

Lake Erie Committee Environmental Priorities

As detailed in *A Joint Strategic Plan for Management of Great Lakes Fisheries* (Joint Strategic Plan), degradation of water quality, destruction of physical habitat, and impairment of ecosystem components essential to the well-being of fish remain as major causes of impairment of Great Lakes fish communities and fisheries. Strategic procedures identified in the Joint Strategic Plan direct lake committees to identify environmental issues that may impede achievement of their fish-community objectives and to work within governmental initiatives, such as the Great Lakes Water Quality Agreement, that provide opportunities for achieving, refining, and assessing progress toward environmental and fish-community objectives.

In 2016, the Council of Lake Committees (CLC) adopted its *Environmental Principles for Sustainable Fisheries in the Great Lakes Basin* to help guide individual lake committees as they identified and prioritized environmental issues that impede achievement of their Fish Community Objectives. The CLC recognized that diverse functional habitats are required for sustainable fish production; protection and improvement of fish habitat should occur systematically, cumulatively, and collaboratively; fishery value should be accommodated in decisions that affect functional habitats; and manageable sources of anthropogenic stress are pathways for addressing impediments to functional fish habitats.

Using the above strategic guidance, the Lake Erie Committee (LEC) developed a short-list of high priority environmental impediments and recommended actions that are critical for achievement of its Fish Community Objectives in Lake Erie. The LEC Habitat Task Group conducted a technical inventory and assessment of functional habitats in Lake Erie, as they relate to production of fish stocks of common concern, identification of impediments to production of fish stocks of common concern that provide broad benefits to fisheries, and recommended actions to address these impediments. The technical inventory and assessment was then prioritized based upon the Lake Erie Committee's determination of benefits associated with the outcomes of the actions identified in the inventory and assessment. Results of that process identified a short-list of high priority regional and site-specific actions that, if achieved, would move the Lake Erie Committee closer to achievement of its Fish Community Objectives.

The environmental priorities chosen by the LEC for this five-year period should improve the production potential for fish species of common concern, including lake sturgeon, lake whitefish, walleye, yellow perch, and muskellunge as these priorities are completed. These environmental priorities are detailed below.

- Regional nutrient reduction strategies to reduce phosphorus loading and achieve mesotrophic conditions in the western, central, and nearshore waters of the eastern basins and embayments.
 - Broadly, excessive nutrients are impacting ability to achieve FCOs and fisheries production basinwide (west, central, and east basin) in 12 priority management areas
 - Specific focal areas for nutrient reduction strategies include:
 - Maumee River watershed
 - Thames River watershed
 - Actions in these two focal watersheds are critical because they directly impact eight identified priority management areas in the western basin of Lake Erie
- Increase connectivity of select tributaries for LEC migratory fish species of common concern

- Terminal barriers are impacting the ability of LEC agencies to achieve FCOs and are compromising production of priority fish species that support recreational and commercial fisheries throughout the basin
- Specific locations where connectivity is limiting production of FCO species includes:
 - Black River, MI – Wingford Dam
 - Huron River, MI – Flat Rock Dam
 - Grand River, ON – Dunnville Dam
- Increase shoreline/nearshore complexity through softening of shorelines, rehabilitation of connected coastal wetlands, and increases in submerged aquatic vegetation
 - Shoreline alterations including shoreline hardening and diking of coastal wetlands has reduced habitat complexity and decreased the extent of submerged aquatic vegetation, which impacts the ability of LEC agencies to achieve FCOs and are compromising production of priority fish species that support recreational and commercial fisheries throughout the basin
 - Specific locations where shoreline alterations (hardening, diking, etc.) are limiting production of FCO species includes:
 - Sandusky Bay
 - Huron-Erie Corridor
 - Grand River, OH
 - St. Clair River Delta