



## Support to the Lake Erie Percid Management Advisory Group on Stock Assessment

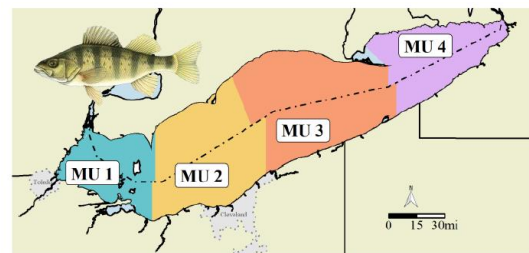
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**Funding Agency:** Lake Erie Committee agencies, Great Lakes Fishery Commission

**Start Date/Status Date:** 2024/May 2026



Caption: Lake Erie yellow perch management units (MUs 1-4), each with its own assessment model and allocated catch limit. Photo credit: Matt Faust.

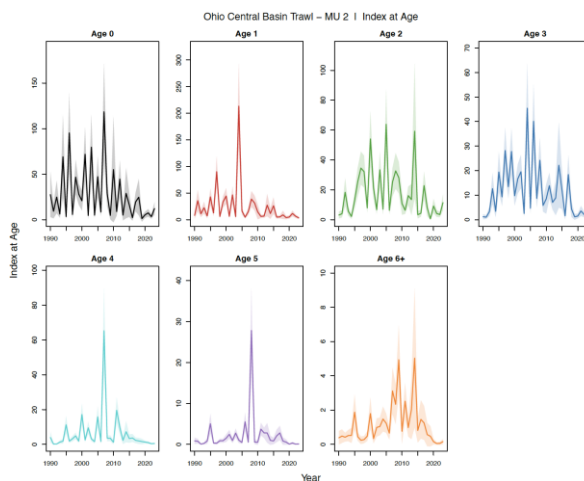
**Goal:** Update and improve stock assessment models used for Lake Erie yellow perch to support the renewal of management plans.

- Objectives:**
1. Address ongoing concerns with model performance of existing stock assessment models.
  2. Revise and streamline data processing and code to enhance stock assessment model performance.

**Management Implications:** Lake Erie yellow perch fishery is both economically and ecologically significant, providing recreational and commercial opportunities. It is one of the only two Great Lake fisheries (along with Lake Erie walleye that have Marine Stewardship Council (MSC) sustainability certification. Reliable stock assessments are essential for maintaining sustainable harvest levels and supporting continued MSC certification.

- Methods:**
- Lake Erie yellow perch are split into four management units, each with its own assessment model. Current efforts focus on management units 2 and 3 (Lake Erie Central Basin).
  - One of two fishery-independent surveys (Ohio Central Basin trawl survey) have been converted from a design-based to a model-based approach.
  - Preliminary statistical catch at age (SCAA) models have been created for management units 2 and 3 in RTMB.

- Prelim. Findings/ Next Steps:**
- Comparison of processed data between the two approaches show minimal differences, confirming the validity of the new workflow.
  - The SCAA models pass basic convergence diagnostic tests and are suitable as a starting point for further model development.
  - Next steps: i) Continue processing fishery independent surveys in management units 2 and 3; ii) Refine the stock assessment models for management units 2 and 3.



Caption: Index at age (in numbers) outputs from data processing the Ohio Central Basin trawl survey for management unit 2. Each line represents an age class, and the shaded colors represent the confidence intervals.

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