

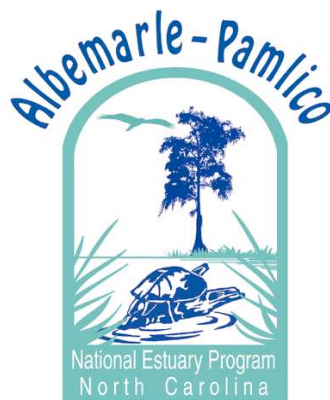
FINAL

**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, 2004 THROUGH SEPTEMBER 30, 2005

(Federal Fiscal Year 2005)



June 2004

Approved by APNEP Coordinating Council on June 21, 2004
Approved by NC DENR on June 25, 2004

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INTRODUCTION

Contents of this document:

- Program responses to EPA Implementation Review are presented on pages 7 through 10.
- A progress report detailing APNEP accomplishments is provided on pages 11 through 37.
- The APNEP FY 2005 Work Plan and budget items are presented on pages 38 through 44.
- Administrative and financial information items are presented on pages 45 through 56.

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.

Period of Performance:

The period of performance under this agreement is from October 1, 2004 through September 30, 2005.

Principal Contacts:

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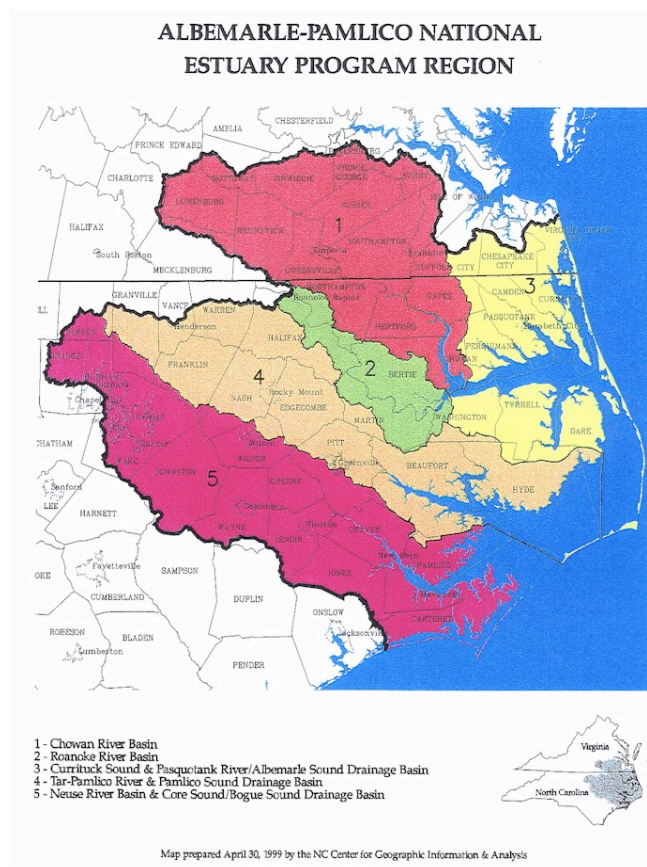
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BACKGROUND

The Albemarle and Pamlico Sounds represent the nation's largest lagoonal 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 a Comprehensive Conservation and Management Plan (CCMP) that was ratified by the Governor of North Carolina and approved by 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.



EPA IMPLEMENTATION REVIEW RESPONSE

EPA Implementation Review Response

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. A written update was provided to EPA in December 2002.

The implementation review contained three challenges to be addressed by NC DENR and APNEP.

- Lack of visibility and autonomy of the Program office

The APNEP director position was filled on June 3, 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 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 move elevated the profile of the program in DENR.

Status: *Complete*

- Inadequate number of Albemarle-Pamlico National Estuary Program staff

In order to address the EPA's concerns, the FY 2003 Work Plan presented a new leadership structure and the addition of two field representatives and a science coordinator. One field representative position was filled in July 2002 and the other (Restoration Specialist) position was filled in October 2003. The Science Coordinator position was filled in November 2003.

Status: *Complete*

- Failure to utilize EPA Section 320 funds.

These funds have been allocated to the various projects as highlighted in the FY 2003 Work Plan (additional information is contained in the FY 2005 Work Plan). The unencumbered funds from the previous Cooperative Agreement (CE 9764802) are applied toward various projects, with \$250,000 allocated to watershed demonstration projects.

Status: *All funds allocated (all will be expended by September 30, 2006)*

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. The move elevated the profile of the program in DENR.
Status: *Complete*

2. Establish two additional full-time field positions and a Science Coordinator
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/Restoration Specialist (Environmental Specialist II) to be supported by the federal assistance agreement. Approval of this Joint Legislative Commission is required for the creation of all new positions in state government. DENR supplied support for the other Field Representative.

The DENR funded field representative position was filled in July 2002 and the other (Restoration Specialist) position was filled in October 2003. The Science Coordinator position was filled in November 2003.
Status: *Complete*

3. Hire an APNEP Director at a salary commensurate with that position's duties and responsibilities
A Director was hired in June 2002 and significant progress has been made toward making the director's salary commensurate with that position's duties and responsibilities.
Status: *Complete*

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 of Coastal Management (DCM). DCM has appointed Guy Stefanski to fill that role.
Status: *Complete*

The EPA also requested additional documentation to be provided by January 1, 2003. APNEP provided the following information 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 required by the EPA. The conditions include:

- Establishment of a Science and Technical Advisory Committee (STAC)
The Science and Technical Advisory Committee (STAC) has been assembled and the first meeting will occur on July 28, 2004.
Status: *Complete*

- Development of an APNEP Monitoring Plan
The APNEP Science Coordinator is facilitating the activities associated with development of the monitoring strategy. The Science Coordinator has reviewed work efforts previously completed by the program and has conducted meetings with other DENR agency staff to gather information on existing and proposed monitoring programs and projects. The APNEP Science Coordinator, STAC and DENR representatives will be addressing this task in FY 2005.
Status: *In progress*

- Greater Public Outreach and Involvement
APNEP has accomplished the following: published and widely distributed “*The Beacon*” newsletter; participated in several “Estuary Live” sessions; redesigned the APNEP Web site and secured a new Internet address (www.apnep.org); developed a new APNEP brochure in November 2003; finalized an APNEP regional guide that should be published in July 2004; designed a new APNEP traveling display that should be completed in the summer of 2004; supported the NC Office of Environmental Education’s campaign to raise awareness of the riverine and estuarine environment; continues to support the APNEP Citizens’ Monitoring Network; produced a video on the Neuse River; and sponsored a plenary session at the National Marine Educators’ Association national meeting in North Carolina. Additionally, APNEP is working to develop active citizen participation in its Council structure.
Status: *In progress*

- Development of a Project Implementation System
APNEP has recently instituted the use of project tracking software. The tracking tool, developed with Microsoft Access relational database software, is being adapted for APNEP from a project tracking tool used by the Charlotte Harbor National Estuary Program. The original tool was created by CHNEP Director, Dr. Lisa Beever. Parameters to be tracked by APNEP include: project identification number, project title, basin, project phase (planning, implementation), issue (biodiversity, hydrogeology, water quality, infrastructure), type (research, restoration, legislation, education), entry date, entry modification date, project operator, project justification, project description, associated CCMP actions, prerequisite activities, linkages to other activities, planned budget, planned duration, acreage, habitat type, funding by individual sources, % leveraged, status (initiated, on-going, complete), location map, and site

photographs. The software is currently undergoing customization for APNEP needs and its database is being populated with project data.

Status: *Developed (database is being populated)*

- Establishment of Implementation Priorities

APNEP has contracted with North Carolina State University (NCSU) to facilitate the strategic planning process. NCSU has worked with Council members and various other stakeholders to conduct surveys on the program. NCSU met with these groups on April 8, 2004 to review the information collected and discuss next steps. A draft final report is currently under review by APNEP staff. Staff anticipate meeting with these parties again in July to review the findings in the final report and discuss the implementation of any program changes. Implementation priorities will be developed during this process in FY 2005.

Status: *In progress*

In a February 2004 letter to DENR, the EPA noted that “NCDENR and the APNEP were unable to meet all of the conditions by the deadlines. However, we believe that they have made a concerted effort to comply with EPA’s requirements and we remain optimistic and encouraged by the significant progress that NCDENR has made to improve the efficacy of the program.” In view of these accomplishments, EPA provided full federal funding (\$536,685) to the APNEP for FY 2004.

GOALS AND ACCOMPLISHMENTS FOR FY 2004

Goals for FY 2004 focused on program reform through strategic planning, program review, improvement and rejuvenation, and coordination with program partners for CCMP implementation, and education and outreach activities.

It should be noted that many of the work plan tasks for FY 2004 are just beginning, as approved funding for FY 2004 projects was obtained on May 24, 2004. Requests for Proposals and contracts for many items could not be initiated until DENR had a signed commitment from the EPA for the funds. It is anticipated that most tasks presented in the FY 2004 work plan will be accomplished with a slight delay. The status of each project is presented within this Work Plan.

Activities and accomplishments from July 1, 2003 (after last work plan was submitted) through June 15, 2004, are summarized below:

I. PROGRAM REFORM

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 subjected to an internal review or been revised.

APNEP staff is working with NC State University to conduct strategic planning to assess APNEP effectiveness and structure. This process will enable the Program to be effective by identifying strengths and weaknesses of the current program and to develop program goals and priorities for the future.

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

Status:	Nearing Completion
Estimated Cost:	\$32,000
Funding Source:	EPA funds for FY 2003 as well as left over funds from previous EPA Grants
Leverage:	Volunteer time and meeting spaces

Establishment of Implementation Priorities

This activity was identified in the 1999 Biennial Review and the 2001 Implementation Review. In order to ensure that progress is made on the most important CCMP activities first, APNEP will develop a list of ranked implementation priorities. (Please see EPA Implementation Review Response.)

EPA Financial Planning – Program Development

As APNEP reevaluates its structure, staff and Council members will work with EPA staff to identify and develop strategies for leveraging funds beyond EPA grant funds. EPA staff will lead this effort. Staff will work with the EPA to schedule a meeting to address this important issue for the program. APNEP staff has held several discussions within DENR to acquire additional implementation funds from non-EPA section 320 funds.

Program Equipment

Various equipment is anticipated to be required to 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 funds from previous years to support this task. Approximately \$5,000 has been spent on laptop computers, software, digital camera and projectors. Additional software (GIS) has been ordered.

II. FY 2004 WORK PLAN PROJECTS

Regional Councils and Coordinating Council

Citizen participation provides a key element of the CCMP's Implementation Plan: the current structure is 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. This structure is mandated through a Governor's Executive Order. 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 was the strategic planning process and implementation of program reform as necessary.

- ❖ 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.*"

Status:	Current Councils will continue to meet until a new structure is developed
Estimated Cost:	Approximately \$2,000 was budgeted for logistics and printing costs.
Funding Source:	EPA funds for FY 2004.
Leverage:	Volunteer time & meeting spaces

Citizens' Monitoring Network

See description under Citizens' Monitoring Network in Ongoing Projects.

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 needs to be cleared to prevent further spread of this highly invasive and damaging pest to the surrounding pine forest. The NC Division of Coastal Management / Coastal Reserves planned to replant approximately 38 acres of forested wetlands with native hardwood species, cypress, and Atlantic White Cedar in winter 2004, but heavy rains have delayed site preparations and replanting.

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

Status: Delayed
Estimated Cost: \$16,000
Funding Source: EPA funds for FY 2004
Leverage: Delayed

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.

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

Status: Delayed
Estimated Cost: \$10,000
Funding Source: EPA funds for FY 2004
Leverage: Delayed

School Yard Demonstration Projects

School Yard Demonstration Projects will be 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 APNEP 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.*"

Status: Delayed
Estimated Cost: \$100,000
Funding Source: EPA funds for FY 2004
Leverage: Delayed

Other Projects (FY 2004)

A category of additional projects was proposed within the FY 2004 Work Plan. Funds will be allocated to a state-wide land and water conservation initiative called *One North Carolina Naturally*. The Office of Conservation and Community Affairs (OCCA) has requested \$6,000 to assist with conservation planning in the APNEP area. The FY 2003 work plan estimated that approximately \$2,000 would be needed to support OCCA activities. To support this request, project funds will be added to the existing \$2,000.

- ❖ 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."*

Status: In Progress
Estimated Cost: \$4,000 (*plus \$2,000 from FY 2003 for a total of \$6,000*)
Funding Source: EPA funds for FY 2004
Leverage: See DENR Land and Water Conservation Initiative in FY 2003 Work Plan Projects

Teacher Institute

APNEP partnered with the NC Environmental Education Fund and the NC Office of Environmental Education and others to offer a week-long (June 13-18, 2004) teacher training institute at the Trinity Center in Salter Path, NC. Twenty-five teachers were 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. The program focused on water and estuarine resources.

- ❖ 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."*

Status: Complete (*final report pending*)
Estimated Cost: \$25,000
Funding Source: EPA funds for FY 2004
Leverage: Pending

Mini-grants

APNEP planned to establish a set of mini-grants for educators to provide material for educational purposes for studies related to the resources of the Albemarle-

Pamlico region. The competitive mini-grants would have provided up to \$500 for educator's estuary related activities. After several discussions with the NC DENR contracts personnel, the APNEP staff has decided to cancel this project at present due to contracting restraints that would severely limit this type of grant program. **Funds will be reallocated.**

- ❖ 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.”*

Status: Cancelled
Estimated Cost: \$4,000 - **funds to be reallocated**
Funding Source: EPA funds for FY 2004

Estuary Live!

APNEP partnered with the NC National Estuarine Research Reserve, NOAA, NC Coastal Reserve Program, Marine Grafics, NC Maritime Museum, and NC Department of Public Instruction to offer interactive field trips for students from North Carolina and throughout the country. Participating teachers and viewers connected to the trips using Internet-connected computers. 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>.

- ❖ 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.”*

Status: Spring session complete, fall session to be scheduled
Estimated Cost: \$4,000
Funding Source: EPA funds for FY 2004
Leverage: Pending

Newsletter – *The Beacon*

The APNEP newsletter, *The Beacon*, was published three times this year. *The Beacon* disseminates information about the mission and activities of the NEP. The APNEP web site also carries *The Beacon*.

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

Status: Ongoing
Estimated Cost: \$1,685

Funding Source: EPA funds for FY 2004
Leverage: Pending

III. FY 2003 WORKPLAN PROJECTS (Actions in FY 2004)

Citizens' Monitoring Network

See description of Citizens' Monitoring Network under Ongoing Projects.

Stream Watch

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.

The NC Stream Watch Coordinator vacated the position and the contract expired without any action. A new Coordinator has been hired and a new contract is being developed.

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

Status: New Contract Pending
Estimated Cost: \$7,000 (contract with the Division of Water Resources)
Funding Source: EPA funds for FY 2003
Leverage: Pending

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 has assisted with public meetings and other activities within the APNEP area. The Office of Conservation and Community Affairs is working to identify and conserve 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 requested \$6,000 to assist with conservation planning in the APNEP area. The FY 2003 Work Plan budgeted \$2,000 to support OCCA activities. To support this

new request, \$4,000 allocated in the FY 2004 Work Plan as “Other Projects” will be used to support this project.

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

Status: Pending (Project to be completed by December 31, 2004)
Estimated Cost: \$6,000 (\$2,000 from FY 2003 + \$4,000 from FY 2004)
Funding Source: EPA funds for FY 2003 & FY 2004
Leverage: ~ \$58,000

Demonstration Projects with Virginia (Oil Recycling)

In support of the MOA, Virginia and North Carolina have facilitated the development of a Virginia and North Carolina Projects Team. The Projects Team is a consortium of representatives from federal, state and local natural resource agencies and organizations with the purpose of developing coordinated and cooperative bi-state initiatives, projects and programs. The initiatives currently being pursued focus on alleviating the stress to water quality, habitat and other natural resources in our shared watersheds as agreed to by the DENR, the Virginia Secretary of Natural Resources, and the Virginia Department of Conservation and Recreation.

A partnership of Cooperative Extension Service, local Soil and Water Conservation Districts, Albemarle-Pamlico National Estuary Program, the Albemarle Resource Conservation and Development Council, and the Virginia Department of Conservation and Recreation have initiated a bi-state program to offer farmers in five counties in North Carolina and select counties and independent cities within the Chowan and Pasquotank River Basins of Virginia an opportunity to recycle their used oil in a safe and environmentally sound manner on their farms. The project distributed 125 double-walled 275-gallon containers and there have been at least two on-site pickups of oil totaling approximately 20 thousand gallons, with additional pickups to be scheduled.

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

Status: In progress (project will continue without addition funding)
Estimated Cost: \$12,000
Funding Source: EPA funds for FY 2003
Leverage: Pending

Support of 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. While the FY 2003 work plan budgeted \$1,000 of EPA FY 2003 funds for support of this program, this financial support has not been required. **Funds will be reallocated.**

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

Status: On-going
Estimated Cost: \$1,000 - **Funds will be reallocated.**
Funding Source: In-kind support from DENR
Leverage: N/A

Support of Coastal Non-point Source Pollution Program

North Carolina's Coastal Non-point Source Pollution Program 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 held a series of Clean Water Contractor workshops in January and February 2003. 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 funds for support of this program. A brochure and materials from the workshop were provided to the EPA in March 2003 as part of a Work Plan Update Report. Approximately \$400 has been spent to date. **The remaining funds will be reallocated.**

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

Status: Complete
Estimated Cost: \$1,000 (**\$400 to project, \$600 to be reallocated**)
Funding Source: EPA base funds for FY 2003, in-kind support
Leverage: \$4,955 for Clean Water Contractor project in FY 2003

FerryMon - Monitoring of Water Quality by NC Ferry System

APNEP partnered with the NC Department of Transportation (NC DOT), Duke University, University of North Carolina, and others to test the monitoring ability of State Ferries to act as platforms for water quality monitoring. 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. More information on the FerryMon project is available at <http://www.ferrymon.org/>

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

Status: Complete
Estimated Cost: \$40,000
Funding Source: EPA funds for FY 2003
Leverage: Pending

Water Quality Monitoring

APNEP assisted 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/>

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

Status: Complete
Estimated Cost: \$40,000
Funding Source: EPA funds for FY 2003
Leverage: Pending

Submerged Aquatic Vegetation (SAV) Monitoring

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

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

Status: In Progress
Estimated Cost: \$6,000

Funding Source: Unencumbered EPA funds from previous years as necessary. (CE-9764802)
Leverage: See SAV in Ongoing Projects

Comprehensive Monitoring Plan

The APNEP Science Coordinator is coordinating the activities associated with development of the monitoring strategy. The Science Coordinator has reviewed work efforts previously completed by the program and has conducted meetings with other DENR agency staff to gather information on existing and proposed monitoring programs and projects. The APNEP Science Coordinator, STAC and DENR agency staff will be addressing this task in FY 2005.

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

Status: In Progress
Estimated Cost: \$3,000
Funding Source: Unencumbered EPA funds from previous years as necessary. (CE-9764802)
Leverage: Pending

Conservation Assessment for the Albemarle-Pamlico Region

The NC Natural Heritage Program conducted a conservation assessment to identify each habitat type of conservation concern within the region of study. For each of these habitat types, they identified a group of animals (indicator guilds) and interpreted diversity and abundance of the associated guild members in a given area as an indicator of both ecosystem quality and landscape integrity. The project was completed in December 2003.

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

Status: Complete
Estimated Cost: \$12,000
Funding Source: Unencumbered EPA funds from previous years
Leverage: The results of this work have the potential to provide significant leverage for conservation actions in the APNEP region; however, these will be difficult to track.

Estuary Live – National Estuaries Day 2002

On October 3rd and 4th, 2002 (FY 2003) 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 were connected to the trips using Internet-connected computers 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 was used for production of the Neuse River video. The remaining \$10,000 will be used for the next national Estuary Live event and to develop additional educational materials.

❖ 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.”*

Status: Complete
Estimated Cost: \$15,000
Funding Source: Unencumbered EPA funds from previous years as necessary. (CE-9764802)
Leverage: [Pending for FY 2004](#)

Estuary Live – North Carolina

The APNEP partnered 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 connected to the trips using Internet-connected computer and free software. 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. [The FY 2003 work plan budgeted \\$6,000 for support of this project. The remaining \\$4,000 will be used to support Estuary Live activities in FY 2005.](#)

❖ 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.”*

Status: Complete
Estimated Cost: \$6,000
Funding Source: Unencumbered EPA funds from previous years
Leverage: Pending for FY 2004

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. More information can be found at the Project Wet web site at http://www.ncwater.org/Education_and_Technical_Assistance/Project_WET/. The Division of Water Resources (DWR) administrates the program in North Carolina. APNEP had contracted with DWR to conduct a series of five Project WET workshops (one per river basin) by October 1, 2003, but the program coordinator resigned and no work was conducted under the contract. APNEP has contracted with the Partnership for the Sounds to conduct 4 workshops (the fifth workshop was conducted separately by the NC Division of Parks and Recreation). The FY 2003 work plan budgeted \$8,000 of EPA funds for FY 2003 for support of this project; the new contract is for \$6,360. The project will be completed by the end of FY 2004. **The remaining \$1,640 will be reallocated.**

❖ 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.”*

Status: In Progress
Estimated Cost: \$6,360 (**\$1,640 will be reallocated**)
Funding Source: EPA base funds for FY 2003
Leverage: Pending

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. 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. A portable display unit has been purchased (**display unit cost \$1777.27**) and the display will be designed soon.

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

Status: In Progress
Estimated Cost: \$3,000 (approximately \$1,000 remaining)
Funding Source: EPA base funds for FY 2003
Leverage: N/A

Web Site Redesign

The APNEP web site was redesigned to increase the Program's visibility and facilitate a greater level of information transfer. The web site will provide information on 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 "www.apnep.org" has been acquired and the new version went online June 1, 2003. Minimal costs are associated with this task.

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

Status: Complete
Estimated Cost: Minimal or no costs will be associated with this task.
Funding Source: N/A
Leverage: DENR support

Newsletter – *The Beacon*

The APNEP newsletter, *The Beacon*, will be published four times 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 also carries *The Beacon*.

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

Status: On-going project
Estimated Cost: \$4,000
Funding Source: EPA base funds for FY 2003
Leverage: DENR support

Brochure

An APNEP flyer was developed to provide information about the mission and goals of the Albemarle-Pamlico National Estuary Program in November 2003. The FY 2003 work plan budgeted \$1,000 of EPA funds for FY 2003 for support of this project.

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

Status: Complete (will need updating again in FY 2005)
Estimated Cost: \$1,000 (Approximately \$200 used)
Funding Source: EPA base funds for FY 2003
Leverage: DENR support

Albemarle-Pamlico Estuary Conference

See description of Albemarle-Pamlico Estuary Conference under Ongoing Projects

NEP National Campaign

APNEP is participating in the national campaign "What's An Estuary?". The project is being coordinated by the Association of National Estuary Programs and collectively developed by NEPs around the nation. Additional information can be found at www.whatsanestuary.com. The FY 2003 work plan budgeted \$15,000 of unencumbered EPA funds from previous years for support of this project.

Status: In Process
Estimated Cost: \$15,000
Funding Source: Unencumbered EPA funds from previous years
Leverage: N/A

Other Projects (FY 2003)

The APNEP worked to develop partnerships to implement projects that support the mission of the APNEP and implementation of the CCMP.

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

Estimated Cost: \$80,000
Funding Source: Unencumbered EPA funds from previous years
(CE 9764802)

The following is a summary for each project:

Project Title: ANEP/NEP/EPA Conference Sponsor September '03 Meeting
Description: Support of September 2003 meeting of EPA & ANEP
River Basin: N/A
Lead Agency: Association of National Estuary Programs
Partners: EPA, NEPs
Funding: \$4,000
Leverage: N/A
Ends: November 28, 2003
Status: Complete

Project Title: Conference Sponsor for National Marine Educators Association Meeting
Description: Funding for Plenary Session at Conference
River Basin: N/A
Lead Agency: Mid-Atlantic Marine Education Association
Partners: Various
Funding: \$500
Leverage: N/A
Ends: September 1, 2003
Status: Complete

Project Title: Riparian Corridor Conservation Design Plan for the Upper Tar River
Description: Riparian Corridor Conservation Design Plan and Maps
River Basin: Tar-Pamlico
Lead Agency: Tar River Land Conservancy
Partners: DENR, CGIA
Funding: \$18,700
Leverage: Pending
Ends: December 31, 2003
Status: Complete

Project Title: Publication of Document: *Drowning the North Carolina Coast: Sea-Level Rise and Estuarine Dynamics*
Description: Publish and distribute the document: *Drowning the North Carolina Coast: Sea-Level Rise and Estuarine Dynamics* by Stanely R. Riggs of East Carolina University. This document is an informational guide to give local governments, community planners and managers and property owners a better understanding of the estuarine shoreline issues as related to development.
River Basin: All
Lead Agency: NC Sea Grant

Partners: NC Division of Coastal Management, East Carolina University
Funding: \$ 4,595
Leverage: \$17,395
Ends: April 1, 2004
Status: Complete

Project Title: Southern Watershed Area Management Program (SWAMP)
Description: Support of SWAMP regional planning and resource protection efforts including Currituck and Camden Counties, NC. SWAMP is a collaborative effort among the cities of Chesapeake and Virginia Beach, the Hampton Roads Planning District Commission (HRPDC) and the Virginia Coastal Program focused on protecting the significant natural resources in the Southern Watershed Area while allowing for continued economic and residential development.

River Basin: Pasquotank, Chowan
Lead Agency: Hampton Roads Planning District Commission
Partners: Currituck and Camden Counties, NC, Cities of Chesapeake and Virginia Beach, VA
Funding: \$15,000
Leverage: Pending
Ends: December 31, 2004
Status: In Progress

Project Title: NC Division of Forest Resources (DFR) Forestry BMP Manual Revision
Description: The DFR will produce and distribute (via workshops and direct mail-out) the Manual to select forest operators and forestland owners located in the five APNEP River Basins.
Lead Agency: NC Division of Forest Resources
Partners: Division's Forestry Technical Advisory Committee, NC Division of Water Quality
Funding: \$15,000
Leverage: Pending
Ends: September 30, 2006
Status: In Progress

Project Title: North River Oyster Reef Restoration
Description: Create over two acres of oyster reefs, seeded with 300,000 juvenile oysters at North River, and to facilitate a public outreach program promoting the merits of oyster habitat through training, hands-on participation, and educational materials.
River Basin: Neuse
Lead Agency: NC Coastal Federation
Partners: NC Division of Marine Fisheries, Carteret Community College
Funding: \$9,225

Leverage: Pending - estimated at \$117,785
Ends: September 30, 2004
Status: In Progress

Project Title: Coastal Habitat Protection Plan Outreach Activities
Description: Development and implementation of a public participation program with the intent of engaging citizens in the draft Coastal Habitat Protection Plan recommendations
Lead Agency: Division of Coastal Management
Partners: DENR Office of the Secretary, Division of Marine Fisheries, NC Coastal Federation
Funding: \$ 5,000
Leverage: \$91,000
Ends: October 31, 2004
Status: In progress

IV. WATERSHED DEMONSTRATION PROJECTS

Watershed demonstration projects are designed to 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 made determinations on projects and funding levels.

- ❖ 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."*

Current Projects

Funds from a previous EPA grant (CE- 9764802) have been dedicated to help support a new round of watershed demonstration projects. The Regional Councils began selecting projects and allocating funding levels in June 2003 and recently completed selections in May 2004. 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.

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.

The following is a summary for each project:

Neuse Regional Council

Project Title: Low Impact Development Demonstration and Education for the Upper Neuse River Basin

Description: Demonstrate the effectiveness of Low Impact Development techniques in reducing stormwater runoff

Lead Agency: North Carolina State University Water Quality Group

Partners: DENR Division of Water Quality, NCSU Biological & Agricultural Engineering Dept., NCSU College of Design, Habitat for Humanity

Funding: \$25,000

Leverage: Pending

Ends: December 31, 2005

Status: In Progress

Neuse and Tar-Pamlico Regional Councils

Project Title: Citizens' Oyster Gardening Program for North Carolina

Description: Demonstrate a way citizens can assist in restoring native oyster numbers and their ecological functions to the estuaries

Lead Agency: Carteret Community College

Partners: DENR Division of Marine Fisheries, NC National Estuarine Research Reserve, NC Division of Coastal Management, NC Shellfish Growers Association

Funding: \$31,946

Leverage: Pending

Ends: September 30, 2005

Status: In Progress

Tar-Pamlico Regional Council

Project Title: Landscape Demonstration Project for Runoff Control and Public Education at the North Carolina Estuarium

Description: Plan and install landscaping on the Estuarium grounds to demonstrate the benefits of native vegetation and water conservation.

Lead Agency: Partnership for the Sounds

Partners: NC Cooperative Extension Service Master Gardener Program, East Carolina University

Funding: \$6,100

Leverage: Pending

Ends: April 30, 2004

Status: Complete

Tar-Pamlico Regional Council

Project Title: Bunn High School Bio-Retention Area

Description: Construction of a bio-retention area that will collect and treat storm water on-site to be monitored by students and faculty at Bunn High School.

Lead Agency: Franklin County Soil and Water District

Partners: Bunn High School Environmental and Agricultural Science classes and Vocational Classes, Franklin County Center of the Cooperative Extension Service
Funding: \$9,600
Leverage: Pending
Ends: December 21, 2004
Status: In Progress

Tar-Pamlico Regional Council

Project Title: Stormwater Wetland at Pactolus Elementary School
Description: Plan and create a stormwater wetland on a parcel located adjacent to Pactolus Elementary School in Pitt County, NC. The wetland will capture runoff from the school's parking lot and roof drains, which presently empties into Grindle Creek as untreated stormwater runoff. The site will educate local students about wetlands and serve as an outdoor classroom.

Lead Agency: Pitt County Planning Department
Partners: Pitt County School Board, Cooperative Extension, Coastal Land Trust
Funding: \$31,200
Leverage: Pending
Ends: September 30, 2005
Status: In Progress

Roanoke and Chowan Regional Councils

Project Title: Protecting Water Quality by Using Bridgemat Crossings on Forestry Operations

Description: Provide and promote the use of "bridgemats" in the two river basins.

Lead Agency: NC Division of Forest Resources
Partners: NC Division of Water Quality, DENR
Funding: \$24,000
Leverage: \$47,000
Ends: September 30, 2005
Status: Pending

Roanoke and Chowan Regional Councils

Project Title: Bennett's Millpond Demonstration Project

Description: Contract Pending

Lead Agency: Edenton-Chowan County Schools
Partners: Chowan County Recreation Department, Chowan County
Funding: \$25,000
Leverage: Contract Pending
Ends: Contract Pending
Status: Contract Pending

Chowan Regional Council

Project Title: Town of Gatesville Water Quality Project
Description: Demonstrate feasibility and effectiveness of monitoring the mouth of two selected creeks to determine pollution contribution.
Lead Agency: Albemarle RC&D Council
Partners: Town of Gatesville, Gates Soil & Water Conservation District, NC Department of Transportation, Natural Resources Conservation Service, Citizens
Funding: \$50,000
Leverage: \$285,000
Ends: September 30, 2005
Status: Complete.

Pasquotank Regional Council

Project Title: Landscape Runoff / Water Quality Demonstration Project at the NC Aquarium on Roanoke Island
Description: Demonstrate feasibility and effectiveness of stormwater collection and use in landscaping at the Aquarium
Lead Agency: The NC Aquarium Society
Partners: North Carolina State University, DENR
Funding: \$35,000
Leverage: Pending
Ends: February 1, 2005
Status: Pending

Pasquotank Regional Council

Project Title: Demonstration Project on the Effectiveness of *Phragmites australis* Removal From the Brackish Marshes of the Albemarle Sound
Description: To work with multiple agencies to consolidate existing research and management practices on the removal of *Phragmites australis* from brackish marshes
Lead Agency: NC Division of Coastal Management – Coastal Reserves
Partners: Elizabeth City State University, U.S. Fish and Wildlife Service, Mackay Island National Wildlife Refuge, NOAA, Center for Coastal Fisheries and Habitat Research, Dare County Extension, The Nature Conservancy
Funding: \$15,000
Leverage: Pending
Ends: September 30, 2004
Status: In Progress, Workshop scheduled for August 25, 2004.

ONGOING PROJECTS

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 production of an environmental progress report. These topics had been identified in the previous Implementation Reviews as areas where NEPs faced challenges, or areas that would assist in meeting the Federal Government Performance and Results Act (GPRA) goals.

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

CCMP Implementation Tracking System

In FY 2001, EPA provided the APNEP with \$20,000 in supplemental funds to address challenges identified by EPA in the 1999 Biennial Review. These funds were designated to 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.

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.

APNEP staff has worked with the Charlotte Harbor NEP to adapt their current tracking system to meet APNEP needs. The APNEP Science Coordinator has taken a lead role in the development of this Microsoft Access[®] database. See the Implementation Review section for additional information.

An integral aspect of the new tracking system is the development of another database to track natural resource and habitat restoration activities. This database will track restoration efforts in the APNEP region and link individual efforts to their respective CCMP management action. The APNEP Restoration Specialist has taken a lead role in the development of this Microsoft Access[®] database. This database 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).

Status: In Progress
Current Cost: Staff Time
Funding Source: EPA supplemental funds, (CE- 9764802)
Leverage: N/A
Partners: Charlotte Harbor NEP, Ecosystem Enhancement Program,
NC DENR, VA DCR, NC CGIA

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. An additional \$6,000 was allocated in the FY 2003 Work Plan by the Coordinating Council from remaining funds from grant, CE-9764802.

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 NC. 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 has partnered 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.

Status: In Progress
Current Cost: \$22,000
Funding Source: EPA supplemental funds 2000, (CE- 9764802)
Leverage: Pending (~70,000)
Partners: NC Division of Marine Fisheries, US Fish and Wildlife Service, Elizabeth City State University and the NC Coastal Nonpoint Source Program, NC Division of Water Resources.

In FY 2005 APNEP will continue to participate in this project as the mapping area is expanded. The SAV workgroup is currently developing the plans for the next round of flights. FY 2005 funds (\$20,000) will be used to support this next phase. Also see Projects for FY 2005 Projects.

II. 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 to create 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.”*

Status: In Progress (Current contract expires September 30, 2004)
Estimated Cost: \$75,000 encumbered under current contract
Funding Source: EPA dedicated funds for project
Leverage: Pending

III. APNEP PROGRAM ADMINISTRATION

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.

Presently, the staff consists of the program office in Raleigh, with the Director, Science Coordinator, and Restoration Specialist. A NC Watershed Field Representative has offices in Raleigh and Washington; the APNEP public involvement office also in Washington houses the Public Involvement Coordinator. The APNEP also has two contract employees: the Citizens' Monitoring Network Coordinator at East Carolina University in Greenville, and the Virginia Watershed Field Representative in Suffolk. For more detail see Administration and Financial section.

Status: In Progress - Ongoing (See Administrative and Financial Section)
Estimated Cost: Approximately \$249,000 will be needed for administration and implementation of the APNEP and the CCMP.
Funding Source: EPA funds for FY 2005

IV. VIRGINIA WATERSHED FIELD COORDINATOR

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 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 for at least 20 hours per week. 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.*

Status: In Progress - Ongoing
Estimated Cost: \$30,000
Funding Source: EPA funds for FY 2005

V. CITIZENS' MONITORING NETWORK

The APNEP Citizens' Monitoring Network (CMN) 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 CMN 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 CMN office at ECU where staff compiles the information and enters the data into reporting form for citizen and government agency use. Information is available to the public on the APNEP website at <http://www.apnep.org/> and at <http://www.ecu.edu/icmr/cwqmp>. This is a very popular program and it continues to be expanded.

Operation of the APNEP Citizens' Monitoring Network (including Coordinator, equipment, supplies, office and lab space and indirect costs) will be continued by extending the contract with East Carolina University (\$55,902).

- ❖ 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.”*

Status: In Progress - Ongoing
Estimated Cost: Continued operation of the Citizens' Water Quality Monitoring Program (including Coordinator, equipment, supplies, lab space and indirect costs) will require \$55,902 (via contract with East Carolina University).
Funding Source: EPA funds for FY 2005

VI. “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 Smithfield Farms, the NC Attorney General’s Office and NC DENR on topics of interest. Little progress has been made and support intentions are unclear.

Status: Ongoing
Estimated Cost: No cost
Funding Source: N/A

VII. OTHER PROJECTS

GIS Outreach and Services

The APNEP had contracted with the NC Center for Geographic Information and Analysis (CGIA) to provide GIS support and training as well as accessible and affordable GIS data to local governments for planning and educational purposes. The contract expired on May 31, 2003 and could not be renewed due to NC DENR contract requirements. APNEP Staff have developed a new contract for GIS support. This support is essential for training new staff and the development of GIS applications for the APNEP web site.

Status: In Progress (New Contract)
Estimated Cost: \$18,000
Funding Source: Remaining from previous NC CGIA contract, EPA funds (CE- 9764802)

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 “Treasures of the Albemarle-Pamlico Region” 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.

Staff are reviewing the final draft document and working with NC DENR Public Affairs to print the document. \$11,000 remains in the project budget for printing. The document should be ready for distribution in August, 2004.

Status: In Progress
Estimated Cost: \$11,000
Funding Source: EPA funds from previous years
Leverage: DENR staff time

North Carolina – Virginia Shared Resources Forum

A forum for state resource agencies and local governments in the Roanoke, Chowan and Pasquotank river basins will be held 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 funds from previous years. The current strategic planning exercise has identified a Governor's agreement as a possible goal for the program. 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."*

Status: Ongoing
Estimated Cost: \$1,000
Funding Source: EPA funds from previous years (CE- 9764802)
This item was budgeted in the FY 2003 Work Plan.

Albemarle-Pamlico Estuary Conference

An APNEP conference will be held to bolster support for the Program and review implementation of the CCMP and other issues and activities in the APNEP region. This conference will be scheduled for November 17 and 18, 2004 in New Bern, NC. Planning for this event is underway.

- ❖ 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."*

Status: Planning
Estimated Cost: \$7,000 (CE- 9764802) , and reallocations.
Funding Source: This project will use EPA funds allocated in the FY 2002 work plan for the conference. APNEP staff will look for sponsors as well.

PROJECTS FOR FY 2005

I. IMPLEMENTATION PLAN

New projects for FY 2005 will continue to support the implementation strategy as outlined in the CCMP and support program reform.

- ❖ These actions 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."*

Program Administration (Ongoing)

For more detail see Administration and Financial, and Ongoing Projects sections.

Status: Ongoing (See Administrative and Financial Section)
Estimated Cost: \$249,000
Funding Source: EPA funds for FY 2005

Watershed Field Coordinator - Virginia

For more detail see Ongoing Projects section.

Status: In Progress - Ongoing
Estimated Cost: \$30,000
Funding Source: EPA funds for FY 2005

Councils And Implementation Support (Ongoing)

The Key element of the CCMP's Implementation is active citizen participation. APNEP staff, current council members and interested parties have been participating in a strategic planning process to assess Program effectiveness and structure. A strategic plan will be effective in identifying strengths and weaknesses of the current program and in developing program goals for the future. In the coming months, the APNEP citizen councils will move to a new structure. The format and details of this new organizational structure are still being formalized and should be in place at the beginning of FY 2005. The current councils and interested parties met on April 8, 2004 for an open discussion of the issues with the current structure. Additional meetings are being planned for the coming months.

Status: Ongoing Project
Estimated Cost: \$6,000
Funding Source: EPA funds for FY 2005

- ❖ 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."*

STAC Workshops (New)

The Science & Technical Advisory Committee (STAC) will sponsor at least two issue-specific workshops in FY 2005. The workshop topics will be based on proposals from individual STAC members and approved by the STAC membership. Because the expertise represented on the STAC is diverse by design, we anticipate that at least one STAC member will be qualified to be a panelist for each workshop. Small workshops and the resulting brief reports is a cost-effective means of gaining and transmitting that knowledge to policy makers and other stakeholders in the APNEP community.

Status: New
Estimated Cost: \$8,000
Funding Source: EPA funds for FY 2005

Other Projects (New)

APNEP will 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.”*

Status: New Project
Estimated Cost: \$14,956
Funding Source: EPA funds for FY 2005

II. VITAL HABITATS PLAN

New projects for FY 2005 will continue to support the vital habitats strategy as outlined in the CCMP.

- ❖ These actions support the CCMP’s Vital Habitats Plan goal: *“Conserve and Protect Vital Fish and Wildlife Habitats and Maintain the Natural Heritage of the Albemarle-Pamlico Sounds Region.”*

NC Conservation Assessment for the Albemarle-Pamlico Region, Phase II

The NC Natural Heritage Program will work to identify owners of lands which contain Significant Natural Heritage Areas identified during the Albemarle-

Pamlico Estuarine Study from 1989 to 1993; and to meet with the landowners to inform them of ecological significance of their lands and to encourage their wise stewardship of their properties. Project builds upon FY 2003 project.

Where appropriate, Natural Heritage staff will:

- conduct additional site investigations to clarify and document the natural heritage values of the property;
- work with the landowners to establish registry agreements under the Nature Preserves Act;
- work with conservation partners to establish more permanent protection; and
- share the natural heritage information with conservation partners that may be able to implement permanent protection for the natural areas.

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

❖ This work will help to implement Objective B: *“Promote the responsible stewardship, protection and conservation of valuable natural areas in the A/P Sounds region.”* and Objective C: *“Maintain, restore and enhance vital habitat functions to ensure the survival of wildlife and fisheries by protecting valuable natural areas and maintaining vital habitat.”*

Status: New
Estimated Cost: \$12,000
Funding Source: EPA funds for FY 2005

Submerged Aquatic Vegetation (SAV) Mapping (on-going)

In FY 2005 APNEP will continue to participate in this project as the mapping area is expanded. The SAV workgroup is currently developing the plans for the next round of flights. See Submerged Aquatic Vegetation (SAV) Monitoring in Ongoing Projects for more information.

Status: Ongoing (See Ongoing Projects for more information)
Estimated Cost: \$20,000
Funding Source: EPA funds for FY 2005
Leverage: Pending

Conservation Assessment for the Chowan River Basin in Virginia

The APNEP will work with the Virginia Heritage Program to conduct a conservation assessment to identify each habitat type of conservation concern within the region of study. The goal of this project is to improve our knowledge of the conservation needs of Virginia's Chowan River basin's natural heritage

resources and develop better conservation targets. Virginia Heritage Program will review and update the documentation collected for natural heritage resources of the region, working to:

- Update digital representations of documented EO locations
- Refine representations of imprecisely known occurrences
- Improve the quality of conservation site boundaries
- Identify data holes regarding natural heritage resources and critical locations on the Chowan landscape.

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

Status: New
Estimated Cost: \$15,000
Funding Source: EPA funds for FY 2005

Wetlands Assessment and Mapping for the Chowan River Basin in Virginia
APNEP will partner with Virginia Department of Conservation and Recreation, the Virginia Institute of Marine Sciences, and others to conduct a wetlands assessment in the Chowan River Basin. This process will lead to the development of GIS data layers of the various wetland habitats.

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

Status: New
Estimated Cost: \$30,000
Funding Source: EPA funds for FY 2005

III. 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' Monitoring Network

Staff will continue to demonstrate the utility of the Citizens' Monitoring Network (see ongoing projects) 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.

Status: On-going Project
Estimated Cost: \$56,000
Funding Source: EPA funds for FY 2005

Hoop Pole Creek Water Quality and Habitat Restoration Project

APNEP will partner with North Carolina Coastal Federation (NCCF) to assist in a restoration and education project at Hoop Pole Creek in Carteret County, NC. This project will be part of a comprehensive water quality and habitat restoration project planned for the site. Elements of the comprehensive project include oyster habitat restoration, a stormwater culvert removal and retrofit project to achieve water quality improvements, and student stewardship and educational activities related to the restoration efforts. Financial support from the APNEP grant program will be used for restoration and educational purposes. A portion of the funds will be used for student-supported oyster restoration activities in Hoop Pole Creek adjacent to the stormwater project. NCCF will work with students within the existing research sanctuary reef at Hoop Pole, and efforts may involve bagging oysters, setting oysters bags in remote-set tanks, and spreading seeded oyster shell to enhance oyster populations and recruitment onto the reefs. A portion of the grant will also support in-class curriculum activities, and expenses related to two student field trips to the site for one class (30 students). Funds will also be used to develop an educational video that will encompass the culvert removal, implementation of an innovative stormwater system, water quality monitoring activities, educational and restoration field trips and associated activities. Educational efforts associated with the restoration projects will reinforce the connections between stormwater runoff, pollution of the creeks and sounds, and the health of the estuarine ecosystem.

Partners in this project will include: teachers and students from an area high school class, who will be involved in oyster restoration and educational activities; Hoop Pole Creek Advisory Group, who will offer technical and volunteer field support; an area oyster grower and harvester (J&B Aquafood), who will work with the students on remote-setting of oyster cultch with larvae; and NCNERRS (Rachel Carson Reserve), who will provide technical assistance in the production of the educational video and various field activities.

- ❖ This project supports the CCMP's Stewardship Plan: Management Action 3: *"Enhance and heighten local public involvement in issues affecting the estuary."*

Status: New
Estimated Cost: \$20,000
Funding Source: EPA funds for FY 2005

Teacher Institute

APNEP will again partner to offer a week-long teacher training institute at the Trinity Center in Salter Path, NC. Approximately 25 teachers 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 on estuary and water resources.

- ❖ 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.”*

Status: New
Estimated Cost: \$25,000
Funding Source: EPA funds for FY 2005

Estuary Live!

APNEP will again partner with the NC National Estuarine Research Reserve to offer interactive field trips for students from North Carolina and throughout the country. See “Estuary Live – North Carolina” in FY 2003 Work Plan Projects section for more information.

- ❖ 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.”*

Status: Ongoing Project
Estimated Cost: \$4,000
Funding Source: EPA funds for FY 2003 (See FY 2003 Work Plan Projects)

Under Served Communities – Estuarine Education

APNEP will work with various partners to develop a pilot program in two elementary schools (grades K-4) in the APNEP region to assist students and their families in learning new skills and developing new abilities to enhance their understandings and connections to the estuary and the environment.

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

Status: New
Estimated Cost: \$8,000
Funding Source: EPA funds for FY 2005

Newsletter – *The Beacon*

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

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

Status: Ongoing Project
Estimated Cost: \$1,685
Funding Source: EPA funds for FY 2005

Web Site (www.apnep.org)

The APNEP web site will continue to 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.*”

Status: Ongoing Project
Estimated Cost: \$100
Funding Source: EPA funds for FY 2005

ADMINISTRATION AND FINANCIAL

I. APNEP PERSONNEL

APNEP staff are responsible for the coordination, planning and successful completion of APNEP functions including 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), Science Coordinator (Dean Carpenter), and Restoration Specialist (Kelly Williams). A NC Watershed Field Representative (Boyce Hudson) has offices in Raleigh and Washington; the APNEP public involvement office also in Washington houses the Public Involvement Coordinator (Joan Giordano). The APNEP also has two contract employees: the Citizens' Monitoring Network Coordinator (Allen Clark) in Greenville, and the Virginia Watershed Field Representative (Noah Hill) in Suffolk.

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 is currently developing a CCMP Implementation Tracking System that will improve the Program's ability to successfully evaluate progress made towards implementing all CCMP management actions.

Overall administration costs for FY 2005 are estimated at approximately \$ 248,044 and includes salaries, fringe, longevity pay, rent, supplies, equipment, and DENR indirect costs.

Program Director

The Program Director administrates and coordinates 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, provides staff support to the APNEP Councils, and represents the APNEP at local, state, regional and national meetings.

Personnel: Bill Crowell will continue in this role. Mr. Crowell has been the Director since June 2002.

Funding: Approximately \$77,000 includes salary, fringe, medical, retirement, supplies, equipment, indirect costs

Funding Source: EPA funds for FY 2005

Public Involvement Coordinator

The Public Involvement Coordinator supports public relations and knowledge concerning issues relating to the Albemarle-Pamlico region; facilitates the implementation of the CCMP; develops and implements educational and outreach programs; promotes dialogue between local government officials and private citizens; and provides liaison responsibility for the Citizens' Monitoring Network. This position also provides valuable staff support to the Regional Councils and Coordinating Council.

Personnel: Joan Giordano will continue in this role. Ms. Giordano has served in this role since 1987.

Funding: Approximately \$68,000 includes salary, fringe, medical, retirement, supplies, equipment, and indirect costs. Funding also includes approximately \$10,000 for annual rent at the DENR Washington Regional Office for two offices and common space.

Funding Source: EPA funds for FY 2005

Science Coordinator

The Science Coordinator assists the Program Director with administration and coordination of the CCMP. The new position helps 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 assists in the management of grants and associated contracts, and provides staff support to the APNEP Councils.

Personnel: Dean Carpenter began in this role in November 2003.

Funding: Approximately \$59,000 includes salary, fringe, medical, retirement, supplies, equipment, and indirect costs.

Funding Source: EPA funds for FY 2005

Restoration Specialist /Watershed Field Representative

The Restoration Specialist /Watershed Field Representative assists 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.

Personnel: Kelly Williams began in this role in October 2003.

Funding: Approximately \$44,000 includes salary, fringe, medical, retirement, supplies, equipment, and indirect costs.

Funding Source: EPA funds for FY 2005

Watershed Field Coordinator (NC)

The Watershed Field Coordinator (NC) provides coordination and support to local governments and state agencies to enhance CCMP implementation. This position provides an essential function as an APNEP liaison to local governments and state agencies. This position splits time between the Raleigh and Washington DENR Regional Offices.

Personnel: Boyce Hudson will remain in this role. Mr. Hudson began in July 2002.

Funding: Approximately \$73,000 includes salary, fringe, medical, and retirement. Also includes approximately \$5,000 for annual rent at the DENR Washington Regional Office for office and common space.

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

Watershed Field Coordinator (VA)

See description under Ongoing Projects

II. GRANTS TO LOCAL ENTITIES

The Albemarle-Pamlico NEP let numerous contracts in FY 2004 in order to accomplish the tasks presented in the FY 2003 and FY 2004 Work Plans. These items are discussed in the Goals and Accomplishments, and the Ongoing Projects sections of this report. Several FY 2004 Work Plan projects will be initiated in the following months. APNEP was unable to provide the funds due to the delay in receipt of funds from the EPA in FY 2004.

Additionally, funds from a previous EPA grant ([CE- 9764802](#)) have been dedicated to help support a series watershed of demonstration projects. The Regional Councils have selected demonstration projects from the proposals and allocated funding to the various projects. The total funds available for the 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 in the spring of 2003. The requests for Chowan and Roanoke Regional Councils were re-posted in the fall of 2003. Several contracts will require an extension of the funds available to the APNEP under [CE-9764802](#) until September 30, 2006.

The following table provides an overview of all active grants to local entities and grants completed since October 1, 2003.

GRANTS TO LOCAL ENTITIES

Project Title	Funded Amount	Project Leader	Purpose	Deliverables	Completion Date	Status
Watershed Coordinator (VA)	\$25,000	VA. Dept. Conservation & Recreation	Fund Watershed Coordinator in VA-NC Shared river basins	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	\$56,000	East Carolina University	Outreach / Monitoring	Program Newsletters Reports Database	Ongoing	In Progress
Strategic Planning	\$32,000	NCSU	Program Evaluation	Meetings Report	June 2004	In Progress
DENR –Office of Conservation & Community Affairs	\$5,500	DENR	Open Space Planning in AP Region	Meetings Maps Report	December 2004	In Progress
Teacher Institute	\$25,000	Environmental Education Fund	Develop and Implement a Teacher Institute for 25 teachers	Week long Institute Report	July 2004	Complete
Water Quality Monitoring Platforms	\$40,000	NC DENR – Div. Water Quality	Support of real –time water quality monitoring platforms	Monitoring Website	October 2003	Complete
Project Wet	\$7,000	Partnership for the Sounds	Organize five (5) Project WET workshops – one in each basin	Workshops	September 2004	In Progress
Oil Recycling Collection	\$12,000	Albemarle Resource Conservation & Development Council	Oil Recycling and Collection	Oil Recycling and Collection Report Meetings	June 30, 2004	In Progress
ANEP-EPA Conference Support	\$4,000	Assoc. of NEPs	Support of National Conference	Conference Documents	March 2004	Complete
FerryMon	\$40,000	Univ. of North Carolina	Support FerryMon Project in AP Sounds	Monitoring Website	March 2004	Complete

Project Title	Funded Amount	Project Leader	Purpose	Deliverables	Completion Date	Status
Conservation Assessment of AP Region	\$12,000	NC DENR – Natural Heritage Program	Conservation Assessment of AP Region	Report	December 2003	Complete
What's An Estuary?	\$15,000	Assoc. of NEPs	National Campaign for NEPs	Video, Web Site, Documents	March 2004	In Progress
ANEP-EPA Conference Support	\$4,000	Assoc. of NEPs	Support of National Conference	Conference Documents	November 2004	Complete
Conservation Plan	\$18,700	Tar River Conservancy	Conservation Plan for Upper Tar River	Report Maps	December 2003	Complete
Shoreline Erosion Book	\$4,595	NC Sea Grant	Shoreline Erosion Book	Book	April 2004	Complete
SWAMP	\$15,000	Hampton Roads Planning District Comm.	Support of Regional Planning	Meetings Documents	December 2004	In Progress
Forestry BMP Manual	\$15,000	NC Div. Forest Resources	Develop and Distribute a Forestry BMP Manual	Manual Meetings	September 2006	In Progress
Oyster Reef Restoration	\$9,225	NC Coastal Federation	Oyster Reef Restoration Project on North River, Carteret Co., NC	Reef Restoration	September 2004	In Progress
CHHP Outreach	\$5,000	NC Div. of Coastal Management	Support of Coastal Habitat Protection Plan Citizen Outreach Efforts	Documents Meetings Video	October 2004	In Progress
LID Demo Project	\$25,000	NCSU	Low Impact Development Demo	Construction Documentation Outreach	December 2005	In Progress
Citizens Oyster Gardening Demo	\$31,946	Carteret Community College	Citizens Oyster Gardening Demo	Oysters Documentation Outreach	September 2005	In Progress
Estuarium Runoff Demo	\$6,100	Partnership for the Sounds	Runoff Control Demo	Construction Documentation Outreach	March 2004	Complete
Bunn High School Bio-Retention Demo	\$9,600	Franklin Co. Soil & Water District	Construct a Bio-retention Area and Monitoring	Construction Documentation Outreach	December 2004	In Progress

Project Title	Funded Amount	Project Leader	Purpose	Deliverables	Completion Date	Status
Pactolus Stormwater Wetland	\$31,200	Pitt County	Construct a Stormwater Wetland	Construction Documentation Outreach	September 2005	In Progress
<i>Phragmites australis</i> Removal Demo	\$15,000	NC Division of Coastal Management	<i>Phragmites australis</i> Removal Demonstration Project	Research Documentation Outreach	September 2004	In Progress
SAV Mapping	\$22,000	Elizabeth City State University	SAV mapping project	SAV Mapping	September 2004	In Progress
GIS Support	\$18,000	NC CGIA	GIS Support	GIS Services Training	September 2004	In Progress

III. FUNDS LEVERAGED

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 of projects, although in several cases the APNEP was not the primary catalyst for the project.

As the program progresses, the APNEP is working to leverage more funds through partnerships, projects and grants. Discussions with NC DENR have begun to develop a strategy for additional state funds for program activities.

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.

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 developed in response to research funded by the Albemarle-Pamlico Estuary Study. These programs include Clean Water Management Trust Fund, Clean Water State Revolving Fund Program, and the North Carolina Conservation Reserve and Enhancement Program.

FY 2004

It should be noted that the ability of the APNEP to leverage funds by the due date of this report (FY 2004) was severely hampered by the delay in receipt of EPA funding to the program. APNEP did not receive funds for FY 2004 until late May 2004. An estimate of leveraged funds is included for the proposed projects where known. In September, the APNEP will provide a final report to the EPA for all funds leveraged in FY 2004.

FY 2005

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.

IV. FY 2005 ESTIMATED FEDERAL COST SHARE

Federal Funds Budget FY 2005

*The estimated federal budget for FY 2005 funding of \$506,984.00 ***

IMPLEMENTATION PLAN

Program Administration (<i>Ongoing</i>)*	
(staff salaries, fringe, medical, rent, supplies, equipment, indirect)	\$ 248,044
Watershed Field Coordinator (<i>Ongoing- contract with VA DCR</i>)	\$ 30,000
Councils & Implementation Support (<i>Ongoing</i>)	\$ 8,000
STAC Workshops (<i>New</i>)	\$ 8,000
Other Projects (<i>New</i>)	\$ 14,956

VITAL HABITATS PLAN

NC Conservation Assessment Phase II (<i>New</i>)	\$ 12,000
SAV Mapping (<i>Ongoing</i>)	\$ 20,000
VA Conservation Assessment Chowan Basin (<i>New</i>)	\$ 15,000
VA Wetlands Assessment and Mapping (<i>New</i>)	\$ 30,000

STEWARDSHIP PLAN

Citizens' Water Quality Monitoring Program (<i>Ongoing</i>)	\$ 56,000
Hoop Pole Creek Project (<i>New</i>)	\$ 20,000
Teacher Institute (<i>New</i>)	\$ 25,000
Under served Communities Project – Estuarine Education (<i>New</i>)	\$ 8,000
Newsletter – <i>The Beacon</i> (<i>Ongoing</i>)	\$ 1,884
Web Site (<i>Ongoing</i>)	\$ 100

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

Total Proposed For FY 2005 Funds \$ 506,984.00

*** Estimate from EPA on June 2, 2004*

** Includes: Fringe Benefits based on Social Security (7.65 %) & Retirement (5.77 %) of position's annual salary and Medical Insurance Plan rate of \$3,432 per year and Indirect Costs based on 10 % of salary.*

V. NON-FEDERAL COST SHARE (Match for FY 2005)

Summary of In-kind Match Requirement

The North Carolina Department of Environment and Natural Resources intends to provide \$506,984.00 as part of the 1:1 non-federal match.

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) Division of Forest Resources conservation property purchase located within 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 & COMMUNITY AFFAIRS (CCA)</u>				
Dir. CCA	1	76,610	.20	15,322.00
NC Watershed				
Field Coordinator	1	61,400	1.0	61,400.00
Office Assistant	1	35,240	.15	5286.00
<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	14,099.00
<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				274,084
Fringe Benefits*				60,119
TOTAL IN-KIND:				\$ 334,204

* Fringe is based on Social Security (7.65 %) & Retirement (5.77 %) of position's annual salary, plus Medical Insurance Plan rate of \$3,432 per year.

Implementation Match (In-Kind Services Descriptions)

Basinwide Planning Unit

Environmental Specialist III and Environmental Specialist II – These positions work as basinwide planners in DWQ’s Basinwide and Estuary Planning Unit and are 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 for 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 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 Match

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

Project	Location/ River Basin	Purpose	Amount Allocated to Match
Clemmons Educational State Forest Addition	Wake County Neuse River Basin	Land Protection and Restoration	\$172,780

Project Description

The NC Division of Forest Resources (DFR)- Forestry NPS Unit will greatly exceed its Federal FY05 match requirements by utilizing state and local government matching funds (~ \$4,400,000) to protect 353 acres of Wake County riparian lands through fee-simple acquisitions; these lands, adjoining the Clemmons Educational State Forest are located in the Neuse River Basin. Therefore, the DFR is committing to apply \$172,780 of a \$1,775,000 grant obtained from the Clean Water Management Trust Fund towards the APNEP; the land acquisitions will actually occur during Federal FY 2005 (October 1, 2004 to September 30, 2005). These land acquisitions will be used to support NPS Program Initiatives including but not limited to a NPS Education Pavilion and NC River Basin Deck, two (2) forest-water quality education modules delivered by ESF staff, the Urban Forest Watershed Planning and Education Initiative (UFWPE) -- a project that will address water retention through forest management at the urban level, and stream/riparian corridor restoration and enhancement (Strickland Creek). The Education Center/Deck and WQ education modules have been previously grant funded and the UFWPE project funding is pending; funding for the stream restoration will occur after the land acquisitions discussed above have been completed.

SUMMARY OF STATE MATCH

In-kind Positions (Implementation):	\$ 334,204
Clemmons State Educational Forest (Stewardship):	<u>\$ 172,780</u>
TOTAL:	\$ 506,984

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 federal grant, EPA provides 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 meetings called on behalf of the NEPs. These funds cannot be used to pay for travel of Federal employees.

FY 2004

Travel funds during FY 2004 (to June 15, 2004) utilized funds from previous EPA grant funds. Travel for the remainder of FY 2004 will use FY 2004 funds. During FY 2004 APNEP staff attended a number of meetings and conferences. Below is a summary of these activities:

Previous Grant Funds

Personnel	Date	Purpose	Location	Cost*
Crowell/Giordano/ Carpenter	March	ANEP-EPA/NEP National Meeting	Washington, DC	\$ 3,000
Giordano	June	NEP Outreach Meeting	Denver, CO	\$ 1,000
APNEP Staff	October to June	Program Activities	Albemarle – Pamlico Region	\$ 400
Carpenter	June	Chesapeake Bay STAC	Annapolis, MD	\$ 200
Strategic Planning Meeting	April	APNEP Strategic Planning	Greenville, NC	\$400

**estimated funds included equipment rental and food*

FY 2004 Grant Funds

Personnel	Date	Purpose	Location	Cost**
APNEP Staff	June to October	Anticipated Program Activities	Albemarle – Pamlico Region	\$ 800
STAC Members	July	STAC Meeting	Greenville, NC	\$ 2,000
APNEP Staff	September	Restore America's Estuaries	Seattle, WA	\$ 2,000

** projected cost - includes equipment rental and food*