



U.S. Environmental Protection Agency Great Lakes National Program Office (GLNPO) Significant Activities Report

On the Web at:
www.epa.gov/greatlakes **February-March 2006**

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Offshore wind turbines
(Photo courtesy of DOE Sandia National Laboratory)

Toward Wildlife-Friendly Wind Power

The new U.S. Energy Bill incentives for alternative energy development are set to expire at the end of 2007. This deadline, along with the prevalence of high wind energy potential areas, rapid advances in technology, and lower equipment costs are all driving a dramatic increase in wind energy farm proposals. Many of the proposals coming forward for development in and around Lake Erie and the other Great Lakes are in areas of high risk to wildlife. Impacts to wildlife and habitat can occur through habitat loss – “foot print”, displacement, barrier effects, habitat fragmentation, collision mortality, and cumulative impacts. The U.S. Fish and Wildlife’s Great Lakes Basin Ecosystem Team along with USEPA’s GLNPO are in the process of developing a resource tool box, and preparing to facilitate a conference June 27th to 29th in Toledo, Ohio, entitled “Toward Wildlife-Friendly Wind Power: A Focus on the Great Lakes Basin.” Additional information is available on the Web at: <http://www.fws.gov/midwest/greatlakes/windpower.htm>.

This proactive collaboration is in line with principles of the State of the Lakes Ecosystem Conference (SOLEC) to provide good environmental information for sound decisions, is supportive of the Lake Erie Lakewide Management Plan ecosystem objectives, addresses the habitat/species and sustainable development priorities of the Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes, and directly responds to the Government Accountability Office's charge to Federal agencies to assist the states to protect wildlife in the development of wind energy.

(Richard Greenwood, USFWS Liaison, GLNPO, 312-886-3853, greenwood.richard@epa.gov)

Invaders May Change Chemistry of the Great Lakes

Invasive zebra and quagga mussels may be changing the chemistry of the Great Lakes in an unanticipated way and this could have important consequences for the ecosystem, according to a study published in an upcoming issue (*Post-dreissenid increases in transparency during summer stratification in the offshore waters of Lake Ontario: is a reduction in whiting events the cause?* 32(1): 131-141) of the Journal of Great Lakes Research.

New research conducted in Lake Ontario by scientists from USEPA's Great Lakes National Program Office, Canada's Department of Fisheries and Oceans and Computer Sciences Corp. suggests the mussels are making offshore waters of the lake clearer during summer months not by filtration as was previously thought, but by altering the chemistry of the lake.

"Our study raises the possibility the lakes may be affected by zebra and quagga mussels in a way never previously demonstrated,"



A cluster of zebra mussels

said USEPA GLNPO's co-author Marc Tuchman. The mussels are dramatically reducing calcium in lake water by absorbing it to make and maintain their shells, resulting in the disappearance of "whiting events" and rendering the water almost twice as clear during summer months than before the mussels invaded. This appears to be the first report of an increase in transparency in lake water that can reasonably be attributed to a chemical change brought about by zebra and quagga mussels.

This impact on water transparency could have important consequences for the Great Lakes ecosystem. For example, increased light penetration of clearer water could increase the amount of tiny plants living in the water (phytoplankton) – particularly populations living at deeper depths – and substantially change the biological balance between living things in the lakes.

The scientists used data collected by EPA and Environment Canada and the study was funded by USEPA's Great Lakes National Program Office.

(Contact: Marc Tuchman, 312-353-1369, tuchman.marc@epa.gov)

Kickoff Celebration for Ashtabula River Cleanup

The Ashtabula River Partnership sponsored a “Kickoff Celebration for the Dredging of the Ashtabula River” on March 29th. The Ashtabula River is scheduled for sediment cleanup with funding from the Great Lakes Legacy Act. A breakfast event was sponsored by the Ashtabula River Partnership, the Growth Partnership for Ashtabula County, Kent State University of Ashtabula Campus, and the local newspaper, the Star Beacon. Over 150 people attended the event. The co-chair of the Ashtabula River Partnership, Fred Leitert gave a brief overview of the history of the project and thanked the many individuals involved. USEPA GLNPO’s Director, Gary Gulezian, spoke about the importance of the project and its larger context within the basin and the positive impacts this cleanup will have for the community. Bob Rule (project manager for the non-federal sponsor) presented the nuts and bolts of the project, including the schedule and when the dredging is expected to begin.

To match the federal funding, the Ashtabula City Port Authority will finance 50 percent of the project costs in cooperation with other public and private entities, including the Ashtabula River Cooperation Group II, a group of private companies. The state of Ohio has provided \$7 million for the project and numerous other organizations, including the U.S. Army Corps of Engineers, will play an important role. The Ashtabula River cleanup project is the largest one to date under the Great Lakes Legacy Act of 2002 in terms of scope and cost and is Ohio’s first.

For more information about the Ashtabula Legacy Act, surf over to: <http://www.epa.gov/glnpo/sediment/legacy/ashtabula/index.html>.



The primary goal of the Ashtabula cleanup project is to eliminate the contamination causing warnings against eating fish caught in the River and Harbor

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Great Lakes Legacy Act Articles

The *Journal of Civil Engineering* published an article about Great Lakes Legacy Act and specifically the Black Lagoon Legacy Act project (see attached PDF of the article). The journal interviewed and quoted Marc Tuchman for the story. The Illinois/Indiana Sea Grant publication, *The Helm*, also featured a story on all of the GLLA projects and specifically on some of the activities that Susan Boehme, as the liaison to GLNPO has been undertaking (<http://www.iisgcp.org/news/helm/helm.htm>). Several articles have appeared in local and regional newspapers regarding the Ashtabula GLLA clean up, spurred by a local kickoff event (see Ashtabula Growth Partnership write up).

(Contact: Susan Boehme, 312-353-4383, boehme.susan@epa.gov)

Paying It Forward:

Outreach by GLNPO Mentors

On February 16th, GLNPO’s GEM-SET mentors Elizabeth Hinchey Malloy, Jacqueline Adams, and Christine McConaghy spoke to high school students in the Math and Science Club at Maria High School (Chicago, Illinois) as part of the University of Illinois-Chicago (UIC)’s Girls E-Mentoring in Sci-



The Great Lakes Areas of Concern (AOCs)

ence, Engineering and Technology (GEM-SET) “meet and greet” mentor session. Their seminar included an overview of Great Lakes monitoring programs that GLNPO conducts with the research vessels Lake Guardian and Mudpuppy, a summary of the mentors' environmental science backgrounds, and tips for how high school students can find environmental internships and other opportunities. All students received a copy of the Great Lakes Atlas. The seminar also served as an announcement to students that Adams, who will be sampling the Great Lakes as part of the GLNPO spring survey in April, will be e-mailing cruise updates to GEM-SET participants. High school students around the country will be able to follow the survey and see pictures of Adams in action.

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[chey.elizabeth@epa.gov](mailto:hinchey.elizabeth@epa.gov))

Michigan AOC Summit III

GLNPO Area of Concern (AOC) liaisons met with Michigan AOC staff and AOC Public Advisory Council (PAC) members at the Area of Concern Summit III held in Kalamazoo, Michigan on February 2nd and 3rd. The goal of the Summit was to further the cleanup and delisting of the Michigan AOCs.

The Summit began with the Michigan Department of Environmental Quality rolling out its newly published Guidance for Delisting Michigan's Great Lakes Areas of Concern (<http://www.deq.state.mi.us/documents/>

[deq-wb-aoc-delistguide.pdf](#)). The Guidance identifies specific criteria for each of the fourteen Beneficial Use Impairments (BUIs) which, if met, will allow that BUI to be considered restored. Once all BUIs affecting an AOC have met the restoration criteria, the Area of Concern can go through a process leading to its delisting (removal from the list of Great Lakes Areas of Concern).

Next came a panel discussion of potential funding sources to aid in the development of restoration plans for the “Loss of Fish and Wildlife Habitat” and “Degradation of Fish and Wildlife Populations” BUIs. According to Michigan’s Delisting Guidance, those BUIs are considered restored once a site-specific restoration plan has been prepared and implemented. The panel consisted of GLNPO, Michigan Department of Environmental Quality, U.S. Fish and Wildlife Service, Michigan Department of Natural Resources, the National Fish and Wildlife Foundation, and the Great Lakes Commission.

Then the Summit participants rolled up their sleeves and joined working sessions broken out by Area of Concern. That AOC’s State, federal, and citizen representatives discussed the status of the Beneficial Use Impairments (BUIs) affecting their AOC, identified the remedial actions needed to remove the BUIs, and identified the draft delisting criteria to use for each BUI by applying the new Michigan Delisting Guidance.

A summary of AOC Summit II is available on the Web at: <http://glc.org/spac/proceedings/course-to-delisting.html>.

(Contact: Mark Elster, 312-886-3857, elster.mark@epa.gov)



Logo of the Great American Woodstove Changeout Campaign to encourage the purchase of lower-emission EPA-certified woodstoves. Newer EPA-certified woodstoves emit much less pollution than older stoves. The Great Lakes Binational Toxics Strategy endorses woodstove changeout campaigns as a way to reduce emissions of toxic carcinogens such as benzo(a)pyrene.

Air Emissions from Wax/Fibre Firelogs

In a study funded by GLNPO, tests were conducted to measure air pollutant emissions from five different wax/fibre firelog brands sold in the Great Lakes region of Canada and the United States. This study was performed because these artificial firelogs are becoming more prevalent and applicable emission factors are not available. The tests measured air emissions of particles, carbon monoxide, nitrogen oxides, formaldehyde, polycyclic aromatic hydrocarbons, including benzo(a)pyrene, volatile organic compounds, and benzene. In addition to the air emissions, the wax and fibre used in each firelog brand were characterized and the burning properties were evaluated. According to the scientists conducting the study, the commercially available wax/fibre firelogs were reasonably similar in their burning characteristics, air emissions and the character of the residue left

after burning and they produced significantly lower emissions from their use in fireplaces than did cordwood.

(Contact: Steve Rosenthal, 312-886-6052, rosenthal.steven@epa.gov)

Binational Toxics Strategy Workgroup Meeting

An Integration Workgroup Meeting of the Great Lakes Binational Toxics Strategy was held on February 16, 2006 in Windsor, Ontario, Canada. Approximately fifty people were in attendance from the US and Canada. An agenda and power point presentation are posted at <http://www.epa.gov/glnpo/bns/integration/Feb2006/index.html>. Major agenda items included an update on Great Lakes Regional Collaboration near term projects, a presentation by Dr. Lynn Katz-Chary of the Northwest Indiana Toxics Action Project on Green Chemistry Projects, a summary of the State of the Lake Ecosystem Conference (SOLEC) Workshop on Chemical Integrity held in Windsor in November 2005, and the upcoming Great Lakes Water Quality Agreement review.

(Contact: Ted Smith, 312-353-6571, smith.edwin@epa.gov)

State of the Streams Presentation

On March 10th, USEPA GLNPO's Rose Ellison delivered the keynote address, "History of the Watershed and Detroit River," at the second annual State of the Streams Workshop for Detroit River tributaries. The event was hosted by the Stream Team, a group of educators and volunteers interested in local water quality issues.

(Contact: Rosanne Ellison, 734-692-7689, ellison.rosanne@epa.gov)



The Detroit River showing Rouge River at top left and northern end of Fighting Island at bottom
(Photo courtesy of NOAA)

Great Lakes Watershed Restoration Grants Awarded

On Great Lakes Day (March 16th) in Washington DC, USEPA's GLNPO, in partnership with the National Fish and Wildlife Foundation, U.S. Fish and Wildlife Service, National Oceanic and Atmospheric Administration, U.S. Forest Service, and the U.S. Department of Agriculture Natural Resources Conservation Service, announced funding for 14 projects through the Great Lakes Watershed Restoration Grant Program. With \$827,400 coming from federal dollars, the projects were able to leverage more than \$1.4 million in non-federal contributions from partners. The projects will address the needs identified by the Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes.

Grant recipients in Minnesota, Wisconsin, Indiana, Michigan, Ohio, and New York include non-profit organizations, state and local governments, a conservation district and an academic institution. The funds will be used to develop and implement local water-

shed plans that address water quality and living resource needs in Great Lakes watersheds. Project activities will help restore critical sand dune, wetland, forest, and stream habitats for fish and wildlife as well as control invasive plant species. Four of the project sites are located in Areas of Concern and eight projects are located in areas identified by The Nature Conservancy's Conservation Blueprint for the Great Lakes as high priority landscapes and water habitats that, if conserved, promise to ensure biodiversity over the long term.

The 2006 awardees of the Great Lakes Watershed Grant Program are:

- Portage Lakefront Habitat Restoration: Portage Indiana Parks Department
- Chiwaukee Prairie State Natural Area Restoration: Wisconsin Department of Natural Resources
- Southeast MI Headwaters Restoration: The Nature Conservancy, Michigan
- Johnson Creek Watershed Management Plan: Charter Township of Northville, Michigan
- Habitat Restoration and Quality Assessment in Ozaukee and Washington Counties: Ozaukee Washington Land Trust, Inc., Wisconsin
- Implementation Strategies of Priority Watershed in Lake Superior Basin: Minnesota Pollution Control Agency
- West Creek Reservation, Wetlands Community Ecological Restoration: Cleveland Metroparks, Ohio
- Milwaukee River Mainstem Riparian Plan Community Restoration: River Revitalization Foundation, Wisconsin
- Westfield Water Supply Diversion Dam: New York Rivers United
- Hersey River Restoration and Dam Removal Project: Muskegon River Watershed Assembly, Michigan
- Restoring Fish Passage in Bad River Wa-

tershed Culverts: Northland College, Wisconsin

- Thornapple River Watershed Plan: Barry Conservation District, Michigan
- Broken Sword Stream Improvement: Sandusky River Watershed Coalition, Ohio
- Black River Watershed Plan: New York State Tug Hill Commission

The federal agencies and National Fish and Wildlife Foundation are reviewing the final Great Lakes Regional Collaboration Strategy to Restore and Protect the Great Lakes. The next Great Lakes Watershed Restoration Grant Program Request for Proposals will be based on that review. That request for proposals is expected to be announced in September 2006. The amount of funding that will be available has not yet been finalized.

(Karen Rodriguez, 312-353-2690, Rodriguez.karen@epa.gov)

Fish Tumor Criteria Workshop

A fish tumor criteria workshop was held in Columbus, Ohio March 28th and 29th by the Ohio State University (Dr. Paul Baumann) funded by a grant from GLNPO. About 25 people were in attendance, ranging from pathologists to representatives from various



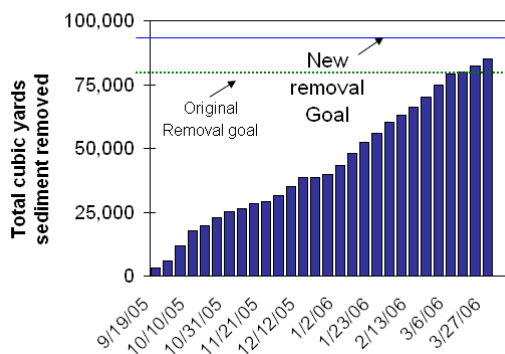
Bullhead with the kind of tumors that have been associated with sediment contamination

Areas of Concern throughout the Great Lakes. The purpose of the workshop was to support the development of delisting criteria for the fish tumor beneficial use impairment at Great Lakes Areas of Concern. The fish tumor beneficial use impairment affects about half of the Great Lakes Areas of Concern. Data was presented on the prevalence of tumors in fish (mostly brown bullheads) in the Great Lakes as well as tumor pathology. Scott Ireland of GLNPO attended and gave an overview presentation on the development of delisting target development for Great Lakes Areas of Concern. The workshop resulted in the decision to pursue a lake-wide (i.e., Lake Erie, Lake Michigan, etc.) reference condition for fish tumors in brown bullheads. Dr. Baumann will be working with several others from the workshop to pull data together that meet the minimum criteria and then to make a determination of additional data needs.

(Contact: Scott Ireland, 312-886-8121, ireland.scott@epa.gov)

View Ruddiman Creek Cleanup Progress Online

Track cleanup progress at the Ruddiman Creek Great Lakes Legacy Act sediment cleanup online at: <http://www.epa.gov/glnpo/sediment/legacy/ruddiman/index.html>. Here you can see the weekly sediment dredging totals as the project progresses. This is the first site where we have shown weekly up-



Graph showing progress of Ruddiman Creek Great Lakes Legacy Act sediment cleanup available online

dated dredging totals and we plan to do this for future sites. Any comments about how we might show progress more graphically are welcome.

(Contact: Susan Boehme, 312-353-4383, boehme.susan@epa.gov)

Canadian Emerging Chemicals Workshop

USEPA GLNPO's Ted Smith gave a presentation on U.S. chemical control and screening programs at a joint Canada-Ontario workshop, "Identifying and Developing Strategies for Canada's and Ontario's Response to Emerging Substances in the Great Lakes Basin" held on March 7th and 8th in Toronto, Ontario, Canada. The purpose of the workshop was threefold, to:

1. Share knowledge regarding the research, assessment and management of emerging substances;
2. Identify challenges and data gaps; and,
3. Discuss potential strategies and approaches that could inform future work under the Canada-Ontario Agreement.

Approximately 100 people attended the workshop, including representatives from the Ontario Ministry of Environment, Environment Canada, Health Canada, Ontario Ministry of Health and Long-Term Care, Ontario Ministry of Agriculture, Food and Rural Affairs and other non-governmental organizations. The workshop was co-sponsored by Environment Canada and the Ontario Ministry of the Environment.

Priorities coming out of the workshop regarding emerging hazardous substances included the following:

- Establish a "watch list" and task force for priority and emerging substances
- Improve the link to public health
- Learn from international best practices

- (e.g. Nordic countries and Europe)
- Collaborate on research between government, industry, international researchers (collaboration between various levels of governments as well)
 - Set practical commitments and specific targets (set commitments and targets with regulations)
 - Promote investment and industry incentives to find “safer” alternatives
 - Promote research and monitoring programs, innovation (Green chemistry)
 - COA should be strengthened – should be a unified body with a vision, requires more national and provincial significance

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<i>Upcoming Events</i>	
2006	
May 17-18	Great Lakes Binational Toxics Strategy Stakeholders Meeting, Toronto, Ontario Canada
May 22-26	IAGLR 49 th Annual Conference on Great Lakes Research, Windsor, Ontario Canada
June 27-29	Toward Wildlife-Friendly Wind Power: A Focus on the Great Lakes Basin Toledo, Ohio
October 11 - 13	Second International Symposium on the Lake Huron Ecosystem, Honey Harbor, Ontario Canada
November 1-3	State of the Lakes Ecosystem Conference (SOLEC) 2006 Milwaukee, Wisconsin

We welcome your questions, comments or suggestions about this month’s Significant Activities Report. To be added to or removed from the Email distribution of the Significant Activities Report, please contact Tony Kizlauskas, 312-353-8773, kizlauskas.anthony@epa.gov.