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MICHIGAN COASTAL NEWS

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Recommendations Released on Offshore Wind Farm Siting, Regulation

On September 1, an advisory council appointed by Governor Jennifer Granholm submitted its report outlining recommendations for siting and regulating offshore wind farms in Michigan's 38,000 square miles of Great Lakes waters. Preliminary scoping indicates that more than 40% of this area may eventually prove suitable for wind energy facility development, if the state adopts the council's recommended buffers to minimize impacts to navigation, fisheries, and other uses and resources. However, the council found there is a need for new state legislation and administrative rules to allow construction and operation of wind farms on state-owned bottomlands. The Michigan Great Lakes Wind Council was created in February under Executive Order 2009-1 to identify offshore areas more and less favorable for wind farms, and recommend permitting criteria, public involvement processes, and statutory and rule changes.

The council relied on an experimental lakebed mapping tool to delineate offshore areas appropriate for wind energy. Fortunately, the Institute for Fisheries Research, a partnership of the Michigan Department of Natural Resources and the University of Michigan, had begun work in 2008 on a CZM-funded geographic information system (GIS) for supporting decisions on the placement of pipelines, cables, and other infrastructure on Michigan's Great Lakes bottomlands. The lakebed GIS combines existing data sets on fisheries habitat, shipping routes, shipwreck locations, and many other valuable uses and resources of the Great Lakes. By mapping the locations of these important sites and areas, decision makers can judge where the placement of offshore infrastructure should not be allowed, where it would require extensive measures to avoid or mitigate resource damage, and where it would result in the least impacts. Applying this process to its task, the council estimates that more than 17,000 square miles of Michigan's Great Lakes could support wind farm construction and operation while accommodating competing uses. The council qualifies this estimate by cautioning that some GIS data sets used in the analysis are incomplete or outdated.

On the suggested to-do list for Lansing policy makers are changes to Michigan's Natural Resources and Environmental Protection Act. Current provisions addressing developments on Great Lakes bottomlands are inadequate for the unique circumstances of offshore wind farms, and the council recommends a new section establishing specific requirements for wind farm site assessment, construction, operation, decommissioning, compensation to the state, and other provisions. As the Army Corps of Engineers also has regulatory jurisdiction over developments on Great Lakes bottomlands, the council urges coordination of federal and state regulations. The report is available for downloading at www.michiganglowcouncil.org.



Photo Credit: Perry Ballard, Inc.



Project Spotlight: St. Joseph Maritime Heritage Trail

For longtime residents of Michigan's coastal communities, a walk along the waterfront can become an excursion into the past as everyday scenes and sounds trigger recollections of local activities and events that now exist only in memory. To these old-timers, the waterfront's present appearance and uses are just the topmost layer of its history, and the layers beneath hold stories and images that enrich the experience of living in the community. Unless researched and interpreted for public benefit, this rich history remains invisible to newcomers. The City of St. Joseph recently used a Coastal Zone Management grant to give new residents and visitors access to such underlying, historic layers of its waterfront through development of a maritime heritage interpretive trail.

Working with The Heritage Museum and Cultural Center in St. Joseph – formerly the Fort Miami Heritage Society – and faculty and students of the Public History Program at Western Michigan University, city staff selected

a route for the future trail through Lake Bluff Park overlooking Lake Michigan and the Upton Arboretum on the St. Joseph River. Identifying potential topics for the interpretive signage was not a problem; to give a sense of the reach of the community's history, the French explorer Sieur de La Salle and his crew built Fort Miami near the river's mouth in the winter of 1679. Instead, the challenge lay in narrowing down aspects of maritime heritage to feature. Ultimately, the project team settled upon topics that were significant, informative, supported by available historical materials that could be used to prepare visually interesting signs, and added to the coherence of the overall trail themes. Museum and university members of the project team researched the topics, developed text, and located appropriate illustrations. A local marketing firm designed the signage for the trail, as well as a promotional brochure and trail map for distribution to the local welcome center and other public locations.

The St. Joseph Maritime Heritage Trail debuted this past summer with a series of 14 interpretive signs, including an "anchor" sign in each of the park and arboretum segments that provides a trail overview. A number of signs are devoted to the once-celebrated local boat and shipbuilding industry, which was a major employer during the 19th and early 20th centuries. Other topics include local lighthouses and the U.S. Life Saving Service, commercial shipping and fishing, a local swing bridge, and the Silver Beach Amusement Park which enjoyed a rollicking reputation for its rides, dance pavilion, boardwalk, roller skating rink, and other attractions until it closed in 1971. Contact John Hodgson, St. Joseph Community Development Director for additional information at (269) 983-1212 or hodgson@sjcity.com.

Contest Encourages Young Poets, Artists, to Pour Out a *River of Words*

K-12 students in Michigan and across the globe are invited to participate in an annual environmental poetry and art contest by submitting original works on the theme of dwelling within a watershed. *River of Words*, a non-profit educational organization, coordinates the national contest with support from the Library of Congress and other partners. The Michigan Center for the Book, Department of History, Arts and Libraries, is a state-level sponsor, and the Michigan contest is coordinated by the staff and volunteers at the Copper Country Community Arts Center in Hancock. Contestants in the United States must have their entries postmarked by December 1, 2009, to qualify for the 2010 contest, while international participants have a February 1, 2010, deadline. Entries submitted after these deadlines will be held for the 2011 competition.

Using the watershed as a frame for understanding one's natural and cultural community is a powerful idea, and provides a unique springboard for young people to dive in, explore, and express what they discover about the place they call home. Immersing students in the ecology, history, and culture of their watershed is in line with the place-based approach to education, which views the students' community and local environment as a rich resource for learning. In fact, *River of Words* coordinators encourage contestants to engage in hands-on learning experiences such as water quality sampling, river clean-ups, botanizing, sketching, and other activities as a means of rooting their poetry and artwork in an authentically-gained sense of place. Since the term "watershed" may define the drainage area of a local stream, river, one of the Great Lakes, or the entire Great Lakes Basin, Michigan teachers can scale the scope of the studies and explorations to fit their students' abilities and educational needs.

Students may enter on their own or as part of a classroom or other group submission. There is no entry fee. Contest rules, resources, winning entries from previous years, and other items of information are linked to the *River of Words* national website at www.riverofwords.org. Michigan educators and prospective contestants may consult the state website at <http://riverofwords.composing.org> or contact Michael Moore, Michigan *River of Words* Coordinator at (906) 370-0206 or mmoore@mtu.edu.

Great Lakes Piping Plover Recovery Efforts Produce Fruitful Results in 2009

Lisa Niemi, Upper Peninsula Program Office, The Nature Conservancy

Another successful nesting season has passed for the endangered Great Lakes piping plover, and the birds have migrated south to their wintering grounds along the Gulf of Mexico. Seventy-one nesting pairs were reported within the Great Lakes this year, eight pairs more than in the 2008 season.

The Great Lakes piping plover population was listed as federally endangered in 1986, when it fell to 17 breeding pairs. Though the population has since quadrupled, it is vulnerable to natural and human disturbances such as predation, nest abandonment, incompatible recreation, and shoreline development.



Photo Credit: Mark Hubinger

Staff and volunteers install a nest enclosure at Grand Marais, 2009

Piping plover recovery demands an annual multifaceted approach including surveys, nest protection and monitoring, captive rearing of abandoned eggs, research, and habitat improvement such as invasive species control. When nests are found, May to mid-June, staff erect nest "exclosures," protecting the eggs against predation. Twine strung between signs and posts serves as "psychological" fencing to reduce human disturbance while increasing public awareness. Nests are monitored daily from incubation until chicks are able to fly, about 28 days after hatching.

The captive rearing program is coordinated by the Detroit Zoological Society and is staffed throughout the season by zookeepers from across the country. While natural hatching and rearing of wild birds is preferable, sometimes it is necessary to remove eggs from abandoned nests or salvage eggs from nests washed out by storms. Rescued eggs are transported to the facility, where zookeepers incubate the eggs and care for the hatchlings and chicks. When they can fly, chicks are released at a shoreline site with wild piping plovers.

Annual research and banding is led by the University of Minnesota. The nearly 20-year effort has provided invaluable information on adult survival, and breeding and wintering ground site fidelity. Each bird is identified with a unique combination of color bands, an orange flag to signify its Great Lakes origin, and a numbered, metal U.S. Fish and Wildlife Service band to assist in identifying individuals at a distance.

Partnerships between government agencies and conservation groups are critical to the success of the piping plover recovery effort. Partners include the Sleeping Bear Dunes, Apostle Islands, Pictured Rocks and Indiana Dunes National Lakeshores, the U.S. Fish and Wildlife Service, National Fish and Wildlife Foundation, Hiawatha and Huron-Manistee National Forests, the states of Michigan and Wisconsin, province of Ontario, Little Traverse Bay Band of Odawa Indians, University of Minnesota, University of Michigan, Lake Superior State University, The Nature Conservancy, Central Lake Superior Land Conservancy, the Detroit Zoological Society, and American Zoo and Aquarium Association institutions. Importantly, volunteers commit thousands of hours annually to monitoring nests and educating beach visitors.

Through this collaborative effort, the 2009 breeding season in the Great Lakes resulted in the largest nesting pair total since listing, producing 126 wild-fledged and 22 captive-reared young. Notably, a pair nested in Illinois, the first piping plover nesting in that state in 30 years! For more information on how you can get involved in 2010, contact Lisa Niemi, lniemi@tnc.org, at The Nature Conservancy's Upper Peninsula Office.

New Report Outlines Demographics and Economic Impact of Birding

Michigan's coastal areas draw a wide range of shorebirds, songbirds, and other birds that nest in the state or pass through on migration. When the birds appear, birders are not far behind and East Tawas, Copper Harbor, Rockwood, and other coastal communities welcome both winged and human visitors with annual birding festivals. A U.S. Fish and Wildlife Service report released this summer suggests that these communities are appealing to a relatively affluent and well-educated subset of the U.S. population. It also presents data on the economic clout of birders. *Birding in the United States: A Demographic and Economic Analysis* presents information about who birders are, where they live, what birds they watch, and how much they spend on their hobby. For example, almost 1.8 million Michigan residents 16 years old and older engaged in bird-watching in 2006. Another 220,000 out-of-state visitors birded in Michigan. Nationally, birders paid out an estimated \$36 billion for birding equipment and trip-related expenditures.

The information in the report is drawn from the wildlife-watching section of the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation, the nation's most recent comprehensive survey of wildlife recreation. The report is available for downloading at http://library.fws.gov/Pubs/birding_natsurvey06.pdf.

Federal Stimulus Funds to Boost Muskegon Lake Environment and Economy

A major stretch of heavily degraded shoreline on Muskegon Lake will get an environmental and economic shot in the arm through a \$10 million grant from the National Oceanic and Atmospheric Administration (NOAA). The funding, appropriated under the American Recovery and Reinvestment Act (ARRA), will support wetland and upland habitat restoration on the lake, an ecologically-rich drowned river mouth connected to Lake Michigan. Local match will help make up the balance of the more than \$30 million in project costs. The restoration work is expected to support an estimated 125 engineering, construction, and other jobs over the course of the project, which is scheduled to run through December 2010. The expanded fish and wildlife habitat and improved water quality resulting from the project will continue to yield yearly economic dividends for the community through enhanced tourism and recreation, long after the last work crew has left the lake.

Decades of industrial pollution discharges, dumping of sawmill waste and demolition material, and urban development have taken a heavy toll on the Muskegon Lake ecosystem. Almost 800 acres of the lake's original shallow waters and wetlands have been filled with dumped waste, and 74% of the shoreline is hardened with sheet metal, broken concrete, foundry slag, and other materials that block public access to the lakeshore and hamper the movement of reptiles, amphibians, and other wildlife that need to move between land and water. The historic pollution and dumping figured prominently in the designation of Muskegon Lake as one of the Areas of Concern identified in the 1987 Great Lakes Water Quality Agreement between the United States and Canada. Areas of Concern are sites in the Great Lakes where the degree of contamination, habitat degradation, and other environmental stressors impair their beneficial use. Muskegon Lake exhibits nine of the 14 "beneficial use impairments" cited in the Agreement including loss of fish and wildlife habitat, degraded fish and wildlife populations, degraded benthos, beach closings, and degraded aesthetics.

The project work plan encompasses a substantial portion of the restoration needed to resolve the beneficial use impairment related to the loss of fish and wildlife habitat. Specifically, workers will remove more than 136,500 cubic yards of industrial and demolition fill to uncover and restore 23.6 acres of aquatic and adjacent upland habitat. They will replace 10,000 linear feet of hardened shoreline with natural, vegetated banks, and revegetate and restore 27.2 acres of emergent and near shore wetlands. According to NOAA staff, the quantitative and detailed restoration goals clearly tied to addressing beneficial use impairments were a compelling factor in the agency's decision to fund the project, the only NOAA restoration project in Michigan awarded stimulus funding to date. Contact Kathy Evans, West Michigan Shoreline Regional Development Commission, for additional information on the restoration effort at **(231) 722-7878** or kevans@wmsrdc.org.



Photo Credit: Matt Smar, MDEO

Detroit Riverwalk

New Guide Presents Smart Growth Options Tailored to Coastal Communities

Smart Growth advocates have focused their attention on the coast with the latest guidance for communities striving to manage development while advancing environmental, economic, and quality of life goals. *Smart Growth for Coastal and Waterfront Communities* hit the Internet this summer thanks to a cooperative effort between NOAA, U.S. Environmental Protection Agency, Rhode Island Sea Grant, and the International City/County Management Association. Smart Growth emerged as a planning and development philosophy in 1996 with the articulation of ten principles put forward by the Smart Growth Network, a coalition of agencies and organizations concerned

with land use and related issues. The principles were borne out of the observation that thriving, diverse, and successful communities share certain characteristics, such as mixed uses in dense, compact development patterns, walkable neighborhoods, and active protection of local farmland, important habitats, and other open space.

Though the Smart Growth principles are formulated for all communities, coastal communities encounter a unique set of challenges to address in their land use master plans and zoning ordinances. For instance, developments near lands that are prone to flooding, shoreline erosion, or storm damage may be afforded a level of protection by vegetated shoreline buffers and other zoning techniques. Also, certain industries, businesses, and recreational pursuits require access to the water, which may need safeguarding from the encroachment of non-water-dependent competing uses. With these and other challenges as a backdrop, the new guidance elaborates on the universal Smart Growth principles in a way that is especially meaningful for coastal communities and offers ideas for implementing them drawn from coastal community case studies. Planners, local officials, developers, and other interested parties can download the coastal Smart Growth document at <http://coastalsmartgrowth.noaa.gov/report.html>.