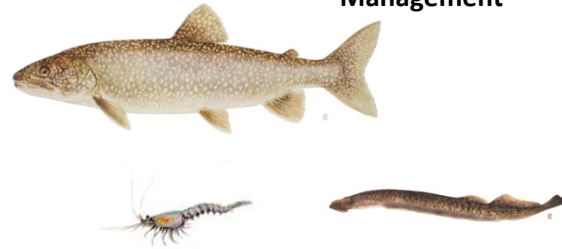




Energy Dynamics of Great Lakes Food Webs



Human Dimensions of Great Lakes Fishery Management

Physical Processes and Fish Recruitment in Large Lakes

Re-establishment of Native Deepwater Fishes

Council of Lake Committees



Overarching areas of importance

Climate Change

Nearshore Habitats

Quantifies energy and nutrient dynamics in Great Lakes food webs and the role of food web members in structuring resilient communities and ecosystems

Socioeconomic value of ecosystem services (e.g., more resilient ecosystems)

Effects of physical processes on population success, predator/prey movements and interactions

Energetic and trophic pathways whose rehabilitation provides for resilient native, deepwater populations and communities

Predicting effects of non-native species on sustainable fishery benefits

The Fishery Research Program also funds relevant research that does not directly fit under one of the five themes

Predicting how changing climate scenarios will impact connections among food webs

Connections between nearshore and estuarine or offshore trophic pathways

Fills knowledge gaps in the areas of legal and institutional frameworks, management decision making, and stakeholder involvement in fisheries management

Consequences of anthropogenic altering of physical processes

Stakeholder perceptions and management decisions about native deepwater fish restoration

Socioeconomic and cultural implications of Great Lakes fisheries management

Sociopolitical and economic implications of reactions to climate change; mitigation of impacts; stakeholder awareness

Stakeholder use of nearshore habitats and impacts of use on these habitats

Uses biophysical approaches to understand and predict fish recruitment in large-lake ecosystems

Effects of abiotic factors on recruitment and population dynamics of native deepwater fishes

Physical processes resulting in food web changes and their implications for management

Effects of changing climate on lake hydrodynamics and thermal structure

Importance of nearshore areas for fish recruitment

Promotes understanding of biological processes regulating native deepwater fish populations and communities, and provides information for re-establishing species of concern

Ecological obstacles to re-establishment of native fishes

Impacts of warming water on restoration success for native deepwater fishes

Importance of nearshore areas for various life stages of deepwater fishes

Fishery Research Program – Research Themes

This table highlights broad examples of intersections among research themes of the Great Lakes Fishery Commission’s Fishery Research Program. Each theme’s overarching goal is presented in a grey box. On the right, examples are given for intersections between each theme and topics of overarching importance to Great Lakes fishery research. Investigators are encouraged to use this table as inspiration and to consult the research theme papers (links below) to explore how their proposed research projects address one or more research themes.

