

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Yellow Perch Assessments In Wisconsin Waters Of Lake Michigan

2024



Aaron Schiller

Senior Fisheries Biologist

Lake Michigan Work Unit - Milwaukee

2024 Spawning Survey

SPRING GILL NET SURVEY DATES (MAY 20 – MAY 30, 2024)

In 2024, the Wisconsin Department of Natural Resources (DNR) conducted a yellow perch spawning survey near the Green Can Reef outside of the Milwaukee Harbor. The survey used gillnets containing one 100-foot panel of each 2.0-inch, 2.25-inch, 2.5-inch, 2.75-inch, 3.0-inch and 3.25-inch mesh.

The Green Can Reef area off the coast of Milwaukee is the established index site for our annual yellow perch spawning assessment. For 2024, the RV Sturgeon was used to set gillnet sets. The survey began May 20, 2024, and continued through May 30, 2024. Depths from 19 to 48 feet of water were sampled. Water temperature on the bottom of the lake ranged from 49°F to 53°F during the survey. The total effort for the 2024 survey was 5,400 feet of gillnet set for one night.

The first nets were lifted on May 20, capturing 94 perch. This set consisted of 3,000 feet of gill net set from 23 to 48 feet of water. The bottom temperature was 49°F.

The second nets lifted set on May 29 capturing 74 perch. This set consisted of 2,400 feet of gill net set from 19 to 35 feet of water. The bottom temperature was 53°F at the time nets were set.

In total, 168 yellow perch were captured, including 158 ripe males, and 10 females (Figure 1). Aging structures were collected from 147 individuals. The most well represented cohort was the 2021 cohort with 57 fish (3-years old) followed by the 2020 cohort (35 fish) that were 4-years old. The 2016 and 2017 cohorts continued to show up strong with a combined 43 fish. The age composition of perch captured in the 2024 survey closely reflected that of the 2023 survey with the addition of a strong 2021 cohort as those fish were now fully recruited to the sampling gear (Figure 2). The 2016 cohort is producing some large fish, while the 2020 and 2021 cohorts may support the recreational fishery. This is the second year in a row where more than 150 perch were encountered in this survey. The increase in adult abundance and the presence of multiple significant cohorts in the fishery is a promising trend.

In addition to yellow perch, round whitefish, alewife, burbot, lake trout, longnose sucker, white sucker, rock bass and round goby were also captured.

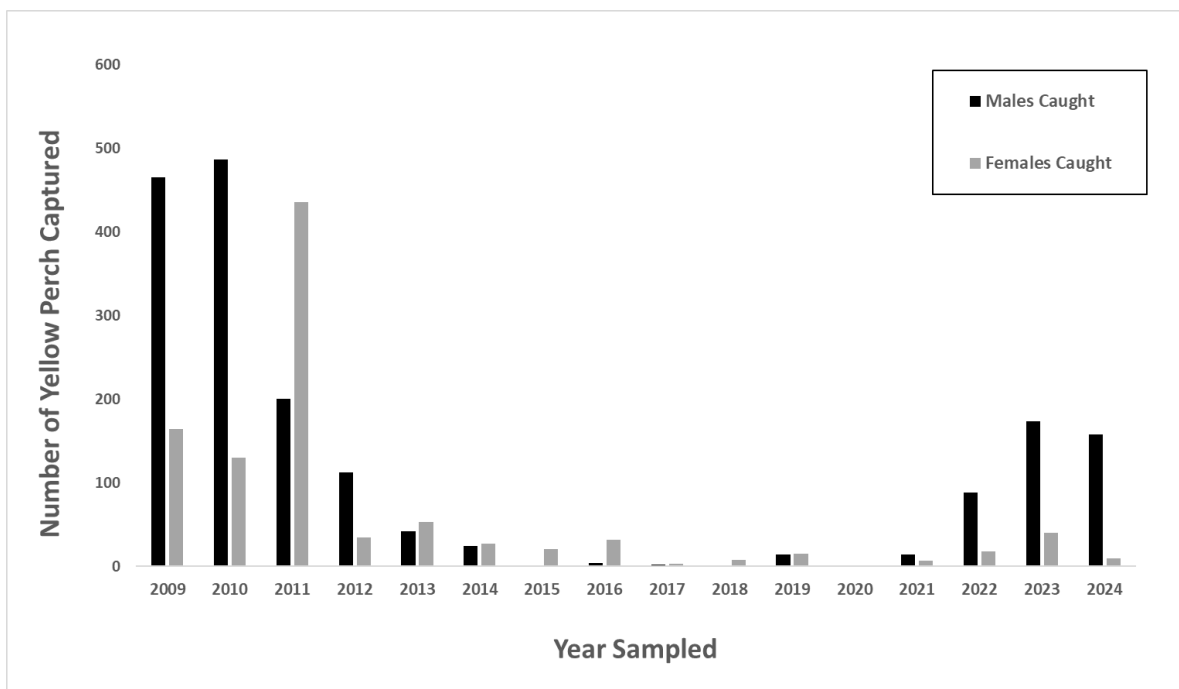


Figure 1. Yellow perch spawning assessment at the Green Can Reef, Lake Michigan, Milwaukee, DNR 2009-2024.

*No spawning survey was conducted in 2020.

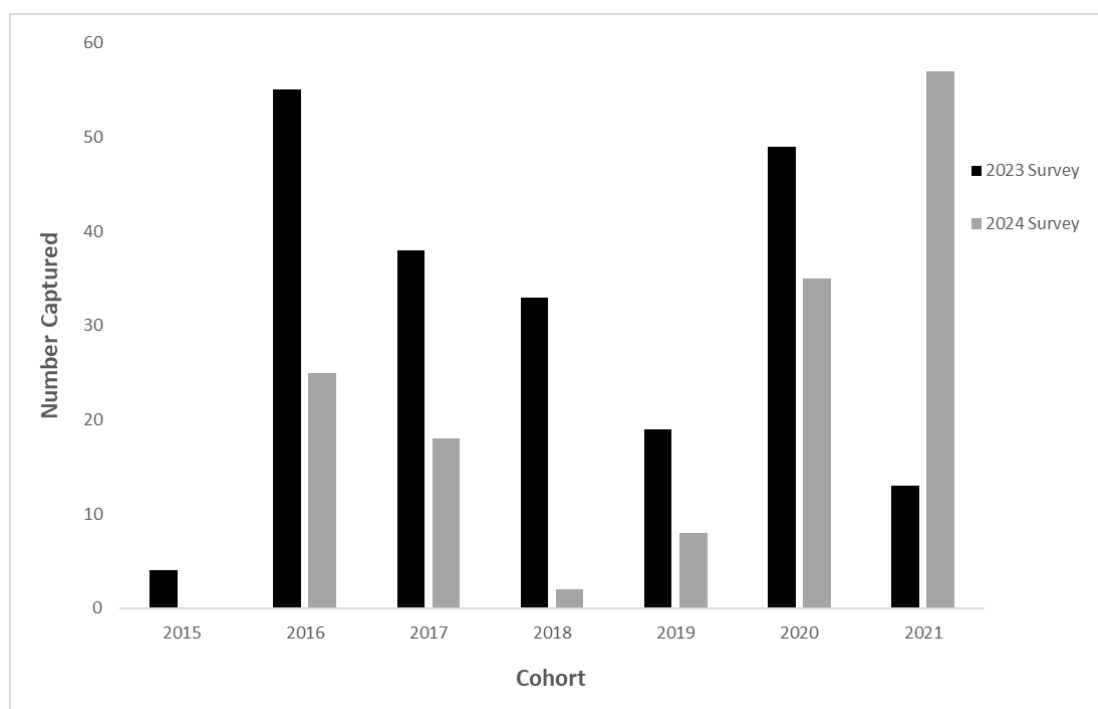


Figure 2. Cohorts of yellow perch captured during annual spawning assessments on Green Can Reef, Lake Michigan, Milwaukee, DNR 2023 and 2024.

Young of Year Survey

NOT CONDUCTED IN 2024

An annual survey of young-of-the-year (YOY) yellow perch along the Lake Michigan shoreline typically consists of both seining and micromesh gill netting efforts encompassing sampling sites from Sheboygan to Kenosha. In 2024, no young of year surveys were conducted due to funding constraints. A cost-effective sampling protocol is being evaluated to estimate the abundance of young perch in nearshore waters.

Winter Graded Mesh Assessment

NOT CONDUCTED FOR 2024 or 2025

Our annual winter graded mesh assessment of the yellow perch population in Lake Michigan is typically conducted in early December and is an index of the age structure of the yellow perch population. The survey was not conducted in December of 2024. This survey may resume in the future to monitor for significant cohorts recruiting to the fishery. With the recent increased catch rate in the spawning survey, the age structure of the perch population may be better informed by those estimates for perch ages 3 and older. Sampling locations and effort have changed in recent years to increase catch in the winter graded mesh survey with minimal results. It is possible that the perch are no longer using historical wintering grounds. Modifications to this survey are being considered to better sample yellow perch in winter months.

2024 Survey Year Summary

The yellow perch population around Milwaukee remains lower than the long term average and struggles to consistently produce significant year classes, however, the recreational fishery should be improving with a few significant cohorts. Yellow perch from the 2016 cohort continue to produce the majority of the large perch but the 2020 and 2021 cohorts are producing the most fish. The spawning stock biomass is increasing with the addition of the 2021 cohort on top of the strong 2020 cohort. Overall, the catch of yellow perch is increasing and the population is relying heavily on a few years of successful recruitment. Hopefully, an increase in spawner biomass and some favorable weather trends will help continue the trend of increasing abundance of yellow perch in the Milwaukee area.