

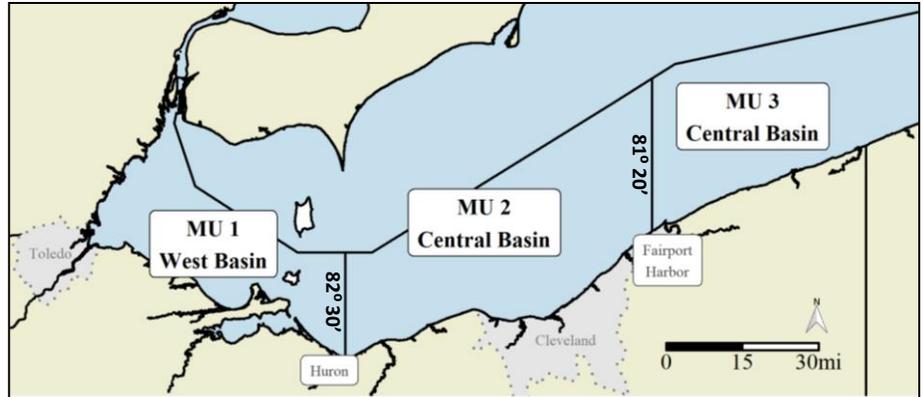


Status of the Lake Erie Yellow Perch Fishery 2021



Yellow Perch Management

Lake Erie Yellow Perch are managed as four separate regional populations. Ohio's waters include portions of 3 Management Units (MUs 1, 2, and 3). The line between MU1 and MU2 is at 82°30.000' longitude, and the line between MU2 and MU3 is at 81°20.000' longitude.



Population Trends

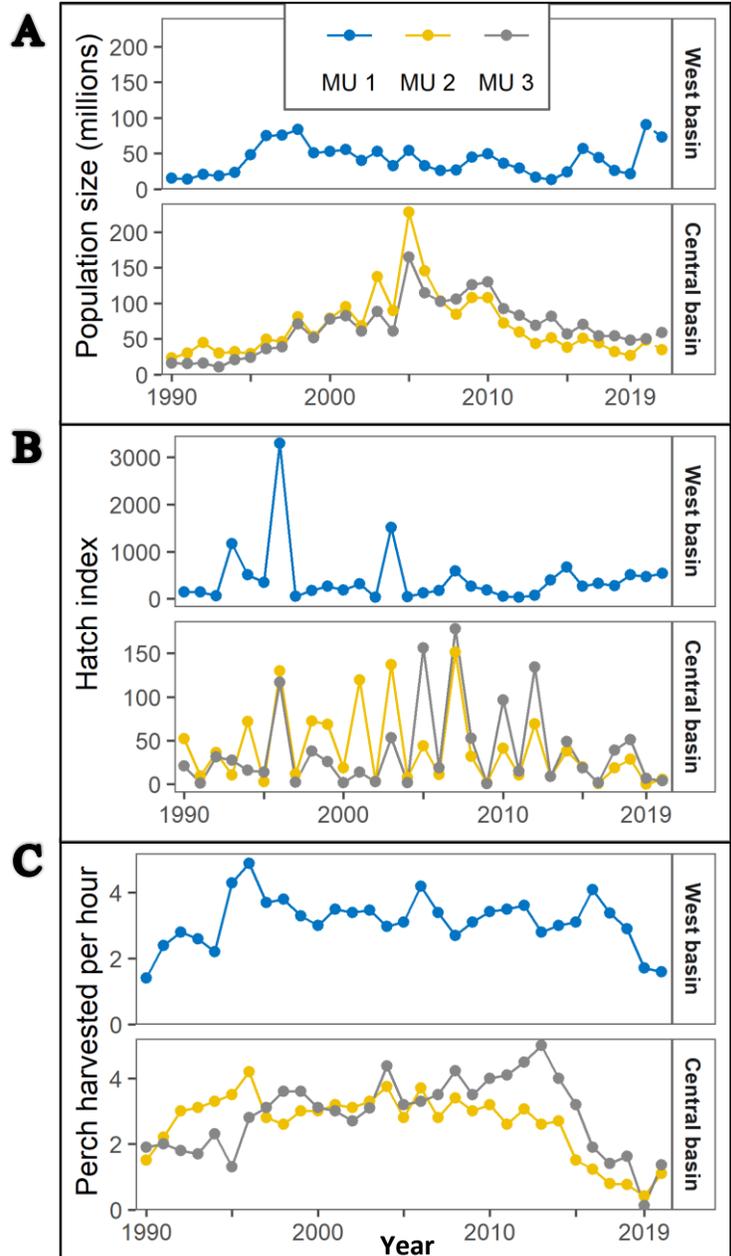
- The **West Basin population (MU 1)** abundance increased substantially in 2020 and **remains high in 2021** (Fig. A).
- The **Central Basin population (MUs 2 and 3)** abundances have **decreased over time and remain low in 2021**, especially compared to the very high abundances in the mid 2000s (Fig. A)

Hatches

- **West Basin (MU1)** recruitment, or the “hatch” of young fish, has been **steady since 2014** (Fig. B). These “hatches” have maintained a healthy adult population and contributed to the 2020 abundance increase.
- **Central Basin recruitment (MUs 2 and 3)** has been **poor since 2013** (Fig. B). The adult population has declined during this period and will continue to decline until strong “hatches” return to the Central Basin.

Sport Fishery Harvest

- In recent years, **angler harvest rates (number of Yellow Perch harvested per hour)** have **decreased** across all populations according to ODNR creel surveys (Fig. C). Small increases in the 2020 Central Basin harvest rates are also characterized by low fishing effort.



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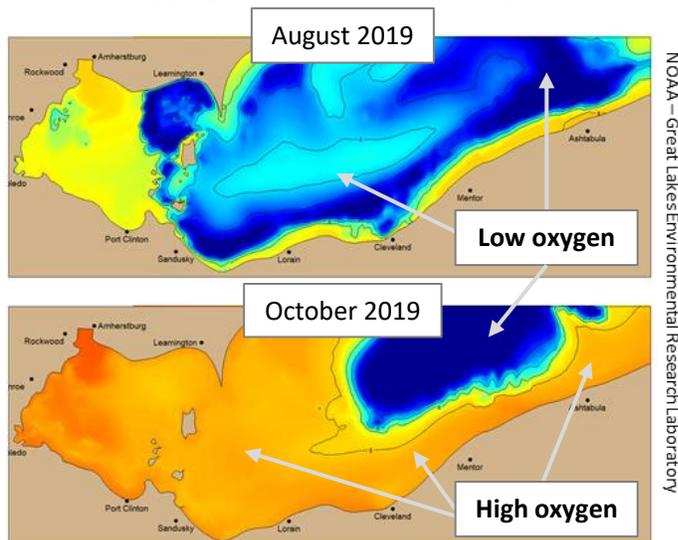
Status of the Lake Erie Yellow Perch Fishery 2021

How are Yellow Perch quotas and limits determined in Ohio?

- U.S. and Canadian biologists across Lake Erie annually **pool together data, estimate adult Yellow Perch abundance, and determine sustainable harvest levels** for each MU.
- Total allowable catches (TACs) within MUs are informed by Harvest Control Rules which **balance fishery performance with population status**. When the population declines, TACs are reduced to allow the population to rebound.
- Ohio receives a portion of the TAC in each MU and **adjusts recreational and commercial quotas to ensure we don't overharvest**. In most years, anglers receive 65% of Ohio's quota and the trap net fishery receives the remaining 35%.
- For 2021, the MU2 Yellow Perch population is approaching the minimum sustainable population size, prompting managers across Lake Erie to reduce TAC. Managers in each jurisdiction must adjust fishery quotas to compensate for reduced TAC and **secure sustainable harvest levels for upcoming years**.

Diets and Environmental Conditions may also affect harvest rates

- Yellow Perch **diets may have changed** in recent years; eating fewer fish and more invertebrates, such as the invasive spiny water flea and native midge larvae (AKA "muffleheads"). These diet shifts may cause fish to **respond differently to lures**.
- Seasonal **hypoxia (i.e., areas of low oxygen; dark blue areas - below)** occur every summer near the bottom, especially in the Central Basin from Lorain to Conneaut. Also known as "dead zones", fish may follow the daily/hourly movement of hypoxic zones, **aggregating near hypoxic edges**.



How can I catch more Yellow Perch in 2021?

- **Try fishing high abundance areas** in the West Basin (MU1) between Toledo and Huron.
- **Try downsizing lures** to mimic the invertebrates found in diets (e.g., spiny water flea and muffleheads).
- **Try fishing different depths or times of day** as fish may suspend off-bottom when eating invertebrates.
- **Be aware of hypoxic zones**, which can push fish shallower or deeper than traditional hot spots. Use NOAA's hypoxia predictor to inform fishing locations and avoid low oxygen zones to; available free online @: www.glerl.noaa.gov/res/HABS_and_Hypoxia/hypoxiaWarningSystem.html