HABITAT TASK GROUP
EXECUTIVE SUMMARY REPORT

Lake Erie Committee

REPRESENTING THE FISHERY MANAGEMENT AGENCIES OF LAKE ERIE & LAKE ST. CLAIR

Introduction - The following provides a brief encapsulation of information presented in the annual report of the Lake Erie Committee (LEC) Habitat Task Group (HTG). The complete report is available from the GLFC's Lake Erie Committee Habitat Task Group website at http://www.glfc.org/lakecom/lec/HTG.htm, or upon request from an LEC, Standing Technical Committee (STC), or HTG representative.

The HTG had three charges in 2018-2019: (1) Develop and maintain a list of functional habitats and impediments for species specified by the LEC Fish Community Objectives (FCOs); (2) Assist member agencies with the use of technology; (3) Support other task groups by compiling metrics of habitat use by fish. Charge 1 had three supporting sub-components 1a) Identify Priority Management Areas, (1b) Develop strategic research direction, (1c) Document key habitat and research projects.

Charge 1: List of functional habitats and impediments for species specified by the LEC FCOs

In 2016, the Council of Lake Committees (CLC) adopted draft Environmental Principles (EPs). The premise of the CLC-EPs is 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."

To address the CLC-EPs, the LEC charged the HTG with identifying priority areas within the Lake Erie Basin where management actions or influence can support the FCOs. To accomplish this the HTG identified potential "habitat actions" within "functional habitats" to address impediments to the productions of fish species within the FCO. *Functional Habitat (FH)* are defined as a dynamic system of hydraulically-connected areas that support sustained production of desired fish species. *Habitat Action (HA)* are defined as intentional actions of protection, restoration, or enhancement on manageable threat/stress sources within a FH(s) to promote production of desired fish species. For this exercise production refers to abundance and does not explicitly consider growth. Through subsequent, systematic application of CLC-EPs and broad LEC fisheries management priorities on the identified habitat actions and functional habitat, the HTG was able to define areas where management actions could have significant effects of the production of desired fish species, referred to as Priority Management Areas (PMAs).

Charge 1a: Identify Priority Management Areas (PMAs)

The HTG and other technical experts identified 116 FHs used by 139 distinct fish stocks of the 13 species identified in the FCOs. Of these FHs, 12 were identified as very high and, and 15 high PMAs (Figure 1). Within the top 10 PMAs, the highest ranked habitat actions range from site-specific actions such as dam removal, fish passageways, shoreline softening/naturalization, to broad scale regional actions such as conservation of local stocks and watershed management to reduce of nutrient and sediment loading into Lake Erie. This first list of PMAs now provides a tool to the HTG and LEC which will aid in the development of lake specific EPs and communication of fisheries priorities to align activities with other environmental management groups in Lake Erie.

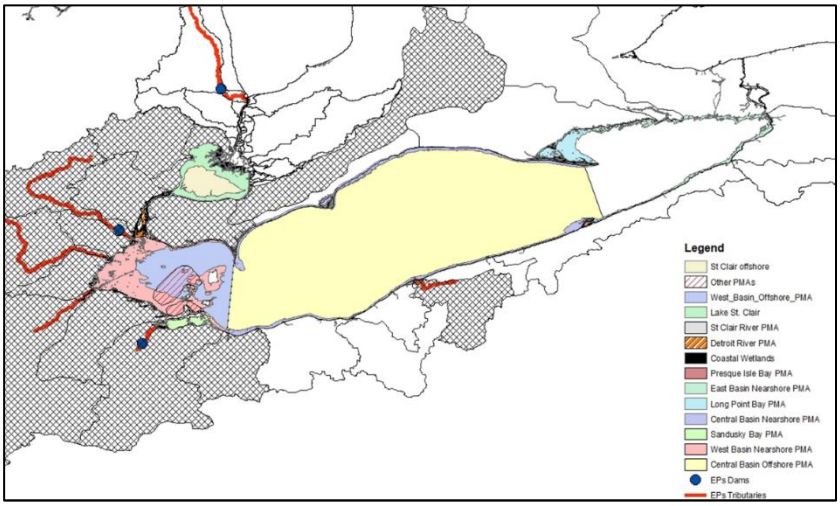

Figure 1: A map of specifically identified very high and high PMAs in the Lake Erie Basin

Charge 1b: Develop strategic research direction Through the process of identifying PMAs, key research gaps have also become apparent. For example, some of the highest ranked habitat actions in the top 10 PMAs included the need to conduct more research on topics ranging from generic fish-habitat interactions to specific questions about forage abundance, resource competition, hypoxia, and specific habitat-use. Over 2019-20, the HTG will use the PMA dataset to identify and prioritize knowledge gaps to facilitate the development of strategic research questions.

Charge 1c: Document key habitat and research projects

The 2019 HTG report includes project overviews for 9 different habitat and research projects underway or completed in med to high PMAs across the Lake Erie basin. These projects are:

- Reef Restoration and Maturation in the St. Clair-Detroit River System, Michigan-Ontario
- Biological and Habitat Assessment of the Lower Rouge River, Michigan
- Clinton River Mouth Ecosystem Restoration Project, Michigan
- Henry Ford Estate Dam fish passage to the Rouge River, Michigan
- Celeron and Stony Islands Habitat Restoration, Michigan
- Removal of the Ballville Dam on the Sandusky River, Ohio
- Maumee River Sturgeon Restoration, Ohio
- Remediating the effects of the Dunnville Dam on the Grand River, Ontario
- Niagara River Habitat Restoration Projects, New York

Charge 2: **Assist member agencies with the use of technology**

Members of the HTG are involved in a variety of projects, often using specialized equipment and techniques to identify, survey, and modify aquatic habitat in Lake Erie and its surrounding watersheds. In 2018-19, there was no additional work toward this charge to report beyond what has been report in previous HTG reports.

Charge 3: **Support other task groups by compiling metrics of habitat**

Habitat influences the distribution of fish species. Evaluating how fish relate to habitat can play an important role in assessing and modeling key fish species in Lake Erie, particularly Walleye and Yellow Perch. In 2018, there was no additional work toward this charge to report beyond what has been report in previous HTG reports.

For more information including detail methodology for identifying PMAs and projects summaries please see the complete HTG report, available from the GLFC's Lake Erie Committee Habitat Task Group website at http://www.glfc.org/lakecom/lec/HTG.htm, or upon request from an LEC, Standing Technical Committee (STC), or HTG representative.