



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

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Big Boost for Sediment Cleanup

On January 30th, EPA Administrator Whitman announced that the President's FY 2004 budget request will include nearly \$34 million to improve Great Lakes water quality. Of the nearly \$34 million, \$15 million will support the Great Lakes Legacy Act of 2002 and the cleanup of contaminated sediments in Great Lakes Areas of Concern. Under the Legacy Act, funding can be used for projects that may include: sediment assessment, sediment remediation, and source control. It also provides authorization for a sediment research program focusing on innovative sediment treatment technologies, and a public information program. The Act is authorized for 5 years from FY 2004 to 2008.



Saginaw River, Michigan Sediment Cleanup
Using Sealed Dredge Bucket and Silt Curtain
to Prevent Spread of Contamination
(Photo courtesy of U.S. Fish and Wildlife Service)

“The Great Lakes are a treasured resource and the additional support that is part of the President's 2004 budget furthers our efforts to ensure that they are enjoyed by generations to come,” said EPA Administrator Whitman.

With the \$15 million in Great Lakes Legacy Act funding, EPA expects to increase new cleanup starts in the Great Lakes by all partners from three starts to between five and six. In the five years from 1997 to 2001, under existing authorities, EPA and partners have cleaned up nearly 2.2 million cubic yards of sediments.

EPA will work with States, Tribes, and other stakeholders to identify sites for remediation, and has already conducted preliminary discussions with the technical staffs of several Great Lakes States to lay the groundwork for identifying cleanups that might be undertaken under the Legacy Act.

Sediment contamination is a significant source of toxic pollutants affecting bottom-dwelling organisms, fish, and wildlife in Great Lakes Areas of Concern. Human health can also be impacted via the bioaccumulation of toxic substances through the food chain. Additional information on contaminated sediments is available at: <http://www.epa.gov/glnpo/sediments.html>. For information on the Great Lakes Areas of Concern, see: <http://www.epa.gov/glnpo/aoc/index.html>.

Additional details on the Legacy Act are available at: <http://www.epa.gov/glnpo/sediment/legacy/index.html>
(Contact: Marc Tuchman, 312-353-1369, tuchman.marc@epa.gov)

GLNPO Funding Competition

On January 30th, GLNPO issued its annual Funding Guidance, requesting Proposals for up to \$4,827,000. Proposals are requested through the “FY2003-2004 USEPA Great Lakes National Program Office Funding Guidance - Four Requests for Proposals.” This Funding Guidance is different from Funding Guidances issued by GLNPO during the last ten years. It consolidates the annual USEPA GLNPO competitive solicitation (the “General Request”) with funds previously managed by USEPA Water programs in Regions 2 and 5 for projects for development and implementation of Lakewide Management Plans and Remedial Action Plans (the “Specific LaMP/RAP Request”).



Proposals are requested through four requests:

RFP 1: General Request \$2,720,000 for Great Lakes projects addressing Contaminated Sediments, Pollution Prevention and Reduction, Habitat (Ecological) Protection and Restoration, Invasive Species, and Strategic or Emerging Issues.

RFP 2: Specific LaMP/RAP Requests \$1,752,000 for specific Great Lakes projects furthering the Lakewide Management Plans and Remedial Action Plans, such as monitoring, outreach, training, assessment, and coordination.

RFP 3: Conferences and Publications \$275,000 for Great Lakes conferences and publications, and for specific conferences on the State of Lake Michigan and Basin-wide RAP Priorities.

RFP 4: Grants Servicing Intermediary \$60,000 to \$100,000 for an “intermediary” organization to make and administer grant sub-awards for habitat and other areas.

The initial deadline for all Proposals is 8:00 AM Central time, Monday morning, March 31st, 2003, with a separate rolling deadline for specified conferences and publications.

Complete information is available on GLNPO’s Web Site at: <http://www.epa.gov/glnpo/fund/2003guid/index.html>.
(Contact: Mike Russ, 312-886-4013, russ.michael@epa.gov)

Is it a Tumor?

On January 21st to 22nd, GLNPO’s Demaree Collier attended the “Fish Tumor Conference Related to Great Lakes Areas of Concern” in Erie, Pennsylvania. The conference was hosted by Pennsylvania Sea Grant and



Bullhead with Mouth Tumor

co-sponsored by USEPA Region 3 and the Pennsylvania Department of Environmental Protection (DEP) in order to help coordinate the standardization of protocols currently being used to evaluate fish tumors in the Great Lakes Areas of Concern (AOCs). A group of nationally recognized experts in the study of fish tumors and pathology gave presentations discussing fish as an indicator of the overall health of an AOC, particularly focusing upon Presque Isle Bay and how this AOC could eventually be de-listed.

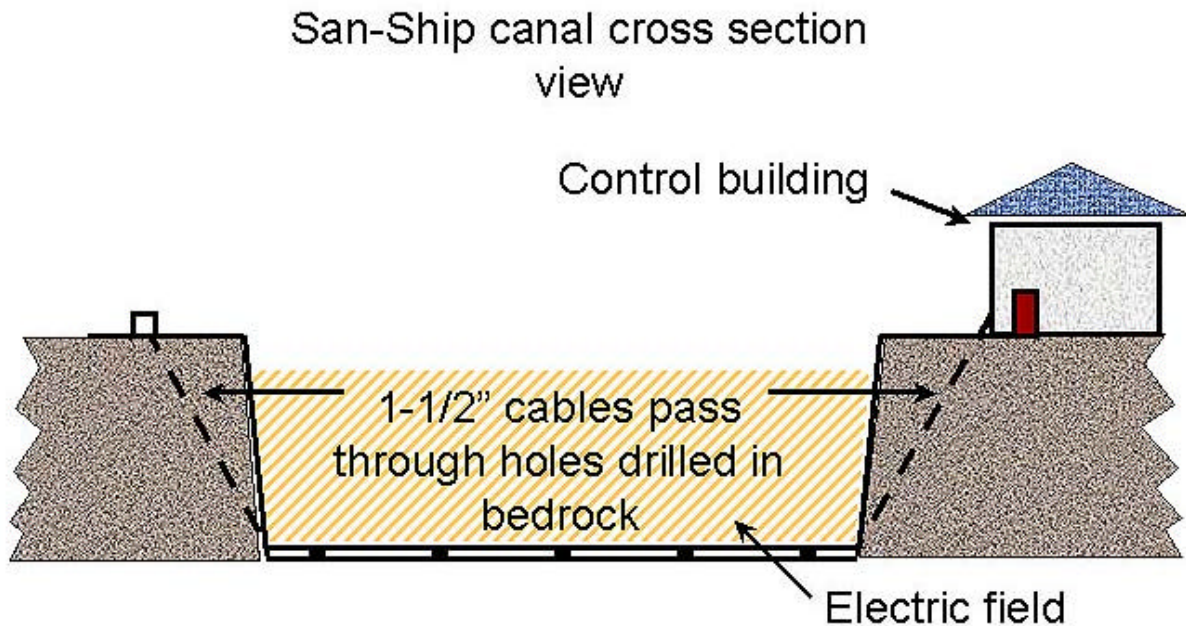
The Pennsylvania DEP, in conjunction with Cornell University and state veterinarians, conducted three studies (1992, 1993 and 1995) to determine the tumor incidence and causative factors in fish from Presque Isle Bay. More than 3,200 Brown Bullheads were either captured, tagged and released, or were examined to reveal that 64% had developed skin tumors and 22% had liver tumors. The relationship between concentrations of polyaromatic hydrocarbon (PAH) metabolites, even those of carcinogenic PAHs such as benzo(a)pyrene, in bile and tumors in fish is unclear. However, the available data certainly support the hypothesis that PAHs may contribute to the high incidence of tumors in bullheads in Presque Isle Bay.

See <http://www.epa.gov/glnpo/aoc/presque.html> for additional information on the Presque Isle Area of Concern. (Contact: Demaree Collier, 312-886-0214, collier.demaree@epa.gov)

Keeping Up With Carp

GLNPO's Marc Tuchman and Duane Heaton attended a January 22nd meeting of the Advisory Panel for the Chicago Sanitary and Ship Canal Dispersal Barrier Project. The meeting was hosted by the Chicago Department of Environment. The electrical dispersal barrier in the Chicago Sanitary and Ship Canal was installed to prevent or reduce the dispersal of non-indigenous species between the Great Lakes and Mississippi River drainage basins (flow in the Canal is away from Lake Michigan and toward the Mississippi River basin).

The first of two proposed barriers, energized in April 2002, has been operating almost flawlessly and at a much lower cost than expected. Because it was authorized and constructed as a short-term demonstration, Congressional action is required before it can be improved to a permanent barrier. However, the second barrier must be constructed before improvements can be made to the first barrier, because the first one will have to be shut down while it is upgraded. The U.S. Army Corps of Engineers has received approval for \$5 million (under WRDA Section 1135) for construction of the second barrier, and the Illinois Department of Natural Resources has committed to pay the \$2 million non-federal match for the project. The International Joint Commission, Great Lakes Fishery Commission, and USEPA Great Lakes National Program Office have provided funding for backup power, and the Metropolitan Water Reclamation District of Greater Chicago is providing a backup generator until the perma-



Schematic Diagram of Chicago Sanitary and Ship Canal Dispersal Barrier
(Illustration courtesy of U.S. Army Corps of Engineers)

ment backup power can be acquired.

To test the effectiveness of the barrier, 15 common carp were tagged with transmitters and released downstream of the barrier in November 2002. Over 300 detections of eight of the fish have all been on the downstream side where they were released – none have been detected on the upstream side (toward Lake Michigan) of the barrier. A research project testing a combined electrical/bubble/sound barrier in a fish runway showed that some fish passed through the first day, but none attempted to pass through on subsequent days, showing that the fish learned to avoid the barrier.

The 2002 goby roundup did not locate round gobies any further downstream than in 2001, but their numbers had increased several fold. Monitoring for Asian carp will take place from March through December 2003 at four locations upstream of their known current range.

(Contact: Marc Tuchman, 312-353-1369, tuchman.marc@epa.gov, or Duane Heaton, 312-886-6399, heaton.duane@epa.gov)

Saving the Terns

In 1974, a small colony of Common Terns was discovered on the remnants of a former pier off Ashland, Wisconsin. In 1980, 45 pairs nested on the island, and by 1989, there were 176 nesting pairs. During the 1990's, however, wave and ice action resulted in the collapse of the northern end of the island, significantly reducing the amount of nesting habitat available to breeding terns. In 1998, only 36 pairs attempted to nest, and mink predation had resulted in the loss of hundreds of chicks in recent years. Common Terns are listed as an endangered species in Wisconsin, and this is one of only two colony sites on Lake Superior, including Canada. Funded by a grant from GLNPO, the Wisconsin Department of Natural Resources completed a restoration project for Tern Island. In the late Summer



Common Tern
(Photo courtesy of U.S. Fish and Wildlife Service)

of 2002, they rebuilt an island 30 feet wide by 96 feet long and standing about 6 feet above the water. The surface substrate of the island is coarse sand and gravel, providing optimum nesting habitat for the terns. The project had strong support from local and statewide organizations, and received good press coverage when it was completed.

(Contact: Duane Heaton, 312-886-6399, heaton.duane@epa.gov)

Otters as Toxics Sentinels

Supported by funding from GLNPO, the Bad River Band of Lake Superior Chippewa Indians' Natural Resources Department collected historic population data, present shoreline population data, and population trends on river otter from wildlife agencies in the eight Great Lakes States and Ontario. The information was gathered in order to report on the status of the American otter as an indicator of contaminant concentrations in the Great Lakes for the State of the Lakes Ecosystem Conferences (SOLEC). The in-

formation was presented at both SOLEC 2000 and SOLEC 2002 as Indicator #8147, "Population Monitoring and Contaminants Affecting the American Otter."

The interpretation of this indicator is that the status of the otter populations is mixed and that otter populations are a direct link to organic and heavy metal concentrations in the food chain. Contaminant problems in otter are suggested by decreased population levels, morphological abnormalities and decline in fecundity.

State and provincial jurisdictions use different population assessment methods so direct comparisons are difficult. Researchers recommended that resource management



Otter

agencies be encouraged and funded to streamline data for targeted population and contaminant research on Great Lakes American otter populations, especially in coastal zones.

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

Islands of the Great Lakes

A final grant report to the Michigan Coastal Management Program contains information about a five-year project to inventory and conduct conservation outreach for Great Lakes islands. GLNPO funded a biological inventory in the second year of the project. The goals of the project were to systemati-



Raspberry Island, Apostle Islands, Lake Superior

cally examine selected Great Lakes islands, compile comprehensive information on natural features and significant biodiversity areas, and convey the information in the most useful form for landowner education and conservation planning purposes. Animal, plant, and natural communities inventories focused on surveys of Bios Blanc and several islands in the Les Cheneaux chain of northern Lake Huron. Conservation outreach workshops tested types and levels of information desired by island communities. (Contact: Karen Rodriguez, 312-353-2690, rodriguez.karen@epa.gov)

Experts Ponder Lakes Future

GLNPO's Gary Gulezian and Ted Smith attended an expert consultation on emerging issues in the Great Lakes, held at the Wingspread Conference Center in Racine, Wisconsin, from February 5th to 7th. The meeting was sponsored by the Science Advisory Board of the International Joint Commission, GLNPO, and Environment Canada.

Six major themes were considered by the participants:

1. A vision for the future of the Great Lakes,
2. new non-chemical stressors,
3. new chemical stressors,
4. new effects,

5. the changing ecology, and
6. new policies.

The major threats identified for the future included

1. contaminant occurrence and effects,
2. nutrients,
3. exotic species, and
4. shoreline/basin development and sprawl.

Presentations on emerging chemical stressors were made by Derek Muir from Environment Canada, and John Walker from USEPA. Findings related to chemicals included that the U.S. and Canada need to develop a better integration of monitoring for new chemicals, including better coordination of data sharing, data management and ecological forecasting. Another recommendation was to utilize QSAR (Quantitative Structure-Activity Relationships) modeling to predict occurrence, fate and effects of emerging contaminants. Some recommendations for possible future initiatives included establishing a binational integrated Great Lakes Observing System, supporting research to conduct and validate QSAR assessments, and to conduct an intensive multi-year binational coordinated monitoring program, IFYGL-2., similar to the IFYGL that was carried out on Lake Ontario from 1972 to 1973. IFYGL stands for "International Field Year for the Great Lakes."

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

Global Conservation Partnership

Steve Edwards, head of IUCN World Conservation Union Ecosystem Management Programme and Nik Lopoukhine, Director General of Parks Canada as well as a member of IUCN, met with EPA staff from Regions 5 and 10, GLNPO, and Joy Marburger

of the National Park Service, regarding a partnership to promote ecosystem management principles and techniques. Steve Edwards and Nik Lopoukhine explained the mission and goals of IUCN; Joy Marburger described the National Park Service's research and education projects; EPA Region 5's John Perrecone and Al Krause presented information on critical ecosystem methodology and environmental software programs; and GLNPO's Karen Rodriguez gave an overview of the State of the Lakes Ecosystem Conferences and indicator processes, invasive species, and Biodiversity Investment Areas. Following the presentations, participants discussed policy development and application across multiple jurisdictions, requirements for institutional structures to implement policies, how to link technical expertise to address management

needs, and how to put lessons into context across different scales, including governance, geographic, ecological, and temporal. Several themes may serve to focus future discussion, including Web Site linkages, sharing networks of experts, and sharing lessons learned from case studies. EPA's Office of International Activities will play a significant role in nurturing this new partnership.

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

Native Landscaping Awards

USEPA presented the 2002 Conservation and Native Landscaping Awards to seven Chicago area Park District and Municipalities on January 25th at the Illinois Associa-

tion of Park District's Annual Meeting. This was the third year of the Awards, which were developed in partnership between USEPA and Chicago Wilderness.

This year's Award winners and projects:

- Chicago Park District for the South Shore Nature Sanctuary
- Crystal Lake Park District for the Acres Pond Restoration
- Elmhurst Park District for the Elmhurst



Native Plants Surround Park Lagoon
(Photo courtesy of Chicago Park District)

- Great Western Prairie Forest Preserve District of Will County for the Plum Creek Nature Center
- Wayne Park Commission for Prairie Garden Park
- Westmont Park District for Ty Warner Park, and
- Wheeling Park District for Husky Park

Honorable Mention:

- Village of Barrington for the Kilgoblin Wetland
- Park District of Franklin Park for the North Park Nature Area, and
- Waukegan Park District for the Waukegan River Wetland Restoration

(Contact: Danielle Green 312-886-7594, green.danielle@epa.gov)

Advances in Limnology

GLNPO's Dr. Paul Bertram was a guest lecturer to a graduate seminar class at the University of Wisconsin-Milwaukee on "Recent Advances in Limnology" on February 13th. The theme for the seminar series is "Indicators and Biomarkers." Dr. Bertram discussed the Great Lakes indicators project; SOLEC; important concepts regarding indicators, objectives and endpoints; concepts regarding indices; and results from the indicators presented at SOLEC 2002, in October 2002. Attendees and organizers expressed appreciation for the clarity of Dr. Bertram's presentation of this complex material.

(Contact: Paul Bertram, 312-353-0153, bertram.paul@epa.gov)

Indicators Journal Article

A limited number of reprints are now available for the article "Bi-national Assessment of the Great Lakes: SOLEC Partnerships," recently published in *Environmental Monitoring and Assessment* 81:27-33. The article was authored by GLNPO's Paul Bertram and Paul Horvatin and Environment Canada's Nancy Stadler-Salt and Harvey Shear. A quote from the article states, "The selection of SOLEC indicators was a study in collaboration. Most of the Great Lakes management jurisdictions were involved, as well as industry and environmental groups, academia, Aboriginal groups, and private citizens."

(Contact: Paul Bertram, 312-353-0153, bertram.paul@epa.gov)

Invasive Species Field Course

Funded by a GLNPO grant, the Inland Seas Education Association (ISEA) held its First Annual Invasive Species Field Course on June 17th to 19th in Traverse City, Michigan. The course was designed to teach educators, regulators, environmentalists and

citizens in the Great Lakes Region about the nature of invasive species. The Invasive Species Field Course provided a combination of hands-on field sampling aboard the *Inland Seas*, ISEA's 77-foot schooner, and professional seminars on shore. Twenty participants, including GLNPO Project Officer Melissa Hulting, and eleven faculty members were in attendance at the course, held from June 17th to 19th, 2002 in Traverse City and on Grand Traverse Bay, Michigan.



Invasive Species Field Course Final Report Cover Photo Collage

A Final Report for the project was recently published. The report covers background on the course participants and faculty, resource materials used, the course outline, projects conducted by participants, and course evaluations. Biological monitoring data collected on the Inland Seas during the 2002 season is also included. Data were collected by students from grades 4 through 12, families, volunteers and ISEA staff as part of ISEA's educational programs. Teacher and Student editions of "Great Lakes Invaders: Lake Trout and Sea Lamprey Case Study" were created specially for the course. A good compilation of background information on invasive species was also developed for the course. The final report and these materials have been placed on ISEA's website at: <http://www.greatlakeseducation.org/invasivespecies/>.

ISEA was recently funded by the W.K. Kellogg Foundation to conduct a Second Annual Course in June 2003. Information on the 2003 course is available on ISEA's Web Site.

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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.