COUNCIL OF LAKE COMMITTEES
POSITION STATEMENT
On

An ecosystem approach for Great Lakes fisheries management

Acknowledging interest in holistic approaches to fisheries management, the Council of Lake Committees (CLC) herein states its position on how an ecosystem approach may be of utility in the Great Lakes, drawing from several sources of information:

- *A Joint Strategic Plan for Management of Great Lakes Fisheries* (Plan), which states an ecosystem approach "*places particular emphasis on water quality and various habitat features that are required for normal functioning of fishes and for unrestricted consumption of fish*". Further, consistent "*with the spirit of an ecosystem approach", "parties must exercise their full authority and influence in every available arena to meet the biological, chemical, and physical needs of desired fish communities*" under the Plan's *Ecosystem-Management Strategy*;
- working knowledge from fisheries professionals in the Great Lakes region, who seek to secure environmental conditions that support achievement of fish community objectives identified by lake committees;
- Indigenous knowledge, which considers all beings to be interrelated;
- published definitions, where an ecosystem approach to management is generally described as being (a) informed by an integration of physical, biological, and social aspects of ecosystems; (b) driven by scientific and monitoring information in geographically defined areas; (c) adaptive to accommodate uncertainty in understanding and variability in assessments; and (d) focused on sustainable natural resources with equitable benefits to societies;
- NOAA Fisheries, which identifies a continuum, from an *ecosystem approach* to management that focuses on environmental influences on single species management (routinely applied in the Great Lakes), to *ecosystem-based fisheries management* that considers multiple species in fisheries management decisions (somewhat applied in the Great Lakes), to e*cosystem-based management* that considers tradeoffs among all sectors (fisheries, environmental, social) from management actions (not applied in the Great Lakes); and
- recognition that fisheries managers use traditional practices (e.g., harvest regulation, fish propagation/stocking, and fish habitat protection and improvement), augmented by engagement with environmental managers and programs in science and communications, to address ecosystem status and trajectory relevant to fish production and fisheries.

Accordingly, the CLC views an ecosystem approach to fisheries management as

the adaptive use of biological, physical, and social information to guide decisions by lake committees for desired fish communities and fisheries in the Great Lakes.

Central to this view is recognition that fish community objectives reflect socially desirable Great Lakes ecosystems consistent with

- the common goal statement of fisheries agencies "*to secure fish communities, based on foundations of stable self-sustaining stocks, supplemented by judicious plantings of hatchery-reared fish and provide from these communities an optimum contribution of fish, fishing opportunities and associated benefits to meet needs identified by society for wholesome food, recreation, cultural heritage, employment and income, and a healthy aquatic ecosystem*" (Plan);
- a premise that "*sustainable fisheries can occur across the basin if functional habitats are protected or improved in each lake through a systematic, adaptive, cumulative, and collaborative approach that accommodates fishery value in decisions to act on manageable anthropogenic stresses*" (CLC environmental principles for sustainable fisheries in the Great Lakes Basin, 2016); and
- continuing efforts to integrate modern science and management with wisdom from other sources and approaches, such as Indigenous knowledge and practical knowledge from stakeholders in the basin.

Further, the CLC notes that all lake committees have considered holistic aspects when establishing fish community objectives and are receptive to using an ecosystem approach for assistance in attaining these objectives, particularly in concert with implementation of the CLC's environmental principles. More specifically, lake committees will benefit from an increased understanding of how:

1) **changes in fish community structure** (species, stocks, behavior) may alter adaptive properties of aquatic ecosystems that affect the sustainability and sharing of ecosystem services among societies;
2) **broad-scale drivers** of environmental changes to Great Lakes ecosystems (e.g., climate change, established invasive species, persistent contaminants, etc.) may affect fish community structure;
3) **environmental management** of nutrient and contaminant loadings, invasive species, and land use in the basin can prevent or control potential damage to fish communities;
4) **fisheries management** through traditional practices of harvest regulation, stocking, and habitat protection and improvement, can be improved to achieve and maintain fish community objectives of lake committees;
5) **societal valuation** of fisheries and other ecosystem services provided by the Great Lakes can be effectively assessed by fisheries and environmental managers when evaluating options and opportunities;
6) **communications and outreach** can be improved across Great Lakes fisheries and environmental management disciplines through the use of consistently defined and applied terminology (e.g., ecosystem "health", "resilience", "function", "processes");
7) **coordination** between fisheries and environmental management can be improved, recognizing distinct responsibilities and authorities, to support dynamic ecosystems that sustain desired fish communities and fisheries, and other societal benefits.