1976

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

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IJC WELCOMES MEDIA AND THE PUBLIC TO WATER QUALITY AGREEMENT ANNUAL MEETING

The I.J.C. will hear the presentations of the four major institutions reporting to it under the Water Quality Agreement from July 19-22 in Windsor, Ontario. This four-day event marks the first time that the Commission has opened such a meeting to the media and general public. The meetings will be held at the Cleary Auditorium and Convention Centre.

On July 19, beginning at 9:00 a.m., the International Reference Group on Upper Lakes Pollution will present the final report of its three-year study. The Group's report will include conclusions and recommendations regarding the condition of Lake Superior and Lake Huron-Georgian Bay, sources of pollution, and recommendations for programs to maintain or enhance water quality in the Upper Lakes. At 5:00 p.m. there will be a news conference.

The International Reference Group on Pollution from Land Use Activities (PLUARG) will give a progress report on its investigations on July 20 from 9:00 a.m. until 1:00 p.m. The Group's studies will not be completed until 1978.

The Great Lakes Water Quality Board will present its Fourth Annual Report July 21 beginning at 9:00 a.m. and continuing until 4:30 p.m. The Board's report will provide an assessment of water quality in the Great Lakes with emphasis on Lake Ontario. Detailed information on the progress of municipal and industrial programs will be presented as will an overview of current efforts to control nonpoint sources. The Board will present new and revised specific water quality objectives and details of the proposed International Quality Water Surveillance Program to improve the effectiveness of the Agreement. In this year's report special emphasis will be given to three major issues for Great Lakes Water Quality: radioactivity, toxic and hazardous substances (PCBs, DDT, Mirex), and the adequacy of present phosphorus control programs. A news conference will be held beginning at 5:00 p.m.

The Great Lakes Research Advisory Board will report its programs for 1975 from 9:00 a.m. until 12:15 p.m. on July 22. One of the Board's emphases will be research needs for the Great Lakes.

Anyone interested in attending these meetings will be welcome, but accommodations in the City of Windsor will definitely be limited since the city is also hosting the 1976 Canadian Golf Tournament during the same week.
NATIONAL COMMISSION ON WATER QUALITY

In its recently released final revised report to Congress (NCWQ) the National Commission on Water Quality made several recommendations of interest:

- Compliance date for uniform treatment requirements — Maintain July 1, 1977, date for both industry and publicly owned treatment works compliance, but provide some flexibility on grant extensions, and waivers, on a (continued on back page)

PCBs

An ad hoc committee of industrial representatives, citizen environmental groups and other state departments’ staff members is working with the Department of Natural Resources in development of rules to implement Michigan’s new PCB law.

The legislation bans further manufacture of the chemical compound for uses that might lead to contamination of surface or ground waters. Only “closed system” electrical capacitors and transformers will be allowed to contain PCBs.

The PCB rules committee is charged with mapping out the most efficient technical procedures for handling, disposal and reporting of PCB uses.

Wisconsin’s law on PCBs, effective January 1, 1977, states that 0.01 mg/l (as measured in a 24-hour composite sample) may be discharged; this is to decrease to 0.005 mg/l by February 2, 1979. The Department of Natural Resources has asked the legislature to ban use, sale, purchase, or manufacture of PCBs after February 1, 1977, except in limited instances.

Indiana’s law, effective May 1, 1976, prohibits manufacture, sale or use of any product containing PCBs in excess of 250,000 parts per million (ppm) after January 1, 1977; 1,000 ppm after January 1, 1978; and 100 ppm after January 1, 1979. The 1979 restriction could be made stronger if the state environmental management board determines that the 100 ppm level is inadequate. The law also has a provision requiring that users of all products with over 100 ppm PCBs file annual reports stating how much of the chemical is used, label products with PCBs, and dispose of all PCBs wastes in conformance with the state board’s rules.

Minnesota’s law states that “Beginning January 1, 1978, no person shall use, possess, sell, purchase or manufacture PCB or any product containing PCB unless exempted by the agency. If the Minnesota Pollution Control Agency finds, after there is opportunity of a public hearing on an application presented by any person, that no substitutes or feasible alternatives are reasonably available for PCB or a product containing PCB or class of products containing PCB, it shall grant a certificate of exemption which shall clearly set out the permitted use, possession, sale or purchase of PCB or a product containing PCB.” Beginning July 1, 1977, all new items, products or materials with PCBs must be conspicuously labeled to show they contain PCBs. The label must specify concentrations.

One provision which the new laws do not seem to have (only the Minnesota law has been reviewed in other than summary form) is some means to safeguard people working with products containing PCBs which already are on the market. Are there large transformers (and capacitors) which should be labeled so that persons moving them, disposing of them or draining them are made aware of the potential hazard?

At the March Water Quality Board meeting in Detroit, the Environmental Protection Agency reported that meetings have gone on between its administrator (Train), industry and other federal agencies on phasing out the use of PCBs; electrical industry guidelines on handling and disposal of PCBs are in final draft; and a special Toxicology Committee of HEW is reviewing the possibility of lowering present 5 ppm limit on foods for human consumption.

TOXICITY OF METALS

The proceedings of an IJC Research Advisory Board sponsored symposium held in October 1975 on the toxicity of metal forms in natural waters to biota are now available. Two
committees working to develop water quality objectives for the Great Lakes recommended that the symposium be held because the members did not believe scientifically defensible objectives could be prepared at the time. They stated that the underlying chemical and physiological bases for such toxicity are not well understood; this, despite 30-40 years of research on heavy metals toxicity.

Most past research and all current objectives are based on total metal concentration. However, the toxicity of metals in the natural environment may be affected by oxidation state, solubility, complexation, ionic strength and the presence of organic matter. With recent advances in solid-state electronics and ion-sensing electrodes, there has been a resurgence of interest in developing analytical methods to enable differentiation of the various chemical states with the intention of relating the concentrations of the different forms to their toxicity to biota.

At the symposium papers were presented and discussions were conducted to determine whether heavy metals objectives for the Great Lakes could be based on species of metals. The latest research findings in areas of heavy metal forms (speciation), toxicity and cause-effect relationships were presented. The discussions were structured to define research needs to enable future concerted efforts of aquatic biologists and analytical chemists.

Chemical, biological and monitoring needs were defined based on two overall conclusions:

1. There is a need for an understanding of the changes that can take place in the chemical forms of heavy metals when these are introduced into the Great Lakes and of the ultimate fate of these forms.

2. The biological impact of the various chemical forms of each heavy metal must be understood in order to assess adequately the permissible concentrations in Great Lakes waters.

For more details regarding the research needs, write to the Regional Office for a technical note summary. Limited copies of the proceedings are also available.

ENVIROMENTAL CONTAMINANTS ACT

Canada's Environmental Contaminants Act became law on April 1, 1976. Anyone intending to manufacture or import a new chemical in amounts in excess of 500 pounds is required to report his intent to the federal Minister of the Environment. The report is to state the amount and any available information about the hazards related to the chemical.

Information submitted will be processed by the Environmental Contaminants Control Branch. Since some of the information will be proprietary, there will be strict security to protect the marketer. However, Jean Marchand, Minister of the Environment, has stated that all task force reports and other conclusive documentation will be made public.

The federal environment department has the power to control or limit manufacture or import of substances which it determines may cause indirect harm to humans by upsetting the ecological balance. Further, it can impose penalties of up to $100,000 and two years imprisonment upon violators.

The first substances under investigation are PCBs. The task force report is nearing completion, and after full review, proposed regulations will be published for public review. If objections are filed, a board of review would be established and further study would be undertaken. No other substances are now being investigated by task forces.

Although Canada's Environmental Protection Act has become law, it will not become effective until regulations have promulgated.

CORPS' LAKE ERIE REPORT

The Buffalo District of the Corps of Engineers recently completed a preliminary report in its Lake Erie Wastewater Management Study. The report concludes that current plans for reducing pollutant loads to Lake Erie will not be sufficient to restore all of Lake Erie to a more desirable condition. It notes that attention must be given to reducing the amount of phosphorus which enters the lake from "diffuse" sources, those which cannot be pinpointed.
In its Preliminary Feasibility Report the Corps concludes:

(1) The preponderance of diffuse phosphorus loads to Lake Erie is carried by streamflows resulting from storm events which represent only a small portion of the total duration of flows to the lake. For most streams sampled, a significantly high correlation between phosphorus flux and water discharge is evident. Several streams show similar correlations for nitrogen, and there is also a high correlation between suspended solids carried by a stream and phosphorus flux. The flow interval method for developing load estimates, used in conjunction with high-flow-event water quality sampling, can significantly improve estimates for phosphorus loads to Lake Erie. Methods are now available for extrapolating estimates of phosphorus loads for all tributaries of Lake Erie, including those with sparse water quality records. Further, previously collected low-flow data are at least partially useful for long-term trend analysis and for development of regional models.

(2) Mathematical models are available for evaluation of the effect of reduced phosphorus loading on the quality of Lake Erie waters.

(3) Diffuse sources account for approximately 44 percent of the tributary area phosphorus loads to Lake Erie. Therefore point source control programs are not sufficient to meet the Agreement’s phosphorus goal.

(4) A load reduction plan which reduces Lake Erie point phosphorus loadings by 4,900 metric tons per year and diffuse sources by 2,200 metric tons per year is the most reasonable plan developed during the preliminary study phase.

(5) Current wastewater management planning activities generally are not advanced enough for definitive estimates of their effects on reduction of phosphorus loads.

(6) Methodologies are required for determining the response of a watershed to phosphorus application and the availability for biological uptake of the phosphorus which reaches the lake.

(7) Economic, social and environmental impacts of the proposed techniques for reducing phosphorus loads must be analyzed.

LEGISLATION AND THE COURTS

The Environmental Protection Agency’s decision to exempt Ohio’s Mahoning Valley iron and steel industry from national effluent guidelines is being challenged by the Sierra Club (Cleveland). Other possible challenges could come from Pennsylvania and the Natural Resources Defense Council. Some of the Mahoning Valley plants have been operating since 1910. The eight plants employ 25,000 and 10-25,000 more have jobs in steel-dependent industries. EPA took the closedown threats seriously. To clean up the pollution to meet 1977 standards would cost approximately $145 million in construction and $40 million more in operating costs; to meet 1983 standards another $122 and $42 million would have to be spent.

The Environmental Protection Agency has, recommended agricultural practices under the Federal Environmental Protection Control Act of 1972 (Federal Insecticide, Fungicide and Rodenticide Act as amended) that:

• Give the highest priority to the breeding and growing of food crops that can fix their own nitrogen and ward off pests and diseases.

• Invent and employ pesticides that affect only specific pests and that break down quickly once their job is done.

• Rely, more and more, on the principles of integrated pest management (combinations of natural and chemical controls).

• Make use whenever they can of the growing amounts of municipal and other wastes to replenish the soil.

Because of release of asbestiform fibres associated with taconite tailings, Reserve Mining
Company, and its parent companies Armco Steel and Republic Steel, are liable for all interim costs of the filtration and water supply expenses incurred to furnish several Lake Superior communities with safe drinking water, United States District Court, District Court of Minnesota Judge, J. Devitt ruled. A separate decision will be rendered regarding expenses incurred by Duluth.

Russell Train, in testifying before the House Public Works Subcommittee on construction grants and permit programs, urged these PL 92-500 amendments: continued use of ad Valorem taxes by communities already doing so; concentration on significant discharges and removal of requirement to issue permits to all point sources; extension of July 1977 deadline on a case-by-case basis.

On March 26, 1976, the United States Senate passed a toxic substance bill (S 3149) by a 60 to 13 vote. The bill, a revision of Senator John Tunney's (S 776), incorporates most of the provisions of House bill (HR 10318). It was sent to the floor by the Senate Commerce Committee with a resounding 18-0 vote of approval.

The bill now contains provisions for premarket notification for new chemicals or new uses of present substances, gives citizens an opportunity to file suit against violators or against EPA for nonperformance, and gives EPA power to restrict or ban the use, require record keeping, or limit production of substances found hazardous. In addition, the EPA Administrator can require testing of a chemical if it presents an unreasonable risk to people's health or to the environment.

In the House of Representatives on March 4, Rep. John McCollister introduced HR 12336, a bill less stringent than HR 10318. The new bill, said to have Administration support, gives the Environmental Protection Agency Administrator more discretion, exempts small businesses from the reporting and record keeping requirements of the bill, and, by limiting to "proven hazards", cuts the number of toxics to be tested.

The CAC (Citizens Advisory Council) of Pennsylvania's Environmental Resources Department voted in February to support the pending state bill SB 229 which empowers the Environmental Quality Board to review and set fees to cover costs to the department of processing applications for permits, licenses and registrations. The bill was passed by the Senate with a 45 to 2 vote last June but has been stalled in the House Rules Committee.

**MINNESOTA'S APPROACH TO HAZARDOUS WASTES**

*by C. Perkett, MPCA*

The media in recent months has done much to raise the public's consciousness of the hazardous waste management problem. Past incidents of surface and ground water contamination, fires, and personal injury caused by accidents clearly illustrate a need to examine all the interrelated, intermedial aspects of the problem and to implement both preventive and abatement programs.

The Minnesota Pollution Control Agency (MPCA) is in the process of developing, through regulations, a program for hazardous waste management. The two areas of concern are development of proper facilities to handle toxic and hazardous wastes and tighter controls over waste management and handling practices.

Included in the regulations are control measures for each phase of the handling operation. A method of classification using the physical, chemical, and biological properties of each waste is being developed to provide a uniform approach to the processing of wastes.

The producers of toxic and hazardous waste will be responsible for evaluating the properties and determining if it is hazardous. MPCA will use its data on Minnesota's industries and EPA's extensive information about the wastes produced by industrial processes to double check such designations. Once a waste is determined to be hazardous, and is stated to be by MPCA, the regulations will automatically incorporate conditions pertaining to labeling, storage, transportation, facilities, and final disposition.
Containers will be required to meet sound standards and to bear appropriate warning labels; transportation vehicles will be required to have safety equipment and to meet standards; and facilities will be obliged to meet performance specifications. Then, the producer must assure the safe and proper handling of a hazardous waste from his plant to the final treatment or disposal facility.

According to the program, the Agency will supervise the shipments of all wastes by requiring the producer, transporter, and operator to maintain a thorough record and reporting system. Reports will accompany each shipment. A transporter will file a report when hazardous waste leaves his facility. The receiver will file a report regarding that waste's treatment or disposal. Resource recovery processes will also be covered by reporting requirements. The overall effect will be a monitoring system of waste controlled from the "cradle to the grave".

The emphasis of the program is proper management through source reduction, recycling, and energy recovery. MPCA believes that these, more than other technologies, embody sound policies of resource conservation. In addition, techniques for waste disposal such as land storage sites, treatment, and incineration are being considered.

The problem facing Minnesota and the Great Lakes Basin today is that adequate facilities to treat, incinerate, and dispose of hazardous waste are few. A strong program is probably not possible without specific regulatory action to eliminate competition from operators using cheaper, improper techniques.

Proper treatment, handling, and disposal of hazardous waste will undoubtedly lead to higher costs for the producer and ultimately for the consumer. The burden to the consumer will be reflected directly in product cost. Eventually this may present an advantage for the products in the market place produced with the least amount of hazardous by-products, and thereby the lesser costs.

In summary, the program is directed toward solving the hazardous waste problem at its source. The key element in the program is regulations which are being developed now and will be offered for public hearings this fall. It is hoped that the adoption of the regulations (amended as necessary) and the implementation of the program in the near future will lead to responsible management of hazardous wastes in Minnesota.

For additional information, write to:
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CANADA-ONTARIO AGREEMENT RESPECTING GREAT LAKES WATER QUALITY

On March 12, 1976, the Minister of the Department of the Environment, Canada, and the Minister of the Environment, Ontario, signed an agreement amending the previous Canada-Ontario Agreement on Great Lakes Water Quality (1971). The new Agreement strengthens the effort needed to fulfill Canada's obligations under the joint U.S.-Canada Great Lakes Water Quality Agreement (GLWQA). The commitment required under the Agreement cannot be met by Canada or Ontario alone since the province has control over use and management of its natural resources, thereby limiting federal jurisdiction.

With the new Agreement, Ontario will continue to be closely involved in deliberations concerning the international Agreement. The province has pledged to take part in the development of an annex to the GLWQA on the control of hazardous polluting substances. In addition, the two Governments agreed to joint consultation on any recommendation made by the IJC as a result of the PLUARG studies. If any changes are proposed for implementation of the GLWQA which may affect programs underway, Canada and Ontario will jointly review Canada's obligations under the Agreement and make appropriate recommendations to the Commission. Ontario will also be consulted about any arrangements made by Canada and the U.S. which will affect the new Canada-Ontario Agreement. Ontario has assured Canada that it will continue to provide the IJC
with such water quality data and other assistance necessary to perform its role under the GLWQA.

The provincial-federal agreement recognizes the water quality objectives detailed in the Canada-U.S. Agreement as minimum levels which do not preclude more stringent requirements. These objectives form the basis for designing and assessing programs to maintain the water quality of the Great Lakes. Such programs will include additional action on industrial and municipal waste treatment, pollution from combined storm and sanitary sewers, phosphorus control, and elimination of toxic material, thermal, and radioactive discharges. Measures to control vessel wastes and the removal of polluted dredged spoil are also taken into consideration. In addition, any amendments affecting Ontario's part in the contingency plans required by the GLWQA will be made with the province's consent.

Provision is also made for surveillance activities to monitor water quality of the boundary waters. The $1,500,000 costs of these programs and research undertaken for the Agreement in 1976 will be shared equally between Canada and Ontario. Cost sharing will continue in future years.

Finally, the new Agreement excludes the arrangements for funding of sewage works as contained in the original agreement, but it maintains the Board of Review which consults, monitors and reports to the governments on the performance of the federal-provincial agreement.

**PEOPLE**

Kenneth H. Walker is the new Deputy Director of the Regional Office. Mr. Walker, a sanitary engineering graduate of Rensselaer Polytechnic Institute, has been the Environmental Protection Agency Rochester Field Office Director since 1972. His experience with EPA, the U.S. Public Health Service, county government and environmental publications will all be valuable to his work with the Research Advisory Board, Water Quality Board and other Agreement institutions.

George Reed Alexander, Jr. is the new United States Chairman of the Great Lakes Water Quality Board, replacing Francis T. Mayo. Mr. Alexander has stated that EPA and EPA-supported work relating to the Water Quality Agreement is going to retain and even increase its priority while he is Region V Administrator.

Dr. Donald Mount is now United States Chairman of the Great Lakes Research Advisory Board. Dr. Mount, Director of the Environmental Protection Agency's Environmental Research Laboratory in Duluth, Minnesota for the past nine years, would like to see the Board develop methods to foresee water quality problems in the Great Lakes before they become crises of international proportion. He replaces Dr. A. F. Bartsch, Director of the Environmental Protection Agency Laboratory in Corvallis, Oregon.

Peter A. A. Berle, former state assemblyman and environmental lawyer, is the new Commissioner of New York State's Department of Environmental Conservation. He replaced Ogden Reid.

**FROM OUR READERS**

A note of thanks to A.A.U.W.'s Helen Bieker for sending a quotation from the Citizens Energy Coalition's *Citizen's Power* extending the Bailly nuclear plant item in *Focus* 4:

"The Supreme Court did not grant Bailly a construction permit, however. It ordered the Circuit Court to reopen their hearings to decide on several other objections to Bailly raised by citizen opponents of the reactor.
These objections include environmental and legal issues stemming from Bailly’s proximity to Indiana Dunes National Lakeshore.”

A Summary of the Proposed Regulations to Control Discharges of Hazardous Substances under Section 311 of P.L. 92-500

by

Jonathan E. Amson
Hazardous Substance Branch
United States Environmental Protection Agency

In FOCUS 3 it was stated that the United States has not yet prepared legislation on hazardous and toxic substances. This is not completely correct. The following is a response by a member of the staff of the United States Environmental Protection Agency that has, in fact, proposed hazardous substances legislation.

1. Introduction

On December 30, 1975, the United States Environmental Protection Agency published a Notice of Proposed Rulemaking (NPR) for controlling discharges of hazardous substances. The NPR covers four specific requirements of Section 311 of the Federal Water Pollution Control Act Amendments of 1972 (PL 92-500): designation of hazardous substances, determination of their actual removability and harmful quantity, and stipulation of rates of penalty for discharge in excess of the determined quantity.

An Advance Notice of Proposed Rulemaking (ANPR) published in 1974, proposed the designation of 375 substances as hazardous. Public comments were solicited on the choice of substances, the tentative selection criteria and the determination of removability. The ANPR also requested information on spills of the proposed substances, the potential economic impact of implementing regulations for their discharge, and existing measures and costs for spill prevention.

As a result of comments received and further evaluation of the data base, 306 hazardous materials were specified. The selection criteria detailed in the NPR were based on such factors of aquatic, oral, dermal and inhalational toxicity, as well as potential for discharge which was referred to as “spill potential”. Determination of the latter was based on the substance’s past history of spillage, production quantities, use and distribution patterns, and value.

2. Magnitude of the Problem

Spills generally cannot be predicted for either time or location. Spills, particularly from transportation sources, are often a sudden release of a pollutant resulting in a rapid increase in concentration in the water. Both the rate of pollutant discharge and the flow characteristics of the receiving water body can affect this concentration. Water quality (in the spill area) is usually affected for only a relatively short period of time by the material itself, but the long-term effects of a severe or particularly widespread spill may be considerable.

The existing data base consists of records of spills voluntarily reported or fortuitously discovered. Since reporting was not required until substances were designated and their harmful quantities established, only a limited percentage of the actual chemical spills are recorded. It may be assumed, however, that the data are representative of the types, sources and causes of the spills.

From July 1972 through December 1974, EPA has on record an average of 70 spills per year where there was an actual release of a designated substance into water. Based on the ten-fold increase in reports following the institution of mandatory reporting for oil spills, it is anticipated that there will be a similar increase in reports of hazardous substances spills after promulgation of these regulations.
3. Designation of Hazardous Substances

One mandate of section 311 instructs EPA to publish regulations designating substances, other than oil, as hazardous when discharged in sufficient quantity to "present an imminent and substantial danger to the public health or welfare, including fish, shellfish, wildlife, shorelines and beaches". Although the degree of danger is dependent on many factors, the usual method for quantifying risk is through the use of bioassays which measure toxicity. In its designation of hazardous substances, EPA utilized criteria for highly toxic materials previously specified for enforcement of the Federal Insecticide, Fungicide, and Rodenticide Act. These limits are considered by the Agency as the most acceptable ones for the establishment of the concept of imminent and substantial danger to humans and wildlife from spilled pollutants.

4. Determination of Removability

EPA is required under another mandate of Section 311 to determine actual removability in advance of designating hazardous substances. Because of the variety of circumstances (such as amount, possibility for containment and weather) which can affect removal of substances from water, the technical basis for the determination is restricted to the physical and chemical characteristics of the material. Those properties which can influence the behavior of a substance in water include solubility, specific gravity, viscosity, surface tension, vapor pressure, hydrolytic reactions, and ability to form colloids. However, local conditions can also affect these properties. Thus, a conclusive evaluation of removability is not possible in advance. As a result, all proposed hazardous substance were deemed non-removable in the NPR, although this concept may be changed in the final rulemaking.

5. Determination of Harmful Quantity

EPA is also responsible for promulgating regulations to determine the times, locations, circumstances, conditions and quantities of any hazardous substance discharge which will be harmful to public health and welfare. EPA divided substances into four categories, A through D, with A as the most harmful to the environment. The pound was chosen as the unit to use in defining quantities; one pound is defined as the harmful quantity for the most toxic substances, Category A.

The specific instructions to designate elements and compounds as hazardous substances has led to the development of methods for defining harmful quantities based on pure compound characteristics. Damages caused by individual constituents are therefore considered to be additive. For a mixture or compound of substances X, Y and Z, the weight of each constituent is divided by the quantity of it defined as harmful. The three fractions are then added, and if the total exceeds 1, the harmful quantity of the mixture or solution has been exceeded in the discharge.

6. Determination of Rates of Penalty

Finally, another mandate of Section 311 directs EPA to establish "a unit of measurement" for each designated hazardous substance and specifies that civil penalties be from $100 to $1,000 per unit of measurement. Agency studies have not found common units except for the pound. Multiples of this basic unit are utilized throughout industry, but no single multiple was found as representative of the usual trade practice for any chemical. Consequently, the weight corresponding to the smallest common commercial container size, one pound, previously adopted as the "harmful quantity" for materials in the most toxic category, has also been chosen as the "unit of measurement" and assigned a base penalty of $1,000 per unit. Since all substances within a category do not exert their damaging effects equally, the base rates can be modified by use of a physical/chemical/dispersal adjustment factor, thereby allowing the final penalty rates to fall within the legislatively mandated range of $100 to $1,000 per unit of measurement.

7. Joint United States-Canada Great Lakes Agreement

It should be noted that Article V of the United States-Canada Great Lakes Water Quality Agreement of 1972 called for the development of an annex concerned with the identification of hazardous polluting substances and their dis-
charge. Annex 9, which is presently under consideration by the two Governments also has another purpose: to support the provisions of Annex 6 relating to polluted dredge spoil.

During the development Annexes 3 and 7, which identify programs for prevention and control of discharges from vessels and facilities, a joint working group took into account U.S. and Canadian legislation dealing with hazardous materials. Although both countries recognized the need to identify hazardous substances, it was recognized that United States and Canadian laws that deal with hazardous and polluting substances differ in structure. Canadian laws are more flexible than PL 92-500 which requires the four very specific determinations noted above.

Designed to accommodate this divergence in law, Annex 9 provides for a list of hazardous polluting substances. However, it should be recognized that this list is not to be regarded as complete, all-encompassing or final.

NOTE: This Focus article is a summation of a longer, more detailed, version which is available from the Regional Office. On April 25-28, 1976, EPA and the Oil Spill Control Association of America sponsored a conference in New Orleans, Louisiana, entitled “Control of Hazardous Material Spills”. Proceedings are available from Information Transfer, Inc., 1160 Rockville Pike, Rockville, Md. 20852 at a cost of $25. Two papers in that symposium are particularly applicable to the discussion above: “The Use of Spill Potential in the Designation of Hazardous Substances”, by Allen L. Jennings and Charles R. Gentry; and “Analysis of the Economic Impact of Hazardous Substances Regulations” by Jonathan E. Amson.

**MUNICIPAL CONSTRUCTION STATUS**

By the end of 1975, 203 communities on the United States side of the Great Lakes Basin had sewage treatment facilities construction under way. When all these new plants and existing plant improvements are completed (1983), 92 percent of the sewered population of the Basin will be served with adequate treatament.

These conclusions were provided by the Environmental Protection Agency after it had completed an analysis of municipalities with systems discharging a million or more gallons of treated wastewater a day into streams, rivers or lakes.

Projections of progress included in the analysis indicate that 234 municipalities serving nearly 99 percent of the sewered population will have adequate facilities under way by September 30, 1977. By that date, the close of the 1977 fiscal year, federal and state governments will have made available $4.4 billion to those communities.

**VESSEL WASTES**

The problem of achieving compatible regulations for vessel wastes, as required by the Great Lakes Agreement, remains. United States regulations are somewhat less stringent than draft Canadian ones in the quality of effluent allowed, but they do permit state governments to apply for no-discharge zones. Michigan has been granted permission and intends to apply no-discharge provisions to all Michigan waters including that state’s areas of Lake Erie, Lake Huron, Lake Superior, and the St. Clair and Detroit rivers. Shippers have filed for an injunction to stop enforcement of the zero discharge regulation by Michigan.

The Michigan no-discharge provision could mean that Canadian vessels must have holding tanks and, or instead of, treatment systems if they want to go into the Upper Lakes.

Wisconsin has also applied for no-discharge in its waters and EPA has approved it for Lake Michigan, but not Lake Superior. Minnesota too is preparing an application.

**BRIEFS**

Of the 1,500 Michigan National Pollutant Discharge Elimination System (NPDES) permits developed by that state’s Department of Natural Resources staff, only four are being contested. In Ohio 54 major permits remain to be issued; in Minnesota, there are nine. The majority of these are in the adjudicatory hearing and court appeal stage. Indiana, Michigan, Ohio and Wisconsin took 1,093 formal enforcement actions in the last six months of 1975; EPA referred 59 violators to the local U.S. attorney and initiated 334 informal enforcement actions during the same period. For more details, see “NPDES program switches emphasis” by Jane Wissemes, the April issue of the EPA Region Newsletter, *Environment Midwest*. 
In March, six hazards in the environment: mercury, lead, radiation, nitrogen oxides, asbestos and vinyl chloride were the subject of a Science Council of Canada seminar to explain a study on policies and poisons.

A new 15-member Council of Environmental Programs will be established at the University of Michigan to coordinate campus environmental studies programs and develop a core program of environmental courses.

Canada and Ontario have signed an accord for protection and enhancement of general environmental quality. Cost-sharing for joint programs of data gathering, assessment, research and design will be affected on 50/50 basis except in special circumstances where other proportions are indicated. (Legacy March/April, 1976)

Environmental Protection Agency has proposed control of agricultural activities under the NPDES system. To be regulated are agricultural activities, particularly irrigation, resulting in surface discharges.

1. Which contain pollutants; and
2. Which result from the controlled application of water by any person, and which are not caused or initiated solely by natural processes such as precipitation; and
3. Which are discharged from a discernible, confined and discrete conveyance; and
4. Which are directly discharged into navigable waters; are subject to regulation under section 402, the NPDES permit program.

Once an agricultural activity is defined as a point source according to these criteria, it may discharge in accordance with the general permit(s) to be issued under procedures which will be proposed simultaneously with the promulgation of these regulations.

Feedlot owners with under 300 animals and feedlots not discharging into navigable waters will be exempted unless designated on a case-by-case basis. Any operator with more than 1,000 animals must get a permit. Operations between 300 and 1,000 animals need permits only under certain conditions. (See Federal Register, Vol 41, No. 36, February 23, 1976 for more details).

An Environmental Protection Agency order for the end to production of most pesticides containing mercury has been postponed to June 30, 1976, because of the number of suits filed by paint and turf fungicide manufacturers. Compounds in question are used in seed treatment, paints, turf fungicides, control of Dutch elm disease and on outdoor fabrics.

On April 1 Environmental Protection Agency issued a “guidance” document for disposal of wastes containing PCBs. The agency stated that landfill disposal is not suitable and outlined needs for disposing of liquids and solids with PCBs.

The General Accounting Office (GAO) says than in its review of 100 registered pesticides containing 36 active-ingredient chemicals, it found that 64% lacked testing data on possible mutagenic effects, 39% on teratogenic effects, 19% on reproductive effects, and 19% on oncogenic effects.

Trout taken from Western Lake Superior have detectable levels of toxic compounds (PCBs, mercury, DDT) according to findings of the Great Lakes Environmental Contaminants survey prepared by Michigan Departments of Natural Resources, Public Health and Agriculture, United States Federal Department of Agriculture, and the United States Bureau of Sport Fisheries and Wildlife. Of the fish samples taken from the Isle Royale area, 75 percent exceeded FDA’s 0.5 ppm of mercury and 17 percent had PCB traces. Of fish taken from the Black River-Ontanogan area 68 percent exceeded mercury limits and 38 percent exceeded DDT limits. From Marquette-Munising area, 70 percent of the fish had PCB traces. For more details, contact Michigan’s Department of Natural Resources in Lansing.

Environmental Protection Agency is preparing regulations which would delete the fecal coliform limitations from the definition of secondary treatment of wastewater. Another revision would allow the suspended solids limitations to be raised so that small communities could use waste stabilization ponds to meet secondary treatment requirements under 92-500.
case-by-case and category-by-category basis.

- 1983 interim water quality goal — Maintain substance, but postpone deadline for actual application of uniform technologies for 5 to 10 years pending on assessment of progress in water quality improvement and review of these results by a new NCWQ. The 1983 interim water quality goal would be met by: applying the 1977 requirements to all dischargers; revising 1977 limitations periodically to reflect advances in practicable control technology; applying effluent limitations for the elimination of the discharge of toxic pollutants in toxic amounts beginning immediately; applying new source performance standards for all new point source dischargers; periodic upgrading of permits for discharges into water quality limited waters; and applying control measures to combined sewer overflows, urban stormwater runoff, and agricultural and nonpoint sources.

- Decentralization — Selectively certify states to perform regulatory and administrative functions, based on satisfactory state plans and programs to control both point and nonpoint sources (including irrigated agriculture).

- Construction grants program funding — Stabilize by assuring 75 percent federal financing for priority treatment needs at a fixed amount (not less than $5 billion per year) for a specified number of years (5 to 10).

- Goal redefinition — Change goal of zero discharge by 1985 to stress conservation and reuse of resources.