

# Soundings

Newsletter of the Albemarle-Pamlico National Estuary Program

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**Director's Note**

Greetings, it's a busy summer here at APNEP.

We welcome our summer intern Maria Vozzo and our new project coordinator, Scott Gentry (see page 5) to APNEP!

We are moving forward with our new CCMP effort based on the principles of ecosystem-based management. Some information on EBM is contained on page 2. The Policy Board approved the Draft CCMP goals and sub-goals at its May meeting. Staff and the EBM implementation team will be working to further refine the CCMP Objectives in the coming months in preparation for the Advisory Committee's review.

-Bill Crowell, APNEP Director



**Communities to Combat Climate Change**

EPA's Local Climate and Energy Program has announced \$10 million in grants for local communities to implement sustainable community actions, improve environmental, economic, public health and social conditions in the community, as well as generating cost-effective ways to reduce greenhouse gases. Grant recipients will receive training and technical support from EPA, and will also share their stories with other communities across the nation.

For more information on the grants, visit:  
<http://www.epa.gov/statelocalclimate/local/showcase>

**Upcoming Events**

**July**

Tuesdays through August 10: Building Oyster Reefs, Jones Island

Tuesdays & Thursdays through August: Rachel Carson Reserve Nature Hikes, Boardwalk Trips and Circumnavigation Cruises (reservations required, please call (252) 838-0883)

Wednesdays through August 25: Pleasure Island Sea Turtle Project Presentations, call (910) 458-8206 for more information

Wednesdays - Saturdays through August: River Roving Educational Tours, call (252) 948-0000 for reservations, N.C. Estuarium

11-16 – Teacher Institute, Salter Path, N.C.

**August**

5 – APNEP's Science and Technical Advisory Committee Meeting, Pitt County Complex

**September**

11-26 – N.C. Science Festival, visit <http://www.ncsciencefestival.org/>

17 – APNEP's Policy Board Meeting

25 – National Estuaries Day



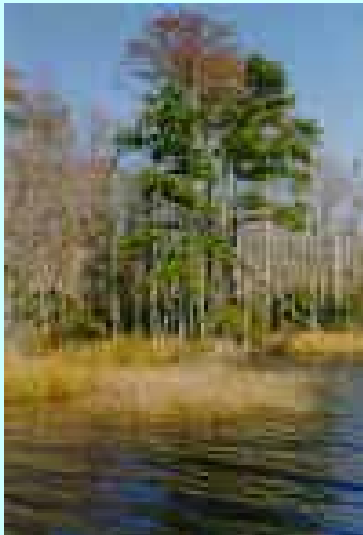
Visit the calendar at [www.apnep.org](http://www.apnep.org) for more detailed event information.

# An Ecosystem-Based Management Approach for APNEP

APNEP recently adopted an ecosystem-based management (EBM) approach for the program's Comprehensive Conservation Management Plan (CCMP). Ecosystem-Based Management is a management approach that considers the entire ecosystem, including humans and their actions in addition to the environment, rather than focusing solely on an individual resource, species or issue. Currently, government agencies and organizations are divided into programs that manage a narrower range of issues such as water quality or fisheries. Such a system leaves room for gaps in management across different agencies; thus, an ecosystem-based management approach considers all issues or objectives in a given ecosystem type. This type of management addresses the complexity of social systems and natural processes by incorporating not only ecological, but social and economic aspects into the entire ecosystem as well.

The EBM Team developed updated CCMP goals and subgoals that address various aspects of the APNEP region including water, natural communities and stewardship (the draft is included in this newsletter). After outlining the goals, the next step is to design efficient and comprehensive EBM approaches that consider and include all aspects of the ecosystem in a conceptual model process. This process identifies contributing factors, their specific impacts and management strategies.

Once the conceptual model process has been completed for each goal and subgoal, the EBM Team and APNEP will identify different partners' goals and objectives that have overlaps in the proposed EBM. Upon meeting with these agencies, APNEP can discuss issues and areas of concern regarding specific portions of the ecosystem as well as identifying any gaps. APNEP plans for its role to be one of an overarching connection amongst agencies to more thoroughly monitor and manage various components of the ecosystem. Incorporating elements of an ecosystem-based management, and drawing more effective connections among humans, nature, science and government will increase the likelihood of success in managing natural resources.



# Draft Goals and Subgoals for the Comprehensive Conservation & Management Plan

The following goals and subgoals were approved by the APNEP Policy Board on May 13, 2010.

## WATERS

**Vision:** Achieve and maintain the water quality and quantity necessary to support the living resources of the Albemarle-Pamlico ecosystem.

**Goal 1:** Maintain, enhance, or restore water quality to support natural and human communities.

A: Maintain the condition of “high quality waters” as defined by North Carolina & Virginia [e.g., Outstanding Resource Waters, Shellfish “Class A” Waters].

B: Improve\* water quality in impaired waters as defined in the states’ 2008 Impaired Waters List. (\* Improvement defined uniquely depending on whether impairment is biological, chemical, or physical)

**Goal 2:** Maintain or restore sufficient water quantity to support natural and human communities.

A: Maintain or restore hydrologic regimes necessary to support aquatic, riparian and floodplain communities.

B: Maintain sufficient groundwater levels to support aquatic and wetland communities.

## NATURAL COMMUNITIES

**Vision:** Conserve, restore, and maintain the natural communities that support the functional integrity of the Albemarle-Pamlico ecosystem.

**Goal 1:** Conserve and restore functional natural communities.

A: Conserve or restore priority upland communities

B: Conserve or restore priority wetland communities.

C: Conserve or restore priority aquatic communities.

**Goal 2:** Conserve and restore priority native species.

A: Conserve or restore priority native upland species.

B: Conserve or restore priority native wetland species.

C: Conserve or restore priority native aquatic species.

**Goal 3:** Limit the establishment and spread of invasive non-native species.



## STEWARDSHIP

**Vision:** Engage partners in promoting responsible stewardship of the significant resources in the Albemarle-Pamlico ecosystem.

**Goal 1:** Actively engage program partners in promoting responsible stewardship.

A: Increase the number of active partnerships

B: Increase the effectiveness of active partnerships

**Goal 2:** Increase environmental literacy among citizens and interested parties.

A: Increase public access to opportunities that increase environmental awareness and knowledge.

B: Increase opportunities for public access to significant natural resources of the region.

C: Create and maintain active educational partnerships to increase environmental literacy.

**Goal 3:** Promote sustainable land use planning and development practices.

A: Provide resources to support local and regional planning.

B: Assist decision makers in planning for and adapting to climate change and rising seas.

# The Deepwater Horizon Oil Spill



Photo : NOAA.

The Deepwater Horizon oil spill, which occurred on April 20, 2010, in the Gulf of Mexico due to a drilling rig explosion, is now considered the largest oil spill in U.S. history. Current data reports state that oil slicks cover at least 2,500 square miles (and up to 28,000 square miles), with many oil plumes remaining beneath the surface of the water. Images and reports of damage are shown on multiple news stations daily. As viewers see the destruction caused by the oil spill and the subsequent spread of oil, it leaves many wondering how the spill might impact other parts of the country.

While the Albemarle-Pamlico Estuary System coastlines and the Atlantic coast have yet to see any oil or tar, the spill has in fact affected the Albemarle-Pamlico National Estuary Program. Many of the program's federal counterpart correspondents, such as those from the EPA or Fish and Wildlife Service, have been sent to Louisiana and the gulf area for training and work on oil spill disaster response and clean up. The oil spill is responsible for thousands of marine animal deaths, as well as damaging estuaries, fisheries and beaches. While the economic loss estimate values continue to climb, the environmental loss is severe and the true loss will not be known for many more years to come. (To learn more about the oil spill, you can visit: [http://www.eoearth.org/article/Deepwater\\_Horizon\\_oil\\_spill](http://www.eoearth.org/article/Deepwater_Horizon_oil_spill))



Photo: NOAA

In the event that the oil spill makes its way to the Atlantic Coast, the Emergency Management Division of the Department of Crime Control and Public Safety will lead the state level response. The N.C. Department of Environment and Natural Resources is working with the Emergency Management Division as the technical lead to review the oil response plan and for response, which can be accessed from the NCDENR website at <http://www.enr.state.nc.us/>. Should oil come to North Carolina's coast, NCDENR staff is prepared to assist in a variety of ways including assessing environmental impact and damage, collecting water, air and specimen samples reviewing and monitoring cleanup, among many other tasks.

For more information on North Carolina's Oil Spill Response, please visit: <http://portal.ncdenr.org/web/gulf-oil-spill/home> or the "N.C. Gulf Oil Spill Site" at <http://www.nccrimecontrol.org/Index2.cfm?a=000003,000010,001921>





## APNEP News in Brief:

### Comment on EPA's Strategic Plan

The EPA has just issued its draft for the FY 2011-2015 Strategic Plan and is seeking public comment. The strategic plan will help advance Administrator Lisa P. Jackson's seven priorities to protect human health and the environment. The *Draft Strategic Plan* identifies five strategic measures and five strategies they will use to accomplish Administrator Jackson's priorities of taking action on climate change, improving air quality, protecting America's waters, cleaning up our communities, assuring the safety of chemicals, expanding the conversation on environmentalism and working for environmental justice, and building strong state and tribal partnerships. The measures and strategies aim to provide a renewed commitment to accountability, transparency and inclusion. The plan also identifies benefits the public can expect in human health and the environment over the next five years and how the EPA will achieve these results.

Comments on the draft strategic plan may be submitted through <http://www.regulations.gov> and are due by July 30. The Docket ID number is EPA-HQ-OA-0486. You may also provide feedback on a discussion forum that you can locate at <https://blog.epa.gov/strategicplan>

For more information about the draft plan, please visit: <http://www.epa.gov/ocfo/plan/plan.htm>

### North Carolina Maps Project

Thanks to the North Carolina Maps Project, you can now access an online resource containing more than 3,200 historic maps of North Carolina. Visit:

<http://www.lib.unc.edu/dc/ncmaps/>

Check out the "Coast and Geodetic Survey maps" to see how North Carolina's coastline changed through the 19<sup>th</sup> and 20<sup>th</sup> centuries:

<http://www.lib.unc.edu/dc/ncmaps/cgs.html>



### Jockey's Ridge Wind Turbine

In May, Jockey's Ridge State Park constructed a wind turbine that will help supply electric energy to the park. The wind turbine, which is 60 feet tall and 23 feet in diameter, is expected to supply enough power to offset much of the energy costs of the visitor center. Prior to its construction, park staff, biologists and the state park system studied any negative visual impacts the turbine might have as well as any negative effects on migratory and coastal birds. Near the monopole-style structure, there are outdoor exhibits explaining the wind turbine's operation to visitors. The park hopes to continue helping people enjoy the natural resources by exploring sustainable ways of operating and exemplifying good stewardship.

### New Staff Member!

We are happy to welcome our new staff member, Scott Gentry. Scott joins APNEP as a project coordinator after completing a master's degree in urban and regional planning at Virginia Tech, where he also earned a Watershed Management Graduate Certificate. A North Carolina native, Scott graduated from N.C. State University in 2001 with a bachelor's degree in civil engineering. Scott joined AmeriCorps in 2002 and served as a crew leader with the Montana Conservation Corps. Prior to attending graduate school, Scott worked as a NEPA practitioner at NC DOT.

### APNEP's Summer Intern

This summer, APNEP is excited to have Maria Vozzo, a REACH intern, working with us. Maria is a Raleigh native and a recent graduate from UNC-Chapel Hill with a bachelor's degree in biology. As an intern, Maria has worked on outreach components of APNEP and will assist with the annual Teacher Institute. Maria is looking forward to learning more about the program this summer!

### Thanks for Reading!

We thank you for taking the time to read our newsletter. Have a question or comment? E-mail [bill.crowell@ncdenr.gov](mailto:bill.crowell@ncdenr.gov).



# N.C. Plan for Environmental Education Released

RALEIGH — The Office of Environmental Education today released the plan that serves as the state's guiding document for environmental education efforts.

The North Carolina Plan for Environmental Education outlines strategies for increasing environmental literacy and natural resource stewardship in North Carolina.

There has been a recent surge of interest in environmental literacy, especially on the federal level. The Partnership for 21st Century Skills now recognizes environmental literacy as one of the five interdisciplinary themes essential to student success. Moreover, environmental literacy was recently included in the President's 2010 education budget, and federal legislation has been proposed that would provide states with funding for teachers' professional development and programming in environmental education through the No Child Left Inside Act.

"Environmental education has a long history in North Carolina, and the renewed focus on increasing environmental literacy makes this a very exciting time for our state," said Lisa Tolley, director for the Office of Environmental Education.

The goal of environmental education is increased environmental literacy, but there are many benefits to being outside and engaged with the natural environment. Environmental education also fosters an environmental ethic and encourages civic responsibility while promoting healthy, active lifestyles.

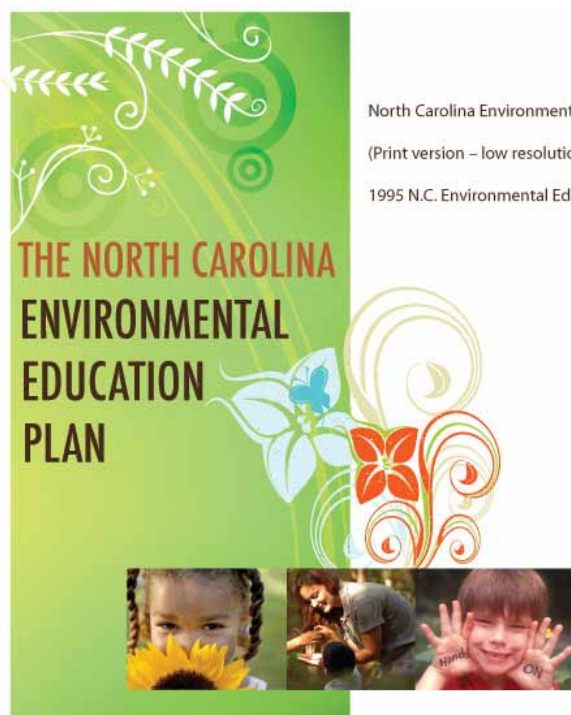
Although the previous plans performed extremely well as a guiding framework for the office and other environmental educators in North Carolina, many of the original goals have been accomplished. Demographic and economic changes in the state, advances in the environmental education field and technological innovations necessitated an updated plan.

Members of the N.C. Environmental Education Advisory Council, a volunteer body comprised of representatives from the academic, business, economic development and environmental communities, were crucial in drafting the third edition of the plan. While the third edition retains the core goals and definition of environmental education reflected in previous plans, it is enhanced by the perspectives and ideas of a broader selection of academic, environmental, cultural arts, business and agricultural contributors. The result is an effective guidebook for environmental education in the 21st century.

"This is a pivotal time for environmental education in our country," said Dee Freeman, secretary for the N.C. Department of Environment and Natural Resources. "Citizens will be required to address and solve complex environmental issues affecting the economy, public health and shared natural resources. I think this plan will help bring our state closer to its goals for environmental literacy."

The plan is available online at

[http://www.eenorthcarolina.org/ee\\_plan\\_web\\_spread.pdf](http://www.eenorthcarolina.org/ee_plan_web_spread.pdf)



North Carolina Environmental Education Plan

(Print version – low resolution)

1995 N.C. Environmental Education Plan