

Goals for FY 2002 focused on further involvement by the Regional Councils and Coordinating Council in carrying out their responsibilities regarding CCMP implementation. As of May 2002, significant progress had been made in accomplishing these objectives. Key accomplishments in each program area are summarized below (from May 1, 2001 through June 15, 2002).

I. COORDINATING COUNCIL

The purpose of the 29-member APNEP Coordinating Council is to devise policy and provide continued opportunity for interagency coordination and local government input.

- ❖ The Coordinating Council was established under the CCMP's Implementation Plan, Objective A, Management Action 1: *“Create a Coordinating Council and five Regional Councils through executive order by the Governor of North Carolina upon approval of the CCMP.”* Actions by the Coordinating Council and the Regional Councils support the CCMP's Implementation Plan goal: *Implement the CCMP in a way that protects environmental quality while using the most cost-effective and equitable strategies.*

The Coordinating Council is charged with the following duties as identified in the Governor's Executive Order No. 75:

- To evaluate and support the implementation process to ensure the highest level of cooperation and coordination among agencies, local governments, and public and private interest groups.
- To consult the Regional Councils for guidance on coordinating implementation strategies at a local level.
- To set annual priorities for implementing sections of the CCMP and make recommendations based on progress and success, and identify and prioritize information needs as described in the CCMP.
- To pursue a MOU between North Carolina and Virginia to ensure continued cooperation and coordination in implementing the CCMP.
- To develop/submit annual reports evaluating the progress made in implementing CCMP recommendations and the success of implementation strategies.

The APNEP Coordinating Council met on April 25, 2001 to determine the main components to be included in the FY 2002 APNEP Work Plan. The principal Program objective for FY 2002 has been to carry out the responsibilities and priority actions as determined by the APNEP Coordinating Council. Below is a summary of the priority initiatives included in the APNEP FY 2002 work plan as approved by the Coordinating Council:

1. Coordinate program activities/implementation process
2. Enhance public relations and coordinate outreach

3. Provide coordination and support to DENR and VA Dept. of Conservation and Recreation (VA DCR) to enhance CCMP implementation in three common river basins
4. Continue the Citizens' Water Quality Monitoring Program
5. Promote a better understanding of the region's many issues and offer opportunities for public involvement
6. With input from the Regional Councils and Coordinating Council, identify and implement a watershed demonstration project for environmental benefit
7. Coordinate a large-scale, long-term Submerged Aquatic Vegetation (SAV) monitoring effort to assess the extent of SAV coverage in the Albemarle-Pamlico estuaries (FY 2002 Supplemental Funding Initiative)
8. Fully implement ongoing projects and staff support contracts from previous year including implementation of Regional Council (RC) Demonstration Projects, completion of Air Deposition Project, and completion of the Nutrient Reduction Accountability Project.

Many changes occurred in FY 2002 as APNEP was subject to an Implementation Review by the EPA, and DENR made substantial programmatic changes. Below is a summary of major activities undertaken by the Coordinating Council during FY 2002:

- Supported ongoing projects and staff
- Continued support of the Citizens' Water Quality Monitoring Program
- Received a presentation on Total Maximum Daily Loads (TMDL) and development processes and priorities
- Reviewed primary components for consideration in the APNEP Work Plan for FY 2003 (presented on pages 30 - 44).

II. REGIONAL COUNCILS

The role of the Regional Councils (RCs) is to advise and consult with local, state, and federal governments, as well as the general public and different interest groups within the basin, on the implementation of environmental management programs in the river basins. Because different basins are likely to face different concerns and problems, the Council for a particular basin works to prioritize the problems to be addressed in that basin and to design and build consensus support for the most cost-effective strategies for dealing with those problems. The councils also advise the public and local governments of actions and information relevant to environmental management in the basin.

The Regional Councils encourage public and local government involvement in the implementation process, and the Coordinating Council supports the overall implementation process. Working together, these groups identify priority management actions on an annual basis for inclusion in the APNEP annual work plan. All six councils have been active since the 1999 Biennial Review.

- ❖ The Regional Councils were established under the CCMP's Implementation Plan, Objective A, Management Action 1: "*Create a Coordinating Council and five Regional Councils through executive order by the Governor of North Carolina upon approval of the CCMP.*" Actions by the Regional Councils support the CCMP's

Implementation Plan goal: *“Implement the CCMP in a way that protects environmental quality while using the most cost-effective and equitable strategies.”*

Neuse River Basin Regional Council

Held four regular meetings and one Executive Committee meeting. Topics and Actions include:

- Review of the role of the Association of National Estuary Programs (ANEP) and its purpose relative to the 28 National Estuary Programs (NEPs) around the US - highlighted the ANEP e-auction effort
- Discussion on Council’s concern regarding non-participation by some counties within the basin
- Discussion on Council’s concern with proposal (by Eagle Water Corp.) of water transfer from PCS Phosphate to counties included in the Central Coastal Plain Regional Water Authority
- Review of progress with demonstration project monitoring the mouth of Beard's Creek for nutrient input into the river and the sedimentation load from Crabtree Creek in Raleigh
- Co-sponsor of (with DWQ) public workshops on update of 2002 Neuse Basinwide Water Quality Plan
- Development of brochure entitled "Best in the Basin 2000" which introduces the 20 top places to visit in the Neuse basin as determined by council
- Presentation by Dr. David Hardy (NCSU) on agriculture runoff to the Neuse River
- Presentation by Surabhi Shah, Environmental Engineer with the Division of Environmental Health on the Source Water Assessment and Protection (SWAP) program
- Participation in GIS workshops featuring CGIA's BasinPro software
- Water Supply Seminar with the Roanoke Regional Council

Tar-Pamlico River Basin Regional Council

Held five regular meetings. Topics and Actions include:

- Review of the role of the ANEP and its purpose relative to the 28 NEPs around the US - highlighted the ANEP e-auction effort
- Review of progress on the Council's demonstration project
- Examination of the Council's 2-year Program of Work to review its three "core areas of concern" and assess their relationship to the CCMP
- Discussion on Council’s concern regarding non-participation by some counties within the basin
- Hosted an interactive forum regarding isolated wetlands and the current protection efforts of the U.S. Army Corps of Engineers and State of North Carolina
- Discussion on water reuse (Wilson, Louisburg and Cary are reusing water for golf course irrigation); open-space (development and sprawl are seen as reducing infiltration, increasing sediment loads, and increasing flooding); forestry practices; DOT construction practices; and hurricane contamination

- Discussion on the need for a better understanding of erosion and sediment control; Phase II of the stormwater rules; new approaches in development; and the Smart Growth initiative
- Presentation by Division of Land Resources on the Sedimentation and Control Act of 1973 - the regulatory basis for work within that Division
- Presentation by Louisburg's Town Manager on their Greenway project. The town is piecing together parcels of land on each side of the Tar River to preserve as green space - soon they will have all the land on the north side of the river in public or semi-public ownership
- Discussion on concerns with standard methods of wastewater disposal and interest in alternative septic-system methodologies
- Toured River Park North (Greenville) to view aftermath of 1999 hurricanes
- Toured the NC Estuarium in Washington, NC
- Toured the Town of Aurora's constructed wetlands (which serve as the town's water treatment system) and learned about the function of the constructed system
- Toured the Town of Louisburg's water reclamation facility and nearby open space projects

Roanoke River Basin Regional Council

Held five regular meetings. Topics and Actions include:

- Participation in US Army Corps of Engineers (ACOE) - Citizens' Listening Sessions for the John H. Kerr Dam and Reservoir
- Completion of demonstration project entitled "Riparian Zone Rehabilitation Demonstration Project"
- Met on Sept. 21st in Rich Square and toured the NPS/Riparian Restoration Demonstration Project in Halifax County sponsored by the council and APNEP
- Co-sponsored (with DWQ) workshops regarding development of the Roanoke Basinwide Water Quality Plan
- Presentation by Division of Water Quality (DWQ) basinwide planner on update of the Chowan Basinwide Water Quality Plan
- Development of topics for Joint Regional Council 2002 Demonstration Project
- Discussion of Weyerhaeuser's proposed alternative water intake plan developed due to saltwater intrusion occurring during drought conditions
- Examination of historical impacts to local fishery populations and current strategies underway to enhance their sustainability
- Development of a Resolution recommending Congressional funding for an ACOE section 216 Scoping Study to evaluate flow modifications for the John H. Kerr Reservoir system and to evaluate operation of the project
- Presentation by US Fish and Wildlife Service on the *Riparian Zone Rehabilitation Demonstration Project*, demonstrating the effectiveness of cattle fencing and restoration of the riparian zone to reduce nonpoint source impacts
- Initiation of cooperative action by NC DENR and NC Dept. of Corrections to address effects of cattle at Caledonia Prison Farm in Halifax and Odom Prison in Northampton County

- Participation in Water Supply Seminar planning meeting
- Pledged support and cooperation in co-sponsoring (with the Neuse Regional Council), a water supply seminar to discuss the regions' water supply issues
- Revisited the Regional Council's 2-year Program of Work and its correlation to the CCMP for possible modification
- Water Supply Seminar with the Neuse Regional Council
- Toured Winslow Farm - site of a Council watershed demonstration project

Chowan River Basin Regional Council

Held five regular meetings. Topics and Actions include:

- Completion of "Precision Agriculture Demonstration Project", demonstrating the effectiveness of utilizing precision agriculture methodology to optimize agriculture production
- Discussion of lingering concerns with the siting of the Nucor steel recycling plant on the banks of the Chowan River
- Presentation by Division of Water Quality (DWQ) basinwide planner on update of the Chowan Basinwide Water Quality Plan
- Co-sponsored (with DWQ) workshops to gather public input on updating the Chowan Basinwide Water Quality Plan
- Updated directory of NC and VA agency contacts
- Reviewed the role of the ANEP and its purpose relative to the 28 NEPs around the US
- Reviewed the ANEP e-auction effort
- Pursued Memorandum of Agreement with Commonwealth of Virginia
- Reviewed progress of *Subsoiler/Denitrification Barrier Demonstration Project*
- Presentation by DWQ on the non-discharge program
- Revisited the CRBRC 2-year Program of Work and its correlation to the CCMP for possible modification
- Toured the Colerain Wastewater Treatment Plant
- Presentation by Tar-Pam Rapid Response Team (RRT). The Council is interested in seeing a RRT developed for the Chowan or having the RRT efforts extended to their area.

Pasquotank River Basin Regional Council

Held five regular meetings. Topics and Actions include:

- Review of the role of the Association of National Estuary Programs (ANEP) and its purpose relative to the 28 NEPs around the US - highlighted the ANEP e-auction
- Completion of the *Winfall Water Quality Demonstration Project*, which demonstrates the effectiveness of a constructed wetland in treating backwash from the Winfall wastewater treatment plant. The Town of Winfall hosted the Pasquotank Regional Council meeting on Sept. 13th. Attendees toured the Winfall constructed wetlands demonstration project sponsored by the council and APNEP

- Co-sponsor of workshops with Division of Water Quality (DWQ) to gather public input on updating the Pasquotank Basinwide Water Quality Plan
- Co-sponsor of Virginia's "7th Annual Watershed Management Conference" held in Williamsburg, VA
- Presentation by Environmental Professionals, Inc. (Kill Devil Hills) on findings of the NC Estuarine Shoreline Protection Stakeholders group, whose mission was to make recommendations to improve water quality within the 20 coastal counties subject to CAMA, including recommendations addressing activities and policy affecting coastal water quality beyond CAMA jurisdiction
- Presentation by basinwide planner on the updating of the Pasquotank Basinwide Water Quality Plan
- Presentation by Dare Co. Commissioner and Council member, Cheryl Byrd, on Dare Co.'s sustainable development initiative. The Council recommended updating the Northeastern Economic Partnership on the initiative
- Presentation on the *NC Wetlands Restoration Program*
- Presentation on Virginia's *Virginia Outdoors, SWAMP, Adopt-A-Stream, and Riverkeeper* efforts in the Blackwater and Nottaway rivers
- Presentations by NC and VA representatives on the erosion and sedimentation control programs in their respective states
- Tour of Walter B. Jones, Sr. Environmental Education Center
- Presentation by US Fish and Wildlife Service on the development of Comprehensive Conservation and Management Plans for the refuges
- Participation with Keep America Beautiful-Pasquotank Co. in observance of Big Sweep
- Instrumental in securing Congressional funding (\$100,000) for the ACOE to conduct a comprehensive study of Currituck Sound
- Pursuit of a Memorandum of Agreement with the Commonwealth of Virginia.
- Revisited the Regional Council's 2-year Program of Work and its correlation to the CCMP for possible modification
- Distribution of a USGS report entitled *Hydrology and Salinity Characterization of Currituck Sound and Selected Tributaries in NC & VA*
- Tour of the Scuppernong River boardwalk and discussion on the habitat

III. APNEP TECHNICAL AND OUTREACH ACTIVITIES

APNEP staff are responsible for the coordination, planning and successful implementation of the CCMP, APNEP functions including Regional Council and Coordinating Council meetings, conferences, forums, workshops, and other APNEP-sponsored events. Staff attend meetings, conferences and workshops in order to stay apprised of technological advancements that may prove beneficial in the APNEP region.

- ❖ Actions by APNEP staff support the CCMP's Implementation Plan, Goal: *"Implement the Comprehensive Conservation and Management Plan in a way that protects environmental quality while using the most cost-effective and equitable strategies."*

Although the Regional Councils and Coordinating Council are instrumental in identifying local environmental issues and prioritizing management actions within each basin, many management actions are implemented by various state agencies on a local, basinwide, regional or statewide basis.

During FY 2002 the APNEP staff spent a considerable amount of time supporting the numerous meetings and activities of the Coordinating Council and Regional Councils, as well as managing contracts for implementing the Regional Council demonstration projects. Other noted accomplishments follow:

- APNEP staff continued to provide support to the Citizens' Water Quality Monitoring Program (CWQMP).
- Distributed numerous APNEP research documents, outreach products, and environmental education materials to those requesting them.
- Completed boat tours for Regional Councils to promote environmental awareness in October 2001.
- In January 2002, APNEP staff, in accordance with the Government Performance and Results Act (GPRA), provided extensive information to EPA regarding: 1) the number of priority actions initiated across the NEP, and 2) the acres of habitat restored during 2000.
- New public education and awareness currently being developed for the APNEP Web site <http://h2o.enr.state.nc.us/nep>.
- Discussions have been held regarding a formal strategic planning process. This process to be developed to assess the strengths and weaknesses of the program, to assess the strengths of other NEPs and determine applicability to the APNEP, to assess the value of the current CCMP and determine if a revised CCMP is needed, and to assess the existing Executive Order to determine if the Order needs to be amended.
- Initial contacts and literature review completed for Submerged Aquatic Vegetation (SAV) monitoring. Two meetings were held with interested federal and state agencies
- Nine existing contracts will be closed out this year, resulting in the completion of all six demonstration projects, the completion of the nutrient loss research project, and the development of text for the APNEP Regional Guide.
- Draft text of the non-technical document titled "The Albemarle-Pamlico ... North Carolina's Coastal Treasure" is complete. Document currently in the final layout/design stage and should be printed by October 2002.
- Contracts for the citizen monitoring program, the VA liaison position, CGIA and the Tryon Palace project will all continue.
- Participated in an EPA Implementation Review December 2001- April 2002
- Bill Crowell became the new program director on June 3, 2002.
- APNEP moved from DWQ to Office of Conservation and Community Affairs on July 1, 2002.
- APNEP is developing a new logo and will produce promotional items as noted in the FY 2002 Workplan before October.

- With the guidance of the program director, a work plan was developed for FY 2003.
- Planning a shared resources forum with VA DCR staff to present programs and coordinate efforts for implementation of the CCMP.
- Permanent urban stormwater exhibit at NC Estuarium - Due to open to public mid-August 2002

IV. FY 2002 PRIORITY INITIATIVE PROJECTS

Following is the status of the four priority initiatives as determined by the APNEP Coordinating Council for FY 2002:

A. IMPLEMENTATION PLAN

APNEP will continue to implement the conservation strategies as outlined in the Comprehensive Conservation Management Plan (CCMP).

- ❖ This action supports the CCMP's Implementation Plan goal: *“Implement the CCMP in a way that protects environmental quality while using the most cost-effective and equitable strategies.”*

Regional Councils and Coordinating Council

Key elements of the CCMP's Implementation Plan are the operation of Regional Councils (RCs), representing local government and stakeholder interests in each of the five river basins in the Albemarle-Pamlico region, and a Coordinating Council (CC). The CC's role is to devise policy and provide continued opportunity for interagency coordination and local government input. All five Regional Councils have been meeting since September 1997 and the Coordinating Council has been meeting since March 1998. As of June 15, 2002, all Regional Council watershed demonstration projects were either complete or nearing completion. Two full-time APNEP personnel supported the operational needs of the Regional Councils and Coordinating Council.

- ❖ The Coordinating Council and Regional Councils were established under the CCMP's Implementation Plan, Objective A, Management Action 1: *“Create a Coordinating Council and five Regional Councils through executive order by the Governor of North Carolina upon approval of the CCMP.”* Actions by the Coordinating Council and the Regional Councils support the CCMP's Implementation Plan goal: *“Implement the CCMP in a way that protects environmental quality while using the most cost-effective and equitable strategies.”*

Staff Activities for FY 2002

The acting Program Coordinator (Darlene Kucken) guided the implementation process by interacting with numerous resource management agencies and interest groups, as well as the general public. This position managed the post-CCMP grant and associated contracts (including management of the Regional Councils' demonstration projects), provided staff support to the Regional Councils and Coordinating Council, and represented the APNEP at local and national meetings. Guy Stefanski served as Program Coordinator through October 2001 at which time Darlene Kucken, Basinwide Planning Director, assumed the responsibilities of Program Coordinator on an interim basis. Bill Crowell filled the Program Director position in June 2002. Grant funds were used to support this position.

The Public Outreach Coordinator enhanced public relations and knowledge concerning issues relating to the CCMP; developed educational and outreach programs; promoted dialogue between local government officials and private citizens and demonstrated oversight responsibility for the Citizens' Water Quality Monitoring Program contract. This position also provided valuable staff support to the Regional Councils and Coordinating Council. Joan Giordano will continue in this role within the Division of Water Quality as she has since 1987. Grant funds will be used to support this position. A portion of these grant funds (\$10,000) were allocated for the purchase of a new computer, laptop and LCD projector to support an increase in outreach efforts.

Extensive work was required to fully engage the Regional Councils and Coordinating Council to effectively carry out their roles in implementing the priority actions of the CCMP and to coordinate environmental management strategies in the Albemarle-Pamlico region.

During FY 2002, APNEP staff worked to:

- develop and implement recommendations to enhance effectiveness of Regional Councils and Coordinating Council
- continue dialogue with the Commonwealth of Virginia in preparation and signing of the interstate MOA
- work with contractors to fully implement the Regional Councils' demonstration projects
- increase the level of program outreach through completion of FY 2001 outreach projects
- enhance coordination between the Regional Councils, Coordinating Council and DWQ's Basinwide Program as it relates to the development of last year's basinwide plans for the APNEP region
- continue to develop annual progress assessments regarding CCMP implementation achieved through use of FY 2001 Supplemental Funding Initiative
- increase level of coordination between APNEP and the state's 319 Program Coordinator
- develop the FY 2003 work plan

Watershed Field Coordinator Contract with the Virginia Department of Conservation and Recreation

APNEP provided funding of \$25,000 to continue an existing contract with Virginia Department of Conservation and Recreation (VA DCR) to support a Watershed Field Coordinator that will support Virginia's effort to implement the CCMP. The VA DCR provided an additional \$25,000 to support this position. Approximately 20 hours per week are dedicated to the CCMP efforts. Mr. Noah Hill, who works out of the VA DCR Office in Suffolk, Virginia, staffed this position.

- ❖ This action directly supports the Governor's Executive Order No. 75: *To pursue a Memorandum of Agreement between North Carolina and Virginia to ensure continued cooperation and coordination in implementing the CCMP.*

B. STEWARDSHIP PLAN

One primary objective in FY 2002 was to continue to demonstrate the utility of the Citizens' Water Quality Monitoring Program as an effective public involvement and education tool and expand the program's interaction with regulatory agencies. See the Citizens' Water Quality Monitoring Program description (page 25) in Ongoing Projects.

- ❖ This action directly supports the CCMP's Stewardship Plan, Objective B, Management Action 4: *"Expand involvement in the CWQMP and make the program more interactive with regulatory agencies."*

The second objective was to conduct Public Outreach Projects to promote a better understanding of the region's many issues and offer opportunities for public involvement. See the APNEP Technical and Outreach Activities description (page 12) above and the Public Outreach description in Ongoing Projects description (page 26).

- ❖ This action directly supports the CCMP's Stewardship Plan, Objective B: *"Increase public understanding of environmental issues and citizen involvement in environmental policy-making."*

C. WATERSHED DEMONSTRATION PROJECTS

According to North Carolina's 2000 303(d) List, there are over 930 miles of impaired freshwater streams in the Albemarle-Pamlico region. There is a great need to target these streams for restoration and to implement the measures necessary to achieve their viability.

- ❖ The Regional Councils' demonstration projects support the CCMP's Water Quality Plan goal: *"Restore, maintain or enhance water quality in the Albemarle-Pamlico region so that it is fit for fish, wildlife and recreation."*

Regional Council Demonstration Projects

A primary role of the Regional Councils is to establish local environmental priorities, based on those outlined in the APNEP CCMP and the Division of Water Quality's basinwide management plan recommendations. The Regional Councils have been encouraged to develop and implement strategies that are most amenable to local action.

Funds from previous EPA grants have been dedicated to help support demonstration projects recommended by the Regional Councils. Total funds available for demonstration projects were approximately \$130,400 or about \$26,080 per Regional Council.

The Coordinating Council approved demonstration project guidelines in January 1999. As of June 15, 2002 all Regional Council demonstration projects were either complete or nearing completion. Much of the past year was devoted to managing contracts and working with contractors during various stages of their respective projects.

Neuse Regional Council

Project Title: "Selected Creek Monitoring Demonstration Project"

Description: Demonstrate feasibility and effectiveness of monitoring the mouth of two selected creeks to determine pollution contribution.

Lead Agency: Neuse River Foundation

Partners: Neuse Regional Council, DENR, APNEP, EPA

Funding: \$25,000 from EPA/APNEP base funds awarded in FY 1995-1996

Time Period: April 1, 2000 through March 31, 2002.

Status: Complete. Trained volunteers have been collecting water quality data once per week from the mouth of Beards Creek (Pamlico County) since May 2000 and Crabtree Creek (Wake County) since September 2000. Final report is pending

Tar-Pamlico Regional Council

Project Title: "Alternative On-site Wastewater Treatment System Demonstration Project"

Description: Demonstrate the effectiveness of an advanced on-site wastewater treatment system in reducing pollutants to groundwater.

Lead Agency: NC State University

Partners: Tar-Pamlico Regional Council, NC Cooperative Extension Service, County Government, Homeowner, DENR, APNEP and EPA

Funding: \$18,400 from EPA/APNEP base funds awarded in FY 1995-1996

Time Period: May 1, 2000 through April 30, 2003.

Status: In-progress. Working with local health departments to identify a residence with a failing conventional septic system. Plans are to

install a peat bio-filter system to treat the wastewater prior to subsurface disposal. Project on hold due to original homeowner backing-out of agreement. As a result, the installation of the peat bio-filter has been put on hold until a new site can be found.

Roanoke Regional Council

Project Title: “Riparian Zone Rehabilitation Demonstration Project”

Description: Demonstrate the effectiveness of cattle fencing and restoration of riparian zone to reduce nonpoint source impacts.

Lead Agency: Natural Resources Conservation Service (NRCS)

Partners: Roanoke Regional Council, USFWS, Fishing Creek Soil & Water Conservation District, Landowner, Coop. NC Cooperative Extension Service, DENR, APNEP and EPA

Funding: \$41,000 (\$25,000 from EPA/APNEP base funds awarded in FY 1995-1996 and \$16,000 from USFWS)

Time Period: April 20, 2000 through April 19, 2002.

Status: Complete. Fencing has been installed, a cattle crossing has been repaired and the new of cattle troughs have been constructed. The final phase of this project, the planting of hardwoods in the buffer area and restoration of the riverbank, was completed in April 2002. This project restored approximately 36 acres of riparian habitat and benefits various species of anadromous fish and migratory birds that utilize this area.

Chowan Regional Council

Project Title: “Precision Agriculture Demonstration Project”

Description: Demonstrate the effectiveness of utilizing precision agriculture methodology to optimize agriculture production and reduce nonpoint source loading to surface and groundwater.

Lead Agency: Cooperative Extension Service – Bertie County

Partners: Chowan Regional Council, Colerain Peanut & Supply Co., Local landowners, DENR, APNEP, EPA

Funding: \$5,000 from EPA/APNEP base funds awarded in FY 1995-1996

Time Period: April 1, 2000 through March 31, 2001.

Status: Project completed. This demonstration project provided farmers with an opportunity to utilize this new methodology to make comparisons based on standard lime and fertilizer application rates. The demonstration was conducted on 457 acres of farmland in Bertie County and, when compared to standard application rates and prices, showed that farmers could save 2 tons of lime, 4 tons of phosphorus, 12 tons of potash and reduce costs by \$2800.

Project Title: “Subsoiler/Denitrification Barrier Demonstration Project”
Description: Demonstrate the effectiveness of utilizing subsoiler techniques to improve soil permeability and denitrification walls to remove/reduce nitrate from shallow groundwater.
Lead Agency: Mid-East Resource Conservation and Development Council
Partners: Chowan Regional Council, Municipalities, Local landowners, DENR, APNEP, and EPA
Funding: \$22,000 from EPA/APNEP base funds awarded in FY 1995-1996
Time Period: May 1, 2000 through April 30, 2002.
Status: Complete. Grant funds were reallocated from purchasing a subsoiler to tractor rental (participating municipalities owned a subsoiler). Project leaders provided the technical assistance necessary for its operation. Monitoring component of proposal was removed.

Pasquotank Regional Council

Project Title: “Winfall Water Quality Demonstration Project”
Description: Demonstrate the effectiveness of a constructed wetland in treating backwash water from water treatment plant.
Lead Agency: Albemarle Resource Conservation and Development Council
Partners: Pasquotank Regional Council, Town of Winfall, Perquimans Soil & Water Conservation District, NRCS, Wooten Engineering, Royster Clark, Inc., DENR, APNEP, and EPA
Funding: \$26,000 from EPA/APNEP base funds awarded in FY 1995-1996
Time Period: August 1, 2000 through July 31, 2002
Status: Complete. Project constructed a wetland for addressed backwash for the Town of Winfall water treatment plant and stormwater runoff. Project also serves as an excellent outdoor environmental education program for the school adjoining the project property.

Air Deposition Project

Project Title: “Comparison of atmospheric concentrations of ammonia and ammonium aerosols at three sites in eastern North Carolina”.
Description: The project’s main focus is to determine the contribution of atmospheric nitrogen deposition to the sounds, particularly as it pertains to ammonia from intensive livestock operations.
Lead Agency: Water Resources Research Institute (WRRI)
Partners: NC State University, UNC-Institute of Marine Sciences, EPA, DENR and APNEP
Time Period: Contract expired on September 30, 2000
Funding: \$65,000 from EPA add-on
Status: Complete. Draft report currently being peer reviewed through WRRI for future publication. This study demonstrated that a region in eastern North Carolina (particularly Sampson County) with a high density of large-scale animal operations is experiencing

relatively high atmospheric concentrations of ammonia near the earth's surface. Indirect evidence in the form of rainwater content suggests that significant changes in atmospheric ammonia began to occur around 1990. Data from the study strongly suggests that the swine industry in this portion of eastern North Carolina has a strong influence on local atmospheric ammonia concentrations. The relatively high concentrations of atmospheric ammonia measured at the Sampson County site suggests a strong source with a resultant dispersion of ammonia throughout the region, including possible transport to local estuaries.

Nutrient Reduction Accountability Project (Clean Water Action Plan Supplement – FY 2000)

Project Title: "Sample Analysis: Comparison of Field-Scale and Aggregated Versions of NLEW"

Description: The nitrogen TMDL standard determined by DENR for the Neuse River has been set at 30% reduction in nitrogen. In order to meet this reduction, mandatory rules have been established in the Neuse River Basin. One of the regulations requires that the agricultural sector utilize a nitrogen accounting tool to track changes in nitrogen loading from the implementation of BMPs. The development of an accounting methodology will assist the Division of Water Quality in verifying and adjusting the nutrient loading baseline from agricultural fields within the Neuse River Basin. This will help to ensure that the county nitrogen reduction goal is achieved in accordance with the Neuse River Basin Nutrient Sensitive Waters (NSW) Management Strategy being implemented in that basin. The tool developed for this purpose, Nitrogen Loss Estimation Worksheet (NLEW) has been developed at two different scales – a field-scale and an aggregated scale. The aggregated scale of NLEW was developed to allow for the historical baseline nitrogen loading determination from agricultural activities. It is necessary; however, to compare the results from the aggregated version of NLEW with the field-scale version of NLEW in order to ensure accuracy of the baseline results. To compare the two tools, statistically valid field-scale information must be collected, analyzed and compared.

Lead Agency: NC State University

Partners: NC Department of Agriculture & Consumer Services, DENR, NRCS, APNEP and EPA.

Funding: \$241,800 (\$30,000 from EPA CWAP supplemental funds, \$120,000 from Federal 319 Program and \$91,800 state in-kind match)

Time Period: July 1, 2000 through September 2, 2002.

Status: Complete. The field-scale information necessary to conduct this project has been collected and the data is being finalized.

D. SUPPLEMENTAL FUNDING INITIATIVE FY 2001 and FY 2002

In 2000, EPA provided \$40,000 of supplemental funds to be used to assist APNEP in addressing challenges identified by EPA in the 1999 Biennial Review. In particular, these funds are for the development or enhancement of environmental indicators, CCMP implementation tracking system, or produce an environmental progress report. These topics had been identified in the previous Implementation Reviews as areas where NEPs faced challenges, or areas that would assist in meeting the Federal Government Performance and Results Act (GPRA) goals.

At their April 25th 2001 meeting, the Coordinating Council allocated the supplemental funds to initiate a large-scale, long-term submerged aquatic vegetation (SAV) monitoring effort to assess the extent of SAV coverage in the Albemarle-Pamlico estuaries, and to assist APNEP with tracking and reporting on progress in implementing CCMP actions. Both projects were begun in FY 2002.

Submerged Aquatic Vegetation (SAV) Monitoring

The Coordinating Council elected to provide \$20,000 in FY 2002 supplemental funds as seed money to initiate a large-scale, long-term submerged aquatic vegetation (SAV) monitoring effort to assess the extent of SAV coverage in the Albemarle-Pamlico estuaries.

Submerged aquatic vegetation constitutes one of the most common estuarine habitats in North Carolina. The 1990 published estimate of SAV area is 200,000 acres. In the contiguous 48 states, North Carolina is second only to Florida in acreage of SAV, and has twice the acreage reported for Chesapeake Bay. SAV provides food and cover for a great variety of commercially and recreationally important fauna and their prey. Thirteen species of SAV have been reported for the Albemarle-Pamlico estuary. SAV support many species of fish and shellfish and are major fishery habitats of the shallow sounds behind North Carolina's barrier islands and along the coastal fringes bordering the western side of these sounds.

Previous studies by NOAA and East Carolina University to delineate and quantify the location and extent of SAV, based on conventional color aerial photography and field sampling, were conducted in the late-1980s and early-1990s for major portions of the Albemarle-Pamlico estuary. This information, some of which has been digitized in GIS-format, has proven valuable to habitat managers in their review of dredge and fill related permit applications and has helped Core Sound, Back Sound and western Bogue Sound achieve nomination for designation as Outstanding Resource Waters.

Since that time, no major organized effort to map the location and extent of SAV coverage in the Albemarle-Pamlico estuary has been conducted. SAV is being used as a critical environmental indicator in several other estuarine systems (e.g., Indian River Lagoon, Sarasota Bay, Tampa Bay and Chesapeake Bay). Currently,

North Carolina lacks the information necessary to determine reliable trends in SAV distribution and health.

APNEP staff are currently working on project design. Staff have participated in two scoping meetings involving local and national experts in SAV research and monitoring to develop a SAV monitoring strategy for the Albemarle-Pamlico estuaries. Staff will continue to seek partners and develop the project over the coming year.

- ❖ This action supports the CCMP's Water Quality Plan goal: *“Restore, maintain or enhance water quality in the Albemarle-Pamlico region so that it is fit for fish, wildlife and recreation.”*

CCMP Implementation Tracking System

In FY 2001, EPA provided the APNEP with \$20,000 in supplemental funding to be used (by the APNEP) to address challenges identified by EPA in the 1999 Biennial Review. These funds are being used to develop an APNEP CCMP Implementation Tracking System (ITS) that will help the APNEP track and report progress made in implementing CCMP management actions. The use of supplemental funds in this manner will strengthen the program's capacity to produce and demonstrate environmental results and improve EPA's ability to accurately measure APNEP's progress for reporting under the Government Performance and Results Act (GPRA).

The APNEP Coordinating Council decided that the ITS would be developed by an independent contractor with support and assistance provided by APNEP staff, the NC Division of Water Quality and other state resource management agencies. In mid-November the APNEP entered into a contract with Mr. Andrew Coburn to develop the APNEP CCMP ITS. Although this contract did not officially commence until November, 2001, Mr. Coburn has been working on this initiative under a previous contract since September, 2001.

An integral aspect of the CCMP ITS is the development of an APNEP natural resource/habitat management database. This database, a continuously-updated compendium of natural resource management efforts in the APNEP region, will link individual efforts to their respective CCMP management action and serve as the foundation upon which CCMP implementation will be evaluated.

As of May 2002, 136 resource management-related efforts had been identified. When complete, the database will include as much of the following information on each resource management effort as possible:

- Project title
- Project partners
- A narrative description of the project
- Organizations/agency contact information
- Project objectives and goals

- Project type (restoration, preservation, enhancement, regulatory, planning)
- The resource/habitat focus of the project (aquatic, wetlands, terrestrial)
- The river basin(s) in which the project is located or focused
- The county(ies) in which the project is located or focused
- The start date (or projected start date) and ending (or anticipated ending) date
- Project funding sources
- Project sponsors (if different than project coordinators)
- The CCMP Management Action most closely associated with the project
- Project results, findings and conclusions
- Secondary and/or cumulative impacts of the project

The database will contain summary information only. It will not contain or duplicate raw data produced by, or associated with, an identified resource management effort. Database updates and queries will be performed through an Internet browser interface.

Mr. Coburn met with the acting APNEP Program director several times to plan and review this project. Much of the discussion has focused on the specific type of database that will be created, strategies for obtaining pertinent information, the types of outcomes that are expected, and how information will be presented. In September 2001, an interagency scoping meeting was held to solicit input from other interests. The major discussion points of the meeting included:

- Current Data Collection Methodologies
- Database Content and Development
- Database Accessibility and Compatibility with other State Agency/Program Efforts
- Geographical/Spatial Components of the Database
- Future Data Collection Efforts
- Agency/Stakeholder/Program Assistance

It is anticipated that data collection will be complete by August with a database developed by September 2002. The ITS will be undergo testing and is expected to fully operational by December 2002.

- ❖ This action supports the CCMP's Implementation Plan, Goal: "Implement the Comprehensive Conservation and Management Plan in a way that protects environmental quality while using the most cost-effective and equitable strategies."

ONGOING PROJECTS

I. APNEP WATERSHED FIELD COORDINATOR (VA)

The headwaters for the Pasquotank, Chowan and Roanoke River basins are located within Virginia. One of the most critical components to effectively implementing the CCMP within these basins is long-term, comprehensive coordination between North Carolina and Virginia. To provide coordination and support to APNEP, DENR and the Virginia Department of Conservation and Recreation (VA DCR), and to enhance implementation of the CCMP in the Roanoke, Chowan and Pasquotank river basins, Mr. Noah Hill was hired in August 2000 to serve as an APNEP Watershed Field Coordinator. The APNEP supports one-half of this position, and the contract specifies that Mr. Hill will devote approximately 20 hours per week to APNEP needs.

Highlights of accomplishments of the watershed field coordinator in FY 2002 include:

- Raising awareness of the Southern Watershed Area Management Program (SWAMP) as it relates to the APNEP and CCMP. SWAMP is a very active coalition of local governments, state agencies and other policy-making interests focused on Virginia's southern watersheds of Virginia Beach and Chesapeake.
- Working with SWAMP representatives concerning the possibility of an information-sharing agreement with the Pasquotank Regional Council.
- Involved in the formation of Virginia's Chowan River Watershed Roundtable. The purpose of the Roundtable is to provide a watershed-based forum for stakeholders to participate in defining critical needs, targeting problems for resolution and providing input on potential management options.
- Attended two Pasquotank Regional Council meetings and three Chowan Regional Council meetings, as well as one Coordinating Council meeting.
- Arranged for speakers at two Pasquotank Regional Council meetings.
- Updated directory of North Carolina and Virginia environmental organizations and agencies.
- Researched population estimates for VA Chowan and Pasquotank regions for inclusion in DWQ basinwide plans.
- Participated in several public education events to promote NC-VA partnership and highlight specific goals of the CCMP.
- Compiled information about the Chowan and Pasquotank basins for promotional purposes in support of the CCMP.
- Assisted APNEP coordinator and VA Albemarle, Chowan & Coastal Watersheds Manager in the development of a paper and presentation for the National Watersheds Conference.
- Worked closely with APNEP Outreach Coordinator to establish and facilitate the interstate MOA signing ceremony.
- Worked as part of the planning team for the 8th Annual Virginia Watershed Management Conference in Williamsburg, VA to ensure that APNEP was a featured program on the agenda and as an exhibitor.
- Researched SAV monitoring plans and approaches for using APNEP supplemental funding.

- ❖ This action directly supports the Governor's Executive Order No. 75: *To pursue a Memorandum of Agreement between North Carolina and Virginia to ensure continued cooperation and coordination in implementing the CCMP.*

II. ALBEMARLE-PAMLICO CITIZENS' WATER QUALITY MONITORING PROGRAM

Citizens' Water Quality Monitoring Program

The APNEP Citizens' Water Quality Monitoring Program (CWQMP) is a network of private citizens who monitor surface water quality in the Albemarle-Pamlico estuary and its tributaries. The program began as an initiative of the Pamlico-Tar River Foundation in 1988, to protect, preserve and promote the water quality of the Tar-Pamlico River and its watershed. The program was expanded under the APNEP several years ago to include all waters located in the Albemarle-Pamlico region and has been funded by the EPA grant via contracts with East Carolina University since FY 1994.

The CWQMP has three areas of activity: Baseline Monitoring, Targeted Monitoring and Surveys, and Water Quality Education. Program volunteers receive support in each of these areas through water quality education and training, QA/QC workshops, distribution of equipment and supplies, data management/analysis, and networking opportunities. Participants primarily monitor "vital signs" of the estuary. Specifically, parameters tested include: dissolved oxygen, pH, salinity, air and water temperatures, and turbidity to gauge the general health or quality of water in the estuary. Occasionally, program volunteers gather water samples for specific pollutants such as bacteria and nutrients. Using basic but accurate water quality test kits, citizen volunteers analyze their water samples, observe qualitative factors such as weather conditions and other visual indicators, and record the results.

All monitoring data collected are forwarded to the CWQMP office at ECU where staff compiles the information and enters the data into report form for citizen and government agency use. Information is available to the public on the APNEP website at <http://h2o.enr.state.nc.us/nep/> or at <http://www.ecu.edu/icmr/cwqmp>. Often, these monitoring efforts serve as a useful supplement to existing governmental activities. For example, specific monitoring data was requested by the 1) Army Corps of Engineers during the scoping phase of a pending Currituck Sound Study, 2) Division of Marine Fisheries for consideration in the Chowan River Coastal Habitat Protection Plan, 3) Division of Water Quality for consideration in various basinwide management plans, and 4) Cypress Landing Group (grass-roots organization) for local use/information.

Status: In addition to the benefits of public involvement, tangible benefit is derived from water quality data collection through the CWQMP. Currently, there are 75 volunteers actively involved in the program, monitoring 34 sites within the APNEP region.

Selected FY 2002 accomplishments include:

- development of trend analyses for specific sampling sites synthesized from existing and future data
 - continuation of a program newsletter
 - development of a program website located at <http://www.ecu.edu/icmr/cwqmp>
 - outreach activities and presentations made to area schools and civic groups
 - contract with East Carolina University (program sponsor) extended through May 2003
- ❖ This action directly supports the CCMP's Stewardship Plan, Objective B, Management Action 4: *"Expand involvement in the CWQMP and make the program more interactive with regulatory agencies."*

III. PUBLIC OUTREACH PROJECTS

- ❖ Public Outreach Projects support the CCMP's Stewardship Plan goal: *"Promote responsible stewardship of the natural resources of the Albemarle-Pamlico region."*

A. GIS Outreach and Services

The APNEP has contracted with the NC Center for Geographic Information and Analysis (CGIA) to provide accessible and affordable GIS data to local governments for planning and educational purposes. The FY 1999 work plan budgeted \$40,000 for CGIA to provide GIS outreach and services. An additional \$18,234 was added to this contract in FY 2000. Total contract funding is \$58,234. These funds were used to support the development of all GIS layers related to the APNEP region and to provide this information in a free CD format to local governments in the region.

In September-October 2000, APNEP staff coordinated with CGIA to conduct five "*BasinPro* Workshops" in the Albemarle-Pamlico region. These workshops offered key local government representatives and planning staff with hands-on training utilizing the *BasinPro* CD – a desktop geographic information system. Participants received a free copy of the *BasinPro* CD, a \$285 value. These workshops were held at the computer labs located at the Roanoke-Chowan Community College in Ahoskie, Craven Community College in New Bern and Pitt Community College in Greenville.

The APNEP may utilize CGIA services to develop an atlas of the Albemarle-Pamlico region featuring a detailed geographic description of pertinent environmental data sets of the region. As a follow-up to the 1996 and 1998 public

workshops, another GIS-related public workshop may be conducted in the region to support activities by the Regional Councils, Coordinating Council, local governments and private citizens.

- ❖ This action directly supports the CCMP's Stewardship Plan, Objective A, Management Action 2: *“Provide to local governments affordable and accessible data from the state Geographic Information System (GIS) for use in planning and public education within the region by 1996.”*
- **Total federal funds spent during FY 1999 - 2002 on GIS services:** \$58,234
- **Status of contract:** Approximately \$18,108 remains in this contract that expires on May 31, 2003.

B. Albemarle-Pamlico Regional Guide

During FY 2000, the APNEP allocated \$20,000 for the development of an Albemarle-Pamlico Regional Guide that would provide a document featuring the many environmental, cultural, recreational and economic aspects of northeastern NC. The Guide will promote ecotourism opportunities, such as the environmental education centers established by the Partnership for the Sounds. The Guide will feature information on water quality, vital habitats, fisheries, historical and cultural areas and recreational access areas. The document will be an easy-to-read narrative with colorful graphics. The will be the first document of its kind to present this type of information about the region.

- ❖ This action supports the CCMP's Stewardship Plan, Objective A, Management Action 2: *“Provide support to organizations that promote nature-based tourism and environmental education as a way of fostering environmentally sound economic development in the region.”*
- **Total federal funds spent during FY 2002 on Regional Guide:** \$9,000
- **Status of contract:** Project is ongoing and a draft document has been prepared for review. An additional contract will be developed for layout and design services as well as printing. \$11,000 left on budgeted amount for layout and printing. The Guide should be printed by October 2002.

C. EPA Supported Nonpoint Source Pollution - Related Restoration Project

During FY 2001, APNEP received \$75,000 to support an environmental NPS-related restoration project in the APNEP region. These funds were used to support and leverage Clean Water Management Trust Fund money to construct a wetland and storm water management project associated with Tryon Palace State Historic Site in New Bern, NC. Specifically, these funds are being used to plant a cord grass marshland in the designated area along the confluence of the Neuse and Trent rivers.

- ❖ This action supports the CCMP's Vital Habitats Plan, Objective C, Management Action 3: *“Enhance existing efforts to restore the functions and values of degraded wetlands and vital fisheries habitats. Develop and begin implementing an expanded program to restore wetlands.”*
- **Total federal funds spent during FY 2001-2002 on restoration project:** None to date
- **Status of project:** Contract is ongoing and project is still underway. Although much work has been done, no invoice has yet been received for the specific activity defined for this contract.

D. North Carolina – Virginia Shared Resources Forum

This forum will be for state resource agencies and local governments in the Roanoke, Chowan and Pasquotank river basins to review resources shared by the two states. The Forum is currently scheduled for fall 2002.

- ❖ This action directly supports the CCMP's Implementation Plan, Objective A, Management Action 2: *“Coordinate implementation of the CCMP.”*
- **Total federal funds spent during FY 2002 on Forum:** None to date
- **Status of project:** Project planning is ongoing. The Forum is currently scheduled for fall 2002. Approximately \$1,000 is budgeted for this effort using FY 2002 EPA base funds.

NEW PROJECTS FY 2003

I. IMPLEMENTATION PLAN

New projects for FY 2003 will continue to apply the implementation strategy as outlined in the CCMP.

- ❖ This action supports the CCMP's Implementation Plan goal: *"Implement the CCMP in a way that protects environmental quality while using the most cost-effective and equitable strategies."*

A. COORDINATING COUNCIL and REGIONAL COUNCILS

Key elements of the CCMP's Implementation Plan are the operation of a Coordinating Council (CC) and the five Regional Councils (RCs) representing local government and stakeholder interests in each of the river basins in the Albemarle-Pamlico region. The role of the Coordinating Council is to devise policy and provide continued opportunity for interagency coordination and local government input. This structure, mandated through a Governor's Executive Order, allows for the communication and coordination critical to successful CCMP implementation. All five Regional Councils have been meeting since September 1997 and the Coordinating Council has been meeting since March 1998.

Estimated Cost: Approximately \$2,000 will be needed for CC and RC meeting logistics and printing costs.

Funding Source: EPA base funds for FY 2003

In FY 2003, the APNEP and the Coordinating Council will focus on the following topics:

Strategic Planning

Conduct strategic planning to assess APNEP effectiveness and the need for update of the CCMP, Executive Order No. 75, and program objectives. APNEP was established as a National Estuary Program in 1987 with the objective to create and implement a CCMP that addresses the broad range of environmental problems facing the estuary, as well as the economic and social values of the estuary. With grants and technical assistance, the EPA has continued to help North Carolina to achieve these goals. The CCMP was intended as a practical, cost-effective and equitable approach to managing the valuable resources of the Albemarle-Pamlico region, and was ratified by the Governor of North Carolina and the EPA in November 1994. Since then, neither the program nor the CCMP have been revised. Strategic planning with an unbiased facilitator is critical at this time. A strategic plan will enable the Program and the CC to plan for the future by identifying strengths and weaknesses of the current program and to develop program goals for the future.

- ❖ This action supports the CCMP's Implementation Plan, Objective B: *“Assess the progress and success of implementing CCMP recommendations and the status of environmental quality in the Albemarle-Pamlico Sounds region.”*

Estimated Cost: Approximately \$2,000 will be needed for logistics and printing costs. EPA will provide guidance and contracted facilitation services in support for this effort.

Funding Source: EPA base funds for FY 2003

Establishment of Implementation Priorities for FY 2004 Projects

As identified in the 1999 Biennial Review, in order to ensure that progress is made on the most important CCMP activities first, APNEP and the Coordinating Council need to develop a list of ranked implementation priorities. Input from the Regional Councils is necessary. The outcome should be reflected in yearly work plans and in the implementation tracking matrix. During FY 2003, the Coordinating Council will participate in the strategic planning process to provide direction for the APNEP and to establish implementation priorities. This was a component of last year's work plan, but was not accomplished.

- ❖ This action supports the CCMP's Implementation Plan, Objective B: *“Assess the progress and success of implementing CCMP recommendations and the status of environmental quality in the Albemarle-Pamlico Sounds region.”*

Estimated Cost: Minimal costs will be associated with this task

Funding Source: Unencumbered EPA funds from previous years if necessary

Determine APNEP proposals for “program enhancements” relating to Smithfield Foods Agreement

In July 2000, the NC Attorney General's Office and Smithfield Foods, Inc. and its subsidiaries, the largest hog producing and pork processing companies in the world, signed a major agreement. It is a legally binding agreement that focuses on the elimination of open-air hog lagoons and spray fields in North Carolina. An element of the agreement states that the Smithfield companies will play a leadership role in enhancing the effectiveness of the Albemarle-Pamlico National Estuary Program. The APNEP staff submitted an initial funding proposal to the NC Attorney General's Office on December 15, 2000. Representatives from Smithfield Foods and the NC Attorney General's Office discussed the agreement and proposals with members of the APNEP Coordinating Council on April 25, 2001 in Raleigh, NC.

Representatives from the NC Attorney General's Office are currently working with APNEP staff to update the proposal, and are continuing discussion with

Smithfield Foods to determine what type of enhancements are necessary and feasible.

- ❖ This action supports the CCMP's Stewardship Plan, Goal: *"Promote Responsible Stewardship of the Natural Resources of the Albemarle-Pamlico Sounds Region."*

Estimated Cost: Minimal or no costs will be associated with this task

Funding Source: Unencumbered EPA funds from previous years if necessary

EPA Financial Planning – Program Development

APNEP staff and Chairs of the Coordinating Council will work with EPA staff to identify and develop strategies for leveraging funds beyond EPA base operating budgeted funds. EPA staff will lead this educational effort and provide funding.

- ❖ This action supports the CCMP's Implementation Plan, Goal: *"Implement the Comprehensive Conservation and Management Plan in a way that protects environmental quality while using the most cost-effective and equitable strategies."*

Estimated Cost: Minimal or no costs will be associated with this task, as EPA staff will lead this effort

Funding Source: Unencumbered EPA funds from previous years if necessary

B. PROGRAMMATIC CHANGES

The EPA conducted an Implementation Review with NC DENR and APNEP staff between December 2001 and April 2002. The EPA submitted its findings to DENR in April 2002. In general, the EPA found that the APNEP had not made adequate progress on implementation of the CCMP and recommended changes to achieve full implementation. During FY 2003, DENR and the APNEP staff will work to implement the programmatic changes suggested by the EPA for the APNEP program.

- ❖ This action supports EPA Programmatic requirements and supports the CCMP's Implementation Plan, Goal: *"Implement the Comprehensive Conservation and Management Plan in a way that protects environmental quality while using the most cost-effective and equitable strategies"* as well as the CCMP's Stewardship Plan, Goal: *"Promote Responsible Stewardship of the Natural Resources of the Albemarle-Pamlico Sounds Region."*

Estimated Cost: Costs to implement programmatic changes suggested by the EPA in response to the 2002 implementation review will require approximately \$250,000

Funding Source: NC DENR funds and EPA base funds for FY 2003

C. PROGRAM EQUIPMENT

Various equipment is anticipated to be required to full support implement the CCMP and supporting EPA Programmatic requirements as noted in the Implementation Review conducted an with NC DENR and APNEP staff between December 2001 and April 2002. In general, a laptop computer, software (such as: Microsoft Office, Adobe Acrobat, ArcView 8.1, and Adobe Photoshop) and an additional LCD projector will be required.

Program Equipment (hardware, software, etc.)

- ❖ This action supports and supports the CCMP's Implementation Plan, Goal: *"Implement the Comprehensive Conservation and Management Plan in a way that protects environmental quality while using the most cost-effective and equitable strategies."*

Estimated Cost: \$ 10,000

Funding Source: EPA base funds from previous years will be used to support this task.

II. STEWARDSHIP PLAN

The APNEP will take actions to continue to promote responsible stewardship of the natural resources by working to increase public understanding of environmental issues and citizen involvement in the Albemarle - Pamlico Region.

Staff will continue to demonstrate the utility of the Citizens' Water Quality Monitoring Program as an effective public involvement and education tool and expand the program's interaction with regulatory agencies. Staff will conduct Public Outreach Projects to promote a better understanding of the region's many issues and offer opportunities for public involvement.

- ❖ Actions in the Stewardship plan support the CCMP's Stewardship Plan Goal: *"Promote Responsible Stewardship of the Natural Resources of the Albemarle-Pamlico Sounds Region."*

A. Citizens' Water Quality Monitoring Program

Since 1988, the APNEP Citizens' Water Quality Monitoring Program (CWQMP), supported by APNEP with EPA funds, has provided an opportunity for citizen involvement by monitoring specific sites in the estuary. Currently, the CWQMP is based at East Carolina University (ECU) in Greenville, North Carolina.

In 2001, the APNEP staff successfully negotiated with ECU representatives to lower their indirect cost rate from 39.5% to 15%. This rate is consistent with that charged by universities sponsoring other DENR projects/contracts. Lowered indirect costs will result in the program having more operating funds.

In addition to the benefits of public involvement (e.g., heightened understanding, greater appreciation for resources, and stewardship ethic), tangible benefit is derived from water quality data collection through the CWQMP.

State biologists and the basinwide planning program can use information gathered by the CWQMP:

- Baseline / background data - consistent monitoring of the same sites over time.
- Investigative sampling - locate sources of pollution by sampling potential contamination areas and continuing sampling to pinpoint contamination.
- Shoreline survey work or watershed surveys - document potential and actual, direct and indirect sources of pollution.
- Resource inventory - survey of flora and fauna of the area and surveys of benthic organisms.
- Scientific investigations - test a hypothesis.
- Public education - stimulates awareness that complex ecological systems require long-term observation and study for understanding.
- Establish new management priorities - provides information that may help guide management efforts.
- Understanding the relationship between ecological conditions and human land-use.

Allen Clark will continue in his role as Water Quality Monitoring Coordinator. This position has been institutionalized at ECU, but long-term university support is questionable.

- ❖ The Citizens' Water Quality Monitoring Program directly supports the CCMP's Stewardship Plan, Objective B: Management Action 4: *“Expand involvement in the Citizens' Water Quality Monitoring Program (CWQMP) and make the program more interactive with regulatory Agencies.”*

Estimated Cost: Continued operation of the Citizens' Water Quality Monitoring Program (including Coordinator, equipment, supplies, lab space and indirect costs) will require \$40,000 (via contract with East Carolina University).

Funding Source: EPA base funds for FY 2003

B. Stream Watch

The Albemarle – Pamlico Region's streams and rivers are among North Carolina's most precious resources. The realization that local residents are best suited to monitor their nearby waterways prompted North Carolina to begin project Stream Watch. With Stream Watch, citizen groups "adopt" a waterway, or a portion of one, and act on its behalf. Stream Watchers become the adoptive parents of a stream and, as such, become its primary caretakers.

With the assistance of the Division of Water Resources, Stream Watchers become informed stewards, learning how to react to the changing stream conditions. Local efforts combined with state support will allow many of the APNEP region's

waterways to be thoroughly monitored by those with the best view: local residents. Signs along stream overpasses will identify local participation in the program and raise water resource awareness.

Stream Watch groups are encouraged to take an active role in promoting the health of the waterway. Potential activities include stream and riverbank cleanups, wildlife identification and inventories, water quality testing and nature walks.

- ❖ The Stream Watch Program will supplement the Citizen's Water Quality Monitoring Program and support the CCMP's Stewardship Plan, Goal: *"Promote Responsible Stewardship of the Natural Resources of the Albemarle-Pamlico Sounds Region."* And Objective B: Management Action 4: *"Expand involvement in the Citizens' Water Quality Monitoring Program (CWQMP) and make the program more interactive with regulatory Agencies."*

Estimated Cost: Stream Watch program and materials will require \$7,000
(contract with the Division of Water Resources)

Funding Source: EPA base funds for FY 2003

C. DENR Land and Water Conservation Initiative

APNEP staff will work with the DENR Office of Conservation and Community Affairs in the implementation of a DENR land and water conservation initiative within the APNEP region. The Office will take actions leading to the identification and conservation of areas critical for their unique biological and habitat and landscape values, and develop strategies to protect and enhance their contribution to the State's economy and high quality of life.

- ❖ This action supports the CCMP's Vital Habitats Plan, Objective B, Management Action 2: *Provide incentives and technical assistance for the protection of privately owned vital habitat.* As well as the CCMP's Stewardship Plan, Objective B: Goal: *"Promote responsible stewardship of the natural resources of the Albemarle-Pamlico region."*

Estimated Cost: Program materials and outreach efforts will require \$2,000

Funding Source: EPA base funds for FY 2003

D. Demonstration Projects with Virginia

In an effort to further build partnerships with resource agencies and others in both NC and VA, at least one demonstration project will be developed in the shared river basins. Example projects may include a Dismal Swamp water management study and a oil recycling project.

- ❖ This action supports the CCMP's Water Quality Plan, Objective B: *“Reduce sediments, nutrients and toxicants from nonpoint sources.”*

Estimated Cost: \$12,000

Funding Source: EPA base funds for FY 2003

E. Support DWQ Basinwide Planning Program Efforts in APNEP Region

Basinwide water quality planning is a non-regulatory, watershed-based approach to restoring and protecting the quality of North Carolina's surface waters. The NC Division of Water Quality (DWQ) prepares Basinwide water quality plans for each of the major river basins in the state. Preparation of a basinwide water quality plan is a three phase, five-year process. While these plans are prepared by the DWQ, their implementation and the protection of water quality entails the coordinated efforts of many agencies, local governments and stakeholder groups in the state. The first cycle of plans was completed in 1998. The second cycle, that includes the Chowan, Neuse and Pasquotank plans will be completed 2002. The Roanoke River was revised in 2001.

- ❖ This project supports the CCMP's Water Quality Plan, Objective A, Management Action 1: *“Develop and begin implementing basinwide plans to protect and restore water quality in each basin according to the schedule established by the Division of Water Quality.”*

Estimated Cost: \$1,000

Funding Source: EPA base funds for FY 2003

F. Support of Coastal Non-point Source Pollution Program

The core of the state's Coastal Non-point Source Pollution Program (CNPSPP) is increased communication and coordination between the Division of Coastal Management (DCM), the Division of Water Quality (DWQ) and key state agencies that have regulatory responsibilities for controlling nonpoint sources of pollution. This increased dialogue is facilitated in part by the state's CNPSPP Coordinator, and will allow for identification of gaps, duplications, inadequacies, or inefficiency in existing programs and policies. The program will develop a 15-year Strategy Plan involving participation of a Nonpoint Source Workgroup to represent coastal water quality interests. The Workgroup is involved with the continual refinement of the 319 Grant Program and development of North Carolina's Non-point Source Pollution Management Program Update. This program will identify nonpoint source management resource needs and goals for each of the management agencies, and provide a single document incorporating this information. The CNPSPP is a joint program between DCM & DWQ.

- ❖ This project supports the CCMP's Water Quality Plan, Objective B, Management Action 1: *“For each river basin, develop and implement a plan*

to control nonpoint source pollution as a part of the basinwide management plans.”

Estimated Cost: \$1,000

Funding Source: EPA base funds for FY 2003

G. FerryMon - Monitoring of Water Quality by NC Ferry System

Currently there is no routine analysis of water quality in the Pamlico Sound other than the FerryMon project conducted by the NC Department of Transportation (NC DOT), Duke University, and University of North Carolina. The NC DOT operates routine ship traffic along fixed routes in the area (Swan Quarter – Ocracoke, Cedar Island - Ocracoke, and Minnesott Beach – Cherry Point), providing a cost-effective platform for continuous monitoring purposes. The automated monitors and sample collection equipment on these ships will gather information on the water quality conditions found along transects of the Sound on a daily basis. This information can yield valuable insight into the long-term response of algal communities in the Sound waters and water quality effects resulting from algal bloom events, as well as baseline conditions.

- ❖ *This project supports the CCMP’s Water Quality Plan, Objective A, Management Action 6: “Continue long-term, comprehensive monitoring of water quality in the APNEP system, collecting data to assess general system health and target regional problems.”*

Estimated Cost: \$40,000

Funding Source: EPA base funds for FY 2003

H. Water Quality Monitoring

APNEP will help support the continuation of water quality monitoring efforts in parts of the Albemarle-Pamlico estuaries. This action will call for continued monitoring from a project that utilized special appropriations from the General Assembly in FY 2002 in a response to fish kills and associated problems in the Neuse Estuary. APNEP will continue to support DWQ’s operation (via contract with USGS) of monitoring platforms/stations located in the Neuse, Pamlico and Pungo estuaries.

- ❖ This action supports the CCMP’s Water Quality Plan, Objective A, Management Action 6: *“Continue long-term, comprehensive monitoring of water quality in the Albemarle-Pamlico NEP system, collecting data to assess general system health and target regional problems.”*

Estimated Cost: \$40,000

Funding Source: EPA base funds for FY 2003

I. Conservation Easement Workshops

A set of workshops covering the use of conservation easements as well as programs, laws, regulations, tax incentives, and other assistance that provide opportunities for agencies, non-profit organizations, landowners, and others to preserve land. It addresses the continuing education needs of, Appraisers, Attorneys, Foresters, Planners, and other professionals. It is also intended to fill the general education needs of landowners, cooperative extension personnel, government officials, and employees of nonprofit organizations who are interested or are working in the area of land preservation/conservation. Partner with North Carolina State University.

- ❖ This action supports the CCMP's Vital Habitats Plan, Objective B: *“Promote the responsible stewardship, protection and conservation of valuable natural areas in the Albemarle – Pamlico Sounds region.”*

Estimated Cost: \$6,000

Funding Source: EPA base funds for FY 2003

J. Submerged Aquatic Vegetation Monitoring (SAV) (continued)

Submerged aquatic vegetation constitutes one of the most common estuarine habitats in North Carolina. The 1990 published estimate of SAV area is 200,000 acres. In the contiguous 48 states, North Carolina is second only to Florida in acreage of SAV, and has twice the acreage reported for Chesapeake Bay. SAV provides food and cover for a great variety of commercially and recreationally important fauna and their prey. Thirteen species of SAV have been reported for the Albemarle-Pamlico estuary. SAV support many species of fish and shellfish and are major fishery habitats of the shallow sounds behind North Carolina's barrier islands and along the coastal fringes bordering the western side of these sounds.

In FY 2002 the Coordinating Council elected to provide \$20,000 supplemental funds as seed money to initiate a large-scale, long-term submerged aquatic vegetation (SAV) monitoring effort to assess the extent of SAV coverage in the Albemarle-Pamlico estuaries. APNEP staff are currently working on project design (see Submerged Aquatic Vegetation Monitoring under *Supplemental Funding FY 2001 and FY 2002* – [page 21](#)). Staff will continue to seek partners and develop the project over the coming year. Additional funds may be necessary to continue project development.

- ❖ This action supports the CCMP's Water Quality Plan goal: *“Restore, maintain or enhance water quality in the Albemarle-Pamlico region so that it is fit for fish, wildlife and recreation.”*

Estimated Cost: \$6,000

Funding Source: Unencumbered EPA funds from previous years as necessary.

K. Comprehensive Monitoring Plan

Staff will work with other state and federal agencies as well as academia to develop a Comprehensive Monitoring Plan. In December 2000, APNEP staff, in coordination with EPA and Battelle, conducted a two-day monitoring workshop for the purpose of developing a comprehensive monitoring plan for the Albemarle-Pamlico region. Staff will continue to build upon the efforts initiated at the workshop. APNEP staff will work with the EPA in identifying a contractor for this effort.

❖ This action supports the CCMP's Water Quality Plan goal: *“Restore, maintain or enhance water quality in the Albemarle-Pamlico region so that it is fit for fish, wildlife and recreation.”*

Estimated Cost: \$3,000

Funding Source: EPA intends to supply contracted support for this effort. Unencumbered EPA funds from previous years as necessary.

L. Conservation Assessment for the Albemarle-Pamlico Region

Staff of the NC Natural Heritage Program will do a conservation assessment to identify each habitat type of conservation concern within the region of study. For each of these habitat types they will identify a group of animals (indicator guilds) and interpret diversity and abundance of the associated guild members in a given area to be indicative of both ecosystem quality and landscape integrity. A map showing types of habitat will show the areas where the guild members could potentially occur. Staff will then inspect the spatial distribution of the guild members, overlaid on a cover map representing their habitat type looking for core habitat areas and connectors. The NC Natural Heritage Program believes the approach offers the most comprehensive approach to the problems of conservation assessment, at least over the long term. In addition to pointing out areas that are worthy of conservation efforts now (including areas of secondary habitat quality such as connectors), this approach also reveals where major information gaps exist, in terms of species, habitats, or localities that have not been sufficiently studied in the past.

❖ This action supports the CCMP's Vital Habitats Plan, Objective A: Management Action 2: *“Develop and maintain maps and records of wetlands, fisheries habitats, federal and state endangered species and their habitats, natural areas, and natural.”*

Estimated Cost: \$12,000

Funding Source: Unencumbered EPA funds from previous years

III. PUBLIC OUTREACH AND EDUCATIONAL PROJECTS

A combination of state, federal, and local efforts will be undertaken to broaden opportunities for the public to learn about the Albemarle-Pamlico estuary and management issues surrounding it. Information about economic and cultural issues as they relate to estuarine protection will be integral to this undertaking. Efforts will be made to coordinate with other established coastal programs and activities to focus public attention on the APNEP region and coastal issues. Proposed activities and dates are listed below.

- ❖ The Public Outreach Projects support the CCMP's Stewardship Plan goal: *"Promote responsible stewardship of the natural resources of the Albemarle-Pamlico region."*

A. Estuary Live – National Estuaries Day

On October 3rd and 4th, 2003 the APNEP will partner with the NC National Estuarine Research Reserve, EPA, NOAA, NC Coastal Reserve Program, Chesapeake Bay Program, National Aquarium, and six other NEPs and six other NERRs to offer interactive field trips for students from North Carolina and throughout the country. Participating teachers and viewers can connect to the trips using only an Internet computer and free software or a K-U Band satellite television. As teachers facilitate the trip, classes identify questions and email them to the estuary, where their questions are answered live from the field. Class sessions are divided into grade levels so that the appropriate level of general estuarine education is provided. For more information, visit the Estuary Live website at <http://www.estuarylive.org> and National Estuaries Day website at <http://www.estuaries.gov>.

- ❖ This project supports the CCMP's Stewardship Plan Objective C: *"Ensure that students, particularly in grades K-5, are exposed to science and environmental education."*

Estimated Cost: \$15,000

Funding Source: Estuary Live – National Estuaries Day will use the funds allocated for the national campaigns outlined in the FY 2002 Workplan

B. Estuary Live – North Carolina

On October 1st and 2nd, 2003 and in the spring of 2004 the APNEP will partner with the NC National Estuarine Research Reserve, NC Coastal Reserve Program, and the NC Department of Public Instruction to offer interactive field trips for students from North Carolina and throughout the country. Participating teachers and viewers can connect to the trips using only an Internet computer and free software. As teachers facilitate the trip, classes identify questions and email them to the estuary, where their questions are answered live from the field. Class

sessions are divided into grade levels so that the appropriate level of general estuarine education is provided. For more information visit the Estuary Live website at <http://www.estuarylive.org/>.

- ❖ This project supports the CCMP's Stewardship Plan Objective C: *“Ensure that students, particularly in grades K-5, are exposed to science and environmental education.”*

Estimated Cost: \$6,000
Funding Source: Unencumbered EPA funds from previous years

C. Project WET

Project WET (Water Education For Teachers) is an interdisciplinary water education program that encourages learners to apply scientific processes and develop critical thinking skills to understand water issues. Project WET is a nonprofit water education program for educators and young people, grades K-12. The Division of Water Resources (DWR) administrates the program in North Carolina. The original Project WET program was established in 1984 by the North Dakota State Water Commission and has since gained international significance with programs in all 50 states, the U.S. Islands, The U.S. Peace Corps, Canada, and Mexico. The National Project WET office is located in Bozeman, Montana. APNEP will partner with the DWR to conduct a series of five Project WET workshops in FY 2003. Workshops will be extended to approximately twenty K-12 teachers in each of the five river basins as well as APNEP staff.

- ❖ This project supports the CCMP's Stewardship Plan Objective C: *“Ensure that students, particularly in grades K-5, are exposed to science and environmental education.”*

Estimated Cost: \$8,000
Funding Source: EPA base funds for FY 2003

D. Polluted Run-off Campaign

APNEP staff will work with the Office of Environmental Education and the Division of Water Quality's Coastal Non-point Source Program in the implementation of a campaign to raise awareness about the effect of polluted run-off on the riverine and estuarine environment.

- ❖ This project supports the CCMP's Stewardship Plan goal: *“Promote responsible stewardship of the natural resources of the Albemarle-Pamlico region.”*

Estimated Cost: \$7,000
Funding Source: EPA base funds for FY 2003

E. Traveling Exhibit Materials

Traveling exhibit materials will be developed for the purpose of drawing attention to the mission and goals of the APNEP and providing information on the CCMP implementation progress. These materials will be displayed at festivals, Regional Council meetings, annual meetings, State Commission meetings (Coastal Resources, Environmental Management, Marine Fisheries, etc.) and other public gatherings. Materials will include photographs, posters, a small shelter, tables, chairs and display boards.

- ❖ This project supports the CCMP's Stewardship Plan goal: "*Promote responsible stewardship of the natural resources of the Albemarle-Pamlico region.*"

Estimated Cost: \$3,000
Funding Source: EPA base funds for FY 2003

F. Web Site Redesign

The current APNEP web site will be redesigned to increase the Program's visibility and facilitate a greater level of information transfer. The web site will provide information on the APNEP projects, workshops, conferences, demonstration projects and the APNEP newsletter, *The Beacon*. Links to APNEP partners will be available as well as items of general interest to the region. The new web site will also be compliant with the Americans with Disabilities Act.

- ❖ This project supports the CCMP's Stewardship Plan goal: "*Promote responsible stewardship of the natural resources of the Albemarle-Pamlico region*" and EPA recommendations for program visibility.

Estimated Cost: Minimal or no costs will be associated with this task.
Funding Source: Unencumbered EPA funds from previous years if necessary.

G. Newsletter – *The Beacon*

The APNEP newsletter, *The Beacon*, will be published twice a year. *The Beacon* will disseminate information about the mission and goals of the NEP and provide information on progress of CCMP implementation. The APNEP web site will also carry *The Beacon*.

- ❖ This project supports the CCMP's Stewardship Plan goal: "*Promote responsible stewardship of the natural resources of the Albemarle-Pamlico region.*"

Estimated Cost: \$4,000
Funding Source: EPA base funds for FY 2003

H. Brochure

An APNEP brochure will be published to provide information about the mission and goals of the Albemarle-Pamlico National Estuary Program.

- ❖ This project supports the CCMP's Stewardship Plan goal: *"Promote responsible stewardship of the natural resources of the Albemarle-Pamlico region."*

Estimated Cost: \$1,000
Funding Source: EPA base funds for FY 2003

I. Third Albemarle-Pamlico Estuary Conference

An APNEP conference will be held to review implementation of the CCMP and other issues and activities in the APNEP region. This conference will be scheduled for the spring of 2003.

- ❖ This action supports the CCMP's Implementation Plan, Objective B, Management Action 3: *"Assess the progress and success of implementing CCMP recommendations and the status of environmental quality in the Albemarle-Pamlico Sounds region."*

Estimated Cost: \$7,000
Funding Source: This project will use EPA base funds allocated in the FY 2002 work plan for the conference

J. National Campaigns

Participate in a national campaign featuring estuaries, which will be collectively produced by several of the NEPs around the nation. Identification and development of these efforts was the focus at the June 25-26, 2001 NEP Outreach/Education workshop in Philadelphia. National campaigns will be modified for regional NEP use.

Examples might be to engage in a national campaign to stencil storm drains while underscoring the importance of where storm drains lead, or collaboration with a national sponsor, such as McDonald's, to perhaps produce place mats featuring estuaries. The front side would explain what estuaries are, their importance/function, the location of regional/local sites; while the back could be devoted to a "puzzle page" for children to apply the information gleaned from the front.

Estimated Cost: \$ 15,000
Funding Source: Unencumbered EPA funds from previous years

IV. ADDITIONAL PROJECTS

Develop partnerships with state and federal governmental agencies, academia, commercial and private organizations to develop and implement projects and workshops that support the mission of the APNEP to identify, restore, and protect the significant resources of the Albemarle-Pamlico estuarine system.

Examples of possible projects include: Stream Restoration Project - Workshops, Smart Growth Planning Workshops, Forest Water Quality BMP Workshops, Forest Legacy Workshops, and Project Learning Tree.

- ❖ All projects will at a minimum support the CCMP's Implementation Plan, Goal: *"Implement the Comprehensive Conservation and Management Plan in a way that protects environmental quality while using the most cost-effective and equitable strategies."*

Estimated Cost: \$80,000
Funding Source: Unencumbered EPA funds from previous years

V. WATERSHED DEMONSTRATION PROJECTS

Watershed demonstration projects provide environmental benefits in each of the five river basins in the Albemarle-Pamlico region. Results of the watershed demonstration projects will be transferable to all river basins in the Albemarle-Pamlico Region.

A primary role of the Regional Councils is to establish local environmental priorities, based on those outlined in the APNEP CCMP and the NC Division of Water Quality's basinwide management plan recommendations. The Regional Councils have been encouraged to develop and implement strategies that are most amenable to local action. The Coordinating Council approved demonstration project guidelines in January 1999.

Funds from previous EPA grants have been dedicated to help support watershed demonstration projects recommended by the Regional Councils. Total funds available for demonstration projects to begin in FY 2003 are approximately \$250,000 or approximately \$50,000 per Regional Council.

- ❖ The Regional Councils' demonstration projects support the CCMP's Water Quality Plan goal: *"Restore, maintain or enhance water quality in the Albemarle-Pamlico region so that it is fit for fish, wildlife and recreation."*

Estimated Cost: \$250,000 (\$50,000 allotted to each Region)
Funding Source: Unencumbered EPA funds from previous years

Each of the Regional Councils will work with APNEP Staff to determine appropriate watershed demonstration projects.

ADMINISTRATION AND FINANCIAL

I. APNEP PERSONNEL

APNEP staff are responsible for the coordination, planning and successful completion of APNEP functions including Regional Council and Coordinating Council meetings, APNEP forums and other APNEP-sponsored events. In addition, staff monitors, and often becomes involved in, activities of state resource management agencies that relate to CCMP implementation. Staff also attend meetings, conferences and workshops in order to stay apprised of technological advancements that may prove beneficial in the APNEP region.

The APNEP program office has typically consisted of an APNEP program coordinator and a technical support person (Andrew Coburn) on contract. The program coordinator position has been vacant since the departure of Guy Stefanski in October 2001. Darlene Kucken, supervisor of the Basinwide and Estuary Planning Unit which housed the APNEP, assumed the responsibilities of this position in the interim. A new Director (Bill Crowell) began work on June 3, 2002. The APNEP public involvement office consists of a public involvement coordinator (Joan Giordano) and an administrative assistant (Betty Sandow).

Although the Regional Councils and Coordinating Council are instrumental in identifying local environmental issues and prioritizing management actions within each basin, most management actions are implemented by various state agencies on a local, basinwide, regional or statewide basis.

Progress is currently measured through communication with the primary agency, as identified in the CCMP, responsible for implementing each management action. The APNEP is currently developing a CCMP Implementation Tracking System (ITS) that will improve the Program's ability to successfully evaluate progress made towards implementing all CCMP management actions.

D. Program Director

In implementing the EPA recommendation to provide the APNEP coordinator with "sufficient authority and independence to be proactive and to ensure that key implementation activities occur", DENR has moved the APNEP from the Division of Water Quality to the Office of Conservation and Community Affairs. The program has a new leadership structure establishing authority over program staff and personnel. The new Program Director will administrate and coordinate program activities and the CCMP implementation process, involving interaction with numerous federal and state resource management agencies, universities, interest groups, and the general public. This position manages the post-CCMP grants and associated contracts (including management of the Regional Councils' demonstration projects), provides staff support to the Regional Councils and Coordinating Council, and represents the APNEP at local and national meetings.

Duties of the Director will include:

- Administration of the APNEP
- Supervise and support of APNEP staff
- Support to Coordinating Council and Regional Councils
- Coordination of the CCMP implementation process
- Implementation of FY 2003 Workplan
- Development of the FY 2004 Workplan
- Oversight of the Strategic planning process
- Implementation of program enhancement measures
- Management of program development and grant requests
- Provision of educational outreach activities
- Assistance with public relations
- Update of website
- Liaison with federal and state agencies, academia, and interest groups
- Contract administration
- Building partnerships on APNEP projects
- Coordination and support of monitoring, research and educational programs
- Establishment of the Scientific and Technical Advisory Committee (STAC)
- Oversight of the APNEP monitoring strategy
- Facilitate and foster coordination and communication between NC DENR agencies and VA DCR
- Coordinate with the NC National Estuarine Research Reserve System-Wide Monitoring Program (SWMP), Division of Water Quality, Division of Marine Fisheries and the Wildlife Resources Commission
- Represent APNEP at the Environmental Commission, Coastal Resources Commission, Marine Fisheries and Wildlife Resources Commission meetings
- Oversee APNEP Monitoring efforts

Personnel: Bill Crowell began as the new director on June 3, 2002. The APNEP is currently in the process of being moved to the Office of Conservation and Community Affairs within the NC Department of Environment and Natural Resources. The APNEP has been located within the Division of Water Quality since 1994.

Funding: EPA FY 2003 base funds (\$86,000) will continue to be used to support this position.

E. Public Involvement Coordinator

A Public Involvement Coordinator is necessary to enhance public relations and knowledge concerning issues relating to the CCMP; develop and implement educational and outreach programs; promote dialogue between local government officials and private citizens; and provide liaison responsibility for the Citizens' Water Quality Monitoring Program. This position also provides valuable staff support to the Regional Councils and Coordinating Council.

Duties of the Public Involvement Coordinator will include:

- Coordination and implementation of public relations activities
- Development, enhancement and coordination of outreach programs
- Coordination of Regional Council Meetings
- Development, enhancement and coordination of educational programs

Personnel: Joan Giordano will continue in this role within the Office of Conservation and Community Affairs within the NC Department of Environment and Natural Resources. Ms. Giordano has served in this role with Division of Water Quality since 1987.

Funding: EPA FY 2003 base funds (\$70,000) will continue to be used to support this position.

F. Outreach Assistant / Administrative Support (*contract*)

This position is responsible for administrative and outreach activities necessary to support CCMP implementation and to provide help with day-to-day requirements of staffing the APNEP Public Involvement Office. This is a full-time position working approximately 40 hours per week through a temporary staffing service. This position will continue to be located in the Washington Regional Office.

Duties of the Outreach Assistant will include:

- Assistance with meeting preparation, including arrangement of meeting locations
- Identification of equipment needs, provision of appropriate meeting materials, scheduling speakers, arranging refreshments, production of name tags and general assistance with the Public Involvement Coordinator's administrative needs
- Assistance with the development and distribution of mailing materials relevant to meetings, including agendas, minutes, mailing labels, and necessary enclosures
- Assistance with the development of reports, news articles, educational pieces, school presentations
- Assistance with arrangements for educational/outreach/public information meetings, workshops

Personnel: Betty Sandow will continue to provide this support via an established contracted.

Funding: EPA FY 2003 base funds (\$25,000) will be used to continue the contract for this position.

G. Watershed Field Coordinator (NC)

The Watershed Field Coordinator (NC) will provide coordination and support to local governments and state agencies to enhance CCMP implementation in three common river basins. This position will provide an essential function as an APNEP liaison to local governments and state agencies. This new position will split time between the Raleigh and Washington DENR Regional Offices. NC DENR funds will be used to support this position. This position is expected to be filled by early 2003.

Duties of the Watershed Field Coordinator will include:

- Liaison with local governments in APNEP region
- Provision of support for North Carolina's River Basin Regional Councils, Coordinating Council, and APNEP activities
- Facilitation and fostering of coordination and communication with Virginia's Watershed Field Coordinator
- Provision of coordination and support to local governments and state agencies to enhance CCMP implementation
- Assistance with Strategic planning process
- Liaison with NC Basinwide Planning Program
- Support for the Scientific and Technical Advisory Committee (STAC)
- Assistance with event planning and facilitation as necessary
- Assistance with educational outreach and public relations
- Liaison with federal and state agencies, academia, and interest groups

Personnel: This position is expected to be filled by January 2003.

Funding: NC DENR funds will be used to support this position.

H. Watershed Field Coordinator (VA)

The headwaters for the Pasquotank, Chowan and Roanoke River basins are located within Virginia. One of the most critical components to effectively implementing the CCMP within these basins is comprehensive long-term coordination between North Carolina and Virginia. To provide coordination and support to APNEP, DENR and the Virginia Department of Conservation and Recreation (VA DCR), and to enhance implementation of the CCMP in the Roanoke, Chowan and Pasquotank river basins, an APNEP Watershed Field Coordinator was hired by VA DCR in August 2000. The APNEP supports one-half of this part-time position and the contract specifies that the Watershed Field Coordinator will devote approximately 20 hours per week to APNEP needs. This position will continue to work out of the VA DCR Albemarle, Chowan and Coastal Watersheds Office in Suffolk, Virginia.

Duties of the Watershed Field Coordinator (VA) will include:

- Coordination and support for Virginia's Watershed Conservation Roundtables (basin councils) in the Albemarle, Chowan and Roanoke River basins. The Roundtables will play a critical role in providing regional forums for stakeholders to discuss and develop CCMP implementation protocols and efforts in Virginia.
- Facilitation and fostering of coordination and communication with North Carolina's Watershed Field Coordinator
- Compilation of information from local jurisdictions that will aid in APNEP CCMP work plans and DWQ basin plans and non-point pollution source control efforts, targeting and monitoring of progress. Examples of information needed could include: demographics, current and projected land uses, nonpoint source pollution control programs, local GIS maps, and BMPs implemented
- Assistance with CCMP public relations by preparing material for regionally targeted fact sheets, news releases, and other articles to be published

- Assistance with CCMP public relations by preparing material for APNEP newsletter – *The Beacon*
- Liaison with NC Basinwide Planning Program
- Support for the Scientific and Technical Advisory Committee (STAC)
- Assistance with event planning and facilitation as necessary

Personnel: This position is currently held by Noah Hill of VA DCR.

Funding: \$25,000 (EPA FY 2003 base funds) to continue an existing contract with VA DCR supporting a Watershed Field Coordinator. The VA DCR is providing an additional \$25,000 to support this position. The current contract period supporting this effort is from January through December 2002. This contract will be amended effective January 2003.

I. Watershed Field Representative (NC)

The Watershed Field Representative will assist the Program Director to administrate and coordinate the CCMP implementation process, involving interaction with numerous federal and state resource management agencies, universities, interest groups, and the general public. This new position, currently being established will assist in the management of grants and associated contracts, and provide staff support to the Regional Councils and the Coordinating Council.

Duties of the Watershed Field Representative (NC) will include:

- Assistance with administration of program activities
- Assistance with Strategic planning process
- Assistance with educational outreach and public relations
- Assistance with additional program development
- Liaison with federal and state agencies, academia, and interest groups
- Coordination and support to local governments and state agencies to enhance CCMP implementation
- Provision of support for North Carolina's River Basin Regional Councils
- Facilitation and fostering of coordination and communication between Virginia's Watershed Roundtables and North Carolina's River Basin Regional Councils
- Assistance with implementation of a comprehensive monitoring plan
- Liaison with NC Basinwide Planning Program
- Provision of support for the Scientific and Technical Advisory Committee (STAC)

Personnel: This position is expected to be filled by January 2003.

Funding: EPA FY 2003 base funds (\$60,000) will be used to support this position.

J. Science Coordinator

The Science Coordinator will assist the Program Director with administration and coordination of the CCMP. The new position, currently being established will help design and implement a comprehensive monitoring strategy and reporting process, establish the Scientific and Technical Advisory Committee (STAC), and review project proposals and reports for merit. This position will assist in the management of grants and associated contracts, and provide staff support to the Regional Councils and the Coordinating Council.

Duties of the Science Coordinator will include:

- Coordination and support of monitoring, research and educational programs
- Assistance in the establishment of the Scientific and Technical Advisory Committee (STAC) and support for all meetings
- Development of the APNEP monitoring strategy
- Facilitate and foster coordination and communication between NC DENR agencies and VA DCR on monitoring and research
- Coordinate monitoring and educational activities with the NC National Estuarine Research Reserve System-Wide Monitoring Program (SWMP), Division of Water Quality, Division of Marine Fisheries and the Wildlife Resources Commission
- Represent APNEP at the DENR Science Advisory Council (SAC)
- Oversee Citizens' Water Quality Monitoring Program
- Research and evaluation of Submerged Aquatic Vegetation surveys and monitoring proposals.
- Investigation of approaches for using APNEP supplemental funding for research
- Assistance with Strategic planning process
- Liaison with federal and state agencies, academia, and interest groups
- Support for North Carolina's River Basin Regional Councils
- Liaison with NC Basinwide Planning Program
- Oversight of Watershed Demonstration Projects
- Liaison with the Division of Water Quality's Laboratory Section
- Assistance with APNEP CCMP educational outreach and public relations

Personnel: This position is expected to be filled by January 2003.

Funding: EPA FY 2003 base funds (\$60,000) will be used to support this new position

K. Additional Staff Support – Technical (*contract*)

A supporting technical staff will continue in FY 2003 via a contract utilizing funds budgeted specifically for program support from unencumbered EPA base funds from previous years. Mr. Coburn has provided technical assistance to the APNEP since August 1998 for purposes of staffing the Regional Councils and Coordinating Council and other tasks as necessary to support implementation of the CCMP. Among other things, Mr. Coburn was instrumental in developing APNEP's GPRA, technical information transfer, Implementation Review and Critical Steps Assessments documents during the past year.

During FY 2003, Mr. Coburn will:

- Continue to assist in the development of EPA reporting documents
- Continue development of *The Beacon* newsletter
- Manage Regional Council and program mailing list databases
- Assistance with the update of the APNEP website
- Assistance in the development of news articles, educational pieces, public presentations and assist with meeting preparations and relevant mailing distributions
- Assistance with Regional Councils and Coordinating Council meetings

Personnel: Andrew Coburn will continue to provide this support via an established contracted.

Funding: EPA base funds from previous years will be used to continue support of this position in FY 2003 (\$12,000).

II. GRANTS TO LOCAL ENTITIES

Funds from previous EPA grants have been dedicated to help support demonstration projects recommended by the Regional Councils. Total funds available for the multi-year demonstration projects were approximately \$130,400 or about \$26,080 per Regional Council.

The Coordinating Council approved demonstration project guidelines in January 1999. As of June 2002, all Regional Council demonstration projects were either complete or nearing completion. Much of the past year was devoted to managing contracts and working with contractors during various stages of their respective projects.

GRANTS TO LOCAL ENTITIES

Project Title	Funded Amount	Project Leader	Purpose	Deliverables	Completion Date	Status
Selected Creek Monitoring Demonstration Project	\$ 25,000 from EPA base funds awarded in FY 1995-1996	Neuse River Foundation	Demonstrate feasibility and effectiveness of monitoring the mouth of two selected creeks to determine pollution contribution	Monitoring Data Final Report	March 31, 2002	Complete Final report is pending
Alternative On-site Wastewater Treatment System Demonstration Project	\$ 18,400 from EPA base funds awarded in FY 1995-1996	NC State University	Demonstrate the effectiveness of an advanced on-site wastewater treatment system in reducing pollutants to groundwater	Report and installation of the peat bio-filter	April 30, 2003	In-progress. Installation bio-filter has been put on hold until a new site can be found
Riparian Zone Rehabilitation Demonstration Project	\$41,000 (\$25,000 from EPA base funds awarded in FY 1995-1996 and \$16,000 from USFWS)	Natural Resources Conservation Service	Demonstrate the effectiveness of cattle fencing and restoration of riparian zone to reduce nonpoint source impacts	Fencing, cattle crossing, troughs new hardwoods in the buffer area and restoration of the riverbank	April 19, 2002.	Complete
Precision Agriculture Demonstration Project	\$5,000 from EPA base funds awarded in FY 1995-1996	Cooperative Extension Service – Bertie County	Demonstrate the effectiveness of utilizing precision agriculture methodology to optimize agriculture production and reduce nonpoint source loading to surface and groundwater	Report	March 31, 2001	Complete
Subsoiler/Denitrification Barrier Demonstration Project	\$22,000 from EPA base funds awarded in FY 1995-1996	Mid-East Resource Conservation and Development Council	Demonstrate the effectiveness of utilizing subsoiler techniques to improve soil permeability and denitrification walls to remove/reduce nitrate from shallow groundwater.	Report	April 30, 2002	Complete Final Report is pending
Winfall Water Quality Demonstration Project	\$26,000 from EPA base funds awarded in FY 1995-1996	Albemarle Resource Conservation and Development Council	Demonstrate the effectiveness of a constructed wetland in treating backwash water from water treatment plant	Constructed wetland, Report	July 31, 2002	Complete Final Report is pending

Project Title	Funded Amount	Project Leader	Purpose	Deliverables	Completion Date	Status
Comparison of atmospheric concentrations of ammonia and ammonium aerosols at three sites in eastern North Carolina	\$65,000 from EPA add-on	Water Resources Research Institute	The project's main focus is to determine the contribution of atmospheric nitrogen deposition to the sounds, particularly as it pertains to ammonia from intensive livestock operations	Report	September 30, 2000	Complete. Draft report currently being peer reviewed through WRI for future publication.
Sample Analysis: Comparison of Field-Scale and Aggregated Versions of Nitrogen Loss Estimation Worksheet (NLEW)	\$241,800 (\$30,000 from EPA CWAP supplemental funds, \$120,000 from Federal 319 Program and \$91,800 state in-kind match)	NC State University	The development of an accounting methodology to assist the Division of Water Quality in verifying and adjusting the nutrient loading baseline from agricultural fields within the Neuse River Basin. The tool developed for this purpose, Nitrogen Loss Estimation Worksheet (NLEW) has been developed at two different scales – a field-scale and an aggregated scale	Report	September 2, 2002	Complete. The field-scale information necessary to conduct this project has been collected and the data is being finalized.
Model Representation of Urban Stormwater Treatment System	\$24,000 (\$19,000 from EPA/APNEP base funds and \$5,000 from a private contributor)	NC Estuarium	A permanent exhibit display on effects of urban stormwater runoff on estuarine life. The exhibit will depict an innovative system for treating urban stormwater recently completed by the City of Washington in its downtown area.	A permanent exhibit displayed at the Estuarium in Washington, NC	August 2002	Due to open to public mid-August 2002

III. FUNDS LEVERAGED

The APNEP has historically done little work to leverage additional funds for specific CCMP implementation actions. Although, the APNEP has been successful in its ability to promote the needs, as well as the successes, associated with natural resource management, protection and enhancement efforts in the APNEP region. Several State conservation funding sources were formed in response to research funded by the Albemarle-Pamlico Estuary Study. These programs include Clean Water Management Trust Fund, Clean Water State Revolving Fund Program, and the North Carolina Conservation Reserve and Enhancement Program.

FY 2002

Several current projects presented funding collaborations. The US Fish and Wildlife Service contributed \$16,000 to the Roanoke Regional Council' demonstration project - Riparian Zone Rehabilitation Demonstration Project. The Federal 319 Program contributed \$120,000 and North Carolina contributed \$91,800 in state in-kind match for the Sample Analysis: Comparison of Field-Scale and Aggregated Versions of NLEW-Nutrient Reduction Accountability. Weyerhaeuser provided funding directly to a contractor in support of the Monitoring workshop and a private contributor (PCS – Phosphate) provided \$5,000 toward an outreach project at the NC Estuarium.

FY2003

In FY 2003 the APNEP staff and Chairs of the Coordinating Council will work with EPA staff to identify and develop strategies for leveraging funds beyond EPA base operating budgeted funds. EPA staff will lead this effort.

APNEP staff, the Regional Councils and the Coordinating Council will more actively seek alternative sources of funding for APNEP activities and projects to fulfill the goals of the CCMP. In addition, the APNEP will seek additional avenues for collaborating with other agencies to assist in targeting these program funds towards CCMP and basinwide goals. Where possible, APNEP will cost-share projects with other funding sources to increase the effectiveness and magnitude of enhancement and restoration projects.

IV. ESTIMATED FEDERAL COST SHARE

Federal Budget FY 2003

The federal budget for FY 2003 funding of \$510,000 is provided below:

IMPLEMENTATION PLAN

Program Director*	\$ 86,000
Includes office supplies	
Public Involvement Coordinator*	\$ 70,000
Includes office supplies & regional office rental	
Science Coordinator *	\$ 60,000
Includes computer and office supplies	
Watershed Field Representative*	\$ 60,000
Includes computer and office supplies	
Watershed Field Coordinator (<i>contract with VA DCR</i>)	\$ 25,000
Outreach Assistant / Administrative Support (<i>contract</i>)	\$ 25,000
Coordinating Council and Regional Councils Support	\$ 2,000
	Subtotal \$ 328,000

* Includes: Fringe Benefits based on Social Security (7.65 %) & Retirement (5 %) of position's annual salary and Medical Insurance Plan rate of \$2,933 per year.
Indirect Costs based on 10.7% of salary.

STEWARDSHIP PLAN

Citizens' Water Quality Monitoring Program	\$ 40,000
Stream Watch	\$ 7,000
DENR Land and Water Conservation Initiative	\$ 2,000
Demonstration Projects with Virginia	\$ 12,000
Support of DWQ Basinwide Planning Efforts in APNEP Region	\$ 1,000
Support of Coastal Non-point Source Pollution Program	\$ 1,000
FerryMon - Monitoring of Water Quality by NC Ferry	\$ 40,000
Water Quality Monitoring	\$ 40,000
Conservation Easement Workshop(s)	\$ 6,000
	Subtotal \$ 149,000

PUBLIC OUTREACH PROJECTS

Project WET	\$ 8,000
Polluted Run-off Campaign	\$ 7,000
Traveling Exhibit Materials	\$ 3,000
Newsletter – <i>The Beacon</i>	\$ 4,000
Brochure	\$ 1,000
	Subtotal \$ 23,000

TRAVEL (Allocated by EPA) \$ 10,000

Total Proposed For FY 2003 Funds \$ 510,000

Budget of Unencumbered Federal Funds from Previous Years

Use of APNEP Unencumbered Section 320 Funds

The EPA Implementation Review noted that the APNEP has not been able to fully utilize Section 320 funds. In an effort to use will the remaining unencumbered section 320 funds from FY 2002 and other past years in the most efficient and effective allocations, the APNEP apply the funds to the following projects in FY2003.

Non-Federal match was accomplished in the previous years by NC DENR (see previous APNEP Work Plans *and Request for Federal Assistance* applications).

IMPLEMENTATION PLAN

Additional Staff Support – Technical (<i>contract</i>)	\$ 12,000
Program Equipment (hardware: software, etc.)	\$ 10,000
	Subtotal \$ 22,000

STEWARDSHIP PLAN

Submerged Aquatic Vegetation Monitoring (SAV) (<i>continued</i>)	\$ 6,000
Conservation Assessment for the Albemarle-Pamlico Region	\$ 12,000
	Subtotal \$ 18,000

PUBLIC OUTREACH PROJECTS

<u>FY 2002 Carry-over Funds</u>	
Estuary Live – National Estuaries Day	\$ 15,000
Third Albemarle-Pamlico Estuary Conference	\$ 7,000
	Subtotal \$ 22,000
<u>Carry-over Funds from Previous Years</u>	
Web Site Redesign	\$ 2,000
Estuary Live – North Carolina	\$ 6,000
National Campaigns	\$ 15,000
	Subtotal \$ 23,000

WATERSHED DEMONSTRATION PROJECTS

A watershed demonstration project in each of the five river basins within the Albemarle-Pamlico region (\$50,00 per basin)
Projects in this item are expected to require more than one fiscal year to complete.

Subtotal \$ 250,000

ADDITIONAL PROJECTS (*see description page 42*)

Some projects in this item may require more than one fiscal year to complete

Subtotal \$ 55,000

Total Using Unencumbered Funds From Previous Years \$ 390,000
(Non-Federal match was accomplished in the previous years)

Total Estimated Budget for FY 2003 Using All Federal Funds \$ 900,000

V. NON-FEDERAL COST SHARE (Match FY 2003)

Summary of State Funds (Match Requirement)

The NC Department of Environment and Natural Resources intends to provide \$510,000 as part of the 1:1 non-federal match for this agreement. The match will be provided through:

- 1) in-kind services provided by staff of the Department of Environment and Natural Resources and its various divisions and offices and
- 2) Clean Water Management Trust Fund projects located with in the Albemarle-Pamlico region.

Below is a description of the intended state match:

<u>POSITION</u>	<u>SALARY</u>	<u>% EFFORT</u>	<u>SALARY (AS MATCH)</u>	<u>FRINGE</u>	<u>TOTAL</u>
<u>OFFICE OF CONSERVATION & COMMUNITY AFFAIRS (CCA)</u>					
Dir. CCA	76,610	10	7,661.00	3,902.12	11,513.12
Watershed					
Field Coordinator	61,400	100	61,400.00	10,700.10	72,100.10
Office Assistant	33,562	10	3,356.20	3,357.56	6,713.76
<u>DWQ BASINWIDE PLANNING BRANCH</u>					
Env. Spec III ^a	35,337	50	17,668.50	5,168.07	22,836.47
Env. Spec II	33,319	50	16,659.50	5,040.43	21,699.93
Env. Spec III ^b	44,777	50	22,388.50	5,765.15	28,153.65
<u>DWQ NEUSE RIVER RESPONSE TEAM</u>					
Env. Spec I	31,131	50	15,565.50	4,902.04	20,467.54
Env. Spec II	32,553	50	16,276.50	4,991.98	21,268.48
Env. Bio I	33,146	50	16,573.00	5,029.48	21,602.48
Env. Tech IV	28,195	50	14,097.50	4,716.33	18,813.83
TOTAL:			\$ 191,646	53,573	245,219

In-Kind Services Descriptions

Environmental Specialist III^a and Environmental Specialist II – These positions work as basinwide planners in DWQ’s Basinwide & Estuary Planning Unit responsible for developing basinwide water quality management plans. During FY 2003, Neuse, Chowan and Pasquotank river basins plans will be a major focus.

- ❖ *These positions support the CCMP’s Water Quality Plan, Objective A, Management Action 1: “Develop and begin implementing basinwide plans to protect and restore water quality in each basin according to the schedule established by the Division of Water Quality.”*

Environmental Specialist III^b – This position works in DWQ’s Nonpoint Source Planning Unit and spends a considerable amount of time on the development and implementation of a nutrient control strategy in the Tar-Pamlico River Basin.

- ❖ *This position supports the CCMP’s Water Quality Plan, Objective B, Management Action 1: “ For each river basin, develop and implement a plan to control nonpoint source pollution as part of the basinwide management plans.”*

The Neuse Response Teams are located in DWQ’s Environmental Sciences Branch. The response teams are equipped to respond quickly to fish kills (and other water quality-related events) in order to better determine causes and conditions.

- ❖ *These positions support the CCMP’s Water Quality Plan, Objective E, Management Action 1: “Continue to track and evaluate indicators of environmental stress, including algal blooms, fish kills, and fish and shellfish diseases.”*

NC CEAN WATER TRUST FUND

Created in 1996, the Clean Water Management Trust Fund (CWMTF) makes grants to local governments, state agencies and conservation non-profits to help finance projects that specifically address water pollution problems. CWMTF funds projects that enhance or restore degraded waters, protect unpolluted waters, and/or contribute toward a network of riparian buffers and greenways for environmental, educational, and recreational benefits.

The following projects within the Albemarle-Pamlico region will be used for match.

Project	Location/ River Basin	Purpose	Amount
Upper Tar River – The Nature Conservancy	Person County and Nash County Tar – Pamlico River	Riparian conservation easement	\$ 210,000
Carteret Community College	Carteret County Neuse River	Shoreline protection with marsh plantings	\$ 54,781
Total			\$ 264,781

CWMTF Project Descriptions

Upper Tar River – The Nature Conservancy

The Nature Conservancy requested \$233,750 towards a \$733,750 effort to protect riparian buffers in the Upper Tar River Watershed in the Tar-Pamlico River Basin. The Board of Trustees of the Clean Water Management Trust Fund approved a grant of up to \$210,000 to acquire a conservation easement on the 100-acre Adcock tract in Person County and the purchase fee simple the 104.99-acre Ducks Unlimited tract in Nash County. APNEP will use \$ 210,000 as match.

Carteret Community College

The Board of Trustees of the CWMTF approved a grant of up to \$60,000 for an. an \$65,454 effort to by Carteret Community College to conduct a planning and design project for managing stormwater runoff and shoreline erosion on the Carteret Community College campus, office grounds of the Division of Marine Fisheries, and the UNC Institute of Marine Sciences. The shoreline is located along SA waters of Bogue Sound in Carteret County in the White Oak River Basin. CWMTF funds would be used to plan and design a new method of shoreline protection including marsh plantings protected by a low-profile detached breakwater, and to host stakeholder workshops (charettes) to discuss stormwater management and possible alternatives for this project. APNEP will use \$54,781 as match.

SUMMARY OF STATE MATCH

In-kind Positions (salaries and fringe):	\$ 245,219
Clean Water Management Trust Fund Projects:	<u>\$ 264,781</u>
TOTAL:	\$ 510,000

VI. TRAVEL DOCUMENTATION

The EPA considers personal, face-to-face contact with peers and colleagues essential for information sharing and technology transfer. As part of the FY 2003 federal grant, EPA is providing APNEP with \$10,000 allocated as travel funds for program enhancement, education, and outreach support.

These funds are to be used for activities such as:

- 1) Presentations at or participation in national or regional NEP meetings
- 2) Presentations at or participation in workshops or conferences
- 3) Travel to other NEPs or communities to provide peer-to-peer technical assistance
- 4) Travel to other NEPs or watersheds for assistance
- 5) Travel by NEP staff or stakeholders from other NEPs or watershed programs to provide NEP with assistance
- 6) Travel to national or international conferences to share information on the National Estuary Program

Funds may also be used to pay for travel of staff or stakeholders from other NEPs or watershed organizations to serve as a consultant to a NEP. These stakeholders may include citizens, members of environmental or public interest organizations, business or industry representatives, academicians, scientists or technical experts. As a requirement of this agreement, APNEP core staff are required to attend all national or regional meetings called on behalf of the NEPs. These funds cannot be used to pay for travel of Federal employees.

FY 2002

Travel funds during FY2002 were utilized by APNEP staff to attend a number of important meetings and conferences. Below is a summary of these activities:

Personnel	Date	Purpose	Location	Cost
Kucken/Giordano	April 2002	EPA- NEP Regional National Meeting	Atlanta, GA	\$ 712
Kucken/Giordano	March 2002	NNEP-EPA- NEP National Meeting	Washington, DC	\$ 2474
Giordano	February 2002	Coastal Stormwater Management Workshop	New Bern, NC	\$ 150
Stefanski/Giordano	October 2001	NC-VA MOA Signing	Dismal Swamp, NC	\$ 700*
Kucken/Giordano	FY 2002	Misc. in state travel for local meetings	Albemarle – Pamlico Region	\$ 1000
			Total	\$ 5036

* funds included equipment rental and food

FY 2003

As part of the FY 2003 federal grant, funds in the amount of \$10,000 are included in the agreement for outreach support. These funds are to:

- 1) cover travel for the APNEP Program Office, Management Conference members, or other associated stakeholders to appropriate national and regional conferences, workshops, or meetings;
- 2) provide peer-to-peer technical assistance to other National Estuary Programs (NEPs) or neighboring communities; and
- 3) bring in staff or stakeholders from other NEPs or watershed programs to assist APNEP.

As a requirement of this agreement, APNEP staff are required to attend all national or regional meetings called on behalf of the NEPs. These funds cannot be used to pay for travel of Federal employees.