

GREAT LAKES FISHERY RESEARCH

Making Science-based Management Possible



PHOTO: GREAT LAKES FISHERY COMMISSION

SOUND SCIENCE is the cornerstone for wise management of the Great Lakes. Successful management efforts have been dependent on a scientific understanding of the natural and human-induced conditions that affect this system. Moreover, the success of future management initiatives will depend on a continuing investment in environmental science.

Under the *Convention on Great Lakes Fisheries*, the Great Lakes Fishery Commission has the responsibility to formulate a coordinated research program between the United States and Canada. The goals of the research program are to identify ways to nurture the maximum sustained productivity of Great Lakes fish stocks and, based on that research, to recommend specific management initiatives to the governments.

The commission formulates this research program based on advice from the Sea Lamprey Integration Committee, the Board of Technical Experts, the Habitat Advisory Board, the Lake Committees, and the Great Lakes Fish Health Committee. These boards and committees are made up of fisheries experts from academic and research institutions, from government organizations, and from tribal resource agencies.

What Types of Research Does the Commission Support?

The Great Lakes Fishery Commission sponsors research in two broad areas:

- Research in support of sea lamprey control, including research into alternatives to lampricides, and
- Research in support of healthy ecosystems.

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The commission sponsors research symposia, such as the RESTORE conference on lake trout rehabilitation, to focus on important research issues and needs.

COURTESY:
INTERNATIONAL ASSOCIATION OF
GREAT LAKES RESEARCH



Great Lakes Fishery Commission

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The commission has recently sponsored research on such topics as:

- native species rehabilitation;
- fish passage through barriers;
- identification of sea lamprey attractants;
- natural enemies to sea lampreys;
- exotic species;
- role of biodiversity in managing fisheries;
- economic value of the fisheries;
- environmental effects of lampricides; and
- trout and salmon mortality imposed by sea lampreys.

How Does the Commission Build Research Partnerships?

Commission-sponsored Great Lakes research is truly an ecosystem-based effort that takes advantage of the skills of a variety of fisheries experts. The commission cooperates with governmental and non-governmental agencies to carry out its research program. For instance, the commission contracts with the U.S. Geological Survey, tribal agencies, and universities to carry out research in the United States, and with the Department of Fisheries and Oceans, the Ontario Ministry of Natural Resources, and universities to carry out research in Canada. The commission is also a member of Michigan State University's Partnership in Ecosystem Research program (PERM), a partnership between the university, the commission, Michigan DNR, and the U.S. Geological Survey.

Through its review and choices of research funding, and based on advice from its various boards and committees, the commission works to ensure that fisheries research will provide for an ecosystem

approach to management, that the fisheries will be rehabilitated, and that individual research programs are complementary. The commission also leverages funds from other organizations so that more research can be undertaken.

What Have We Learned from Great Lakes Research?

The commission's research program is based firmly on the ecosystem approach. It has provided the two

nations with the know-how to control sea lampreys effectively and has reinforced how important sea lamprey control is to the health and sustainability of the fisheries. It has demonstrated that fish populations are interconnected, that they are vulnerable to human-induced and natural changes, and that restoring native species—particularly predatory

fish—will bring a more natural balance to the ecosystem. This research has also underscored that certain exotic species, over-exploitation, and habitat destruction act to destabilize the fishery.

Above all, the commission's research has confirmed that fisheries managers must always cooperate to protect the fishery for today's use and to sustain it for future generations.



PHOTO: DEPARTMENT OF FISHERIES AND OCEANS CANADA

Laboratory tests help identify pheromone attractants, which could be used to attract sea lampreys into traps or to unsuitable spawning areas of a stream.

The Great Lakes Fishery Commission was established by Convention between Canada and the United States in 1955 to improve and perpetuate fishery resources.

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