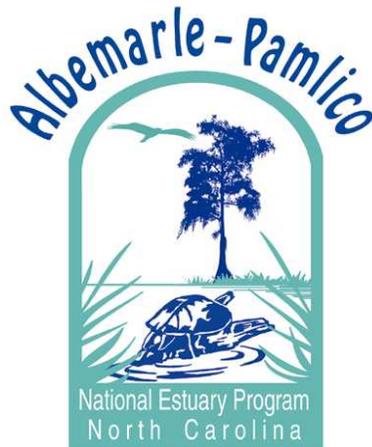


ALBEMARLE-PAMLICO NATIONAL ESTUARY PROGRAM

**Work Plan
for the
Cooperative Agreement Between
The United States Environmental Protection Agency
and
North Carolina Department of Environment and Natural Resources
in
Cooperation with the
Virginia Department of Conservation and Recreation**

October 1, 2011 - September 30, 2012



**Approved by the
APNEP Policy Board on
June 8, 2011
Williamston, NC**

CE-95451210

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INTRODUCTION

Agreement Related Contents of this Document:

- A progress report detailing accomplishments in FY 2011 is provided on pages 12 through 25.
- The FY 2012 Proposed Work Plan items are presented on pages 26 through 28.
- The FY 2012 Proposed Work Plan budget is presented on page 37.
- Administrative and financial information items are presented on pages 29 through 42.

Purpose: The purpose of this cooperative agreement is to provide support to the NC Department of Environment and Natural Resources (NCDENR) 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 (APNEP) Comprehensive Conservation and Management Plan and support for the APNEP Mission to identify, restore and protect the resources of the region.

This work plan and the associated grant application represent an increased funding request for the amount of \$598,800 and a time extension to September 30, 2012 under Cooperative Agreement CE-95451210. It also represents completed or ongoing work under CE-97464802 to September 30, 2011. All work under CE-97464802 will be complete by September 20, 2011.

Period of Performance:

The period of performance under the current Cooperative Agreement (CE-95451210) is from October 1, 2009 through September 30, 2015. The period of performance under the Cooperative Agreement (CE-97464802) is from October 1, 2002 through September 30, 2012.

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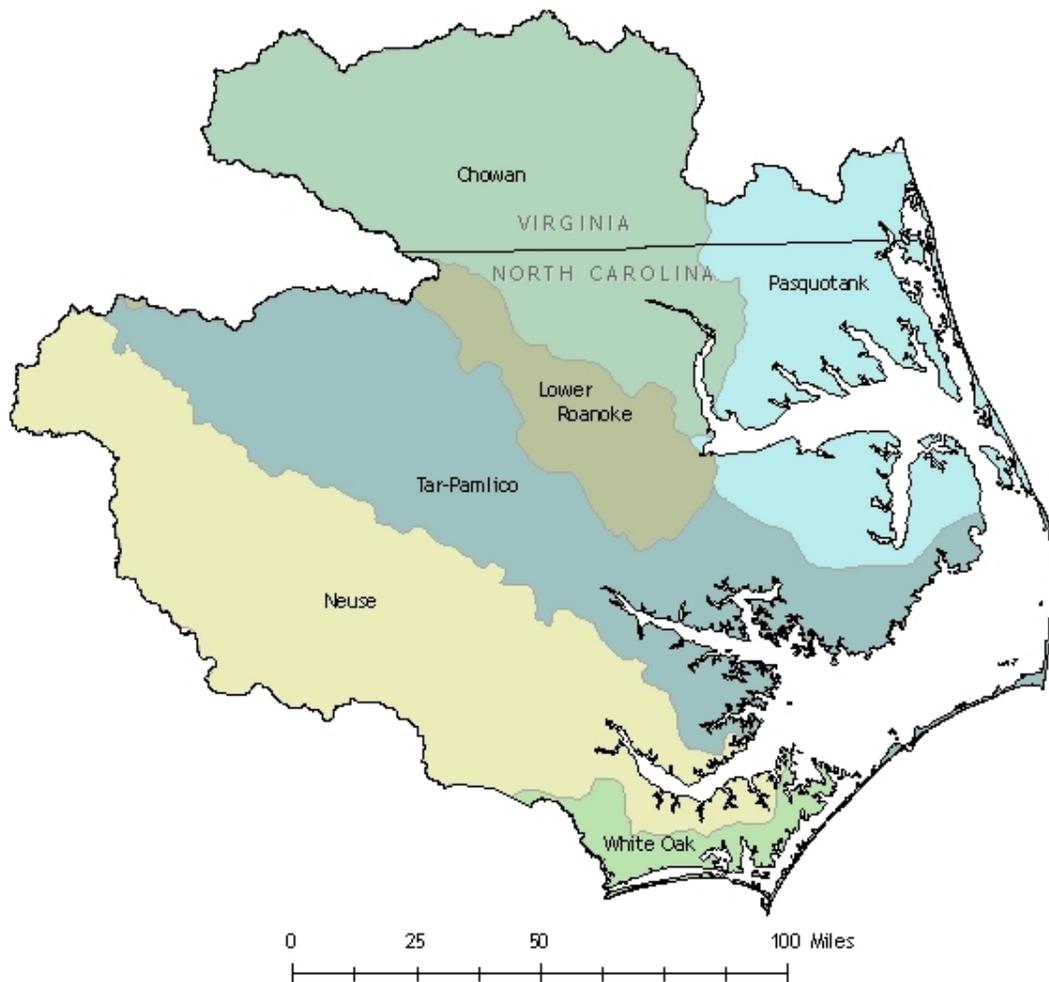
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BACKGROUND

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 North Carolina and 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.



APNEP Transition to Ecosystem-Based Management

Ecosystem-Based Management (EBM) is a paradigm that has gained support within many government agencies and other organizations worldwide to effectively manage natural resources in their respective jurisdictions. The tenet is that managing natural resources from a systems perspective increases the likelihood of success by forging more effective connections among humans, nature, science, and government. The Albemarle-Pamlico National Estuary Program (APNEP) has been working with limited resources to integrate and implement EBM concepts and tools within the program and with its local, state and federal partners, albeit in a piecemeal fashion. Given the relative complexity and increased resources required up front to implement EBM in full, APNEP staff decided in 2008 to begin actively working toward a paradigm change with the APNEP Policy Board, Advisory Committees, and partners.

This activity culminated in late 2009 in the form of an EBM transition proposal to the APNEP Policy Board, authored by a small team of APNEP staff, Policy Board members, and partners. The proposal was approved at the Board's December 2009 meeting. With the Policy Board's support, APNEP staff created an EBM Transition Team whose goal is to guide the transition in the most efficient manner possible. One of the products of the transition is a new Comprehensive Conservation Management Plan (CCMP) to replace the original 1994 CCMP. To maintain momentum on all transition fronts, the EBM Transition Team is holding monthly discussions to create the new CCMP and monitoring plan in the EBM framework.

When this APNEP FY 2012 Work Plan comes into implementation, APNEP anticipates completing the new CCMP based on EBM principles. With a new CCMP established with a ten-year planning horizon, this FY 2012 APNEP Work Plan will propose activities that are directly attributable to "program actions" and associated "implementation steps" under the new CCMP objectives.

Ecosystem-Based Management (EBM) is a management approach¹ that:

- Is concerned with the ecological integrity that sustains both human and natural resources systems.
- Integrates ecological, social, and economic goals and recognizes humans as key components of the ecosystem.
- Considers ecological, not just political, boundaries.
- Addresses systems and the complexity of natural processes and uses adaptive management to reduce risk related to decisions and actions.
- Engages multiple stakeholders in a collaborative process to define problems and find solutions providing mutual benefit.

¹ http://www.ebmtools.org/about_ebm.html



AUTHORITY

Federal Water Pollution Control Act

The National Estuary Program was established by Congress in 1987 to improve the quality of *Estuaries of National Significance*. The Federal Water Pollution Control Act (33 U.S.C. 1251 et seq.), Section 320 directs EPA to develop plans for attaining or maintaining water quality in an estuary. This includes: protection of public water supplies; the protection and propagation of a balanced, indigenous population of shellfish, fish, and wildlife; allowance of recreational activities in and on water; and control of point and nonpoint sources of pollution to supplement existing controls of pollution. Each program establishes a Comprehensive Conservation and Management Plan to meet the goals of Section 320.

Comprehensive Conservation and Management Plan

In 1987, Congress designated the Albemarle-Pamlico Estuarine System as an *Estuary of National Significance* and thus began a comprehensive study effort, called the Albemarle-Pamlico Estuarine Study (APES). The result of this process is the Albemarle-Pamlico National Estuary Program Comprehensive Conservation and Management Plan (CCMP). The CCMP was developed over a 7-year period by representatives from the private and public sectors, including government, industry, business, environmental interest groups, and municipal officials. The plan is a guide for environmental stewardship of the Albemarle-Pamlico estuary system. The CCMP reflects the input of people from the region who will be affected by the plan's recommendations. The CCMP seeks to balance the need for economic growth in eastern North Carolina with the need to secure the environmental future of the region. It was submitted to EPA in October 1994 for approval by NC Governor Jim Hunt. The final CCMP was signed by EPA Administrator Carol Browner in November 1994. It is an outstanding example of watershed and community-based environmental management, and demonstrates how targeted federal assistance can serve as a catalyst to achieve major state and local resource commitments.

North Carolina Governor's Executive Order #122

On August 2nd, 2007, North Carolina Governor Michael F. Easley signed Executive Order # 122: *Creation of a Program Office, a Policy Board, and Advisory Committees to Support Natural Resource and Environmental Management in the Albemarle-Pamlico National Estuarine System*. This Executive Order is essential to the future of the APNEP and was developed after more than two years of program review and assessment, and stakeholder participation. This Executive Order replaces Executive Order # 74 (2005), and provides the operational advisory framework for the program office. A copy of Executive Order #122 is attached and is available from the APNEP office at 1601 MSC, Raleigh, NC 27699.

Program Office

The Albemarle-Pamlico National Estuary Program Office coordinates and facilitates the implementation and advancement of the CCMP, the APNEP mission, and the activities of the Policy Board and Advisory Committees. The APNEP Program Office serves as a conduit for information between the Policy Board, Advisory Committees, state and federal agencies, local governments, tribes, academia and the public. The main program office is located in the Division of Natural Resource Planning and Conservation within the NC Department of Environment and Natural Resources in Raleigh, NC, with additional program personnel in Washington, and Greenville, NC, and Suffolk, VA.



Policy Board

A Policy Board for the Albemarle-Pamlico watershed was established by Executive Order to advise, guide, evaluate and support the CCMP implementation process and advance the CCMP and its management actions, and to ensure the highest level of collaboration, coordination and cooperation among state and federal agencies, local governments, the public and various interest groups. The Policy Board consults with the Advisory Committees and the Program Office for recommendations pertaining to implementation of CCMP management actions at the regional and local level, and the coordination and development of research and monitoring priorities. A major duty of the Policy Board is to evaluate the relevance of the CCMP and to make recommendations on amending it to address new or emerging issues that may affect the significant natural resources of the Albemarle-Pamlico estuarine system. The Policy Board, in cooperation with the Program Office, develops an annual report, budget and work plan. The Policy Board held its first meeting on October 31, 2005.

Advisory Committees

The Executive Order established three advisory committees to assist the Policy Board in guiding the APNEP and CCMP implementation.

A Committee of Citizen Advisors ("Citizen Advisory Committee") was established to advise and support the Policy Board, and to serve as a liaison to local agencies and interested parties regarding environmental and natural resource management concerns and issues relevant to implementation of the CCMP and the APNEP mission. The Citizen Advisory Committee (CAC) held its first meeting in January, 2006.

A Committee of Management Agency Representatives ("Management Advisory Committee") was established to facilitate and support the implementation and advancement of the CCMP management actions, and the APNEP mission. The Management Advisory Committee (MAC) held its first meeting in November, 2006.

A Committee of Science and Technical Advisors ("Science and Technical Advisory Committee") was established to advise the Policy Board and agencies responsible for implementation of the CCMP on scientific and technical issues. The Science and Technical Advisory Committee (STAC) held its first meeting in July, 2004.



2009 PROGRAM EVALUATION UPDATES

The EPA Coastal Management Branch conducted a Program Evaluation of APNEP with staff between March and June 2009.

A December 15, 2009 letter stated that the EPA found that the APNEP continues to make “significant progress” in implementing its CCMP and determined that the APNEP “passed” the 2009 Program Evaluation and would be eligible for FY 2010, 2011 and 2012 funding authorized under §320 of the Clean Water Act. A copy of the EPA review letter may be requested from the APNEP office.

The Program Evaluation (PE) Team commended APNEP on many of its accomplishments and progress made in areas highlighted in the 2005 Implementation Review. In particular the team applauded APNEP for its commitment to using robust science and technical data to set broad policy goals and to inform project selection as well as the actions of the STAC.

The PE Team commended the APNEP for its leadership of local efforts to build the capacity of educators to teach environmental science to students living in economically- and socially-distressed communities. The PE Team was impressed by the partners’ systematic tracking and analysis of post-workshop/ training survey results and by the results themselves. Those results showed that teachers thought that the workshops and training sessions had enhanced their ability to effectively teach environmental science to a broad cross-section of students. The PE Team had an opportunity to see on-the-ground evidence of workshop impacts when it visited a high-functioning wetland designed and constructed by students whose teacher had attended one of the environmental education workshops.

The PE Team was impressed by the APNEP’s leadership of multi-faceted outreach and public involvement efforts such as the 2008 public listening sessions that focused on sea level rise impacts on the Albemarle-Pamlico Sound study area. Those listening sessions and follow-up discussions with local civic and business leaders and State policymakers exemplify a well-planned, strategic approach to developing effective climate change adaptation policies and action plans and engaging a broad cross-section of the public.

The PE Team commended APNEP and its partners for their commitment to engaging communities which, while especially vulnerable to sea level rise because of their location and/or lack of economic resources, are not typically provided opportunities for public involvement on environmental issues. Since fewer participants than expected actually attended those listening sessions, partner co-sponsors noted in their final report that in the future, they would use different strategies to more successfully engage members of those communities.

The Team also noted that given the size of APNEP’s study area, field staff is critical to effective outreach and priority action implementation in outlying communities. Field staff’s daily interaction with community stakeholders enables staff to tap into the pulse of communities, effectively serve as liaisons to the Program offices in Raleigh, and raise awareness among communities about APNEP’s mission and priorities. The Team believes that assigning staff to



serve in field positions has been an important step toward promoting APNEP's mission and enhancing CCMP implementation throughout the study area.

The EPA review also identified the following three challenges:

Maintaining Visibility and Independence

EPA is concerned that APNEP's move back to a Division jeopardizes the Program's status, visibility, and independence, thereby slowing the momentum attained over the past several years and compromising the Program's leadership of efforts to improve Albemarle-Pamlico Sound water quality and living resource conditions. Since APNEP has demonstrated that it operates most effectively when it has visibility and autonomy, EPA recommends that:

- DENR reverse its decision to move APNEP back into a Division.
- DENR re-locate the Program to an organizational home where the Program is highly visible and regarded as a model of ecosystem-based management.

Update:

On July 1, 2010 the APNEP was relocated within a new Office of Conservation, Planning, and Community Affairs. This new office integrates 10 programs that provide the science, incentives and guidance that inform, guide and support conservation of the state's significant natural areas, coastal habitats and working lands. This new office strengthens APNEP's role within the NC DENR and will enable the program to better accomplish its mission.

Demonstrate Environmental Progress

EPA commends the Program for its support of water quality and habitat restoration and protection projects and for its indicator development and monitoring plan design efforts. EPA acknowledges that indicator development and monitoring plan design typically take several years to complete. However, given the increased public sector emphasis on accountability and government stakeholder requests to demonstrate program results, EPA is concerned that the pace of APNEP efforts to set baselines, assess conditions throughout the study area, and measure environmental change is slower than necessary. To promote implementation of monitoring and assessment priority actions, EPA requested that:

- DENR provide additional resources to support completion of the STAC monitoring plan.
- The STAC complete development of its monitoring plan and DENR identify resources for monitoring program implementation.
- The State begin conducting a regional ecosystem assessment to help guide the allocation of monitoring resources to waters and other ecosystem components of highest priority.

Also, EPA believes it is important that APNEP, like all NEPs, consider developing a strategy stating that: (1) achievement of on-the-ground environmental results is a Program priority, and (2) the Program will develop a tool for measuring the environmental progress resulting from implementation of Program-supported projects. To promote those efforts, EPA recommends that APNEP should:



- Draft a strategy as described above that would identify funding and staff resources dedicated to strategy implementation.
- Include in its next work plan a description of its protocol for measuring the short-term environmental outcomes of projects that it funds and/or in which it plays a lead support role.
- Begin setting and documenting project-specific baselines as a first step toward measuring environmental results.

Update:

As the EPA acknowledged, indicator development and monitoring plan design typically take several years to complete, and APNEP is working to accomplish this important task with input from its many partners. During FY2011, the APNEP Science and Technical Advisory Committee (STAC) will complete an ecosystem assessment to evaluate present conditions and provide a measure of baseline conditions throughout the study area.

The APNEP Policy Board adopted a new approach to addressing and integrating environmental monitoring in the Comprehensive Conservation and Management Plan (CCMP) at its December 16th, 2009 meeting: the Program will use an Ecosystem Based Management (EBM) paradigm as a framework for the new CCMP. APNEP staff are currently working on the new CCMP, with the assistance of an EBM implementation team composed of five Policy Board members, representatives of the NC Division of Water Quality, and the Division of Parks and Recreation, as well as the US Fish and Wildlife Service, faculty from the Virginia Institute of Marine Sciences.

Advantages of the new EBM approach are numerous:

- This is a significant action by the Program to further the connection between policy development and environmental improvements.
- The PE letter stated that APNEP should consider developing a strategy to achieve on-the-ground environmental results and develop a tool for measuring the environmental progress resulting from implementation of program-supported projects.

Most importantly, APNEP staff are working with DENR divisions to integrate their environmental priorities into the new CCMP using the EBM approach. Better integration between the program and DENR divisions will result in an increased level of support that will benefit APNEP and increase its potential to produce measurable environmental results.

APNEP continues to strive for a strong science-based program for the protection and restoration of our estuary of national significance. APNEP program staff, policy board members, and other partners are making significant progress on an ecosystem assessment of the APNEP region and a new Comprehensive Conservation and Management Plan. Staff are also working on a monitoring strategy that uses an EBM, paradigm. The program's EBM approach will provide a strategy to achieve on-the-ground environmental results and develop tools for measuring the environmental progress resulting from implementation of program-supported activities. The EBM approach is well-suited for this purpose and will allow APNEP to adapt its approach over time to address emerging issues.



Expedite Funds Draw Down

As of September 30, 2009, APNEP, still had an unexpended balance of \$769,805 in FY 2007-2008 and FY 2008-2009 appropriated funds. The PE Team became concerned about APNEP's slow draw down of those funds.

EPA, the Director of APNEP, and a senior NC DENR official have all agreed that beginning in FY 2010, APNEP and NC DENR will take steps to ensure that §320 funds are drawn down in an expedited manner:

Update:

APNEP has taken significant action to expedite the draw-down of the unexpended balance of the FY2007-2008 and FY2008-2009 remaining appropriated CWA §320 grant funds. APNEP has encumbered all remaining funds and all projects and expenditures will be completed by September 30, 2011.

Additionally, APNEP and DENR have taken the following steps to ensure that §320 funds are drawn down in an expedited manner in the future:

- The APNEP Director, the Director of the Division of Conservation Planning and Community Affairs, and the DENR Budget Analyst meet monthly to review the budget and implement steps to ensure efficient budgeting and the timely draw-down of all §320 awards.
- The APNEP Director and the Director of the Division of Conservation Planning and Community Affairs meet monthly to address progress on all aspects of the program, including fiscal issues, and ensure progress on PE Challenges.



ACCOMPLISHMENTS (Completed Projects)

The following activities and projects have been completed since the May 13, 2010 APNEP annual workplan. All projects which involved contract or grants are summarized in the table on pages 32-35.

DWQ Outreach and Engagement Project

NC Division of Water Quality implemented several projects and workshops on coastal stormwater and riparian buffer rules and the development of outreach material regarding riparian buffers and 401 Water Quality Certifications. The materials provided information to focus students in K-12 on understanding the biodiversity in the lakes, streams, and estuaries.

Output: Promote awareness of water quality, buffers, and biodiversity
Outcome: New education programs and materials
320 Funds: \$ 8,000
Leverage: To be determined

2010 Teacher Institute

The NC Office of Environmental Education, the Environmental Education Fund, and others offered a teacher training institute during the summer of 2010 at the Trinity Center in Salter Path, NC. Approximately 20-30 middle and high school 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 on estuary and water resources.

Output: 30 teachers trained in environmental education
Outcome: Increased environmental education in schools
320 Funds: \$ 24,000
Leverage: \$ 9,000

Outdoor Classroom Symposium

The Office of Environmental Education, the NC Botanical Garden, and others produced the second annual outdoor classroom symposium in April 2011. This event focused on techniques for creating outdoor classrooms and strategies for using them to integrate environmental education into curriculum and programs. Approximately 200 participants were involved over the course of three days.

Output: 130 teachers exposed to outdoor environmental education opportunities
Outcome: Increased environmental education in schools
320 Funds: \$ 9,000
Leverage: To be determined

Elizabeth City Eco-Park

Seed funds were provided to Elizabeth City, NC to support the creation of a local Eco-Park. The Park would offer nature trails/paths through the woods along Knobb's Creek, giving access to flora and fauna viewpoints along the way. The project will utilize undevelopable



land areas that are in or adjacent to a flood zone. The potential exists to upgrade fisheries spawning and utilize wetlands restoration techniques to improve watershed drainage along Knobb's Creek. The project consists of all or part of three key land parcels and part of three other adjacent parcels. A key property is owned by City of Elizabeth City. Funds were used to hold community meetings and provide a landscape plan for the site.

Output: Community meetings, park plan
Outcome: Park, wetland restoration
320 Funds: \$ 25,000
Leverage: To be determined

Ecosystem Assessment Pilot Project: Pasquotank and Chowan River (VA), Phase II

This second phase of the project built upon the data inventory survey conducted by APNEP in 2006. The Virginia Institute for Marine Science worked to refine the preliminary ecosystem health indicators developed in Phase I, expand the data inventory developed for the Chowan and Pasquotank River basins, and develop an ecosystem report card for the entire APNEP region. This project was particularly beneficial as it integrated data and management programs across state boundaries in shared waterways.

Output: Condition Report
Outcome: Informed decision makers, APNEP indicators/ status of environment
320 Funds: \$ 25,000
Leverage: \$ 25,000

Submerged Aquatic Vegetation (SAV) Image Analysis

Funding was provided to lead interpretation of the acquired digital aerial photography of potential SAV habitats in the APNEP region, which were collected in 2008. This imagery is a necessary step in providing APNEP partners with information on the current status of SAV in the sounds. APNEP obtained a contractor with a suitable consultant to complete this task.

Output: Report, GIS data, maps, educational opportunities
Outcome: Better environmental data, better resource management and planning
320 Funds: \$ 79,961
Leverage: To be determined

Rates and Processes of Vital Wetland Habitat Loss in the Albemarle-Pamlico Estuarine System

This project, conducted by East Carolina University, aimed to determine rates of wetland loss by shoreline erosion across the Albemarle-Pamlico Estuarine System over varying timescales. It evaluated the key processes driving this shoreline change using a combination of field and remote-sensing observations.

Output: Report, outreach materials
Outcome: Better environmental data, shoreline/wetland mapping
320 Funds: \$ 58,440
Leverage: To be determined



Assessment of Small Dam Impacts on Freshwater Mussels & Fishes in the Tar, Roanoke, Neuse and Chowan River Drainages, NC and VA

Appalachian State University was awarded funds to quantify the effects of small dams on mollusk and fish assemblages and stream habitats in the Albemarle-Pamlico basin, provide a baseline estimate of mollusk and fish populations near small dams, and provide resource managers with an empirical ranking system for evaluating and prioritizing dams for removal in the Albemarle-Pamlico basin.

Output: Report with recommendations for high-value restoration sites
Outcome: Better environmental data, resource management
320 Funds: \$ 64,009
Leverage: \$ 49,300

Evaluating Restoration Success for Newly Constructed Oyster Reefs Spanning a Critical Intertidal Elevation

The University of North Carolina at Chapel Hill was awarded funds to construct oyster shell reefs at different intertidal elevations and to monitor reef size and community structure over time. These sites will serve as long-term experimental stations. The data gathered will be used to support more effective restoration models and practices for oyster reefs in intertidal settings and better define their range of ecosystem services and habitat value.

Output: Constructed oyster reefs, report
Outcome: Expanded oyster habitat, improved understanding of reef function
320 Funds: \$ 67,364
Leverage: \$ 48,409

Manteo High School Constructed Wetland and Outdoor Environmental Education Classroom

The Albemarle Resource Conservation and Development Council was awarded funds for a restoration project that involved constructing and planting a wetland between Manteo High School and Dough's Creek. The project also involved constructing a boardwalk over the wetland to provide access for observation and water quality sampling and the development of an environmental education curriculum for high school students using the wetland as an outdoor classroom. This project was constructed adjacent to another APNEP project at Manteo Middle School that uses several retention areas and a rain garden to reduce stormwater runoff into the creek.

Output: Constructed wetland, boardwalk & educational curriculum, report
Outcome: Improved stormwater runoff, better public understanding of wetlands
320 Funds: \$ 49,000
Leverage \$ 10,000

Hydrologic Restoration for Habitat and Estuarine Water Quality Improvement in Hyde County, NC

The North Carolina Coastal Federation was awarded funds to support a large, landscape-scale project to restore the hydrology on more than 42,000 acres of drained farmland. The drainage district is adjacent to the Alligator River National Wildlife Refuge, Mattamuskeet



National Wildlife Refuge, Gull Rock Game Lands, the Long Shoal and Alligator Rivers, the Intracoastal Waterway and the Pamlico Sound. APNEP funds were used to construct dikes, plant vegetation and install water control structures.

Output: Hydrologic restoration, report
Outcome: Improved water quality, provided vital habitats
320 Funds: \$ 99,967
Leverage: \$ 83,517

Building Ecosystem Resilience to Climate Change and Sea-Level Rise through Restoration of an Estuarine Habitat Complex

The Nature Conservancy's North Carolina Chapter was awarded funds to restore the ecosystem function of the abandoned Point Peter waterfowl impoundment at Alligator River National Wildlife Refuge and adjacent estuarine sub-tidal zone through invasive species removal, re-establishment of wetland hydrology and construction of a fringing oyster reef. This project is an essential component of the Point Peter demonstration project where the Conservancy and the U.S. Fish and Wildlife Service have partnered to implement a comprehensive set of climate change adaptation strategies. The strategies test the project's effectiveness at reducing the impacts of sea level rise on the ecosystems of the Alligator River National Wildlife Refuge.

Output: Hydrologic restoration, constructed oyster reef, report
Outcome: Increased ecosystem resilience to sea level rise, improved habitat for native oysters and wetland vegetation
320 Funds: \$ 65,538
Leverage: \$ 150,629

Northeast Ag Expo No-till/Conservation-till Education

Funds were provided to support conservation farm practices in six northeastern NC counties (Camden, Chowan, Currituck, Gates, Pasquotank, and Perquimans Counties), through education and demonstration about the benefits of conservation tillage. Cooperative Extension agents in the six county area represented by the Northeast Ag Expo use a demonstration-sized drill to educate farmers about the effectiveness of this option for crop production.

Output: Community Demonstration Projects
Outcome: On-the-ground projects that demonstrate environmental benefits
Estimated Cost: \$10,000
Leverage: To be determined

Forum: Positive Environmental Impacts of Agricultural Best Management Practices and Other Innovative Farming Methods in the Tar-Pamlico River Basin

Funds were provided to support a two-day forum at the North Carolina Estuarium in August 2010 to educate local farmers and the public about the beneficial impacts of agricultural Best Management Practices (BMPs) in the Albemarle-Pamlico region. The event included speakers and poster presentations highlighting success stories from the region.

Output: BMP forum



Outcome: Increased use of BMPs
320 Funds: \$10,0000
Leverage: To be determined

Renewable Energy Discovery Zone

Kitty Hawk Elementary School received a grant for \$8,800 to construct a Renewable Energy Discovery Zone. The Discovery Zone is used to educate students, faculty, staff and the local community about the benefits of renewable energy through a lab and via the internet. A solar panel and an electricity wind generator were installed on the campus of the school and linked to existing school facilities.

Output: Installation of renewable energy equipment
Outcome: Better understanding of renewable resources, better resource management
320 Funds: \$ 8,800
Leverage: To be determined

Rainwater harvesting system at the Pamlico County Schools

Pamlico County Cooperative Extension Service, in cooperation with the Pamlico County School System, received a grant to install a best management practice in the form of a rainwater harvesting system at the Pamlico County Schools bus garage. This system captures a portion of the estimated 188,697 gallons of water that falls annually on this rooftop and helps protect the water quality of nearby waters by reducing stormwater runoff.

Output: Cistern, educational materials, report
Outcome: Reduced stormwater runoff, demonstration of a functioning BMP
320 Funds: \$ 6,220
Leverage: \$ 3,840

Edward Wyatt Middle School outdoor classroom

Edward Wyatt Middle School in Emporia, Virginia received a grant to construct an outdoor classroom and nature exploratory trail. The project was designed to improve the classroom experience while providing a direct interaction with nature. Elements of the project include a teaching pavilion, dry river bed, and nature trail.

Output: Outdoor classroom, nature trail, report
Outcome: Hands-on environmental education, promoting responsible stewardship
320 Funds: \$ 12,000
Leverage: \$ 59,650

Managing Stormwater Runoff at Cape Lookout National Seashore Visitor Center

The NC Coastal Federation (NCCF) received a grant for \$10,200 for a project to reduce stormwater runoff into Core Sound at the Cape Lookout National Seashore Visitor Center at Harker's Island, NC. NCCF worked with 40 students from the rural Harker's Island elementary school, two teachers and community volunteers to construct a bioretention/infiltration area to capture polluted stormwater runoff coming from the parking lot and road at the Visitor Center. Educational outreach efforts focused on pre- and post- site monitoring



by the students and educating the public about best management practices and the importance of reducing stormwater pollution. This project has been completed.

Output: Install a bio-retention area, educational outreach, report
Outcome: Improved stormwater runoff, better public understanding of best management practices
320 Funds: \$ 10,200
Leverage: \$ 9,642

Claridge Nursery Stream Restoration Monitoring Study

This project supports water quality nutrient and sediment analysis for pre-restoration baseline watershed monitoring in the Upper Neuse sub-basin (HUC # 03020201). Approximately 15,000 linear feet of stream and floodplain restoration has been conducted at the NC Division of Forest Resources (NCDFR) Claridge Nursery in Wayne County, NC. This study was designed to evaluate water quality changes associated with future mitigation activities and represents a unique opportunity to document before- and after- stream and floodplain restoration water quality conditions. Project partners include: NC Division of Forest Resources, NC Department of Transportation, and the NC State University Department of Biological & Agricultural Engineering.

Output: Stream monitoring study, report
Outcome: Better understanding of stream restoration and BMPs
320 Funds: \$ 8,000
Leverage: \$ 15,000

J.H. Rose High School's In-Stream Constructed Wetlands Schoolyard Demonstration Project

The Mid-East Resource Conservation & Development Council was awarded \$19,800 for J.H. Rose High School's In-Stream Constructed Wetlands Schoolyard Demonstration Project. The grant was used to plant a 0.75-acre constructed wetland, restore 450 linear feet of stream and provide educational programming at J.H. Rose High School in Greenville, NC. This project has been completed.

Output: Constructed wetland, educational curriculum, report
Outcome: Water quality improvements, increased student/public understanding
320 Funds: \$ 19,800
Leverage: \$ 230,141

Landscaping with Nature in Currituck County

N.C. Sea Grant was awarded \$20,000 for "Landscaping with Nature in Currituck County," a project that created an environmental education demonstration site with natural landscape features and native plants at the Currituck County Cooperative Extension Building. This project is complete.

Output: Community design charrette, retrofit stormwater ponds, report
Outcome: Improved stormwater treatment, educate local citizens
320 Funds: \$ 20,000
Leverage: \$ 24,629



Henderson Affordable Housing Wetland Boardwalk Trail

The Black Family Land Trust in Durham was awarded \$20,000 for the Henderson Affordable Housing Wetland Boardwalk Trail. The grant aimed to create a protected, one-acre wetland park at the center of an affordable housing subdivision. The Trust requested a release from the grant, primarily because they were unable to raise the additional funds necessary to complete the project. No money was expended on this contract. APNEP is currently working with the Conservation Trust of NC to complete the project.

Managing Stormwater into Bogue Sound

The N.C. Division of Marine Fisheries was awarded \$8,087 to reduce stormwater flowing into Bogue Sound at the division's headquarters in Morehead City. This was part of a comprehensive stormwater project that involved re-vegetating part of the Bogue Sound shoreline adjacent to the agency's headquarters and educating the community about stormwater pollution. The project was completed in March 2011.

Output: Shoreline restoration, educational outreach, report
Outcome: Improved stormwater runoff, better public understanding of restoration
320 Funds: \$ 8,087
Leverage \$ 6,470

Carrot Island Habitat Improvement Demonstration Project

The N.C. Coastal Reserve in Carteret County was awarded \$14,929 for the Carrot Island Habitat Improvement Demonstration Project. The project improved a 22,000-square-foot dredge spoil habitat through native plantings and fencing and provided public outreach about habitat improvement. This project has been completed.

Output: Habitat improvement, educational outreach, report
Outcome: Soil stabilization, increased plant biodiversity, public stewardship
320 Funds: \$ 14,929
Leverage: \$ 14,148

Dinwiddie Junior High School Outdoor Classroom and Nature Trail

Dinwiddie Junior High School in Dinwiddie, VA, was awarded \$15,206 for its Outdoor Classroom and Nature Trail. The grant included construction of an outdoor classroom area with seating, an educational kiosk and a nature trail with signs identifying native plant species. The school did not submit documentation once the grant was awarded, and no contract was created. Funds have been reallocated to other projects.

Uriah Branch Nature Trail

Greensville County, VA was awarded \$19,159 for phase I of the Uriah Branch Nature Trail. The project consisted of trail development next to the Greensville County Government Complex and construction of an observation deck overlooking the floodplain and wetlands along Uriah Branch stream. This project has been completed.

Output: Constructed nature trail, educational outreach component
Outcome: Increased citizen connection to the Chowan watershed



320 Funds: \$ 19,159
Leverage \$ 2,180

N.C. Environmental Education Plan

The CAC directed the APNEP to use \$6,000 in funding to assist in the printing of the N.C. Environmental Education Plan from funds that remained in the budget after awarding the CAC projects. This plan is available online at http://www.eenorthcarolina.org/ee_plan_web_spread.pdf

Output: **Environmental Education Plan**
Outcome: Increased environmental awareness
320 Funds: \$ 6,000
Leverage: To be determined

Climate Ready Estuary

In 2009, APNEP was awarded a grant to address adaptation to climate change. After working with a steering group, the Nicholas Institute for Environmental Policy Solutions at Duke University was chosen to lead the effort. The climate ready estuary project builds upon the APNEP and the Albemarle-Pamlico Conservation and Community Collaborative public listening sessions on sea level rise and coastal population growth in the summer of 2008. For this project, students surveyed local elected and appointed officials in NC's coastal counties in the spring of 2009. Bill Holman, Amy Pickle, and Katherine McGlade made presentations to local elected and appointed officials in Beaufort, Dare, Hyde, Tyrrell and Washington Counties and in Columbia, Manteo, Plymouth, and Washington in the summer and fall of 2009 to assess their awareness and concerns about climate change and sea level rise and to ask them what information and tools they needed to plan for and adapt to climate change. The final report contains strategies to guide future public outreach and engagement, and it includes recommendations and options to help state and local officials plan for and adapt to climate change and sea level rise. The report is available from the APNEP website.

Output: Report
Outcome: A communication strategy for addressing climate change and sea level rise
320 Funds: \$ 48,375
Leverage: To be determined



ONGOING PROJECTS & ACTIONS

The following activities and projects have been currently ongoing as of June, 8, 2011.

Board and Committees Support

The key element of the CCMP's implementation is active citizen participation. On August 2, 2007 North Carolina Governor Michael F. Easley signed Executive Order # 122: *Creation of a Program Office, a Policy Board, and Advisory Committees to Support Natural Resource and Environmental Management in the Albemarle-Pamlico National Estuarine System*. Staff work with these advisory groups to guide CCMP implementation, indicator development, and development of a new CCMP.

Output: Partnership building, outreach, CCMP implementation prioritization
Outcome: New and greater public involvement, estuarine indicator development
320 Funds: \$10,000
Leverage: To be determined

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 effective implementation of 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.

Output: Program administration, reports, leverage, presentations
Outcome: Environmental result, CCMP implementation
320 Funds: \$ 30,405
Leverage \$ 30,405

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.

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 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 are compiled by the CMN office at ECU. Information is available to the public on the APNEP website at <http://www.apnep.org/> and at <http://www.ecu.edu/icmr/cwqmp>

For FY 2012, operation of the APNEP Citizens' Monitoring Network (including Coordinator, equipment, supplies, office and lab space and indirect costs) will continue under contract with East Carolina University (ECU) to maintain the current participating citizens' monitoring efforts. APNEP expenditures will cover the costs of chemical supplies, and ECU will cover operational expenses. In concert with development of its monitoring strategy, APNEP will develop a request for proposals (RFP) to establish a revised citizen monitoring program for implementation in FY2013.

Output: Awareness, data
Outcome: Increased environmental awareness
320 Funds: \$ 59,100
Leverage: To be determined

CCMP/ EBM Support

In order to support the development and production of the new CCMP and associated monitoring plan, APNEP contracted with the Virginia Institute of Marine Science to assist in the development of the Ecosystem-Based approach for the new CCMP

Output: CCMP and associated monitoring strategy
Outcome: CCMP & Monitoring Plan
320 Funds: \$ 34,995
Leverage: To be determined

2011 Teacher Institute

APNEP is partnering with the NC Office of Environmental Education, the Environmental Education Fund, and others to offer a teacher training institute in July 2011 at the Trinity Center in Salter Path, NC. Approximately 25-30 elementary school teachers will be provided with curriculum training in earth and environmental sciences with hands-on activities, site visits, and specific content to support inquiry, experiential, and research-based instruction on estuary and water resources.

Output: 20-30 teachers trained in environmental education
Outcome: Increased environmental education in schools
320 Funds: \$ 25,000
Leverage: To be determined

Estuary Awareness Campaign: Estuary Essentials

The North Carolina Aquarium Society was awarded funds to support its "Estuary Essentials" program for libraries. Estuary Essentials is a one-hour presentation to library patrons that introduces the critical components of a healthy Albemarle-Pamlico estuarine system and some of the animals found in the waterways. The North Carolina Aquarium on Roanoke Island (NCA-RI) will provide this presentation to 20 libraries within the APNEP region.

Output: Presentations to library patrons across the APNEP region



Outcome: Increased public engagement, increased knowledge of the estuaries
320 Funds: \$6,560
Leverage: \$12,488

Estuary Awareness Campaign: Educational bookmark contest

The NC Division of Soil and Water Conservation was awarded funds to conduct an educational bookmark contest throughout 16 northeastern counties in North Carolina. The bookmark contest will focus on the importance of estuaries, their significance in eastern North Carolina, and the challenges estuaries face in the evolving world. This campaign will be a hands-on contest, targeting fifth-grade students, and winning bookmarks will be distributed through local libraries.

Output: Bookmark contest in regional schools
Outcome: Education and outreach to 4,000 students and 8,000 adults
320 Funds: \$3,200
Leverage: \$8,600

Promoting Awareness and Stewardship of APNEP's Estuarine Habitats and Shorelines

The North Carolina Coastal Reserve & National Estuarine Research Reserve was awarded funds to conduct an education and awareness campaign across the APNEP region. Target audiences of this campaign are K-12 teachers and students, coastal decision-makers, and the public (including estuarine-front property owners). This campaign will teach the value and function of estuarine habitats, how these habitats may be affected by sea level rise, and alternative methods of estuarine shoreline stabilization.

Output: Public information campaign, workshops, public field experiences, educational curriculum, report
Outcome: Increased public awareness and stewardship of estuaries
320 Funds: \$ 27,698
Leverage: \$ 12,012

CAC Project: Elizabeth City Middle School Created Stormwater Wetland

The UNC Coastal Studies Institute Foundation was awarded funds to construct a stormwater wetland, a boardwalk across the wetland, and develop educational curriculum. Students will plant native plant species as part of the project.

Output: Constructed wetland, boardwalk, educational curriculum
Outcome: Water quality improvements, increased access to natural resources
320 Funds: \$ 25,000
Leverage: \$ 20,000

CAC Project: Recycling Fishing Gear to Enhance Shellfish Productivity and Improve Local Water Quality

The UNC Institute of Marine Sciences was awarded funds for a project that will utilize recycled crab pots in targeted locations to facilitate oyster settlement and growth to create habitats for oysters. The project will be studied to quantify the environmental and fishery



benefits that can be accrued by refurbishing derelict crab pots so they no longer capture unintended animals, and fish that utilize recycled crab pots will be sampled to quantify the ecosystem effects of this restoration.

Output: Re-deploy recycled crab pots, biological surveys, report
Outcome: New oyster habitat, expanded understanding of reef function
320 Funds: \$ 24,168
Leverage: \$ 29,979

CAC Project: Living Shoreline project to improve habitat and water quality and reduce stormwater runoff

The North Carolina Coastal Federation was awarded funds for a living shoreline project to improve habitat and water quality and reduce stormwater runoff. A total of 6,000 marsh grass plugs are to be planted by student and community volunteers along the Bogue Sound shoreline in Morehead City. The marsh grass will create valuable estuarine habitat, protect the shoreline from erosion, help to improve the water quality of Bogue Sound, and capture and infiltrate polluted stormwater runoff.

Output: Shoreline restoration, report
Outcome: Created marsh habitat, improved stormwater runoff
320 Funds: \$ 8,159
Leverage: \$ 4,196

CAC Project: Basic Observation Buoy (BOB) program

The UNC Coastal Studies Institute Foundation was awarded funds to expand the existing Basic Observation Buoy (BOB) program. This project includes a Teacher Training Workshop, construction of the BOB units at four schools, and deployment for data collection. Data collected from the BOB units will be entered by the students and made accessible via the internet.

Output: Construct and deploy Basic Observation Buoys, report
Outcome: Increased student engagement, expanded data on the estuary
320 Funds: \$ 25,000
Leverage: \$ 20,407

Henderson Affordable Housing Wetland Boardwalk Trail

The initial grantee for this project was unable to raise the additional funds necessary to complete the project and requested a release from the grant. Staff are currently working with the Conservation Trust of NC in an effort to complete the project. The renewed project aims to fulfill the work under the initial grant, which will create a protected, one-acre wetland park at the center of an affordable housing subdivision.

Output: Boardwalk, wetland, educational products
Outcome: Stormwater management, wetland restoration, increased awareness
320 Funds: \$ 15,000
Leverage: To be determined



303-D Listed Waters Project (Fishing Creek)

APNEP partnered with the NC Ecosystem Enhancement Program and other local partners to implement actions to remove Fishing Creek (Tar-Pamlico River Basin) from the 303-D list of impaired waters. No deliverables were submitted, resulting in no funds expended. Staff is working to identify a new project.

State of the Sounds Conference

APNEP will release the 2010 State of the Sounds Report and host a one-day science and policy conference on November 17, 2011. This conference will feature guest speakers, discussion panels, and various sessions to examine the status of the Albemarle-Pamlico Estuarine system's natural habitats and resources, measure progress made, and discuss challenges ahead.

Output: Public awareness
Outcome: Public awareness /Environmental Protection
320 Funds: \$ 9,000
Leverage: To be determined

Shad in the Schools

Shad in the Schools is a collaborative project that provides students with an understanding of the science process, inspiration for careers in science, and a desire to protect our waterways through hands-on experience raising American Shad from egg to releasable fry. This is a collaboration led by the US Fish and Wildlife Service, and the North Carolina Museum of Natural Sciences, the students and teachers. The objective of this project is to build an understanding of the life history of shad and an appreciation for our natural world. The project has three primary components: 1. Classroom project: Equipping classrooms to raise the shad, providing the shad eggs, assisting with the release. 2. Teacher training: one day training on the process of raising shad and an overnight canoe workshop on the Roanoke to learn about the ecosystem and 3. Multimedia presentations in both short online segments and a longer High Definition movie to be shown at the Museum and shared throughout the state.

Output: Increased community involvement in water quality and habitat protection
Outcome: Educational program, restoration activities
320 Funds: \$ 60,000
Leverage: \$ 40,750

SAV Monitoring

This project supplements the SAV work that APNEP has been involved in over the past few years. In the Spring of 2009, APNEP was awarded a grant to test protocols for SAV monitoring. The funds will be used to support the effort and provide a portion of the match. Funds will be used for boat use and some required travel.

Output: Testing of monitoring protocols
Outcome: SAV monitoring plan
320 Funds: \$1,000
Leverage: \$112,000



Albemarle-Chowan Watershed Roundtables

The APNEP partnered with the Virginia Department of Conservation and Recreation to lead the formation of an Albemarle-Chowan Watershed Roundtable on March 29, 2006. Several meetings have occurred since that date.

Output: Citizen advisory group
Outcome: Increased environmental awareness and citizen participation
320 Funds: Associated travel costs for attending meetings
Leverage: To be determined

EBM & Comprehensive Monitoring Plan/ Ecosystem Assessment

The APNEP Scientist is coordinating the activities associated with development of the ecosystem assessment and monitoring strategy within the new APNEP Ecosystem-Based Management (EBM) framework. APNEP will continue to address this task in FY 2012 along with support from the STAC. APNEP has contracted support from the UNC Institute of Marine Sciences to support this effort. The Ecosystem assessment is expected in the early fall of 2011.

Output: Ecosystem Assessment
Intended: Enhanced environmental monitoring
320 Funds: \$ 36,000
Leverage: To be determined

Albemarle-Pamlico Conservation and Communities Collaborative (AP3C)

Since October 2006, APNEP has been involved with the development of the Albemarle-Pamlico Conservation and Communities Collaborative (AP3C). This partnership emerged as a result of the interest expressed by numerous institutions in balancing the long-term conservation of natural systems with opportunities for the well-being of all the region's citizens. It is intended to provide a forum for working collaboratively whenever feasible. These organizations believe it will be possible to realize a sustainable future by avoiding duplicative efforts and missed opportunities. The participating organizations represent a broad spectrum of land and water resource managers and conservation and community advocates, each with a different mission. All are dedicated, through partnership in the AP3C, to providing for human needs while protecting the integrity of the region's ecosystems. APNEP continues to participate in meetings of the AP3C and discuss how to better engage communities in conservation.

Output: Citizen participation
Outcome: Community engagement
320 Funds: Associated travel costs for attending meetings
Leverage: To be determined



PROPOSED PROJECTS & ACTIONS FOR FY 2012

Projects for FY 2012 will continue to support the transition to an Ecosystem Based Management program under the new CCMP. Additionally, projects and actions presented here support restoration and environmental improvement efforts.

Program Administration & Indirect Costs

For more detail see Administration and Financial section.

Type: Ongoing
Intended Output: Program administration, partnership building, CCMP implementation
Intended Outcome: CCMP implementation
Estimated Cost: \$289,315 direct and \$19,476 indirect costs (see indirect cost p. 37)

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

Watershed Field Coordinator - Virginia

For more detail see Ongoing Projects section.

Type: Ongoing
Intended Output: Governmental coordination, public involvement
Intended Outcome: CCMP implementation
Estimated Cost: \$32,000
Estimated Leverage: \$24,000

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

Board and Committees Support

The key element of the CCMP's implementation is active citizen participation through the Policy Board and each of the three Advisory Committees. Funds support meetings, speakers, and materials as needed.

Type: Ongoing
Intended Output: Partnership building, outreach, CCMP implementation prioritization
Intended Outcome: New and greater public involvement, estuarine indicator development
Estimated Cost: \$ 3,000
Estimated Leverage: \$ 3,000



❖ This action supports the current 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."

Citizens' Monitoring Network Transition

For more detail see Ongoing Projects section.

Type: Ongoing / Transition to new program
Intended Output: Awareness, data
Intended Outcome: Increased environmental awareness
Estimated Cost: \$ 5,000
Estimated Leverage: \$ 50,000

❖ This action supports the current CCMP's Water Quality Plan: Management Action 4: "Expand involvement in the Citizens' Water Quality Monitoring Program (CWQMP) and make the program more interactive with regulatory agencies."

CCMP - Identify

In order to support the implementation of the new CCMP and its associated monitoring strategy, APNEP will develop projects and request bids for support it address priority actions identified in its new CCMP identify and monitoring strategies. Examples of potential projects include natural heritage county inventories, database development, or habitat mapping. The selection of the projects will be made by the Executive Committee of the Policy Board.

Type: New
Intended Output: CCMP, Monitoring Plan, supporting EBM materials
Intended Outcome: CCMP & Monitoring Plan
Estimated Cost: \$ 100,000
Estimated Leverage: \$ 50,000

❖ This category of projects supports the initial implementation of the new CCMP and its identify and monitor strategies.

CCMP- Restore

APNEP will develop a *Request for Proposals* for work in the region that provides a measurable environmental benefit and addresses the potential effects of climate change in alignment with the new CCMP restore strategy. This item will be supplemented with the allocation of funds from FY2011 (\$100,000). The selection of the projects will be made by the Executive Committee of the Policy Board.

Type: New
Intended Output: Restoration Projects, public awareness
Intended Outcome: Environmental / Natural Resource Restoration
Estimated Cost: \$ 150,000 (\$50,000 FY2012 & \$ 100,000 FY2011)
Estimated Leverage: \$ 150,000



❖ This category of projects supports the initial implementation of the new CCMP and its restore strategy.

CCMP- Engage

In order to support the implementation of action within the new CCMP, APNEP will develop projects to address actions identified in its engagement strategy. Potential actions may include the continuation of Shad in Schools project, the Sound Learning Teacher Institute, and temporary education staff. The selection of the projects will be made by the Executive Committee of the Policy Board.

Status: New
Intended Output: Engagement and environmental education projects
Intended Outcome: Increased community engagement in NEP issues
Estimated Cost: \$ 80,000
Estimated Leverage: \$ 40,000

❖ This category of projects supports the initial implementation of the new CCMP and its engage strategy.

CCMP- Monitor

A series of workshops will be structured to develop priorities among local scientists and other researchers, managers, policy makers, and citizens on how ecological monitoring funds of APNEP and Partners should be targeted to best support APNEP indicator tracking for the CCMP outcome. Workshops will be theme-based (e.g., estuarine waters, uplands) and topics will include one or more of the following: policy questions to be addressed, technical questions to support policy, indicator selection, monitoring design (coverage, frequency, technology, and cost-to-information calculations), and monitoring funding.

Type: New
Intended Output: Monitoring Plan
Intended Outcome: Detection of environmental changes
Estimated Cost: \$2,000

❖ This category of projects supports the initial implementation of the new CCMP and its monitor strategy.

Community Involvement and Outreach Activities

This project supports all of APNEP's outreach activities, including the APNEP newsletter, e-mail updates and other outreach materials.

Status: Ongoing
Intended Output: Public outreach and involvement
Intended Outcome: CCMP Implementation, increased environmental awareness
Estimated Cost: \$8,009
Leverage: To be determined

❖ This project supports the initial implementation of the new CCMP and its engage strategy.



ADMINISTRATION AND FINANCIAL

PROGRAM ADMINISTRATION

Program staff are responsible for the coordination, planning and successful completion of APNEP functions, including Policy Board and Advisory Committee meetings, APNEP forums and other APNEP-sponsored/partner events. In addition, staff monitors, and often becomes involved in, activities of state resource management agencies that relate to CCMP implementation, APNEP mission, the Albemarle-Pamlico watershed or estuary. Staff also attend meetings, conferences and workshops in order to stay apprised of technological advancements that may prove beneficial in the APNEP region and the program. Although the Policy Board and Advisory Committees 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, and require staff involvement and interactions.

Indirect Costs

NC DENR has negotiated an indirect cost agreement with the US EPA for the Office of Conservation and Community Affairs at a rate of 8.8 % of all salaries supported by this federal grant. Estimated indirect costs for FY 2012 are \$19,476 based on this indirect rate.

Administrative Costs

Overall administration costs for FY 2012 are estimated at approximately \$289,315 and include salaries, benefits, longevity pay, equipment, supplies, IT services and phone, and training and development.

Personnel*

Presently, the APNEP staff consists of the APNEP program office in Raleigh, with the Director, Program Scientist, Community Specialist and Project Coordinator. The APNEP office in Washington, NC houses the NC Watershed Field Representative.

The APNEP also has two contract employees: the Citizens' Monitoring Network Coordinator in Greenville, and the Virginia Watershed Field Representative in Suffolk, Virginia. See description under Ongoing Projects for information on these programs.

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 Policy Board and Advisory Committees, and represents the APNEP at local, state, regional and national meetings. Bill Crowell will continue in this role. Dr. Crowell has been the Director since June 2002.

Community Specialist

The Community Specialist supports public/community 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 Policy Board and Citizens' Advisory Committee. Jim Hawhee currently serves in this role. Mr. Hawhee began in November 2010.

Program Scientist

The Program Scientist assists the Program Director with administration and coordination of the CCMP. This position helps design and implement a comprehensive monitoring strategy and reporting process, guides the Scientific and Technical Advisory Committee (STAC), and reviews project proposals and reports for merit. This position provides staff support to the Policy Board and Advisory Committees. Dean Carpenter will continue in this role. Dr. Carpenter has served in this role since November 2003.

Project Coordinator

The Project Coordinator assists the Program Director to administrate the Program and coordinate and manage contracting and associated activities within NCDENR. The position also assists with the CCMP implementation process, involving interaction with numerous federal and state resource management agencies, universities, interest groups, and the general public, and provides staff support to the Policy Board and Advisory Committees. Scott Gentry currently serves in this role. Mr. Gentry began in June 2010.

Watershed Field Coordinator (NC)

This position provides an essential function as an APNEP liaison to local governments and state agencies. The Watershed Field Coordinator (NC) provides coordination and support to local governments and state agencies to enhance CCMP implementation. This position also provides staff support to the Policy Board and Advisory Committees. This position splits time between the Raleigh and Washington DENR Regional Offices. Jimmy Johnson will continue in this role. Mr. Johnson has served in this role since January 2006. Position is funded by NC DENR through the NC Natural Heritage Trust Fund and provides a portion of the non-federal match for the 320 grant.

* Note: Positions funded under EPA section 320 funds are consistent with North Carolina Office of State Personnel rules and policies.



I. TABLE of CONTRACTS and GRANTS

The Albemarle-Pamlico NEP established and managed many contracts in FY 2011. A description of these items are discussed in the Goals and Accomplishments, and the Ongoing Projects sections of this report.

Most actions are funded under CE-95451210 and CE-97464802. In additional project APNEP partnered with Environmental Defense to obtain a Regional Wetland Grant from the EPA in December 2005 and 2007. This grant (CD-9444206) funds support for the development of a comprehensive assessment and tracking methodology for wetland functionality in the Chowan estuary of Western Albemarle Sound. The project was completed in September 2010.

The following table provides an overview of all active and completed contracts to local entities since October 1, 2010.



GRANTS TO LOCAL ENTITIES (Active or completed October 1, 2010 to June 8, 2011)

Project Title	Funded Amount	Project Leader	Purpose	Deliverables	Completion Date	Status
Watershed Coordinator (VA)	\$30,405	VA. Dept. Conservation & Recreation	Fund Watershed Coordinator in VA-NC Shared river basins	Program support, Reports	Ongoing	In Progress
Citizens' Monitoring Network	\$59,100	East Carolina University	Outreach / Monitoring	Program Admin., Reports	Ongoing	In Progress
Teacher Institute 2010	\$24,000	Environmental Education Fund	Develop and Implement a Teacher Institute for 25+ teachers	Week long Institute, Report	Sept. 2010	Complete
Teacher Institute 2011	\$25,000	Environmental Education Fund	Develop and Implement a Teacher Institute for 25+ teachers	Week long Institute, Report	Sept. 2011	In Progress
303-D Waters Restoration (Fishing Creek)	\$14,000	NC Ecosystem Enhancement Program	Support efforts to remove Fishing Creek from 303-D impaired waters list	Report, Community Involvement	Dec. 2010	Cancelled by Contractor
2009 Schoolyard Demonstration Project	\$12,000	East Wake Academy	Outdoor Classroom & Boardwalk	Outdoor Classroom & Boardwalk, Report	March 2011	Cancelled by Contractor
2009 Schoolyard Demonstration Project	\$12,000	E. W. Wyatt Middle School	Nature's Classroom and Exploratory Trail	Outdoor Classroom & Trail, Report	January 2011	Complete
2009 Schoolyard Demonstration Project	\$10,200	NC Coastal Federation	Stormwater Runoff – Cape Lookout Visitors Center	Stormwater BMP, Report	Dec. 2010	Complete
Chowan Ecosystem Assessment II	\$25,000	Virginia Inst. Marine Science	Ecosystem analysis of a portion of the watershed	Report, Indicator Support	Dec. 2010	Complete
Climate Ready Estuaries Pilot Project	\$48,375	Duke University	Local government survey: Communications Strategy	Report	Sept. 2010	Complete
DWQ Outreach and Engagement Project	\$8,000	NCDENR- DWQ	Water Quality – Outreach and Engagement	Regional outreach & materials	August 2010	Complete
Ecosystem Assessment & Synthesis Report	\$68,838	Univ. of North Carolina - IMS	Ecosystem Assessment Support	Support, Report	June 2010	In Progress
Claridge Nursery Stream Restoration Monitoring Study	\$8,000	NC DENR – Div. Forest Resources	Pre-restoration baseline watershed monitoring	Monitoring, Report	June 2011	In Progress
Reducing Stormwater Runoff into Bogue Sound	\$8,087	NC DENR – Div. Marine Fisheries	Re-vegetate a portion of the Bogue Sound shoreline adjacent to the NCDMF site	Restoration, Report	March 2011	Complete
Landscaping with Nature in Currituck County	\$20,000	NC Sea Grant	Stormwater control and treatment systems demonstration project	Stormwater BMP, Report	Sept. 2010	Complete

Carrot Island Habitat Improvement	\$14,929	NC DENR – Div. Coastal Man.	Dredge spoil habitat restoration	Restoration, Report	Aug. 2010	Complete
Rates and Processes of Vital Wetland Habitat Loss in the Face of Climate Change	\$58,440.00	East Carolina University	Research: Rates and Processes of Vital Wetland Habitat Loss	Research, Report	March 2011	Complete
Evaluating Restoration Success for Newly Constructed Oyster Reefs	\$67,364	Univ. of North Carolina	Research: Oyster Restoration	Research, Report	April 2011	Complete
Elizabeth City Eco-Park	\$25,000	Elizabeth City	Design for local eco-park	Park & Stormwater Design, Report	March 2011	Complete
Assessment of Small Dam Impacts on Freshwater Mussels & Fishes	\$64,009	Appalachian State University	Baseline estimate of mollusk and fish populations near small dams	Research, Report	Dec. 2010	Complete
Manteo High School Constructed Wetland and Outdoor Environmental Education Classroom	\$49,000	Albemarle RC&D Council	Constructing and planting a wetland between Manteo High School and Dough's Creek.	Restoration, Report	Dec. 2010	Complete
Hydrologic Restoration for Habitat and Estuarine Water Quality Improvement	\$99,967	North Carolina Coastal Federation	Restoration project to restore the hydrology on more than 42,000 acres in Hyde County, N.C	Restoration, Report	Dec. 2010	Complete
Climate Change: Sea-Level Rise & Restoration of Estuarine Habitat	\$65,538	The Nature Conservancy	Invasive species removal, re-establishment of wetland hydrology, and construction of a fringing oyster reef	Restoration, Report	Dec. 2010	Complete
J. H. Rose High School – Schoolyard Demonstration Project	\$19,800	Mid-East RC&D	Constructed wetland, stream restoration, and educational curriculum	Restoration, Report	Sep. 2010	Complete
Uriah Branch Nature Trail, Phase I	\$19,159	Greensville County, VA	Construction of a trail and wetlands observation deck	Public trail, observation deck	October 2010	Complete
Agricultural Best Management Practices Event	\$10,000	Partnership for the Sounds	Conduct an event to promote innovative farming methods in the Tar-Pamlico river basin	Estuarium Event, Report	Sep. 2010	Complete
Northeast Ag Expo No-till/Conservation-till Education	\$10,000	Perquimans County, NC	Promote the benefits of conservation tillage to farmers in northeastern North Carolina	Demonstration of no-till drill, Report	July 2010	Complete



Project WET (Water Education for Teachers) Facilitator Training	\$1,000	NC DENR – Division of Water Resources	Train 10 new facilitators to conduct “WET” workshops throughout the state.	Training Session, Report	Sep. 2010	Complete
Support for the Incorporation of Ecosystem-Based Management	\$34,995	Virginia Institute of Marine Science	Facilitate and establish ecosystem-based management in the new CCMP and companion monitoring plan	Monthly Meetings, Conceptual Model, Report	March 2011	Complete
Outdoor Learning and Environmental Education Teacher Training Workshop	\$20,000	Environmental Education Fund	3-day teacher training workshop focused on integrating environmental education and outdoor learning into PreK-5th grade classrooms	Workshop, Report	October 2010	Complete
Submerged Aquatic Vegetation (SAV) mapping	\$79,961	Atkins (formerly PBS&J)	Using ArcGIS software, delineate SAV boundaries from aerial imagery of the entire NC coast	ArcGIS geodatabases	June 2011	Complete
NC Outdoor Classroom Symposium (2011)	\$9,000	Environmental Education Fund	3-day symposium for teachers to provide instructional techniques focused on outdoor learning	Outdoor Classroom Symposium	April 2011	Complete
Shad in the Schools	\$60,000	Friends of the NC Museum of Natural Sciences	Students will raise American Shad in the classroom from egg to releasable fry	Teacher workshop, Shad Release, Podcasts & Film	Sep. 2011	In Progress
VA Forum: Living in Your Watershed Booklet (Chowan Basin)	\$1,500	South Centre Corridors RC&D Council	Print and distribute copies of an educational booklet to all elementary schools within the Virginia Chowan Watershed	20,000 copies of the booklet	March 2011	Complete
CAC Projects: Elizabeth City Middle School Created Stormwater Wetland	\$25,000	UNC-Coastal Studies Institute Foundation	Construct a wetland at Elizabeth City Middle School to intercept stormwater from the school's buildings and parking lots	Stormwater Wetland, Boardwalk, Ed. Curriculum	Sep. 2011	In Progress
CAC Projects: Recycling fishing gear to enhance shellfish productivity and improve local water quality	\$24,168	UNC-Institute of Marine Sciences	Recycled crab pots will be deployed in targeted locations to facilitate oyster settlement and growth to create habitats for oysters.	Deploy Crab Pots, Surveys & Analysis, Report	July 2011	In Progress
CAC Projects: Living Shoreline to Improve Habitat and Water Quality and Reduce Stormwater Runoff into Bogue Sound	\$8,159	NC Coastal Federation	Conduct a shoreline restoration project by planting native vegetation along the Bogue Sound shoreline in Morehead City	Shoreline Planting, Report	July 2011	In Progress



CAC Projects: Basic Observation Buoy (BOB) Workshop, Construction, and Deployment	\$25,000	UNC-Coastal Studies Institute Foundation	Local students will construct and deploy "BOB" units to collect data in the Albemarle-Pamlico Sounds	Training Workshop, BOB units, Report	Sep. 2011	In Progress
N.C. Environmental Education Plan	\$6,000	NC DENR: Office of Environmental Education	Printing of the N.C. Environmental Education Plan	NC EE Plan	July 2010	Complete
Estuary Awareness: Estuary Essentials Program for Libraries	\$6,560	North Carolina Aquarium Society	Conduct presentations across the APNEP region about the estuarine system	Present "Estuary Essentials" at 20 Libraries, Report	Sep. 2011	In Progress
Estuary Awareness: Environmental Education Bookmark Contest	\$3,200	NC DENR Soil & Water Conservation	Conduct an educational bookmark contest, targeting fifth-grade students across 16 counties, with a theme focused on the estuaries	Conduct Contest, Distribute Winning Bookmark to Local Libraries	Sep. 2011	In Progress
Estuary Awareness: Promoting Awareness and Stewardship of APNEP's Estuarine Habitats and Shorelines	\$27,698	NC Coastal Reserve & National Estuarine Research Reserve	Conduct an education campaign in the APNEP region that is complementary across multiple target audiences, including K-12 teachers and students, coastal decision-makers, and the public	Public Information Campaign, Workshops, Public Field Experiences, Report	Sep. 2011	In Progress
Remote Sensing of Submerged Aquatic Vegetation (SAV) in the APNEP region	\$5,300	NC Dept. of Transportation	Use a Digital Mapping Camera to obtain remotely sensed imagery of selected SAV sites in the APNEP region	Digital Mosaics of SAV sites.	June 2011	Pending
Affordable Housing Wetland Boardwalk	\$15,000	Conservation Trust for NC	Create a protected one-acre wetland park at the center of an affordable housing subdivision	Boardwalk, Trail, Educational Materials	Sep. 2011	Pending



II. LEVERAGE FUNDS

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, even though 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. APNEP will be working with NC DENR to develop a strategy for the development of additional state funds for program activities.

Additionally, the APNEP staff will work with EPA staff to identify and develop strategies for leveraging funds beyond the EPA section 320 grant 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 2012

In FY 2012, the Albemarle-Pamlico NEP will continue to seek additional avenues for collaborating with other partners to assist in targeting funds to support CCMP implementation goals and the APNEP mission. Where possible, APNEP will actively seek alternative sources of funding for APNEP activities and projects to fulfill the goals of the CCMP.

FY 2011

In FY 2011, the Albemarle-Pamlico NEP continued to seek partners and additional opportunities for partners in targeting actions and funds towards CCMP implementation. APNEP will submit its FY 2011 Leverage results in September 2011.



III. FY 2011 ESTIMATED FEDERAL COST SHARE

FY 2012 Budget

The estimated federal cost share grant for each NEP for FY 2012 is \$598,800*

Program Administration (staff salaries, benefits**, longevity, rent, supplies, etc.)	\$ 289,315
Boards & Committees Support	\$ 3,000
Travel	\$ 10,000
VA Watershed Field Coordinator	\$ 32,000
Community Involvement & Outreach	\$ 8,009
Citizens' Monitoring Network Transition	\$ 5,000
CCMP- Identify	\$ 100,000
CCMP- Restoration***	\$ 50,000
CCMP – Engagement	\$ 80,000
CCMP – Monitoring	\$ 2,000
Indirect Costs (8.8%)	\$ 19,476
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	\$ 598,800

** US EPA, May 2011*

*** Includes: Benefits are based on Social Security (7.65 %) & Retirement (10.51 %) of position's annual salary
Medical Insurance Plan rate of \$4,929 per year and
Indirect Costs based on 8.8 % of federal salaries.*

**** Will be combined with FY2011 funds for a total of \$150,000*



APNEP Policy Board requested that the previous year's budget be included in the annual work plan for review and comparison purposes.

Federal Funds Budget FY 2011

The estimated federal funds grant for each NEP for FY 2011 is \$800,000*

Program Administration (staff salaries, benefits**, longevity, rent, supplies, etc.)	\$ 277,196
Watershed Field Coordinator	\$ 32,000
Boards & Committees Support	\$ 2,000
Community Involvement & Outreach	\$ 2,443
Citizens' Monitoring Network	\$ 60,000
CCMP-EBM Support (RFP)	\$ 40,000
2010 Teacher Institute	\$ 24,000
Restoration Projects*** (RFP)	\$ 100,000
Estuary Awareness (RFP)	\$ 50,000
CAC Projects	\$ 80,000
303-D Listed Waters Project (Fishing Creek)	\$ 6,000
Outdoor Classroom Symposium	\$ 9,000
State of the Sounds Conference	\$ 9,000
Shad in the Classroom	\$ 60,000
Travel	\$ 10,000
Indirect Costs (18.2%)	\$ 38,361
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	Total \$ 800,000

* From EPA meeting in February 2010

** Includes: Benefits are based on Social Security (7.65 %) & Retirement (10.71 %) of position's annual salary
Medical Insurance Plan rate of \$4,929 per year and
Indirect Costs based on 18.2 % of federal salaries.

*** To be implemented with FY 2012 Restoration Projects



IV. NON-FEDERAL COST SHARE (Match for FY 2012)

Summary of Match Requirements

The North Carolina Department of Environment and Natural Resources intends to provide \$598,800 for the required 1:1 non-federal match for FY 2012 under CE-95451210. All non-federal match has been met for CE-97464802. This match will be provided through:

- 1) In-kind services provided by staff support for the NC Field Representative from the Department of Environment and Natural Resources: Office of Conservation and Community Affairs.
- 2) State funds allocation to cover costs associated with projects to improve water quality through funding of the NC Clean Water Management Trust Fund for one or more projects in the APNEP program boundary.

Summary of Non-federal State Match

In-kind Position (salaries and benefits)	\$ 84,110
Clean Water Management Trust Fund Project(s):	<u>\$ 514,690</u>
TOTAL:	\$ 598,800

In-kind Position Non-federal Match

The North Carolina Department of Environment and Natural Resources intends to provide \$84,110 as part of the required 1:1 non-federal match for FY 2012. The match will be provided through in-kind services provided by staff of the Department of Environment and Natural Resources.

Office of Conservation and Community Affairs

NC DENR's Office of Conservation and Community Affairs manages the *One North Carolina Naturally* initiative by leading the development and implementation of a comprehensive statewide conservation plan involving government agencies, private organizations, landowners and the public. Protecting the state's open space areas in this coordinated manner facilitates the more effective use of limited funding sources. OCCA also provides support for development of regional open space plans, providing assistance through regional meetings and resource materials.

The match position is responsible for program administration, support, community involvement and guiding implementation of the APNEP Comprehensive Conservation and Management Plan and the NC Coastal Habitat Protection Plan.

<u>POSITION</u>	<u>#</u>	<u>SALARY</u>	<u>EFFORT</u>	<u>Match</u>
Field Representative	1	67,012	1.0	67,012
			Benefits* 1.0	<u>17,098</u>
		Total In-Kind Service Match:		84,110

* Benefits are based on Social Security (7.65 %) & Retirement (10.71 %) of position's annual salary, plus Medical Insurance Plan rate of \$4,929 per year.



In-kind Project/Services Non-federal Match

The North Carolina Clean Water Management Trust Fund intends to provide \$514,690 as part of the 1:1 non-federal match for FY 2012. The expenditure of non-federal funds will be provided through water quality improvement projects in one or more of the APNEP river basins.

Clean Water Management Trust Fund

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

V. TRAVEL

The APNEP and EPA consider personal, face-to-face contact with peers and colleagues essential for information sharing and technology transfer. As part of the federal grant, APNEP will allocate \$10,000 as travel funds for program support, 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 and EPA 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

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 grant agreement, members of the 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 2011

APNEP staff attended a number of meetings and conferences using the allotted travel funds and specific project funds or administration costs. Below is a summary of these activities that have occurred or are currently planned for the year:

Personnel	Date	Purpose	Location	Cost*
APNEP Staff	10/10 to 9/ 2010	Normal Program Activities/ projects	APNEP area	\$6,800
Crowell	Feb.2011	EPA- ANEP/NEP National Meeting	Washington, DC	\$1,200
APNEP Staff	November 2010	EPA- ANEP/NEP National Meeting	Charlotte Harbor, FL	\$2,000
			Total	\$10,000

**Estimate*

FY 2012 Projected Travel Estimates

All travel is allocated into three categories: In-State, Out-of-State, and EPA Required. All travel must be consistent with published 2010 NC DENR travel policies and regulations (<http://www.enr.state.nc.us/ooc/pdf/trav.pdf>). Due to the dynamic nature of the NEP, all travel cannot be scheduled a year ahead: therefore, only an estimate can be provided based on established NC DENR rates (below). Some travel is associated with specific projects, and travel costs are included in budgeted amounts.

In-State:

In-State travel is primarily for program staff to conduct routine business associated with APNEP daily operations, staff training or topical meetings germane to the program. It may also cover non-staff for NEP business (i.e., board and committee members, guest speakers, and experts). Rates are listed below.

In-state estimate for FY 2012: 30 trips, among 4 staff members; average cost per trip approximately \$100. Total \$3,000

EPA-associated Out-of-State:

The NEPs hold two national meetings each year (these may be in same fiscal year or not). Each program is strongly encouraged to participate in the meetings. The spring meeting is held in the Washington, D.C. area and the fall meeting location rotates among the different NEP locations. The level of staff participation will vary depending on the agenda for a particular meeting. Generally one or two staff members attend. Travel may also cover non-staff (e.g., Policy Board or Advisory Committee members).

Estimate for FY 2012: 2 trips, 3 persons; average cost per trip per person is approximately \$1000.00 (based on prior travel). Total \$6,000

Other Out-of-State:

Out-of-State travel is primarily for program staff to conduct business associated with the NEP, and to attend training or topical meetings germane to the program. It may also cover non-staff (e.g., board and committee members, guest speakers, experts) for NEP related activities. Rates are listed below.

Out-of-State Estimate for FY 2012: 2 trips, 2 days; average cost per trip approximately \$500.00. Total \$1,000



2012 NC DENR TRAVEL RATES

Item	In-State	Out of State	Overnight Trip	Day Trip
Breakfast	\$ 7.75	\$ 7.75	Leave Office before 6:00 AM	Leave Office before 6:00 AM; Extend workday by 2 hours
Lunch	\$ 10.10	\$ 10.10	Leave Office by 12:00 Noon; Overnight return after 2:00 PM	Never claimed on day trip
Dinner	\$ 17.30	\$ 19.65		Depart office before 5:00 PM Return after 8:00 PM Extend workday by 3 hours
Breakfast/ Dinner				Leave office before 6:00 AM; Return after 8:00 PM; Extend workday by 5 hours
Hotel (+ taxes)	\$ 65.90	\$ 78.05		

FY 2012 Projected Travel

Personnel	Date	Purpose	Location	Estimated Cost
APNEP Staff & volunteers	October 2011 to September 2012	Normal program activities in the region	Albemarle – Pamlico Region	\$3,000
APNEP Staff	October 2011	NEP national meeting	Los Angeles, CA.	\$3,000
APNEP Staff	February 2012	NEP national meeting	Washington, DC Area	\$2,000
APNEP Staff	October 2011 to September 2012	Additional relevant national meetings	TBA	\$2,000

