



*Welcome to the Albemarle-Pamlico National Estuary*

*Program E-Update – a monthly summary of selected activities of the APNEP staff, committees and our partners...*

### **Improving and Maintaining the Health of Estuaries - National Estuaries Celebrates 20th Anniversary -**

Thanks to EPA's National Estuary Program (NEP), more than 1 million acres of critical habitat has been sustained or restored. That's a figure that is just shy of the total area of Rhode Island. The NEP, which includes 28 estuaries across the country, was developed 20 years ago to protect and restore these national resources. Stories of success and on-the-ground environmental results are evident from coast-to-coast. These examples help tell the story:

- Indian River Lagoon Estuary in Palm Bay, Fla., has rehabilitated 34,943 acres of wetlands;
- The Charlotte Harbor NEP restored 700 acres of Florida habitat by eliminating exotic plant species. It also founded the Babcock Preservation Partnership to save 91,361 acres from development;
- 81,000 students have learned about stormwater management through the Lower Columbia River Estuary Partnership's Schoolyard Stormwater Project;
- The Massachusetts Bays program has restored 13 shellfish beds;
- The Barnegat Bay Program in New Jersey has saved more than 32,000 acres of critical habitat;
- Coastal Bend Bays Estuary in Corpus Christi, Texas, secured \$6 million to protect more than 1,000 acres of wetlands; and
- The Narragansett Bay Estuary Program's dissolved oxygen surveys which documented hypoxia and anoxia in that estuary were a catalyst for Rhode Island to enact legislation requiring a 50 percent reduction in nutrients from treatment plants discharging to the Narragansett Bay.
- The Albemarle-Pamlico NEP in North Carolina and its partners have protected more than 670 acres of tidal wetlands, 1,800 acres of forested wetlands, 4,700 acres of riparian areas, 9,700 acres of agricultural land, 5,800 acres of forest and woodland, and more than 28,000 acres in other types of wildlife habitat.

The NEP was authorized under the 1987 Amendments to the Clean Water Act to improve estuarine waters, habitats and living resources by working with partners and the public. For more, go to: <http://www.epa.gov/owow/estuaries/>.

**Wind Patterns Drive Florida Red Tides Study Finds** - Harmful red tide blooms along Florida's west coast in the fall are spurred when seasonal changes in wind patterns move nutrients east from the Mississippi River, scientists reported Wednesday. Harmful algal blooms occur occasionally in most coastal areas, and researchers have been seeking ways to better forecast when they will appear. Researchers from the National Oceanic and Atmospheric Administration (NOAA) suggest that seasonal wind patterns are the driving force behind Florida's red tides. Normally, water from the Mississippi River travels west, but seasonal wind changes in late summer and fall move it eastward towards Florida. The river water, rich in nitrogen and other nutrients, spurs the growth of colonies of red tide algae. The wind patterns in the summer and fall push the small colonies toward the Florida shore, concentrating them into larger blooms. Researchers hope these findings will aid in the detection and forecasting of algal blooms. These findings are published in the journal, *Continental Shelf Research*.

**NASA Satellites Eye Coastal Water Quality** - Armed with data from two NASA satellites, researchers have invented a way to map the fleeting changes in coastal water quality from space - something that has long evaded researchers and coastal managers relying only on ground-based measurements. Using data from instruments aboard NASA satellites, researchers found that they can monitor water quality almost daily, rather than monthly. The findings will aid in the effort to tease out factors that drive changes in coastal water quality. For example, sediments entering the water as a result of coastal development or pollution can cause changes in water turbidity. Now with advances in satellite sensors combined with developments in how the data are analyzed it is possible to monitor turbidity of coastal waters via satellite. Frequent measurements from space could resolve questions about the specific timing and nature of events that lead to decreases in water quality.

**Ecological Forecasting Tool Will Assist in Predicting Climate Change Impacts** - National Estuarine Research Reserve managers will soon be able to assess climate change impacts in their estuaries through the use of an ecological forecasting tool developed through the research project Climate Change and Intertidal Risk Analysis, supported through the National Centers for Coastal Ocean Science Ecological Forecasting Program. The forecast tool uses temperature data from the NOAA National Centers for Environmental Prediction and predicts whether body temperatures of intertidal organisms will exceed lethal limits, and if managers can expect mass die-offs in their estuaries. It also can be used to predict changes in geographic distributions of intertidal animals that could change ecosystem structure.

**APNEP Submerged Aquatic Vegetation Initiative** - The image below shows the status of SAV flights for fall 2007. The areas not yet flown will be flown in the spring. Image files will be made available by early January.



## **EPA's Watershed Academy Sponsors Webcast on Smart Growth and Green Infrastructure**

EPA's Watershed Academy sponsors free monthly Webcasts for watershed practitioners from around the globe. On Nov. 28, Geoffrey Anderson, EPA's director of Development, Community and Environment Division, Nancy Stoner, director of the Natural Resources Defense Council's (NRDC) Clean Water Project, and Noelle Mackay, executive director of Smart Growth Vermont, discussed how various Smart Growth and Green Infrastructure tools are being used at the regional, watershed and site levels to preserve, enhance and protect our water resources. The speakers also will discuss various approaches, including messaging, research, and partnering, to ensure that these tools are successfully implemented.

For more information or to access archived audio versions of past Web casts, please visit <http://www.epa.gov/watershedwebcasts/>.

**New York Sea Grant Seeks Director** - The State University of New York (SUNY) and Cornell University invite nominations and applications for the

full-time director of the New York Sea Grant Institute (NYSGI), a cooperative program of the two universities and part of NOAA's National Sea Grant College Program. The director will be based at Stony Brook University and report to the Chancellor of SUNY and the President of Cornell University through a Board of Governors. NYSGI's mission is to develop and deliver science that addresses issues of New York's marine and Great Lakes coasts. This science and educational outreach program serves to protect and enhance the economies, ecosystems and resources of New York State's coasts for government, academic, business, industry, environmental action group, student and lay citizen stakeholders. The director's goal is to lead a program of high quality research, outreach and education in support of that mission. The job posting can be found at: <http://www.seagrantsunysb.edu/nysgdirector/>. Apply by Dec. 5, 2007.

**EPA Sponsors Free Web cast-** EPA's Total Maximum Daily Load (TMDL) Program is sponsoring a Web cast on Dec. 6 from 2 p.m. – 4 p.m. on EPA's recently released draft document, Options for Expressing Daily Loads in TMDLs (document posted at: [http://www.epa.gov/owow/tmdl/draft\\_daily\\_loads\\_tech.pdf](http://www.epa.gov/owow/tmdl/draft_daily_loads_tech.pdf)). This Web cast for TMDL practitioners will provide information regarding options for developing appropriate daily load expressions during the TMDL process. In particular, the Web cast will address the calculation of daily loads for TMDLs that use allocation timeframes that are greater than daily (e.g., annual, seasonal). The Web cast is free, but you need to register in advance to participate. For registration information, please go to: <http://www.epa.gov/owow/tmdl/training.html> .

**Newspaper In Education Tabloid Supplement** - The News and Observer, the largest circulation publication in the Triangle of North Carolina, printed a 12-page Albemarle-Pamlico National Estuary Program (APNEP) educational insert in its daily circulation of about 170,000 papers, and in newspapers ordered by Newspapers in Education participants, on Nov. 13. The insert highlighted the value of estuaries and increased awareness about the APNEP's work to protect North Carolina's coastal resources. APNEP is also distributing 10,000 overrun copies of the insert at presentations, exhibits, festivals and other schools in coastal counties. For more information or to reserve a quantity of the inserts, email [joan.giordano@ncmail.net](mailto:joan.giordano@ncmail.net).

Until next time...

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