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### Great Lakes Focus on Water Quality: vol.2 iss.4

UWindsor Administrator  
University of Windsor, [scholarship@uwindsor.ca](mailto:scholarship@uwindsor.ca)

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# GREAT LAKES FOCUS On Water Quality

International Joint Commission — Windsor, Ontario

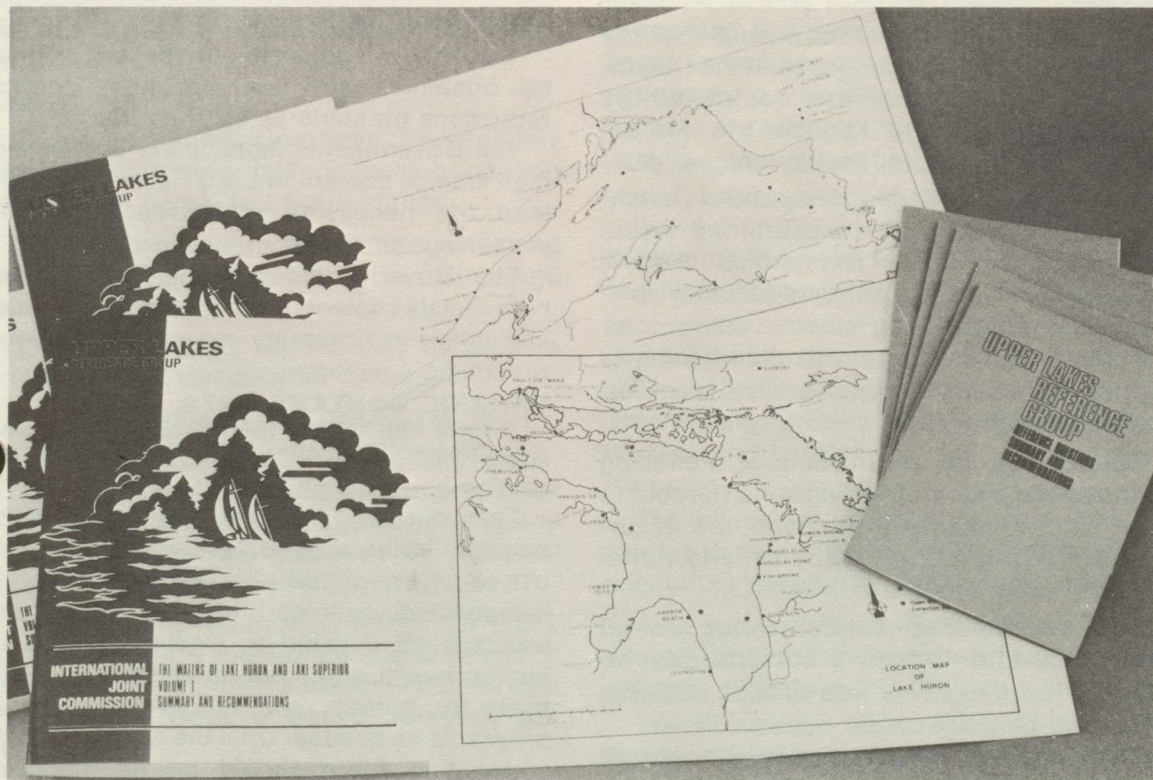
Editor: Patricia Bonner

VOL. 2

ISSUE 4

DECEMBER 1976

## ULRG REPORT AVAILABLE



If you live near either Lake Superior or Lake Huron, chances are there is a copy of the Upper Lakes Reference Group's Final Report within a few miles of your home. Copies of Volume I, the summary document, have been sent to all the libraries listed at the end of this article. When they are printed, early in the spring, copies of the 1200-page Volumes II and III, containing details about Lake Superior and Lake Huron, will be sent to many of the same libraries.

These reports are the result of the Reference Group's four-year, \$14-million study to determine the quality of the waters of Lake Superior and Lake Huron-Georgian Bay and to recommend actions to remedy any pollution found. Scientists from both the United States and Canadian federal governments, Ontario, Michigan, Wisconsin, and Minnesota conducted the studies which led to the preparation of the reports. The study was required by the 1972 Water Quality Agreement, and the Group,

reported results to the IJC, the co-ordinating body, in July of 1976.

The IJC will schedule public hearings on the Upper Lakes Reference after all three volumes of the final report have been made available to residents of the region.

The key recommendations found in the report are as follows:

#### **ENRICHMENT:**

Michigan ensures that the point source remedial programs in the Saginaw Bay Basin are completed by December, 1978, to reduce the annual phosphorus load by 600 metric tons per year.

Wisconsin and Minnesota ensure that the point source remedial programs in the Duluth-Superior Harbor area are completed by December, 1978, to reduce the annual phosphorus load by 160 metric tons per year.

The condition of Saginaw Bay and of Duluth-Superior Harbor be re-examined upon implementation of the phosphorus removal programs to determine if additional load reductions are needed.

The sources of phosphorus contributing to the problems in the Goderich area be identified and controlled.

Surveillance be maintained at Penetang Bay, Midland Bay, and Collingwood Harbour to determine whether improvements are occurring as expected or whether additional remedial programs are warranted.

The phosphorus concentration in all municipal and industrial discharges be reduced to 1.0 mg/l or less as soon as possible.

The allowable phosphorus content of all detergents be limited to not more than 0.5% phosphorus by weight.

All practicable measures be taken to reduce phosphorus loadings from land use and non-point sources.

#### **PUBLIC HEALTH MICROBIOLOGY:**

The jurisdictions undertake the necessary remedial programs to bring the 20 areas exhibiting bacteriological water quality degradation into compliance with the Water Quality Agreement objectives.

New microbiological objectives be established and standard measurement methods be developed.

#### **METALS:**

There be no increase allowed for inputs of any metals to the Upper Lakes.

Mercury discharges from American Can Co. of Canada, Ltd. chlor-alkali plant at Marathon be eliminated by December, 1978, as scheduled, and any other sources identified in the future also be eliminated.

Remedial programs to reduce iron and zinc discharges from Algoma Steel Co. at Sault Ste. Marie, Ontario should be developed and implemented as soon as possible.

The metals input from atmospheric sources be quantified and the maximum possible reductions be made as soon as possible.

The Governments monitor the unexplained high arsenic content in Lake Huron chubs and take the necessary measures to prevent worsening conditions.

The Governments monitor the identified high metals content in sediments and in water, and take the necessary measures to prevent worsening conditions.

#### **ORGANIC CONTAMINANTS:**

A total ban on the manufacture, sale, transport, and use of PCBs, aldrin, dieldrin, a DDT and its derivatives be imposed.

That for lindane, chlorobenzene compounds, chlordane, octachlorostyrene, and other man-made organics such as halogenated hydrocarbons, an accelerated program be initiated to evaluate effects on human health and biota, to establish a better basis for criteria, and to develop remedial programs as needed. Until the effects are fully understood there should be no increased manufacture, use, or discharge of these compounds.

Environmental and health effects be fully evaluated before new organic compounds are produced, distributed, or used.

The Governments immediately implement programs to minimize pesticide use, as recommended in the Early Action Program Report of March, 1974, prepared by the Pollution From Land Use Activities Reference Group.

Appropriate remedial measures be taken to

eliminate the remaining taste and odour problems at Thunder Bay, Marathon, Jackfish Bay, and the mouth of the Spanish River, caused by pulp and paper mills.

Governments ensure that the waste treatment facilities for Algoma Steel at Sault Ste. Marie, Ontario be completed as soon as possible to achieve the Agreement objective for phenolic substances.

Governments ensure that appropriate measures be taken at Sault Ste. Marie, Ontario to reduce the present phenolic discharges from the sewage collection and treatment facilities so as to achieve the agreement objective for phenolic substances by December, 1978.

#### **ASBESTOS:**

Reserve Mining Company immediately cease discharging tailings, which contain asbestiform fibres, to Lake Superior.

The erosion and further asbestos loading from the tailings delta at Silver Bay, Minnesota be minimized.

The Governments immediately establish a drinking water standard for asbestos.

The IJC develop and recommend to Governments a water quality objective for asbestos.

The Governments intensify their support of research on the effects of fibre size, shape, and concentration on the health of all biological forms in the Upper Lakes *especially man*.

That the surveillance program for Lake Superior include monitoring the changes in asbestos concentration subsequent to the cessation of the Reserve Mining Company discharge.

#### **RADIOACTIVITY:**

The adequacy of present programs be assessed and, if needed, additional abatement measures be implemented in the Elliot Lake area to achieve compliance with the Ontario drinking water criteria.

The jurisdictions initiate without delay the surveillance plan prepared by the Radioactivity Subcommittee and incorporated into Great Lakes surveillance plan developed by the Surveillance Subcommittee, in order to ascertain that changes in radioactivity occur as

predicted and that no localized increase in concentration occurs.

#### **DREDGING:**

The Governments act upon the recommendations of the International Working Group on the Abatement and Control of Pollution from Dredging Activities, leading to the development and adoption of compatible regulations for dredging and dredge spoil disposal that fully consider the short and long-term effects.

#### **VESSEL WASTES:**

Existing and proposed vessel waste regulations be amended to prohibit discharges of personal wastes from all vessels into Lakes Huron and Superior or into any of their harbours or embayments. Major ports should be required to provide adequate pumpout facilities for personal wastes.

All ocean vessels inbound to the Great Lakes be required to exchange seawater ballast for acceptable freshwater ballast prior to entering the Saint Lawrence Seaway.

Compatible regulations be developed and appropriate remedial programs be instituted to abate operational and functional waste discharges. Particular attention should be given to ocean-going vessels, self-loading/unloading vessels, and tankers.

#### **SPILLS:**

The regulatory agencies conduct post-spill studies to determine the associated long-term environmental effects of spills and cleanup.

As a result of these studies, improvements should be made in response measures and recovery technology.

The information base regarding the nature and the character of the material spilled be upgraded and reported in a common format.

#### **THERMAL DISCHARGES:**

Comprehensive environmental assessment studies be conducted for each thermal discharger to be sited on the Upper Lakes with particular emphasis given to the design of intake and discharge structures to minimize fish and fish larvae entrainment.

#### **ATMOSPHERIC INPUTS:**

The Governments include phosphorus as an air pollution control parameter and determine its sources.

A surveillance program for atmospheric loading to the Upper Lakes, including synthetic organics, arsenic, and mercury, be instituted.

### WATER QUALITY AGREEMENT OBJECTIVES:

The IJC continue to review all the criteria, standards, and objectives presently used and, where necessary, refine the present objectives and develop new specific objectives for inclusion in the Water Quality Agreement; and where less stringent criteria are in force, recommend the adoption of criteria at least as stringent as the objectives in the Agreement.

Further, the Reference Group pointed to three areas where research and additional international co-ordination would be helpful. Members recommended increased research to improve the understanding of lake dynamics in the Great Lakes System. They urged that priority be placed on refining present loading estimates and maintaining intensive monitoring of major inputs and receiving water quality so that sources of increased loadings can be identified and remedial measures taken.

In addition, the Reference Group believes that data quality assurance necessary for surveillance activities must be pursued through a demonstration of accuracy, precision, and sensitivity, and by within and between-laboratory comparability of field and laboratory procedures, terminology, and units.

## PUBLIC LIBRARIES

Reports have been sent to all the libraries listed below. Public libraries are in alphabetical order by the name of the cities in which they are located. Canadian libraries sent the report by a regional system are separately listed after the regional library.

### UNITED STATES

Alpena County Library  
303 N. Second Avenue  
ALPENA, MI 49707

Appleton Public Library  
121 S. Oneida Street  
APPLETON, WI 54911

Northland College  
Dexter Library  
1411 Ellis Avenue  
ASHLAND, WI 54891

Vaughn Public Library  
502 Second St. W.  
Box 440  
ASHLAND, WI 54806

Babbitt Public Library  
Village Hall  
BABBITT, MN 55706

Bay City Public Library  
708 Center Avenue  
BAY CITY, MI 48706

Bayfield Carnegie  
Public Library  
BAYFIELD, WI 54814

Charlevoix Public Library  
107 Clinton Street  
CHARLEVOIX, MI 49720

Cheboygan Carnegie  
Public Library  
107 S. Ball Street  
CHEBOYGAN, MI 49721

Cloquet Public Library  
CLOQUET, MN 55720

Duluth Public Library  
101 W. Second Street  
DULUTH, MN 55802

Ely Public Library  
30 S. First Ave. E.  
ELY, MN 55731

Harbor Beach Public Library  
105 N. Fifth St.  
HARBOR BEACH, MI 48441

Alcona County Library  
HARRISVILLE, MI 48740

Portage Township Library  
105 Huron St.  
HOUGHTON, MI 49931

Hurley Public Library  
HURLEY, WI 54534

Dickson County Library  
401 Iron Mountain St.  
IRON MOUNTAIN, MI 49801

Carnegie Public Library  
Main & Barnum Sts.  
ISHPEMING, MI 49849

Kalkaska County Library  
274 Cedar St.  
KALKASKA, MI 49646

L'Anse Township  
School & Public Library  
L'ANSE, MI 49946

Mackinac City Public Library  
310 Jannet  
MACKINAC CITY, MI 49701

Peter White Public Library  
217 N. Front Street  
MARQUETTE, MI 49855

Mellen Public Library  
MELLEN, WI 54546

Grace A. Dow Memorial Library  
1710 W. St. Andrews Dr.  
MIDLAND, MI 48640

Milwaukee Public Museum  
800 West Wells  
MILWAUKEE, WI 53233

Munising School Public Library  
Elm Avenue  
MUNISING, MI 49862

Negaunee Public Library  
Case Street  
NEGAUNEE, MI 49866

Ontonagon Township Library  
311 N. Steel  
ONTONAGON, MI 49953

Port Huron Public Library  
210 McMorran Blvd.  
PORT HURON, MI 48060

Presque Isle County Library  
176 Michigan  
ROGERS CITY, MI 49779

St. Ignace City Public Library  
396 N. State Street  
ST. IGNACE,  
MI 49781

Saginaw Public Libraries  
505 Janes  
SAGINAW, MI 48605

Sebewaing Township Library  
41 N. Center Street  
SEBEWAING, MI 48759

Silver Bay Public Library  
SILVER BAY, MN 55614

Spooner Memorial Library  
421 High Street  
SPOONER, WI 54801

Superior Public Library  
1204 Hammond Avenue  
SUPERIOR, WI 54880

Two Harbors Public Library  
TWO HARBORS, MN 55616

Carp Lake Township Library  
WHITE PINE, MI 49971

### CANADA

Barrie Public Library  
37 Mulcaster Street  
BARRIE, Ontario L4M 3M2

Collingwood Public Library  
Box 70  
COLLINGWOOD, Ontario

Huron County Public Library  
60 Lighthouse Street  
GODERICH, Ontario

Hamilton Public Library System  
55 Main St. W.  
HAMILTON, Ontario L8P 1H5

Midland Public Library  
320 King Street  
MIDLAND, Ontario L4R 3M6

Owen Sound Public Library  
824 First Ave. W.  
OWEN SOUND, Ontario N4K 4K4

Bruce County Public Library  
622 Gustavus Street  
Box 160  
PORT ELGIN, Ontario N0H 2C0

Sarnia Public Library & Art Gallery  
124 South Christina Street  
SARNIA, Ontario N7T 2M6

Sault Ste. Marie Public Library  
50 East Street  
SAULT STE. MARIE, Ontario P6A 3C3

Sudbury Public Library  
74 Mackenzie Street  
SUDBURY, Ontario P3C 4X8

Thunder Bay Public Library  
285 Arthur Street  
THUNDER-BAY, Ontario P7B 1A9

Toronto Public Libraries  
40 Orchard View Blvd.  
TORONTO, Ontario M4R 1B9

Windsor Public Library  
850 Ouellette Avenue  
WINDSOR, Ontario N9A 4M9

### REGIONAL LIBRARIES

Multi-County Library System  
Hqs. at Vaughn Public Library  
502 Second St. W., Box 440  
ASHLAND, WI 54806

Eastern Penninsula Library System  
c/o Sault Ste. Marie Carnegie  
Public Library, Armory Place  
SAULT STE. MARIE, MI 49783

Iosco-Arenac Regional Library  
Route 2, Z  
TAWAS CITY, MI 48763

Arrowhead Library System  
701 11th Street  
VIRGINIA, MN 55792

Lake Ontario Regional Library System  
88 Wright Cr.  
KINGSTON, Ontario K7L 4T9

Lake Erie Regional Library System  
305 Queens Avenue  
LONDON, Ontario N6V 1X2

Algonquin Regional Library System  
29 Mary Street  
PARRY SOUND, Ontario P2A 1E3

Honey Harbour Public Library  
Mactier Public Library

North Central Regional Library System  
334 Regent St. S.  
SUDBURY, Ontario P3C 4E2

Assignack Public Library  
MANITOWANING, Ontario

Blind River Public Library  
Carnarvon Township Public Library  
MINDEMOYA, Ontario

Espanola Public Library  
Gore Bay Union Public Library

Hilton Union Public Library  
Little Current Public Library  
Massey & Townships Public Library  
Michipicoten Township Public Library  
WAWA, Ontario  
St. Joseph Township Public Library  
RICHARDS LANDING, Ontario

Geroglian Bay Regional Library System  
30 Morrow Road  
BARRIE, Ontario L4N 3V8

Kinkardine Public Library  
Meaford Public Library  
Orillia Public Library  
Penetang Public Library  
Southampton Public Library  
Tobermory Public Library  
Walkerton Public Library

Northwestern Regional Library  
910 Victoria Avenue  
THUNDER BAY, Ontario P7C 1B4

Atkinson Public Library  
Beardmore Public Library  
Dorian Public Library  
Geraldton Public Library  
Ignace Public Library  
Longlac Public Library  
Manitouwadge Public Library  
Marathon Public Library  
Nipigon Public Library  
Pic Huron Bay Public Library  
Red Rock Public Library  
Schreiber Public Library  
Terrace Bay Public Library

*tions*, the report of the Upper Lakes Reference Group, is now available. Please check with your local library or agency library before requesting it from the Regional Office.

Copies of the *Public Participation Workshop Proceedings* have been reprinted and are now available from the Regional Office.

## GOVERNMENT LIBRARIES

### UNITED STATES

New York State Library  
State Education Dept.  
Education Building  
ALBANY, N.Y. 12224

U.S. EPA - Region V Library  
230 South Dearborn Street  
CHICAGO, IL 60609

Ohio Legislative Service  
Commission Library  
State House  
COLUMBUS, OH 43215

U.S. EPA  
National Water Quality Lab. Library  
6201 Congdon Blvd.  
DULUTH, MN 55804

State Library of Pennsylvania  
Dept. of Education, Education Bldg.  
Walnut St. & Commonwealth Ave.  
HARRISBURG, PA 17125

Indiana State Library  
140 N. Senate Avenue  
INDIANAPOLIS, IN 46204

Michigan State Library  
735 E. Michigan Avenue  
LANSING, MI 48913

Wisconsin State Library  
310 East State Capital  
MADISON, WI 53702

Illinois State Library  
Centennial Building  
SPRINGFIELD, IL 62706

Legislative Reference Library  
State Capital  
Rm. 111  
ST. PAUL, MN 55155

Neatby Library  
K.W. Neatby Building, Rm. 3032  
Carling Avenue  
OTTAWA, Ontario K1A 0C6

Canada Dept. of External Affairs  
Library Services  
Sussex Drive  
OTTAWA, Ontario K1A 0G2

Canada Dept. of Trade, Industry  
Commerce Library  
112 Kent Street  
OTTAWA, Ontario K1A 0H5

Environment Canada Dept. Library  
OTTAWA, Ontario K1A 0H3

Library of Parliament  
Parliament Buildings  
OTTAWA, Ontario K1A 0A9

National Library of Canada  
395 Wellington Street  
OTTAWA, Ontario K1A 0N6

Legislative Library  
Parliament Buildings  
TORONTO, Ontario M7A 1A2

Ontario Ministry of the Environment  
Library  
135 St. Clair Ave. W.  
TORONTO, Ontario M4V 1P5

Ontario Ministry of Natural  
Resources Mines Library  
Parliament Buildings  
Whitney Block, W - 1603  
TORONTO, Ontario M7A 1W3

Environmental Protection  
Service Library  
135 St. Clair Avenue West  
TORONTO, Ontario M4V 1P5

### CANADA

Ontario Science Centre Library  
770 Don Mills Road  
DON MILLS, Ontario M3C 1T3

Ohio EPA, Office of Wastewater Pollution Control, (P.O. Box 1049, Columbus, OH 43216), has published its first *Water Quality Report*. The pamphlet presents summarized data from 15 of Ohio's 90 primary stations. The automatic monitors analyze the quality of water flowing into Lake Erie and the Ohio River. Five parameters are now reported; however, expanded quarterly reports are anticipated.

*The Seiche* is a newsletter now available from the Minnesota Marine Advisory Service and the Lake Superior Basin Studies Center, the University of Minnesota, Duluth. Readers interested in Lake Superior will find it a good source of information. Write to: *The Seiche*, 325 Administration Building, University of Minnesota, Duluth, Minnesota 55812.

Single copies of "EPA Enforcement - A Progress Report, December 1974 to December 1975", are available from the EPA Public Information Center, PM-215, Washington, D.C. 20460. Air, water and pesticides anti-pollution enforcement is reported nation-wide.

*What Do You Know About Water?* is a six-part brochure series available from the Inland Waters Directorate of Environment Canada, Place Vincent Massey, Ottawa, Ontario K1A 0E7. The series includes: Nature's Most Versatile Substance; Where and in What Form; Uses in Canada; Too Little or Too Much; Resource Development and Conservation; and Cleaning Up Pollution.

A 558-page document, (Volumes 3 and 4 of *Inventory of Pollution-Relevant Research in*

## BOOKSHELF

The IJC's *Fourth Annual Report to Governments on Great Lakes Water Quality* is available from the Regional Office. The report highlights those Water Quality Board Report items which the Commission wished to stress as key to the improved implementation of the 1972 Agreement.

Volume I, *The Waters of Lake Huron and Lake Superior - Summary and Recommendations*

Canada), listing workers in Canada engaged in pollution-relevant pursuits, their areas of interest, expertise, and projects, is available from Publications, National Research Council of Canada, (NRCC), Ottawa, Ontario K1A 0R6, for \$6.50.

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Of Acceptable Risk: Science and Determination of Safety has recently been released by the United States National Academy of Sciences. The book discusses the problems of measuring and estimating how "safe" a substance is, testing procedures, substance structures, cause and effect relationships, and investigation of accidents or exposure. DDT is among the cases cited. Copies are \$4.95 paper-bound; \$8.95 hard-cover, from William Kaufman Inc., One First Street, Los Altos, CA 94022.

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Effects of Chromium in the Canadian Environment, Publication 15017, is available at \$2.00 from Publications, NRCC, Ottawa, Ontario K1A 0R6. Chapters are devoted to the cause/effect interrelations of chromium on biochemical systems, microscopic organisms, (used in fermentation, biological oxidation), aquatic plants and animals, land plants, land animals and man. Analytical methodology, carcinogenicity and mutagenicity are considered.

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Ohio EPA has a series of Environmental Facts, short explanations of the purpose and operations of the various offices in its organization, its programs under 92-500, and other items of interest. For a list of Facts, write to Ohio EPA's Public Interest Center, 361 E. Broad Street, P.O. Box 1049, Columbus, Ohio 43216.

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Upwellings is a newsletter of reports and commentary on news and research around the Great Lakes. The publication covers a broad range of subjects, and is available free from Ms. Leslie Lin, Michigan Sea Grant Program, University of Michigan, 2200 Bonisteel Boulevard, Ann Arbor, Michigan 48102.

## LAWS AND THE COURTS

On October 15, EPA filed a \$2-million suit against the Erie Sewer Authority, the City of Erie and the Commonwealth of Pennsylvania for exceeding the terms of a 1974 wastewater discharge permit for Erie's treatment plant. The 64 million gallons of wastewater which the facility discharges to Lake Erie daily contains too much phosphorus, suspended solids and biochemical oxygen demand.

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On June 2, the U.S. District Court of the District of Columbia ruled in favor of the National Association of Regional Councils by ordering EPA to release \$137-million in unobligated water quality management planning funds under Section 208 of PL 92-500, (The Federal Water Pollution Control Act Amendments of 1972). EPA Region V will be allocated \$18,348,084 through September, 1977.

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Ontario's Environmental Assessment Board met on November 30, to hear the City of Windsor's application for a proposed site for composting sewage sludge. There was no opposition to the proposal. The process which would be used, were the EAB to approve it, decomposes the sludge into a friable "soil". The "soil" would be used to cover a landfill area to improve it for planting. Subsequently the acreage will be used as a golf course and park.

## MEETINGS

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"Land Use - Tough Choices in Today's World" is the topic for a March 21-24, 1977, meeting in Omaha, Nebraska. The lead sponsor is the Soil Conservation Society of America; co-sponsors include: The American Institute of Planners, The National Association of Conservation Districts, and The American Society of Planning Officials. Write to them for further information.

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The Twentieth Conference on Great Lakes Research will be held in Ann Arbor, Michigan, May 10-12, 1977. Further information about this annual IAGLR (International Association

for Great Lakes Research), meeting is available from Dr. Andrew Robertson, Coordinator, 20th Conference IAGLR, GLERL/NOAA, 2300 Washtenaw Avenue, Ann Arbor, Michigan 48104.

### BRIEFS

Governor Wendell R. Anderson has replaced Vice-President-Elect, Walter Mondale in the Congress of the United States as the Senator for Minnesota. Lieutenant-Governor Rudolph Perpiche will take office as the new Governor of Minnesota.

The U.S. Justice Department has interpreted the Coastal Zone Management Act to exclude federal lands from the states' coastal zones. However, under the consistency clause, once a state adopts a Coastal Zone Management Plan, federal actions are to be consistent with it.

Inland Steel of East Chicago, Indiana, will reduce its maximum ammonia discharge by 80%, phenols by 50% and cyanide by 90% by July 1, 1977, to meet conditions of a permit recently issued under provisions of the 1972 Amendments to the Federal Water Pollution Control Act.

U.S. Steel was denied its request for a stay of effectiveness of a similar permit for its Gary, Indiana Works by a U.S. Court of Appeals.

The U.S. Food and Drug Administration announced on October 15, that it would propose an orderly phase-out of fluorocarbon propellants. Late in October, EPA announced that it too would seek a ban.

On November 22, the National Commission on Consumer Product Safety proposed an eventual ban on fluorocarbon aerosols falling under its jurisdiction, (mostly degreasers and household cleaners). The FDA one day later proposed that warning labels be placed on aerosol spray cans to tell consumers that the fluorocarbon gases they contain *may* be harmful to public health and the environment by reducing ozone in the upper atmosphere. The warning would be an interim step towards a

ban on fluorocarbons in all nonessential uses in foods, drugs and cosmetics.

In Canada, the Environmental Contaminants Act could be employed to effect a ban, if an investigative committee (just reported) recommends such action.

Michigan's voters approved a proposition banning throw-away bottles and cans in November. The returnables will be phased in over a two-year period. Ontario has enabling legislation under which a similar program is being effected.

"Environmental risks and costs" were cited by EPA as reasons for deleting wastewater disinfection by chlorine and fecal coliform bacteria limitations from its guidelines on secondary treatment. "Disinfection of Wastewater . . . Task Force Report", MCD-21/EPA-430/9 - 75-012, a review of related data, is available from: Centralized Mailing Lists Services, Bldg. 41, Denver Federal Center, Denver, Colorado 80225.

September, 1976, was proclaimed Great Lakes Awareness Month by the Governors of Wisconsin, Michigan, Minnesota and Indiana, and the Premier of Ontario. The aim was to increase the public's interest in, and knowledge of, the Great Lakes as a natural resource system.

As a fitting end to the month, on September 30, the Great Lakes Basin Commission sponsored a public involvement workshop in Buffalo, New York. Citizen representatives from the eight states and Conservation Authority delegates from Ontario met to discuss ways to inform and interest the general public in Great Lakes issues.

Ontario and Environment Canada will be utilizing the techniques explored at the workshop to increase interest in the "Great Lakes Shore Damage Survey". (For a summary brochure, "Coping with the Great Lakes", write to CCIW, Public Relations Unit, P.O. Box 5050, Burlington, Ontario L7R 4A6; or Ontario Ministry of Natural Resources, Whitney Block - Queen's Park, Toronto, Ontario M7A 1W3).



State attendees will be applying the ideas to their Coastal Zone Management Plan efforts.

At the Great Lakes Basin Commission meeting in Duluth in mid-November, George Alexander, EPA Region V Administrator, and U.S. Chairman of the Great Lakes Water Quality Board, recommended two resolutions which were passed by consensus. They were the following:

"The Great Lakes Basin Commission believes that the control of phosphorus in detergents is an effective action that can be taken to preserve the future quality of the Great Lakes. Therefore, it recommends that all appropriate governments require detergents manufactured or sold for domestic use in the Great Lakes Basin not contain phosphorus in excess of 0.5% by weight expressed as elemental phosphorus".

"In view of the increasing number and seriousness of problems associated with trace toxic substances in the Great Lakes environment, and because of the apparent susceptibility of the Great Lakes to these persistent contaminants, the Great Lakes Basin Commission recommends that the future fate and long-term effects of toxic substances, particularly industrial organic compounds that may find their way into the Great Lakes water resources, be given increased attention by the governments, so that this problem can be put in proper perspective as soon as possible".

Monsanto will be out of the PCBs market by October 31, 1977. Westinghouse is also committed to phase-out. General Electric has agreed to stop using PCBs in capacitors made at Hudson Falls and Fort Edward, New York.

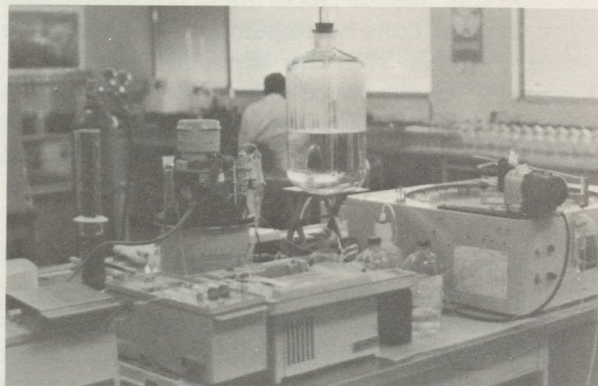
Reed and Abitibi Paper Companies have been charged with offences under Ontario's Environmental Protection Act. The Ministry of the Environment charged that discharges of wood and chemical wastes may impair water quality.

Algoma Steel has pleaded guilty to the Ministry of the Environment's 14 charges of pollution for its excessive discharges of phenols. On January 10, 1977, the assessment of fines and a judgment will occur. Charges were made under sections of the Ontario Water Resources and Environmental Protection Acts.

In Ontario, the Ministries of Health, Natural Resources and the Environment have joint research and action programs on PCBs. MOE is also working with Ontario Hydro to inventory

equipment containing PCBs to insure that all precautions are taken to prevent discharge. Environment Canada and MOE have a program to control discharges to the air from manufacturing plants and incinerators.

U.S. manufacturers, distributors, registrants and formulators of pesticides, 4100 of them, are subject to a selected toxicity test report auditing program of EPA. The audits will be designed to insure that tests are properly performed and reports properly describe tests and their results.



Automatic analysis equipment in the Rexdale laboratory.

The Ministry of the Environment nearshore surveillance vessel, *Guardian 1*.



## NEARSHORE SURVEILLANCE

The Ontario Ministry of the Environment performs nearshore surveillance activities related to implementation of the Great Lakes Water Quality Agreement.

This summer the nearshore survey was of Lake Erie and Lake Ontario. Lake Erie was divided into four cruise sections: (1) Buffalo to Port Colborne; (2) Port Colborne to Dunnville; (3) Dunnville to Port Dover, and (4) Port Dover to Longpoint and return. A member of the Regional Office staff went along on Section (1) of the Lake Erie cruise.

On that cruise, the plan was to sample the head range of the Niagara River and 19 stations between Buffalo and Port Colborne. At each station water samples were collected and sampled for bacteria, chlorophyll, filtered phosphorus, temperature and biochemical oxygen demand (BOD).

The on-board laboratory is used to test or to preserve samples immediately after collection for those parameters which might change before they reach the shore laboratory.

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### AGREEMENT ACTIVITIES

Twice since the last *Focus*, the public has met with members of the Great Lakes Water Quality Board. The first meeting was in Chicago during September, and the second on December 14 in Toronto. Citizens and media representatives expressed concern about the problems of toxic substances, their regulation and control.

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The Pollution from Land Use Activities Reference Group and the Great Lakes Research Advisory Board sponsored a workshop on Fluvial Transport in Kitchener, Ontario, on October 20 - 22, 1976. Scientists from Europe joined with North Americans studying the mechanisms of transport, the process and the deposition of materials transported. Proceedings will be published in 1977.

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In Windsor, November 8 - 10, the Great Lakes Research Advisory Board sponsored a workshop on Environmental Mapping of the Great Lakes. Such mapping may be one possible instrument to help decision-makers balance the potentially conflicting uses of the Great Lakes, so that preservation, restoration and enhancement can occur while economic growth continues and an increased population

places more demands on the Lakes. This workshop was designed to determine whether environmental mapping may be useful for the Great Lakes, and, if so, which parameters can or should be mapped. Proceedings which include recommendations will be available in 1977.

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February 21 - 22, 1977, the Great Lakes Research Advisory Board will sponsor a workshop to examine economic and legal enforcement mechanisms and procedures for control of point and non-point sources of pollution. Invitations have been issued to participants. For a copy of the preliminary program, or to be placed on the proceedings list, write to the Regional Office.

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### PEOPLE

There are two new members of the Great Lakes Research Advisory Board: *Mr. John J. Convery*, Director of the Wastewater Research Division of the Municipal Environmental Research Laboratory - EPA, in Cincinnati, Ohio; and *Dr. Mitchell R. Zvon*, Corporate Medical Director of Hooker Chemicals and Plastics Corporation, in Niagara Falls, New York.

On behalf of all those who have had the pleasure of working with the former members of the Board, thank you for your years of service: *Mrs. Evelyn Stebbins*, *Mrs. Mary Munro*, *Mr. Hugo Holland*, *Mr. Alvin R. Balden* and *Professor Leonard B. Dworsky*.

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*Kenneth Walker*, Deputy Director of the International Joint Commission Regional Office, was awarded a Bronze Medal by EPA for his commendable service during the International Field Year for the Great Lakes.

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### ENVIRONMENTAL ASSESSMENT IN ONTARIO

Future major projects and development programs of the Ontario Government and its principal agencies will require environmental impact assessment, including social, cultural and economic factors, before they are undertaken.

Under new regulations of the Environmental

Assessment Act, effective October 20th, Ontario projects which will require assessment as part of the planning process include; new provincial highways, sewage and water treatment plants, master plans for parks, major building complexes and electrical generating plants and transmission lines.

The Ministry of the Environment, which administers the Act and regulations, will maintain a full public record of assessments under way.

Members of the public and interested parties may request a public hearing conducted by the Environmental Assessment Board, the formal decision-making and hearing agency, on any project under assessment. If no hearings are held, projects can be approved, modified or rejected by the Minister of the Environment with the approval of Cabinet. Where hearings are held, the Board makes the decisions.

Three basic categories of exemption are set out in a new regulation announced with the proclamation:

- Projects deemed to have little environmental effect;
- Individual projects now under construction or so far advanced in planning that the application of the assessment system would be undue interference; and
- Programs in which individual projects would have little environmental effect, but which could be collectively significant. This class of exemption applies only for a limited time.

The regulation provides for projects of municipalities and conservation authorities to be brought under the Act over a period of time. Extension of environmental assessment to the private sector will require a separate proclamation and a new regulation. (O.M.O.E. News Release - October 19).

### THINGS TO SEE

An illustrated lecture on Lake Michigan's surprising wilderness islands is available in the Great Lakes area. The slides portray the history and beauty of the islands in a two-part program. One portion is a photo-journalistic treatment of an adventurous 9-week canoe trip of the islands, sponsored by EPA in 1974; the other is a botanist's view of the same trip.

Michael Steere, and his wife Anne, will travel anywhere in the Region to present their program to any group willing to cover their expenses. Contact them at 434 Kellogg, Ann Arbor, Michigan, (313-663-4951). If you have not seen the islands in person - you, (and your group), will want to see this program.

### TOXIC SUBSTANCES CONTROL ACT PASSES

The last *Focus* forecast that the Toxic Substances Act would not likely be passed before the end of the 94th Congress. Though it did not seem probable, the House and Senate did it; President Ford signed it on October 12, and there is a Toxic Substances Control Act.

Over 40 differences in the bills were ironed out. Votes for passage were 73 - 6, and 360 - 35 in the Senate and House respectively. The Act is effective as of January 1, 1977, with pre-market notifications becoming effective after December, 1977.

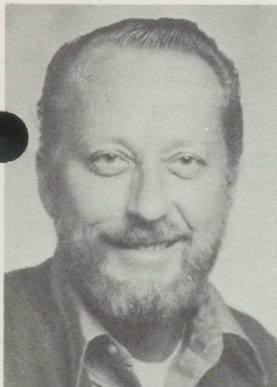
The Act bans PCBs within two years, and authorizes EPA to require manufacturers to test all potentially dangerous chemicals for health and environmental effects before marketing. Further, EPA can limit or block new products found harmful.

Implementation requires EPA to publish a list of *all existing* chemicals by November, 1977. This list will form the basis for determining which chemicals are new and therefore subject to pre-market notification provisions of the Act. The list is to be updated on a continuing basis and is to include chemicals imported to, or manufactured in the U.S. for the previous 3 years. Two agency task forces have been formed: one to develop an overall procedural scheme for toxic substances management under all laws, the other to identify all that EPA must do and to design the implementation strategy under the Toxic Substances Control Act.

Passage of the United States Act and implementation of the Canadian Environmental Contaminants Act will materially assist the implementation of Water Quality Agreement Programs recommended to the Governments over the last several years. In its 1975 report to Governments, the International Joint Commission stated the following:

"Toxic substances, e.g., heavy metals and persistent organic contaminants, may well be the most serious and long term problem governments face in ensuring future beneficial uses of the Great Lakes. They pose threats to water quality, the fishery, human health and ecology in general. Too little is known about these substances, their identity, sources, amounts present, characteristic forms and behavior, and their effects. Control and monitoring programs are imperative. Research is required to enable the establishment of objectives and the evaluation of potential hazards. Effective control laws must be enacted and implemented to the fullest extent possible in both countries as quickly as possible."

*Dr. Robert Slater* has been named the Chairman of the Canadian Section of the Great Lakes Water Quality Board. He is the Ontario Regional Director of the Environmental Protection Service, Department of Fisheries and the Environment. (Courtesy Graphics Division - Environment Canada).



*Dr. G. Keith Rodgers*, Canadian Chairman of the Upper Lakes Reference Group, has been named Associate Director of Research Programs of the Canada Centre for Inland Waters in Burlington, Ontario.



*Mr. Robert White* has joined the IJC's Regional Office as Head of the Research Activities Section. He will utilize his recent experience as Chief, Section of Chemical Research and Analytical Services, U.S. Fish and Wildlife Service, Denver Wildlife Research Center, Denver, Colorado, in directing the activities supporting the Great Lakes Research Advisory Board.



The American Society of Civil Engineers has awarded the J. James R. Croes medal to Frank H. Pearson and *Archie J. McDonnell* for their paper, "Limestone Barriers to Neutralize Acidic Streams". Mr. McDonnell, a Research Advisory Board member, is a professor at the Pennsylvania State University where he is Assistant Director of the Water Resources Research Center.

## OBJECTIVES HEARINGS

On December 7 and 8, the International Joint Commission held public hearings on the water quality objectives recommended to it by the Great Lakes Water Quality Board for annexation to the Great Lakes Water Quality Agreement of 1972.



*Dr. Andrew Robertson* of the Scientific Basis for Water Quality Criteria Task Force responds to questions raised by *Dr. Arnold Timms*.

After opening remarks by Canadian Chairman Maxwell Cohen and Acting United States Chairman Charles Ross, the Water Quality Board Chairmen, *Dr. Robert Slater* (Canada) and *George Alexander* (United States), presented an explanation of what objectives are, what they are supposed to accomplish, the philosophy used in developing the new and revised objectives, and concluded by listing the proposed objectives.

Comments were presented by the Conservation Council of Ontario, the Lake Erie Task

Force of Great Lakes Tomorrow, Lake Michigan Federation, Ministry of the Environment, and PACE (the Petroleum Association for Conservation of the Canadian Environment). The Commission and its advisors: members of the Water Quality Board, its Water Quality Objectives Subcommittee, and the Research Advisory Board's Water Quality Criteria Task Force responded to questions raised and points of clarification requested during the presentations.

The objective which received the most extensive comments was the one proposed for mixing zones. Persons commenting were particularly interested in the guidelines for establishing mixing zones.

Since the hearings, additional comments have been received from the United States Department of Agriculture, the League of

Women Voters-Lake Erie Basin Committee, NOACA (Northeast Ohio Areawide Coordinating Agency), DuPont de Nemours and Company, Hammermill Paper Company, and The Sierra Club.

The hearing record will remain open until February 1, 1977. Persons who have not yet submitted briefs are encouraged to do so. Send your comments to the International Joint Commission, Great Lakes Regional Office. The Commission is particularly interested in receiving information relating to economic and social effects which regulations based on the objectives could cause.

#### FOR ADDITIONAL COPIES

Write to Patricia Bonner - Editor, Great Lakes Focus, IJC Regional Office, 100 Quellerie Avenue, Windsor, Ontario, Canada N9A 6T3.

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