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GREAT LAKES REGIONAL OFFICE

September 24, 1993

To: Speakers and Participants, Cornwall Workshop

From: Bruce Kirschner

Thank you for your participation in the "Workshop on Remediation of Contaminated Sediments" in Cornwall, Ontario, on September 17-18, 1993.

For your information, enclosed is a list of the participants and a copy of John Jackson's presentation.

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September 17-18, 1993

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NOTES FOR A KEYNOTE ADDRESS
TO
IJC'S WORKSHOP ON REMEDIATION OF CONTAMINATED SEDIMENTS
IN AOCs
September 17, 1993

By
John Jackson
Great Lakes United

Significance of Contaminated Sediments

* Ninety per cent of the flow at the mouth of the Grand Calumet River in Gary, Indiana is from discharge pipes. This has resulted in 10 feet of contaminated sediments building up in Indiana Harbor. The results of the consequent devastation affect not only the environment, but also the economic and social well-being of the community.

* Seventy-five per cent of the PCBs in Lake Michigan come from sediments.

* A study by the US EPA in 1990 concluded that contaminated sediments are the major source of toxic exposure for fish, wildlife and people in the Great Lakes basin. Humans who from cultural preference or from economic need consume more fish and wildlife than others are the ones most immediately and seriously affected by the release of contaminants from the sediments. This includes the native nations, many immigrant groups, and the poor.

* The US EPA's National Water Quality Inventory in 1990 found that only 2% of the waters along the US shore of the Great Lakes fully support their designations of use for industrial, municipal or recreational use. Only 5% of the waters at the shoreline met the goal of being safe to fish in.

This Problem is not just a Result of Historical Mistakes

* Contaminated sediments are frequently described as the lingering horror from our past irresponsible behaviour. But contaminated sediments continues to be produced by our current industrial, municipal and agricultural behaviour.

* Discharges from agricultural lands must be recognized as a major part of the sources. For example, fifty per cent of the sediments in Lake Erie come from the Maumee River at Toledo, Ohio. Sixty per cent of these sediments come from agricultural lands.

* Clear proof that the problem is worsening is a recent report from Ontario's Ministry of the Environment and Energy on a survey of the sediments in the Detroit River. The study found that:

> The mean sediment contaminant levels over the entire study area, for nutrients, solvent extractables and heavy metals increased from 1980 to 1991. Throughout the Detroit River there was a significant increase in the concentrations of iron, chromium, copper, nickel, aluminum, total phosphorus and total Kjeldahl nitrogen in the sediments. Total PCBs, total DDT, hexachlorobenzene and chlordane concentrations were found to significantly decline throughout the study area since 1980.
>
> Associated with these [impaired zones] are benthic macroinvertebrate community structures that were considered to be indicative of moderately to severely impacted environments. The impacted areas have not reduced in size since the 1980 environmental assessment and there is some evidence, based on sediment quality and benthic community structures, to suggest that

the environmental quality of the Detroit River may have deteriorated since 1980.

Stop the Sources

* It is foolish to spend a fortune cleaning up while we continue to create ever more contaminated sediments. We must stop the sources now. This is one reason why citizens throughout the Great Lakes basin are so strongly calling for zero discharge.

* The real solution is to ban persistent toxic substances. The Detroit survey shows this. Banned or severely restricted substances, such as PCBs, DDT and chlordane, are the ones that have gone down in the sediments. This is why citizens' groups are calling for zero use and zero generation of persistent toxic substances.

* Municipal sewage treatment plants are a major source of contaminated sediments. In Ontario, for example, only 300 industrial dischargers discharge directly to water ways. The remaining 12,700 industries discharge to municipal sewers. Despite the significance of municipal sewage systems as a source of contaminated sediments, Ontario has decided that the municipal sector will be the last one for which regulations will be developed under MISA. Likewise the Federal Government in Canada refuses to contribute to the costs of upgrading sewage systems. In most of the RAP areas, combined sewer overflows are a major problem. Unless the Federal Government helps fund correction of these problems, the RAP areas will not be cleaned up. They are refusing to make such contributions despite the fact that in the Great Lakes Water Quality Agreement, which they signed, they committed to help finance such infrastructure.

Can't Ignore Cleanup

* Stopping the sources of contamination is not enough. We must also clean up what has already been put out into the environment.

* According to the IJC, one goal of the Great Lakes Water Quality Agreement is to virtually eliminate the presence of persistent toxic substances in the Great Lakes environment. This can only be achieved if we remove as much of the contaminated sediments as possible. Only in this way can we achieve zero availability of contaminants to harm the environment in the future.

* Contaminated sediments are often called a "ticking timebomb." This implies that they are hidden there waiting to be released some time in the future. The reality, however, is that they are a bomb that is already going off. The contaminants in the sediments are now being released into the environment.

* The mass balances being conducted in Lake Michigan show that 1144 pounds of PCBs enter Lake Michigan each year from sediments released from the Fox River near Green Bay, Wisconsin.

The Clean-up: Issues

1) Do we leave them in?

The problems with leaving them in the bottom of waterways are:

(i) the goal of zero availability of persistent toxic substances to the environment cannot be achieved as long as they lie in the bottom of the waterways.

(ii) dredging activities will keep stirring up contaminated sediments.

(iii) global warming is predicted to lower the levels of water in the Great Lakes. This will mean that the sediments are closer to the surface and will result in ever greater desire to dredge.

We cannot afford the long-term risks involved in leaving contaminated sediments in the water.

2) Clean-up Methods

(i) Confined disposal facilities are not acceptable. They always leak. In addition, they become areas where birds nest, resulting in birds taking up high levels of contaminants. Confined disposal facilities are usually placed along the shoreline which reshapes the shoreline and takes away other habitat.

(ii) Our society is looking for the magic black-box or magic bugs to destroy contaminants in the sediments. We do not accept biotech solutions. The creation and release of unnatural organisms is as dangerous, if not more so, than the creation and release of unnatural persistent toxic substances has been.

(iii) The public should be directly involved in deciding on the technologies to be used and in monitoring the clean-up operation. Liaison committees of local residents should be set up.

(iv) In choosing clean-up methods, we should look for local solutions, such as mobile technologies. It is not satisfactory to dig up the problem from one area and send it to another area. Likewise it is not acceptable to get rid of the problem by putting it into the air through inadequate incinerators.

(v) An environmental assessment should be conducted in each area for the clean-up strategy. The public should be fully involved in this assessment

Who Pays?

The costs involved are huge.

* A third of Environment Canada's Great Lakes Clean-up fund has been used for habitat restoration. It is irresponsible to create habitat in contaminated areas before the sediments are cleaned up. It just encourages birds and other wildlife to move in and experience health problems from the contaminants in the area. This fund should be devoted to the real cleanup.

* Most funding from governments has been for experiments. But we have no commitment from governments for the funding for the actual cleanup.

* Many cleanups have been delayed by long legal battles over who is responsible for the cleanup. For example, the legal battle went on for over ten years before a cleanup started in Waukegan Harbor, Illinois.

* If there is a dispute over who is responsible for the clean-up costs, the government should proceed with the cleanup and pursue the money from the responsible companies later.

Summary

We, the residents around the Great Lakes, who are putting in thousands of hours of volunteer time on RAPs, expect strong action from government and industry on cleaning up contaminated sediments. These actions should be taken according to the following principles:

1) Don't transfer the problem somewhere else, i.e., into the air or to another location.

2) Develop specific plans for cleanup that include:
   (i) timetables
   (ii) who will be responsible for the cleanup
   (iii) financial commitments from the responsible parties

3) Include the public in developing the clean-up plans.

4) Stop the sources of further contaminated sediments now. We must have zero use and zero generation of persistent toxic substances.

PROPOSAL RE: POLICY ON USE OF CANADIAN CHARITABLE NUMBER BY OTHER ORGANIZATIONS

Environmental groups without charitable numbers have been and will continue to request that they be allowed to use our charitable number, just as we have used the Citizens Environment Alliance and Canadian Institute on Environmental Law and Policy numbers in the past. We need a set of guidelines to be used in determining when to allow our number to be used.

EVALUATION FACTORS:

1) Nature of Project: The goal of the project should be consistent with and further the goals of GLU.

2) Competition with Other Projects: We should ensure that the submission of the project proposal will not mean that a foundation will reject another proposal of ours because of restrictions on the number of applications considered from the same group in a funding cycle.

3) Nature of Group Requesting: Revenue Canada guidelines specify the types of "qualified donees." For the most part, "qualified donees" are restricted to registered Canadian charities. The reason groups are asking to use our charitable number is that they are not "qualified donees." Therefore, to protect our charitable status, the project should be carried out as our project with the applying group carrying out the work. Therefore, the project should have as a subtitle "a project of Great Lakes United Foundation."

4) Our Responsibility: When our charitable number is used, we become responsible for ensuring that the work is carried out and that the money is used properly. Therefore each time a group uses our charitable number, an agreement should be signed between GLUF and the group specifying:

(i) Times at which progress reports will be submitted to GLUF. These reports should include descriptions of progress and financial updates;

(ii) That the project shall be autonomous in decision-making providing its decisions remain within the intent of the project description and goals, it behaves in a financially responsible manner and it follows acceptable decision-making norms.

5) Administrative Fee: Inevitably administrative time is involved in dealing with a grant. Therefore, it seems that GLUF should receive an administrative fee for this service. For example, the Citizens Environment Alliance took a 1% administrative fee from GLU's grant from the Laidlaw Foundation. However, the budgets for such proposals are usually so borderline that any additional taking of money out of the grant is a burden. GLUF should take an administrative fee of ?%.