



Michigan Department of Environmental Quality
 Jennifer M. Granholm, Governor; Steven E. Chester, Director
<http://www.michigan.gov/deq>

Office of the Great Lakes Activity Report

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Governor Granholm Signs Landmark Legislation to Protect Great Lakes

from the Governor's Office

In February, Governor Jennifer M. Granholm signed legislation that for the first time protects Michigan waters from large-scale diversions and withdrawals. The landmark legislation fulfills a commitment Michigan made more than 20 years ago to join with other states and Canada to protect and preserve the waters of the Great Lakes Basin.

"Michigan has been blessed by a bounty of water that fuels our economy and defines our character," Granholm said. "It is our most vital resource, and its preservation and protection is far too important to be left to future generations."

The bipartisan package provides an important framework for comprehensive water management in Michigan. It allows the state to manage large quantity water withdrawals of over 100,000 gallons per day and prohibits withdrawals that would have an adverse impact on the water resource. The legislation also requires all new or increased bottled water operators with withdrawals of over 250,000 gallons per day to meet high standards, including no adverse resource impact, no impact on riparian rights or common water law, and must address hydrologic impacts.

Granholm first called on the Legislature to enact the comprehensive water legacy legislation more than two years ago, and a bipartisan group of lawmakers, environmental, industry, and agricultural advocates, worked to craft legislation that both protects the state's natural resources and the interests involved.

"The legislation we celebrate today represents the best of the Michigan spirit," said Granholm. "The Water Legacy Act is the product of compromise, negotiation, and a bipartisan effort. It will benefit generations to come."

Granholm recognized numerous legislators and nonprofit organizations, including the Michigan Environmental Council, PIRGIM, the Michigan Chamber, The Farm Bureau, and Clean Water Action for their work in making the legislation possible.

"More than 20 years ago, Michigan made a commitment to

protect our water," said Granholm. "Today, thanks to the hardwork of many legislative and environmental leaders, we finally make good on that promise."

In 1985, Michigan signed the Great Lakes Charter with the seven other Great Lakes States and Canada, pledging to protect the waters of the Great Lakes Basin from withdrawal or diversion. Until today, Michigan was the only state that had failed to pass legislations fulfilling this commitment.

Under Granholm's leadership, Michigan has taken a number of steps to protect the state's water resources, including:

- prohibiting open water disposal of contaminated dredge sediments in the Great Lakes;
- implementing the nation's first laws regulating the discharge of ballast water from ocean-going ships;
- joining with other Great Lakes states in signing the Great Lakes Annex Agreements;
- renewing groundwater permit fees, allowing the Michigan Department of Environmental Quality to issue permits and complete inspections for businesses that discharge treated water into the groundwater system;
- collecting fees under the National Pollution Discharge Elimination System (NPDES) to protect our lakes and streams from contaminated wastewater. (Until two

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years ago, Michigan was the only state in the nation that didn't charge fees for wastewater discharge permits.)

The Water Legacy Act includes: Senate Bill 850, sponsored by Senator Patty Birkholz (R-Saugatuck Township); Senate Bill 851, sponsored by Senator Bruce Patterson (R-Canton); Senate Bill 852, sponsored by Senator Gerald Van Woerkom (R-Norton Shores); Senate Bill 854, sponsored by Senator Ray Basham (D-Taylor); and Senate Bill 857, sponsored by Senator Liz Brater (D-Ann Arbor).

Final Guidance for Delisting Michigan's Great Lakes Areas of Concern

The Department of Environmental Quality has released Guidance for Delisting Michigan's Great Lakes Areas of Concern, a document integrating Michigan's criteria for restoration of beneficial use impairments in Areas of Concern with the process for delisting these sites once they meet the criteria. The document was developed by the DEQ, with close support from the Statewide Public Advisory Council for Michigan's AOCs.

The AOCs are sites along the Great Lakes experiencing severe environmental degradation stemming primarily from historic pollution. They were designated under the United States-Canada Great Lakes Water Quality Agreement based on the presence of one or more of 14 beneficial use impairments, such as restrictions on fish and wildlife consumption and beach closures.

Of the 41 current Great Lakes AOCs, 14 are located in Michigan. They include rivers, lakes, and bays located across the state. Michigan's AOC Program is administered by the DEQ's, Water Bureau, in collaboration with other state and federal agencies and local stakeholders.

The guidance document and information pertaining to Michigan's AOC Program is posted on the DEQ Web site at <http://www.michigan.gov/deqwater>; select Great Lakes, then select Areas of Concern.

Third Comprehensive Environmental Indicators Report Released

The *State of Michigan's Environment 2005: Third Biennial Report*, a comprehensive review charting Michigan's environmental trends, is now available. The report was prepared by the Department of Environmental Quality and the Department of Natural Resources, and is required under Public Act 195 of 1999 (the Environmental Indicators Act).

"We have made significant strides in protecting and enhancing our environment, and are committed to continuing our efforts to ensure Michigan has a proud environmental legacy," said DEQ Director Steven E. Chester.

Director Chester pointed to significant successes that have better protected Michigan's environment by fighting to keep invasive species out of our waters, partnering with communities to eliminate sewer overflows, and cleaning up historically contaminated sites so that they can be returned to productive use.

"Our greatest success, however, is breaking down the barrier between having a healthy environment and a healthy economy," he added. "Clearly, we are proving that Michigan can, and should, have both."

The 2005 Biennial Report follows important trends including the impact of the many exotic species that have invaded Michigan's waters and land, along with the progress the state has made to help control them. It also gives an overview of Michigan's endangered and threatened plants and animals, urban sprawl, numerous environmental programmatic measures, and several emerging contaminants of concern and their increasing prevalence and potential impact on Michigan's environment.

The invaluable information in this report helps the DNR better manage and protect the state's natural resources," said DNR Director Rebecca Humphries. "Environmental indicators are often the first measure of a threat to wildlife, forestland, or water resources, so this report serves as an important tool for our managers."

Directors Chester and Humphries both pointed out that care must be taken in terms of how the report is interpreted. Observed changes that may occur in a given indicator from one reporting period to the next do not necessarily tell why those changes are occurring. It may take several years worth of monitoring data to properly identify and assess the emergence of positive or negative trends.

Copies of the report may be obtained by contacting the DEQ either by email at deqwater@deq.state.mi.us or by telephone at 517-373-6626. Copies of the report also may be obtained directly from the Internet at <http://www.michigan.gov/deqwater> and click on Key Topics, Environmental Reports, and click on the 2005 State of Michigan's Environment Second Biennial Report under Information.

Grants Awarded to Protect Michigan Waters from Aquatic Invasive Species

Office of the Great Lakes Director Ken DeBeaussaert has announced that eight grants have been awarded under the Aquatic Invasive Species Information and Education Program. The purpose of the program is to provide funding to local grassroots efforts to raise public awareness about AIS prevention and control, and protect Michigan's water resources. This year's awards totaling \$22,427 will fund educational field courses for teachers and environmental professionals, protect unique state and national treasures including Isle Royale and Beaver Island, and educate boaters and lake groups about preventative measures.

“Our state took a historic step forward in the protection of the Great Lakes by passing comprehensive water withdrawal legislation,” said DeBeaussaert. “Today, we are continuing that commitment to the Great Lakes by helping to safeguard them from the growing threat of invasive species.”

The projects funded by these grants:

- Invasive Species Field Course for Teachers and Environmental Professionals, Inland Seas Education Association - \$3,000
- Working with the Media & User Groups to Educate Recreational Boaters on Aquatic Invasive Species, Michigan United Conservation Clubs - \$2,967
- Isle Royale Spiny Water Flea Project, Isle Royale Natural History Association - \$2,960
- Clinton River Watershed-Wide Aquatic Invasive Species Education Program, Clinton River Watershed Council - \$3,000
- Glen Lake Association Invasive Species Protection Station – Equipment Shed and Education Upgrade, Glen Lake Association - \$1,500
- Aquatic Invasive Species Survey and Monitoring Plan for Gratiot Lake, Keweenaw County, Gratiot Lake Conservancy - \$3,000
- “Beaver Island: Ours to Protect” Educational Video, Brochure, and Website, Beaver Island Property Owners Association - \$3,000
- Aquatic Invasive Species Patrol: A Training Program for Early Detection, Tip of the Mitt Watershed Council - \$3,000

For details on what these projects will accomplish, visit the Office of the Great Lakes’ website at:

<http://www.michigan.gov/deqmiqlprotectionfund>

Funding for the AIS Information and Education Small Grants Program was provided by proceeds from the sale of the 2005 Great Lakes Protection Fund decal.

\$333,743 Grant Awarded to Protect Humbug Marsh and Detroit River

The Department of Environmental Quality has awarded \$333,743 to the Wayne County Department of Public Services to support the development of the International Wildlife Refuge Headquarters in Trenton. The project will protect the area’s water resources by pre-treating storm water before it discharges to Humbug Marsh, and ultimately, the Detroit River.

The Monguagon Drain currently discharges directly into the Detroit River without prior treatment. The project will remove a 600- foot concrete culvert which will recreate a natural streambed, and create a storm water retention pond. The combination of a natural channel, retention pond, and constructed wetlands will treat storm water by settling out suspended sediments, taking up pollutants, and slowing storm water before it enters Humbug Marsh. The marsh will then

naturally further treat the storm water before reaching the Detroit River. “This project is the result of a partnership at all levels to improve Michigan’s environment,” said DEQ Director Steven E. Chester.

The project is part of a larger plan for the headquarters of the IWR that includes major educational components and the integration of environmental programs from the U.S. Fish and Wildlife Service, DEQ, Wayne County Parks, and the city of Trenton schools. Along with the DEQ’s grant, the project has support from a \$3.5 million federal appropriation secured by U.S. Congressman John Dingell, and a \$1 million grant from the Mott Foundation.

Coastal Zone Management Grant Awards Announced

Department of Environmental Quality Director Steven E. Chester has announced the approval of 26 Coastal Zone Management (CZM) grants totaling \$680,000. The funds will be used by coastal communities, nonprofit organizations, and universities to fund a variety of shoreline related projects that will allow our state to better manage and protect our valuable Great Lakes coastal resources.

“This program provides a tremendous benefit to citizens across our state,” said Director Chester. “By providing the tools to properly maintain and enhance our Great Lakes coastline, we can ensure that future generations have the same opportunities to enjoy them that we have today.”



Big Sable Lighthouse

Projects funded by grants announced today will enhance access to the coast, plan for waterfront redevelopment, document shipwrecks, restore lighthouses, provide educational outreach, and develop coastal land use planning resources.

Michigan’s Coastal Management Program, which administers the CZM grants, has a legacy of managing and protecting the state’s valuable Great Lakes coastal resources, and was cited by The National Oceanic and Atmospheric Administration as a national leader in community based coastal management. This annual funding is the result of a state and federal partnership established through the Coastal Zone Management Act of 1972.

A complete list of the funded projects can be viewed on the CMP Web site at: http://michigan.gov/deq/0,1607,7-135-3313_3677_3696---,00.html

Plan will Address E. Coli in Rouge River

The Department of Environmental Quality has received a grant from the United States Environmental Protection Agency to develop a plan to address E. coli in the Rouge River. The plan, known as a Total Maximum Daily Load (TMDL), will analyze data from the river to define sources and target areas for reductions with the goal of meeting state water quality standards.

The Rouge River has historically had levels of E. coli resulting from combined sewer overflows and nonpoint source pollution that make the water unsafe for body contact. The TMDL will focus on E. coli sources from the Rouge River Main, Upper, Middle, Lower, Bell, and Franklin Branches, and Evans Ditch.

The DEQ has partnered with local organizations to determine E. coli sample locations and share data that will help identify the sources of contamination. Once the sources have been identified, efforts will be focused on eliminating or reducing them.

The TMDL process, lead through a partnership between DEQ and Camp Dresser & McKee, will involve stakeholder input, public meetings, and a public comment period. The DEQ plans to have a draft document available for public comment in February 2007.

Information about TMDLs can be found on the Web at: <http://www.michigan.gov/deqwb>, under "TMDL Assessments," or by contacting Christine Alexander of the DEQ at 517-373-6794 or alexandc@michigan.gov.

The Binational Blueprint for the Great Lakes

The Nature Conservancy's Great Lakes Program and the Nature Conservancy of Canada have collaborated to develop a binational conservation blueprint that highlights areas in critical need of conservation in both the United States and Canada. The information provides government leaders, scientists and concerned residents with a cross-country roadmap to restore the health of the Great Lakes.

The blueprint can be found at: www.nature.org/wherewework/northamerica/greatlakes/

Great Lakes Information Network Unveils Comprehensive Portal

from the Great Lakes Information Network

Teachers in Michigan, the Great Lakes region and beyond recognize the importance of educating the next generation on the value of the Great Lakes, including its fishery resources. As a result, a comprehensive new collection of education tools and resources for K-12 educators in the Great Lakes region is now available through the Great Lakes

Information Network (GLIN).

Funded by the Great Lakes Fishery Trust, Michaela Zint, an environmental education professor at the University of Michigan's School of Natural Resources and Environment, together with her master's students, education specialists and a core group of K-12 educators, has developed a Teachers' Corner - for GLIN's revamped online education portal, The Education and Curriculum Homesite (TEACH) - to make instructional kits, sample lesson plans, reviews of curricular materials and online discussion opportunities easily available to teachers.

"Past studies have told us that K-12 educators want to teach their students about the Great Lakes but they are not aware of relevant teaching materials that can also help them meet state education standards," says Zint.

The portal (<http://glin.net/teach/>) offers all the teaching materials the research team was able to identify in existence on the topic. Independent education expert reviews of the materials also are provided. "With the reviews as a guide, teachers can easily compare and choose between materials based on their content and education characteristics," adds Zint. "Also provided are sample lesson plans teachers correlated to Michigan education standards."

The revamped TEACH, which is hosted and maintained by the Great Lakes Commission through the Great Lakes Information Network, also features education-related news along with established offerings such as the a "Great Lakes Vault of Knowledge," a calendar of events and mini-lessons specifically geared to K-12 students on Great Lakes history, culture, environment, geography, pollution and careers options.

"This site has a lot of good information for teachers and nonformal educators," says Linda O'Brien, a teacher with Marquette Area Public Schools and director of the MooseWood Nature Center. "It is easy to navigate. I look forward to using it and sharing it with other educators."

The Teachers' Corner online discussion forum gives teachers a venue to discuss or submit reviews of educational materials, submit lesson plans and share educational resources. Other features include a grid allowing comparisons between available lesson packages as well as links and resources for further information.

For further information, contact Christine Manninen, Great Lakes Commission, manninen@glc.org, 734-971-9135, or Dr. Michaela Zint, School of Natural Resources and Environment, zintmich@umich.edu, 734-763-6961.

Nab the Aquatic Invader

Nab the Aquatic Invader (www.sgnis.org/kids) is an exciting education technology venture that uses problem-based activities to teach students in grades 4-10 about invasive species. An engaging detective theme raises awareness of the critical nature of problems caused by invaders and inspires a desire to take action. As honorary detectives, students are provided with



opportunities for critical thinking and scientific inquiry. Students conduct research with the help of fact sheets, photos, web links, curriculum, education kits, maps and more. Educators have an opportunity to enhance existing units; use activities created by teachers; and work with technology that integrates science, geography, math and language arts. The site provides a stimulating online educational experience.

Department of History, Arts and Libraries Adds ‘Lights of Northern Lake Huron’ to Maritime Heritage Visitor Trail

from the Michigan Department of History, Arts and Libraries

Earlier this year, representatives from the Department of History, Arts and Libraries (HAL), the Alpena Convention & Visitors Bureau and Michigan’s Sunrise Side Travel Association gathered at Alpena’s Great Lakes Maritime Heritage Center to unveil “The Lights of Northern Lake Huron” – the latest chapter in the state’s efforts to create one-of-a-kind visitor experiences that build on legend and lore of the Great Lakes State.

“The Lights of Northern Lake Huron” is just one of several maritime driving tours available on the Travel Michigan Web site at: <http://www.michigan.org>

In the days before ship-to-shore radios and global positioning systems, lighthouses were the only signposts guiding travelers on the Great Lakes. If you couldn’t see them, or the stars and the sun, you were driving blind. This tour visits the Lights of Northern Lake Huron that disappeared from view during the great storm of 1913.

“Nearly three years ago, we outlined a plan to capture the spirit and history of Michigan’s love affair with the water, give it a public face with broad appeal, and firmly establish maritime heritage and cultural tourism as part of Michigan’s national identity,” said HAL Director Dr. William Anderson. “With the launch of the ‘Northern Lake Huron’ tour, Michigan continues to drive home the point that these are experiences you just can’t have anywhere else in the world.”

“The Lights of Northern Lake Huron” encompasses nearly 20 key maritime destinations, beginning with the Charity Island Light and Tawas Point Lighthouse to the south and finishing with Old Mackinac Point Lighthouse way to the north. The tour follows the harrowing journey of Captain James B. Watts who was shepherding the *Durston* through the stormy seas, snow and 90-mile-per-hour winds that cold November day. The

tour is also peppered with a handful of key attractions for the maritime traveler, including the Thunder Bay National Marine Sanctuary, the Middle Island Keeper’s Lodge and R.J. Dives – Glass Bottom Boat Tours.

Said Sandra Clark, director of the Michigan Historical Center, an agency within HAL: “The creation of this Michigan maritime heritage destination is a perfect example of how communities throughout Michigan can package their cultural and historical resources in new and appealing ways, with the goal of attracting all-important tourism dollars to Michigan.”

In December 2005, HAL introduced the state’s strategy for cultural economic development, inviting stakeholders in the arts and cultural sector to reposition their resources in ways that leverage the sector’s power to create new tax revenue, provide good-paying jobs and create sustainable enterprise. Dr. Anderson said the Michigan Maritime Heritage Destination, with tours like “The Lights of Northern Lake Huron,” is just one strong example of how cultural economic development works.

“Right in line with Governor Granholm’s plan to diversify Michigan’s economy, the state’s cultural economic development strategy brings many new partners to the table and many previously untapped opportunities to the forefront,” said Dr. Anderson. To see the full cultural economic development report, visit <http://www.michigan.gov/ced>

In addition to “The Lights of Northern Lake Huron,” visitors to the maritime tours on Travel Michigan’s Web site can choose from these other culturally and historically engaging options: Echoes of the Edmund Fitzgerald; Historic Harbortowns; Exploring Michigan’s Beachtowns; River Country Heritage Water Trail; and Northwest Michigan Ports of Call.



The Department of History, Arts and Libraries (HAL) is dedicated to strengthening the economy and enriching the quality of life for Michigan residents by providing access to information, preserving and promoting Michigan heritage and fostering cultural creativity. In addition to the Michigan Historical Center, HAL includes the Mackinac Island State Park Commission, the Library of Michigan, the Michigan Film Office and the Michigan Council for Arts and Cultural Affairs. Learn more at: <http://www.michigan.gov/hal>

Annual Pollution Prevention Report Released

The Department of Environmental Quality has released its 2005 Pollution Prevention (P2) Annual Report titled *Protecting Michigan's Environment, Ensuring Michigan's Future, Preventing Pollution*. The report highlights Michigan's innovative approaches to achieving reductions in pollution, eliminating waste, and expanding recycling. This tenth annual report to the Governor and Michigan Legislature details the P2 efforts undertaken between October 1, 2004, and September 30, 2005.

"Pollution prevention fosters innovation and is a catalyst for environmental and economic success in Michigan," said DEQ Director Steven E. Chester. "The DEQ continues to promote environmental stewardship initiatives, affirming that a healthy environment is needed for a healthy economy."

DEQ staff works with business, industry, and community partners to advance P2 efforts in Michigan and make the places we live, work, and play cleaner and healthier. The DEQ has over 25 voluntary P2 programs, representing over 1,800 facilities and partners working with businesses, community groups, and local governments toward sustainability. Last year, the P2 program staff played a critical role in a number of statewide P2 and energy efficiency projects. Notable projects include:

The Economic Development and Growth through Environmental Efficiency (EDGE2) Advisory Group, a collaborative effort with state energy suppliers, environmental groups, as well as major manufacturers and manufacturing organizations that provided input leading to the issuance of Executive Directive 2005-4 (Energy Efficiency in State Facilities and Operations) on Earth Day 2005. This Executive Directive showed that the state led by example to reduce energy use in all state operations.

The Neighborhood Environmental Partners (NEP) Program that offers business and citizen groups the opportunity to work together to make their neighborhoods cleaner and more attractive places to live and work.

Copies of the report may be obtained, free of charge, by either contacting the DEQ Environmental Assistance Center at 800-662-9278, or by downloading it from the DEQ Internet Web site at: <http://www.michigan.gov/deqp2>

DEQ Announces New General Permit for Beach Grooming

The Department of Environmental Quality announced plans today to create a new general permit to allow limited vegetation removal activities along Michigan's Great Lakes coastline. The announcement follows the release of a report in March documenting the harmful effects of beach grooming activities on Michigan's ecology, and the DEQ's recommendation to allow provisions of the current law to expire as scheduled.

"The science is clearly telling us that clearing vegetation from Michigan's coastline areas has a harmful effect on our state's ecology," said DEQ Director Steven E. Chester. "We believe that this general permit will strike the appropriate balance between protecting these natural shoreline areas and allowing Michigan's citizens access to the water."



A provision under the current law allows shoreline property owners in two pilot areas (Saginaw Bay and Grand Traverse Bay) to apply for a Director's letter of authorization to clear vegetation from Great Lakes' bottomlands in front of their properties. In view of the March 2006 report on the impacts of vegetation removal, the DEQ determined that the Director's letter process does not provide for adequate review of potential resource impacts and has recommended to the Legislature that this provision be allowed to expire on June 5, 2006, as scheduled in the law.

The new general permit would allow the establishment and maintenance of a six-foot wide pathway designed to provide recreational access from an upland property to the water's edge along the Great Lakes coast, where the growth of wetland vegetation may otherwise impede such access. Unlike the Director's letters of approval, this general permit would be applicable statewide.

The draft general permit and the DEQ report on vegetation removal are available on the web at: <http://www.michigan.gov/deqwetlands>

Report Shows Continued Decline in Toxic Chemical Releases in Michigan

Department of Environmental Quality Director Steven E. Chester has announced that information on toxic chemicals, either released or managed as waste by Michigan facilities in 2004, is now available. The Toxic Chemical Release Inventory (TRI) data is reported annually to the state under the federal Emergency Planning and the Community Right-to-Know Act of 1986.

Total releases and disposal of TRI chemicals in Michigan declined in 2004, a trend continued from 2003. The data shows the total discharges in the state to be 97 million pounds for the year, a decrease of over seven percent.

"Michigan's business community continues to reduce the amount of hazardous materials managed and released to the environment," said Director Chester. "It is encouraging to see businesses continue to make the extra effort to keep our environment healthy, and our people safe."

Certain facilities must report the quantities of specific toxic chemicals released and disposed, as well as the amount contained in wastes managed on-site or transferred off-site to other locations. A report must be submitted for each toxic chemical manufactured, processed, or otherwise used above a certain threshold. The data is compiled and made available to the public who can obtain information specific to facilities in their community. In Michigan, over 900 facilities submitted reports for 2004, the most recent reporting year.

Details about Michigan's TRI data are available on the Internet at <http://www.michigan.gov/deqsara>. Trends and summary reports are listed, and TRI data for 1996 through 2004 can be searched. The Environmental Protection Agency, Toxics Release Inventory Program Internet site has laws and regulations, guidance documents, and other information about the Toxics Release Inventory as well as TRI data available at <http://www.epa.gov/tri>.

Celebrate Lake Superior Day

From the Lake Superior Binational Forum

What's better than a July picnic on a sandy beach next to the world's largest freshwater lake? A picnic and a Lake Superior celebration!

Individuals and families, communities and clubs, businesses and industries, churches and kids will be holding activities or events that celebrate Lake Superior Day on the third Sunday in July (July 16 this year). Can you do something that symbolizes your own connection to the lake on that day?

Lake Superior Day was started in the early 1990s as a way to highlight the importance of this great water body to the environment and economy of this basin. Since then many events have been held to educate or entertain people about

lake issues, special places, and recreational opportunities. The Lake Superior Binational Forum is promoting this basin-wide event to highlight the spiritual, personal, environmental, and economic connections people have to this unique world treasure.

Anyone is invited to hold activities or events that celebrate this world-class lake. Churches, business, communities, tribes, and groups around the lake are already organizing special actions for July 16. For example, many elected and tribal officials in Michigan, Minnesota, Wisconsin, and Ontario are signing proclamations that designate the third Sunday in July as Lake Superior Day. Some cities or groups are holding special events such as dragon boat races, beach clean ups, and special church services. Last year almost 30 groups and communities participated in some way in the first year of basin wide celebrations including churches that offered special sermons, hymns, and prayers for precious water.



The Forum's website offers ideas about how to celebrate the day at <http://www.superiorforum.info>. Click on "Current Projects."

For more information email lakesuperiorday@northland.edu; call 715-682-1489.

The Lake Superior Binational Forum is a multi-sector stakeholder group of Americans and Canadians volunteers who work together to provide input to governments about these efforts and to educate basin residents about ways to protect and restore the lake. Members come from Michigan, Minnesota, Wisconsin, and Ontario.

The Forum is located in the United States at the Sigurd Olson Environmental Institute at Northland College in Ashland, WI, and in Canada at Lakehead University in Thunder Bay, Ontario. The Forum is funded in the US by a grant from the US Environmental Protection Agency's Great Lakes National Program Office and in Canada by Environment Canada.

Great Lakes Wetlands and Habitat Proposal Selected by Corps of Engineers for \$1 million Funding

from the U.S. Army Corps of Engineers

John Paul Woodley, Jr., Assistant Secretary of the Army for Civil Works has announced that the U.S. Army Corps of Engineers Districts located in Buffalo, Detroit, and Chicago will receive \$1 million to further the efforts of the Great Lakes Regional Collaboration for the protection and restoration of wetlands and coastal habitat. The Great Lakes project was the largest of five selected by Mr. Woodley from numerous proposals for the \$4.5 million of funding available for analyses of complex water resources issues within large, multijurisdictional watersheds.

The Corps' proposal for this Great Lakes project received letters of support from key regional stakeholders, including Ducks Unlimited, The Nature Conservancy, the Great Lakes Fishery Commission, Great Lakes - St. Lawrence Cities Initiative, the Great Lakes Commission, and the co-chairs of the Collaboration Habitat Team.

"The Corps' \$1 million will be spent on a two-year effort to develop an implementation plan that builds upon the recommendations of the Collaboration Strategy, focusing on the Habitat/Species area. This effort will bridge the gap between the Strategy recommendations and site-specific projects for habitat protection and restoration that can be implemented through existing governmental and nongovernmental funding programs," said Mr. Woodley.

The products of this investigation will support the identification, prioritization, and implementation of actions to protect and restore coastal wetlands and aquatic habitat in the Great Lakes region. These products will be:

- A summary of existing funding programs for protection and restoration of Great Lakes fish and wildlife habitat;
- An inventory of place-based actions to protect and restore coastal wetlands and aquatic habitat in the Great Lakes that have been proposed to federal, state, local, tribal and nongovernmental programs, but not implemented because of funding limitations;
- Performance measures for prioritizing actions based on their ecological value or benefits, and;
- An integrated analysis of potential habitat protection and restoration actions from the inventory, prioritization using the performance metrics, and cross-matching with existing governmental and nongovernmental funding programs.

The products of this effort will provide tools to agencies and organizations that manage funding programs for prioritizing potential projects and integrating with other habitat funding

programs. It will also provide tools to state, tribal and local agencies and nongovernmental organizations that might sponsor or be a proponent for a site-specific habitat project to identify candidate projects and available funding programs.

Additional information about the project can be found on the internet at www.lrd.usace.army.mil/environmental

The point-of-contact is Mr. Jan Miller, Great Lakes & Ohio River Division, 312-353-6354, cell phone: 312-735-4311, jan.a.miller@usace.army.mil

NOAA Research Vessel Receives Award for Vegetarian Diet

from the National Oceanic and Atmospheric Administration

A NOAA research vessel powered by soybeans, the first modern U.S. research vessel to operate free of petroleum products, was given an award today by the Department of Energy's Federal Energy Management Program during an Earth Day Week event on the shores of Lake Michigan.

"NOAA has a commitment to stewardship of the environment, and this research vessel, the *R/V Huron Explorer*, demonstrates that commitment in very practical ways. Environmentally friendly vessels are better suited to tread lightly on the ecosystems they help research," said Stephen B. Brandt, acting deputy assistant administrator for oceanic and atmospheric research.

The "You Have the Power" campaign helps federal agencies reach their energy-saving goals by raising awareness about energy efficiency at federal facilities. The federal government can encourage wise energy use, while simultaneously protecting the environment and conserving natural resources.

In 2004, the *Huron Explorer*, a 41-foot former U.S. Coast Guard vessel, joined the fleet of NOAA's Great Lakes Environmental Research Laboratory's other two ships that are used to conduct research on the Great Lakes. The *Huron Explorer* serves the Thunder Bay National Marine Sanctuary and Underwater Preserve in Lake Huron.

The other two ships, including the 67-foot *Shenehon* which is one of the oldest in the NOAA fleet, use some non-petroleum products. The *Shenehon* began its use of B100 biodiesel in 2000 and was dubbed the "french fry" ship by some. It showed immediate reductions in visible emissions, smoke and offensive odor, with unchanged performance of the main engine or generators. The use of B100 was a significant achievement in demonstrating soy oil as an alternative fuel in marine applications. B20, a 20 percent blend of soy oil with petroleum diesel, has been in use for a number of years in road vehicles, such as cars, buses and trucks.

GLERL's Ship Operations Group, headed by Dennis Donahue, expanded the use of bio-hydraulic oil on the *Laurentian*, an 80-foot research vessel built in 1974. All systems using the bio-hydraulic oil performed satisfactorily without change to pump or equipment performance while contributing to improved onboard storage and reduced inventory.

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In August 2005, the *Huron Explorer* completed its transformation from petroleum products to biofuels and lubricants by incorporating rapeseed-based hydraulic oil for its deck crane, winches, transmission and steering gear, and 100 percent soy biodiesel for engine fuel and canola-based motor oil.

“We saw dramatic reductions in emissions and improvements to the original 1974 engines in wet exhaust odor and pollution,” Donahue said. “The biodegradable vegetable oils offer an additional level of environmental protection in case of a spill or leak.”

Donahue added that the switch to agri-products has improved the work environment of the ships’ crews and scientists.

“These ships have become real-world field studies that can be used to expand field test data and support other ship conversions,” said Donahue. Other NOAA boat operations and some private vessels are implementing similar bio-product conversions based upon experiences at GLERL.

GLERL plans to convert the *Shenehon’s* remaining systems to agri-products this year and the *Lauentian* is slated to convert to B100 biodiesel in 2007, making all three of the ships 100 percent petroleum-free.

NOAA, an agency of the U.S. Department of Commerce, is dedicated to enhancing economic security and national safety through the prediction and research of weather and climate-related events and providing environmental stewardship of the nation’s coastal and marine resources. Through the emerging Global Earth Observation System of Systems (GEOSS), NOAA is working with its federal partners, 61 countries and the European Commission to develop a global network that is as integrated as the planet it observes, predicts and protects.

New Great Lakes Funding Supports Research into Deposition and Impacts of Toxic Substances

from the Great Lakes Commission

The Great Lakes Air Deposition (GLAD) program has announced more than \$1 million in funding for new research activities to identify and reduce atmospheric inputs of toxic substances to the Great Lakes.

The nine research projects are expected to significantly advance efforts to reduce toxic substances in the Great Lakes. In particular, it is anticipated that the 2006 suite of GLAD-sponsored projects will greatly improve researchers’ ability to model the transport of persistent toxic substances in the region’s atmosphere and the path of these chemicals through the Great Lakes ecosystem.

Although concentrations of many substances in Great Lakeswater and fish continue to exceed established risk thresholds, efforts to achieve further reductions are limited by

the difficulty of identifying and reducing remaining sources of pollution, many of which reach the lakes through the atmosphere. The GLAD program’s goal is to identify atmospheric sources of toxic substances to the region’s waters and to determine the patterns of emission, transport, deposition and accumulation of these substances within the food chain. Continued advances in this area are needed to allow the formulation of scientifically valid approaches for identifying and reducing toxic sources to adequately protect the environment and human health.

With funding from the GLAD program, researchers at the Ohio University, SUNY-Fredonia and the University of Michigan will prepare models to determine the relationship of mercury emissions to deposition within the region. Other research teams at the University of Minnesota and Syracuse Research Corporation will develop multimedia modeling tools for screening emerging chemicals and for assessing uncertainty in model predictions, respectively.

Other funded projects include work at Michigan Technological University to develop and apply improved techniques for measuring toxic substance deposition. Measurements of mercury runoff from urban surfaces during rains will be conducted at the University of Toronto at Mississauga. A team at the University of Michigan will determine the emission rates of flame retardant chemicals from buildings. In addition, The Wisconsin Department of Health and Family Services will lead efforts to study the detrimental and protective health impacts from frequent consumption of Great Lakes fish.

The GLAD program is coordinated by the Great Lakes Commission in cooperation with the air quality control agencies of the eight Great Lakes states, and with funding from the U.S. Environmental Protection Agency. For more information on the GLAD program or sponsored projects, visit <http://www.glc.org/glad> or contact: Jon Dettling, Great Lakes Commission, 734-971-9135 or dettling@glc.org.

LakeWide Management Plans (LaMPS) Updates

from the U.S. Environmental Protection Agency

A Lakewide Management Plan, or “LaMP”, is a plan of action to assess, restore, protect and monitor the ecosystem health of a Great Lake. It is used to coordinate the work of all the government, tribal, and non-government partners working to improve the Lake ecosystem. A public consultation process is used to ensure that the LaMP is addressing the public’s concerns. The U.S. Environmental Protection Agency has released the 2006 LaMP updates including the Lake Huron Binational Partnership Action Plan. The updates can be found at:

<http://www.epa.gov/glnpo/gl2000/lamps/index.html>



2006 Great Lakes Protection Fund Decal

The 2006 Great Lakes Protection Fund decal is now available for sale at a cost of \$35 with the proceeds going toward aquatic invasive species research, education, and eradication efforts. The decal does not replace any required registration or identification stickers, though boaters may notice the decal order form in their registration renewal package. Decals may also be ordered online through the Michigan e-Store at www.michigan.gov/michiganmall.

Governor Announces Comprehensive Plan to Reduce Mercury, Protect Families from Dangerous Health Impacts

from the Governor's Office

On April 17, 2006, Governor Jennifer M. Granholm announced a proposal to reduce mercury emissions from Michigan power plants by 90 percent by 2015. The plan is designed to protect the health of Michigan's families and the environment from the harmful effects of mercury emissions. "Michigan must take actions to protect its citizens and environment from mercury contamination, but we must do so in a way that balances energy, environment and the economy," Granholm said. "Mercury poses a real and serious health concern for the people of Michigan. We are ensuring that future generations can enjoy clean air and safe water." Under the new rule, Michigan power plants will have to reduce mercury emissions by 90 percent by 2015 based on a system-wide approach. The first phase would use the reduction in emissions authorized under the federal Clean Air Mercury Rule (CAMR). The second phase would go beyond the CAMR reductions to get to 90 percent. The Governor asked that the rule take into account both technological and cost-based considerations. A utility would be given additional time to comply if it installs and operates mercury reduction technology, but upon testing is unable to demonstrate compliance with the required reduction or emission limits. Second, additional compliance time would be provided if a power plant demonstrates that the annualized incremental cost of mercury reduction technology to go beyond CAMR will exceed a specified percentage of the gross revenue from electric generation for the utility system. In a letter to Department of Environmental Quality (DEQ) Director Steven E. Chester, the Governor also noted that the governors of Minnesota, Illinois, Pennsylvania and Georgia have all recently announced their intentions to reduce mercury emissions by 90 percent. "Mercury is a potent neurotoxin that is a significant health concern, in particular for children and women

of child-bearing age," Granholm said. The plan will be implemented by Director Chester, whose agency will draft a rule under Michigan's Clean Air Act to achieve the emission reduction goals set forth by the Governor. In her letter, Granholm directed that the rule should not allow interstate trading, but that it could include a utility system-wide approach as long as it would not result in "hot spot" mercury emissions that would place Michigan residents at risk. Director Chester cited the risk mercury poses to Michigan's vast water and fishing resources that are critical to the state's tourism efforts for economic development. "Our waters play a critical role in our economy, and in our success as a state," said Director Chester. "This new rule will protect our citizens, and improve our quality of life by making our waters safe to fish, swim, and boat in." Currently, all of Michigan's inland lakes are under a statewide advisory limiting the consumption of fish due to mercury contamination. Director Chester indicated that the DEQ would begin working on promulgating the rule by initiating a formal stakeholder group process to implement the Governor's directive.

The Great Lakes Water Quality Agreement (GLWQA) review

from the International Joint Commission

The IJC has now released a report synthesizing the comments of more than 4000 people and organizations who took part in a public consultation on the upcoming review of the Great Lakes Water Quality Agreement. Use the link in the sidebar to view the report in HTML or PDF, or [order a printed version](#).

In June 2005, the governments of Canada and the United States asked the International Joint Commission (IJC) to seek the public's views on how well the GLWQA has worked so far and how effective it has been. In response, the IJC held public meetings in 14 Great Lakes and St. Lawrence cities and an innovative [Web Dialogue](#) in October and November 2005; it also received submissions by hand, mail, fax, phone, e-mail and online.

The Great Lakes Water Quality Agreement between Canada and the United States expresses the commitment of each country to restore and maintain the chemical, physical and biological integrity of the Great Lakes basin ecosystem.

For further information on the activities of the Office of the Great Lakes, contact:

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The Office of the Great Lakes in the Michigan Department of Environmental Quality publishes the Great Lakes Activity Report. It welcomes, but is not responsible for, the opinions expressed by contributing authors.