



Potential Issues for Consideration as IJC Priorities for 2001-2003

What is a Priority?

Priorities are specific issues for study that provide a focus for the work of the International Joint Commission and its Boards under the Great Lakes Water Quality Agreement, and which enhance understanding and provide potential resolution to issues faced by the Parties, the Governments of Canada and the United States, and citizens of the Great Lakes basin. This work is not intended to substitute for the work of the parties, but rather take advantage of the unique forum in which the Commission and its Boards and Council operate under the Agreement. Work efforts under chosen Priorities are afforded specific monetary and human resources of the Commission and are done in addition to the specified work conducted by each board under its mandate.

What Issues do You Think Should Be Priorities?

Do you have an Issue that Is Not Listed?

What Issues are Under Consideration?

MERCURY

Mercury has been identified as a Great Lakes critical pollutant since 1985. It is a global pollutant, with some forms of mercury remaining suspended in the atmosphere, subject to transport, for more than a year. Adverse effects on human and ecosystem health are well established and advances in toxicological and epidemiological research have enhanced concerns regarding the risks associated with exposures to mercury, particularly methylmercury. Concerns include levels of mercury in the Great Lakes ecosystem that have remained high enough to cause developmental effects in infants. Although hot spots remain in the sediment, various initiatives over the past three decades have reduced historical uses, such as at chlor-alkali and pulp and paper plants, and overall releases to the environment. A majority of the fish consumption advisories in the basin are related to mercury contamination. While mercury concentrations in Great Lakes birds and fish have declined, recent trends indicate increasing concentrations in inland lake populations in the basin. Major sources include coal-fired power plants, incinerators and smelting operations. Most mercury going into the atmosphere is elemental mercury vapor and inorganic mercury, while most mercury found in water, soil, plants and animals is organic [primarily methylmercury] and inorganic. Need - to fully understand the relationship between mercury emitted into the atmosphere and mercury found in the ecosystem.

ANNEX 2 – RAPs AND LaMPs

The Agreement calls for restoration and protection of beneficial uses in Areas of Concern and in open lake waters. Remedial Action Plans (RAPs) and Lakewide Management Plans (LaMPs) are mechanisms intended to achieve this goal. The Parties and state and provincial jurisdictions have been developing RAPs and LaMPs

since before 1987. To date, only one of 43 AOCs has been delisted and implementation under the LaMP process has progressed slowly. Need - to identify what still must be done in each AOC and establish the actions and resources necessary to accomplish this work.

COMMUNITY HEALTH IN AREAS OF CONCERN

Health Canada published data and statistics for the 17 Canadian AOCs, using selected health end points “that might be related to exposures to pollution.” This unique data base has been consolidated into age-stratified files on mortality, morbidity as hospitalization, and congenital anomalies. Researchers in the U.S. have compiled data for similar end points in the eight Great Lakes states. Other multiple data sources, such as visits to doctors, prescription drug use or preschool screening could be integrated with this data using advances in GIS to model exposure and outcome at various levels of aggregation. Need - to assess how these data bases can be used in concert with other data sources to identify gaps and set research priorities on community health in the Great Lakes basin.

NEW UNMONITORED CONTAMINANTS OF CONCERN

Currently, more than 100,000 chemicals are in commerce with hundreds more brought to market each year. Of these, more than 2,000 are produced at volumes greater than 1,000 tonnes per year. During the past three decades, the impact of chemical pollution has focused almost exclusively on selected pollutants that are persistent, bioaccumulative and toxic, but these are only a part of a larger risk assessment challenge. Recent research has identified five new classes of chemicals of concern for Great Lakes biota, including humans – polychlorinated naphthalenes, brominated fire retardants, perfluorinated organics, alkyl phenols, and numerous pharmaceutical and personal care products. In addition, drugs, hormones and other agriceuticals applied in aquaculture,

livestock and other agricultural activities, along with human vitamin and health supplements (nutriceuticals) pose concerns. Some of these new chemicals and classes are also persistent, bioaccumulative and toxic. Need - to understand how these chemicals are affecting the environment and how to detect their presence.

LAND USE

The IJC made a recommendation regarding land use in its 10th Biennial Report on Great Lakes Water Quality, that the governments of Canada and the United States undertake a binational study of land-use changes in relation to the effects of growth, pollution control and pollution prevention from land-based activities. Increasingly, policy initiatives in both the U.S. and Canada have identified growth management as the key to developing sustainable cities and protecting land and water resources. Often characterized as urban sprawl, urban areas in both countries expand as a result of increasing land consumption, despite planning policies that establish urban boundaries. In the Great Lakes basin many of the largest urban areas have small or negative population growth rates, yet the urban environment continues to expand, usually at the expense of the natural environment, and especially impinging upon the Great Lakes. Need - to understand important land-use issues including: the adequacy of infrastructure to treat and manage urban runoff and sewage; the adequacy of watershed planning and regional approaches for achieving water quality objectives; coordinated planning processes and best management practices for controlling all pollutant sources, fixed and mobile.

SURVEILLANCE AND MONITORING

Surveillance and monitoring are essential to implementation of the Agreement. In recent years the Governments of the U.S. and Canada have significantly reduced resources and programs related to surveillance and monitoring in the basin. Emerging technology offers

the possibility to improve surveillance and monitoring capability, especially to meet the demand for more environmental quality information and the need to integrate diverse data and information within an ecosystem context. As a microcosm, the Great Lakes provide a suitable area within which to test appropriate tools, technologies and methodologies. Need - to consider new monitoring and surveillance technologies and to assess those that can best enhance our knowledge of the Great Lakes.

CLIMATE CHANGE

Climate change may have significant impacts on global society. Considerable work is underway worldwide and in United States and Canada on many aspects of this complex issue. Impacts on Great Lakes water quality could be manifested through changes in water levels and temperature that could, in turn, impact the physical, chemical and biological integrity of the waters of the basin ecosystem. Need - to create a binational compendium of scientific knowledge and other work with respect to the potential impact of climate change scenarios on the water quantity and quality of the Great Lakes basin and to determine where gaps exist in that knowledge base as well as how this knowledge influences policy and decision making.

RESEARCH NEEDS

Scientific information underpins the understanding of Great Lakes issues and the actions necessary to restore and protect the chemical, physical and biological integrity of the waters of the basin ecosystem. The information base to define issues and support appropriate program and policy response continues to evolve. Need - to have a cohesive, well defined summary of research needs for the Great Lakes to enhance scientific collaboration and coordination and to more effectively garner limited funding.

**What Issues do You Think
Should Be Priorities?**

**Do you have an Issue that
Is Not Listed?**

Comments on these proposed priorities can be submitted to the IJC in three ways:

Written - using this sheet.

Orally - during the public testimony portion of the September 15, 2001 Public Forum in Montréal.

Electronically - using e-mail to commission@windsor.ijc.org.

Deadline for comments is September 28, 2001.
