

**LAKE ERIE COMMITTEE**  
**POSITION STATEMENT**

**On**

***Changing water level effects on Lake Erie and the Lake St. Clair Ecosystems***

The Lake Erie Committee of the Great Lakes Fishery Commission understands that fluctuating water levels and the subsequent shifting of the littoral zone are important to the structure, function, and productivity of aquatic systems.

The Lake Erie Committee recognizes that:

- a) a healthy fish community can be best achieved through strategies that include restoration of important coastal near-shore and tributary aquatic habitats (Fish Community Goals and Objectives for Lake Erie, 2003);
- b) Lake Erie water levels have historically fluctuated over a 2-meter range and the US Army Corps of Engineers has established the Ordinary High Water (OHW) elevation for Lake Erie at 174.8 m (IGLD 1985);
- c) associated with changing lake levels is a moving Aquatic Terrestrial Transition Zone (ATTZ) which needs to fluctuate freely in natural form;
- d) shoreline modifications have degraded near-shore fish habitat, reducing the ability of Lake Erie to support healthy fish communities and that more than 40% of Lake Erie's fish species are classified as wetland dependent or facultative wetland dependent species;
- e) given the low topographic relief associated with Lakes Erie and St. Clair, and the St. Clair, Detroit, and Niagara River systems, significant shoreline areas typically cover and uncover with decadal changes in water level;
- f) currently, more than 90% of the southern shoreline of the western basin is hydro-modified and extensively armored, with very little near-shore aquatic vegetation or "shallow-water" habitat (<0.5 m). As the shoreline recedes from this armoring, there is increased potential for re-establishment of near-shore emergent and submerged vegetation and restoration of natural near-shore and coastal processes and connectivity;
- g) there is the potential for Lake Erie water levels to change substantially over the next decade associated with natural lake level fluctuations, and the potential for significant declines in lake level associated with global climate change may create a new shoreline.

Given the potential gains associated with a newly exposed, and eventually re-vegetated, shoreline, and the impacts this will have in regards to restoration of fish community stability, and restoration of natural nearshore and coastal processes and associated ecosystem function, where practical, the Lake Erie Committee supports the free migration of the shoreline below the Ordinary High Water elevation which will allow for restoration of the fish communities associated with the Aquatic Terrestrial Transition Zone.

The Lake Erie Committee strongly encourages all resource agencies with management responsibilities on Lake Erie to commit resources to 1) re-establish natural vegetated shoreline within the range of decadal changes in Lake Erie water levels in balance with other coastal needs, 2) protect the right of the public trust, state, federal and provincial management agencies

to actively manage these areas for native fish community restoration, and 3) promote research to help understand the significance of the Aquatic Terrestrial Transition Zone in maintaining healthy fish communities in Lakes Erie and St. Clair and connecting waters.

**Adopted:**

Annual Lake Erie Committee Meeting

March 30-30, 2005

Niagara Falls, Ontario