

State Of the Lakes Ecosystem Conference (SOLEC)

What is SOLEC?

The State of the Lakes Ecosystem Conferences (SOLEC) are hosted by the U.S. Environmental Protection Agency and Environment Canada on behalf of the two countries. These conferences are held every two years in response to a reporting requirement of the binational Great Lakes Water Quality Agreement (GLWQA). The purpose of the Agreement is "to restore and maintain the physical, chemical and biological integrity of the Great Lakes Basin." The conferences are intended to report on the state of the Great Lakes ecosystem and the major factors impacting it, and to provide a forum for exchange of this information amongst Great Lakes decision-makers. However, these conferences are not intended to discuss the status of programs needed for protection and restoration of the Great Lakes basin, but to evaluate the effectiveness of these programs through analysis of the state of the ecosystem. Another goal of the conference is to provide information to people in all levels of government, corporate, and not-for-profit sectors that make decisions that affect the Lakes.

These conferences are a culmination of gathering information from many sources and engaging a variety of organizations. In the year following each conference, the Governments prepare a report on the state of the Lakes based in large part upon the conference process.

The first conference, held in 1994, addressed the entire system with particular emphasis on aquatic community health, human health, aquatic habitat, toxic contaminants and nutrients in the water, and the changing Great Lakes economy. The 1996 conference focused on the nearshore lands and waters of the system where biological productivity is greatest and where humans have had maximum impact. Emphasis was placed on nearshore waters, coastal wetlands, land by the Lakes, impacts of changing land use, and information availability and management. SOLEC 94 and 96 were based on a series of ad hoc indicators that were suggested by scientific experts. Following SOLEC 96, those involved identified a need to develop a comprehensive, basin-wide set of indicators that would allow the Parties to report on the progress under the Agreement in a predictable, compatible and standard format.

For SOLEC 98, the indicator development process became more formalized with the development of a suite of easily understood indicators that objectively represent the condition of the Great Lakes ecosystem components (as called for in Annex 11 of the GLWQA). This suite is used every two years to inform the public and report progress in achieving the purpose of the GLWQA, thus initiating a regular and comprehensive reporting system. This indicator suite draws upon and complements indicators used for more specific purposes such as Lakewide Management Plans (LaMPs) or Remedial Action Plans (RAPs) for Areas of Concern.

At SOLEC 2000, the challenge was to see how many of the 80 indicators could be reported on. In some cases this was a fairly "easy" task - data were already available for use in reporting on an indicator (by various agencies). In other cases, this task became more difficult as new data were required before they could be reported, or further research and development was required before implementing data collection efforts and then reporting on an indicator. Post SOLEC 2000 and through the winter of 2001, there was an opportunity for further review of the indicator list and for revisions to be made to the indicator suite. SOLEC 2000 was the first conference to begin the actual assessment of the state of the lakes using these science-based indicators.

SOLEC 2000 also saw the first emergence of a new group of indicators called Societal Indicators, following an introduction of the "stewardship" concept at SOLEC 1998. Societal Indicators seek to measure both human activities that impact the environment as well as the societal action(s) taken in response to such environmental pressures. The effort began modestly with one report at SOLEC 2000 and has since benefited from further research in broader areas.

The focus of SOLEC 2002 was to continue to update and assess the state of the Great Lakes using the current suite of indicators with an emphasis on biological integrity, the theme for SOLEC 2002. This SOLEC presented the most comprehensive assessment yet of the state of the Great Lakes basin ecosystem. SOLEC 2002 featured 43 indicator assessments. A draft version of these reports was distributed at SOLEC 2002. The comment and review period for these indicator assessments was available online until January 2003. Comments are collected from participants and incorporated into the indicator reports where feasible.

Significant development work has taken place on broadening the indicator suite. SOLEC 2002 presented a candidate set of Biological Integrity indicators, as well as proposed indicators for agriculture, groundwater, forestry, and societal response, which, as a part of the Societal Indicator suite, measure positive human responses to ecosystem pressures, thereby reflecting a commitment to ecosystem health. SOLEC 2002 also provided revisions to current indicators in the Great Lakes suite, and the identification of management challenges and actions. Work continues on the Great Lakes indicator suite in an effort to streamline this reporting to management and the public. An executive summary of the indicator assessments will be released with the next State of the Great Lakes report, in the summer of 2003.