



*Welcome to the Albemarle-Pamlico National Estuary Program E-Update – a monthly summary of selected activities of the APNEP staff, committees and our partners...*

## **Ecological Society of America Statement on No Child Left**

**Indoors** - The Ecological Society of America (ESA), the nation's premier organization of 10,000 ecological scientists, promoted "No Child Left Indoors" week as part of Earth Week, 2007, to encourage adults to connect a child with nature. The locally begun "No Child Left Indoors" concept has grown into a national movement that encourages students, families, and adults to experience nature. Teaching children about their "home," Planet Earth, fosters better stewardship and science literacy.

More and more, people around the globe are migrating from rural to urban areas, and the number of people living in cities is growing twice as fast as total population growth. In fact, by this year, a majority of the world's people will be living in cities. Children who have grown up over the last 20 years have increasingly limited experience of the outdoors, which is contributing to decreased understanding and appreciation of the environment on which humanity depends:

- \* National statistics show that visits to national and state parks have fallen off by as much as 25 percent in the last decade, and kids remain indoors watching TV and playing computer games.

- \* A recent scientific study found that more children knew the characters of Pokemon than could recognize an oak tree or an otter.

- \* Science education—especially ecology and earth-based sciences—in America is falling behind that of other countries.

- \* Biological, health, and economic data indicate that children who connect with nature perform better in school, have higher SAT scores, exhibit fewer behavioral challenges, and experience fewer attention-deficit disorders.

ESA endorses activities locally and nationally for youth to learn about ecology and experience ecosystems. SEEDS (Strategies for Ecology Education, Development and Sustainability) is an ESA program established to reduce the serious under-representation of individuals from certain minority groups within the field of ecology. The program's mission is to diversify and advance the profession of ecology by promoting opportunities that stimulate and nurture the interest of underrepresented students. The United States offers a wide array of parks and recreation areas where children can connect with a tremendously diverse natural environment, from the gulf shore waters, to coastal dunes, to wetlands, to oak hammocks, to dry prairies, to treetop canopies.

The Ecological Society of America challenges all citizens—young and old—to take a child into the natural world for a shared educational experience.

## **CSO Hosts Envisioning Events on the Future of Coastal Management**

The first in a series of nationwide meetings designed to solicit innovative ideas that will shape the CZMA and other legislation being submitted to Congress later this year has been set for May 8, 2007 at Bentley College Conference Center in Waltham, Massachusetts. During the meeting, NOAA and CSO will present the Visioning initiative, followed by facilitated comment sessions. It is hoped that many success stories, best management practices, and innovative solutions for how coastal management can be improved will be heard. Topics will include:

Coastal issues - What are the most important challenges now and in the future?

Current Policies and Programs - What is working well? What can be improved?

Solutions - What new, innovative approaches will move coastal management forward? How can we improve the Coastal Zone Management Act? What tools are needed to build strong coastal communities and healthy coasts?

Setting Goals and Measuring Success - Should goals be set? If so, what should they be? How can we ensure that management approaches are effective?

Attendance will be on a first-come, first-served basis until capacity is reached. If you are unable to attend the meeting in Boston, please submit your comments via the web or join us at one of the other stakeholder meetings soon to be scheduled in Atlanta, Chicago, San Francisco, or Honolulu.

You can find out more information about the Envisioning project, the upcoming meetings, and how to submit comments via the web at:

[http://coastalmanagement.noaa.gov/czm/czma\\_vision.html](http://coastalmanagement.noaa.gov/czm/czma_vision.html)

## **Oberstar to Introduce Bill Clarifying Wetland Jurisdiction-**

Rep. James Oberstar (D-MN), chair of the House Transportation and Infrastructure Committee, plans to introduce a bill titled the Clean Water Authority Restoration Act. The bill aims to clarify the scope of the Clean Water Act and its applicability to wetlands by codifying broad protection and specifically stating the law extends to intermittent streams, wet meadows, and several other types of water. The bill may also amend the phrase "navigable waters" by removing the word "navigable." A version of the Oberstar bill was included in Great Lakes legislation (H.R. 1350) introduced last month by Reps. Vernon Ehlers (R-MI) and Rahm Emanuel (D-IL). The bills would codify a specific definition of "waters of the United States" to include all interstate and intrastate waters and their tributaries. This includes not only lakes and rivers but also intermittent streams, mudflats, wetlands, sloughs, prairie potholes, playa lakes, natural ponds, and more. Supporters of the bill say it affirms the Clean Water Act's original intent to provide broad protections and clarifies jurisdictional questions. Opponents worry the bill will result in regulations of ditches, gutters, and groundwater and result in permitting delays and impede development. The water law's reach over wetlands was called into question in the Supreme Court case's Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers and most recently by Rapanos v. United States and Carabell v. U.S. Army Corps of Engineers.

## **Second IPCC Report Released on Affects of Climate Change on Natural and Human Systems**

— Earlier this month the Intergovernmental Panel on Climate Change (IPCC) released the second in a series of

major reports due out this year on global climate change and its affects. The report assesses the latest scientific, environmental and socio-economic literature on Impacts, Adaptation and Vulnerability. It provides a comprehensive analysis of how climate change is affecting natural and human systems, what the impacts will be in the future and how far adaptation and mitigation can reduce these impacts. The report also contains chapters on specific systems, sectors and regions. The assessment concluded, with high confidence that:

Most oceans and many natural systems are being affected by regional climate changes, particularly temperature increases;

There is increased run-off and earlier spring peak discharge in many glacier-and snow-fed rivers;

There is warming of lakes and rivers in many regions, with effects on thermal structure and water quality; and

There is poleward and upward shifts in ranges in plant and animal species.

Additional findings can be viewed on the IPCC website at: <http://www.ipcc.ch/>.

**Biofuels: More Than Just Ethanol** - As the United States looks to alternate fuel sources, ethanol has become one of the front runners. Farmers have begun planting corn in the hope that its potential new use for corn will be a new income source. What many don't realize, is the potential for other crops, besides corn, to provide an alternate energy source to fossil fuels. Scientists studied the greenhouse gas emissions and bioenergy of corn, hybrid poplar, switchgrass, and other crops to determine the efficiency of various biocrops in terms of energy consumption and energy output.

The study, "Life-cycle assessment of net greenhouse-gas flux for bioenergy cropping systems", was completed by Paul Adler (United State Department of Agriculture - USDA), Stephen Del Grosso (USDA and Colorado State University), and William Parton (Colorado State University). Results appear in the April issue of Ecological Applications.

"Biofuels have a great potential to reduce our dependence on gasoline and diesel fuel," says Parton. "We have performed a unique analysis of the net biofuel greenhouse emissions from major biofuel cropping systems by combining ecosystem computer model data with estimates of the amount of fossil fuels used to grow and produce crop biofuels."

Adler, Del Grosso and Parton used the Daycent biogeochemistry model, developed by Parton and Del Grosso to assess greenhouse gas fluxes and biomass yields for corn, soybean, alfalfa, hybrid poplar, reed canary grass and switchgrass.

The results of the study showed that when compared with gasoline and diesel, ethanol and biodiesel from corn and soybean rotations reduced greenhouse gas emissions by almost 40 percent, reed canarygrass by 85 percent. Greenhouse gas emissions were reduced by about 115 percent for switchgrass and hybrid poplar. Both switchgrass and hybrid poplar offset the largest amounts of fossil fuels reduced emissions compared to

other biofuel crops and offset two times as much fossil fuels if they are used for electricity generation via biomass gasification.

Study results showed that nitrogen (N<sub>2</sub>O) emission resulting from production of the biofuel crops is the largest greenhouse gas source, while displaced fossil is the largest greenhouse gas sink followed by soil carbon sequestration.

This research shows that farmers will have a variety of biofuel crop options available in the future and that these biofuel crop rotations will have different environmental impacts. Detailed studies of the environmental impact of biofuel crops similar to this study need to be done at the regional and national levels before biofuel national policy decisions are finalized.

For more information about the Ecological Society of America, visit [www.esa.org](http://www.esa.org).

### **Updated Web site on Public Notification for Drinking Water Systems**

— EPA's Office of Ground Water and Drinking Water has recently improved its Web site on Public Notification for drinking water systems. Public notification is intended to ensure that consumers are immediately alerted if there is a serious problem with their drinking water that may pose a risk to public health. Drinking water systems will now have immediate access via their Web site at:

<http://www.epa.gov/safewater/publicnotification/> to view revisions to the 2000 Public Notification Handbooks to provide information on new drinking water rules.

The Public Notification Handbooks were developed to provide public water systems with the information and tools they need to meet the notification requirements of the Safe Drinking Water Act. Handbook revisions have been made to include violations or situations related to the Filter Backwash Recycling Rule, the Long Term 1 Enhanced Surface Water Treatment Rule, the Long Term 2 Enhanced Surface Water Treatment Rule, and the Stage 2 Disinfectants and Disinfection Byproducts Rule. In addition, handbook documents have been updated to include more information on effective risk communication techniques, such as suggestions on how to plan in advance of public notification, actions to take during a violation or situation, and follow-up actions after the violation or situation has been resolved. The handbooks are also available through our warehouse, the National Service Center (telephone number 1-800-490-9198).

### **BACK BAY RESTORATION FOUNDATION'S 22nd ANNUAL FLYWAY FEAST**

- Saturday, June 23, 2007, Noon to 5:00 p.m., the Back Bay Restoration Foundation (BBRF) will hold its 22nd Annual Flyway Feast Fundraiser at The Flyway Hunt Club (historic hunt club South of Creeds on Princess Anne Road - Route 615, just past the North Carolina line). This annual event is the BBRF's major fundraiser and membership drive. Tickets to the Flyway Feast are \$40 per person in advance (\$45 at the door), \$25 for 12-18 year old teenagers, with one child under twelve admitted free with a ticket holder. The ticket price includes All-U-Can-Eat savory slow roasted pork BBQ, slow cooked potatoes, corn on the cob, Sean's famous baked beans, ice cold watermelon, an open bar, a wine tasting, and a beer truck! Live music from Skip Friel

and The Resonators accompanies those circling the Silent Auction tables which feature original artwork from some of the best local and regional artists, wine baskets, vacations, gift certificates, and much more. Children will enjoy meeting pirate characters from the The Old Coast Guard Station. Ticket price includes a Foundation annual membership and bi-monthly Newsletter!

Proceeds are tax deductible and go toward the continuation of the Foundation's projects. These include monthly water quality testing, environmental educational programs, the construction of wood duck nesting boxes and osprey nesting platforms, and pollution prevention projects aimed at restoring and rehabilitating Back Bay and the North Landing River. Tickets are available at: Beach Gallery, 313 Laskin Road, Va Beach, 428-3726; Binswanger Glass, 623 First Colonial Road, Va Beach, 425-9227; Binswanger Glass, 1005 N. Battlefield Blvd., Chesapeake, VA, 547-9141; Fabric Gallery, 5350 Kemps River Drive, Suite 112, Virginia Beach, VA, 366-9434; and Sandbridge Realty, 581 Sandbridge Rd., 426-6262.

### **APNEP Science & Technical Advisory Committee (STAC)**

**Meets** – APNEP's STAC met on April 30<sup>th</sup> in Greenville for its quarterly (spring) meeting. Agenda items included an exercise in prioritization of technical issues that were derived from recommended issues submitted by STAC members prior to the meeting.

Submissions included: instituting procedures to **track land cover change** in the Albemarle-Pamlico National Estuary Program (APNEP) region; instituting an **in situ monitoring system for submerged aquatic vegetation (SAV)** in the APNEP region; **continuous water level measurements** in the Albemarle and Pamlico Sounds; **endocrine disruptors and antibiotic-resistant bacteria** attributable to increasing concentrations of **pharmaceuticals** in rivers receiving municipal waste sources, and **antibiotics and steroids** from agricultural systems; continued and additional study of **juvenile fish distribution and abundance**, with emphasis on the effects of weather and climate events such as high or low rainfall, hurricanes, predation, food resources, adult reproductive populations, and their impact on the ability of nurseries to support juvenile populations; identification of areas along streams or estuaries that would benefit from **buffer zones**; identification of abundance and distribution of **exotic species** and the likelihood of exotic species invasion from nearby areas such as Florida; statistical design of **indicator workshops**; **watershed and estuarine monitoring** and **predictive modeling** of inputs, transport, and ecological processes; **global warming**; and the **efficacy of existing ground-water standards**. Stay tuned for more or contact Dean Carpenter, APNEP Science Coordinator at (919) 715-7735 or go to APNEP's website: [www.apnep.org](http://www.apnep.org)

### **APNEP Policy Board to Meet May 15<sup>th</sup> at the Aquarium on**

**Roanoke Island** – the majority of the day-long meeting is dedicated to budgetary and FY'08 Work Plan issues, and plans for updating the APNEP Comprehensive Conservation and Management Plan (CCMP).

**Who Lives in the Great Dismal Swamp?** – A CHILDREN'S ANIMAL SCAVENGER HUNT WITH PHOTOGRAPHY, Saturday, June 2, 2007. The American

Hiking Society's National Trails Day<sup>®</sup>, held the first Saturday of every June, is America's largest celebration of trails and the outdoors. With more than 1000 events hosted by trail and community groups, public agencies, and businesses from coast to coast, there is something for everyone!

Sponsored by Albemarle RC&D Council, the Dismal Swamp Canal Welcome Center & the Dismal Swamp State Park, events get underway at 9:30am and will conclude at 11:30am. Prior to the scavenger hunt, a 45-minute program by NC State Park Rangers pertaining to animals who live in the Great Dismal Swamp. Children will receive a disposable camera (and film processing) to capture their special moments. Lunch will be provided from 11:00-11:30am.

Registration is on a first come, first served, basis and will be divided into three classes of 10 children each: Ages 4-6, 7-9, and 10-12. Each class will have adult supervision. To register, please call 771.8333 before May 18, 2007.

**18<sup>th</sup> Annual Virginia GIS Conference** – Sponsored by the Virginia Association of Planning District Commissions, the Hampton Roads Planning District Commission (HRPDC) is hosting the conference. It will be held at the Virginia Beach Convention Center, September 24 – 25, 2007. For more information, go to: <http://www.hrpdc.org/VAGIS2007/Default.aspx>

**Water Trail Map** – “John Smith’s Adventures on the James” chronicles Jamestown adventurer Capt. John Smith’s explorations in Virginia from 1607–1609 along the James River. Smith’s journey can be retraced by land or water. The James River trail extends from the falls of the James in Richmond to Hampton Roads and includes over 35 points of interest related to Smith’s journeys and nearby sites that interpret the early colonial experience in Virginia. Go to: <http://www.virginia.org/johnsmithtrail/> for a wonderful resource! Educators who would like a copy of the printed map for their classroom should call (804) 692-0903.



Until next time...

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