might arise between the United States and Canada. To assist the two Governments in the implementation of the Treaty’s provisions, an independent organization known as the International Joint Commission was formed.

The Commission is a binational, unitary body comprised of equal membership from each country which oversees and approves the use of our shared fresh water resources. The establishment of the Commission has enabled the two sovereign powers to utilize the boundary waters to mutual advantage, in an efficient manner, and without the case by case negotiation demanded of all other such types of resource use. Since its inception 70 years ago, the Commission has acted on a variety of boundary water matters, providing peaceful and timely solutions and recommendations when views differ. As a result, the purpose of the Treaty has been achieved.

The Commission serves in a dual capacity. As a quasi-judicial body it has jurisdiction over matters affecting the levels and flows of boundary waters. The Commission also acts as an advisory body, investigating and making recommendations on matters referred to it by the two Governments relating to those waters. In recent years, an increasing amount of the Commission’s work has focused on the Great Lakes.

Although the Commission may recommend that Governments adopt programs to achieve certain objectives, the Commission has traditionally refrained from commenting on the substance of proposed legislation, as we deem that to be an internal matter of the individual Federal Governments. We believe, however, that our experience as part of a cooperative international effort to achieve shared objectives in the Great Lakes Basin may assist this Subcommittee when considering legislation which will have an impact upon our northern neighbor.

The Commission has been vitally

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interested in the Great Lakes since 1912 when it received a reference from Governments to study the problem of pollution in waters along the boundary, including the Great Lakes. The past decade has seen increased Commission attention to Great Lakes water quality issues. Our increased activity has been due primarily to the decision of the United States and Canadian Governments to enter into two Agreements on Great Lakes Water Quality.

In 1970, the Commission issued its Report on Pollution of Lake Erie, Lake Ontario and the International Section of the St. Lawrence River. The Commission found that the waters of the Lower Lakes were being polluted on both sides of the boundary, "...to an extent which is causing injury to health and property on the other side of the boundary...," referring to Article IV of the Boundary Waters Treaty. The Commission identified water quality objectives which, if met, would enable both countries to fulfill their mutual obligations under the Treaty. The Commission recommended that these objectives be formally adopted by the two countries and that Canada and the United States enter into agreement on programs and measures to be taken in order to achieve them. It was also recommended that the two countries develop compatible and coordinated programs, in concert with provincial and state governments, to control pollution of the lakes from phosphorus, pesticides, toxic and hazardous materials, and other pollutants. It was in this spirit that President Reagan, during his trip to Ottawa in March, 1981, pledged his continued support of the 1978 Agreement, "...to protect our joint heritage in the Great Lakes."

Pursuant to this Report, President Nixon and Prime Minister Trudeau signed a Great Lakes Water Quality Agreement in 1972 on behalf of their two countries. The 1972 Agreement set forth general and specific objectives for water quality, and outlined programs and measures which the countries agreed to establish as part of the joint cleanup effort. In 1978, during the Carter Administration, the two countries reaffirmed their commitment to restore and enhance the water quality of the Great Lakes by entering into a second, more comprehensive agreement. As you can see, Mr. Chairman, the Great Lakes issue transcends partisan politics. Administrations, both Republican and Democratic, have embraced the need for cooperation between the United States and Canada.

Under both Agreements, the IJC has been charged with several responsibilities aimed at assisting in the implementation of the provisions set forth in the Agreements. The 1972 Agreement established a framework for international cooperation in the Great Lakes pollution control effort. The 1978 Agreement recognized a far more complex set of issues by inquiring into the effect of toxic contaminants on the waters, on fish, and ultimately, on the people of the Great Lakes Basin. The 1978 Agreement expanded the earlier framework by adopting an ecosystem concept, placed new emphasis on the control of pollution of the Great Lakes from toxic substances, and stated the commitment of the Parties to develop a coordinated surveillance program. The Commission was charged with the responsibility of monitoring the Governments' efforts to achieve the goals of the Agreement, and assisting in the implementation of programs where appropriate. Unfortunately, much of the information we need to make decisions is simply not available. Research, closely coordinated between the two Federal Governments and among the various jurisdictions, must be a keystone for effective implementation of this framework.

An enormous amount of research still needs to be conducted, and the commitment to this need must continue if we are to receive the data essential to making the intelligent judgments that over 30 million people in the Great Lakes Basin, citizens of the United States and Canada, deserve and indeed insist upon. The measure before us today, or any other measure which has as its goal the effective coordination of Great Lakes research, constitutes for this Commission an essential ingredient to discharging our obligations under the 1978 Water Quality Agreement. It is to this end, in fact, that the Commission has directed its Science Advisory Board to conduct a survey, review and assessment of research programs, and to advise the Commission on research needs and areas where international coordination and cooperation are required.

As a signatory to the 1978 Agreement the United States has made a commitment to develop and implement programs to achieve the purpose and objectives of the Agreement, and, as I mentioned earlier, President Reagan has reinforced that commitment. This commitment includes, among other measures, the development of coordinated planning processes and best management practices to ensure adequate control of all sources of pollutants (Article II). The United States has made a commitment to coordinate air, water, and solid waste programs to assess the total input of toxic substances to the Great Lakes Ecosystem (Annex 12). The
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United States agreed to prepare an inventory of all municipal and industrial point sources discharging into the Great Lakes System as a preliminary step toward assessing the eventual abatement of polluting discharges (Article VI(1)(c)). And the United States has pledged to intensify its research efforts to determine the effects of toxic and other substances on human health, fishery resources and wildlife of the Great Lakes Basin Ecosystem (Annex 12). Coordination of programs is essential to all these efforts.

There is no question that the Great Lakes are a unique national and international natural resource. The Lakes contain 90% of all surface fresh water in North America. The Basin is not only home for over 30 million people, it is also the heart of North American industry, as well as a superb recreational resource for citizens of both countries. This already invaluable fresh water resource is becoming ever more valuable to the United States and Canada as other sources of surface and ground water are depleted. The continued peaceful shared use and coordinated concern over the future of these waters serves as a model of international cooperation for the rest of the world to follow. The eight states bordering the Great Lakes are intimately involved in this effort and therefore play a unique role in the foreign policy of this country. Unlike any other region in the United States, the Great Lakes states border one of the great natural wonders of this world, and in our opinion, Mr. Chairman, all Governments must recognize that necessary resources previously committed to restore and protect this shared international resource must continue to be made available.

Mr. Chairman, the Great Lakes System does not exist as a group of isolated lakes. The slow-paced but determined flow of the Upper to the Lower Lakes means that the actions of one will someday impact on his neighbor, and upon his neighbor, and so on through the system. Our countries must understand that contamination does not recognize international borders. We must honor our obligations under the Boundary Waters Treaty of 1909 and the 1978 Great Lakes Water Quality Agreement. And we must preserve for future generations of Americans and Canadians what is truly a magnificent natural resource."

BRIEFS

Syracuse Research Corporation (Merrill Lane, Syracuse, New York 13210-4080; (315) 425-5100) is developing Environmental Fate Data Bases for the U.S. EPA. In January 1982, SRC began making its DATALOG and CHEMFATE data bases available to the public. These files may be searched on-line or, if communication equipment is not available, SRC can perform the searches as a service for the cost of connect time and labor. Potential governmental users may gain access to the system at no cost by contacting Dr. Andrew Colb, Office of Pesticides and Toxic Substances (TS-778) EPA, Washington, D.C. 20640 (202-382-3436).

For further information or a copy of a paper that will appear in the Journal of Chemical Information and Computer Sciences, please contact either Philip Howard or Gloria W. Sage at SRC.

EVENTS

The International Joint Commission will hold its Annual Meeting on Great Lakes Water Quality in Windsor, Ontario, November 17 through 19, 1982. For more information as it becomes available, write to the Editor.

The Fourth Annual Hazardous Waste Management Symposium will be held in Houghton, Michigan, June 16-18, 1982. Upon completion of this program, registrants should understand the current status of Michigan and federal regulations governing hazardous wastes; understand the principles, applications and limitations of engineered systems used to treat and dispose hazardous wastes; and be able to develop hazardous waste management plans. Fee $300. For more details contact: Symposium Coordinator, Dr. Neil J. Hutzler, Department of Civil Engineering, Michigan Technological University, Houghton, Michigan 49931, (906) 487-2270.

The 1982 Inland Lakes Research and Study Center Conference Series, East Lansing, Michigan will be as follows: June 19 — Aquatic Plant Control; July 10 — Do-It-Yourself Water Chemistry and Other Measurements; July 24 — Inland Lake Fish Management; August 7 — Nutrient controls and Wetlands Values.

The Michigan State University Institute of Water Research, Agricultural Experiment Station, and Cooperative Extension Service are sponsors. Costs: $8 (1 session); $10 (any 2 sessions); $12 (any 3 sessions); $15 (all 4 sessions); plus lunch costs. For more information or registration form, contact: Lois Wolfson, Institute of Water Research, Michigan State University, East Lansing, Michigan 48824; (517) 353-3742.
Pointe Mouille Wins Award

The U.S. Army Corps of Engineers, Detroit District Office recently won the Honor Award in the environmental category of the 1981 Corps of Engineers Design and Environmental Awards Program. The Pointe Mouille Confined Disposal Facility/Fresh Water Marsh Restoration Project was one of 114 world-wide entries in four categories: environmental, landscape, engineering, and landscape architecture.

Corps engineers and their contractors completed the 3 1/2-mile long, 1400 feet wide, 700 acre crescent-shaped facility in December 1981, $332,000 under the $51 million budget. The facility has two functions: confined disposal of 18 million cubic yards of polluted dredged materials, and erosion control. The facility will confine ten years' worth of polluted dredged material from the Detroit and Rouge Rivers. Pollutants in the material include the heavy metals mercury, lead and zinc; oil and grease, volatile solids and excess nitrogen (Total Kjeldahl Nitrogen).

The site will also provide a protective barrier to help prevent further erosion of the Pointe Mouille State Game Area and marsh, located 20 miles south of Detroit, at the mouth of the Huron River where it empties into Lake Erie. Built on the site of the original sand barrier beach that had been completely washed away by the early 1970's, the containment facility (also called a barrier island) will help re-establish more than 2,000 acres of marshland lost during the last four decades. Marsh re-establishment has already begun inside a section of the facility completed three years ago. That section is in use now.

In conjunction with the construction of the facility, the Michigan Department of Natural Resources (DNR) developed a fresh water marsh restoration plan. To stimulate regrowth of the marsh, the lake bottom (former marsh) between the barrier island and its dikes will be dewatered by pumping. (Construction causeways were left in place to function as cross dikes and access roads.) Submerged flora such as wild celery and pondweeds are expected to grow in shallow clear areas. Emergent plant communities such as cattails, bulrushes, and sedges should grow on exposed mud flats. If basic natural seed stocks are lacking for revegetation, artificial seeding will be used. This marsh restoration plan is also expected to attract and hold waterfowl in the area. Corps biologists consider a marsh composed of 50 percent open water and 50 percent emergent vegetation achievable by 1985.

Local environmentalists and hunting organizations caused original plans to use the marsh for disposal to change to plans to reconstruct the natural barrier island destroyed by a severe storm in 1952. Environmental, conservation and sportsman groups strongly support the project. "In the future when another disposal site is needed, we should look for
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areas where it could benefit wildlife and man alike. We think this project makes a point; that is, everything can be put to a good use — polluted dredge spoils included — if we put our minds to it,” said William Trojan, Michigan Duck Hunters Association.

This article is based upon a news release prepared by Dennis Everette. For additional information, contact him at the Office of Public Affairs, Detroit District, U.S. Army Corps of Engineers, Box 1027, Detroit, MI 48231; telephone (313) 226-4680.

Decisions for the Great Lakes

Citizens, scientists and government officials can address decisions involved in developing an “ecosystem” orientation to protecting Great Lakes water quality and managing other key basin resources through Decisions for the Great Lakes. The Joyce Foundation, the Canadian National Sportsmen’s Fund, the Canada-Ontario Agreement Board (Environment Canada and the Ontario Ministry of the Environment) have already provided funds for this citizen training program. Purdue University-Calumet and Great Lakes Tomorrow (GLT) began work under a project initiation grant from the U.S. Environmental Protection Agency in 1980. Decisions for the Great Lakes is an outgrowth of Purdue’s Interstate Water Quality Training Program: Decisions for Lake Michigan.

Decisions for the Great Lakes will bring about 750 citizen leaders, government officials, and scientists together in intensive training programs at 24 locations around the International Great Lakes (Erie, Ontario, Superior and Huron) during the next three years. Following completion of the courses around each lake there will be an international Lake Basin Conference to bring together U.S. and Canadian citizens to discuss mutual concerns and consider strategies for addressing them.

During the 40-hour course experience, through learning from experts and each other, all participants should increase their understanding of “what’s at stake” for the Great Lakes System when development, resource management or pollution control decisions are made at local or regional levels.

A basic tool for use by all citizens participating in the Decisions program will be the Decisions for the Great Lakes Resource Manual. The manual is being written by people from all backgrounds who are knowledgeable and who care about the wise management of this resource. It emphasizes a systems perspective. It tries to communicate to Canadians what they need to know about how the United States system of managing Great Lakes resources works and to U.S. citizens what they need to know about how the Canadian management system works.

The Lake Erie Decisions Program will begin with a planning meeting in June, 1982. Beginning in September of 1982, courses will be offered at each of seven locations around Lake Erie: Windsor, London and St. Catharines, Ontario; Buffalo, Erie, Cleveland-Akron Area and Toledo on the U.S. side. Faculty members will be chosen from among local university, business, citizen group and governmental experts. A local coordinator from the university will provide for continuity and handle details at the local level. The Decisions for the Great Lakes courses will be free of charge. A maximum of 30 participants will be chosen from among the applicants for each location to ensure that a mix of backgrounds and perspectives will be present. If you wish to know more about the project or want to be considered as a faculty member or a participant, contact U.S. Project Manager, Mimi Becker, at P.O. Box 1935, Hiram, Ohio 44234.

Arthur M. Timms, GLT’s 1st Vice President, is the Canadian Project Manager, and he can be reached c/o The Conservation Council of Ontario, 45 Charles St. East, Toronto, Ontario M4Y 1S2.
RADIO LINE

In October 1981 the IJC’s Great Lakes Regional Office began a new public information effort. It is called the Great Lakes Radio Line.

The office offers broadcast quality taped programs no longer than two and one-half minutes. Every month an advisory notice is mailed to all 720 radio stations throughout the Great Lakes Basin. That notice lists the programs for the following month or longer if a series is offered. To obtain the programs we ask radio stations to telephone the Regional Office and ask for the Radio Line.

The Radio Line began with an introduction to the Great Lakes Basin Ecosystem. Then, each day for a week a different program about the special features of the five individual Great Lakes was available. Following that series a different program was available about the specific problems of each lake.

Between the November 1981 Annual Meeting and February 1982 tapes have been available weekly utilizing speeches made and interviews recorded during the meeting. Each tape features one or more of the persons who made presentations.

During February and March, 1982 a nine program series was available concerning the potential energy futures for the Great Lakes Basin. In April programs dealt with pollution from land use. Topics for May through August are as follows:

May — Great Lakes Fishery and Water Quality
June — Navigation and Dredging
July-August — Toxic Substances and Human Health

Generally, the programs are information features rather than news. For this reason, scripts will be gathered together and offered as resource material.

Though scripts were originally designed and produced with radio stations as the target audience, anyone may telephone the Windsor Office to hear the programs. Tapes are available between 9:00 am and 4:30 pm Eastern time, Monday through Friday (except holidays) by calling: in Canada—(519) 256-7821; in the United States—(313) 963-9041.

When you telephone, ask for the Great Lakes Radio Line. The receptionist will ask for some information for our out log (city you are calling from, your affiliation — if any) and then connect you to the Radio Line extension. When the program message plays through, your call will automatically disconnect.

If you think you may want more information than will be offered in the taped program, ask the receptionist to take your name, telephone number and particular interest or question. Information Services Section personnel will call you back or arrange for someone with the specific expertise you seek to telephone you.

BOOKSHELF

“Great Lakes Guides” is a new catalogue listing publications that take you along The Coasts of Wisconsin to Bayfield’s Historic Architecture and Around the Shores of Lake Superior. It is available free from the University of Wisconsin Sea Grant Communications Office in Madison. To get a free copy, send a self-addressed, stamped envelope to UW Sea Grant Communications, 1800 University Avenue, Madison, WI 53706.

The Ontario Ministry of the Environment has compiled and published a 181-page annotated bibliography to list available scientific literature on the effects of acidic precipitation on terrestrial ecosystems. The new bibliography is available for $3.00 (Canadian) at the Ontario Government Bookstore, 880 Bay Street, Toronto, Ontario. For reference, the bibliography can be consulted at the Public Reading Room, Ontario Ministry of the Environment Library, on the ground floor at 135 St. Clair Ave. West, Toronto, Ontario and at all Ministry regional and district offices.

ONTARIO PROVIDES MAJOR FUNDING FOR CONSERVATION AUTHORITIES

The Ontario Government is providing more than $36 million to assist the province’s 39 conservation authorities in 1982. The money will be used to finance water and land management programs, conservation and recreation land management and other projects under the scope of the individual authorities. In addition, $920,000 of the total amount is proposed for a federal/provincial mapping program to identify areas of potential damage.

Some important projects to be financed in this year’s program are:

- erosion control (Halton Hills, Brampton, Mississauga, and other centres in Credit River vicinity);
- water and related land management (Metro Toronto and region);
- Kam River erosion control, Hazelwood Dam-Causeway (Thunder Bay);
- Neeling-MacIntyre flood control project (city core Thunder Bay);
- channel construction work (Listowel);
- flood control work (Paisley); and
- South Nation basin plan and channel improvements.

Focus

Collision

The Event Scenario

In patchy fog on February 17 at 6:00 AM the M/V Mount Surabachi collided with the tank barge Hannah 2093 east of Marine City, Michigan in U.S. waters of the St. Clair River, 30 miles south of Sarnia, Ontario. The Surabachi was downbound from Milwaukee heading for Spain loaded with 16,400 metric tons of metal borings and turnings. The Hannah, being pushed by a tug, was upbound in United States waters from the Rouge River Enterprise Oil Facility to the Marysville Detroit Edison Plant loaded with 16,000 barrels of number 6 oil. The bow of the Surabachi struck the Hannah on the port bow, opening number one and two cargo tanks, the bow rake and the port wing area, releasing 6,400 barrels of oil. The vessels separated with the Surabachi dropping anchor. The tug was unable to control the drifting barge. One crewman on the Hannah was seriously injured; the lookout aboard the Surabachi was reported missing.

By 6:05 AM, the collision had been reported to the Sarnia Vessel Traffic Centre which immediately notified the United States Coast Guard Group in Detroit and the Toronto Traffic Centre via hotline telephone, and began broadcasting to all ships in the area. By 7:30 AM two Coast Guard vessels and a Michigan State Police boat were on scene, had removed the injured crewman and confirmed the incident to the Detroit Coast Guard. The tug had grounded the barge which had been in danger of sinking. It was on a shoal in Canadian waters. Oil continued to leak and steam or smoke had begun to come out of cargo holds on the Surabachi.

Immediately the United States and Canada began to mobilize their Joint Response Team (JRT) — government representatives from the two Coast Guards, Environment Canada, U.S. Environmental Protection Agency, the Army Corps of Engineers, U.S. Fish & Wildlife Service, National Oceanic and Atmospheric Administration, Michigan Department of Natural Resources, Occupational Health & Safety Administration, Canadian Forces, Ontario Ministries of the Environment, Natural Resources, Health, and Solicitor General. On scene coordinators of the United States (Detroit) and Canadian (Amherstburg) Coast Guards were designated to organize spill control and clean-up efforts. Everyone on the team began heading for Detroit. The on-scene coordinators from the United States and Canadian Coast Guards began to set up a joint command post in Detroit.

The St. Clair River between Port Huron and the Detroit River was closed to all traffic. By 8:30 AM, the On Scene Coordinators and their staffs gathered, the JRT members were enroute, and five Coast Guard vessels (3 U.S.; 2 Canada) had been directed to the scene.

Simulation Complexities

Now you as much about the incident as those who participated in a simulation staged in a Detroit hotel February 17, 1982. The Coast Guards...
brought together people from the United States and Canada to test the readiness of those who would be involved in cleaning up such an incident, were it to occur. Throughout the day realistic problems kept cropping up. Customs in Sombra, Ontario had to be notified that the barge might have to be moved to that location. A French speaking correspondent called for information and no one on-scene could talk to him. The barge company refused to accept financial responsibility for the clean up. The cargo ship owner refused to find a salvage master. Detroit would not send a fire boat without knowing who would pay for the service. Contracts could not be issued to salvage and clean up firms except with authority from the highest level in Ottawa. The Walpole Indian Reserve Tribal Council requested information and offered manpower and small boats to help direct the oil away from the wildlife preserve areas in the pathway of the oil spill. Enough booms were not immediately available, had to be located and arrangements to have them transported were complicated by bureaucratic rules. By 10:15 the owners of the Surabachi still had not been reached. Sbiteers got in the way of the boom placement effort. Ships could not get in close enough to see how bad the fire was on the Surabachi. The on-scene group had no authority to release information to the media or the public and had to refer all inquiries to the JRT.

Response

By 10:45, the first booms were installed across one of the three channels affected by the oil and the Canadian Coast Guard had begun negotiating contracts for the clean-up. Booms installed around the leaking barge were reported to be ineffective, and the fire on the Surabachi was still burning. By 11:45 the JRT authorized a 1:00 PM news conference.

In the meantime a technical dispute had arisen: one expert said the bow tanks on the Surabachi could be flooded and the fire put out; another said the vessel was too unstable and could sink. No on-scene salvage master had been designated by the ship owners by noon. At 1:40 PM the on-scene group was told that there might be PCBs in the plume of the fire because the turnings surfaces could contain a film of PCB contaminated oil. No evacuation order was issued immediately because the plume pathway did not appear to cross populated areas. Samples could not be taken from the Surabachi cargo because the fire was too intense. A representative sample was taken from the Milwaukee source. Municipalities which take their water from the St. Clair River were notified of the oil spill.

At the news conference, the Coast Guard official did not have up to date information about the spill. He did not have a direct tie line to the On Scene Coordinators, and therefore had some difficulty responding to the inquiries from the media.

One barge was in place and receiving oil deflected by the booms by 2:30 in the afternoon. By 3:00 PM, the U.S. EPA reported that no PCBs were present in the turnings shipment. Soon after, the fire was reported to be under control. The Walpole Council called again to request an update and offer services at a price to keep oil away from the shoreline where there is a valuable muskrat habitat. Divers arrived on the site just after 3:00 PM. Places that would take the retrieved oil and waste cargoes were located. The booming appeared to be working reasonably well. The Detroit River was reopened to limited traffic. Samples were being taken for follow up litigation if necessary. An overflight was scheduled to see if additional booms were required. The needed equipment for clean up was enroute and all the contracts necessary negotiated. Things appeared to be calming down; the confusion and tension began to lessen.

At 3:15 the On Scene Coordinators were notified that a chemical tanker had run aground. The ship was carrying toxic chemicals — particularly dangerous ones. After preliminary questions were asked an overall strategy worked out, the simulation exercise ended. It was 4:15 PM and a sigh of relief was heard in three places — the Joint Response group's room, the On Scene Coordinators' room and the area from which the audience witnessed the events on video screens all day.

Those of us who attended have a much better idea of what goes on when any kind of spill happens in the international waters of the Great Lakes System.
(Prepared by Patricia Bonner, Focus editor.)

Aftermath

The following day a debriefing was held to identify those procedures and actions which prevented more proficient response to the accidents, fire, and spill. Several areas of difficulty were identified and are being rectified through changes in procedures and protocols.

With such exercises the Joint Canada-United States Marine Contingency Plan will be refined. As a result, real spills within the Great Lakes will be more effectively contained and cleaned up.
(Prepared by Robert White, UC-Windsor)

LAW AND THE COURTS

Under a U.S. Department of Transportation ruling which recently went into effect, all interstate highways have been designated as transportation routes for radioactive materials. The enactment overrules existing state and municipal bans on the movement of radioactive materials, and will have an effect on shipments between Canada and the U.S. For example, the Thousand Island Bridge near Gananoque, Ontario has now been opened up to radioactive materials. (Eco' Log Week, February 12, 1982)
FOCUS

Great Lakes Wetlands Plan

Owing to a lack of funding in the 1982 budget, the Great Lakes Basin Commission, as well as the five other river basin commissions created under the Water Resources Planning Act (Pub. L. 89-90), ceased to exist on September 30, 1981. In August 1981, the Commission issued as part of its Great Lakes Basin Plan two new policy statements—two involving wetlands, the other involving coastal hazards. These two statements were the last issue-oriented policies incorporated into the Basin Plan, and, in their recommendations, reflect the Commission’s cooperative approach to solving problems affecting the entire Basin ecosystem. The wetlands policy plan stressed the need for all basin states to develop, along common guidelines, more comprehensive wetlands inventory, regulatory, management, and evaluation programs.

In its policy plan, the Basin Commission stated that shortcomings exist in all aspects of most state wetlands programs. It noted that states and agencies could not depend on a complete up-to-date federal inventory for at least several years and, with this in mind, advised states to drop their various wetlands classification systems, if still in use, and adopt, or at least refer to, the U.S. Fish and Wildlife Service’s (FWS) new 1979 federal Classification System. Furthermore, the report recommended that states should not confine their inventories to wetlands with well-documented functions, but rather should include all wetlands at least one hectare (2.5 acres) in size and falling within the eight categories of wetlands listed in the Federal Circular #39 of 1956. This would entail the states’ recognizing not only well-known marshes, but seasonally flooded basins and flats, inland fresh meadows, shrub and wooded swamps, and bogs as well. The Commission also recommended that “additional support” be given to the National Wetlands Inventory to complete its federal wetlands survey.

The Commission concluded that, in some states, “existing regulations do not appear to adequately protect wetlands, and suggested that such states develop more comprehensive regulatory programs in which the FWS’s 1979 Classification System would again be used. These new regulations should be designed to protect all wetlands larger than five hectares (and whenever possible, smaller plots, of the eight types listed in Circular #39 excepting flats not in floodplains). The Commission also suggested that these state programs address themselves to the following seven concerns: (1) clear labeling of activities that do or do not require a permit or certification under Section 401 of the Clean Water Act; (2) procedures for enforcing regulations; (3) penalties to deter violators; (4) a public hearing or appeals process; (5) activities to be prohibited; (6) adequate public knowledge of regulations; and (7) guidelines for assessing the cumulative effects of small wetland fill activities. Adoption of these guidelines would lead to greater consistency among state programs, and would, the Commission felt, aid in planning for the entire region.

The Commission noticed inadequacies in state management programs quite similar to those in regulatory programs. It therefore suggested that states develop more comprehensive management plans along the same guidelines proposed for regulatory programs, and further encouraged states to consider initiating or increasing positive incentive programs for private landowners. Such incentives could include tax exemptions or credits, easements, or land leases with annually adjusted payments. Because of the complexity of federal wetland legislation and the subsequent confusion among agencies whose programs affect wetlands, the Commission recommended that an appointed agency or task force determine the need for consolidating some federal programs. Doing so "could improve the use of limited funds, reduce the possibility of duplication, and simplify the situation for landowners who want to participate in wetlands management."

The Commission seems to imply that, underlying many of the present problems in inventory, regulatory, and management programs is dismaying ignorance of the possible, non-traditional values and functions of wetlands. States have long recognized the traditional fish and wildlife values of wetlands, but should begin collecting data on:

1. mass balances of chemicals and sediments passing through wetlands;
2. long-term case studies on the effects of altering wetland systems;
3. the effect of wetlands on groundwater and downstream water quality and flood control;
4. the role of wetlands in nutrient exchange with major water bodies and the relationship of wetlands to lake food chains;
5. the effects of water level management of the Great Lakes on contiguous wetlands; and
6. evapotranspiration rates of various wetland types and related impacts on the nutrient budget.

It was recommended that those states currently not having evaluation systems should develop them. Though a state’s evaluation team would be expected to design a system tailored to any unique characteristics of the state’s wetlands, it should also follow the Commission’s proposed guidelines. According to these guidelines, special or unique features include:

(a) presence of rare or endangered plant or animal species, presence of endangered species habitat area;
(b) unusual abundance or diversity of
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<th>Permit Programs</th>
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<td>IL</td>
<td>IL DOT regulates dredge &amp; fill activities within Public waters.</td>
<td>Natural Resources Comm. policy 6/27/86 — to preserve remaining wetlands</td>
<td>Acts of 1945 — Ch. 18 — requires permit for construction in floodways</td>
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<td>MN</td>
<td>Public Waters Ch. 105; 1937 — water bodies must be designed</td>
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<td>Flood Plain Management Act 104.01 — standards local areas must adopt</td>
<td>Wild &amp; Scenic Rivers Program 104.31²</td>
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<td>NY</td>
<td>Freshwater Wetlands Act Art. 24 of ECL — areas over 1.24 acres or of special significance Tidel Wetlands Act Art. 25 of ECL Stream Protection Law 15-0058</td>
<td>Natural Heritage Program</td>
<td>No significant regulations</td>
<td>Wild, Scenic &amp; Recreational Rivers Act SB 103; 1972.3</td>
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<td>OH</td>
<td>PA Dam Safety &amp; Encroachment Act (32PS) PA Floodplain Mgmt. Require permits for the construction, alteration, maintenance &amp; operation of all water obstruction &amp; fill activities in, along, across watercourses, lakes and wetlands.</td>
<td>Policies soon to be issued by Envtl Quality Bd. Both the New FP Mgmt. Act &amp; the DS &amp; EA allow for equity suits brought by the State, and Co. municipality or aggrieved person to enforce the act &amp; correct violators</td>
<td>Title 32 — requires permit for obstructions</td>
<td>Scenic Rivers Act PA 1972; 283</td>
<td></td>
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</tr>
<tr>
<td>PA</td>
<td>Navigable Waters Ch. 30 WI statutes — permit required for dredging, filling, flooding, or building structures below the ordinary high watermark. Solid Waste Disposal Licensing Program (§ NR 180.13(G), WI Admin. Code) — prohibits location of solid waste land disposal facilities within wetlands. WI Pollution Discharge Elim. Sys. Program (Ch. 147 WI Statutes) — regulates amount of pollutants discharged to waters of the state including wetlands.</td>
<td>Shoreland Zoning¹ 59.971 &amp; 144.26 — restricts activities in shoreland wetlands — unincorporated areas only — co. administered with state oversight and maps — wetlands recommended to be put in conservancy districts.</td>
<td>WI Natural Resources Bd. Policy NR 1.95 Wetlands Preservation, Protection and Management</td>
<td>Flood Plain Zoning 87.30 — must be open space for special circumstances</td>
<td>Wild Rivers Program 30.262.3</td>
<td></td>
</tr>
</tbody>
</table>

¹ Coverage is 1,000 ft. from public waters or 300 ft. from rivers and streams. 2. Zoning is part of program. 3. Money is available for land purchases.

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The Natural Resource Sector: Federal Perspectives and Foundation Opportunities

by James A. Joseph

James A. Joseph spoke at the Joyce Foundation’s Great Lakes Resource Management Conference in Chicago March 5. A former Under Secretary of the United States Department of the Interior, he is now with the Council on Foundations. His presentation captured the audience and the spirit of the event perfectly. Mr. Joseph kindly granted the editor permission to share it with Focus readers:

When we think of natural resources, we usually have in mind land, water, minerals and the air we breathe. But how we live together, what jobs are available, what re-creative outlets are open to us, are all shaped by natural resource policy and natural resource practices. The resolution of natural resource issues is central to our well-being in the 1980’s and beyond.

I am here against the backdrop of having spent four of the last five years making natural resource policy and managing natural resource programs. I want to share with you six perspectives which I believe should guide your deliberations as you consider where to go from here.

1. While the issues you are addressing are multi-county and multi-state, many have their origins in decisions and policies which are multi-regional and even multi-national.

Whether to have regional planning agencies, the future quality of your air and water, whether national parks will be located close to the cities where most people live or in rural areas inaccessible to the poor and elderly, are all issues which have a national resource base and are part of a national responsibility.

When I became Under Secretary of the Interior, I was surprised to learn how much revenue was generated for the federal treasury from natural resource management—offshore oil and gas leasing, grazing, mineral development and other uses of public land. At a time of huge budget transfers we may want to consider whether it is appropriate to demand that natural resource income be used to solve natural resource problems.

But it is not only natural resource income which concerns me. It is the tone and mood which are set in Washington regarding natural resource protection and development and the natural resource ethic which undergirds public policy.

When grant-makers consider opportunities for funding, they will need to recognize that both analysis and action must frequently take place at the regional and multi-regional level simultaneously. 2. Those of us who emphasize the potential of the private sector also have a responsibility to emphasize its limitations.

I am increasingly concerned about the disparity between the social aspirations of the American people and the capacity of either the private or public sectors to deliver. Rarely in our history as a people has there been a more concentrated attempt to renegotiate the social contract between a society and its people. Rarely has so much been expected of the private sector. But there are some things which government can and should do; there are some things which private institutions can and should do, and there are some things which must be done together. Effective management of our natural resources will require the collaboration of all three sectors, private, public and independent. Funding should facilitate cooperation.

3. The reason there is so much government regulation is because there is so little self-regulation.

The national discourse about private sector initiatives focuses too narrowly on corporate contributions. A responsible corporation is one which locates a site responsibly, builds a facility responsibly, hires a workforce responsibly, manufactures a product responsibly, sets prices responsibly, distributes the return on its investment responsibly, controls its impact on the environment responsibly and takes action in the public sector responsibly. More corporations need to recognize that the charter they receive from society uniquely makes them a trustee of the public good. But self-regulation is simply not sufficient. Regulatory reform is, therefore, useful and important, but formal regulations will continue to be necessary to ensure that the public interest is served.

Some critics of natural resource regulation have a vision of a future where formal regulations will be increasingly unnecessary as a form of social discipline. They could be correct, but before we arrive at such a state in natural resource policy, we will need an ethic in which our use of the earth’s resources is based on qualities of prudence, moderation, equity and responsibility to the future.

In the meantime, we will have to depend on government to define principles, set standards, provide legitimacy, provide authority and raise the level of community consciousness. For in a democratic society, we protect the environment, guarantee equal distribution of social burdens and social benefits, promote health and safety and provide other safeguards for workers and consumers through legislation and regulation.

This means that there will need to be groups who monitor regulatory efforts...
and remind those in power that in changing the process, they often change the prospect.

4. Policy-making in the management of natural resources is essentially a bargaining process where analysis and rational thought frequently take a back seat to political realities.

As Under Secretary of the Interior, I had to deal with oil drillers and fishermen who wanted control of the same stretch of water, coal miners and park enthusiasts who wanted the same mountain, urban developers and historic preservationists who wanted title to the same historic landmark.

Each group was convinced that it alone represented the public interest and each used all the power at its disposal to transform its private want into the public definition of public need.

So the utility and message of this conference may be that we have to take our analysis and our frustrations back into the political precincts where potential voters need to be registered and registered voters need to be prodded into active participation.

5. The public policy discourse about natural resource issues is dominated by energy entrepreneurs and ecological protectionists but the major issue of the 1980s may well be distributional; who gets what and why?

This means that those concerned about social justice are potential allies of those concerned about a balance between protection and development.

The concern with ecology and the concern with equality are not necessarily antithetical. One may be post-affluent and the other pre-affluent, but they deal with issues which will shape our common destiny.

Many of the issues I dealt with in natural resource management were issues of equity: why some water systems are in trouble while large agribusinesses receive subsidized water for private benefit in violation of the 1902 Reclamation Law; why Land and Water Conservation Funds are often used to provide re-creative outlets which benefit only a narrow segment of natural resource stakeholders; why some water projects, paid for at enormous cost to the tax payer, are for private benefit but not subject to user charges.

The most fundamental question of equity, however, is why natural resource benefits are called subsidy while human resource payments are called welfare. Clearly, one man’s subsidy is another man’s welfare payment. A Wall Street Journal article about millionaires in Idaho did a profile of prototype millionaires in the West. Most received their start through a natural subsidy—a public land grant or a water subsidy. The national discourse about national resource policy must ultimately include a discussion of welfare payments in the natural resource sector.

6. Natural resource activism must be based on natural resource analysis.

Those who seek to change private practice and those who seek to influence public policy must tell us not only what they are against but what they are for. The observation of Camus is still correct. “A true rebel is one who knows in behalf of what he is rebelling altogether as much as against what he is rebelling.”

Foundations must support the generation of new ideas and the application of new strategies, but they have a right to expect that those who seek their help will share their commitment to the public good and join with them in putting public interest before private wants.”

Bulletin ...
On May 18, 1982, the United States House of Representatives Committee on Science and Technology approved the Great Lakes Protection Act. The next step is consideration by the full house.
A five-member steering committee will coordinate the Project and improve sharing of the experience and findings available. Central coordination for the Project will be provided by the Northeast Ohio Group in Cleveland. Ellen Knox will be the Chairman backed by the five member steering committee. The existing structure of the Great Lakes Committee offers access to thousands of Sierra members in hundreds of communities along the Great Lakes shores. The Water Quality Project aims to encourage groups to combine forces in defense of "their lake" or the Great Lakes System.

Municipal systems remove only a portion of the wastes received. Persistent toxics in industrial wastes accumulate in ecosystems since there are no natural entities in the water that beneficially use these foreign substances. Industries that flush their wastes into sewers leading to publicly operated wastewater treatment plants have been required to plan to cut down or eliminate the toxic materials which can interfere with the functioning of the bacteria that purify domestic wastes. The pre-treatment program is one mechanism that can be used to reduce the amount of toxic substances discharged to Great Lakes waters. (Excerpted with permission from March 2, 1982 letter from E. Knox)

For more information about the Water Quality Project and Sierra Club, contact Ellen Knox, 75 Public Square, 2nd Floor, Cleveland, OH 44113; (216) 623-7547.

FOR ADDITIONAL COPIES
Write to Patricia Bonner, Editor, Great Lakes Focus, UC Regional Office, 100 Ouellette Avenue, Windsor, Ontario, Canada N9A 6T3.

Hazardous Substances

NEW YORK

Bill A. 437 under consideration in the New York State Assembly, would ban after January 1, 1983, the landfilling of any waste defined by the Department of Environmental Conservation as "high-priority" if a suitable alternative disposal method exists. DEC defines as "high-priority" the following: (1) materials containing more than 1,000 ppm of any one of 25 specific chemicals such as pentachlorophenol, nitroguanine, aldrin, dieldrin, ammonium picrate, benzidine, and cyanogen chloride; (2) specific waste types that are highly soluble metal salts or are explosive, radioactive, shock sensitive or pyrophoric; and (3) hazardous waste associated with the production of chlordane, epichlorhydrin, toxaphene and 2,4-D.

Under the law as written, DEC may exempt a high-priority waste from the ban if the agency determines that no safe alternative disposal method exists for that waste. DEC plans to conduct case studies to promote increased storage, reuse and recycling of certain high-priority wastes.

Another major bill, the mini-superfund bill, A. 9520, would draw on three financial sources to fill its coffers. (1) a tax of $7.50 per ton, or three cents per gallon, on toxic wastes disposed of in the state regardless of where they were generated to be paid by the owner of the disposal facility handling the wastes. Disposal facilities could then pass on the surcharge costs to the waste generators and transporters. (2) $4.5-million from a state government emergency fund that has largely been untapped since its creation several years ago; and (3) penalties collected from persons who violate the state's hazardous waste laws and rules. This would include punitive damages awarded to the state in cases brought to trial by the DEC.

DEC would use the state superfund money to finance cleanup or emergency actions at sites ranked as priority sites by DEC but ineligible for federal superfund monies. It would also be used to provide state matching shares of a federal superfund cleanup.

One more bill, A. 7693, would require operators of treatment, storage and disposal facilities to adopt the following financial assurances to cover their liabilities in the event of an accident: (1) trust funds for sites for site cleanup; (2) bonds to be posted for all funds to guarantee the full future value of the funds; and (3) insurance for general liability, fire, property and workers' compensation.

Three other hazardous waste bills have been approved by the Assembly and move on to Senate consideration. A. 7839 would impose strict, joint and several liabilities on operators of inactive waste sites and on the generators and transporters of wastes disposed of in such sites. The bill would allow DEC to force responsible parties to prepare remedial
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plans and conduct the cleanup, with the party that can “best afford the loss” financing the cleanup without regard to fault. These liability provisions could be used in conjunction with the proposed superfund bill to retrieve funds from responsible parties to reimburse the fund. Other provisions of the bill include: (1) a definition of “waste” to include unpermitted industrial discharges; (2) a requirement that DEC complete by October 1, 1982, a registry of inactive sites in New York; and (3) authority for DEC to develop and implement an inactive site remedial program.

Bill A. 437 would be incorporated into A. 7839 if it passes the Senate. It would require DEC to make its registry available for public inspection at county clerk offices throughout the state.

Bill A. 1916 amends the requirements for obtaining a DEC permit to burn hazardous wastes. It would require permit applicants to conduct a trial burn following DEC approved monitoring and waste analysis procedures. DEC permits would specify all operating conditions at the incineration and all wastes to be burned. Includers permitted prior to the effective date of the bill would be exempt from the proposed amendments, but would have to comply with them when applying for renewal of their permits. In addition, the bill would require DEC to promulgate by January 1, 1983, general performance standards for the burning of hazardous wastes. (Source: State Regulation Report, February 17, 1982, Business Publishers, Inc., 951 Pershing Drive, Silver Spring, MD 20910; (301) 587-6300)

WISCONSIN

Wisconsin has received interim authorization to run its own hazardous waste program. The EPA nod for Wisconsin indicates that EPA is standing firm so far in its defense of a state’s right to have controls more stringent than federal Resource Conservation and Recovery Act rules on hazardous waste.

Wisconsin’s law prohibits the release of confidential information to EPA unless specific confidentiality agreements have been entered into. EPA regulations require that states share confidential information with EPA without restriction.

The Wisconsin legislature will review, during the 1982 session, an amendment to the state’s hazardous waste law that expressly authorizes the state to release all confidential information to EPA. Pending adoption of the amendment, the state will share information with EPA using case-by-case confidentiality agreements.

The state’s hazardous waste program now differs from the EPA program in several crucial aspects. First, Wisconsin requires a license for transporters and disposers of hazardous waste, a provision that is now in effect in a few states and being considered in several more.

Second, Wisconsin requires generators who produce more than 100 kilograms per month to file an annual report with the Department of Natural Resources. The report must list types of wastes, and the names and identity of the transporter and the name of the disposal site for which the waste is destined.

Unlike the EPA rules, Wisconsin regulations will not exempt off-site facilities that do reuse or reclamation work from RCRA requirements. In the state, all off-site plants will be subject to full requirements and must have a treatment license. Any on-site facilities that use hazardous waste mainly for heat recovery must comply with the incinerator standards but do not need a license. The state’s waste criteria and listings are identical to the EPA list as required by state statute.

Another Wisconsin requirement that is a little more stringent than the EPA rules is that the state will require treatment, storage and disposal facilities to file quarterly reports rather than the annual reports required by EPA. (State Regulation Report, February 3, 1982)

MICHIGAN

The Michigan Department of Natural Resources (DNR) has been awarded a $308,000 grant from the U.S. Environmental Protection Agency to increase investigative and enforcement efforts with respect to the regulation of polychlorinated biphenyls. In addition the program will provide a model for enforcement programs in other states. The program will be administered by the Emergency Response Section, Water Quality Division, and the Environmental Enforcement Division in DNR.

The purpose of the program will be to monitor industrial use of PCBs to make sure that industries using them are complying with Michigan’s PCB Compounds Act and the federal Toxic Substances Control Act. Enforcement efforts will shift from reacting to specific spills or disposal problems to a preventive approach through surveillance and monitoring activities. DNR staff will make on-site inspections to determine compliance with storage and container requirements, to verify proper marking of equipment and PCB transport vehicles, and to check inventory records. Investigations will be conducted where spills are reported or evidence of a spill is found.

For more information on PCB control efforts in Michigan, contact the Office of Toxic Materials Control, Environmental Services Division, Michigan Department of Natural Resources, P.O. Box 3028, Lansing, MI, or call (517) 374-9640. (State Regulation Report, February 2, 1982)

ONTARIO

The Ontario Waste Management Corporation (OWMC) is no longer considering using government owned lands in South Cayuga as a hazardous waste disposal site.

A hydrogeological study prompted the decision. Among factors cited in the study
were the shallow covering of clay till over bedrock in the area, which increased the likelihood that leachate could reach the groundwater passing through the bedrock; a large portion of the 4,600 acre site was established as a potential flood area; presence of surface drumlins—mounds of silt, sand, gravel and boulders formed by glaciers—which would provide an easy path for leachate to travel to bedrock and then to groundwater; as well as 180 unrecorded gas wells with a probability of additional unrecorded wells.

Dr. Donald Chant, President of OWMC, when announcing the decision to stop considering South Cayuga, said that search for another site would soon begin.

The site ultimately selected must have reliable and predictable natural features which guarantee a reasonable life expectancy, and allow sufficient lead time for detecting and dealing with leachate migration problems and which minimize the need for major "corrective" engineering. The sites examined should be within reasonable transportation distances of the major waste generation areas.

The site will undergo an evaluation process. First, the corporation must be prepared to conduct preliminary investigations of a number of potential areas before selecting a preferred location. Then the preferred site must be studied in great detail with a proposal submitted to a public hearing. Finally, the process must allow for public input in each preliminary stage, as well as in the public hearing itself, through financial assistance for the participants in the hearings.

Presently Ontario's hazardous liquid industrial wastes are directed to one private facility in the province or exported to the United States and other provinces. (Source: ONTARIO Bulletin, Volume 4, January 1982; Solid Waste Management Association.)

**CANADA**

In January the Canadian Departments of the Environment and Health and Welfare published a Priority and Candidate Chemicals Schedule to the Environmental Contaminants Act. The following chemicals are those for which further regulations or specific control strategies are being developed: polychlorinated biphenyls (PCBs), chlorofluorocarbon, cadmium, and chlorophenols. Substances which may pose a significant danger to human health or the environment and about which further detailed study or information is needed are chlorobenzenes, hexachlorobutadiene (HCBD), dodecachloropentacyclo-octadecadiene, organotins, phthalic acid esters, chlorinated paraffins, chloroethylenes, chloromethanes. Candidate chemicals which may or may not present environmental contamination problems sufficient to warrant listing on the Priority Chemicals list once more information is available: triarylphosphates and related substances, aromatic amines, halogenated diphenyl ethers, and halogenated toluenes.

Anyone wishing more details should contact: Hazard Assessment Division, Contaminants Control Branch, Environmental Impact Control Directorate, Environmental Protection Service, Department of the Environment, Ottawa, Ontario K1A 1C8.

**UNITED STATES**

On March 17, 1982, the United States Environmental Protection Agency decided that it should re-instate the ban prohibiting liquid hazardous waste disposal in landfills under provisions of the Resource Conservation and Recovery Act. *(Environment Reporter, March 19, 1982)*