

Status of Yellow Perch in Lake Michigan – 2018



[Brian Breidert, long-time member of the Lake Michigan Yellow Perch Task Group and Inshore Fish Working Group, retired in 2019. Brian was, and remains, a tireless advocate for Lake Michigan fisheries. Congratulations Brian!]

REPORT TO THE LAKE MICHIGAN COMMITTEE
Ypsilanti, Michigan
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Yellow Perch / Inshore Fish Working Group Contact List: 2019

This report was prepared from information provided by agency biologists. Questions regarding data from a specific area of Lake Michigan, or concerning a specific aspect of Lake Michigan yellow perch research, should be directed to biologists from the relevant jurisdiction (see Appendix 1 for a map of lake areas).

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Status of Yellow Perch in Lake Michigan

Yellow perch assessment activity is occurring throughout the lake, with numerous agency and university personnel sampling perch utilizing various gear types in different seasons. Selected parts of this information are presented here, in three sections. The first section covers the relative abundance of adult (age 1 and older) yellow perch. The second section examines the most recent age structure data available for different parts of the lake. The final section consists of estimates (or indices) of juvenile yellow perch recruitment: most of these data come from collections of age-0 yellow perch. Coordinated regulation of yellow perch harvest has been an important part of perch management since the early 1990s. Current commercial and recreational regulations for all Lake Michigan jurisdictions are included as a final section of this status report, along with data showing trends in yellow perch harvest over time.

Since its formation in 1994, the Lake Michigan Yellow Perch Task Group has in most years produced an annual status report. Exceptions to the annual reporting cycle occurred in 2012 (report covering 2010 and 2011 activities), 2015 (2012-2014 activities), and 2018 (2016 and 2017 activities). In 2014, ongoing and additional yellow perch-related work and research activities were incorporated within the responsibilities of the existing Lake Michigan Technical Committee (LMTC) Inshore Fish Working Group. The current (2019) report marks the 20th report and 25th year of reporting by this group.

Adult Relative Abundance (Figures 1 – 5; data assembled were collected with either gill nets or bottom trawls)

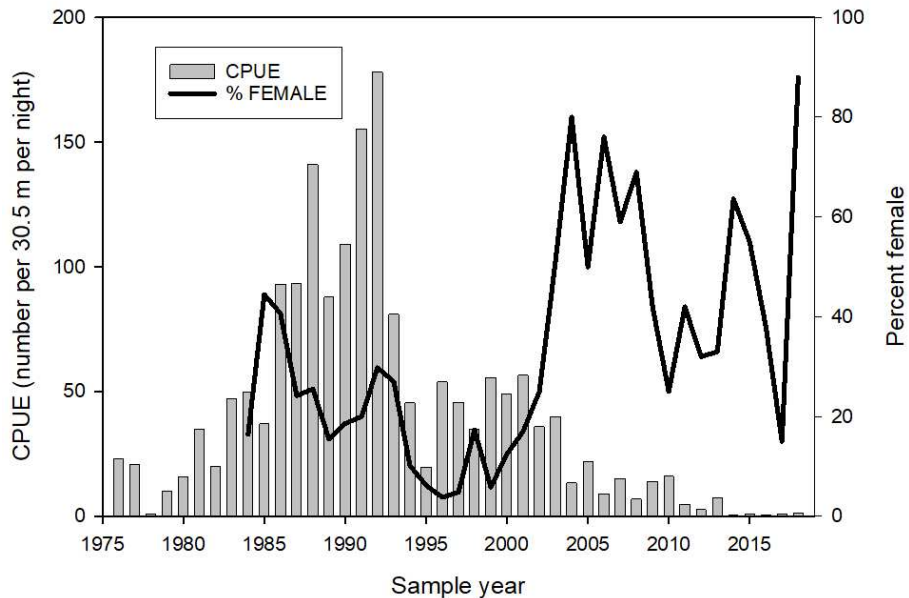


Figure 1. Adult yellow perch relative abundance and percent female in the Illinois waters of Lake Michigan. (ILDNR; data from spring gill net assessment, Chicago and Lake Bluff, IL, 1976 – 2018.)

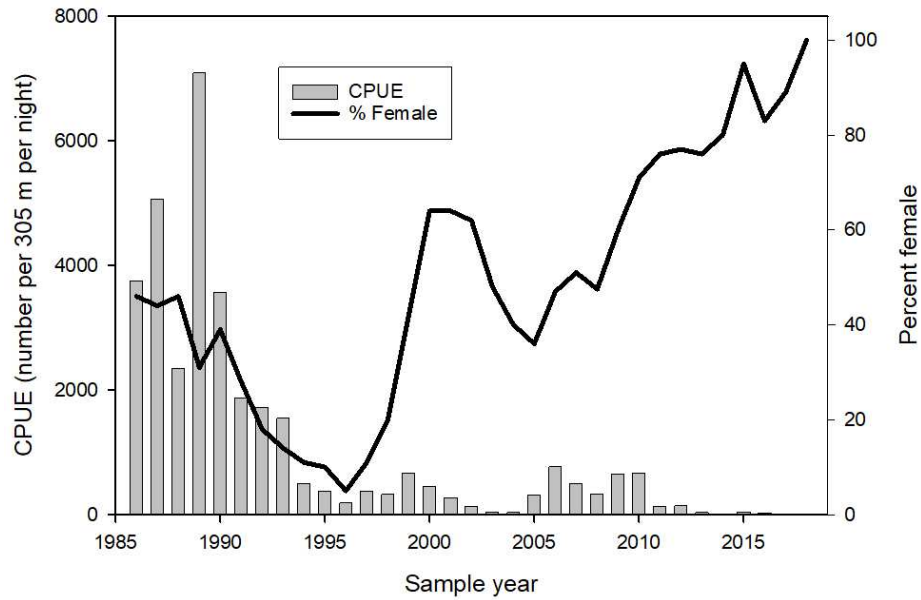


Figure 2. Adult yellow perch relative abundance and percent female in the Wisconsin waters of Lake Michigan. (WDNR; data from winter gill net assessment, Milwaukee, WI, 1986 – 2018.)

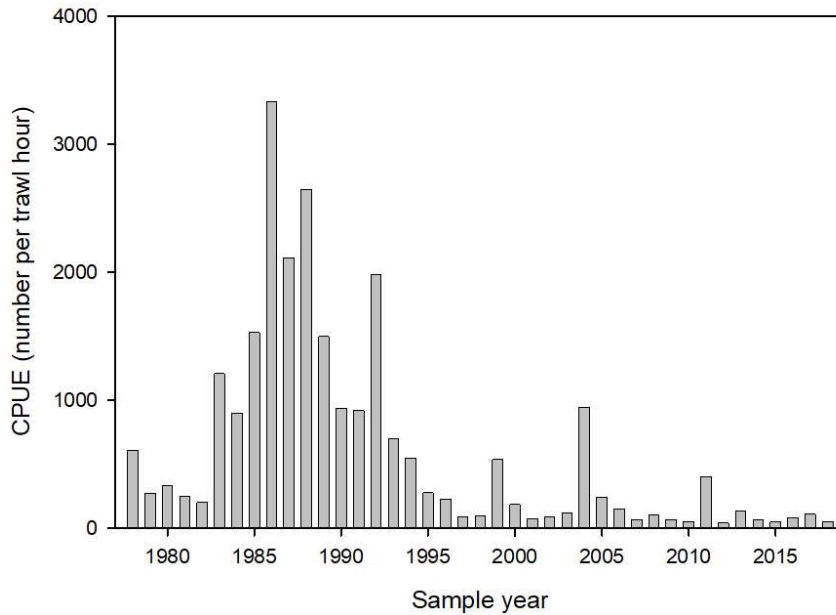


Figure 3. Adult yellow perch relative abundance in the Wisconsin waters of Green Bay. (WDNR; data from summer trawl assessment, Green Bay, WI, 1978 – 2018.)

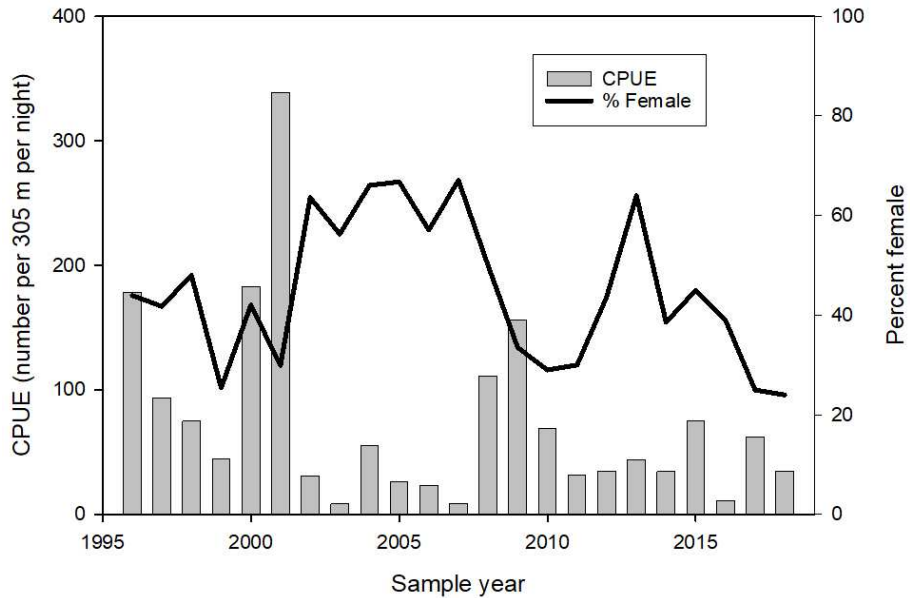


Figure 4. Adult yellow perch gill net catch-per-unit-effort and percent female in the catch at four southern Lake Michigan ports (Grand Haven, Saugatuck, South Haven, and St. Joseph, MI). (MDNR; data from April-June, 1996 – 2018.)

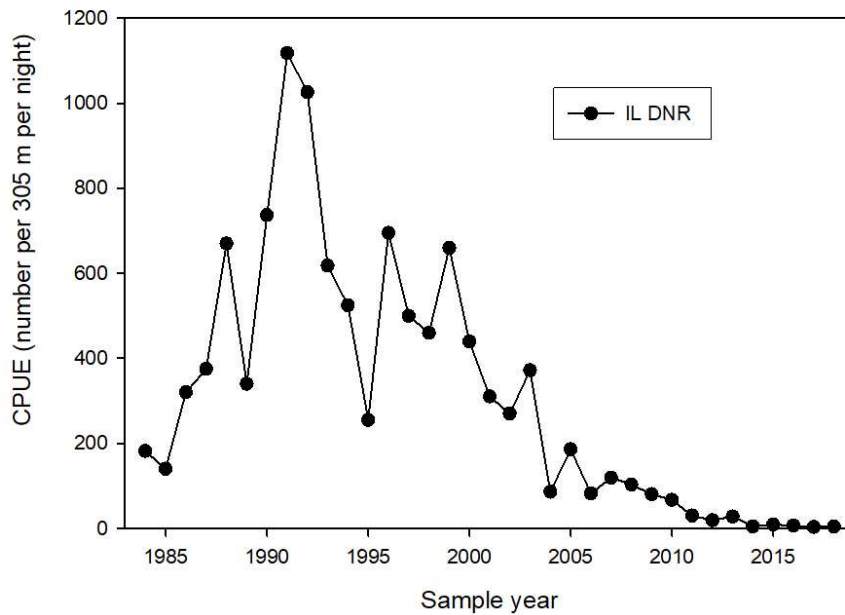


Figure 5. Yellow perch CPE (number of fish per 305 m) in graded mesh gill net consisting of equal length panels of 51-mm, 64-mm, and 76-mm stretched mesh, 1984-2018. (Data from ILDNR)

Population Age Structure (determined by evaluating otoliths or spines; see figures for agency-specific information)

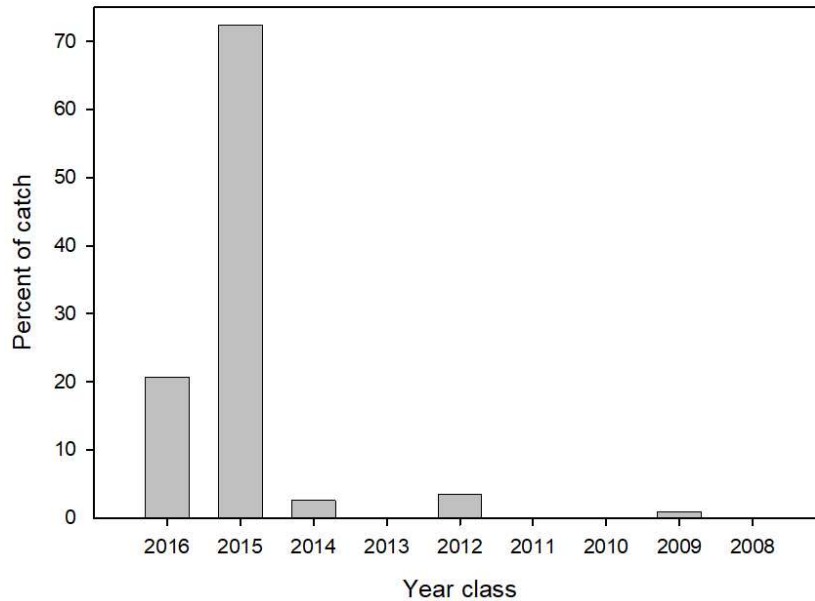


Figure 6. Yellow perch age structure from the Illinois waters of Lake Michigan. (ILDNR; data from spring gill net assessment, Chicago and Lake Bluff, IL, 2018. Ages determined using otoliths.)

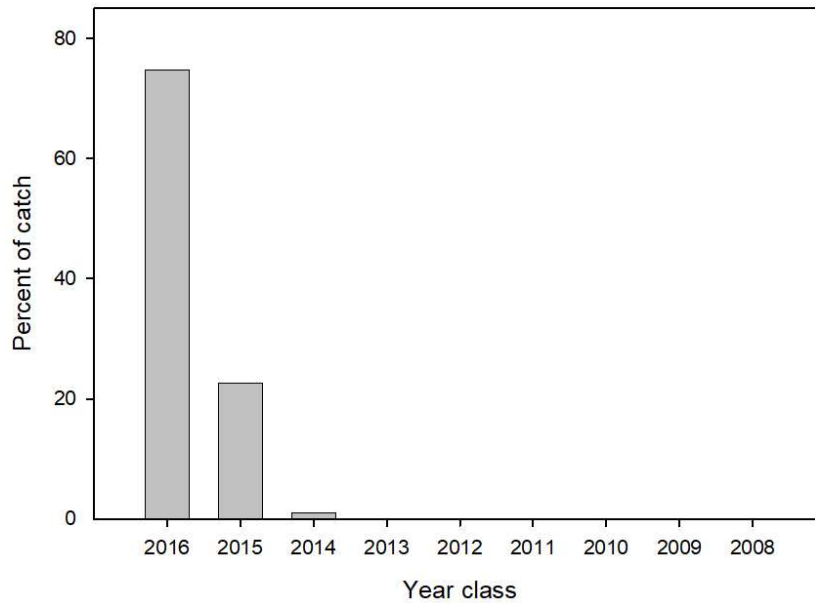


Figure 7. Yellow perch age structure from the Wisconsin waters of Green Bay. (WDNR; data from commercial harvest – all gear types, Green Bay, WI – 2018. Ages determined using spines.)

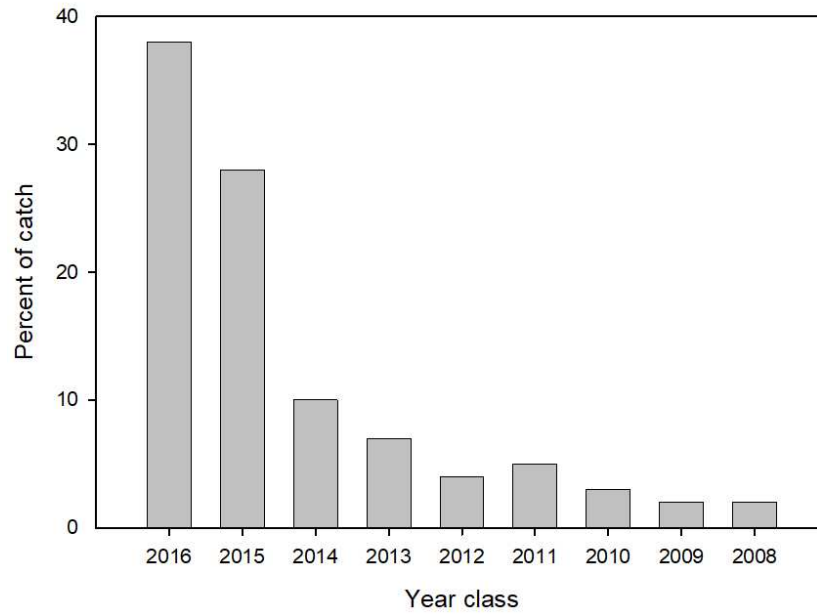


Figure 8. Yellow perch age structure from the Michigan waters of Lake Michigan. (MDNR data from spring gill net assessment, combined three southern Lake Michigan ports – Grand Haven, Saugatuck, and South Haven, MI – 2018. Age determined using spines.)

Recruitment

Having a reliable indicator of future inputs to an adult population is vital to understanding the dynamics of the fish population and helping predict changes in abundance. An early indicator of recruitment is most beneficial to managers. In Lake Michigan, indicators of yellow perch recruitment have traditionally been collected using bottom trawls or beach seines. In addition, the YPTG agreed to implement a lakewide summer “micromesh” gill net assessment (beginning in summer 2007) to standardize assessment of young-of-year yellow perch production, especially in areas where standard trawl and seine surveys cannot be implemented. Preliminary evaluation of five years of data from this assessment were included in the 2012 report; this survey is continuing, and additional data analyses are ongoing.

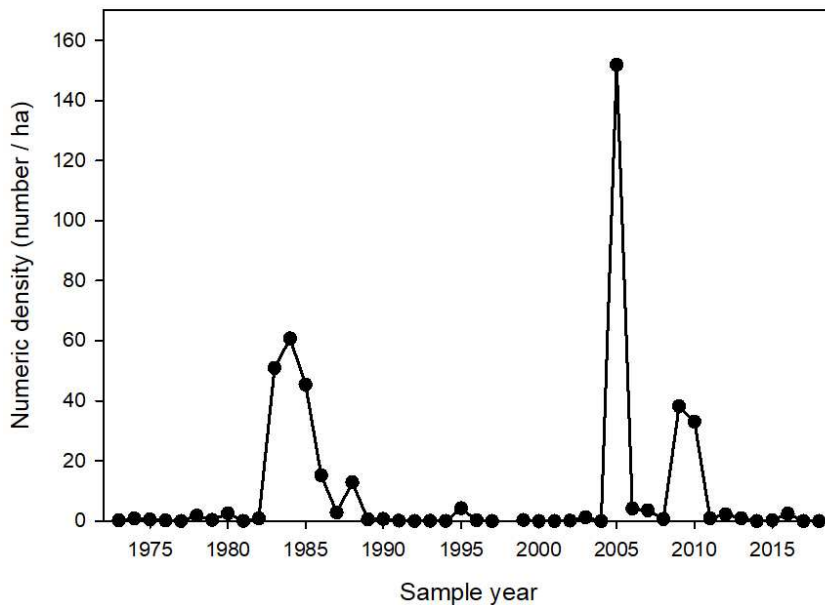


Figure 9. Density of age-0 yellow perch, lakewide. (USGS; data from fall bottom trawl assessments, 1973 – 2018.)

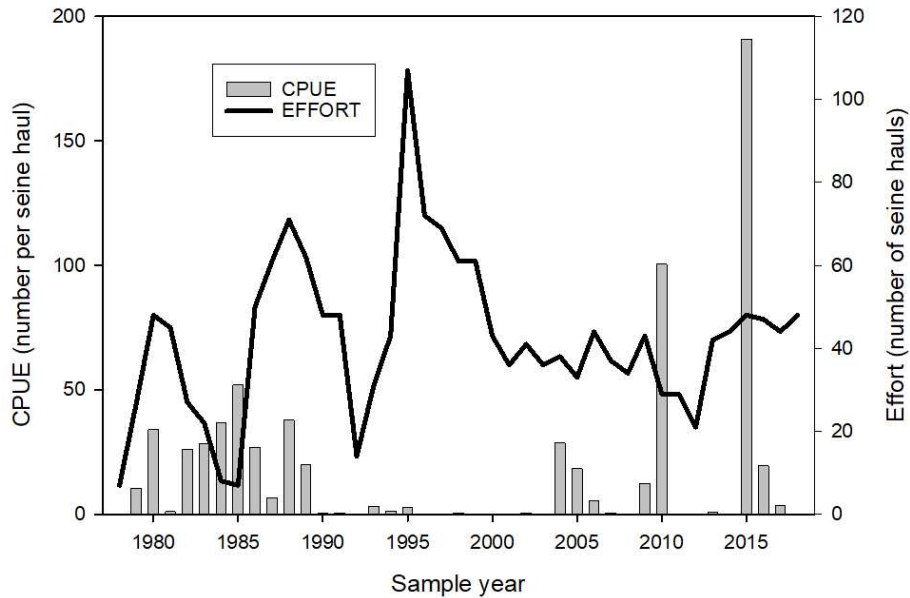


Figure 10. CPUE of YOY yellow perch from the Illinois waters of Lake Michigan. (ILDNR; data from summer beach seining along the Illinois shoreline, 1978 – 2018.)

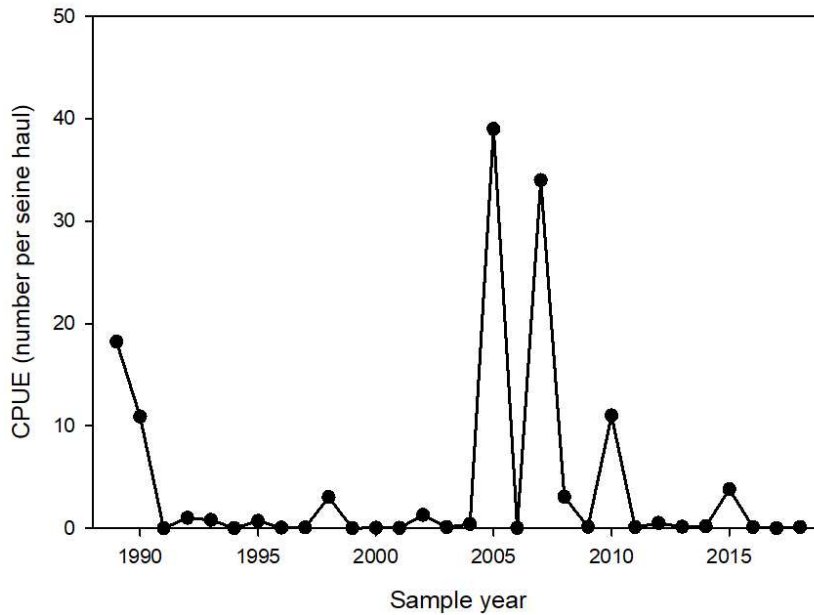


Figure 11. CPUE of age-0 yellow perch from the Wisconsin waters of Lake Michigan. (WDNR; data from summer beach seine assessments along the southern Wisconsin shoreline, 1989 – 2018.)

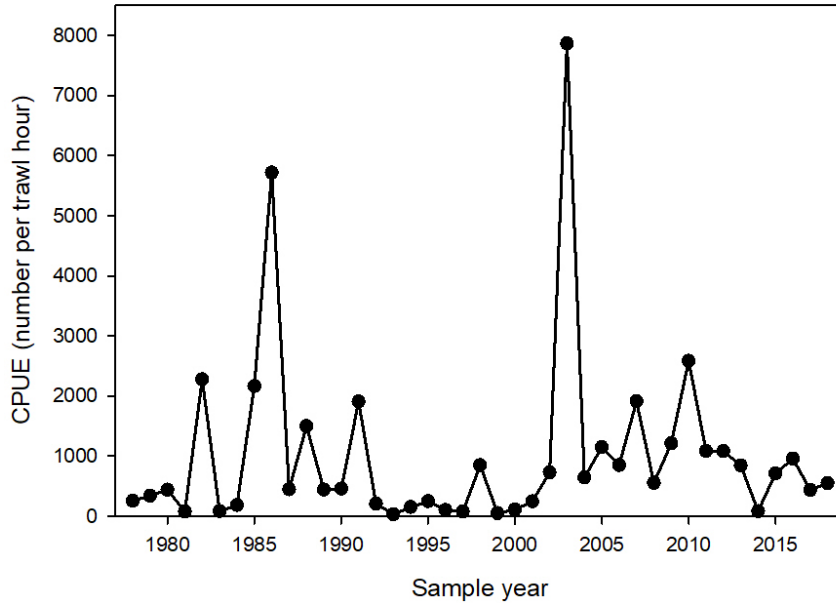


Figure 12. CPUE of age-0 yellow perch from the Wisconsin waters of Green Bay. (WDNR; data from summer trawl assessments, 1978 – 2018.)

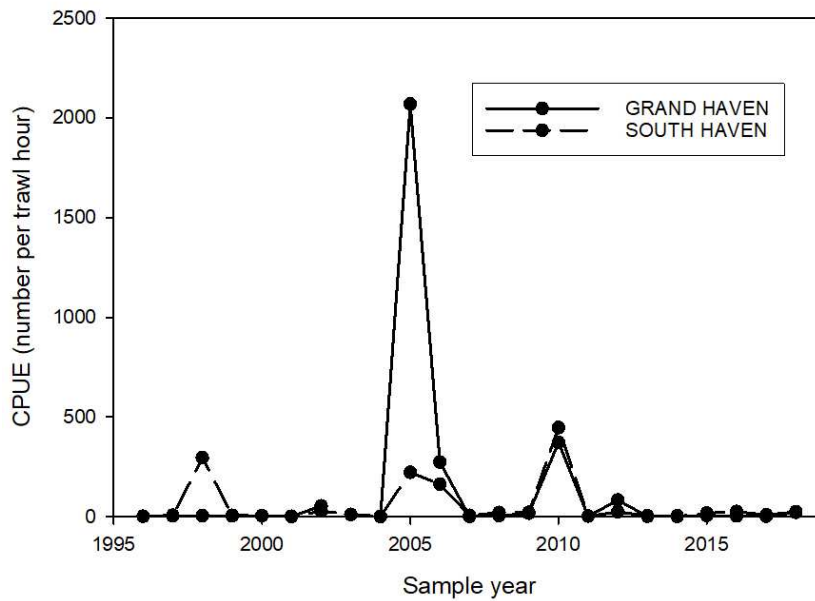


Figure 13. CPUE of age-0 yellow perch in the Michigan waters of Lake Michigan. (MDNR; late summer bottom trawl data from Grand Haven and South Haven, 1996 - 2018. Grand Haven was not sampled in 2003.)

2019 Yellow Perch Regulations and Harvest Trends

Sportfishing regulations:

- Illinois
 - May 1 through June 15; closed to sportfishing for yellow perch
 - Daily bag limit 15 fish
- Indiana
 - No closed season for yellow perch
 - Daily bag limit 15 fish
- Michigan
 - No closed season for yellow perch
 - Daily bag limit; 25 fish
- Wisconsin (Lake Michigan)
 - May 1 through June 15; closed to sportfishing for yellow perch
 - Daily bag limit 5 fish
- Wisconsin (Green Bay)
 - March 16 through May 19; closed to sportfishing for yellow perch
 - Daily bag limit 15 fish

Commercial regulations:

- Illinois perch fishery remained closed
- Indiana perch fishery remained closed
- Michigan does not allow a commercial harvest (outside of 1836 Treaty waters)
- Wisconsin perch fishery remained closed (outside of Green Bay, where quota for 2019 is 100,000 pounds)

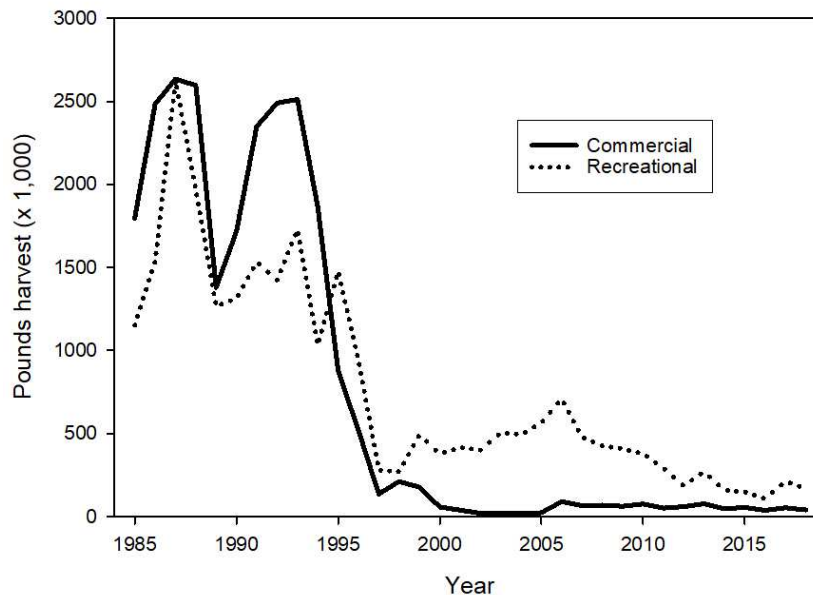


Figure 14. Lake Michigan harvest (lakewide) of yellow perch by commercial and recreational fisheries, 1985-2018. (All jurisdictions; data from Lake Michigan Committee lakewide extractions database, B. Breidert / R. Redman.)

Meetings and Other Yellow Perch-Related Happenings in the Lake Michigan Basin, 2018

- Outside of the regular summer and winter LMTC meetings (and coordination of this report), no additional meetings of the LMTC Inshore Fish Working Group were convened during 2018.

Appendix 1. Lake Michigan statistical districts.

