

**FISHERY RESEARCH PRIORITIES:  
LAKE HURON  
Great Lakes Fishery Commission**

Version November 2014

The following list of questions represents the latest effort by the Lake Huron Technical Committee (LHTC) to communicate focal areas for research into the fish community of Lake Huron. The LHTC has dispensed with its previous hierarchical, theme-based research priority structure, which offered a more detailed and exhaustive list of questions, in favor of this more focused list. The LHTC has identified below those questions which we believe should receive priority focus\*, though we encourage any research that will further attainment of 1) management objectives detailed in the *Fish Community Objectives for Lake Huron* [http://www.glfc.org/pubs/SpecialPubs/Sp95\\_1.pdf](http://www.glfc.org/pubs/SpecialPubs/Sp95_1.pdf); or 2) restorations goals for species with existing restoration plans in place. Further guidance on relevant focus areas can be obtained by reviewing the most recent State of the Lake Huron Report [http://www.glfc.org/pubs/SpecialPubs/Sp13\\_01.pdf](http://www.glfc.org/pubs/SpecialPubs/Sp13_01.pdf).

*\*What long-term trade-offs for the Lake Huron fish community would result from removal of barriers that restrict movement of potadromous fishes? Which barrier designs or strategies would allow passage of non-jumping fish, such as sturgeons, suckers, and walleyes, while preventing passage of sea lampreys and other invasive species?*

*\*How has fish production potential changed in Lake Huron as a result of shifts in energy cycling/pathways? What are the implications for fisheries and species diversity?*

*\*What factors control the distribution and structure of Lake Huron's preyfish populations, including cisco?*

*What strategies can be employed to expand cisco beyond its current range and limited population size in order for it to become a major prey item in Lake Huron?*

*How do invasive species affect the productivity and stability of Lake Huron fish populations?*

*What factors influence early life survival of lake trout and what is the relative importance of these factors on recruitment to the adult stage?*

*To what extent does fish community structure in Lake Huron influence juvenile sea lamprey survival? What are the implications for sea lamprey control efforts?*

*What level of stock discrimination exists in Lake Huron's ecologically significant fish stocks, including lake trout, lake whitefish, walleye and cisco? How does stock intermixing affect the stability of exploited fish stocks?*

*Has catchability in surveys and fisheries changed over time and, if so, how does this influence our assumptions about fish stocks?*

*What is the probability of surviving a sea lamprey attack for host species other than lake trout, particularly lake whitefish and cisco?*

*How do fluctuating water levels, habitat alteration/loss/fragmentation and climate change influence fish productivity and species diversity?*