

# COASTAL MANAGEMENT NEWS

Volume 2, Issue 4, October 2008



A New Shoreline Structure GIS Database developed by the Oregon Coastal Management Program will assist local planners and state agency staff with long-range planning on Oregon's beaches.

## Oregon Creates Shoreline Structure GIS Database

The construction of riprap and other shoreline protective structures continues to be a controversial issue facing the Oregon Coastal Management Program. Coastal Program staff at the Department of Land Conservation and Development (DLCD) are developing a new tool to help identify properties for which shoreline protection permit applications can be submitted. This will assist local planners and state agencies with decision making as well as long-range planning on Oregon's beaches.

Statewide Planning Goal 18 describes limitations on where oceanfront shoreline protective structures may be permitted. These limitations are based on whether development existed on individual properties in 1977. The term "development" can range from structures built on the property to vacant, improved subdivision lots.

Determining whether a property is eligible to apply for a shoreline protection permit on a case-by-case basis can be inefficient and time consuming for local planners. Also, there are several examples where property owners found out too late that their property did not qualify for a shoreline protective structure. To assist local planning departments, as well as other Coastal Management Program agencies involved in long-range planning for the ocean shore, the Oregon DLCD has created a GIS database of permit eligibility for individual oceanfront tax lots. The large number of individual properties was at first daunting, but in collaboration with local cities and counties, significant progress has been made. Data input for two counties is now complete.

To build the tool, the DLCD developed a database table and

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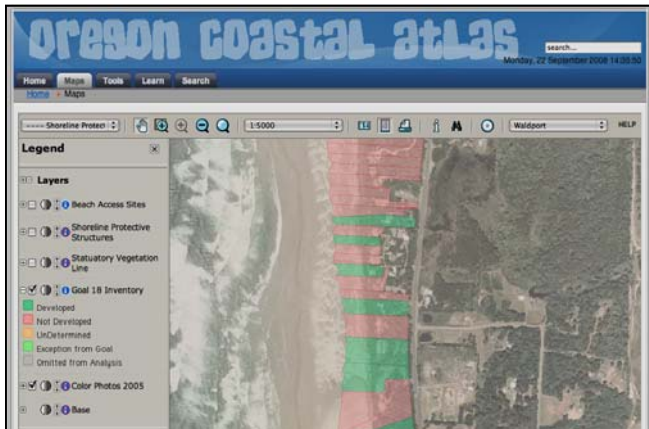
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Florida partners with local waterfront communities. See Page 2.

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Screenshot of shoreline structure shapefiles displayed within the Oregon Coastal Atlas.

form that contains the information necessary to make a determination. This includes the parcel ID, history of building subdivision, and infrastructure improvements, comments regarding aerial photo interpretation, and information from city and county planners. Using this information, a final determination was made on whether the property owner is or is not eligible to apply for a permit.

Eligible property owners may apply for a permit from the Oregon Parks and Recreation Department.

When converted to a GIS shapefile, the determinations can be graphically displayed, and the form information can be accessed in an associated attribute table. In addition to city and county use, the GIS mapping also helps permitting agencies visualize potential build-out of shoreline protection structures to determine if policies need to be revised to protect certain beaches from being affected by future shoreline armoring. The maps also display potential conflicts for future permitting, for example, where eligible properties adjoin ineligible properties.

GIS files have been distributed to the cities and counties, and the maps and information are also available on the Oregon Coastal Atlas (<http://www.coastalatlus.net/>). The maps and atlas allow for easy access to the information without the need for GIS software.

Work on the remaining counties continues. To find out more about this project, contact Steve Williams at [steve.williams@state.or.us](mailto:steve.williams@state.or.us).

## Waterfronts Florida Program a Model Partnership

The Waterfronts Florida Partnership Program (WFPP) was created in 1997 by the Florida Coastal Management Program as a program enhancement under Section 309 of the Coastal Zone Management Act (CZMA) to assist coastal governments with preservation and revitalization of their commercial and recreational working waterfronts. The WFPP provides hands-on technical assistance, support and startup funds to help communities develop vision and implementation plans for the following priorities: environmental and cultural resource protection, public access, economic development, and hazard mitigation. Since its inception, the WFPP has designated 21 coastal governments as Waterfronts Florida Partnership communities. The success of the WFPP was recognized in 2005 when the Florida Legislature authorized the program in statute.

The Florida Department of Community Affairs administers the WFPP and recently conducted a comprehensive assessment of the program's performance over the past ten years and developed a strategic plan to guide and enhance the program into the future. The plan aims to ensure the long-term viability of the WFPP by securing sustainable funding and

administrative rule to strengthen the WFPP legal framework and program participation, enhancing coastal resiliency in waterfront communities, and promoting regionalism among waterfront communities. Building on the success of the WFPP, and in response to new working waterfronts legislation, the strategic plan will also guide the development of a broader mission to provide technical assistance and support to all coastal local governments in the state, not only those included in the WFPP.

Throughout the lifetime of the WFPP, the Florida Coastal Management Program has provided technical and financial assistance for program administration and startup activities and made grants available to WFPP communities through its competitive Coastal Partnership Initiative grant program. The Waterfronts Florida Partnership Program is a success story illustrating the value of federal-state-local partnership and the benefits derived from leveraging new initiatives with CZMA funds. For more information on the WFPP, visit <http://www.dca.state.fl.us/fdcp/dcp/waterfronts/index.cfm> or contact Shawna Beji at [Shawna.Beji@dca.state.fl.us](mailto:Shawna.Beji@dca.state.fl.us).

## Rhode Island Begins Work on Innovative Plan for State Waters

Rhode Island is kicking off an innovative project to zone its offshore waters for diverse activities, including renewable energy development. The Ocean Special Area Management Plan (SAMP), to be developed by the Rhode Island

Coastal Resources Management Council (CRMC) and the University of Rhode Island (URI), with funding through the Rhode Island Economic Development Corporation, will be a two-year research and planning process that integrates the best available science with open public input and involvement.

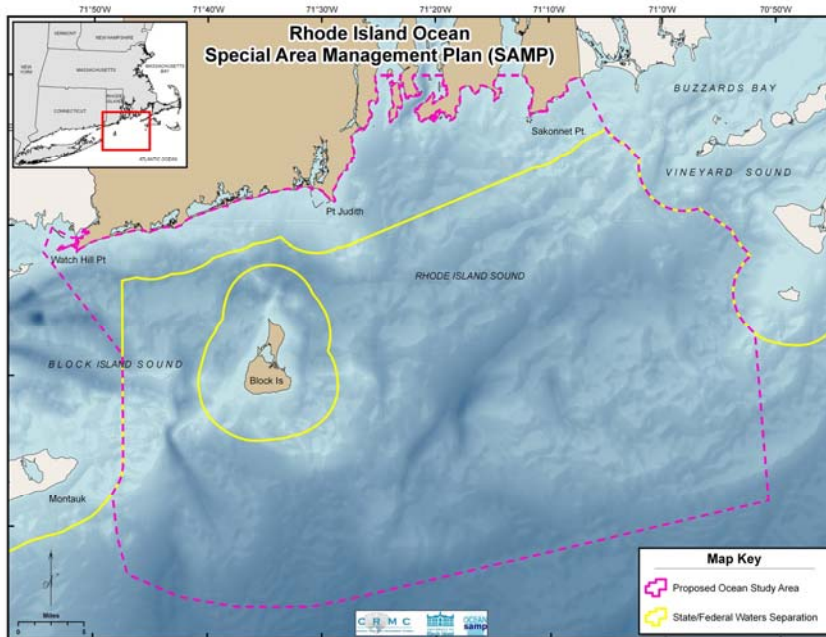
Global warming is one of the most critical issues

facing Rhode Island's coastal area. Accelerating sea level rise is already leading to beach erosion and property losses and increasing the state's vulnerability to hurricanes and floods. To help mitigate the impacts of climate change, Rhode Island is committed to reducing its carbon footprint by using renewable energy resources, primarily offshore wind farms, to meet 15 percent of its energy needs.

This surge in interest in offshore wind farms is a driving force behind Rhode Island's Ocean SAMP. Planning and zoning for ocean uses in the state's waters would allow for the proper planning and regulation for renewable energy projects in the offshore environment. The Ocean SAMP process will include provisions for renewable energy zones as well as protect current uses and habitats

through zones for commercial fishing, critical habitats, marine transport, and more.

Research projects conducted by URI scientists will provide the essential scientific foundation for the Ocean SAMP policy development. These projects will assess wind speeds and appropriate technologies, as well as map benthic habitat and existing water uses. Federal agencies such as the Minerals Management Service and the U.S. Army Corps of Engineers, which have authority in federal waters, will participate, as will various state agencies.



Map of draft proposed boundary for Rhode Island Ocean Special Area Management Plan.

A draft zoning map should be available for public comment by February 2009. CRMC anticipates adopting the completed Ocean SAMP by February 2010. Completion of the Ocean SAMP will enable the state to have preselected sites that are environmentally and technically sound for wind facility development and, most importantly, have public and government acceptance. This will increase permitting predictability for renewable energy projects and expedite application review.

To find out more about the Ocean SAMP, go to <http://seagrant.gso.uri.edu/oceansamp/> or contact Laura Ricketson-Dwyer at [lricketson@crmc.ri.gov](mailto:lricketson@crmc.ri.gov).

## Maryland Releases Climate Change Action Plan

On August 27, 2008, Maryland's Commission on Climate Change released its Climate Action Plan. The report details what effects global warming will have on the state, recommends concrete actions to protect Maryland's property and people from rising sea levels and changing weather patterns, and outlines 42 actions to help the state reduce global warming pollution.

The Maryland Chesapeake and Coastal Program has been actively involved in the Commission and coordinated the efforts of the Commission's Adaptation and Response Working Group (see also story in July 2007 Coastal Management News). The Adaptation and Response Working Group was charged with developing a

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*Climate Change, continued from pg. 3*

**Comprehensive Strategy for Reducing Maryland's Vulnerability to Climate Change, which was incorporated as a chapter in the state's Climate Action Plan.**



*The loss of wetlands at Blackwater Wildlife Refuge, Maryland, is due in part to sea level rise, erosion, and subsidence.*

The Chesapeake Bay Region, with a projected relative sea level rise of 2.7 to 3.4 feet, is ranked as the third most vulnerable region to sea level rise, due to its geography and geology. Only Louisiana and Southern Florida are estimated to be more vulnerable. Thus, adaptation and response planning is crucial to Maryland's ability to sustainably manage its coastal zone.

The Comprehensive Strategy for Reducing Maryland's Vulnerability to Climate Change is built around a vision for future preparedness. The Strategy aims to 1) reduce impacts to existing built environments, as well as to future growth and development; 2) shift to sustainable investments and avoid financial and economic impacts; 3) enhance preparedness to protect human health, safety, and welfare; and 4) restore and protect Maryland's natural resources and resource-based industries. Key recommendations include:

- Develop and implement long-range plans to minimize the economic impacts of sea level rise to natural resource based industries.

- Establish an independent Blue Ribbon Advisory Committee to advise the state of the risks that climate change poses to the availability and affordability of insurance.
- Develop a Maryland Sea Level Rise Disclosure and Advisory Statement to inform prospective coastal property purchasers of the potential impacts that climate change and sea level rise may pose to a particular piece of property.
- Identify high priority natural resource protection areas and strategically and cost-effectively direct protection and restoration actions to these areas to guard against coastal flooding.
- Promote and support sustainable shoreline and buffer area management practices.
- Update and maintain statewide sea level rise mapping, modeling, and monitoring products.
- Utilize new and existing educational outreach, training, and capacity building programs to disseminate information and resources related to climate change and sea level rise.
- Develop statewide sea level rise planning guidance to advise adaptation and response planning at the local level.
- Develop and implement a system of performance measures to track Maryland's success at reducing its vulnerability to climate change and sea level rise.

Maryland's state agencies are working together, along with their partners, to begin implementation of the Climate Action Plan's short- and long-term strategies. The Commission will continue to meet over the fall and spring to monitor the Plan's implementation. Maryland's Climate Action Plan can be downloaded at <http://www.mde.state.md.us/Air/climatechange/index.asp>. For additional information, contact Zoë Johnson at [ZJohnson@dnr.state.md.us](mailto:ZJohnson@dnr.state.md.us).

## Pennsylvania Evaluates LIDAR Technology for Bluff Setbacks

The Pennsylvania Coastal Resources Management Program (CRM) is exploring the use of LIDAR technology and analysis in order to produce reliable and accurate bluff recession data for Pennsylvania's Lake Erie coast. Pennsylvania's Bluff Recession and Setback Regulations require municipalities along Lake Erie to adopt ordinances that regulate construction of new

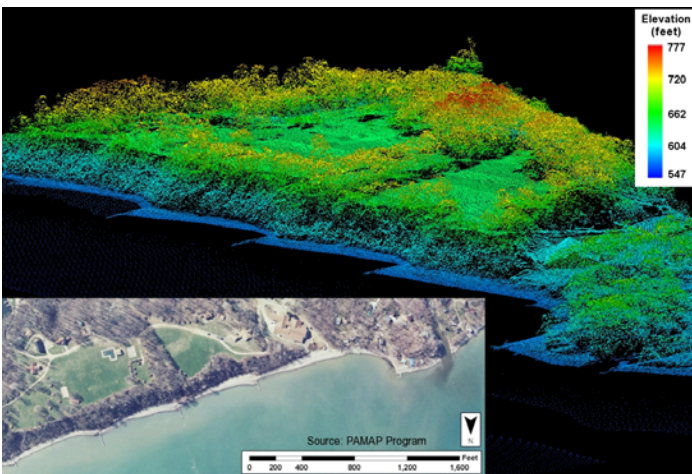
structures and improvements to existing structures located in designated bluff recession hazards areas (BRHAs) overlooking Lake Erie. The CRM is required to periodically update the recession rates used by the eight municipalities to regulate the placement of structures within BRHAs. These rates are updated every four years and historically have been determined through on-site

*(Continued on pg. 5)*

*Bluff Setbacks, continued from pg. 4*

field measurements. Locating, measuring and frequently repairing and adjusting approximately 130 fixed monuments requires significant staff time. CRM staff decided to evaluate whether LIDAR data could be used to accurately obtain this bluff recession data more efficiently.

CRM staff recently completed a successful pilot analysis using LIDAR data for a 6.5 mile study area in western Erie County, adjacent to the Ohio border along Lake Erie. Staff estimated recession over an eight-year period using 1998 and 2006 LIDAR datasets provided by NOAA's Coastal Services Center. They then delineated bluff edge lines for 1998 and 2006 using Triangular Irregular Network data models symbolized by slope value and calculated the distance between the two lines to derive an overall recession rate of the eight-year period. LIDAR results were in relative agreement with historic field measurements.



3D image of 2006 western Erie County coastline developed using LIDAR data and an overhead aerial photograph of that same area.

CRM is continuing to pursue this initiative and is currently examining the remaining 40 miles of shoreline that contain the highest and most unstable bluffs along Lake Erie. Pennsylvania's newest LIDAR dataset, flown for Erie County in 2007, will also be used as an additional dataset to evaluate bluff recession rates. If successful, this use of LIDAR technology will allow the CRM and local partners to make more informed decisions about preventing property damage and protecting the public along Pennsylvania's retreating bluffs overlooking Lake Erie. For additional information, contact Shamus Malone at [smalone@state.pa.us](mailto:smalone@state.pa.us).

## CELCP Updates NOAA's Coastal and Estuarine Land Conservation Program

### FY 2009 Competition

The FY 2009 CELCP competition closed in mid-July. The program received 54 proposals from 27 states and territories, totaling approximately \$79 million in requests. A panel of merit reviewers comprising coastal zone managers, estuarine reserve staff, and representatives from nongovernmental organizations and academia evaluated the applications. CELCP staff are currently in the process of completing technical reviews and finalizing the ranked list. The list of recommended projects should be finalized and released by mid-November.

### Selected Acquisitions this Quarter

On August 1, 2008, the Town of Strafford, New Hampshire acquired *286 acres of unfragmented forested uplands and wetlands along the Isinglass River*. Additionally, nearly 600 acres in the Isinglass watershed were permanently protected through donated land and easements, used as match to the CELCP award. This relatively undisturbed property provides high quality habitat to a wide array of wildlife and protects source waters for public drinking water supplies.

On September 11, 2008, the Alaska Department of Natural Resources with help from the Conservation Fund and funding from CELCP, the Forest Legacy Program, and National Coastal Wetlands grants, acquired a *conservation easement and subsurface rights for over 20,000 acres in the Nushagak Bay Watershed*. This area encompasses the Agulowak River, a highly valuable anadromous fish habitat for sockeye, coho, king, chum, and pink salmon.

On September 22, 2008, the City of Cleveland, Ohio, acquired over *0.46 acres along the east bank of the Cuyahoga River in downtown Cleveland*. This parcel will be incorporated into the future Flats East Riverfront Park, which will increase public access to the Cuyahoga River.

On September 25, 2008, the Town of North Hempstead, New York, acquired *1.22 acres of upland and tidal wetlands along Hempstead Harbor* to complete a mile-long public trail and park. This parcel was the last remaining piece not yet in public ownership along the harbor. It is contiguous with lands previously protected with CELCP funds, and offers significant fish and wildlife coastal habitat and public access opportunities along Hempstead Harbor.

## – Spotlight on NOAA Resources –

### NERRS Launches New Estuaries 101 Curriculum

Estuaries 101, the new on-line science curriculum from NOAA's National Estuarine Research Reserve System, provides powerful ways for students to learn fundamental concepts in science and develop scientific thinking skills, as well as explore the nation's biologically rich and economically important estuaries. From flying over an estuary with "Google Maps" to tracking the path and impact of a hurricane, Estuaries 101 modules feature hands-on learning, experiments, field-based activities, and data explorations. This curriculum was designed to help students explore and discover the nation's estuaries while learning how to use real data to support investigations.

The Estuaries 101 curriculum consists of four two- to three-week modules. Each module tells the estuary story through one of three domains: earth, life, or physical science. With the emphasis on these domains, teachers can weave the study of estuaries into existing earth, life, or physical science courses, all of which can be used together or separately. Designed for 9th-12th grade classrooms—with the flexibility to adapt to higher or lower grades—Estuaries 101 meets key National Science Education Standards and can be readily aligned to all state standards.

Estuaries 101 is the central feature of the Reserve System's newly designed Estuaries.gov website, recently

launched to help mark National Estuaries Day (September 27, 2008). Estuaries.gov was originally created to host the annual EstuaryLive Webcasts, virtual field trips to estuaries around the country led by scientists and educators at the reserves. The success of that series led to increased requests from teachers for more estuarine educational materials. The Estuaries.gov site was designed to be a hub for exploration and discovery, allowing students and educators to access videos, live water quality and weather data, fact sheets, and other information.

Development of the Estuaries 101 Curriculum and new Estuaries.gov site is the result of extensive partnerships between NOAA's Estuarine Reserves Division and TERC, MarineGrafics, Tellus Applied Sciences, NOAA's Chesapeake Bay Office, NOS Outreach and Education Division, NOAA's National Marine Fisheries Service, Office of Protected Resources, Environmental Protection Agency, NOAA's Office of Education, Reserve Educators, and the National Estuarine Research Reserve Association.

Check out the new estuaries curriculum and see what else the redesigned site has to offer at <http://www.estuaries.gov/>. For additional information, contact Atziri Ibanex at [Atziri.Ibanex@noaa.gov](mailto:Atziri.Ibanex@noaa.gov).

### MPA Federal Advisory Committee Seeks Nominations

The Marine Protected Areas Federal Advisory Committee is seeking new members to fill approximately 15 vacancies for early 2010. The Committee advises the Departments of Commerce and the Interior on the development and implementation of a national system of marine protected areas. Nominations for natural and social scientists, state and territorial resource managers, cultural resource experts, and representatives of ocean industry, commercial and recreational fishing, and environmental organizations, are sought by November

30. Nominations must include a resume or CV, a cover letter describing the nominees qualifications and interest in serving on the Committee, and up to three letters of support. Self nominations are acceptable. Nominations should be sent to Lauren Wenzel, National Marine Protected Areas Center, NOAA, 1305 East-West Highway, Station 9143, Silver Spring, MD 20910. E-mail: [Lauren.Wenzel@noaa.gov](mailto:Lauren.Wenzel@noaa.gov); e-mail nominations are acceptable. See <http://mpa.gov/mpafac/fac.html> for more details.



The quarterly *Coastal Management Program Newsletter* was developed in response to state requests for assistance in improved communication/lesson sharing among the state and territory coastal management programs. Please let us know about interesting things going on in your coastal zone you would like to share with others. If you have any projects that you would like to highlight, please send a brief description to [Allison.Castellan@noaa.gov](mailto:Allison.Castellan@noaa.gov). The submission deadline for the next newsletter is January 1, 2009.

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