

**PROPOSED WORK PLAN**

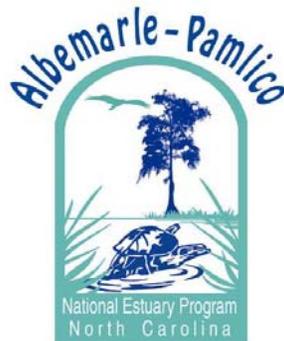
**for the**

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

**ALBEMARLE-PAMLICO NATIONAL ESTUARY PROGRAM**

**OCTOBER 1, 2003 THROUGH SEPTEMBER 30, 2004**

**(Federal Fiscal Year 2004)**



**JUNE 2003**

Approved by APNEP Coordinating Council on June 4, 2003

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## **INTRODUCTION**

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**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 2003, is provided on pages 7 through 30. The APNEP FY 2004 Work Plan and budget items are presented on pages 30 through 49.

**Period of Performance and Principal Contacts:** The period of performance under this agreement is from October 1, 2003 through September 30, 2004.

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## **BACKGROUND**

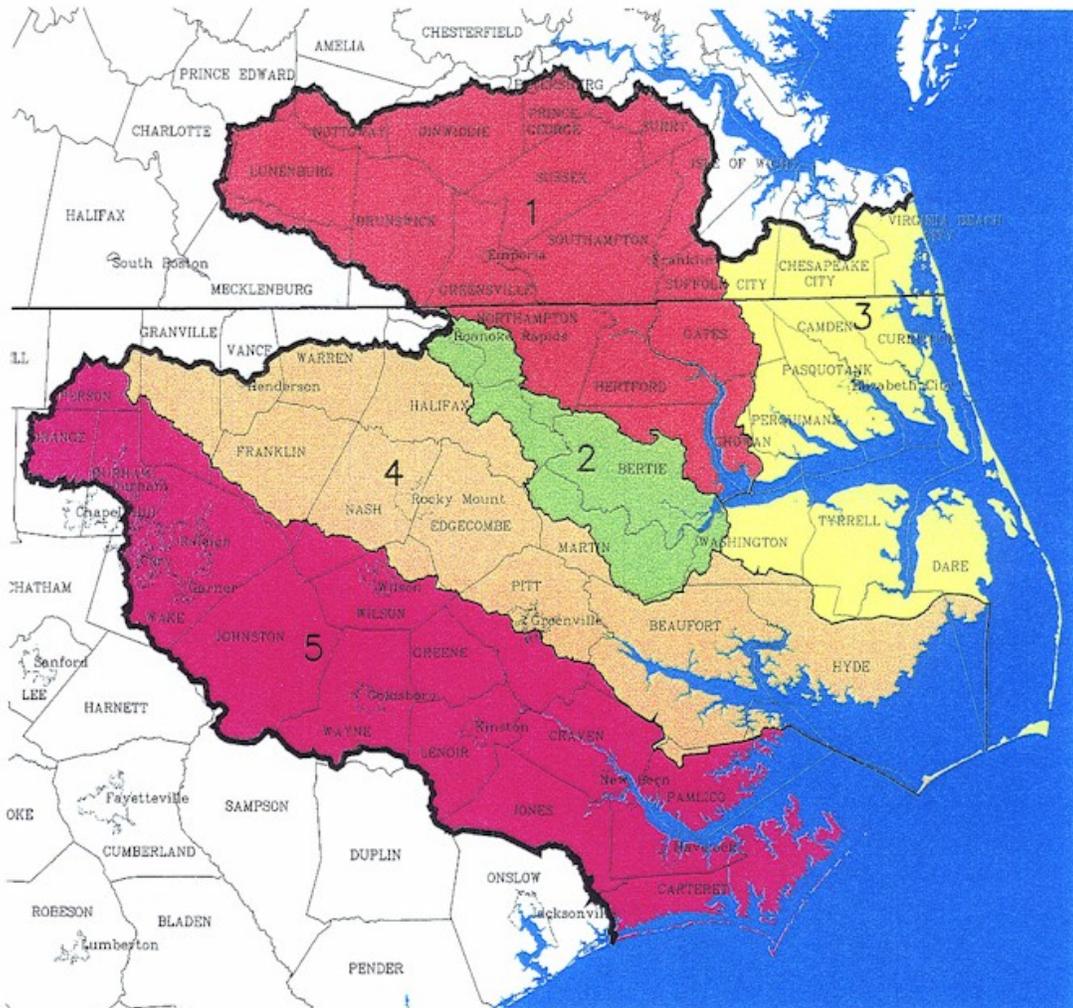
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The Albemarle and Pamlico Sounds represent the nation's second largest estuarine system. The system is composed of seven sounds and five major river basins draining over 30,000 square miles of watershed in northeastern North Carolina and southeastern 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.

The Program is located in the Office of Conservation and Community Affairs within the NC Department of Environment and Natural Resources with program personnel in Raleigh, Washington and Greenville, NC and Suffolk, VA.

# 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 2003**

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Goals for FY 2003 focused on program rejuvenation, improvement and outreach. Key accomplishments in each program area are summarized below (from July 1, 2001 through June 1, 2003). Many changes occurred in FY 2003 as a result of the 2001 Implementation Review by the EPA. DENR made substantial programmatic changes (see Programmatic Changes).

### **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 14, 2003 to review the work accomplished on the FY 2003 Work Plan and to discuss issues of concern with NC DENR staff. Staff also provided insight into the current activities for the River Basin Regional Councils Demonstration Projects. The principal Program objective for FY 2003 was to transition the Program into a position of higher profile and prepare for greater CCMP implementation. Below is a summary of the priorities for the FY 2003:

- Increase APNEP interactions with NC DENR programs
- Enhance public relations and coordinate outreach efforts

- Provide coordination and support to DENR and VA Dept. of Conservation and Recreation (VA DCR) to enhance CCMP implementation in three common river basins
- Continue the Citizens' Water Quality Monitoring Program
- Promote a better understanding of the region's many issues and offer opportunities for public involvement
- With input from the Regional Councils, solicit, identify and implement watershed demonstration projects for environmental benefit
- Coordinate a large-scale, long-term Submerged Aquatic Vegetation (SAV) monitoring effort to assess the extent of SAV coverage in the Albemarle-Pamlico estuaries (using FY 2002 Supplemental Funding Initiative funds)
- Support EstuaryLive!
- Initiate a Strategic Planning Process for APNEP
- Fully implement ongoing projects and staff support contracts from previous year including implementation of Regional Council Demonstration Projects.

The APNEP Coordinating Council met on June 4, 2003 to determine the main components to be included in the FY 2004 APNEP Work Plan. The principal Program objective for FY 2004 will be to carry out the demonstrations projects and increase public participation and awareness. Additionally, strong program emphasis will be placed on the strategic planing process. Below is a summary of the priority actions for the APNEP FY 2004 work plan as approved by the Coordinating Council:

- Participate and respond to the Strategic Planning Process
- Continue the Citizens' Water Quality Monitoring Program
- Continue to support EstuaryLive! and build partnership projects with the NCNERRs
- Increase APNEP present within DENR and other related organizations
- Provide coordination and support to DENR and VA Dept. of Conservation and Recreation (VA DCR) to enhance CCMP implementation in three common river basins
- Promote a better understanding of the region's many issues and offer opportunities for public involvement through enhanced public relations and coordinated outreach efforts
- With input from the Regional Councils solicit, identify and implement watershed demonstration projects on school grounds for environmental benefit
- Continue to coordinate a large-scale, long-term Submerged Aquatic Vegetation (SAV) monitoring effort to assess the extent of SAV coverage in the Albemarle-Pamlico estuaries (using FY 2002 Supplemental Funding Initiative funds)
- Complete projects implemented in FY 2003

## **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 are to 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.”*

#### **River Basin Regional Council Activities**

Each of the River Basin Regional Councils has held one meeting thus far in FY 2003 to discuss issues of regional concern and to review the request for proposals for watershed demonstration projects. The low number of meetings was mainly due to Program staff addressing programmatic changes as a result of the 2001 Implementation Review and in preparing for the strategic planning process. The strategic planning process met with numerous delays, but a contract is being processed to begin this work. Councils will continue to work during the strategic planning process.

### **III. APNEP STAFF – IMPLEMENTATION, TECHNICAL AND OUTREACH ACTIVITIES**

APNEP staff are responsible for the coordination, planning and successful implementation of the CCMP. APNEP staff functions include program representation, consulting, planning, coordination with partner agencies, budgeting and financial administration, and contracting. Staff also 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 APNEP Councils 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. APNEP staff tracks and participates in these CCMP implementation actions as necessary.

During FY 2003, the APNEP staff spent a considerable amount of time supporting the transition of the Program, as well as supporting implementation of the CCMP at numerous meetings and planning sessions. A great deal of time was spent establishing contracts for implementation of FY 2003 work plan activities. Other noted staff accomplishments follow:

- Continued to provide support and expand to the Citizens' Water Quality Monitoring Program (CWQMP).
- Distributed numerous APNEP research documents, outreach products, and environmental education materials to those requesting them.
- 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 in 2002.
- Developed an APNEP Web site <http://www.apnep.org>
- Developed a new APNEP logo



- Began a contract for a formal strategic planning process. This process is 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.
- Initiated over seventeen (17) contracts for CCMP implementation activities as highlighted in the FY 2003 work plan.
- Published and distributed *The Beacon* newsletter.
- Held several meetings on Submerged Aquatic Vegetation (SAV) monitoring.
- Completed all existing contracts for watershed demonstration projects (See watershed demonstration projects).
- Moved forward on the production of an APNEP Regional Guide, "The Albemarle-Pamlico ... North Carolina's Coastal Treasure"
- Continued to support the VA liaison position and the establishment of an oil-recycling program.
- Opened a permanent urban stormwater exhibit at NC Estuarium
- Participated in the groundbreaking for the Tryon Palace project
- Participated in two EstuaryLive! Sessions (October 2002 and April 2003)
- Participated in two National Estuary Program conferences
- Supported a set of Clean Water Contractor training workshops

- Participated in several festival outreach events
- Participated in NC Sea Grant research/demonstration grant project selection process
- Participated in the *One NC Naturally* Conference and development of the planning document.

#### **IV. FY 2003 PROJECTS and ACTIVITIES**

Following is the status of the five priority area projects as determined by the APNEP Coordinating Council for FY 2003:

##### **I. 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."*

##### **Coordinating Council & 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.

Each of the Regional Councils met in March to discuss demonstration projects and other issues. Future meetings will be held for project selection and the discussion of regional issues. The Coordinating Council met in April to discuss the progress on FY 2003 work plan and ideas for the upcoming year. The Coordinating Council met on June 4 to review the FY 2004 work plan and budget.

##### **Strategic Planning**

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 ratified by the Governor of North Carolina and the EPA in November 1994. Since then, neither the program nor the CCMP have been revised.

APNEP staff is working with NC State University to conduct strategic planning to assess APNEP effectiveness and structure. A strategic plan will enable the Program

to be effective in the future by identifying strengths and weaknesses of the current program and to develop program goals for the future. Approximately \$29,000 will be needed for logistics and printing costs. The FY 2003 Work Plan identified a need of approximately \$2,000 for the project, given potential EPA contract support for the project. APNEP is applying the remaining funds (approximately \$27,000) from the funds allocated in the FY 2003 Work Plan and Budget to the Science Coordinator position as the position is unfilled at present.

### **Establishment of Implementation Priorities**

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 task will be closely associated with the strategic planning process and the implementation of the CCMP tracking system.

### **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. Staff has met several times with representatives from the NC Attorney General’s Office and NC DENR of topics on interest. Little progress has been made and support intentions are unclear.

### **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 effort. This meeting has not been scheduled, but it remains an important issue for the program.

### **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. DENR and the APNEP staff are working to implement the programmatic changes suggested by the EPA. An update was provided to EPA in December 2002.

The implementation review contained three challenges to be met by January 1, 2003. NC DENR has taken several steps in addressing these items.

- Lack of visibility and autonomy of the Program office  
The new APNEP director began on June 3, 2002. The APNEP was relocated from the Basinwide Planning Branch in NC Division of Water Quality to the Office of Conservation and Community Affairs on July 1, 2002. The leadership format has been restructured (title of coordinator was changed to the title of director, and the position is now responsible for supervision of program staff) to provide for greater autonomy to administrate and implement the program. The move also elevated the profile of the program in DENR.
- Inadequate number of Albemarle-Pamlico National Estuary Program staff  
In order to address the EPA's concerns, the new work plan (FY 2003) provides for a new leadership structure and the addition of two field representatives and a science coordinator. NC DENR staff are currently taking actions to create the new positions. The Science Coordinator position should be filled by July and the NC Watershed Field Representative position should be filled by August.

Due to the current budget restraints, it should be noted that the State of North Carolina will only be able to provide funding for one of the new positions. The other 2 positions will be funded out of EPA base program funds as noted in the FY 2003 work plan. It should also be noted that the APNEP director is concerned about the amount of funds being allocated towards staff support and away from other potential program activities.

- Failure to utilize EPA Section 320 funds.  
Presently these funds are being allocated to the various projects in the FY 2003 Work Plan. The allocation of approximately 400 thousand dollars of unencumbered Section 320 funds is to be applied toward outreach and CCMP implementation projects in the coming year, with 250 thousand allocated to watershed demonstration projects. Remaining unencumbered funds will be committed by September 30, 2003.

The EPA also presented four conditions to be met by January 1, 2003. NC DENR has taken the following steps in addressing these items:

1. Move the Program from the Basinwide and Estuary Planning Unit  
The APNEP was relocated to the Office of Conservation and Community Affairs on July 1, 2002. In addition to the move, the leadership format was restructured to provide the program director greater autonomy to administrate and implement the program. The transition involved changing the APNEP coordinator to director with budget and personnel supervision responsibilities over program staff. The move also elevated the profile of the program in DENR.

2. Establish two additional full-time field positions and a Science Coordinator  
In order to address the EPA's concerns, the FY 2003 Work Plan provides for the addition of two field representatives and a science coordinator. NC DENR staff are currently taking actions to create the new positions. On December 4, 2002 the NC General Assembly's Joint Legislative Commission on Governmental Operations gave its approval for NC DENR to create the new positions of science coordinator (Environmental Specialist III) and Field Representative (Environmental Specialist II) to be funded by our federal grant. Approval of this Joint Legislative Commission is required for the creation of all new positions in state government. The Science Coordinator position should be filled by July and the NC Watershed Field Representative position should be filled by August. One of the field positions is currently held by Boyce Hudson. He is working to gather information necessary for the strategic planning process and enhance local government relations.
3. Hire an APNEP Director at a salary commensurate with that position's duties and responsibilities  
The approved APNEP FY 2003 work plan allocated \$65,000 for the director's salary. NC DENR has begun working to upgrade the salary. Significant progress has been made toward making the director's salary commensurate with that position's duties and responsibilities within NC DENR.
4. Identify an employee within NC DENR to act as a liaison between the Division of Coastal Management and the APNEP  
In July 2002, the APNEP established a liaison with the NC Division Coastal Management (DCM). DCM has appointed Guy Stefanski, former APNEP Coordinator, to fill this roll.

In order to increase communication, implementation of the CCMP and increase public outreach and education efforts, the APNEP is working to identify individuals to provide for greater opportunities for cooperation and coordination for mutually beneficial program enhancements. The APNEP has established a liaison with the NC National Estuarine Research Reserves (NC NERR). Amy Sauls was appointed to head this effort. Amy is an educator at the Rachel Carson National Estuarine Research Reserve in Beaufort. The NC NERR has several managed sites in the Albemarle-Pamlico region where they conduct research and monitoring. They also extend educational programs through the region.

The APNEP has also established a liaison with the NC Sea Grant program. Our liaison with NC Sea Grant is Walter Clark. Walter is the Coastal Law Specialist. He is the editor of biannual newsletter, Legal Tides, and is the past President of the Coastal Society.

The APNEP will also continue to work with the NC Division of Water Quality, with Darlene Kucken as main contact, and Diane Reid in the laboratory services

section. The ANEP also works with Gloria Putnam with the Coastal Non-point Source Program.

The EPA also requested additional documentation be provide by January 1, 2003. APNEP was provided the following to the EPA in December 2002:

- An organizational chart showing the new location of the program
- An organizational chart showing the structure of the program and location of each staff member
- A description of duties and responsibilities, activities and salary levels of each staff person and the Director

Additionally, the APNEP is working to address the other conditions that are to met or initiated by September 30, 2003. It is anticipated that each of these conditions will be met as the program staff positions are filled. The conditions include: the establishment of a Science and Technical Advisory Committee (STAC); development of an APNEP monitoring plan; greater public outreach and involvement; development of a Project Implementation System; and the establishment of implementation priorities.

### **Program Equipment**

Various equipment is anticipated to be required to fully support implementation of the CCMP and to support EPA Programmatic requirements as noted in the Implementation Review conducted with NC DENR and APNEP staff between December 2001 and April 2002. The FY 2003 Work Plan and Budget allotted \$10,000 of EPA base funds from previous years to support this task. Approximately \$4,000 has been spent on laptop computers and additional software has been ordered. Additional materials will be required as more staff is hired.

## **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.

- ❖ 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."*

### **Citizens' Water Quality Monitoring Program**

See description under Ongoing Projects

### **Stream Watch**

While the APNEP Citizens' Water Quality Monitoring Program includes all waters located in the Albemarle-Pamlico, most of the focus has been on the lower reaches of the watershed. The APNEP is partnering with the Division of Water Resources

Stream Watch program to extend stewardship to a broader audience. 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. This project is funded by EPA base funds for FY 2003. Additional information may be found at the Stream Watch web site at [http://www.ncwater.org/Education\\_and\\_Technical\\_Assistance/Stream\\_Watch/](http://www.ncwater.org/Education_and_Technical_Assistance/Stream_Watch/)

### **DENR Land and Water Conservation Initiative**

APNEP is working with the DENR Office of Conservation and Community Affairs in the implementation of a state-wide land and water conservation initiative called *One North Carolina Naturally*. APNEP staff is assisting with public meetings and other activities within the APNEP area. The Office of Conservation and Community Affairs 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. The Office of Conservation and Community Affairs has not requested any financial assistance at this time, only staff support for regional meetings and planning. The FY 2003 work plan estimated that approximately \$2,000 will be needed to support this project.

### **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. Noah Hill is currently working with a workgroup on cross border projects and the group has begun an oil recycling project. The FY 2003 work plan budgeted \$12,000 of EPA base funds for FY 2003 for demonstration projects with Virginia.

### **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. APNEP staff is working to identify the type of support needed this year. The FY 2003 work plan budgeted \$1,000 of EPA FY 2003 base funds for support of this program.

### **Support of Coastal Non-point Source Pollution Program**

North Carolina's Coastal Non-point Source Pollution Program (CNPSPP) is coordinated between the NC Division of Coastal Management, the NC Division of Water Quality and other state agencies that have regulatory responsibilities for controlling nonpoint sources of pollution. The program is developing a 15-year strategic plan involving participation of a Nonpoint Source Workgroup to represent coastal water quality interests. The program held a series of Clean Water Contractor workshops in January and February. APNEP provided planning, supplies and staff support for the workshops held in the AP region. The FY 2003 work plan budgeted

\$1,000 of EPA FY 2003 base funds for support of this program. Approximately \$400 has been spent to date. A brochure and materials from the workshop were provided to the EPA in March 2003 as part of a Work Plan Update Report.

### **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 APNEP is providing support (\$40,000) for this program using EPA base funds for FY 2003. More information on the FerryMon project is available at <http://www.ferrymon.org/>

### **Water Quality Monitoring**

APNEP is assisting (\$40,000 of EPA base funds for FY 2003) with the continuation of water quality monitoring efforts in parts of the Albemarle-Pamlico estuaries. APNEP is contracting to support Division of Water Quality's operation (via contract with USGS) of monitoring platforms/stations located in the Neuse, Pamlico and Pungo estuaries. More information for each basin may be found on the APNEP website <http://www.apnep.org> or at <http://nc.water.usgs.gov/qw/>

### **Conservation Easement Workshops**

APNEP is working with NC State University and others to hold a set of two workshops covering the development and use of conservation easements. These workshops will also cover easement programs, laws, regulations, ethics, tax incentives, and other assistance that provide opportunities for agencies, non-profit organizations, landowners, and others to preserve land. The workshops will address the continuing education needs of appraisers, attorneys, foresters, planners, and other professionals. The information will also fulfill 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. The FY 2003 work plan budgeted \$6,000 of EPA FY 2003 base funds for support of these workshops. More information on each of the workshops may be found at the following web site: <http://www.cals.ncsu.edu/wq/conservationworkshops>

### **Submerged Aquatic Vegetation Monitoring (SAV)**

The FY 2003 Work Plan and Budget provided for an additional \$6,000 of unencumbered EPA funds from previous years to support the existing SAV project. A portion of these funds was used to send three representatives of the SAV Workgroup to a SAV monitoring and restoration workshop and meeting hosted by the Tampa Bay NEP in March. The participants reported back to the SAV Workgroup in March 2003.

### **Comprehensive Monitoring Plan**

Staff will work with other state and federal agencies as well as academia to develop a Comprehensive Monitoring Plan for the Albemarle-Pamlico Region. APNEP staff has begun discussion with the NC Division of Water Quality on this project. Staff will continue to build upon the past efforts initiated at the workshop with EPA and Battelle. The development of a comprehensive monitoring plan is expected to proceed when the APNEP science coordinator is hired. The EPA has indicated the ability to supply contracted support for this effort. The FY 2003 work plan budgeted \$3,000 of unencumbered EPA funds from previous years for support of this project.

### **Conservation Assessment for the Albemarle-Pamlico Region**

The APNEP is contracting with the NC Natural Heritage Program to conduct 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 indicate the areas where the guild members could potentially occur. Staff will then inspect the spatial distribution of the guild members, and produce an overlay on a cover map representing their habitat type to determine core habitat areas and connectors. The FY 2003 work plan budgeted \$12,000 of unencumbered EPA funds from previous years for support of this project. The project will be complete by December 2003.

## **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. Efforts are being made to coordinate with other established coastal programs and activities to focus public attention on the APNEP region and environmental issues.

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

### **Estuary Live – National Estuaries Day**

On October 3<sup>rd</sup> and 4<sup>th</sup>, 2002 the APNEP partnered 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-connected computer and free software or a K-U Band satellite television. As teachers facilitated the trip, classes identified questions and emailed them to the estuary, where their questions were answered live from the field. Class sessions were divided into grade levels so that the appropriate level of general estuarine education was provided. For more information, visit the Estuary Live website at <http://www.estuarylive.org>. The APNEP also produced a short video on the Neuse River for broadcast during Estuary Live. The video will be used for other purposes as well. The FY 2003 work

plan budgeted \$15,000 of unencumbered EPA funds from previous years for support of this project. \$5,000 were used for production of the Neuse River video.

### **Estuary Live – North Carolina**

The APNEP is partnering 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-connected 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/>. The FY 2003 work plan budgeted \$6,000 of unencumbered EPA funds from previous years for support of this project.

### **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. APNEP will work with DWR to conduct a series of five Project WET workshops (one per river basin) by October 1, 2003. Workshops will be extended to approximately twenty K-12 teachers in each of the five river basins. The FY 2003 work plan budgeted \$8,000 of EPA base funds for FY 2003 for support of this project.

More information can be found at the Project Wet web site at [http://www.ncwater.org/Education and Technical Assistance/Project WET/](http://www.ncwater.org/Education_and_Technical_Assistance/Project_WET/)

### **Polluted Run-off Campaign**

APNEP staff is contracting with the NC Office of Environmental Education in the implementation of a campaign to raise awareness about the effect of polluted run-off on the riverine and estuarine environment. The NC Office of Environmental Education will produce and distribute educational materials to river basins within the Albemarle-Pamlico region. The FY 2003 work plan budgeted \$7,000 of EPA base funds for FY 2003 for support of this project.

### **Traveling Exhibit Materials**

The APNEP staff is developing traveling exhibit materials 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, and various governmental and public gatherings. Materials will include photographs, posters, a small shelter, tables, chairs and display boards. The current work plan budgeted \$7,000 of EPA base funds for FY 2003 for support of this project.

### **Web Site Redesign**

The APNEP web site is currently being 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. The internet address "[APNEP.org](http://APNEP.org)" has been acquired and new version went online June 1, 2003. Minimal costs are associated with this task, and unencumbered EPA funds from previous years (see Additional Projects) will be used if necessary.

### **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*. The contract with the task of producing *The Beacon* resigned last fall, delaying production of the newsletter. Staff anticipate maintaining the production schedule. The FY 2003 work plan budgeted \$4,000 of EPA base funds for FY 2003 for support of this project

### **Brochure**

An APNEP brochure will be published to provide information about the mission and goals of the Albemarle-Pamlico National Estuary Program. The FY 2003 work plan budgeted \$1,000 of EPA base funds for FY 2003 for support of this project. The new brochure is expected to be completed by October 2003.

### **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 has been rescheduled from the spring of 2003 to the fall. Staff are currently planning the conference. The FY 2003 work plan budgeted \$7,000 of unencumbered EPA base funds from previous years for support of this project. Additional unencumbered funds (Additional projects) may be required to fully implement the conference. Staff are also looking for conference sponsors.

### **National Campaigns**

APNEP plans to 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. The FY 2003 work plan budgeted \$15,000 of unencumbered EPA base funds from previous years for support of this project.

#### **IV. ADDITIONAL PROJECTS**

The APNEP is working to develop several partnerships to implement projects that support the mission of the APNEP to identify, restore, and protect the significant resources of the Albemarle-Pamlico estuarine system. Current project prospects include a riparian corridor assessment on the upper Tar River in partnership with the Tar River Conservancy, a forestry BMP manual with the NC Division of Forestry, and a Plenary Session at the National Marine Educators national conference in Wilmington, and support of the Association of National Estuary Programs conference.

#### **V. 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 and prevent their degradation.

- ❖ 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.*"

Watershed demonstration projects provide environmental benefits in each of the five river basins in the Albemarle-Pamlico region. These demonstration projects offer transferable methods and results to all river basins in the Albemarle-Pamlico Region. The Regional Councils make determinations on projects and funding levels. Current projects are based on 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 and provide direction for the selection of demonstration projects in their basin. Projects follow guidelines approved by the Coordinating Council in January 1999.

##### **Current Projects**

As of June 1, 2003 all current Regional Council demonstration projects are complete. Funds from previous EPA grants supported these demonstration projects. Total funds available for demonstration projects were approximately \$130,400 or approximately \$26,080 per Regional Council/ River Basin.

Updates on projects that were active at the time of the last report (July 2002) follow:

##### **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  
Status: Complete.

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

Status: Complete.

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

Status: Complete.

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)

Status: Complete.

### **New Projects**

Funds from previous EPA grants have been dedicated to help support a new round of watershed demonstration projects. The Regional Councils are currently (June 2003) selecting projects and allocating funding levels. The total funds available for this round of demonstration projects is \$250,000 with \$50,000 available per basin. A "Request for Proposals" was open for governmental agencies, educational institutions, and non-profits from March 1, 2003 until May 9, 2003. Contracts should be made by the end of July.

The projects must address the main sections of the APNEP Comprehensive Conservation and Management Plan (CCMP): water quality, vital habitats, fisheries and stewardship. The projects should have three main components: 1) they should be physical in-ground projects, 2) they should have a public outreach/education element, and 3) they should have transferable methods. Prospective grant recipients were encouraged to partner with others to leverage additional funds.

## **ONGOING PROJECTS**

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### **I. 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 25<sup>th</sup> 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 a pilot project with NC Division of Marine Fisheries, US Fish and Wildlife Service, Elizabeth City State University and the NC Coastal Nonpoint Source Program. Staff have participated several meetings involving local and national experts in SAV research and monitoring to develop a SAV monitoring strategy for the Albemarle-Pamlico estuaries.

In the coming months APNEP partner with NC Division of Marine Fisheries, US Fish and Wildlife Service, Elizabeth City State University and the NC Coastal Nonpoint Source Program to conduct aerial photography flights over Back Bay, Currituck Sound and Kitty Hawk Bay.

Estimated Cost:           Approximately \$20,000 SAV mapping and monitoring.  
  Costs will be divided among several monitoring projects  
  with leveraged funds.

Funding Source:           EPA supplemental funds

### **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 will support the development of a CCMP Implementation Tracking System that will help the APNEP and the EPA 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).

In April 2001 the APNEP Coordinating Council decided that the CCMP Implementation Tracking System 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 November 2001 the APNEP entered into a contract with Mr. Andrew Coburn to develop the APNEP CCMP ITS. In October 2002 Mr. Coburn resigned his contract. With the addition of new staff and the assistance of other NEPs, the APNEP will begin developing this system. At the present, staff does not have a new contractor.

An integral aspect of the CCMP ITS is the development of an APNEP natural resource/habitat management database. This database 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. The addition of an NC Watershed Field Representative will be beneficial to proceeding on this project, as this staff

position will be responsible for developing a restoration database. This position is expected to be filled by late summer.

Estimated Cost: Approximately \$20,000 for tracking system development if contracted – less if internal.

Funding Source: EPA supplemental funds

## **II. 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. 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.

The APNEP at present consists of the APNEP program office in Raleigh, with the Director (Bill Crowell) and Watershed Field Representative (Boyce Hudson); the APNEP public involvement office in Washington houses the Public Involvement Coordinator (Joan Giordano). The APNEP also has two contract employees: the Citizens' Water Quality Monitoring Program Coordinator (Allen Clark) in Greenville, and the Virginia Watershed Field Representative (Noah Hill) in Suffolk.

The APNEP will be hiring additional staff in the coming months. These positions include the Science Coordinator and a Watershed Field Representative.

Estimated Cost: Approximately \$249,000 will be need for administration and implementation of the APNEP and the CCMP.

Funding Source: EPA base funds for FY 2004  
See Administrative and Financial Section for more information

## **III. 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. The Watershed Field Coordinator for Virginia (Mr. Noah Hill) provides coordination and support to APNEP, DENR and the Virginia Department of Conservation and Recreation (VA DCR), and enhances implementation of the CCMP in the Roanoke, Chowan and Pasquotank river basins. The APNEP supports one-half of this position, and the contract specifies that Mr. Hill devote approximately 20 hours per week to APNEP needs.

Mr. Hill continues to work on regional issues in the Roanoke, Chowan and Pasquotank river basins. An oil recycling project has now begun and other projects are in the planning stage. The contract has been extended for another year.

- ❖ 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.*

Estimated Cost: \$25,000 (EPA FY 2004 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 2003. This contract will be amended effective January 2004.

Funding Source: EPA base funds for FY 2004

#### **IV. 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. Today, the program includes all waters located in the Albemarle-Pamlico region. Mr. Allen Clark runs the program from the campus of East Carolina University in Greenville, NC.

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. 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://www.apnep.org/> or at <http://www.ecu.edu/icmr/cwqmp>. This is a very popular program and it continues to be expanded.

Operation of the Citizens' Water Quality Monitoring Program (including Coordinator, equipment, supplies, lab space and indirect costs) will be continued by extending the contract with East Carolina University (\$40,000).

- ❖ 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 \$56,000 (via contract with East Carolina University).

Funding Source: EPA base funds for FY 2004

## **V. EPA SUPPORTED NONPOINT SOURCE POLLUTION – RELATED RESTORATION PROJECT (Tryon Palace)**

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.

The current contract is ongoing and the project is still underway. Ground breaking and site dedication occurred in the fall of 2002. Although much planning has been done, no invoice has yet been received for the specific activity defined for this contract.

- ❖ 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.”*

Estimated Cost: \$75,000 encumbered under current contract

Funding Source: EPA dedicated funds for project

## **VI. 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. Staff has met several times with representatives from the NC Attorney General's Office and NC DENR on topics of interest. Little progress has been made and support intentions are unclear.

Estimated Cost: No cost

Funding Source: N/A

## VII. 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."*

### **GIS Outreach and Services**

The APNEP had 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. Approximately \$18,108 remained available for GIS support to APNEP. The contract expired on May 31, 2003 and could not be renewed due to NC DENR contract requirements. APNEP Staff is developing a new contract for GIS support. This support will be essential for new staff.

Estimated Cost: \$18,000 that will be become un-encumbered under current contract

Funding Source: EPA funds from previous contract

### **Albemarle-Pamlico Regional Guide**

During FY 2000, the APNEP allocated \$20,000 for the development of an Albemarle-Pamlico Regional Guide, 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. This will be the first document of its kind to present this type of information about the region.

This project is ongoing. A final draft document has been prepared for layout with photographs. APNEP staff is currently working with NC DENR Public Affairs to develop the layout, and print the document. \$11,000 remains in the project budget. Completion is expected by late summer.

Estimated Cost: \$11,000

Funding Source: EPA funds from previous years

### **North Carolina – Virginia Shared Resources Forum**

This forum will be designed for state resource agencies and local governments in the Roanoke, Chowan and Pasquotank river basins to review resources shared by the two states. This forum has been delayed in order to assess the role of the new Roanoke Bi-State Commission as designated by General Assembly of both states. Approximately \$1,000 is budgeted for this effort using EPA base funds from

previous years. It should also be noted that the APNEP Watershed Field Coordinator for Virginia is playing a key role in inter-state relations with issues in our shared river basins.

- ❖ This action directly supports the CCMP's Implementation Plan, Objective A, Management Action 2: *"Coordinate implementation of the CCMP."*

Estimated Cost:            Approximately \$1,000  
Funding Source:            EPA funds from previous years (budgeted in FY 2003)

### **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 2004.

- ❖ 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. APNEP staff will look for sponsors as well.

## **NEW PROJECTS FY 2004**

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### **I. IMPLEMENTATION PLAN**

New projects for FY 2004 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."*

### **Councils and Coordinating Council Regional**

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. A major focus for the Councils in FY 2004 will be the strategic planning process and implementation for program reform as necessary.

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

Funding Source: EPA base funds for FY 2004.

- ❖ 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.”*

## **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.”*

### **Atlantic White Cedar Restoration Project**

The area to be re-vegetated is located at the Preyer-Buckridge Coastal Reserve in Tyrrell County, NC. A portion of the site became infested with Pine Bark Beetles and had to be clear-cut to prevent further spread of this highly invasive and damaging pest to surrounding pine forest. Approximately 38 acres of forested wetlands will be cleared. The NC Division of Coastal Management / Coastal Reserves would like to replant the area with native hardwood species, cypress, and Atlantic White Cedar in winter 2004. By planting species other than loblolly pine, future pine bark beetle infestations in this area may be avoided and return the habitat to a more natural mix of trees. The expected survival rate for the planted trees is at least 75% the first year and 50 % over 5 years. The goal is approximately 320 trees per acre by the fifth year. Monitoring would be done by the site manager as part of the site management plan which is available online at <http://dcm2.enr.state.nc.us/Download/buckridgeplan.pdf>

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

Estimated Cost: \$16,000 for seedlings and labor  
Funding Source: EPA base funds for FY 2004

### **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 an oil recycling project.

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

Estimated Cost: \$10,000  
Funding Source: EPA base funds for FY 2004

### **School Yard Demonstration Projects**

School Yard Demonstration Projects solicited to provide environmental benefits in the Albemarle-Pamlico region. Results of the School Yard Demonstration projects will be transferable to all river basins in the Albemarle-Pamlico Region and other National Estuary Programs. Project selection will be made by the Coordinating 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: \$100,000  
Funding Source: EPA base funds for FY 2004

### **Other 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 Workshops, Planning Workshops, Sustainability Workshops

- ❖ 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: \$8,000

Funding Source: EPA base funds for FY 2004

### **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."*

#### **Teacher Institute**

APNEP will partner with the NC Office of Environmental Education to offer a week-long teacher training institute at the 4H Center in Columbia. Approximately 25 teachers from the Albemarle-Pamlico region will be provided with curriculum training in earth / environmental sciences with hands-on activities, site visits, and specific content to support inquiry, experiential, and research based instruction.

- ❖ 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: \$25,000  
Funding Source: EPA base funds for FY 2004

#### **Mini-grants**

APNEP will establish a set of mini-grants for educators to provide material for educational purposes for studies related to the resources of the Albemarle-Pamlico regions. The mini-grant will be competitive and available for sums up to five hundred dollars each.

- ❖ 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: \$4,000  
Funding Source: EPA base funds for FY 2004

#### **Estuary Live!**

APNEP will partner with the NC National Estuarine Research Reserve, NOAA, and NC Coastal Reserve Program 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-connected computer. 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:           \$4,000  
Funding Source:         EPA base funds for FY 2004

**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:         \$1,685  
Funding Source:         EPA base funds for FY 2004

## **ADMINISTRATION AND FINANCIAL**

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### **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.

Presently, the APNEP staff consists of the APNEP program office in Raleigh, with the Director (Bill Crowell) and Watershed Field Representative (Boyce Hudson); the APNEP public involvement office in Washington houses the Public Involvement Coordinator (Joan Giordano). The APNEP also has two contract employees: the Citizens' Water Quality Monitoring Program Coordinator (Allen Clark) in Greenville, and the Virginia Watershed Field Representative (Noah Hill) in Suffolk. The APNEP will be hiring additional staff in the coming months. These positions include the Science Coordinator and a Watershed Field Representative.

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.

#### **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
- Supervision 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
- Facilitation and fostering of coordination and communication between NC DENR agencies and VA DCR
- Coordination 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
- Representation of APNEP at the Environmental Commission, Coastal Resources Commission, Marine Fisheries and Wildlife Resources Commission meetings
- Oversight of APNEP monitoring and research efforts

Personnel: Bill Crowell began as the new director on June 3, 2002.

Funding: EPA FY 2004 base funds will continue to be used to support this position.

### **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 2004 base funds will continue to be used to support this position. Funding also include approximately \$10,000 for annual rent at the DENR Washington Regional Office.

### **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 August 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: Boyce Hundson has filled this position since July 2002.

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

### **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: EPA FY 2004 base funds will be used to support this position through at contract with the Virginia Dept. of Conservation and Recreation.

### **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 August 2004.

Funding: EPA FY 2004 base funds will be used to support this position.

### **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
- Facilitation and fostering of coordination and communication between NC DENR agencies and VA DCR on monitoring and research
- Coordination of 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
- Representation of 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 July 2003.

Funding: EPA FY 2004 base funds will be used to support this new position

## **II. GRANTS TO LOCAL ENTITIES**

The Albemarle-Pamlico NEP let numerous contracts in FY 2003 in order to accomplish the tasks presented in the FY 2003 Work Plan. These items are discussed in the Goals and Accomplishments, and the Ongoing Projects sections of this report.

Additionally, funds from previous EPA grants have been dedicated to help support a new round of watershed demonstration projects. The Regional Councils are currently selecting demonstration projects from the proposals and allocating funding levels. The total funds available for this round of demonstration projects is \$250,000 with \$50,000 available per basin. A "Request for Proposals" was open for governmental agencies, educational institutions, and non-profits from March 1, 2003 until May 9, 2003. Regional Councils will review project applications and make awards in June. All contracts should be let by the end of July.

### GRANTS TO LOCAL ENTITIES

<b>Project Title</b>	<b>Funded Amount</b>	<b>Project Leader</b>	<b>Purpose</b>	<b>Deliverables</b>	<b>Completion Date</b>	<b>Status</b>
Selected Creek Monitoring Demonstration Project	\$ 25,000 from EPA base funds awarded in FY 1995-1996	Neuse River Foundation	Monitoring the mouth of two selected creeks to determine pollution contribution	Monitoring Data Final Report	December 2002	Complete
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 2003	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.	Demonstration sites Report	April 2003	Complete
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 2002	Complete
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	Development of an accounting methodology to assist the NC DWQ in verifying and adjusting the nutrient loading baseline from agricultural fields within the Neuse River Basin	Report	February 2003	Complete
Model Representation of Urban Stormwater Treatment System	\$24,000	Partnership for the Sounds / NC Estuarium	. 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	October 2003	Complete

<b>Project Title</b>	<b>Funded Amount</b>	<b>Project Leader</b>	<b>Purpose</b>	<b>Deliverables</b>	<b>Completion Date</b>	<b>Status</b>
Watershed Coordinator (VA)	\$25,000	VA. Dept. Conservation & Recreation	Fund Watershed Coordinator position in VA	Program support Reports	Ongoing	In Progress
Riparian Restoration	\$75,000 EPA dedicated funds for project	Tryon Palace Committee	Riparian Restoration	Shoreline restoration Reports	September 2004	In Progress
Citizens Water Quality Monitoring	\$53,000	East Carolina University	Outreach / Monitoring	Program Newsletters Reports Database	Ongoing	In Progress
Neuse River Video	\$5,000	Rick Allen	Outreach Video Production	Video	October 2003	Complete
Conservation Easement Workshops	\$6,000	NC State University	Organize a set of workshops on conservation easements	Workshops	July 2003	Complete
River Basin Educational Inserts	\$7,000	NC DENR – Office of Environmental Education	Develop, print and distribute a educational material or river basins in AP region	Educational Materials	October 2003	In Progress
Water Quality Monitoring Platforms	\$40,000	NC DENR – Div. Water Quality	Support of real –time water quality monitoring platforms	Monitoring Website	October 2003	In Progress
Project Wet	\$8,000	NC DENR – Div. of Water Resources	Organize five (5) Project WET workshops – one in each basin	Workshops	October 2003	In Progress
NC Stream Watch	\$7,000	NC DENR – Div. of Water Resources	Support NC StreamWatch activities in upper basin areas of AP region	Workshops	October 2003	In Progress
FerryMon	\$40,000	Univ. of North Carolina	Support FerryMon Project in AP Sounds	Monitoring Website	October 2003	In Progress
Conservation Assessment of AP Region	\$12,000	NC DENR – Natural Heritage Program	Conservation Assessment of AP Region	Report	December 2003	In Progress
EstuaryLive!	\$12,000	NC DENR- Div. Coastal Management	Assist with Production of EstuaryLive!	EstuaryLive Events	October 2003	In Progress

### **III. FUNDS LEVERAGED**

The APNEP has historically done little work to leverage additional funds for specific CCMP implementation actions. As the program progresses we are leveraging more funds through our partnerships, projects and grants.

#### **FY2003**

The Albemarle-Pamlico NEP has more actively sought alternative sources of funding for APNEP activities and projects to fulfill the goals of the CCMP. In addition, the APNEP sought out additional avenues for collaborating with other agencies to assist in targeting these program funds towards CCMP and basinwide goals. Where possible, APNEP worked to cost-share projects to increase the effectiveness or the magnitude projects. Although in several cases the APNEP was not the primary catalyst for the project.

Currently the APNEP is working with the Regional Councils to identify demonstration projects. Many of these applications have matching funds, therefore the APNEP's leveraged fund amount is expected to increase in the coming months for FY 2003.

Additionally, the APNEP staff has plans to work with EPA staff to identify and develop strategies for leveraging funds beyond EPA base operating budgeted funds.

#### **FY 2004**

The Albemarle-Pamlico will seek additional avenues for collaborating with other partners to assist in targeting program funds towards CCMP implementation goals. Where possible, APNEP will cost-share projects with other funding sources to increase the effectiveness and magnitude of enhancement and restoration projects. NEP will actively seek alternative sources of funding for APNEP activities and projects to fulfill the goals of the CCMP.

\*Please see attached Leverage Worksheet

Additionally, 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.

#### IV. FY 2004 ESTIMATED FEDERAL COST SHARE

##### Federal Budget FY 2004

*The federal budget for FY 2004 funding of \$536,685 \*\**

##### IMPLEMENTATION PLAN

Program Director*	\$ 73,000
Includes office supplies	
Public Involvement Coordinator*	\$ 66,000
Includes office supplies & regional office rental	
Science Coordinator *	\$ 55,000
Includes office supplies	
Watershed Field Representative*	\$ 55,000
Includes office supplies	
Watershed Field Coordinator ( <i>contract with VA DCR</i> )	\$ 25,000
Coordinating Council and Regional Councils Support	\$ 2,000
Strategic Planning**	\$ 30,000
	<b>Subtotal \$ 306,000</b>

##### STEWARDSHIP PLAN

Citizens' Water Quality Monitoring Program	\$ 56,000
Atlantic White Cedar Restoration Project	\$ 16,000
Demonstration Projects with Virginia	\$ 10,000
Schoolyard Demonstration Projects	\$ 100,000
Other Projects (Sustainability Workshops)	\$ 4,000
	<b>Subtotal \$ 186,000</b>

##### PUBLIC OUTREACH PROJECTS

Teacher Institute	\$ 25,000
Mini-grants	\$ 4,000
EstuaryLive!	\$ 4,000
Newsletter – <i>The Beacon</i>	\$ 1,685
	<b>Subtotal \$ 34,685</b>

**TRAVEL (*Allocated by EPA*)** **\$ 10,000**

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**Total Proposed For FY 2004 Funds \$ 536,685**

*\* Includes: Fringe Benefits based on Social Security (7.65 %) & Retirement (3.03 %) of position's annual salary and Medical Insurance Plan rate of \$2,933 per year.  
Indirect Costs based on 10 % of salary.*

*\*\* The EPA in FY 3003 as a penalty withheld \$30,000 from the Albemarle- Pamlico National Estuary Program for a late report in FY 2002. This remaining \$30,000 was budgeted in the FY 2003 and matched and will be used for APNEP strategic planning.*

**V. NON-FEDERAL COST SHARE (Match FY 2004)**

**Summary of State Funds (Match Requirement)**

The federal budget for FY 2003 funding of \$536,685. The NC Department of Environment and Natural Resources intends to provide \$503,685 as part of the 1:1 non-federal match for this agreement with matching funds equaling \$30,000 provided in state match in FY 2003. This \$30,000 was budgeted in the FY 2003 Work Plan and Budget. It will be used for strategic planning. Therefore the non-federal cost share (state match) budget as provided below covers \$506,685

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) Natural Heritage Trust Fund and Clean Water Management Trust Fund projects located with in the Albemarle-Pamlico region.

Below is a list of the intended state match:

<u>POSITION</u>	<u>#</u>	<u>SALARY</u>	<u>% EFFORT</u>	<u>Match</u>
<u>OFFICE OF CONSERVATION &amp; COMMUNITY AFFAIRS (CCA)</u>				
Dir. CCA	1	76,610	.20	15,322.00
NC Watershed				
Field Coordinator	1	61,400	1	61,400.00
Office Assistant	1	35,240	.20	7,048.00
<u>DIVISION of WATER QUALITY (Basinwide Planning Branch)</u>				
Env. Spec III	1	35,337	.50	17,668.50
Env. Spec II	1	34,302	.50	17,151.00
<u>DIVISION of WATER QUALITY (Nonpoint Source Planning Unit)</u>				
Env. Spec III	1	44,777	.50	22,388.50
<u>DIVISION of WATER QUALITY (Neuse River Response Team)</u>				
Env. Spec I	1	31,131	.50	15,565.50
Env. Spec II	1	32,553	.50	16,276.50
Env. Bio I	1	33,146	.50	16,573.00
Env. Tech IV	1	28,195	.50	14,097.50
<u>DIVISION of FOREST RESOURCES (Water Quality Foresters)</u>				
Service Forester II	1	42,585	.65	27,680.25
Service Forester II	1	34,709	.65	22,560.85
Service Forester II	1	34,022	.65	22,114.30
Totals				275,846
Fringe Benefits*				49,551
<b>TOTAL IN-KIND:</b>				<b>\$ 325,397</b>

\* Fringe is based on Social Security (7.65 %) & Retirement (3.03 %) of position's annual salary, plus Medical Insurance Plan rate of \$2,933 per year.

## **Implementation ( In-Kind Services Descriptions)**

### **Basinwide Planning Unit**

Environmental Specialist III 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 including all five basins in the Albemarle-Pamlico region.

- ❖ *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.”*

### **Nonpoint Source Planning Unit**

Environmental Specialist III – 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 Team**

The Neuse Response Team is 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.”*

### **Water Quality Foresters**

In August of 2002, the "Forestry NPS Unit" was established within the Division's Forest Management Branch. The organization is charged to develop and implement water quality projects that serve to minimize NPS pollution from forest operations. The Unit also practices technology transfer through BMP related education and training workshops and supporting publications targeted at forest operators and forestland owners. Unit staff also share a role in normal forest management and incident operations undertaken by the Division.

- ❖ *These positions supports the CCMP’s Water Quality Plan, Objective B, Management Action 1: “Strengthen implementation of forestry best management practices through training, education, technical assistance and enforcement.”*

**Stewardship (NC Natural Heritage Trust Fund)**

The Natural Heritage Trust Fund was established by the NC General Assembly in 1987. It was provided with a continuing funding source by the General Assembly in 1989 and an additional source in 1991. The Natural Heritage Trust Fund is financed by receipts from the annual fees for automobile personalized license plates, and in 1991, by 15% of the deed stamp tax. In July 1996, funding from the deed stamp tax increased to 25% of the state's share. The Natural Heritage Trust Fund provides grants to state agencies (NC Department of Environment and Natural Resources, NC Wildlife Resources Commission, NC Department of Cultural Resources, and NC Department of Agriculture and Consumer Services) for purposes of acquiring natural lands for state parks, preserves, wildlife conservation areas, coastal reserves, natural and scenic rivers, historic site properties, and other outdoor recreation and natural areas. Inventories by the Natural Heritage Program are also eligible for grants. Funding priorities are given to projects which will protect areas of state or national ecological significance or outstanding cultural significance.

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

<b>Project</b>	<b>Location/ River Basin</b>	<b>Purpose</b>	<b>Amount</b>	<b>Amount for Match</b>
Newbold-White House Historic & Natural Heritage Site	Perquimans County Pasquotank River Basin	Land Protection	\$ 236,000	\$181,288

**Project Description**

Newbold-White House Historic & Natural Heritage Site

The Department of Cultural Resources received \$236,000 from the NC Natural Heritage Trust Fund towards a \$988,500 three-year effort to acquire land to protect the historic quality and natural shoreline habitats at the site. This purchase protects the final 89.15 acres targeted in this effort. The site is located on the Perquimans River and located in the Pasquotank River Basin Watershed. It contains important habitat for waterfowl and estuarine fauna. The Newbold-White House was built in 1730 and the oldest brick house in North Carolina. It is also the oldest house in the state that is open to the public on a regular basis. APNEP will use \$181,288 of this conservation purchase as match.

**SUMMARY OF STATE MATCH**

In-kind Positions (Implementation):	\$ 325,397
Natural Heritage Trust Fund Projects (Stewardship):	<u>\$ 181,288</u>
<b>TOTAL:</b>	<b>\$ 506,685</b>

**VI. TRAVEL**

The EPA considers personal, face-to-face contact with peers and colleagues essential for information sharing and technology transfer. As part of the FY 200a4 federal grant, EPA is provided 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 2003**

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:

<b>Personnel</b>	<b>Date</b>	<b>Purpose</b>	<b>Location</b>	<b>Cost*</b>
Crowell/Giordano	October 2002	ANEP-EPA/NEP National Meeting	Ocean City, MD	\$ 2000
Crowell/Giordano	March 2003	ANEP-EPA/NEP National Meeting	Washington, DC	\$ 2000
Giordano	February 2002	NEP Outreach Meeting	New Orleans, LA	\$ 1,000
Crowell	October to June	Program Activities	Albemarle – Pamlico Region	\$ 400
Giordano	October to June	Program Activities	Albemarle – Pamlico Region	\$ 800
Crowell/Giordano	September 2003	ANEP-EPA/NEP National Meeting	Seattle, WA	\$ 2000**
			<b>Total</b>	<b>\$10,000</b>

\*estimated funds included equipment rental and food

\*\* estimated cost of event

**FY 2004**

As part of the FY 2004 federal grant, funds in the amount of \$10,000 are included in the budget for program and 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.