



**Final Closeout Report  
2014-2019**

**December 2021**

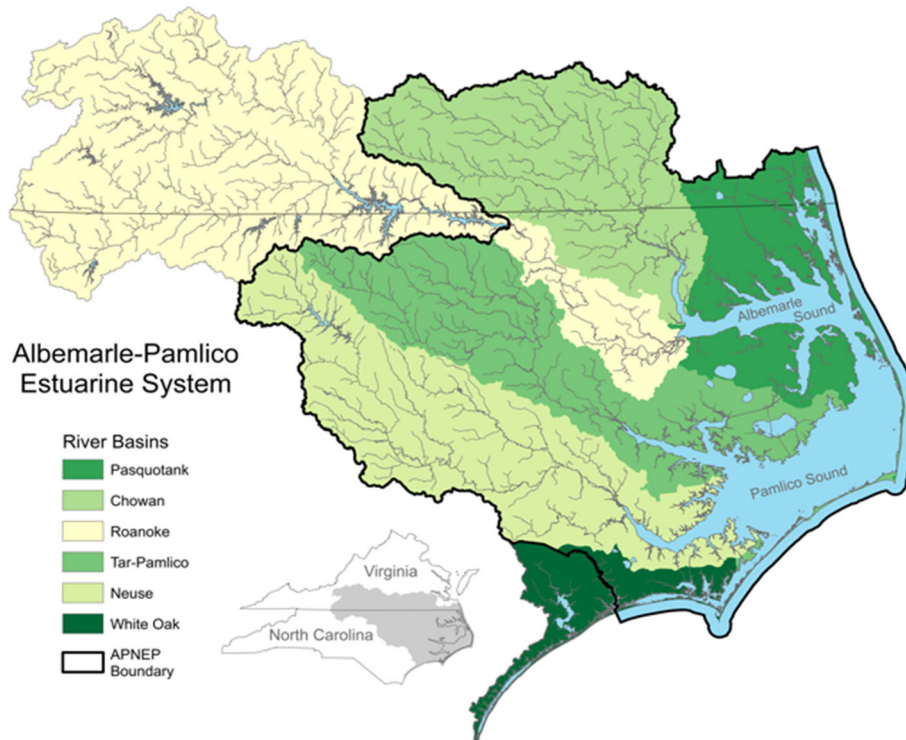
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# INTRODUCTION



The Albemarle-Pamlico National Estuary Partnership (APNEP) is a component of the U.S. Environmental Protection Agency's (EPA) National Estuary Program. It was one of the first programs established under amendments to the Clean Water Act in 1987. APNEP's mission is to identify, protect, and restore the significant natural resources of the Albemarle-Pamlico region.

The Partnership is a cooperative effort currently hosted by the N.C. Department of Environmental Quality (NC-DEQ) under a cooperative agreement with the EPA and works closely with the Commonwealth of Virginia. The Partnership also works closely with both EPA Regions III and IV.

APNEP's initial Comprehensive Conservation and Management Plan (CCMP) was ratified by the Governor of North Carolina and approved by the EPA in November 1994. The APNEP Management Conference approved a revised CCMP and submitted to the EPA in March 2012. The [2012-2022 CCMP](#) was created in a stakeholder-driven process with an ecosystem-based management approach to implementation.

APNEP is guided by a Management Conference as authorized under [N.C. Governor's Executive Order #26 \(2017\)](#).

More information on the Partnership may be found at [www.APNEP.org](http://www.APNEP.org)

## Purpose

This document provides a report of activities under the following EPA-N.C.DEQ Cooperative Agreements to support implementation of the management strategies recommended in APNEP's [2012-2022 Comprehensive Conservation and Management Plan \(CCMP\)](#) under the direction of the Leadership Council, as well as to support APNEP's mission of identifying, protecting, and restoring the Albemarle-Pamlico region's significant natural resources.

### **Cooperative Agreement *CE-0D20614***

The period of performance under this Cooperative Agreement is from October 1, 2014 through September 30, 2021.

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## Key Accomplishments

Key accomplishments from October 2014 to September 2020 are listed below.

### Scientific and Technical Initiatives

#### Submerged Aquatic Vegetation Monitoring and Coordination

- **Release of 2013-14 SAV Mapping Data:** APNEP has been a leader in recognizing the value of North Carolina’s submerged aquatic vegetation (SAV) resource since the early 2000’s and continues to facilitate an SAV Team to coordinate monitoring, mapping, and outreach efforts. In fall 2019, the Team finalized and published a map of high-salinity SAV extent and density from 2013 aerial images. This data represents the second map of North Carolina’s SAV habitat and will be utilized alongside the previous map to develop a better understanding of the status and trends of SAV in the state. [Learn more.](#)
- **A total of 3 SAV Map Data Collection:** In 2019, APNEP coordinated with the N.C. Department of Transportation and the N.C. Division of Marine Fisheries to gather data via aerial imagery and boat-based ground truthing respectively for a third SAV map. Efforts to collect aerial imagery needed for a complete map of SAV in the high-salinity areas of the Albemarle-Pamlico region were continued in spring 2020. Additional flights are planned for fall 2020. [Learn more.](#)
- **SAV-Water Quality Workshop:** In March 2020, APNEP led a coordinated effort to host a full-day workshop called “Clean Waters and SAV: Making the Connection” that brought together regional experts in both water quality and SAV to discuss linkages between the two resources. The recommendations and priorities developed during the workshop are being used to inform revision of the [N.C. Coastal Habitat Protection Plan](#) and will be synthesized in a summary report. The workshop discussion was also used to identify short-term actions for APNEP and partners to focus on in regard to SAV protection within the Albemarle-Pamlico region. [Learn more.](#)
- **Development of Ecosystem Indicators and Metrics**  
Under guidance of the Partnership’s Science and Technical Advisory Committee (STAC), APNEP completed an initial list of high-priority ecosystem indicators and metrics for a Monitoring Plan in 2020. [Learn more.](#)

### Communications and Outreach

- **Submerged Aquatic Vegetation Communications**

**SAV Economic Valuation:** APNEP has contracted with the N.C. State University Center for Environmental and Resources Economics Policy (CEnREP) to fund an analysis of the economic value of SAV in the Albemarle-Pamlico region. The study’s findings will be incorporated into future outreach and communication campaigns about the resource.

**SAV Press and Outreach:** Alongside release of the 2013 SAV map and the 2019 mapping effort, APNEP worked to highlight the organization’s focus on SAV protection and the importance of SAV to the Albemarle-Pamlico region through various communications, including a [blog post](#), a recurring SAV Spotlight section in APNEP’s [monthly e-newsletter](#), a [2014 map press release](#), and a focus on SAV on APNEP social media platforms. The press release led to external press for APNEP’s efforts in the [Coastal Review Online](#) and on [Public Radio East](#).

- **Water Quality Testing and Communications Projects**

Core to APNEP’s mission as a program authorized by the Clean Water Act is protecting and restoring the Albemarle-Pamlico region’s waters, the Partnership funded a number of projects in support of this goal. Through support for Sound River’s Swim Guide program and N.C. Division of Marine Fisheries’ Recreational Water Quality Monitoring program, APNEP is expanding the collection of water quality data for our region and prioritizing public health. Both programs monitor water quality with the primary goal of alerting local communities to potentially hazardous conditions, and the Swim Guide program has the added educational benefit of operating through citizen scientists. [Learn more.](#)

- **Development of Updated Outreach Materials**

In 2019, APNEP redeveloped the organization’s outreach activities and materials. While direct outreach and environmental education is not a core focus for the Partnership, APNEP participates in tabling events and environmental education initiatives throughout the year and updated its materials to make sure that its participation in these events is effective and informative. Updates included the purchase of supplies that will allow for more hands-on and exploratory learning, as well as the development of a new “Water Detectives” activity that deepens elementary students’ interest in the process of scientific research while learning about components of water quality.

- **Development of Updated Printed Materials**

APNEP redesigned its set of printed materials to target priority audiences and communicate the Partnership’s value to the region. Separate brochures for partner organizations, educators, and the general public were developed, as well as a rack card for general use. These new materials have a consistent look and feel that will be utilized across the board in APNEP communications. [Learn more.](#)

## **Long-Term Watershed Outreach Projects**

- APNEP’s long-term support for the Summer Teacher Institute, a multi-day environmental and outdoor education professional development opportunity for the region’s educators, has reached approximately 25 teachers each year since its inception in 2004. The workshop was held via online session this year. [Learn more.](#)
- Long-term APNEP support for the N.C. Museum of Natural Science’s Shad in the Classroom program has reached approximately 30 educators each year since 2011, and through those educators over 1000 students each year. From 2010 (pre-APNEP funding) to 2018, the

program has been able to grow from 13 classrooms to 30 classrooms across the region. [Learn more.](#)

### **Installation of Albemarle-Pamlico Estuary Highway Signs**

APNEP worked with the N.C. Department of Transportation to design and install highway signs at major roadways into the Albemarle-Pamlico watershed. These signs will raise awareness of the extent of the region and of the connectivity from headwaters to the coast. [Learn more.](#)

## **Coastal Resiliency Initiatives**

- **N.C. Executive Order 80 Implementation**

APNEP staff participated in the N.C. Risk and Resiliency Plan development process led by NC-DEQ, designed to assist North Carolina cabinet agencies in assessing risks and vulnerabilities associated with climate change on agency programs and services. Staff participated in workgroups that conducted these assessments and wrote the Ecosystems and Coastal Structures chapters of the N.C. Climate Risk Assessment and Resilience Plan.

### **Coastal Resilience Community of Practice**

- APNEP staff have joined the N.C. Division of Coastal Management and N.C. Coastal Reserve in co-leading a Coastal Resilience Community of Practice. The workgroup consists of diverse coastal stakeholders, including agency representatives, local governments, and non-profit organizations who have agreed to focus on how ecosystem resiliency can help build local community resilience.

### **Water Level Monitoring Stations**

- APNEP has funded the placement of three N.C. Flood Inundation Mapping and Alert Network (FIMAN) remote monitoring stations through the N.C. Division of Emergency Management. Data from these gauges will increase real-time knowledge of flood conditions in the Albemarle-Pamlico region, as well as contribute to the knowledge used to address future water management actions in the watershed. [Learn more.](#)

## **Partnership-Building and Regional Coordination**

- **North Carolina – Virginia Agencies Memorandum of Understanding (2020)**

Facilitated by the Albemarle-Pamlico National Estuary Partnership (APNEP), a new MOU will assist agencies in coordinating with APNEP to tackle regional issues such as nonpoint source pollution, restoring fish passage and spawning habitat, and controlling invasive species. Agency included: North Carolina Department of Environmental Quality, North Carolina Department of Natural and Cultural Resources, North Carolina Department of Agriculture and Consumer Services, North Carolina Wildlife Resources Commission,, Secretary of Natural Resources of the Commonwealth of Virginia, and the Secretary of Agriculture and Forestry of the Commonwealth of Virginia. Agencies will also continue to explore opportunities to assist state, regional, and local governments in incorporating climate change and sea level rise considerations into their planning processes.

- **N.C. Aquatic Nuisance Species Management Plan Committee Coordination**

APNEP staff continued working with the N.C. Aquatic Nuisance Species Management Plan Committee in 2019-2020 to finalize and submit the Plan for federal approval, and afterwards identify next steps for Plan implementation. This state plan for coordinated management, research, and outreach of aquatic nuisance species, once finalized and federally approved, will make North Carolina eligible for federal funding to support the plan's implementation. Improved coordination and collaboration across state agencies will leverage limited resources available for invasive species management in North Carolina. [Learn more.](#)

- **Living Shorelines Tech Transfer Workshop**

APNEP staff worked with Restore America's Estuaries and the N.C. Coastal Federation to organize a workshop in Beaufort, N.C. in October 2019. Staff participated on the steering committee that developed the agenda and coordinated field trips for all attendees. There were approximately 250 professionals from the U.S. and Canada who attended. All aspects of living shoreline work in the state, including the APNEP region were discussed with the participants. [Learn more.](#)

- **NC Marine Debris Action Plan Development**

APNEP staff participated on the N.C. Marine Debris Advisory and Implementation Team that help guide the final stages of plan development. This committee advises on and participates in implementing the Action Plan. This plan provides a strategic framework for prevention and removal of marine debris along the North Carolina coast and inspires coordination, focus, and direction for the organizations and communities in addressing marine debris over the next five years and into future generations. [Learn more.](#)

## **Management Conference Activities**

- **Leadership Council Strategic Planning Meeting:** In January 2020, the APNEP Leadership Council met for a multi-day strategic planning meeting facilitated by Coastwise Partners. APNEP has been working in spring 2020 to implement the resulting programmatic and administrative recommendations, including the development of program focus areas, revitalization of Management Conference purpose and focus, and increased North Carolina-Virginia collaboration. [Learn more.](#)
- **Science and Technical Advisory Committee:** The APNEP STAC has been focused primarily on the development of a Monitoring Plan for the Albemarle-Pamlico region. With STAC guidance, APNEP is finalizing its initial list of high-priority ecosystem indicators and metrics for its Monitoring Plan in early 2020.
- **APNEP Diversity and Inclusion Statement:** The APNEP Leadership Council adopted a Diversity and Inclusion Statement on September 1, 2020 that reflects the Partnerships views, efforts, and actions to support the diversity of the human community within the Albemarle-Pamlico region. The full statement is included in the Appendix.

## CCMP Focus Areas and Activities

Under the direction of the Leadership Council, APNEP has focused on the following CCMP focus areas and activities. Details about individual projects can be found in the [Ongoing](#) and [Proposed](#) Projects sections of the work plan. These goals are in line with program priorities of Water Quality, Submerged Aquatic Vegetation and Coastal Habitats, and climate resiliency.

### Submerged Aquatic Vegetation

#### SAV Mapping

To continue high-salinity SAV data collection from 2019, aerial image acquisition and interpretation will take place in spring/summer 2020. This will result in the creation of a third map of SAV extent and density in the Albemarle-Pamlico region.

#### SAV Economic Analysis

APNEP is funding an analysis of the economic value of SAV in the region and will incorporate the study's findings into future outreach and communication campaigns about the resource.

#### SAV Communication Campaign

To highlight the value of SAV to the state as well as APNEP's role in monitoring the resource, the Partnership plans to continue focusing outreach and communication efforts on this topic in 2020.

#### Research Study to Develop Chlorophyll-*a* Standards for SAV Protection

In order to set SAV protection and restoration goals for the Albemarle-Pamlico Estuarine System and make the connection to needed nutrient and sediment load reductions, quantitative linkages between chlorophyll-*a* concentrations and SAV light requirements are needed. This project through the UNC Institute for Marine Sciences will develop recommendations for scientifically defensible chlorophyll-*a* standards that are protective of SAV in high- and low-salinity zones of the Albemarle-Pamlico Sound Estuarine System.

### Water Quality and Quantity Protection and Restoration

#### Ecological Flows Action Team

A working group brought together by APNEP has been developing a pilot project to address issues related to lack of ecological flow data in the coastal plain. Team members from East Carolina University are working on a proposal to develop research questions and criteria for establishing flow-ecology relationships in the coastal plain based on input and recommendations from team members at recent meetings. This work builds on a Phase I study, supported by APNEP, which focused research on the status of available ecological flow-related data for the Albemarle Pamlico Drainage Basin.

### Living Shorelines

#### Living Shorelines Action Team

This team is co-lead by APNEP and the North Carolina Coastal Federation and is also called the NC Living Shorelines Steering Committee. Work by these members in 2019 includes research and

monitoring of natural marshes and living shorelines, wave attenuation and transformation, and the use of alternative living shoreline construction materials. Education and outreach efforts by members have increased the awareness and shown the benefits of living shoreline techniques to the public as well as to real estate agents, contractors, and engineers. In addition, nearly 2,400 feet of living shorelines were constructed in 2019 throughout the state.

## Monitoring

### **Development of Monitoring Strategy and Ecosystem Indicators**

With the input of the Partnership's Science and Technical Advisory Committee (STAC), APNEP plans to complete development of its initial Monitoring Plan in 2020, as well as identification of high-priority ecosystem indicators and reports on their status in the Albemarle-Pamlico region.

## Education/Outreach

### **Continuation of Long-Term Outreach Projects**

APNEP plans to continue funding for Shad in the Classroom and the Teacher Institute until 2022, at which time continued funding for both programs will be reevaluated alongside other submitted project proposals through an open RFP process. With input from its Engagement and Stewardship Action Team, APNEP is currently creating an RFP that will be used to fund targeted outreach and engagement initiatives starting in Fall 2021. This RFP process will enhance the program's transparency, accessibility, and the evaluation of outputs/outcomes from funded projects.

### **Development of Updated Printed Outreach Materials and Activities**

APNEP is continuing the development of updated printed brochures for target audiences in 2020. These will include printed materials highlighting APNEP's SAV mapping, monitoring, and economic valuation, as well as brochures for other audiences such as researchers. APNEP also plans to develop a SAV-focused educational activity that can complement water quality-focused activities developed in 2019 for use at future outreach and tabling events.

## Improved Climate Resiliency

### **Building Capacity for Climate Resilience in Tribal Communities**

Using supplemental 320 funds, APNEP is contracting with the North Carolina Commission of Indian Affairs to work with tribal communities in the Albemarle-Pamlico region to develop a strategy for incorporating resilience into tribal planning and community engagement processes. The project will also involve an analysis of tribal engagement in climate and resilience planning efforts around the U.S. as well as assistance from the Virginia Coastal Policy Center with coordination with state agencies and tribal communities in Virginia.

### **Using Natural and Nature-Based Features to Build Resilience to Storm-Driven Flooding**

APNEP is collaborating as a project partner on a [NOAA Coastal Resilience Grant](#) with the Virginia Institute of Marine Science (VIMS). The project is focused on increasing the use of natural and nature-based features (NNBFs) to increase resilience of coastal communities to flooding caused by storms and extreme weather events and is designed with local government officials as the target

audience for project generated data and guidance. The project includes development of tools that allow local planners in coastal counties in Virginia to determine suitable areas to implement natural infrastructure. APNEP will continue its role in assisting the project team in assessing transferability of the tool to coastal localities in North Carolina.

### **Prioritizing Coastal Habitats and Carbon Resilience**

APNEP was invited to collaborate on a United States Climate Alliance (USCA) project to expand work led by Duke University for the NC-DEQ Natural and Working Lands sub-teams that were established to support N.C. Governor's Executive Order #80. The USCA grant was awarded in winter 2019 and is a multi-state effort that includes APNEP partners in Virginia. The project involves a spatial analysis to map and prioritize coastal habitats that store carbon, enhance natural and human community resilience to coastal hazards, and support a variety of species. It is designed to support Atlantic coast states that are engaged in resilience planning and working to incorporate blue carbon into their climate mitigation plans. APNEP will continue its role in assisting the project team in making connections to scientists, restoration practitioners, resource managers, and communities working in coastal resilience and climate mitigation in North Carolina and Virginia to ensure products reflect their feedback and priorities.

# COMPLETED PROJECTS FISCAL YEAR 2014-2019

The following list provides an overview of APNEP’s completed projects October 2014 – September 2021.

## CE-00D20614 Funds Awarded to Entities 2014-2019

2014			
Title	Amount	Grantee	Purpose
Citizens’ Monitoring Network	\$1,000	East Carolina University	Outreach / Monitoring
Teacher Institute	\$11,000	UNC Institute for the Environment	Develop and Implement a Teacher Institute for up to 24 teachers
Shad in the Schools	\$39,004	Friends of the NC Museum of Natural Sciences	Students will raise American Shad in the classroom from egg to releasable fry
Basic Observation Buoy (BOB) Workshop, Construction, and Deployment	\$11,510	UNC-Coastal Studies Institute	Local students will construct and deploy “BOB” units to collect data in the Albemarle-Pamlico Sounds

Restoration Project: Using positive interactions between bivalves and seagrass to improve water quality and restore essential habitats	\$74,956	UNC Institute of Marine Sciences	Restore clam populations within seagrass meadows at sites in Back and Pamlico Sounds to spur further eelgrass recovery.
Restoration Project: Use of a Novel Restoration Method to Enhance Oyster Populations and Improve Water Quality in Tidal Creeks	\$32,122	UNC Institute of Marine Sciences	Enhance oyster populations in lower portions of five tidal creeks along the eastern shore of Newport River, Carteret County.
2013 Restoration Project: Water Quality Restoration of Alligator River, Long Shoal River and Pamlico Sound	\$74,989	NC Coastal Federation	Install water control structures, swales and dikes to direct water into restored wetlands. Water re-directed to these wetlands reduces the amount of water pumped directly by farm operations into the Albemarle and Pamlico Sounds. Component of high priority comprehensive watershed restoration plan.
Restoration Project: Hoggard Millpond Restoration Project	\$49,500	Mid-East Resource Conservation and Development Council, Inc.	Restore spawning and nursery habitat for two species of river herring by implementing a multi-phase, multi-funded, integrated watershed project for Hoggard Mill Creek in Windsor, NC.
Enhancement and Restoration of North Carolina Oyster Resources through Oyster Sanctuaries	\$34,875	NC Division of Marine Fisheries	Develop approximately 1.25 acres of West Bluff Oyster Sanctuary by deploying reef structures.
Estuary Awareness: Environmental Education Bookmark Contest	\$3,200	NCDACS Soil & Water Conservation	Conduct an educational bookmark contest, targeting fifth-grade students across 16 counties, with a theme focused on the estuaries

Support for the Implementation of an Ecosystem Based-Management CCMP	\$30,000	Virginia Institute of Marine Sciences	Assist with facilitating the incorporation of EBM elements into the Albemarle-Pamlico National Estuary Partnership program.
Remote Sensing of Submerged Aquatic Vegetation (SAV) in the APNEP region	\$128,500	NC Dept. of Transportation	Use a Digital Mapping Camera to obtain remotely sensed imagery of selected SAV sites in the APNEP region
Roanoke River gage near Oak City (USGS Station Number 02081022)	\$5,900	NCDENR Div. of Water Resources	Operation and maintenance of Roanoke River Gage near Oak City to keep water flow/water quality historical record intact.
Roanoke River gage near Oak City (USGS Station Number 02081022)	\$4,900	NCDENR Div. of Water Resources	Operation and maintenance of Roanoke River Gage to keep water quality historical record intact.
CCMP Implementation Projects	\$182,000	Multiple	Identify projects that need financial or admin support from APNEP. PB will evaluate requests and administrate funding of projects.
APNEP Symposium	\$9,832	APNEP	Symposium on health status and trends in APNEP region.
Education and Outreach Assistant through AmeriCorps Program	\$6,392	NCDEE	Assisting with implementation of APNEP communication strategy through videography development/ integration, other education and outreach events.

North Carolina Low Impact Development Summit	\$2,500	NCCF	Summit to unveil the latest technology and tools for low impact development.
NC Division of Water Resources Project WET Facilitator Workshop	\$2,000	NC DWR	Workshop to train environmental educators.
NC Coastal Federation Oyster Summit	\$2,002	NCCF	Summit to assess current restoration and management activities for oysters.
NC Coastal Federation CAMA Land Use Planning Workshop	\$652	NCCF	Workshop to discuss effective land use planning.
Regional Workshop on CAMA Land Use Planning	\$1,500	NCCF/ NC DCM	Workshop to discuss effective land use planning.
NC Museum of Natural Sciences Egret Workshop	\$2,250	NC MNS	Workshop to train educators on egret monitoring and the importance of estuaries.
Chowan River Basin Booklet Printing	\$2,000	ACRT	Booklet printed for the roundtable for the Chowan river basin.

NC Catch Placemat Printing	\$2,000	NC Catch	Restaurant placemat printing.
NC Heritage Trails Map Printing	\$2,000	Core Sound Waterfowl Museum & Heritage Center	Trail brochure printing.
NC DMF Recreational Water Quality Monitoring	\$20,000	NC DMF	Bridge funding for bacteria contamination testing in coastal recreational waters.
<b>2015</b>			
Citizens' Monitoring Network	\$1,000	East Carolina University	Outreach / Monitoring
Teacher Coastal Institute	\$25,000	UNC Institute for the Environment	Develop and Implement a Teacher Institute for up to 24 teachers
Shad in the Classroom	\$30,000	Friends of the NC Museum of Natural Sciences	Students will raise American Shad in the classroom from egg to releasable fry

Remote Sensing of Submerged Aquatic Vegetation (SAV) in the APNEP region	\$128,500	NC Dept. of Transportation	Use a Digital Mapping Camera to obtain remotely sensed imagery of selected SAV sites in the APNEP region
Roanoke River gage near Oak City (USGS Station Number 02081022)	\$4,900	NCDENR Div. of Water Resources	Operation and maintenance of Roanoke River Gage to keep water quality historical record intact.
CCMP Implementation Projects	\$182,000	Multiple	Identify projects that need financial or admin support from APNEP. PB will evaluate requests and administrate funding of projects.
NC Catch Estuary Placemat Printing	\$2,000	NC Catch	Restaurant placemat printing.
North Carolina Low Impact Development Summit	\$2,500	NCCF	Summit to unveil the latest technology and tools for low impact development.
NC Division of Water Resources Project WET Facilitator Workshop	\$2,000	NC DWR	Workshop to train environmental educators.
NC Coastal Federation Oyster Workshop	\$2,002	NCCF	Summit to assess current restoration and management activities for oysters.

Regional Workshop on CAMA Land Use Planning	\$1,500	NCCF/ NC DCM	Workshop to discuss effective land use planning.
Education and Outreach Assistant through AmeriCorps Program	\$6,392	NCDEE	Assisting with implementation of APNEP communication strategy through videography development/ integration, other education and outreach events.
NC Heritage Trails Map Printing	\$2,000	Core Sound Waterfowl Museum & Heritage Center	Trail brochure printing.
NC DMF Recreational Water Quality Monitoring	\$20,000	NC DMF	Bridge funding for bacteria contamination testing in coastal recreational waters.
Integrating Digital Learning & Experiential Learning: The Science of the NC Coast	\$400	NCCF	Develop and Implement a Teacher Training program in the NE
NC Coastal Federation Oyster Summit	\$4,000	NCCF	Summit to assess current restoration and management activities for oysters.
Neuse River Estuary Modeling and Monitoring Project	\$35,000	NC DWR	Water Quality Monitoring

2016			
NC Catch Summit	\$400	NC Catch	Support for annual meeting and information exchange
Shad in the Classroom	\$30,000	Friends of the NC Museum of Natural Sciences	Students will raise American Shad in the classroom from egg to releasable fry
Survey of Submerged Aquatic Vegetation in Albemarle Sound	\$41,007	ECU	Boat-based SAV survey in Albemarle and Roanoke Sounds
Neuse River Estuary Modeling and Monitoring Project	\$85,000	NC DWR	Water Quality Monitoring
Graduate Fellowship in Estuarine Research	\$5,632	North Carolina Sea Grant	Funding a graduate student fellowship to conduct applied research within the North Carolina portion of the APNEP management boundary.
Extending Distributions of NC Aquarium's Rainwater Harvesting System	\$4,000	North Carolina Aquarium on Roanoke Island	To provide water for the Roanoke Aquarium native plants and freshwater exhibits

NC OEEPA River Basin Publication Program	\$5,000	NC OEEPA	To create maps, inserts, and posters to distribute for river basin education to the public
Seeds of Inspiration: An educational partnership between the N.C. Coastal Federation and Mano al Hermano	\$2,530	NCCF	Engages underserved populations in environmental education and restoration work
Teacher Institute	\$25,000	UNC-CH Institute for the Environment	Develop and Implement 2015 Teacher Institute
NC DMF Recreational Water Quality Monitoring	\$20,000	NC DMF	Bridge funding for bacteria contamination testing in coastal recreational waters.
Integrating Digital Learning & Experiential Learning: The Science of the NC Coast	\$400	NCCF	Develop and Implement a Teacher Training program in the NE
CHPP Printing	\$2,500	NC DEQ	Reprinting of the CHPP Document
Mapping of Submerged Aquatic Vegetation (SAV) in the APNEP region	\$128,500	NC Dept. of Transportation	To obtain remotely sensed imagery of selected SAV sites in the APNEP region

Economic Valuation of the Albemarle-Pamlico Watershed in the AP Resources	\$79,876	Research Triangle Institute	To assess economic value of the Albemarle-Pamlico watershed's natural resources
Economic Analysis of the Costs and Benefits of Restoration and Enhancement of Shellfish Habitat and Oyster Propagation in North Carolina.	\$34,829	Research Triangle Institute	Economic analysis of the North Carolina Division of Marine Fisheries (NCDMF) Shellfish Rehabilitation Program, Oyster Sanctuary Program, and Artificial Reef Program
Education and Outreach Assistant through AmeriCorps Program	\$6,392	NCDEE	Assisting with implementation of APNEP communication strategy through videography development/ integration, other education and outreach events.
Living Shorelines Workshop and Video	\$4,000	NC Coastal Reserve	Workshops and workshop videos increase awareness and encouraging a shift away from hardened structures
<b>2017</b>			
Acquisition of Aerial Images from State Agency Archives in Support of Research to Document Historical Baselines of SAV Extent	\$896	NC Dept. of Transportation	Obtain remotely sensed imagery of selected SAV sites in the APNEP region
Sound Rivers Film Support	\$4,103	Sound Rivers	Videography to document environmental issues the APNEP region

NC Catch Summit	\$500	NC Catch	Support for Annual meeting and information exchange
Shad in the Classroom	\$22,000	Friends of the NC Museum of Natural Sciences	Students will raise American Shad in the classroom from egg to releasable fry
NC Division of Water Resources Project WET Facilitator Workshop	\$2,000	NC DWR	Workshop to train environmental educators.
Effects of Environment on Blue Crab Size: Fisheries Science Place Based Learning and a Reciprocal Transplant Growth Study	\$4,000	Duke University Marine Lab	Outreach and workshops will provide enrichment and place-based education for Mattamuskeet schools' students.
Sea Wolf at CMAST Communication Project	\$731	NCSU Center for Marine Sciences and Technology	The Sea Wolf at CMAST program provide marine science and STEM opportunities for area high school students through educational programs, presentations, and experiential learning.
Graduate Fellowship in Estuarine Research	\$5,632	North Carolina Sea Grant	Funding a graduate student fellowship to conduct applied research within the North Carolina portion of the APNEP management boundary.
Teacher Institute on Watersheds 2016	\$22,000	UNC Institute for the Environment	Develop and Implement a Teacher Institute for up to 24 teachers

Secrets of the Swamp and River Days	\$3,000	Friends of the NC Museum of Natural Sciences	A two-day, one night field-based workshop for educators in the swamps of the Roanoke River basin.
Seeds of Inspiration: An educational partnership between the N.C. Coastal Federation and Mano al Hermano	\$3,550	NCCF	This program engages underserved populations in environmental education and restoration work by partnering with a local group called Mano al Hermano.
Coastal Discovery Camps	\$1,668	NCCF	North Carolina Coastal Federation will engage students in outdoor, experiential learning during summer enrichment programs (Coastal Discovery Camps).
NC DMF Recreational Water Quality Monitoring	\$10,074	NC DMF	Bridge funding for bacteria contamination testing in coastal recreational waters.
East Carolina University Ecosystem Assessment	\$9,998	ECU	Report to provide a management level synthesis of 24 key environmental indicators
North Carolina State University Ecosystem Assessment	\$9,200	NSCU	Report to provide a management level synthesis of 24 key environmental indicators
<b>2018</b>			

Watershed and Water Quality Planning Workshop	\$500	NCCF	Watershed Planning Workshop
Effects of Environment on Blue Crab Size: Fisheries Science Place Based Learning and a Reciprocal Transplant Growth Study	\$4,000	Duke University Marine Lab	Outreach and workshops will provide enrichment and place-based education for Mattamuskeet schools' students.
NC DMF Recreational Water Quality Monitoring	\$9,000	NC DMF	Bridge funding for bacteria contamination testing in coastal recreational waters.
Sound Economic Development: Creating a Rising Tide for the N.C. Coast	\$4,000	North Carolina Coastal Federation	Stakeholders, practitioners, elected and appointed officials and academia and businesses discussed opportunities for oyster and coastal environmental restoration.
WRRRI Annual Conference 2018	\$1,250	Water Resources Research Institute of the UNC System	Sponsorship for WRRRI Annual Conference
North Carolina Coastal Conference	\$500	North Carolina Sea Grant	Sponsorship for North Carolina Coastal Conference
Discover North Carolina's River Basins Booklets and Posters	\$5,000	Office of Environmental Education and Public Affairs, Department of Environmental Quality	Materials provide information about ecosystems and how humans both affect and depend on the health of North Carolina's rivers.

Microcystin Test Kits	\$505	Division of Water Resources	Funds to purchase test strips that enable rapid testing of recreational waters for potential Harmful Algal Blooms (HABs) in the lower Chowan River and western Albemarle Sound.
Coastal Discovery Camp	\$3,885	North Carolina Coastal Federation	Summer enrichment program that introduces students to coastal ecosystems through outdoor, hands-on learning.
Shad in the Classroom	\$24,000	Friends of the NC Museum of Natural Sciences	Students will raise American Shad in the classroom from egg to releasable fry
Working Group Meeting on <i>Phragmites Australis</i> in North Carolina	\$2,450	North Carolina Coastal Federation	Working group meeting to discuss the state of <i>Phragmites australis</i> , an invasive plant, in North Carolina, as well as establish an ongoing working group to determine the next steps in <i>Phragmites</i> management.
Marine Planning Process Workshop	\$500	Division of Coastal Management	Sponsorship for Marine Planning Process Workshop
Hardwood Reforestation, Twelve Hawks Tract, Nash County NC	\$3,724	Tar River Land Conservancy, Inc.	Funding to purchase tree seedlings and assist in planting for reforestation of conservation easement in Nash County.
Survey of Submerged Aquatic Vegetation	\$6,476	East Carolina University	Support mapping / monitoring of SAC

NC DMF Recreational Water Quality Monitoring	\$9,000	NC DMF	Bridge funding for bacteria contamination testing in coastal recreational waters
Low Impact Development Stormwater Strategies	\$15,000	River City Community Development Corporation (RCCDC)	Project to incorporate Low Impact Development Stormwater Strategies into the Renaissance Square Housing Development
Kid's River Fest	\$1,000	Sound Rivers, Inc.	Sponsorship of mobile planetarium for environmental education programs during Kid's River Fest
College Campus Stormwater Impact and Needs Assessment	\$19,500	Sound Rivers, Inc.	To conduct a stormwater impact and needs assessment for college campuses in the Tar-Pamlico and Neuse River basins
Ecological Flows	\$18,435	East Carolina University	Assess the status of available flow and related data and analyze these data relative to ecological flows (EF)
Teacher Institute on Watersheds	\$24,000	UNC Institute for the Environment	Develop and implement a Teacher Institute to provide professional development opportunities for up to twenty teachers
Swim Guide Program	\$9,500	Sound Rivers, Inc.	Funding to initiate Swim Guide, a regional citizen science water quality monitoring program.

Graduate Fellowship	\$5,750	NC Sea Grant/NC State University	Graduate student fellowship to conduct applied research within the North Carolina portion of the APNEP management boundary
NC DMF Recreational Water Quality Monitoring	\$9,000	NC DMF	Bridge funding for bacteria contamination testing in coastal recreational waters.
<b>2019</b>			
APNEP SAV Workshop	\$7,500	NC DEQ	Coastal Sav Workshop, SAV Experts
Water Level Monitoring Stations	\$80,000	NC Emergency Management	Establish at least three water level monitoring stations within the Albemarle Pamlico watershed.
Leadership Council Forum and SAV Meeting	\$16,500	NC DEQ	Beaufort Inn Coastal Meeting and Forum
SAV Economic Evaluation	\$68,193	NCSU	This contract will fund an economic analysis of SAV in the Albemarle Pamlico watershed. The project will address critical data gaps since the initial study in 2016.
Scuppernong regional Water Management Study	\$25,000	Washington SWCD	Develop a collaborative approach for conducting a hydrologic study of the headwaters of the Scuppernong River, Lake Phelps, and the surrounding land in Washington County

Coastal Resiliency Grant - NC VA Tribal Coordination	\$25,000	NC Department of Administration	Support tribal communities in the APNEP region that have expressed a need for technical and logistical assistance with considering resiliency into their long-range planning processes.
SAV Communications Campaign	\$500	NC Department of Environmental Quality	To increase awareness of the value of submerged aquatic vegetation (SAV) in the Albemarle-Pamlico region and specifically in Bogue Sound among recreational fishermen.
Aquatic Invasive Species	\$2,000	NC Department of Environmental Quality	To contribute to the implementation of the NC Aquatic Nuisance Species Management Plan via assessment of existing outreach efforts; to create and begin implementation of a citizen science strategy.
CCMP Implementation Projects	\$7,442	NC Department of Environmental Quality	Targeted CCMP Implementation Projects
SAV Mapping and Monitoring	\$25,000	Division of Marine Fisheries	To monitor and map the extent and density of submerged aquatic vegetation (SAV) in the Albemarle-Pamlico region.
DMF Recreational Water Quality	\$27,594	Division of Marine Fisheries	Approximately 90 samples will be collected through September 30, 2020 with an approved contract extension.
Summer Teacher Institute	\$20,000	UNC Institute for the Environment	To increase teacher knowledge of watershed science, provide resources to teach watershed science, and increase teacher confidence in utilizing immersive, hands-on, inquiry-based, and outdoor-focused curricula in their classrooms.

Shad in the Classroom	\$29,920	NC Museum of Natural Sciences	Engage students in hands-on learning about American Shad and Albemarle-Pamlico region river basins, foster environmental stewardship and understanding of watershed connections, contribute to the restoration of American Shad within the Neuse River Basin, inspire a new generation of biologists and ecologists.
USFWS-APNEP Water Quality Tool	\$9,038	UNC Institute of Marine Sciences	The services provided herein will include the continued development of code to automate data download, preparation, and generation of summary graphics, tables, and statistics in support of the USFWS WRIA and CAP reports for its refuge system, and the water resource assessment needs of the Albemarle Pamlico National Estuary Partnership
Development of scientifically defensible chlorophyll a standards for protection of submerged aquatic vegetation in the Albemarle-Pamlico Estuarine System	\$24,751	UNC Institute of Marine Sciences	Development of scientifically defensible chlorophyll a standards for protection of submerged aquatic vegetation in the Albemarle-Pamlico Estuarine System
Digital Media and Print Media Development	\$1,000	NC Department of Environmental Quality	Increase awareness of and access to APNEP and partner resources, increase knowledge and understanding of Albemarle-Pamlico region issues and promote environmental stewardship behaviors.
Coastal Flows Regime	\$50,000	ECU	The overall goal is to design and implement a study on a coastal watershed that can provide a scientific basis for guidance to recommend procedures and conditions for ecological flows in Coastal Plain watersheds within the APNEP region
Event Participation and Sponsorships	\$8,500	APNEP Partners	To support regional partners in reaching shared goals, to leverage resources and transfer knowledge/skills within the Albemarle-Pamlico region

Albemarle Pamlico Estuary Highway Signs	\$35,000	NC Department of Transportation	Educate the public in North Carolina about the location of the Albemarle-Pamlico watershed in relation to where they work, play, go to school, and vacation.
<b>Total Project Expenditures CE-00D20614 Grant</b>	<b>\$2,400,109</b>		

# ADMINISTRATION & PROGRAM IMPLEMENTATION

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## PROGRAM ADMINISTRATION

APNEP staff is responsible for the coordination, planning, and successful completion of partnership functions, including Management Conference and Action Team meetings, APNEP forums, and other APNEP-sponsored/partner events. In addition, staff monitor and often becomes involved in activities of federal and state resource management agencies that relate to CCMP implementation, APNEP mission, and the Albemarle-Pamlico estuarine system. Additional interactions occur with local and regional governments as appropriate.

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 partnership. Although the Leadership Council and Advisory Committees are instrumental in identifying local environmental issues and prioritizing management actions within each basin, most management actions are implemented by various federal, state, and local agencies on a local, basin-wide, regional, or statewide basis and require staff involvement and interactions.

### Host Entity

The North Carolina Department of Environmental Quality currently serves as the host entity for the Office and the partnership. The Office was moved to NC-DEQ's Office of the Secretary in March 2018. The Department is responsible for assisting with administrative and fiscal management of the APNEP-U.S. EPA cooperative agreement, which provides federal funds for APNEP. The Department's efficiency of operation and support of the Management Conference plays a key role in the success of APNEP, including assisting in the administration of the cooperative agreement and other funding sources.

### Administrative Costs

Overall administration costs during 2014-19 are estimated at approximately \$3,875,891 and include six staff FTE salaries, and interns, along with benefits, longevity pay, equipment, supplies, government office and storage space rent, IT services and phone, training and development, and negotiated indirect cost rate.

### Personnel

Presently a majority of APNEP staff are housed at the APNEP office in Raleigh within the N.C. DEQ Headquarters. This site houses the Director, Program Scientist, Program Manager, Policy and Engagement Manager, Quantitative Ecologist, and Communications Specialist. The APNEP field office in Washington, N.C. houses the Coastal Habitats Coordinator. The Watershed Manager is collocated with the National Estuarine Research Reserve at the NOAA Laboratory in Beaufort, N.C.. The Virginia Department of Environmental Quality also provides personnel to support CCMP implementation, however this position (currently vacant) is not covered under program administration as it occurs at no additional cost to the program. *All positions are administered in compliance with N.C. Office of State Personnel rules and policies.*

**Director**

The Director administers and coordinates program activities and CCMP implementation, 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 Leadership Council and Advisory Committees, and represents APNEP at local, state, regional and national meetings. Dr. Bill Crowell has been the Director since June 2002.

**Program Manager**

The Program Manager assists in the administration of the U.S. EPA §320 Grant and coordinates and manages APNEP contracting and associated activities within NC-DEQ. The position also assists in the development and maintenance of broad support for the APNEP mission and CCMP implementation; develops tracking mechanisms for performance measures and CCMP implementation efforts; and provides staff support to the Leadership Council and Advisory Committees. Heather Jennings has served as the Program Manager since June 2018.

**Program Scientist**

The Program Scientist assists the Director with CCMP administration. 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 Leadership Council and Advisory Committees. Dr. Dean Carpenter has served in this role since November 2003.

**Policy and Engagement Manager**

The Policy and Engagement Manager assists the Director and Management Conference with engagement, educational and outreach activities. The position oversees communication strategies, pursues new partnership and funding opportunities, and works with program staff to engage in new CCMP implementation actions. It also provides staff support for the Management Conference and serves as a liaison on various external working groups. Stacey Feken has served in this role since March 2016.

**Communications and Outreach Specialist**

The Communications and Outreach Specialist coordinates APNEP's digital and print communications efforts, as well as managing the Partnership's education and outreach initiatives. The position also supports field/boat-based work with APNEP and its partners. Kelsey Ellis served in this role from September 2018 to July 2020.

**Quantitative Ecologist**

The Quantitative Ecologist coordinates with staff and contributing scientists and managers to assess the environmental health of the Albemarle-Pamlico estuarine system. Responsibilities include working with partner agencies and researchers to analyze and report upon indicators of watershed and estuarine health, including identification of monitoring gaps, facilitating and supporting APNEP Action Teams and Monitoring & Assessment Teams, and managing the program's GIS functions. Dr. Tim Ellis has served in this role since March 2017.

**Coastal Habitats Coordinator (Non-federal Match)**

This position serves an APNEP liaison to local governments and state agencies. The Coastal Habitats Coordinator provides coordination and support to local governments and state agencies to enhance CCMP implementation. The position also directs coordinated implementation of the CHPP with three N.C. Commissions: Coastal Resources, Marine Fisheries, and Environmental Management. Jimmy Johnson has served in this role since January 2006. *This position is funded by NC-DEQ and provides a portion of the non-federal match for the CWA §320 grant funds.*

#### **Watershed Manager (Non-federal Match)**

The primary purpose of this position is to assist APNEP in CCMP implementation. The position supports support to APNEP advisory committees and workgroups and monitoring and assessment efforts. The position works cooperatively with the N.C. National Estuarine Research Reserve in Beaufort, N.C.. Additionally, the position also works towards implementation of the CHPP with the APNEP Coastal Habitats Coordinator. Trish Murphey has served in this role since January 2018. *This position is funded by N.C.DEQ and provides a portion of the non-federal match for the U.S. EPA §320 grant funds.*

## **TRAVEL**

National Estuary Programs may use U.S. EPA §320 funds and matching funds to cover the cost of travel by staff and/or stakeholders from other NEPs or watershed organizations who collaborate with the NEP on issues of common interest. Stakeholders may include members of the general public and of environmental and public interest organizations, business or industry representatives, academicians, scientists, and technical experts.

- U.S. EPA §320 funds and matching funds may be used to cover costs associated with attending conferences, meetings, workshops, or events that advance CCMP implementation. Section 320 funds also may be used to cover the cost of projects described in the annual work plan and the cost of renting facilities.
- Note that when using U.S. EPA §320 funds for travel, NEPs should use the least expensive means of travel whenever possible.
- U.S. EPA §320 and matching funds may not be used to cover the travel costs of Federal employees.

APNEP, the Management Conference, and EPA consider personal, face-to-face contact essential for information sharing and technology transfer. As part of the federal grant requirements to attend EPA-NEP meetings, each NEP is required to allocate minimum of \$10,000 as travel funds for program activities, enhancement, education, and outreach support. APNEP intends to use budgeted travel funds to support:

- 1) Management Conference, Action Team, Monitoring and Assessment Teams, and Ad-Hoc committee meetings,
- 2) Participation in watershed stakeholder meetings, workshops and conferences relevant to CCMP implementation
- 3) Participation in national or regional NEP and EPA meetings
- 4) Participation in international, nation, regional, and local workshops or conferences
- 5) Travel to other NEPs or communities to provide peer-to-peer technical assistance
- 6) Travel to other NEPs or watersheds for assistance

- 7) Travel by NEP staff or stakeholders from other NEPs or watershed programs to provide NEP with assistance

Travelers may include Management Conference members, Action Team members and Monitoring and Assessment Team members, citizens, and members of environmental or public interest organizations, business or industry representatives, academicians, scientists or technical experts as determined appropriate by the APNEP Director.

As a requirement of this grant agreement, a member of APNEP’s core staff are required to participate in all meetings called on behalf of the NEPs by U.S. EPA. The spring NEP meeting was cancelled due to Covid19 considerations.

**Food**

While most travel funds are associated with staff, management conference members, and action team participants, travel funds and funds associated with specific workplan projects, APNEP funds awarded as grants or contracts may be used for light refreshments and/or meals served at meetings, conferences, training workshops and outreach activities (events), consistent with 41 CFR 301-74.7 and NC-DEQ travel policies, and as approved by the APNEP Director.

**NON-FEDERAL COST-SHARE (MATCH)**

**Summary of Match**

As Partnership host NC-DEQ (grant applicant provided \$625,000 for the required 1:1 non-federal match for time period of October 1, 2019 to September 30, 2020. This match was be provided through:

**Summary of Non-federal State Match**

In-kind Positions (salaries and benefits)	\$ 944,310
NC Water Quality Improvement Project(s) Expenditures:	<u>\$ 1,870,464</u>
<b>TOTAL:</b>	<b>\$ 2,814,774</b>

1) **In-kind Services:** The North Carolina Department of Environmental Quality (NCDEQ) to provided \$944,310 as part of the required 1:1 non-federal match the period of October 1, 2014 to September 30, 2021. This match will be provided by staff support from the Coastal Habitats Coordinator and Watershed Manager positions. The match positions are responsible for program administration, support, community involvement and guiding implementation of the APNEP CCMP and the NC Coastal Habitat Protection Plan (CHPP) and other A-P watershed issues.

2) **In-kind Project Expenditures Non-federal Match:** \$1,870,464 was provided as part of the 1:1 non-federal match for the period of October 1, 2014 to September 30, 2021. The expenditure of non-federal funds was provided through water quality improvement projects in one or more of the APNEP river basins. State funds allocated to cover costs associated with water quality

improvement projects through funding of the NC Division of Water Infrastructure for one or more projects in the APNEP program boundary.

### **Division of Water Infrastructure**

The N.C. Division of Water Infrastructure provides financial assistance for projects that improve water quality. Programs within this agency fund many types of projects, including sewer collection and treatment systems, drinking water distribution systems, water treatment plants, storm water management systems, and stream restoration. The Division supports the State Water Infrastructure Authority (SWI), which was created in 2013, under North Carolina General Statute 159G-70. The SWI Authority is an independent body with primary responsibility for awarding both federal and state funding for water and wastewater infrastructure projects.

## **LEVERAGE FUNDS**

APNEP continues to actively seek alternative funding sources for Partnership activities and projects to support CCMP goals. In addition, APNEP pursues additional avenues for collaborating with partners to assist in targeting program funds towards CCMP and basin-wide goals. Where possible, APNEP works to cost-share projects to increase the effectiveness or the magnitude of projects, even though in several cases APNEP has not been the primary catalyst for a project or activity.

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 Albemarle-Pamlico region. Several state conservation-funding sources were developed in response to research funded by the Albemarle-Pamlico Estuarine Study. Examples of these programs include the North Carolina Land and Water Fund (formally the N.C. Clean Water Management Trust Fund), the N.C. Clean Water State Revolving Fund Program, and the N.C. Conservation Reserve and Enhancement Program.

## **PARTNERSHIP ENTITIES**

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### **Host**

The main APNEP office is located within the NC-DEQ Office of Secretary in Raleigh, N.C., with additional personnel in Washington and Beaufort, N.C.. The Virginia Department of Environmental Quality also provides support through a position (currently vacant).

### **Management Conference**

#### **Leadership Council**

The Leadership Council is the main advisory body for APNEP and the Management Conference. It was established by a N.C. Governor's Executive Order to advise, guide, evaluate and support the CCMP implementation process, 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 Leadership Council consults with the advisory committees and the APNEP Office for recommendations pertaining to implementation of CCMP actions at the regional and local levels, and the coordination and development of research and monitoring priorities. A major duty of the Leadership Council is to maintain the relevance of the CCMP and to make recommendations to address emerging issues that may affect the significant natural resources of the Albemarle-Pamlico estuarine system. The Leadership Council, in cooperation with the APNEP Office, develops an annual report, budget and work plan.

### **Science and Technical Advisory Committee**

The Science and Technical Advisory Committee (STAC) was established in 2004 to provide independent advice to the Leadership Council and the Implementation Committee on scientific and technical issues, including ecosystem assessment and monitoring, in support of CCMP implementation.

### **Implementation Advisory Committee**

As recommended by the Leadership Council during their January 2020 Strategic Planning Meeting, the function of the Implementation Advisory Committee will be carried out by the Executive Committees of both of the Leadership Council and the STAC. The Executive Committees thus will evaluate those CCMP implementation projects whose funding exceeds the \$5,000 threshold for funding project decisions by staff only. The future of an independent Implementation Advisory Committee lies in a new Executive Order regarding the structure of the Management Conference.

### **Action Teams**

APNEP has established a number of Action Teams focused on implementing CCMP objectives and actions. Action Teams are responsible for developing the outputs associated with each action deemed necessary to achieve desired ecosystem outcomes. Action Team membership is open to any interested party. For 2020-21 the active action teams receiving staff facilitation priority will be those who most closely align with the focus areas as directed by the Leadership Council.

### **Monitoring and Assessment Teams**

Two of the four phases of APNEP's adaptive management cycle, "Monitoring" and "Assessment", help ensure that stakeholders have regular, reliable decision support as to whether CCMP outcomes and actions are being achieved. To leverage program capacity and promote partner collaboration when implementing these two crucial phases, APNEP established in 2008-2009 six resource monitoring and assessment teams (MATs) whose missions each addressed a major sub-system of the Albemarle-Pamlico regional ecosystem. For 2020-21 the MATs receiving staff facilitation priority will be those who most closely align with the development of the monitor plan and the focus areas as directed by the Leadership Council.

## **Additional Partnerships**

In general, APNEP is considered a boundary organization, or an organization that facilitates collaboration and information flow between diverse research disciplines and between the research and public policy community. As such, APNEP engages its partnering organizations and the public to improve awareness and understanding of environmental issues facing the Albemarle-Pamlico

region. The various methods of APNEP engagement are discussed in greater detail in the [APNEP Engagement Strategy](#).

Much of this coordination occurs through relationships built via our partner network, independent of whether partners are participating on an APNEP team. APNEP is tracking issues of interest to the Partnership and providing support where feasible, such as Chowan algal blooms, offshore oil drilling, impacts to communities due to flooding and sea level rise, and fisheries issues. Engagement associated with these issues has led to letters of support for partners applying for grants, formal comments through the Leadership Council, technical advice and support to agency management, funding and logistical assistance, and hosting workshops to convene technical experts.

APNEP staff also regularly participate in external workgroups and committees to expand our reach, facilitate regional collaboration, and reciprocate volunteer involvement. Where possible, APNEP seeks to prioritize projects that align with the complimentary missions of these external workgroups. Staff also actively seek opportunities to integrate external workgroup projects with APNEP Action Team projects.

# APPENDIX: Diversity and Inclusion Statement

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## Albemarle-Pamlico National Estuary Partnership Diversity, Equity, and Inclusion Statement 1 September 2020

The Mission of the Albemarle-Pamlico National Estuary Partnership (APNEP) is to identify, protect, and restore the significant natural resources of the Albemarle-Pamlico estuarine system. As such, the Partnership is committed to addressing environmental inequities by continually reevaluating our partnerships, protection and restoration efforts, and engagement processes through the lens of increasing diversity, equity, and inclusion throughout the Albemarle-Pamlico estuarine system.

Our partnerships with governmental, academic, community, and nonprofit organizations are the foundation of how we work; through our funding processes, representation within citizen advisory groups, strategic planning efforts, and long-term ecosystem priorities, we can foster a Partnership that is inclusive of the diverse perspectives within the region and which works to identify, protect, and restore the region's significant natural resources in ways that increase equity among its communities. By facilitating communication and collaboration among different organizations throughout the region, APNEP seeks to leverage its resources and those of its partners to accomplish more together than any individual organization could alone. This can only be accomplished with a diverse array of perspectives and voices.

Increasing diversity, equity, and inclusion through our work is integral to our ecosystem-based management perspective, which views human communities as a vital component of the overall ecosystem. We are committed to approach this work in a way that is inclusive of diverse connections to the environment, inclusive of perspectives that may otherwise be unheard, and increases equity through ecosystem protection and restoration efforts. We are also dedicated to broad inclusion in our educational and engagement efforts.

### **Specifically, we commit to:**

1. Engage communities and stakeholders that are representative of the broader populations within our programmatic boundaries to implement the 2012-2022 Comprehensive Conservation and Management Plan (CCMP) and the Partnership's Mission.
2. Incorporate diversity, equity, and broad community inclusion as an ecosystem outcome(s) with associated objectives and actions into the 2022-2032 revision of the CCMP.
3. Work to engage diverse communities and populations in the organization's decisions and diversify the perspectives represented within all of Partnership's management and citizen advisory groups.
4. Conduct an internal organizational diversity, equity, and inclusion self-assessment and provide externally facilitated trainings for management and citizen advisory groups and staff as warranted.
5. Report annually on actions taken to enact these commitments in our Annual Work Plan.

