

Human Health Impacts Contrast With Serene Setting of GLU Annual Meeting

By Kirk J. Peters, Great Lakes United

"We live with these lakes. We enjoy looking at them, boating in them and drinking from them. Their well-being is our well-being, and if the lakes are sick, we're sick."

That was how John Jackson summed up the state of the Great Lakes at the 7th Annual Meeting of Great Lakes United.

This year's meeting offered its participants a refreshing change of setting. Instead of "toxic hot spots" such as Cleveland and Niagara Falls — the settings for the past two GLU Annual Meetings — this meeting was held in an area relatively free of local pollution problems, Owen Sound, Ontario.

With a trout stream meandering through its midsection, this peaceful city on the shores of Lake Huron's Georgian Bay provided 150 participants of the Annual Meeting with a scenic setting in which to share ideas and knowledge

about the environment.

Contrasting with this city's serene outlook, however, was the issue of human health impacts of toxic pollution in the Great Lakes. This issue underscored the topics covered in panel discussions by internationally-known experts and activists. As President Frederick L. Brown stated, "In ten years, the impact of toxins on human health is going to be the significant issue in the Basin."

Environmental health consultant Dr. Theo Colborn outlined how toxins are affecting humans, fish and wildlife in their developmental stages, as birth defects and learning disabilities.

Laurie Montour of the Assembly of First Nations gave a moving oration about the perspective of the Native Peoples and toxic contamination. Native Peoples, because of their diet and lifestyle, are one of the first and most seriously affected groups when it comes to contamination. As a result, native

peoples are sought after as "guinea pigs" for health surveys, a practice which further impacts their dignity, she pointed out.

Ironically, something was missing from the panel discussion, "The Public and the International Joint Commission" — namely the International Joint Commission! The invited IJC member could not attend due to illness, but the IJC failed to send a replacement. This was viewed as consistent with their indifferent attitude toward interacting with citizens.

"The IJC needs to recognize the public can be a tremendous ally, and they need to hear directly the concerns of the public," stated panelist Tim Eder of the National Wildlife Federation.

"A Greenhouse Strategy for the Great Lakes" was laid out by several speakers, including Dr. Monica Campbell of the Toronto Environmental Protection Office. She was instrumental in advocating Toronto's proposed ban on CFCs. In addressing "The Glowing Great Lakes: Nuclear Contamination in the Basin," Ed Burt of Algoma Manitoulin Nuclear Awareness was sarcastic and entertaining as he described the way "we are poisoning ourselves" with radioactive contamination (see photo).

He and others made it clear that government cover-ups, bureaucratic stalling and obfuscation regarding nuclear hazards are as rampant as nuclear contamination itself.

Later Saturday, participants helped set GLU's priorities for the coming year,

by drafting policy resolutions on such issues as global warming, oil spills and contaminated sediments.

In the evening, participants at the Annual Banquet were treated not only to fine food, but a rousing presentation of "Message in a Bottle" by the Portable Theatre Company, dedicated to the late Abbie Hoffman, for his pioneering efforts on behalf of the Great Lakes. Carol Finch of the US EPA's Great Lakes National Program Office and John Jackson were among the "volunteers" to join in the performance, which theatrically depicted the effects of toxic pollution on the Great Lakes, and how human compassion and action can make a real difference in improving it. GLU's gratitude is offered to Ontario Ministry of the Environment, whose grant made such a presentation possible.

GLU Executive Director Philip Weller opened the banquet with the presentation of a plaque to Georgian College in recognition of its generosity and hospitality in hosting the Annual Meeting a great success.

Also during the banquet, stunning, framed photographs from the lens of Board member Scot Stewart were awarded to GLU members for outstanding service in the protection of the Great Lakes. Fred Brown was given a hearty standing ovation for his many years of dedication and service to GLU.

Two former GLU staff members, David Miller — now with National Audubon Society — and Tim Eder, also accepted similar awards. Outgoing GLU

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Canadian anti-nuclear activist Ed Burt described nuclear hazards at May Annual Meeting

New Initiatives for the Great Lakes Coast

By Beth Millmann, Director, Coast Alliance

Important opportunities to better protect the Great Lakes are emerging. During the next year, the US Congress must decide if it will strengthen some of the nation's premier coastal protection programs. It will grapple with proposals that would develop or protect, degrade or enhance, the shores and waters of America's "Sweetwater Seas." Conservationists can be a part of this debate and offer lawmakers their blueprint for ways to conserve the environmental and economic riches of the Great Lakes.

Three important programs will be addressed, in one way or another, during the next year. These initiatives affect both shore and lake quality by seeking to make long-term decisions about what can be built on the land and released into the water. Some of these programs are in place, while others need to be applied to the Great Lakes. If strengthened and expanded, all could help protect the fragile yet productive resources of the Great Lakes.

COASTAL ZONE MANAGEMENT PROGRAM

Created in 1972, the Coastal Zone Management Act (CZMA) offers a unique state and federal partnership for wisely managing the nation's saltwater federal funding and a say over federal actions affecting their shores and waters, states develop coastal management programs meeting federal standards. These programs must include

protection of natural resources — such as wetlands, beaches, dunes and islands — and a strategy for managing development, especially in erosion and flood prone areas. Wisconsin, Pennsylvania, Michigan and New York have federally approved programs, while Ohio is taking steps to join.

CZMA must be reauthorized by the end of 1990 or it will expire. The process of re-examining the program opens the door to further enhancing CZMA, and to encouraging non-participating Great Lakes states to join. Two of the major areas in CZMA that conservationists have targeted for attention are:

- **Coastal Water Quality.** A stronger link needs to be made between shoreline development and its impact on water quality. Some experts believe that as much as 75 to 85 percent of the pollution affecting Great Lakes and coastal waters comes from land-based sources.

- **Consistency Requirement.** Used by Great Lakes states to bring dredged spoil dumping in line with coastal protections, the consistency provision is a crucial avenue for state input into proposed uses of the shore and water. The provision requires that federally conducted or permitted activities be consistent with a state's approved coastal management plan. Yet this important provision was weakened by a 1984 Supreme Court decision that raised questions about the applicability of consistency to offshore activities. The right for a state to be a key player in important coastal issues must be clarified in the reauthorized CZMA. Continued on page 5

A Message to IJC

By John Jackson, GLU President

Every two years, the IJC, government representatives, the media and a smattering of scientists and citizen activists gather for a few days to assess progress under the Great Lakes Water Quality Agreement (GLWQA) in cleaning up the Great Lakes and to set the agenda for action for the next two years. The next biennial meeting of the International Joint Commission will be held in Hamilton, October 12 to 14.

THE GLWQA AND REPORTS

This year's lead up to this meeting is a series of reports required under the Agreement: the *First Report of Canada under the 1987 Protocol to the 1978 Great Lakes Water Quality Agreement*; *US Progress in Implementing the Great Lakes Water Quality Agreement*; *Fourth Biennial Report of the International Joint Commission*, and the biennial reports of the Water Quality Board and the Science Advisory Board. (The Water Quality Board and Science Advisory Board reports were not available when this article was written.)

In early 1989, the Canadian and US federal governments released reports detailing their progress in implementing the annexes to the GLWQA. These reports list relevant actions under existing government programmes. But, they

do not tell us whether or not the Lakes are any cleaner as a result of these programmes. Nor do they include commitments for new programmes and actions. As a result, these reports provide the public and the IJC with little basis for assessing progress or making judgements to hold the governments accountable in the future.

The IJC is dependent upon its Water Quality Board for advice in making such judgements. The main mechanisms through which the Water Quality Board does this assessment are its biennial reports. The Water Quality Board members are many of the same government people who wrote the reports on progress in implementation. These people change their hats when they sit on the Water Quality Board and supposedly make unbiased, professional judgements as they advise the IJC. This is a rather awkward, if not impossible, task. The Water Quality Board reports should be presented for what they are: the governments' evaluation of their own progress, rather than being presented as independent advice to the IJC.

The IJC's *Fourth Biennial Report* released in June displays the limitations of the IJC. The report contains many excellent recommendations, but it fails

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New Resolutions Set GLU's Course

By Phil Weller, GLU Executive Director

Last May's Annual Meeting charted GLU's course through a sea of Great Lakes issues and set the priorities for the next 12 months. Twenty-two resolutions were passed involving many issues:

AIR QUALITY

GLU opposes disposal of incinerator ash, which contains lead, mercury and other toxic chemicals, in municipal solid waste landfills. Canada, Ontario and Quebec should develop a strategy to control auto emissions that increase ground-level ozone. To reduce global warming, energy efficiency legislation should be passed to decrease carbon dioxide levels. The US Congress is urged to adopt a toxic air pollution program that requires use of "Best Available Control Technology" (BACT), backed by secondary standards if BACT is not sufficient to protect human health and the environment.

HAZARDOUS WASTE AND ENERGY

GLU hereby adopts a policy banning use of disposable and plastic products at its meetings where alternative products exist, and to promote recycling of such

products in its activities. Regarding nuclear energy, GLU's members will urge that Ontario adopt an electricity efficiency programme to reduce electricity use, and to place an indefinite moratorium on new nuclear power stations. GLU will more aggressively work with other citizens' groups to educate, share information and organize the public regarding the hazards of nuclear power and wastes.

HUMAN HEALTH

Governments should be held accountable to implement the Great Lakes Water Quality Agreement and its goal of zero discharge of toxic chemicals. Research into the health effects of, and alternatives to, toxic chemicals should be a priority; and no new substances should be introduced until proven not to cause human health problems.

LAKE LEVELS & FLOWS

The US Congress should reauthorize the Coastal Zone Management Act, expand the number of participating states, and extend the Coastal Barrier Resources System to undeveloped Great Lakes barriers. GLU will advocate an ecosystem approach to lake level and discharge issues at the October 1989 IJC Biennial

Meeting.

WATER QUALITY

GLU urges creation of independent Great Lakes Protection Fund citizen technical advisory boards. Great Lakes states and provinces should ensure that all their new laws, standards and regulations adhere to the Great Lakes Water Quality Agreement, especially those relating to total loadings of toxic substances, and that the public be involved in their review. A Toxics Freeze should be legally adopted into government programmes. A Great Lakes Spill Prevention Program should be enacted and funded and an emergency clean-up team be established on the Great Lakes. The US Congress should increase funding of Great Lakes research and lamprey control programs to replace losses since 1980. Indiana must adopt the proposed new water quality rules which industry is campaigning against. Lastly, the National Natural Landmark status of Erie, Pa's Presque Isle State Park should be rescinded because of the environmentally destructive and negligent activities of the Commonwealth of Pennsylvania.

CONTAMINATED SEDIMENTS

The US and Canada should adopt na-

tional health-based criteria for contaminated sediments, and identify funding for clean-up programs. The US EPA should establish an Office of Contaminated Sediments, and the US Army Corps of Engineers should be authorized to dredge outside of navigation channels for clean-up purposes.

GLU Gets Major Award

In July, Great Lakes United was awarded the Harry E. Schlenz Medal from the Water Pollution Control Federation.

The award was given for outstanding work as a leader in educating the public on the Great Lakes Water Quality Agreement and for advancing public awareness about water and environmental issues throughout the Great Lakes region.

GLU President John Jackson will accept the award in ceremonies in San Francisco October 18.

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Credit: GLU B. Kershner, K. Peters

GLU Annual Meeting photos: No.1 - Fred Brown accepted award from Scott Stewart; No.2 - Bruce Walker's tee shirt says, "L.U.S.T. Busters" (Leaking Underground Storage Tanks); No.3 - 1989 GLU Board of Directors; No.4 - Carol Finch of EPA and GLU President John Jackson in Portable Theater Co. play "Message in a Bottle"; No.5 - Sr. Pat Lupo and Tim Eder listening to Joyce McLean talk about the IJC and the public; No.6 - Laurie Montour spoke on Native Nations perspective of toxic threats.

From the President

Great Lakes United's strength lies in our ability to support your activities and to help mobilize and present a Basin-wide perspective on Great Lakes concerns and solutions. It is this unique ability of Great Lakes United that has made it a recognized voice of the people of the Great Lakes.

By combining working together locally and Basin-wide, we have had many significant successes. We stopped winter navigation. We set the agenda for the renegotiation of the Great Lakes Water Quality Agreement, making it reflect the concerns and hopes of the residents of the Great Lakes. We strengthened the role of local residents in the development of Remedial Action Plans. We succeeded in getting the International Joint Commission's Water Quality Board to recommend designation of Erie, Pennsylvania as an Area of Concern requiring a Remedial Action Plan. These are only a few of our successes -- successes that occurred because of you.

We have achieved these successes because of our ability to work with people throughout the Basin to present a strong voice. This voice is only effective when it truly reflects all of you. To achieve such a pulling together of the grassroots perspective from throughout such a broad and varied geographic expanse is a difficult and expensive undertaking. It takes considerable determination, dedication and understanding on the parts of so many people. But the successes it brings and the joys of discovery that arise from the effort make it an incredibly satisfying undertaking.

We look forward to continuing to work with all of you to strengthen the voice of the people of the Great Lakes in determining the actions that will restore and protect this glorious region that we are so blessed to be part of.

- John Jackson, President

Annual Meeting Cohesive, Effective

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board members Robert Boice, Joshua Wunsch and John Hickey were given awards for their tireless efforts.

Sunday's proceedings saw the unanimous election of John Jackson as the first Canadian president of Great Lakes United. A board member since 1983, Mr. Jackson will attempt to follow in the footsteps of Dr. Frederick Brown, who has provided exceptional leadership as president of Great Lakes United for the past three years.

Dr. Brown's final words of wisdom as president of Great Lakes United opened the meeting Sunday. "As we move forward, let's be careful not to spread our efforts so thin that we become ineffective. Do what we do, do it well," he offered.

From the productive and cohesive outcome of the Seventh Annual Meeting, the new GLU president's -- and all participants' -- work is cut out for them.



Citizens To Gather at October IJC Meeting

By Joyce McLean, Great Lakes Campaign Coordinator, Greenpeace

The International Joint Commission (IJC) was formed in 1909, following the signing of the Boundary Waters Treaty Act. This U.S.-Canada treaty recognized the serious nature of transboundary pollution problems, particularly in the Niagara region of the Great Lakes. The task of the IJC was to advise the two governments on the status of pollution hot spots and suggest programmes to remediate the problems.

Throughout its 80-year history, the IJC has provided an excellent database of research on polluted regions around the Lakes. It has also provided excellent advice to the two federal governments, especially the suggestion of implement-

ing a zero discharge regulatory approach for persistent toxic substances. This was first articulated in the Great Lakes Water Quality Agreement (GLWQA) of 1978, and subsequently in a revised 1987 GLWQA, both signed by the U.S. and Canada.

Unfortunately, despite this excellent advice, the two federal governments have routinely ignored the IJC's recommendations and responded only with half-measures and plenty of rhetoric. To date, no laws or regulations anywhere at the federal, state, provincial or municipal level have been written which correspond with the principle of zero discharge of persistent toxic substances.

The two federal governments are looking the other way, while polluters

continue to dump.

Greenpeace, GLU and a steering committee of a dozen other environmental groups are organizing to participate in the public forum at the October 12-14 IJC meeting in Hamilton, Ontario. Our aim is to bring public opinion to bear on government regulators who attend the meeting. We are also planning a half-day October 14 summit to prepare a two-year citizen agenda leading up to the next IJC meeting in 1991.

During August and September, a series of one-day regional workshops (see schedule) will give citizens an opportunity to learn more about the environmental and political situation in the Great Lakes, while mobilizing for the IJC meeting.

It is vital that citizens express their

opinions directly to the politicians and bureaucrats who design, implement and enforce laws. Without strong public participation, a timetable for zero discharge is unlikely to be set, schedules are unlikely to be drawn up, and pollution of the Great Lakes is likely to continue unabated. It's our common future.

For information, call Joan D'Argo, Greenpeace Chicago, 312-666-3305, or Great Lakes United, (716) 886-0142. □

CITIZEN WORKSHOP SCHEDULE

Aug. 26: Valleyfield, Que.; Gary, IN

Sept. 9: Syracuse, NY; Cleveland, OH

Sept. 16: Thunder Bay, Ont.

Sept. 23: Port Huron, MI; Green Bay, WI

Sept. 30: Hamilton, Ont.

Area of Concern Status Hinges On New IJC Criteria

By Bruce Kershner, GLU Lake Erie Coordinator

The ultimate fate of 50 or so of the Great Lakes' toxic hot spots rests heavily upon a two-page document. That document, released by the IJC's Water Quality Board for public review this spring, details the criteria the IJC will use to decide which Great Lakes sites should be newly added to the list of Areas of Concern (AOC) — or dropped entirely from AOC status.

Called the "Listing/Delisting Criteria for Areas of Concern," the document gives details on how to evaluate the 14 beneficial uses listed in the Great Lakes Water Quality Agreement to determine if they are impaired enough to list a site as an AOC, or restored sufficiently to allow an AOC's delisting.

Since so many sites around the Basin will be affected by the criteria, Great Lakes United spearheaded a Basin-wide citizen review. Comments were requested from dozens of groups and a joint report was submitted to the Water Quality Board.

GLU commends the Board for involving the public to review the document, and we view the Criteria as a good first step in spelling out the needed process to decide AOC status.

There are about a dozen sites currently being discussed regarding a change in their AOC status, seven for delisting (e.g. White Lake, MI and Collingwood Harbor, Ontario) and five for listing as new AOCs (e.g. Erie, PA and Black River, NY).

While the Criteria are correctly based on the Water Quality Agreement's beneficial uses, they ignore requirements of the rest of the Agreement, and are therefore too narrowly focused. Indeed, Areas of Concern — and the Criteria to judge them — were created by the Agreement!

The report recommends that the following criteria be added to properly reflect the requirements of the Water Quality Agreement:

• The goal of "Zero Discharge" of persistent toxic chemicals is required by the Agreement and should therefore be reflected in the Criteria. The goal of Zero Discharge must be attained before an Area of Concern can be delisted.

• The Criteria must embody the "Ecosystem Approach." This means: looking at total load reductions to the ecosystem; whether upstream sites are contributing to problems of downstream sites; and an emphasis on restoring natural conditions and diversity, not just achieving human use objectives.

• Public consultation is required by the Agreement when it comes to AOC status, yet the Criteria do not mention this essential component. AOC status cannot be decided without public input.

• An area cannot reach the stage of being reviewed for delisting until it has implemented its Remedial Action Plan (RAP). Yet the Criteria hardly mention RAPs and do not require that their specific goals be achieved as a requirement for delisting.

• Like with RAPs, Lakewide Management Plans (LMP) are required by the Agreement. Yet the Criteria hardly mention them and do not review the relationship between achieving the goals of LMPs and RAPs.

The Criteria have a variety of vagaries that allow for too broad and lax an interpretation. As now written, they do not address the issue of burden of proof. We maintain they should be designed to err on the side of caution. The burden of proof must be on those that want to delist an area, that is, to demonstrate that impairments are no longer present before AOC status can be dropped.

The Criteria also refer to "current standards and guidelines" but do not explain whose standards preside. Our report recommends ways to prevent delisting of an area based on weak standards when it would not have been delisted in a jurisdiction with tighter standards.

An example of this great inconsistency is reflected in the differing fish consumption advisories, which are the basis for the one Criteria. Furthermore, U.S. drinking water standards are influenced by cost considerations rather than health-based criteria, which is counter to the Water Quality Agreement.

A sampling of other comments are:

• Fish kills are omitted as a way of judging the degradation of fish populations.

• The Criteria often ask how an AOC compares to a control site. However, genuine control sites may not exist for most AOCs, which lie in highly industrialized regions with a lack of undisturbed or unpolluted sites.

• The Criteria often have a status quo bias. For instance, an agency can circumvent the Drinking Water criterion by simply moving intakes far enough out into the lake to avoid the pollution of an AOC. Or, an agency could declare that its goals for fish habitat have been "achieved" when the agency actually chose a very arbitrary stream classification for that AOC, e.g. "industrial use" instead of "swimmable/fishable." □



In Owen Sound, Ontario, citizens' groups plan for October IJC meeting.

IJC: Enhance Citizen Role

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to hold the governments accountable and to clearly call them to task for their failure to achieve the goals of the GLWQA.

Even when the report is critical, it is often necessary to read between the lines to guess that perhaps this is a serious criticism. For example, when discussing zero discharge, a central objective of the Agreement, the Commission says, "Although progress is being made, the Commission feels that there is room for improvement and acceleration of effort."

Instead of strongly calling upon the governments to carry out their obligations under the Agreement to incorporate the Agreement's general and specific objectives and goals in their water quality standards and programmes, the IJC simply "calls attention of the Parties" to the requirement in the Agreement and proposes no mechanisms to ensure that this happens. No recommendations are included on this issue.

The defense most frequently given by the Commission for taking this timid approach to criticizing the governments is that this diplomatic approach is more effective at getting results. If this approach is working, why does the IJC have to repeat so many recommendations in this report from previous biennial reports and have to so frequently include in its recommendations words such as "accelerate" and "intensify"?

THE IJC AND THE PUBLIC

The IJC relies almost exclusively on one source of advice — the governments — in carrying out its role as an independent assessor of progress in cleaning up the Great Lakes. If the IJC is to fulfill its role, it must hear from the people who live around the Lakes. Unfortunately, the IJC provides only limited opportunities to hear from the public.

Once every two years the IJC holds a major public meeting. In the past, these

meetings have been ineffective at allowing for public input. But even if these were effective meetings, consultation once every two years is unacceptable.

The public has repeatedly called on the IJC to open its doors. This has resulted in some changes. Water Quality Board and Science Advisory Board meetings are now open to the public. But, despite repeated requests, it has proven frustratingly difficult to obtain meeting announcements, agendas and minutes. It is unclear whether subcommittees, such as the Water Quality Board's Programs Committee, are open to the public. This constant need to push makes the public feel like an unwelcome intruder.

As a result, but significant, step forward has recently occurred. The public was formally asked by the IJC to comment on the Water Quality Board's proposed Listing and Delisting Criteria for Areas of Concern. Consultative mechanisms such as this should become a regular part of IJC operations.

In addition, the IJC should restructure its advisory committees. Citizen representatives should be added to the Water Quality Board, making up at least fifty percent of the Board, or a new citizens advisory board should be set up with standing similar to that of the Water Quality Board.

THE IJC AND THE FUTURE

The public sees an invaluable role for the IJC as an independent, prestigious, strong advocate for the Great Lakes. So far the IJC has failed to meet this challenge. If the IJC is to fulfill its role, it must lessen its dependence on the government jurisdictions it is supposed to be judging, and strengthen its ties with the residents of the Great Lakes Basin.

The public is eager to be involved. All that is needed is a strong commitment by the IJC to public involvement. □



Lake Michigan Region

Eating Fish: Risky Business

By Jeffery Foran, Ph.D. and Barbara Glenn, M.P.H., National Wildlife Federation, G. L. Natural Resource Center

Sport fishing has been a recreational and economic gold mine for the Great Lakes Basin. The estimated annual economic value of the Great Lakes sport fishery is over 4 billion dollars, and nearly 4 million people fished on the Great Lakes in 1985. Unfortunately, there are hazards as well as benefits associated with fishing on the Great Lakes.

Many Great Lakes fish carry large body burdens of toxic substances. When humans catch and consume these fish, they are exposed to toxic substances and their health risks. These include cancer, liver damage, and reproductive and developmental impacts.

Since the late 1960s, the Great Lakes states have recognized that sport fish are contaminated with toxic substances and have warned people to reduce or eliminate consumption of these species. However, the states did not coordinate their advisories, and different consumption advice was often issued for the same fish containing the same types and amounts of contaminants. In 1986, the Great Lakes Governors signed the Great Lakes Toxic Substances Control Agreement, which mandated that their states develop uniform consumption advice on a lake-by-lake basis.

A 1987 National Wildlife Federation study showed that the Great Lakes states generally rely on US Food & Drug Administration (FDA) action levels to

trigger consumption advice. When toxic concentrations in sport fish tissue exceed these levels, the states issue consumption advice ranging from "restrict consumption" (no more than one meal per week or one meal per month) to "do not eat" any of the fish. The NWF study determined that this process was outdated and is perhaps dangerous. In place of the current state process, the US EPA has suggested that a risk-based approach be used to develop consumption advice.

Unfortunately, the NWF study showed that, except Minnesota, the Great Lakes states have not adopted the EPA risk-based procedure. Further, the study showed that states still issue different advice for fish with the same amounts and types of contaminants. Consumption advice can range from "do not eat" to "eat all you want" for the same fish, depending on where it was caught. Thus, not only have the Great Lakes states not met the mandate of the Toxic Substances Control Agreement, but the consumption advice likely does not protect the health of individuals who consume Great Lakes sport fish.

In response to the states' inability to adopt a uniform, risk-based approach to fish consumption advisories, the NWF conducted a new study of the health risks of eating contaminated Lake Michigan sport fish. This study is the most comprehensive investigation of its kind in the Great Lakes Basin.

NWF found that the cancer risks for people who eat Lake Michigan sport fish over a lifetime may be higher than had

APPROXIMATE NUMBER OF LAKE MICHIGAN SPORT FISH MEALS *THAT YOU CAN EAT DURING YOUR LIFETIME, ASSOCIATED WITH DIFFERENT CHOICES OF LIFETIME CANCER RISK

Women who intend to have children, pregnant women, nursing mothers, and children (15 years and younger) should not eat any of the Lake Michigan sport fish species listed below.

SPECIES/ SIZE CLASS	CANCER RISK (Choose level you wish to be exposed to)		
	1-IN-10,000	1-IN-100,000	1-IN-1,000,000
Lake Trout (30" or more)	11 meals in your lifetime (but not more than 1 meal in any one year).	1 meal in your lifetime.	No meals in your lifetime.
Lake Trout (20-30") Chinook Salmon (30" or more)	30 meals in your lifetime (but not more than 3 meals in any one year).	3 meals in your lifetime.	No meals in your lifetime.
Brown Trout (Any size) Lake Trout (10-20") Chinook Salmon (10-30")	70 meals in your lifetime (but not more than 7 meals in any one year).	7 meals in your lifetime.	One meal in your lifetime.
Coho Salmon (Any size) Walleye (Any size)	150 meals in your lifetime (but not more than 17 meals in any one year).	15 meals in your lifetime.	One meal in your lifetime.
Yellow Perch (Any size)	420 meals in your lifetime (but not more than 35 meals in any one year).	42 meals in your lifetime (but not more than 35 meals in any one year).	4 meals in your lifetime.

(*1/2-pound meal size, skin-on fillets). The maximum number of meals for any one year is shown to protect against the development of health problems other than cancer, like liver damage. The possibility of these other health problems becomes greater if the fish are eaten more frequently.

been recognized by state health agencies. The chart above is from the NWF booklet, *Lake Michigan Sport Fish: Should You Eat Your Catch?*, for consumers of Lake Michigan sport fish. It shows the fish species studied by NWF and the number of meals, that, if eaten over a 70-year lifetime, may result in an excess cancer risk of 1-in-10,000, 1-in-100,000, and 1-in-1,000,000. These cancer risks mean that, out of an exposed population of, for example 10,000, one person may develop cancer in addition to those individuals who would have developed cancer even if they did not eat Lake Michigan sport fish.

Meal frequencies for a range of cancer risks were provided because people are different and are willing to accept different risk levels. It is important to give people enough information so that they are able to make an informed choice about eating Lake Michigan sport fish.

The numbers in the chart need to be interpreted carefully. In accordance with US EPA guidelines for risk assessment, assumptions must ensure that health risks are not underestimated. Therefore, the actual risk from consuming these sport fish is probably lower than those calculated by NWF. Exactly how much lower is not known.

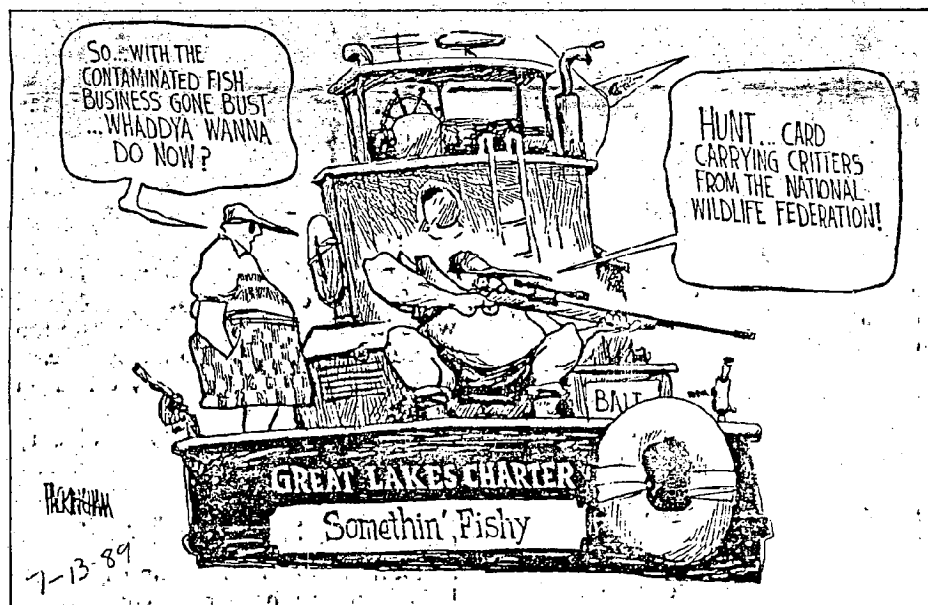
On the other hand, more than 100 toxic substances have been identified in Great Lakes fish, and some are suspected

human carcinogens. Therefore, the total risk from all toxics in fish may be higher than the risks for the four toxics studied.

NWF also recommends that women who intend to have children, pregnant women, nursing mothers, and children 15 years old and younger not eat any of the fish evaluated. This is due to the subtle abnormalities in the children of PCB-exposed mothers, and developmental and reproductive problems in the offspring of several animal species that have been documented.

Whether or not a person follows the NWF recommendations, the NWF booklet urges that fish consumers always properly fillet and prepare their fish to reduce their exposure to toxicants. This involves trimming away fatty areas on the fillet and broiling, baking, or grilling so fats drip away from the fish.

The long-term solution to the problem of contaminated fish is not to stop eating the fish, it is to stop the toxic pollution of the Lake. NWF and other groups have proposed a strategy to control all sources of toxic pollution so that all of the fish in Lake Michigan will be edible once again. For a copy of the NWF booklet and information on NWF programs to stop toxic pollution of the Great Lakes, write to: Great Lakes Natural Resource Center, 802 Monroe, Ann Arbor, Michigan 48104.



Great Lakes Groups Call for New Clean-up Program

By Tim Eder, National Wildlife Federation

Representatives of 21 environmental groups met with Regional Administrator Valdas Adamkus and other US Environmental Protection Agency (EPA) officials in Chicago on June 14 to demand that the agency and the Great Lakes states adopt a comprehensive program to stop toxic pollution of the Great Lakes. The groups, representing over 1.5 million residents of the Great Lakes region, presented EPA with a specific proposal to control all sources of the most dangerous toxics poisoning the Lakes. The program calls on EPA and the eight states to immediately adopt four measures:

- **Uniform water quality standards** and pollution control requirements for toxic pollutants to end competition between the States for heavy-polluting industries, such as paper mills;

- **A "Toxics Freeze"** prohibiting any increased dumping of the most dangerous toxic chemicals into the air, water, or onto land within the Great

Lakes Ecosystem;

- **A timetable to reduce dumping** of chemicals from all sources so that serious progress can be made by the year 2000 toward the goal of Zero Discharge; and

- **A comprehensive pollution prevention strategy** to avoid the creation of toxic wastes.

The clean-up program is described in a 23-page report prepared by the National Wildlife Federation, in cooperation with Great Lakes United and 20 other groups.

The groups have long been critical of the Federal and State Governments for failing to honor the promises of the US-Canada Great Lakes Water Quality Agreement. "We will not accept the IJC (International Joint Commission), the EPA and the states playing 'hot potato' with the responsibility for implementing the Agreement," the report charges. One of the key principles of the pact is that persistent toxic pollution should be halted according to a philosophy of "zero discharge" (a requirement of the

Water Quality Agreement).

According to Great Lakes United President John Jackson, who attended the June 14 meeting, "There is currently no comprehensive government plan or timetable to identify and eliminate the sources of pollutants poisoning the Lakes."

Sierra Club representative Jane Elder said evidence of the problems resulting from toxic poisoning is mounting. "We have fish with cancerous tumors, birds being born with crossed bills and other hideous deformities, bald eagles that can't reproduce, and, perhaps worst of all, babies being born to Great Lakes fish-eating mothers that are smaller, lighter and less well-developed than they should be. Action to cease toxic dumping is long overdue."

The environmental groups' recommendations are aimed at implementing the principles of the international agreement through the development of uniform regulations under the US Clean Water Act. The Great Lakes States

would be required to adopt uniform regulations and pollution control programs when they revise state water quality standards every three years as mandated under the Clean Water Act.

The environmental groups' action comes in the wake of a recent decision by the US EPA to approve a package of water pollution standards developed by the State of Wisconsin. Environmentalists were highly critical of EPA's decision and the Wisconsin rules because, "They allow industries to dilute the toxics they dump instead of treating them; they fail to regulate all PCBs as human carcinogens; and they fail to freeze additional dumping of toxics," according to Mark Van Putten, Director of the National Wildlife Federation's Great Lakes Natural Resource Center.

"EPA's decision shows the complete failure of the present regulatory system to protect the Great Lakes and to keep the promises of the Great Lakes Water Quality Agreement," Van Putten said.

Getting the Muck Out: EPA's Test Project

By Jim AHI, GLU Acting Field Coordinator

In 1987, Congress amended the Clean Water Act (CWA), and added Section 118(c)(3), which authorized the US EPA Great Lakes National Program Office (GLNPO) to coordinate and conduct a five-year study and demonstration project to examine methods to control and remove toxic pollutants from bottom sediments.

This action was a result of an increased awareness that the Basin's harbors, rivers and bays contained sediments contaminated with a wide variety of toxic pollutants that adversely impact both water quality and bottom-dwelling organisms.

The purpose of the demonstration project is to develop guidance on how best to respond to the contaminated sediment dilemma — it is not intended to fully clean up the sites selected.

WHERE WILL DEMONSTRATIONS TAKE PLACE?

Five priority areas were specified in the amended CWA: Buffalo River, N.Y.; Saginaw Bay, MI; Ashtabula River, OH; Sheboygan Harbor, WI; and, Grand Calumet River, IN. Although these five areas are specifically identified, the demonstration program is not restricted to just these five locations.

WHAT IS ARCS?

GLNPO's demonstration project is being undertaken through the Assessment and Remediation of Contaminated Sediments Program or "ARCS". Administration of the ARCS Program is the responsibility of GLNPO. However, overall it is a multi-government agency endeavor that also includes: U.S. Army Corps of Engineers; U.S. Fish & Wildlife Service; National Oceanic & Atmospheric Administration; other U.S. EPA National and regional offices; the eight Great Lakes states; and, public interest/citizen groups.

GLU and the Lake Michigan Federation are representing citizens in the ARCS program at three levels, as shown in the following flow chart which illustrates the components of the ARCS Program:



* Have citizen members

WHAT ARE ARCS OBJECTIVES?

The overall objectives of the ARCS program are: 1) Assess the nature and extent of bottom sediment contamination at the selected sites; 2) Evaluate and demonstrate remedial options, such as removal, immobilization and advanced treatment technologies which include the "no action" alternative; and, 3) Provide guidance to US and Canadian governments for implementing of RAPs, as well as direction for assessing the need for action, options available, and how to select appropriate remedial measures.

The last objective is directly tied into Annex 14 of the Great Lakes Water Quality Agreement, which states, "The Parties in cooperation with State and Provincial Governments, shall design and implement demonstration projects for the management of polluted bottom sediment at selected Areas of Concern."

WHAT IS THE DEMONSTRATION PROJECT PROCESS?

The first step in ARCS is to undertake a physical, chemical and biological assessment of each selected site. There need to be answers to questions such as: What toxic contaminants are present? What kind of adverse impacts do these contaminants exhibit? What is the estimated volume of sediments in the site?

Answers to these and other questions are being addressed by the three work groups shown in the chart. Briefly the responsibilities for each work group include the following:

- **Toxicity/Chemistry** - Identify and study the chemical, physical and biological characteristics of contaminated sediments and their

biotic communities and to describe the toxicity of the sediments to aquatic organisms. Also, to demonstrate these assessment techniques at priority areas and to produce contamination maps of the areas.

- **Risk Assessment/Modeling** - To assess the hazards caused by contaminated sediments to all biota (aquatic, terrestrial and human) under no-action and remedial alternatives at priority areas.

- **Engineering/Technology** - To evaluate and test available removal and remedial technologies for contaminated sediments, to select promising technologies for further testing, and to demonstrate alternatives at priority areas.

When these questions are answered the next step is to assess potential remedial technologies and to match them with the most appropriate demonstration technology and to conduct bench-scale testing.

Pilot-scale demonstrations at selected site(s) will, ideally, then be conducted with other sediment remedial projects such as Superfund or US Army Corps of

Engineers activities.

The final portion of ARCS involves monitoring and evaluation of the environmental and economic effectiveness of the remedial technologies tested.

WHAT IS THE SCHEDULE OF ARCS?

The tentative schedule of ARCS is: 1989 & 1990: Review and identify most appropriate remedial technologies and, evaluate the biological, chemical and physical assessments of the five demonstration sites.

1990: Select demonstration technologies and locations.

1991: Conduct full-scale demonstration projects.

1992: Complete the projects and prepare final report to Congress.

HAS FUNDING BEEN IDENTIFIED?

FY89 funds allocated and available are slightly more than \$3.2 million. Although Congress originally authorized up to \$4.4 million for each year of the study, EPA's proposed funding levels for FY90 through FY92 are at the \$3.2 million level for each fiscal year.

For further information, write:

US EPA, Office of Public Affairs, 230 South Dearborn St., Chicago, IL 60604 or Lake Michigan Federation, 59 East Van Buren, Suite 2215, Chicago, IL 60605. □



US Army Corps dredging Buffalo River contaminated sediments for testing in ARCS program.

Setting Standards for Great Lakes Coasts

continued from page 1

2. CONTAMINATED SEDIMENTS

Years of industrial, agricultural and commercial activities have polluted the Great Lakes, contaminating the bottom sediments with toxic chemicals and heavy metals. In turn, contaminants are released from these sediments by dredging, wind and waves, and the activities of bottom-dwelling organisms. The pollutants accumulate in the foodchain, particularly in fish, shellfish, waterfowl and ultimately, humans. In the US portion of the Great Lakes alone, 27 areas have contaminated sediments problems. Several actions are needed to address the issue of polluted sediments. First, national sediment quality criteria and standards that protect the health of the ecosystem from in-place sediments and their disposal are needed. Second, a coordinated funding mechanism to pay for removal and cleanup of contaminated sediments must be created. Third, a national program and clean-up fund to administer the removal is necessary. Fourth, a national assessment of the problem is needed. And fifth, a comprehensive examination of pollutant sources into the Great Lakes, rivers and marine coasts, and better source control, waste pretreatment and prevention measures, should be completed. Because contaminated sediments are found on all four of the nation's coasts, there is increasing Congressional interest in tackling the problems caused by these pervasive, in-place materials. Wise steps taken now could help address currently

polluted sediments, as well as the continuing onrush of contaminants into the nation's waters.

3. COASTAL BARRIER RESOURCES SYSTEM

Roughly 450,000 acres along the Atlantic and Gulf coasts are protected by this unique system which takes the federal taxpayer out of the business of underwriting unwise shore development. New development on coastal barriers included in the System — such as wetlands, beaches, dunes, spits and islands — cannot qualify for massive federal subsidies that include: 1) insurance through the National Flood Insurance Program, the second largest domestic program behind the Social Security System; 2) federal funding for roads, bridges, water lines, sewers, and other infrastructures that lead to increased development; and, 3) federal grants and loans for housing. Roughly 58,000 acres along the Great Lakes, totalling 153 shoreline miles, are eligible for inclusion in the System. These areas are nurseries for commercially important fish. In the Great Lakes states alone, 41 million pounds of fish valued at \$17 million were landed in 1987. It is now up to Congress to decide if the protective System will be extended to the economically and environmentally rich underdeveloped areas along the Great Lakes shores.

The Coast Alliance, along with Great Lakes United and other important Basin groups, is working to alert citizens to opportunities for public involvement in

the process of making decisions about the health and vitality of the Great Lakes. Now is our chance to present our blueprint for environmental protection. We can help make sure that decisions made today will give us a healthier environment tomorrow. For more information, contact the Coast Alliance, 1536 Bell St., N.W., Washington, D.C. 20006, (202) 265-5518.

SAVE MONEY AND THE ENVIRONMENT

The National Taxpayers Union and the National Wildlife Federation joined to produce a report that shows how the federal government can save billions of dollars — as well as the coastal and Great Lakes environment — by withdrawing harmful federal subsidies for new development along the nation's shores. Called, *Turning the Tide on Wasted Tax Dollars*, the report found that expanding the Coastal Barrier Resources System along the Great Lakes, Gulf, Atlantic and Pacific coasts would save the federal treasury from \$1.8 to \$10.8 billion. Withdrawing taxpayer-funded subsidies for new development in areas along the Great Lakes would save from \$317 to \$824 million, and would protect the Great Lakes ecosystem from the damage and pollution caused by unwise shore development. For a free copy of the report, write: Elise Jones, National Wildlife Federation, 1400 16th St., N.W., Washington, D.C. 20036, or call (202) 797-6839. □

New Citizen Guide to Contaminated Sediments

Lake Michigan Federation has issued *A Citizen's Guide: Cleaning Up Contaminated Sediments*. Contaminated sediments occur in 41 of the 42 Great Lakes Areas of Concern. This 32-page handbook is jammed-packed with easy-to-understand information on:

- Assessing sediment contaminant levels;
- Dredging equipment currently used, and disposal techniques such as CDFs;
- Innovative treatment options including capping, solidification and chemical/physical destruction methods;

• US and Canadian laws/programs, including the Great Lakes Water Quality Agreement; the River & Harbor Act and Clean Water Act in the US; and Fishing & Recreational Harbours Act, Navigable Waters Act and Fisheries Act in Canada; and

• Choices for the future that summarize the activities of environmental groups throughout the Basin.

To obtain the handbook send \$5 (US) or \$6 (Canadian) in money order or check to: The Lake Michigan Federation, 59 East Van Buren, Suite 2215, Chicago, IL 60605. □



Poster Protects Great Lakes And Beautifies Your Wall!

To do your part in protecting our treasured Great Lakes -- and to add a handsome look to your walls -- a poster depicting our beautiful Great Lakes and the serious degradation they are facing is being offered by the Charles Stewart Mott Foundation.

The poster corresponds with the Foundation's special section on the Great Lakes in its 1988 Annual Report. These attractive, 20" x 25" Great Lakes posters are available for contribution of

\$10 to Great Lakes United (tax-deductible in the US).

A full-color, numbered, limited edition reproduction print of the Caspian Tern is also available by making a \$478 donation to GLU. Suitable for framing, each piece has been hand-signed by Rick Pas, award-winning wildlife artist.

Order yours today, and in doing so, help us to protect our precious Great Lakes. ☐

LAKE LEVEL UPDATE

Water levels of three Great Lakes rose due to high precipitation. July 21, 1989 levels recorded by the Department of the Army were:

Change from record	Since last record
Lake Superior -22 in (1986)	July 21, 1988 +10 in.
Lake Mich.-Hurr. -31 (1986)	+1
Lake St. Clair -21 (1986)	+3
Lake Erie -22 (1986)	+5
Lake Ontario -20 (1947)	+12

Protection Fund Making Progress

By Nina McLachlan, Project Director, Great Lakes Protection Fund, Council of Great Lakes Governors

The newly appointed Great Lakes Protection Fund Board held its organizational meeting in Chicago, July 12, 1989. Sixteen members representing diverse interests in the region began planning how this first-of-its-kind regional institution will address Great Lakes water quality issues.

This is the latest step in the governors' initiative to create a permanent funding source to attack toxic problems in the Great Lakes. They first identified the need for a regional funding mechanism in the Toxic Substance Control Agreement, signed in 1986. The Fund became reality February 26, 1989, when the Great Lakes governors signed an interstate agreement to create the \$100 million endowment. With the agreement in place, they next turned attention to appointing board members and to securing legislative approval of individual state commitments.

The Board of Directors will administer the estimated \$7 to \$10 million the Fund is expected to generate annually from investment earnings. Before any

ERRATUM
We apologize for inadvertently omitting a phrase from paragraph 3 of the article "Thunder Bay Marshes Threatened" on page 6 of *The Great Lakes United's* Winter '89 issue:

"Although the South Channel Project is the primary plan being examined, there are also areas adjacent to the other marshes...of new industrial sites." ☐

regional grants are awarded, the Board will appoint a technical advisory committee, establish Fund priorities, and develop grantmaking guidelines with opportunities for public involvement.

Throughout the Fund project, the governors placed a high priority on public outreach. As part of that commitment, the Center for the Great Lakes surveyed GLU members at their Annual Meeting to solicit ideas on Fund priorities and grantmaking guidelines. Center staff are compiling survey results, to be part of a larger report outlining recommendations to the Board on how to proceed. Comments should be sent to the Center for the Great Lakes.

Progress continues on the legislative front as well. Four states have authorized the Fund and appropriated it money, and legislation is pending in three other states.

In addition to state activity, efforts are proceeding to establish a Canadian Protection Fund component. The Center for the Great Lakes is organizing a committee to conduct a feasibility study over the next year to look at options for Canadian participation. For more information, call Bill Brahn at (312) 645-0901. ☐

Groups Present Mulroney Greenprint for Canada

By Stephen Hazell, Director, Canadian Arctic Resource Committee and Chair, Greenprint for Canada Committee

On June 22, Prime Minister Brian Mulroney met with leaders of Canada's environmental, conservation and aboriginal communities to receive our Greenprint for Canada, an environmental agenda for action for the federal government.

The Greenprint is the result of an unprecedented collaboration by 28 organizations representing millions of Canadians. For the first time, Canadians who are most concerned about environmental problems came together and reached a consensus on across-the-board priorities for federal action. The groups supporting the Greenprint range from World Wildlife Fund (Canada) and the Canadian Wildlife Federation to Friends of the Earth and Great Lakes United, from Assembly of First Nations to the Canadian Arctic Resources Committee.

Since the Canadian federal election in November 1988, in which the environment issue was overshadowed only by the free trade debate, the federal government has been casting about for new approaches, for an environmental agenda. They need now look no further than Greenprint for Canada.

Among the 43 recommendations are eight for immediate action that would save taxpayers billions and reduce the federal deficit, yet help solve important environmental problems. These are:

- cancel subsidies to energy megaprojects that harm the environment;
- enact a new environmental assessment law, so there is adequate federal review of all environmental policies, programs and projects;
- enforce vigorously and update the Fisheries Act regulations for industries that pollute Canada's waterways;

- set stringent auto emissions standards to stop smog and acid rain;
 - commit to a 20 percent reduction in Canada's carbon dioxide emissions;
 - ban the sale of irradiated foods in Canada
 - protect endangered species by adequately enforcing the Migratory Birds Convention and the Convention on International Trade in Endangered Species (CITES); and
 - stop uranium mining in the North.
- The recommendations are realistic and feasible and respect the federal government's concern that the budget deficit must be reduced. Our recommendation for a so-called carbon tax to be applied on fossil fuels such as coal and gasoline, for example, would raise \$40 billion over the next 15 years to fund energy conservation and other environmental programs.

The Prime Minister made no commitment at the June 22 meeting to implement any of our recommendations, although environment Minister Lucien Bouchard did agree to help us arrange meetings with other key federal cabinet ministers and senior officials to discuss implementation.

Greenprint for Canada is as much process as a document. Our groups will monitor and evaluate the government's performance in addressing the issues we have identified, primarily through an annual "report card" which will be issued during Environment Week in June, beginning in 1990.

Canada's environmental and aboriginal groups have demonstrated clear unity of purpose in agreeing on a comprehensive plan to protect the Canadian ecology. Now it's up to the federal government.

The Greenprint can be obtained for \$5.00 (Canadian) from the Greenprint for Canada Committee, 111 Sparks St., 4th Floor, Ottawa, Canada, K1P 5B5. ☐



The new floating laboratory ship of the Environmental Hazards Team for the Great Lakes, Inc. was launched June 4 from Port Maitland, Ont. on Lake Erie. Dubbed the "New Age Noah's Ark," the 48-foot Nimble (Non-Invasive Income-Involvement) conducts research, education and advocacy.

GREAT LAKES PROTECTION FUND, STATE BY STATE (AS OF 8/1/89)

STATE	AUTHORIZED BY STATE LEGISLATION*	AMOUNT BUDGETED BY LEGISLATURE	Total State Contributions (according to Governors' Protection Fund Agreement)
MN	Yes	\$500,000 for first year, 2nd & 3rd years in future requests	\$ 1.5 million
WI	Yes	\$4 million for first year, 2nd & 3rd years in future requests	\$12 million
IL	None necessary*	None budgeted yet	\$15 million
IN	Indiana has not signed Protection Fund. New governor has it under review.		
MI	Legislation under review.	Budget bill (for \$25 million) under review	\$25 million)
OH	Legislation under review	\$4.7 million for first year, \$4.7 million for second year	\$14 million
PA	Yes	\$500,000 for first year	\$ 1.5 million
NY	Legislation failed; to be re-introduced in 1990	None budgeted yet	\$12 million

Total 4 passed* \$9.7 million for first year; \$4.7 million (by one state) for second year \$33.3 million for each of three years, totaling \$100 million

* State Constitution allows IL governor to enter interstate agreements without legislative notification.



Contaminated Sediments Focus of Great Lakes Week in Washington

By Philip Weller, GLU Executive Director

Sitting behind a collection of plastic bottles containing contaminated sediment from harbors in the Great Lakes, Glenda Daniel of the Lake Michigan Federation told a congressional hearing in June chaired by Rep. Henry Nowak (D-NY):

"There is an urgent need to get a handle on the contaminated sediments problem and MAKE OUR GREAT LAKES AND MARINE COASTS AND HARBORS SAFE AGAIN."

Daniel's testimony, presented on behalf of Great Lakes environmental groups, was the culmination of a week of education on the problem of contaminated sediments.

Participants at this Sierra Club-sponsored Great Lakes Week, called "No Safe Harbor: Cleaning up Great Lakes Toxic Hot Spots," included GLU President John Jackson, Past President Frederick Brown and Executive Director Philip Weller.

During the week, the group presented officials from the Environmental Protection Agency, the International Joint Commission and the Army Corps of Engineers a report outlining necessary programs for cleaning up contaminated sediments. The report called for development of national sediment criteria, a federal study to assess the full extent of the contaminated sediment problem, and an exploration of funding mechanisms to remediate areas of con-

taminated sediments. The urgency of dealing with this issue was summarized by Brett Hulsey of the Sierra Club who noted, "We are no longer talking about protecting future generations; our own health and that of our children are at stake." Evidence presented at the Congressional hearing by John Geisy of Michigan State University further emphasized the importance of the issue. Geisy said, "bald eagles which nest within five miles of the Great Lakes shoreline reproduce significantly less than eagles nesting away from the lakeshore."

The focus of discussions throughout the week was on Great Lakes contaminated sediments, but Beth Millemann of the Coast Alliance brought to the group the concerns of other coastal environmental groups. She noted that contaminated sediments are more than just a Great Lakes problem. "EPA studies show virtually every harbor and port in the nation has contamination. If we don't clean them up, they will continue to poison us," she said.

Participants considered the "No Safe Harbor" activities a success. Lynn Kaatz-Chary of Indiana concluded, "We have focused attention on the issue and now federal agencies are beginning to pay attention to it -- and they are taking it seriously."

Copies of the draft position paper on contaminated sediments prepared by participating environmental groups can be obtained from Great Lakes United. □

GLU INVITED TO HEAR BUSH'S AIR QUALITY PLAN

After a personal invitation from the White House, GLU Executive Director Philip Weller attended the White House East Room presentation of President George Bush's June 12 announcement of his new initiatives on air quality.

In his presentation, President Bush emphasized commitment to "cleaning the air" and to protecting public health from air pollution. "We commend the President's initiatives to protect public health but are very concerned that the proposals he outlined will not adequately reach the goals he has set," said Philip Weller. The President's proposals do not provide the mechanisms to clamp down strongly on the industries that currently emit 2.7 billion pounds of toxic air pollution annually.

GLU has been a strong advocate of improved programs for reducing the threat posed to human health and the environment by toxic air pollution. This pollution is a major contributor of toxic substances to the Great Lakes-St. Lawrence River Basin.

The week prior to the Bush presentation, GLU had been encouraged in its efforts to reduce toxic air pollution with the introduction by Rep. Mickey Leland (D-Texas) of a bill which has proposals for increased control of toxic air pollutants. This bill, HR 2585, includes specific provisions dealing with air quality in the Great Lakes region.

The Clean Air Act debate is heating up and GLU will respond to these and other air pollution initiatives in a forthcoming newsletter. □

In the Public Interest

By Paul Muldoon and Richard Lippes

Q Every time I hear something about toxic pollution in the Great Lakes, the goal of zero discharge is mentioned. Where does this goal come from and what does it mean?

A The goal of zero discharge is not new - but in light of the increasing understanding of the problems posed by toxic substances, it has gained much more attention in recent times. The goal of zero discharge is found in the *Great Lakes Water Quality Agreement*, an agreement between the national governments of Canada and United States. While originally concluded in 1972, the Agreement was re-negotiated in 1978 with the inclusion of some very important provisions. One of the most important provisions is found in Article II. Under that provision, the national governments committed themselves "to eliminate or reduce to the maximum extent practicable the discharge of pollutants into the Great Lakes System." For persistent toxic substances, a special or more onerous duty was agreed to -- that the discharge of all persistent toxic substances be *virtually eliminated*. This "virtual elimination" goal is then implemented in Annex 12 which states that the regulatory philosophy for the control of persistent toxic chemicals "shall be zero discharge."

The obligations by governments are not limited to those under the *Great Lakes Water Quality Agreement*. In May of 1986, all the U.S. Great Lakes states (with the Canadian provinces joining in later), signed the *Great Lakes Toxic Substances Agreement* which committed the governments to strive for the goal. The US *Clean Water Act* incorporates a "zero discharge" goal in that it states that "it is the national goal that the discharge of pollutants into navigable waters be eliminated by 1985." Although that provision has stirred considerable controversy, it should be

recalled that the 1987 amendments to the *Clean Water Act* state that the US should "seek to attain the goals embodied in the Great Lakes Water Quality Agreement of 1978 with particular emphasis on goals related to toxic substances."

In Ontario, the Municipal-Industrial Strategy for Abatement (MISA) and the Clean Air Program (CAP) in Ontario both expressly have as their aim the virtual elimination of persistent toxic substances.

While there is support for the goal, what does zero discharge mean? A working definition has recently been articulated by the Program for Zero Discharge, a joint program of the Canadian Institute for Environmental Law & Policy (CIELAP) and the National Wildlife Federation's Great Lakes office. It is proposed that zero discharge means the *elimination of all inputs of persistent chemicals, whether it be from direct discharges into waterways or the air, indirect discharges such as agricultural or urban run-off, or inadvertent discharges, such as from leaking landfills or reactivation of contaminated sediments*. The guiding assumption behind this definition is that all sources of persistent toxic chemicals must be eliminated.

Zero discharge is one of the most important goals for the governments of the Great Lakes to strive for. Unfortunately, governments have yet to take it seriously. Most importantly, no timetables or schedules have been set to achieve zero discharge for many of the nastiest persistent toxic chemicals. Like many other initiatives, it will be important that the residents of the Great Lakes remind governments of their commitments and work to achieve this goal both in their community and throughout the Basin.

For more information on the Program for Zero Discharge, contact Paul Muldoon, CIELAP, 517 College St., Suite 400, Toronto, Ont. M6G 1A8 or Tim Eder, National Wildlife Federation, 802 Monroe, Ann Arbor, MI 48104.

Michigan Legislation Update

Michigan, which has the world's largest fresh water sand dune system, now has increased protection for them. The Sand Dune Protection Act was signed into law after a 5-year campaign by the Michigan Environmental Council and other GLU members. It requires zoning that prevents some damaging development on sand dunes, such as on the beach slope and the crest. It protects 70,000 acres of dunes, some up to 400 feet high.

Citizen groups also succeeded in adding protective measures to a bill that declassifies incinerator ash from a hazardous waste to a special solid waste. The added measures reduce environmental damage by requiring improved

landfill design standards for incinerator ash. "The ash shouldn't have been exempted, but at least the law was changed to greatly reduce environmental damage," says a Michigan Environmental Council spokesperson.

Michigan Governor Blanchard established the new Council on Environmental Quality to develop and coordinate environmental policy for the state. Environmentalists are pleased that the Council includes environmental advocates and that it has strengthened EIS guidelines. They hope it will play a strong role in the state's policy including recycling, fish contamination, Greenhouse Effect and public input. □

Canadian Spill Prevention Hearings to be Held

The tragedy of the Valdez incident in Alaska and an oil spill off the B.C. coast earlier in the year graphically highlighted the potential dangers of transporting hazardous and polluting substances by ship. In response to the two incidents, the Canadian federal government has announced the formation of a public review on Tanker Safety and Marine Spills Response Capability. A three-member panel will review "systems currently in place to support the safe movement of oil and chemicals in bulk through Canadian waters and fishing zones; assess existing national legislation and international standards regarding Canadian and foreign tankers; emergency preparedness; pollution countermeasures capability; as

well as the related damage compensation and spill response policy issues."

The panel will be receiving input at public meetings across Canada including five locations in the Great Lakes. The locations and dates for Great Lakes hearings are as follows:

Sault Ste. Marie: September 25, 1989
Sarnia: September 27, 1989
Toronto: September 28, 1989
Montreal: October 10-11, 1989

Persons wishing to make presentations should contact the Secretariat at 1-800-567-6876. Great Lakes United will be preparing a submission and anybody with any information or ideas for this presentation should contact Philip Weller at (716) 886-0142. □ page 7

Join Us!

United! Together we can protect and promote our common treasure -- the Great Lakes Basin.

Name: _____
Organization: _____
Street Address: _____
City: _____ State/Province: _____
Phone: () _____ Zip/Postal Code: _____

- ☐ Individual Membership (\$15.00)
☐ Organizational Membership (\$100.00)

Information Request:

- ☐ By-Laws ☐ Member Organizations
☐ Resolutions ☐ Other (Please specify)

Would you be interested in volunteering for Great Lakes United?

☐ Yes ☐ No

Time Available? _____

Please return this form with checks payable to:

Great Lakes United
Cassidy Hall
1300 Elmwood Avenue
Buffalo, NY 14222

For more information, write to the above address or call (716) 886-0142

THE GREAT LAKES UNITED

Native Peoples Share in Great Lakes' Treasures, Tragedies

By Henry Lickers, Mohawk Council of Akwesasne, Environmental Division

A thousand years ago, the Great Lakes Basin and St. Lawrence River System was home to many Native Nations. Each of these nations lived within the context of their territories, each of these nations had a different perspective of the whole, but all of them honored the Earth as their mother. This single overriding principle of Earth as family was the power of these nations.

All people, animals, plants and things had a place in the process of life. The spirits of the Earth, sky and waters talked with all life and shared the beauty of the Creator's purpose. Over many centuries, the native people formulated governments and cultures which respected this whole and tried to preserve the dignity of all.

This ideal, as one of the world's great religious themes, is the origin of what modern society now calls the "Ecosystem Approach" and the "Gaia" concept of the Earth as a living-holistic system.

Today, the people of the world, through their government and public organizations, have begun to realize that environmental destruction is the greatest crisis which the modern world must overcome. The United Nations' report, *Our Common Future*, outlines the effect of the accumulated destruction of the world's resources, clearly illustrated by the current social, economic and political crises. A new method of dealing with "our common future" must be developed if the nations of the world are to survive.

Simply stated, the report says: "The way we deal with the 'least' in our world will reflect our likelihood of survival."

Nations currently deal with the "least" in our world through economic systems which exploit the world's resources, through social systems which keep the poor weak, and through politi-

cal systems which protect only the majority. These must be renovated to assist and nurture the weakest, the poorest and the exploited.

The Great Lakes and Native Nations within the Basin are a good example of this crisis. Within the Great Lakes/St. Lawrence system, there are some 350,000 Canada/US federally recognized native people and 7 million acres of Canada/US federally recognized native lands. These lands are found in the most crucial areas of the system. Most of the connecting channels flow through native territories, and much of the Canadian shoreline is dotted with native communities. These communities have special legal, cultural and political powers recognized by the governments of Canada and the US. However, they are often neglected when it comes to Great Lakes concerns. These Native Nations are viewed as being unsophisticated and ignorant of the important issues of the environment.

The attitude of neglect, however, is changing. Land claims, water rights cases and environmental cases are being fought and won by native peoples. The native concept of humans as an integral part of the ecosystem is being recognized, and scholars are approaching the Native Nations for help in developing a concept of sustainable development to save the Earth.

The Mohawk people of Akwesasne have always been concerned with the effects of humans on the environment of the St. Lawrence River. Located in the St. Lawrence River near Massena, NY/Cornwall, Ontario and Huntington, Quebec, the Mohawk community of Akwesasne is artificially split between two national governments and three provincial/state governments, each seeking to impose their laws on the river.

In 1834, barge control structures were constructed, followed by the St. Lawrence Seaway in the 1950's. Each time, the Chiefs of the Mohawk people

protested the destruction of spawning beds, fisheries and wetlands, and each time, the Western governments offered money, but did not repair the river. The Mohawk people looked out upon the waters and wept for their brothers.

The St. Lawrence River fishery is an important source of protein for the Mohawk people. Unfortunately, mercury, PCBs, fluoride and other industrial pollution from Canadian and U.S. industries made the river an industrial sewer. Their contaminants found their way up the food chain into the Mohawk people. Concern for the health of the people forced the Mohawk Council of Akwesasne to issue restrictions on fish consumption in 1977: "No women of childbearing age, pregnant women or children under the age of 15 should consume any fish from the St. Lawrence River."

In 1976, the Mohawk Council of Akwesasne created an Environmental Division. The first of its kind in North America, this division was mandated to protect and enhance the environment of Akwesasne, to act as a research facility for the Mohawk Council and to assist other Native Nations which may require assistance in environmental matters. It immediately became embroiled in a fishing dispute on the St. Lawrence River.

Local recreational fishermen accused the native people of "raping" the river's fish stocks. Exaggerated claims of "hundreds of tons of fish leaving the river, 300-foot nets and wholesale destruction" of fishery stocks were alleged against the native people. Government game wardens harassed the native fishermen, even though they were fishing within the territory of Ak-

wesasne. Investigations by the Environmental Division, later confirmed by the Ontario Ministry of Natural Resources, showed a healthy perch fishery and recovering pickerel stock—but still the native people were accused of wrecking the fishery. This is especially regrettable since non-native and native fishermen are all brothers in the ecosystem, and our Earth shares that fishery resource with all of us.

The Mohawk Council of Akwesasne actively set out to protect fish stocks in this confused jurisdiction. Conservation Bylaws were passed, conservation officers hired and licensing of recreational fishermen was enforced. At first, there was a great deal of fear by the non-native fishermen. However, they soon began to realize that fish stocks were protected.

A process of co-management between the Akwesasne, Ontario, Quebec and New York State governments is the eventual aim of the Mohawk Council. This is only a natural extension of the native philosophy and ecosystem view. The St. Lawrence River RAP process recognizes the importance of the Mohawk people, and US EPA has just signed a Memorandum of Understanding with the Mohawk Tribal Council, acknowledging the Mohawk people as partners in the US government. Many other states and provinces are trying to formulate agreements with their native peoples to protect their natural resources. The native people of the Great Lakes/St. Lawrence River are actively seeking the assistance of our neighbors to clean up and preserve the unique ecosystem of the Great Lakes. □

(Lickers is an environmental scientist and a member of the IJC's Science Advisory Board.)

Cuomo Signs Anti-Diversion Law

Flanked by both the current director and the former director of Great Lakes United (GLU), NY Governor Mario

Cuomo used Buffalo Harbor as a backdrop when he signed a bill that would incorporate the Great Lakes Charter into state law. The law increases the ability of the state to prevent diversion of Great Lakes waters. GLU has long campaigned to protect the Great Lakes from diversion. The Great Lakes Charter is an agreement signed by the eight Great Lakes governors in 1985 that vetoes Great Lakes diversion measures without unanimous gubernatorial support.

Cuomo also made another GLU proposal a reality when he created the Great Lakes Basin Advisory Council and announced GLU's former executive director David Miller, now Northeast Regional Vice-president of National Audubon Society, as its chairman, and GLU Vice-president Sr. Margeen Hoffmann as a member.

"We are pleased the governor has signed this legislation providing another stumbling block to those who would withdraw or divert our water out of the Great Lakes," declared Philip Weller, GLU's executive director. □



NY Gov. Mario Cuomo, flanked by Great Lakes United Director Philip Weller (R) and past director David Miller (L), now Reg. Vice President of National Audubon, at signing of Great Lakes anti-diversion law.

STAND UP FOR THE GREAT LAKES!

COME TO THE OCTOBER 12 - 14, 1989 BIENNIAL MEETING OF THE INTERNATIONAL JOINT COMMISSION IN HAMILTON, ONTARIO.

A public forum has been created for this unique opportunity. See page 3 for details.

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