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Great Lakes: A Vital Resource Worth Protecting

International Joint Commission

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The five Great Lakes — Superior, Michigan, Huron, Erie and Ontario — and the St. Lawrence River together form the largest system of fresh surface water on earth.
The United States and Canada

share one of the world's most valuable natural resources: the Great Lakes and St. Lawrence River ecosystem. The Great Lakes Water Quality Agreement reaffirms a commitment first expressed by the two countries in 1972 to restore, enhance and protect the water quality of these lakes. The International Joint Commission plays an important role in evaluating efforts by both countries to restore the Great Lakes Basin Ecosystem, and recommending actions to the two federal governments to implement the goals of the Agreement.

The Great Lakes - St. Lawrence: A Vital Resource for the United States and Canada

The five Great Lakes — Superior, Michigan, Huron, Erie and Ontario — and the St. Lawrence River together form the largest system of fresh surface water on earth. Twenty percent of the world's fresh surface water is stored in
these Great Lakes. The Provinces of Ontario and Quebec
and eight States (Minnesota, Wisconsin, Illinois, Indiana,
Michigan, Ohio, Pennsylvania and New York) share the
lakes, their connecting channels and the St. Lawrence River.

Citizens in the Great Lakes basin have used the
lakes for many purposes over the centuries: drinking,
boating, swimming, fishing, shipping, industrial process-
ing, transportation and disposing of wastes. More than 37
million people live in the
basin, and the region depends
on the Great Lakes for many
economic, recreational and
aesthetic benefits. If the
environmental quality of the
lakes is not preserved these
benefits will be lost, at great
cost to both countries.

The Governments of
the United States and Canada
recognized the value of all
boundary waters, including the
Great Lakes, when they signed the Boundary Waters Treaty
of 1909. The treaty established the International Joint Com-
mission, a permanent international agency that prevents and
resolves disputes concerned with water along the Canada-
United States border.
The Commission investigated pollution problems in the Great Lakes and St. Lawrence region several times between 1912 and 1970. Its findings led the two countries to sign the first Great Lakes Water Quality Agreement in 1972, which addressed a growing concern for deteriorated water quality conditions as a result of increased algal growths caused by excessive phosphorus inputs. While phosphorus is a necessary element in nature, too much can stimulate the excess growth of algae. Excess algae can make the water unfit for drinking and deplete the oxygen supply needed by fish, while decaying algae on beaches makes the area unsuitable for recreation. This process, called eutrophication, is accelerated dramatically when human activities add phosphorus to the lakes.

This first Agreement committed the federal governments to establish phosphorus control programs that limited inputs from municipal and industrial sources into the Great Lakes system. For example, wastewater treatment plants were built or improved, and limits were placed on the amount of phosphate allowed in detergents.
The lakes showed significant signs of improvement as a result of these efforts. As eutrophication was slowed, however, scientists began to find frighteningly high incidences of deformities, reproductive problems and other abnormalities in wildlife species living in the Great Lakes region, which were traced to increasing numbers of toxic substances in the region's water and fish. These contaminants resulted from continued discharges of toxic pollution from point sources, such as industries and municipalities, and from land drainage from urban and rural areas, also known as nonpoint pollution. They also discovered that air pollution accounts for significant levels of toxic pollution entering the lakes, particularly in Lake Superior. The two governments negotiated a second Great Lakes Water Quality Agreement in 1978 to address these issues.

Disruptions to Endocrine Systems in Wildlife *

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*International Joint Commission, Sixth Biennial Report
An Ecosystem Approach to Restoring and Preserving the Great Lakes

To tackle these new problems, the 1978 Agreement focuses on the need for a comprehensive or ecosystem approach to managing human uses of Great Lakes waters. Specifically, this approach states that water quality and related problems are best solved when the complex interrelationships between the air and land surrounding the lakes, the streams flowing into them, wildlife, humans and the lakes themselves are all recognized in efforts to restore and protect the integrity of the Great Lakes Basin Ecosystem.

The 1978 Agreement includes Specific Objectives to achieve and preserve a certain level of quality in the Great Lakes ecosystem, as well as a goal to virtually eliminate toxic substances that persist in the environment from entering the lakes. To reach this virtual elimination goal, and to restore, preserve and protect the Great Lakes Basin Ecosystem, the Agreement calls for cooperative programs among the federal, provincial, state and municipal governments to define the total impact of persistent toxic substances and to develop control programs for the use, transport and disposal of pesticides, industrial wastes, petroleum products, and sludge and dredge spoils. Monitoring and research programs identify
sources and trends in persistent toxic concentrations and the impact of toxics on wildlife and human health.

Specific limits are also set to control the amount of phosphorus entering each of the lakes from point and nonpoint sources. These limits are based on estimates developed between 1972 and 1983 of how much phosphorus can be allowed in the lakes if they are to recover.

In 1987, the governments reauthorized the 1978 Agreement through a Protocol, which reconfirms their commitment to its original principles and goals and adds annexes to strengthen programs and to increase accountability for their implementation. New annexes address research and con-
trols for atmospheric deposition, contaminated sediments and groundwater. Another commits the two countries to develop and implement remedial action plans to restore degraded areas in the Great Lakes basin. These areas had already been adversely affected by contaminants, as evidenced by diseases or impaired health of aquatic and wildlife species in those areas, and impairments that preclude human use of the resource. These areas were first identified by the Commission and its advisors in 1975.

**The Agreement and the International Joint Commission**

While the International Joint Commission reported periodically to the governments on the condition of the Great Lakes under the 1972 Agreement, its role was expanded in the 1978 Agreement. The Commission prepares a comprehensive report to both governments at least biennially to assess the effectiveness of pollution control programs and to recommend further actions. To effectively evaluate progress under the Agreement and to assist in identifying priorities for the
governments' joint programs, advisory boards were created to assist the Commission.

A Great Lakes Regional Office also was established in 1973 to assist the Commission and its advisory boards in fulfilling their responsibilities under the Agreement. Staff in the Windsor, Ontario office provide scientific, technical and administrative support, as well as a public information and consultation service for the Commission.

Great Lakes Water Quality and Science Advisory Boards and the Council of Great Lakes Research Managers

The Great Lakes Water Quality Board provides advice to the Commission on broad policy questions related to Great Lakes water quality issues facing the region. Members are usually key managers of pollution control programs and are appointed from each of the eight Great Lakes states and two Canadian provinces, and the U.S. and Canadian federal agencies.

The Science Advisory Board provides advice related to technical, scientific and socio-economic issues. Its members are chosen from the physical, natural and social science fields and are experts in the areas of Great Lakes research, water quality and related fields.
The Council of Great Lakes Research Managers brings the basin's top research managers together to discuss findings, coordinate projects where applicable, and determine what research is needed to accomplish the goals of the Agreement. Like the Water Quality Board, an equal number of representatives are selected to the Science Advisory Board and the Council from the United States and Canada.

Because the Agreement focuses on a wide variety of water quality issues facing the Great Lakes - St. Lawrence ecosystem, the Commission created a priority setting process to focus on what it considers the most pressing issues. It reviews and revises these priorities as needed every two years, after receiving input from the public and as it prepares its biennial reports to governments on the status of Great Lakes water quality.

The Commission asks its advisory boards to investigate and report on specific elements of these priorities, and creates additional task forces or committees as required to complete additional projects. This process allows the Commission to complete a thorough assessment of progress under the Agreement for these priority issues, and to recommend innovative and anticipatory actions to both governments to restore and protect the Great Lakes Basin Ecosystem.
The Agreement and You

In signing the Great Lakes Water Quality Agreement, Canada and the United States committed themselves to the goals of virtual elimination of all persistent toxic substances into the Great Lakes, financial assistance to construct publicly owned wastewater treatment plants, and development and implementation of coordinated planning processes and management practices to control all sources of pollutants. The 1978 Agreement, as revised by the 1987 Protocol, is a statement of commitment by the two nations to restore and maintain the chemical, physical and biological integrity of the waters of the Great Lakes Basin Ecosystem.

The governments have made this commitment on behalf of their citizens. Likewise, each of us can help the governments fulfill that commitment by considering how our role as consumers, business and community leaders, educators and parents contribute to the health of the

The U.S.’s national symbol, like all other species in the Great Lakes region, needs a clean environment to survive.
Great Lakes - St. Lawrence ecosystem. Citizens can make wise choices in their selection of products, such as nontoxic cleaning materials or low phosphate detergents, which will not contribute to the pollution entering the lakes. Improperly disposing of hazardous materials in the home or at work, being careless about maintaining property or a car, or using products that contain persistent toxic substances all affect the environmental quality of the Great Lakes.

Several regional organizations work on issues concerned with the Great Lakes and play an integral role in ensuring that the tasks in the Agreement are implemented. They welcome involvement from citizens in the basin who can share their knowledge and experiences in the Great Lakes, including alerting representatives of government agencies and elected officials of their concerns, and supporting and encouraging new business and consumer practices and the implementation of remedial action plans or other cleanup programs. The Commission invites advice from the public at any time, and particularly as it prepares reports to governments on progress under the Great Lakes Water Quality Agreement. It also provides information to the public on the Agreement, the Great Lakes and related concerns in the basin, and involves citizens in its programs to ensure that advice and information is received from all interested parties.
The Great Lakes and St. Lawrence ecosystem provides a wide array of benefits to those who live around its waters. When the water becomes contaminated and restrictions are placed on its use for recreation, drinking water supplies, industrial uses, navigation, energy supplies or commercial and recreational fishing, citizens in the Great Lakes region are directly affected. Individuals, businesses, governments and others must work together to accomplish the goals set forth in the Great Lakes Water Quality Agreement in order to ensure that the future of the Great Lakes will be one of usefulness and beauty.

For more information, fill out and mail the attached postcard or contact the Commission’s Great Lakes Regional Office, 100 Ouellete Avenue, Eighth floor, Windsor, ON N9A 6T3, telephone (519)257-6700. In the United States, write to P.O. Box 32869, Detroit, MI 48232, telephone (313)226-2170.
YES, I/my family want to help clean up and protect the Great Lakes - St. Lawrence ecosystem. Please send an information kit on how I can help.

(please print)

Name

Address

City

State/Province

Zip/Postal code

If you've received this as part of an information kit, please pass this brochure on to a friend.