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

On the Web at:
www.epa.gov/greatlakes

May 2006

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U.S. Rep. Pete Hoekstra (R-MI) speaks at Ruddiman Creek Cleanup Celebration Event

Legacy Act Update: Ruddiman Creek Cleanup Done

On Monday, May 15th, the Muskegon community celebrated the completion of the Great Lakes Legacy sediment cleanup project at Ruddiman Creek and Pond in Muskegon Michigan. The event was attended by many local residents, representatives from the Michigan Department of Environmental Quality; USEPA staff including Bharat Mathur, Acting Regional Administrator; the mayor of Muskegon and state and national legislators including U.S. Congressman Pete Hoekstra, who thanked the partners for their hard work and singled out the USEPA for their "awesome" job. The event was covered by local newspapers including the *Muskegon Chronicle*, which ran a cover story with the headline: "A Cleaned-Up Dream Come True." Theresa Bernhardt, a local community member and a driving force behind the project initiation also spoke at the event and gave a special thanks to all the project partners for their willingness to work through the tough issues.

The sediment remediation project was completed in about 10 months and removed 89,870 cubic yards of sediment from Ruddiman Creek and Ruddiman Pond. The sediments contained approximately 328,000 pounds of lead, chromium and other contaminants. The project has resulted in improvements to the creek with the installation of wing dams and flow structures to better protect the shoreline during storm events. The disturbed areas are being graded and new native plantings have been installed to protect the creek banks and to begin the restoration efforts for the site. The project cost about $13 million, with 65% funded through the Great Lakes Legacy Act and 35% through the state of Michigan Clean Michigan Initiative funds. This is the third remediation project completed to date under the Great Lakes Legacy Program. More informa-

tion on the Legacy Act is available online at: http://www.epa.gov/greatlakes/sediment/legacy/index.html.

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Follow-up on Hog Island Cleanup

Post-remediation monitoring has been scheduled for the Hog Island Inlet and St. Louis River Area of Concern (AOC). Hog Island was the second site to be cleaned up using the Great Lakes Legacy Act (see the November 2005 *Significant Activities Report*). Under the terms of the Great Lakes Legacy Act Hog Island Project Agreement, post-remediation monitoring was planned at Hog Island and Newton Creek. The post-remediation activities at Hog Island and Newton Creek will commence June 2006. The post-remediation activities on the Wisconsin side of the St. Louis River AOC will take place at Howard's Bay, Northwest Superior Waterfront, Northeast Superior Waterfront, City of Superior Wastewater Treatment Plant, Southeast Superior Waterfront, and the Allouez Waterfront/Nemadji River Area. A reconnaissance study at Superior, Wisconsin is planned for the end of June to determine the location of depositional sediment areas and the general bathymetry of the bottom areas. Sampling areas will be adjusted based upon the results of the reconnaissance study. Post-remediation sampling on the Wisconsin side of the AOC will take place after the reconnaissance study and is expected to occur later this Summer.

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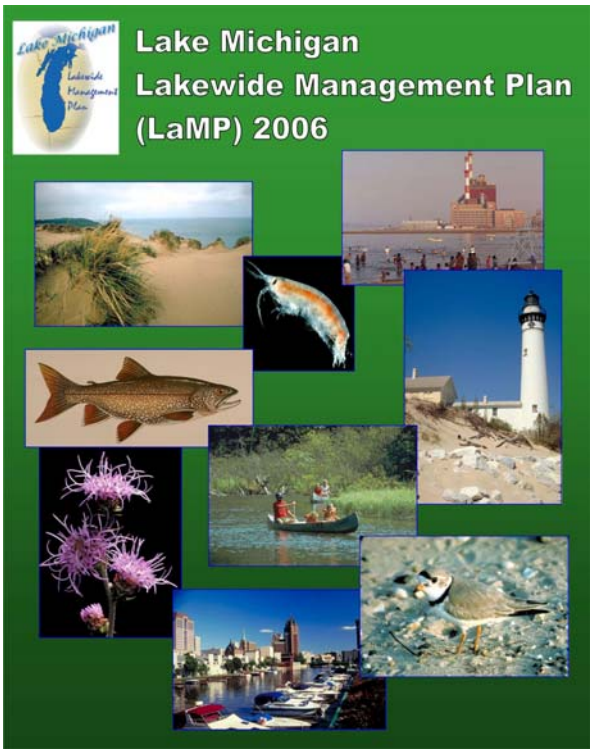

Cover of Lake Michigan 2006 Lakewide Management Plan Update

2006 Updates to Lake Plans

The Lakes Superior, Michigan, Erie and Ontario Lakewide Management Plans, and the Lake Huron Binational Partnership, were recently completed and released**.** These comprehensive, environmental plans outline the environmental status of each lake, highlight successes, identify problems, and propose solutions. The lake-wide plans are a requirement of the Great Lakes Water Quality Agreement between the United States and Canada to restore and maintain the chemical, physical and biological integrity of the Great Lakes. All of the plans, except for the plan for Lake Michigan, were developed in partnership with Environment Canada. They are collaborative efforts of the state, federal, tribal and provincial governments, as well as stakeholder organizations.

They address such issues as toxic pollutants, pathogens, shoreline development, wildlife

and aquatic habitats, uncontrolled runoff and erosion, aquatic and land-based invasive species, and economic and environmental sustainability. They recommend priority actions and projects and address such emerging issues as new chemical threats and the fast pace of changes in land use. They also set priorities for projects and programs that will advance some recommendations of the Great Lakes Regional Collaboration Strategy. The LaMPs can be accessed on the GLNPO web site: http://www.epa.gov/greatlakes/gl2000/lamps/index.html.

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Poster for Crop Life Canada's Clean Farms pesticide container recycling program

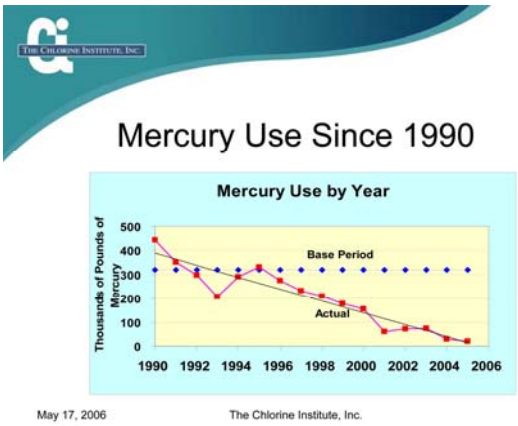
Binational Toxics Meetings

A Great Lakes Binational Toxics Strategy (GLBTS) Stakeholder Forum was held May 17th in Toronto, Ontario, Canada. Approximately ninety stakeholders from industry non-governmental organizations, States, the Province of Ontario, and First Nations attended. The keynote speaker at the morning plenary session was Cam Devreaux from Crop Life Canada, who spoke on the Ontario Waste Agriculture Pesticide Program and future stewardship initiatives regarding pesticide life-cycle management. Art Dungan of the Chlorine Institute also addressed the Stakeholder Forum, reporting on the chlor-alkali sector's mercury reduction accomplishments under the GLBTS has been met and exceeded, and on further work with the United Nations. Copies of the Power Point presentations can be viewed online at: http://www.epa.gov/glnpo/bns/reports/stakemay2006/index.html.

Following the plenary session, the substance-specific workgroups held breakout sessions:

Mercury Workgroup

Approximately 40 workgroup members attended the breakout session. Numerous topics were discussed, including mercury reduction achievements and strategies of the copper and lead smelting industry and the chlor-alkali industry. Speakers also described programs to improve management of lamps, auto switches, and mercury-containing devices used by industry, to develop standards for storing and shipping dental amalgam waste, and to reduce mercury use in Cana-



Graph from presentation by Art Dungan on reductions in mercury use in U.S. chlor-alkali facilities

dian schools. International mercury reduction efforts of Environment Canada and the Commission for Environmental Cooperation were also discussed. In addition, scientists presented information showing recent decreases in atmospheric mercury concentrations in Canada, and described research that illuminates some of the factors influencing mercury methylation and mercury exposure in Canada.

PCB Workgroup

Approximately 15 stakeholders participated in the breakout session. USEPA made a presentation and led a discussion on the Lake Michigan Mass Balance Study on PCB deposition on and around Lake Michigan, a multimillion dollar, multiyear project involving an analysis of the deposition of PCBs, mercury, atrazine and phosphorous on the lake's basin. The project specifically studied the relative loading of PCBs and other chemicals entering Lake Michigan; determined baseline loading estimates in 1994-1995; predicted environmental benefits of specific load reductions and the time to realize these benefits; and predicted the PCB concentration in the Lake trout through 2052. Information was provided on PCB concentrations in Lake Michigan trout and various Lake Michigan media from 1930 until 2000+. According to the study and modeling, even if there was a 100% elimination of all air deposition and or atmospheric loadings of PCBs, it would still take until 2039 to reach PCB levels that would allow unlimited fish consumption.

About 38,000 samples were taken with over 5000 samples on PCBs alone were used for this study. Some of the main findings were:

- PCB concentrations were declining in all media
- PCBs volatilize
- atmospheric deposition is the major source of PCBs to the Lake(s)
- PCB levels in Lake trout may not reach the threshold level of 0.5ug/gm for unlimited consumption in Sturgeon until 2039 and Saugatuck until 2044
- the Chicago urban area is a major general source of PCBs to the Lake.

Environment Canada gave a brief overview of Canadian proposed new PCB regulations which are expected to be in Gazette I in the fall of 2006. These regulations combine and modify two existing PCB regulations, the Polychlorinated Regulations and the PCB Storage Regulations.

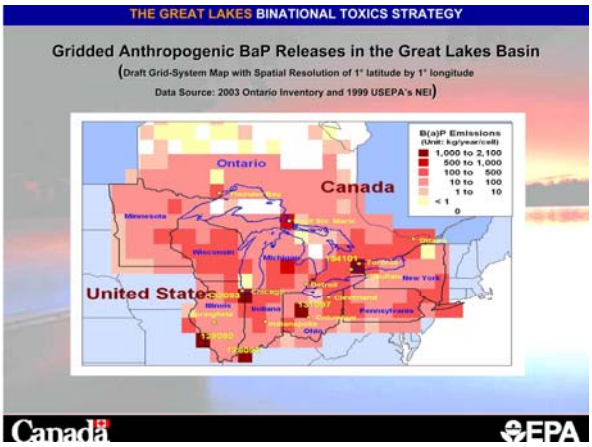
Dioxin/Furan and HCB/B(a)P

Approximately 30 people attended a joint breakout session of the Dioxin/Furan and HCB/BaP Workgroups on issues relating to both groups. Presentation were made on activities of the GLBTS burn barrel subgroup, which has active projects on both sides of the border, with a focus on agricultural burning of plastics on farms; an Ontario Ministry of the Environment project to test sewage biosolids for dioxins, furans, coplanar PCBs, and PBDEs, which found that levels of the dioxin compounds were very low in all of the samples collected, and not of concern for biosolid reuse, however, the PBDE levels were higher and appeared to be increasing

over time; a USEPA presentation on wood boilers which are used to heat homes and small businesses. These boilers may have high emissions, but are considered small sources under the Clean Air Act and therefore are not subject to regulation. USEPA has formed a workgroup to further investigate this issue, particularly because USEPA has received many public complaints. USEPA also presented information on the Midwest Clean Diesel Initiative, a public/private partnership to increase retrofitting, replacing, and reducing emissions from heavy duty engines in Region 5.

In the separate afternoon breakout session, the Dioxin/Furans Workgroup looked at the latest monitoring data in the Great Lakes. Although larger values were seen at the urban monitoring sites versus the rural ones, overall the dioxin air levels were all considerably low.

In a separate afternoon breakout session of the HCB/B(A)P Workgroup, USEPA presented information on B(a)P reduction activities for the largest B(a)P source categories including residential wood combustion, scrap tires, and coke ovens. USEPA described the wood stove change-out program in Pittsburgh during the fall of 2005 and the pending wood stove change-out program in Dayton, Ohio scheduled for the Summer of 2006 as well as three planned tribal Burn-It-Smart workshops scheduled for September, 2006. USEPA described the January, 2006 completion of the Scrap Tire Cleanup Manual, which covers scrap tire cleanup programs, stockpile identification and mapping and identification of potential markets. A number of scrap tire training sessions and forums were in April and May, 2006. Also, more stringent coke oven pushing, quenching and combustion stack MACT requirements went into effect in April, 2006. USEPA reported



Graphic showing Great Lakes basin B(a)P emissions

on a 28% reduction in HCB emissions from 1999 to 2002 and reported on success stories by Syngenta Crop Protection (St. Gabriel, Louisiana), Dow Chemical Louisiana Division, the DuPont Johnsonville Plant in Tennessee and the Solutia Inc. Delaware River plant in New Jersey. DuPont made significant reductions in its water releases of HCB and the other companies made significant reductions in their air emissions.

Environment Canada reported its Burn-it-Smart activities since the last meeting. Twenty-eight Burn-It-Smart workshops were held in early 2006, including 10 for Ontario First Nations and another 18 public and professional workshops in Ontario and Michigan. Environment Canada reported on the results from a joint study with USEPA Region 5 on an artificial wax firelog testing program that compared the emissions of various pollutants, including B(a)P, for several types of artificial logs.

A GLBTS Integration Workgroup Meeting was held the next day. A presentation was given on the Environment Canada's Ecological Categorization of the Canadian Domestic Substances List, which found approximately 400 potential persistent, bioaccumulative and toxic substances out of 11,500 organic

chemical substances screened. A Great Lakes Health panel discussed current research and needs for future health research in the Great Lakes, and a green chemistry panel discussed current innovations in green chemistry and potential relevancy to the work of the GLBTS.

Copies of the Power Point presentations can be viewed online at: http://www.epa.gov/glnpo/bns/reports/stakemay2006/index.html.

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Lake Superior Toxics Study

Persistent bioaccumulative toxic (PBT) substances may increase the risk of cancer, birth defects and neurological and developmental problems through long-term, low-level exposure. USEPA's Great Lakes National Program Office has been collecting data on PBT substances in air and fish since 1990 and 1970, respectively. Data documenting PBT concentrations in the open water is needed as well to accurately estimate the net amount of PBTs entering the lakes from the air and to determine how elevated fish tissue levels relate to the PBT levels in the water.

GLNPO Chief Scientist Melissa Hulting joined Dr. Matt Simcik from the University of Minnesota aboard the *R/V Lake Guardian* to conduct the sampling of organic contaminants and mercury in Lake Superior. The sampling and analysis are a response to the data needs identified by the Lake Superior Lakewide Management Plan, and are in support of the Coordinated Monitoring effort that includes state and federal agencies and is led by GLNPO and Environment Canada. In the survey which took place from May 12th to

R/V Lake Guardian underway on monitoring cruise

19th, stations throughout Lake Superior were sampled for contaminants in water and air to help develop contaminant movement flux estimates. Besides the usual list of suspects, emerging contaminants and dioxins were measured. The list of chemicals to be measured includes:

- Polychlorinated biphenyls (PCBs);
- Polycyclic Aromatic Hydrocarbons (PAHs);
- Organochlorine pesticides including DDT and toxaphene;
- Dioxins and Furans;
- Mercury and Methylmercury;
- Polybrominated diphenyl ethers (PBDEs), which are used as flame retardants in furniture and electronic equipment;
- Perfluoroocatane sulfonate (PFOS) and Perfluoroocatonic acid (PFOA), a main ingredient and a breakdown product from stain repellants commonly applied to clothing.

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Safely Disposing of Unwanted Medications

USEPA Region 5's Waste Pesticides and Toxics Division, GLNPO and Sea Grant hosted a drop-off location in the Metcalf Federal Building in Chicago, Illinois as part of the Chicago Metro Unwanted Medication Disposal event on May 31st. This was the 4th annual event of the Unwanted Medication Disposal collection program sponsored by

the Chicago Police Department, Cook County Sheriff's Office, Illinois Attorney General's Office, Chicago Department of Public Health, Chicago Department on Aging and Metropolitan Water Reclamation District of Greater Chicago.

The Chicago Police Department spearheaded this effort, originally targeting older citizens, because of the potential for identity theft and other privacy issues when seniors dispose of pills and pill bottles in the trash. In addition, old medicines that are removed from the home are no longer in the reach of children, thereby preventing accidental ingestion. The Chicago Police Department and its partners also recognized, however, the growing concern about water contamination from disposal of outdated or no longer needed medicines and pharmaceutical agents into the sewage system, as well as a potential problem for disposal of large quantities of these products in landfills through the actions of millions of individuals.

Approximately 50 pounds of waste pharmaceuticals were collected at the Metcalfe Building location. Most participants worked in the Metcalfe Building, but several other Federal agencies participated in the collection, including Department of Health and Human Services, Centers for Medicare and Medicaid Services. Participants received a tote bag provided by the Chicago Department on Aging full of informational resources on many topics such as medication use, illegal hazardous waste dumping, pesticide usage and USEPA's "Read the Label Campaign." Other informational materials were also available for participants as well as passers-by including USEPA's Aging Initiative fact sheets and a graphic representing the origins and fate of pharmaceuticals and personal care products in the environment (http://epa.gov/nerlesd1/chemistry/pharma/images/drawing.pdf.

Collections occurred simultaneously at 25 locations throughout Chicago, Cook County and Naperville, Illinois. A total of 1,600 pounds of medications were collected in the overall Chicago Metro area event. The unwanted medical waste that was collected is incinerated in the same incinerator used by the Chicago police to dispose of confiscated weapons and other materials.

GLNPO's Elizabeth Murphy (standing in background) helps Chicago Police officers collect unwanted medicines at Metcalf Federal Building in Chicago

For more information, see http://www.epa.gov/esd/chemistry/pharma/overview.htm .
The event was also in support of USEPA's Aging Initiative, www.epa.gov/aging

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National Monitoring Meeting

The National Water Quality Monitoring Council Meeting was held in San Jose, California from May 8th to 11th. The conference was attended by over 800 monitoring professionals from the U.S. and Europe. The theme of the meeting was, "Monitoring Networks, Connecting for Clean Water." A major focus of the conference was the integration of volunteer monitoring with existing monitoring programs. Another theme that ran through the conference was coordination and cooperation in monitoring programs, and a third was the National Water Quality Monitoring Network being developed by USEPA. As

part of the national monitoring theme of the meeting, GLNPO's Paul Horvatin gave a presentation showcasing the range of monitoring that is undertaken by GLNPO while Glenn Warren spoke about monitoring and prediction, describing the mass balance monitoring approach and the results of the Lake Michigan Mass Balance Study.

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Chicago Wilderness Marks 10th

The Lake Michigan Team Manager and Danielle Green represented GLNPO at the May 17th Chicago Wilderness 10th Anniversary reception at the Field Museum of Natural History in Chicago, Illinois. A Lake Michigan display and GLNPO book marks were made available. 100 book marks and the 2006 Lake Michigan Lakewide Management Plan were distributed. Remarks were made by Chicago Wilderness Chair John Rogner (U.S. Fish and Wildlife Service) and Rutherford H. Platt, Director of the Ecological Cities Project of the University of Massachusetts.

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Upcoming Events

2006

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.