

Ohio's Lake Erie Fisheries

2023 Angler Report



Prepared
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by

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Table of Contents

Executive Summary	3
Lake Erie Maps	4
Walleye.....	5
Yellow Perch.....	12
Smallmouth and Largemouth Bass	21
Steelhead	27
Forage Fishes.....	28
Environmental.....	30
More Information	32

Note: The data and management summaries contained in this report are provisional. Every effort has been made to ensure their correctness. Contact the Division of Wildlife’s Lake Erie office nearest you before using these data or before citing research and management findings. Additional data are available upon request.

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Executive Summary

Ohio's Lake Erie Fisheries 2023 Annual Report

The ODNR-DOW Lake Erie Fisheries Unit (DOW), which includes research stations in Fairport Harbor and Sandusky and a law enforcement section in Sandusky, manages the fisheries in the 2.3 million acres of Lake Erie that are within Ohio's waters. Lake Erie's recreational and commercial fisheries contribute upwards of \$1 billion to Ohio's economy; these fish populations are also vital to the ecosystem. Annual fisheries assessments using bottom trawls, gill nets, angler creel surveys, and commercial catch reporting are conducted by the research stations and are combined with data from all jurisdictions in Lake Erie (Ohio, Michigan, New York, Pennsylvania, and Ontario; Figure 1.1) to monitor the status of fish populations and to ensure the sustainable harvest of these shared resources.

Walleye

- The 2023 hatch was the 9th highest since 1988 according to West Basin trawl surveys.
- Angler effort and harvest indicate that Walleye are the top sportfish in Ohio's Lake Erie waters.
- Anglers will continue to see exceptional harvest rates. Most fish will be 15-24", although fish 9-14" will also be common and should be released quickly and with minimal handling.

Yellow Perch

- Hatches in the West Zone (Figure 1.2) have been near or above average for ten years. Central and East Zone hatches have been below average since 2014.
- Angler effort suggests that Yellow Perch is the second most targeted sportfish caught by Ohio's anglers in Lake Erie.
- Angler harvest for 2023 was estimated at 2.7 million fish with a harvest rate of 2.9 fish per angler hour. Harvest rates and harvest increased in 2023 to near average levels in the West Zone, while harvest and effort in the Central and East Zones in 2023 were among the lowest since the creel survey began in 1975.
- The commercial fishing catch rate of 80 pounds per lift increased from last year but was well below the 10-year average of 131 pounds per lift.
- Anglers can expect the best fishing in the West Zone and lower catch rates in the Central and East Zones due to poor hatches leading to a low adult population in recent years.

Black Bass

- The Smallmouth Bass angler catch rate (1.10 fish per hour) was the highest since 2006.
- At a harvest rate of 1%, this fishery continues to be a catch and release fishery.
- The average size of a harvested Smallmouth Bass was 16.8 inches long with a weight of 3.1 pounds.
- The Largemouth Bass angler catch rate was average (1.23 fish per hour).
- Largemouth Bass had an average length of 15.9 inches and an average weight of 2.3 pounds.

Steelhead Trout

- In 2023, DOW hatchery personnel raised and stocked Lake Erie tributaries with 464,898 Steelhead that were a mix of Wisconsin, Shasta, and Manistee River strains.
- The open-lake recreational harvest was 11,763 fish with a harvest rate of 0.21 fish per hour.
- A two-year Steelhead tributary angler creel survey was initiated in fall of 2023; results will be reported upon completion.
- Annual targeted Steelhead stocking will remain at 450,000 fish for 2024.

Forage Fish Community

- Forage fish indices remained well below average across zones.
- West Zone catches were dominated by young White Perch, followed by Trout Perch, Yellow Perch, Rainbow Smelt, and Silver Chub. Catches in the Central and East Zones were primarily composed of young White Perch and Rainbow Smelt.
- Emerald Shiner abundances were at some of the lowest levels in the time-series.
- In the Central and East Zones, the abundance of Alewife increased compared to recent years.

Lake Erie Maps

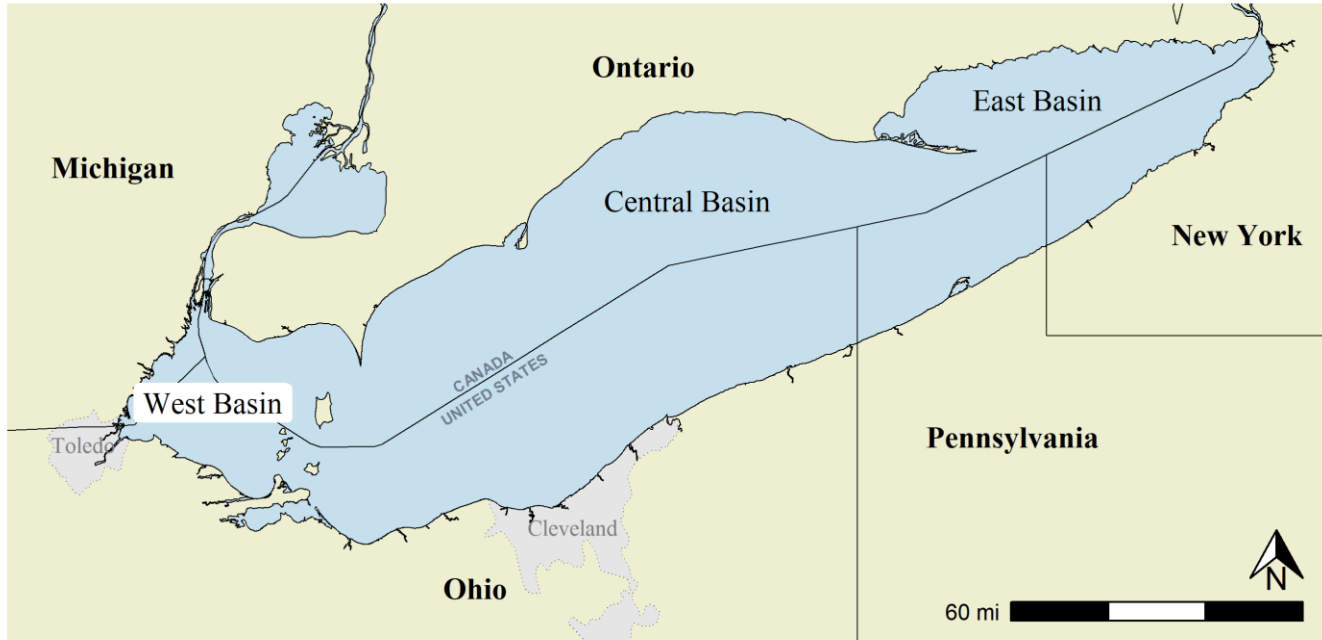


Figure 1.1. Map of Lake Erie depicting basins and the states and province involved in Lake Erie fisheries management.

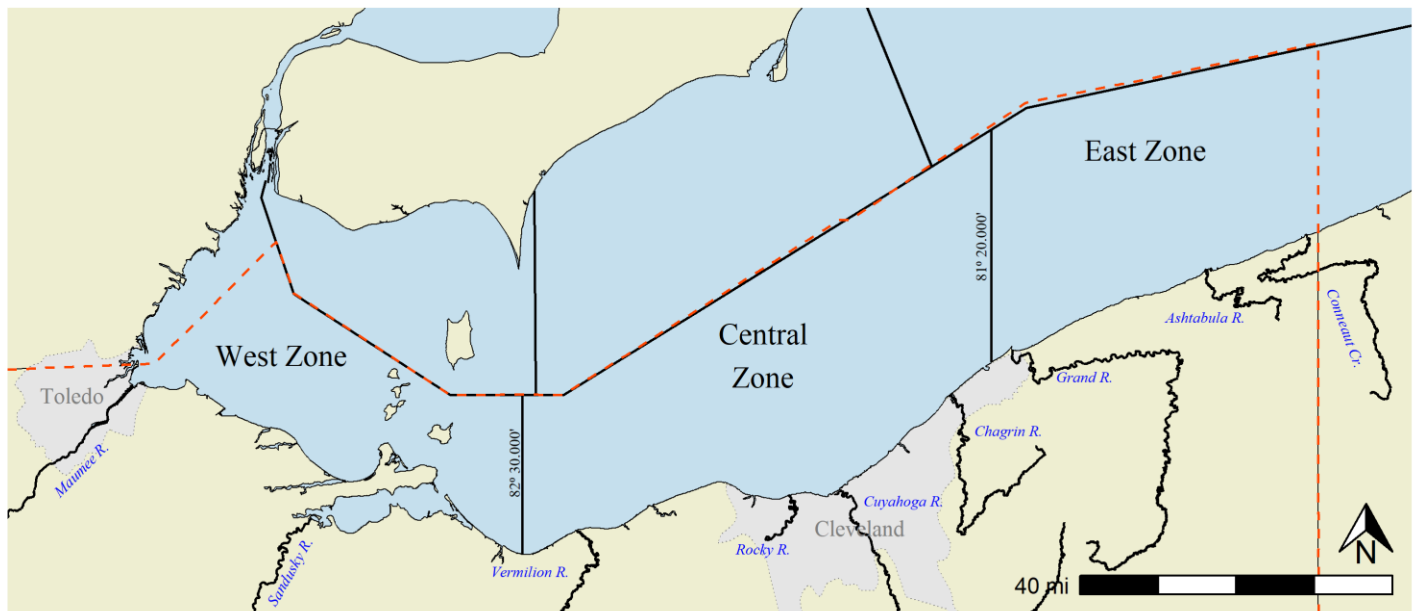


Figure 1.2. Map of Ohio's Lake Erie waters (dashed red line) including zones used for Yellow Perch management and tributaries. The line between the West and Central zones is at $82^{\circ} 30.000'$ longitude (near Huron) and the line between the Central and East zones is at $81^{\circ} 20.000'$ longitude (near Fairport Harbor).

Walleye

Ohio's Lake Erie anglers spend more hours fishing for Walleye than any other sportfish. The DOW uses bottom trawl surveys to determine hatch success, gill net surveys to monitor the abundance of adults, and creel surveys to estimate the harvest and effort of the recreational fishery. Survey data are combined with results from other state and provincial agencies on Lake Erie and are used to manage Walleye as a single population. The Total Allowable Catch (TAC), or the number of Walleye that can be safely harvested, is then determined by the Lake Erie Committee of the Great Lakes Fishery Commission. Ohio receives 51% of the annual TAC based on the surface area of Walleye habitat in Ohio waters.

In recent years, the Walleye population has increased in abundance thanks to **record high hatches** since 2015 (Figure 2.1). Walleye can live 15–20 years in Lake Erie, allowing one strong hatch to contribute to high angler harvest rates for many years. In addition to the recruitment data, the DOW gill-net survey shows a strong adult Walleye population across Ohio waters in recent years (Figure 2.2). Results from the creel survey indicate that **Ohio's Lake Erie Walleye fishery** remains strong. In 2023, Ohio anglers harvested 0.6 Walleye per angler hour across Lake Erie, continuing a six-year streak among the highest harvest rates observed (Figure 2.3). Seasonal trends in high catch rates follow patterns of the annual migration where a majority of Walleye move from West Zone spawning grounds in April to cool waters in the Central and East zones during the warmer months of July through October (Figure 2.4). **Harvest rates in the Central and East zones in 2023 were well above average** across most of the season. High harvest rates in the past decade are associated with a high Walleye harvest (Figure 2.5) and an increase in the time that anglers spend on Lake Erie. Angler effort has declined since 2021 (Figure 2.6), although effort has remained high since shortly after fish from the outstanding 2015 hatch grew into the fishery. A typical keeper-sized Walleye is about two years old on average (Figure 2.7) and weighs about 1.2 pounds (Figure 2.8); an average Fish-Ohio-sized Walleye (28 inches) is 10 years old and weighs 9 ¼ pounds. During the fall, Walleye diets are primarily comprised of Gizzard Shad (Figure 2.9).

Generally, the **2024 adult Walleye population estimate is within the top 25% of the past 30 years** and is comparable to the renowned populations of the 1980s. Anglers can expect harvest rates to remain high in 2024. A majority of the fish that anglers catch will likely be in the 15 to 24 inch size range, although the strong 2022 and 2023 hatches will also be present as 9 to 14 inch fish. Contributions from strong hatches over the past decade will persist in the fishery for many years, continuing Lake Erie's reputation as the "Walleye Capital of the World."

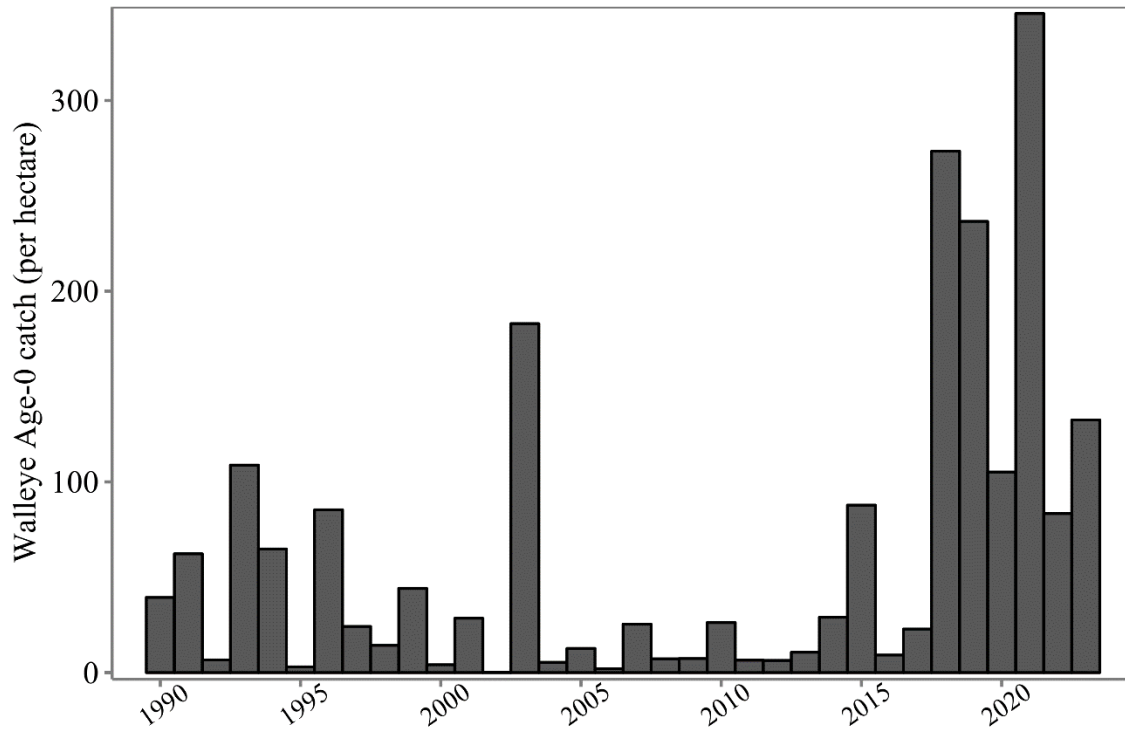


Figure 2.1. Average age-0 Walleye catch from West Zone trawl surveys including data from Ohio and Ontario trawls. The West Zone “hatch” or recruitment index is the primary recruitment index used to determine how many adult Walleye can be expected lakewide in the future.

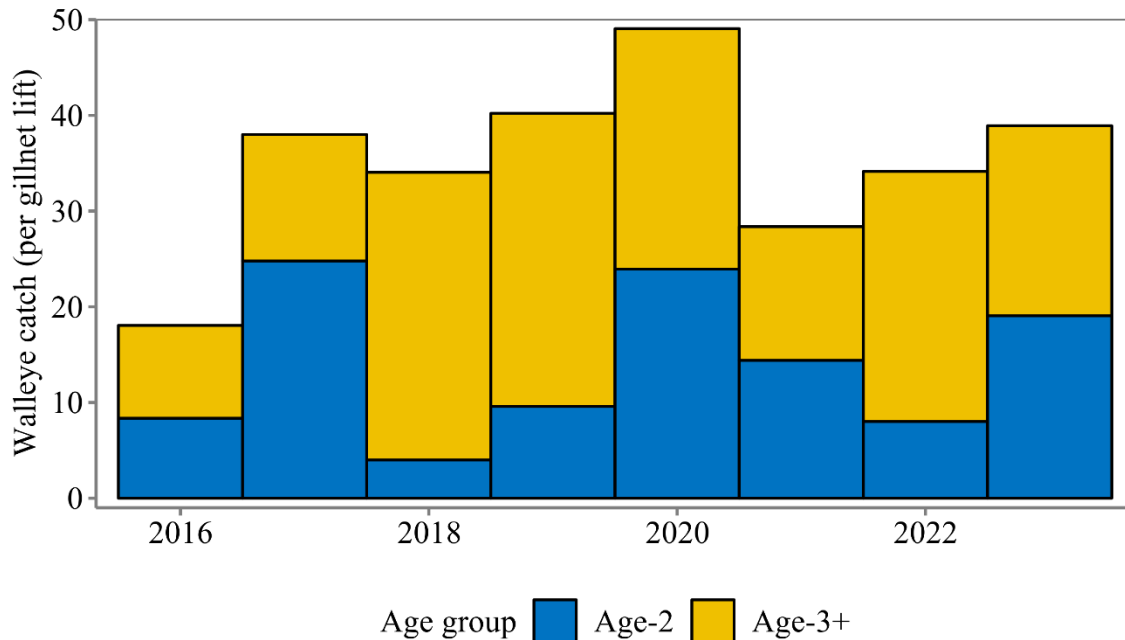


Figure 2.2. Average adult Walleye catch from the fall gillnet survey across all Ohio waters split into age-2 and age-3+ fish. In 2016, this survey switched from multifilament nets to monofilament; pre-2016 catches are available but are not directly comparable to catches from 2016 to the present.

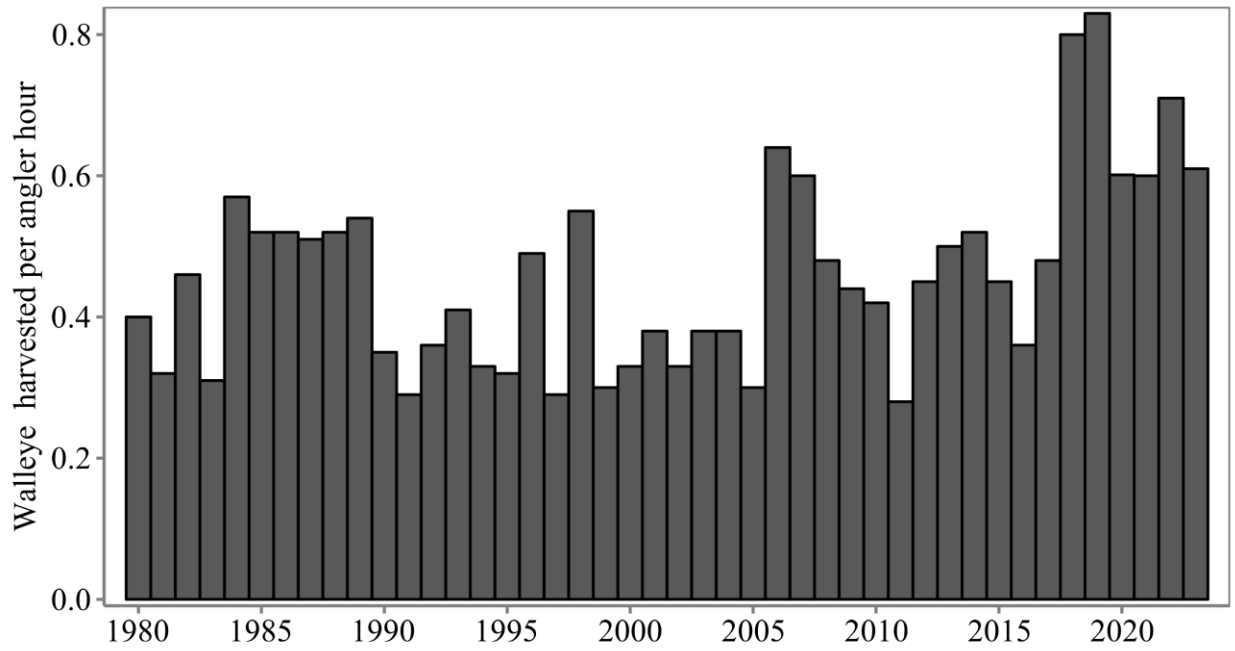


Figure 2.3. Walleye harvest rate (fish harvested per hour per angler) from private (non-charter) boat trips across all of Ohio's Lake Erie waters. Data come from angler interviews taken annually during Ohio's creel survey.

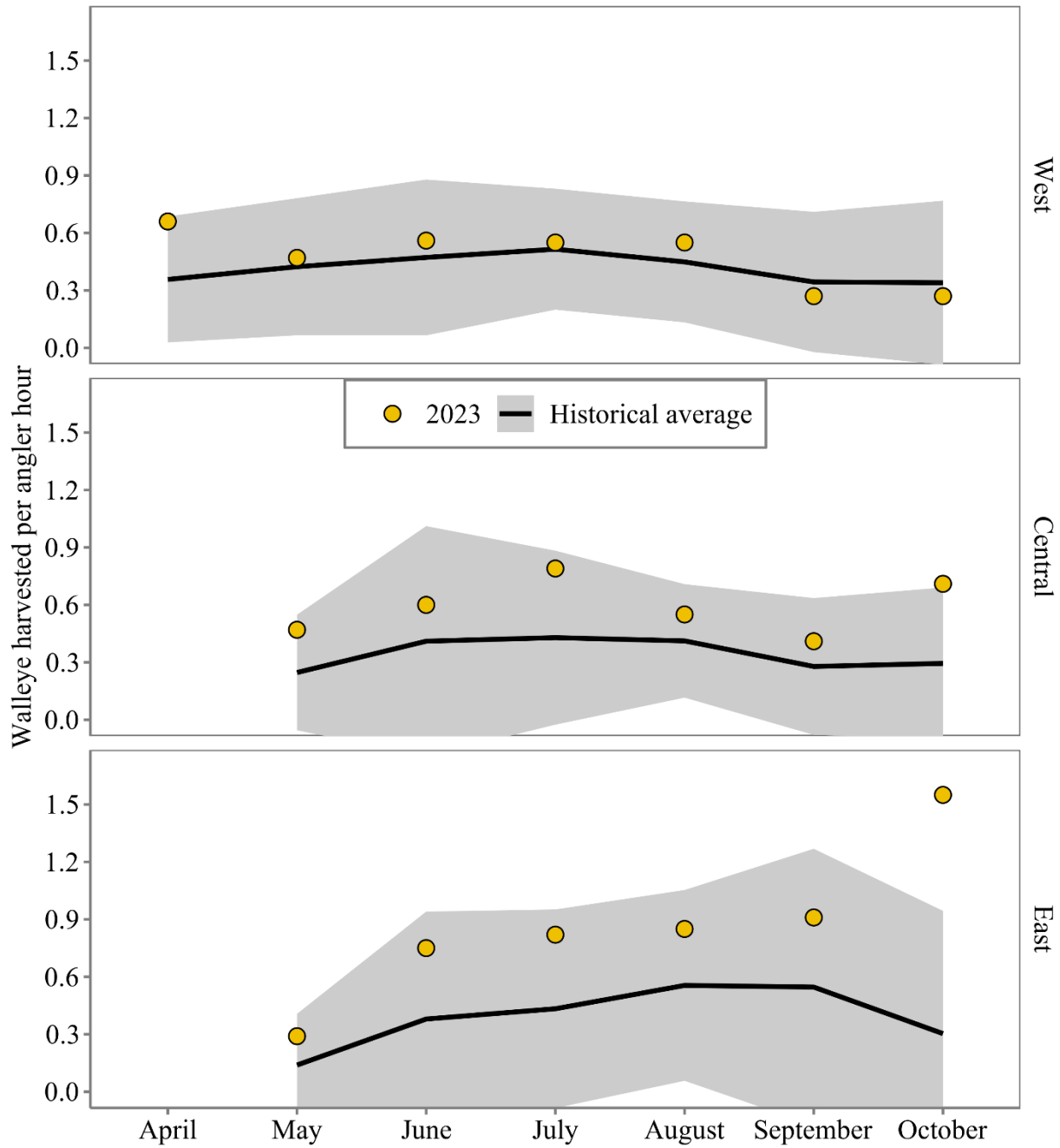


Figure 2.4. Walleye harvest rate (fish harvested per hour per angler) by month and zone from private boat trips across Ohio's Lake Erie waters. Data are from angler interviews taken annually during Ohio's creel survey; April surveys are restricted to the West Zone (top panel).

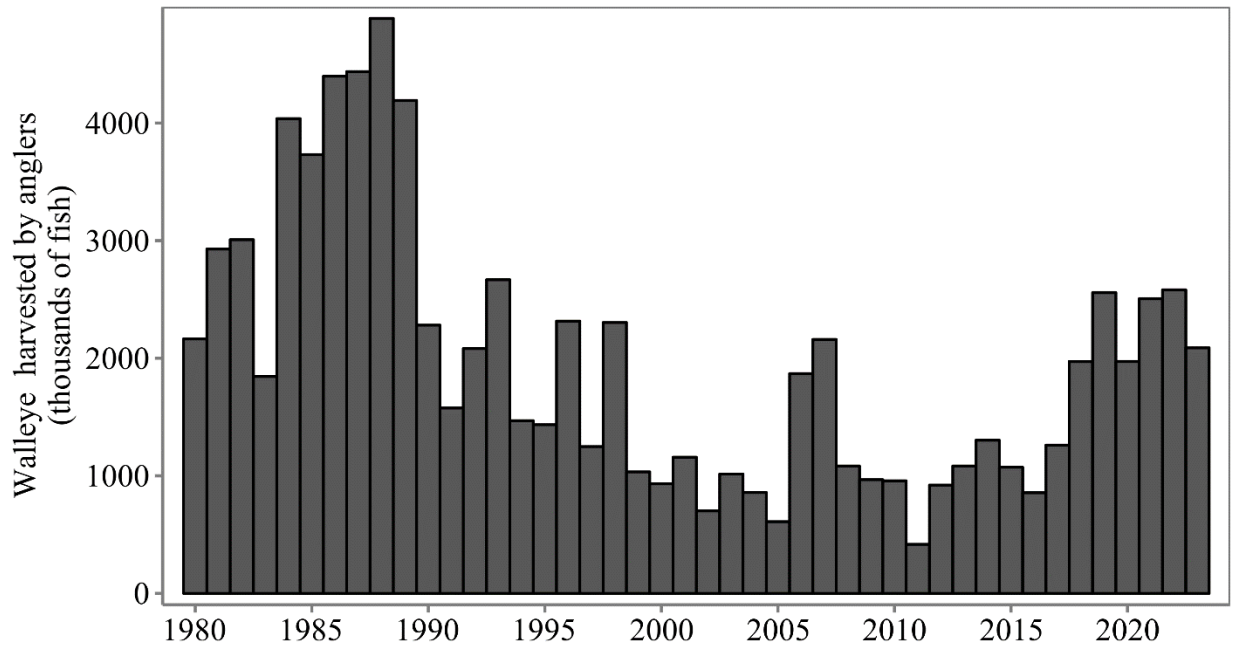


Figure 2.5. Total angler harvest of Walleye from all of Ohio’s Lake Erie waters. Data are from angler interviews taken annually during Ohio’s creel survey.

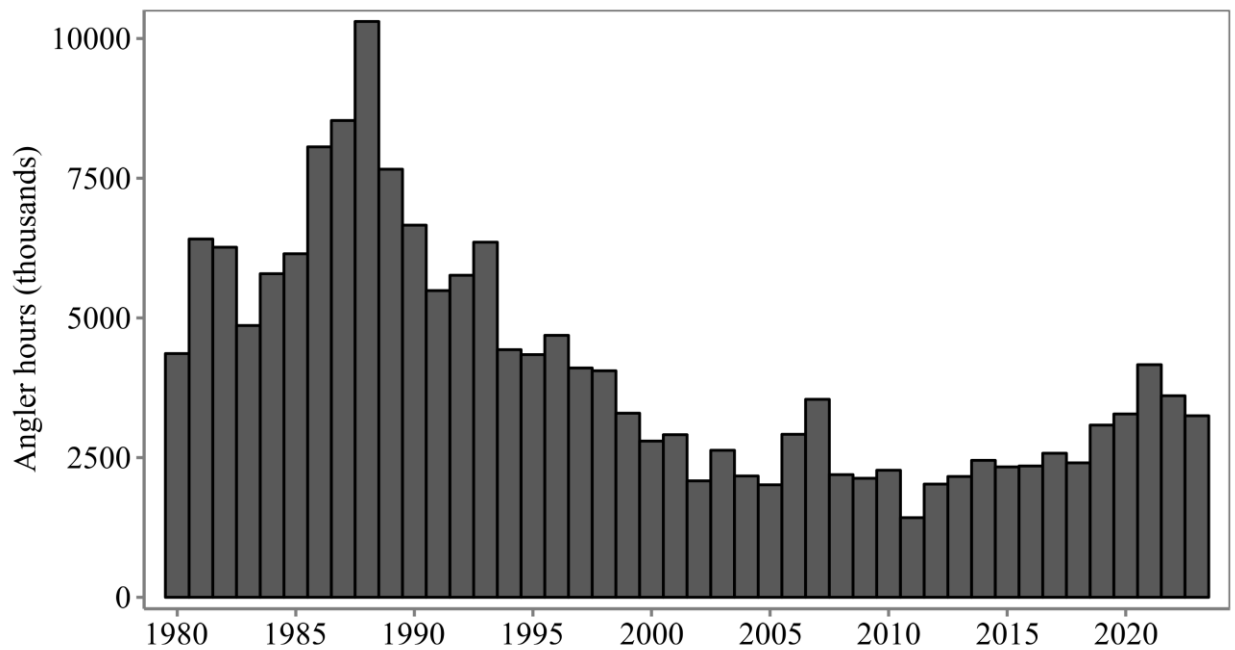


Figure 2.6. Walleye total angler effort (number of hours anglers fished for Walleye) for all of Ohio’s Lake Erie waters. Data are from angler interviews taken annually during Ohio’s creel survey.

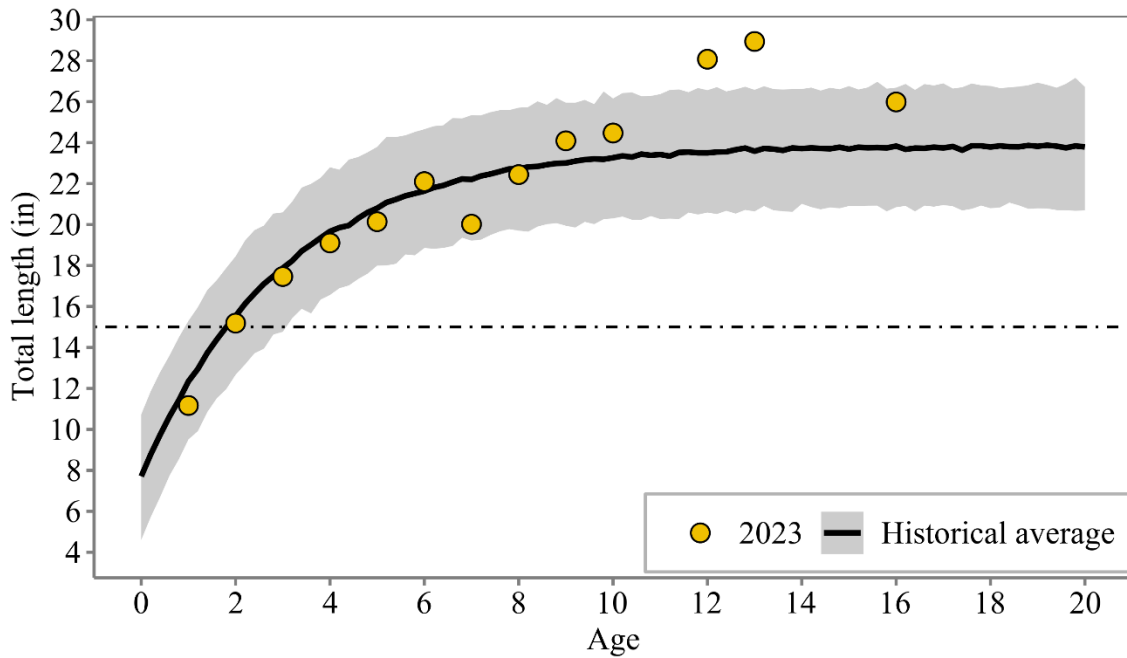


Figure 2.7. Walleye length at age from the fall gillnet survey across all Ohio waters. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year’s average. The black dotted line indicates the legal minimum length (15 inches). This chart can be used to estimate the approximate age of a Walleye with a known length.

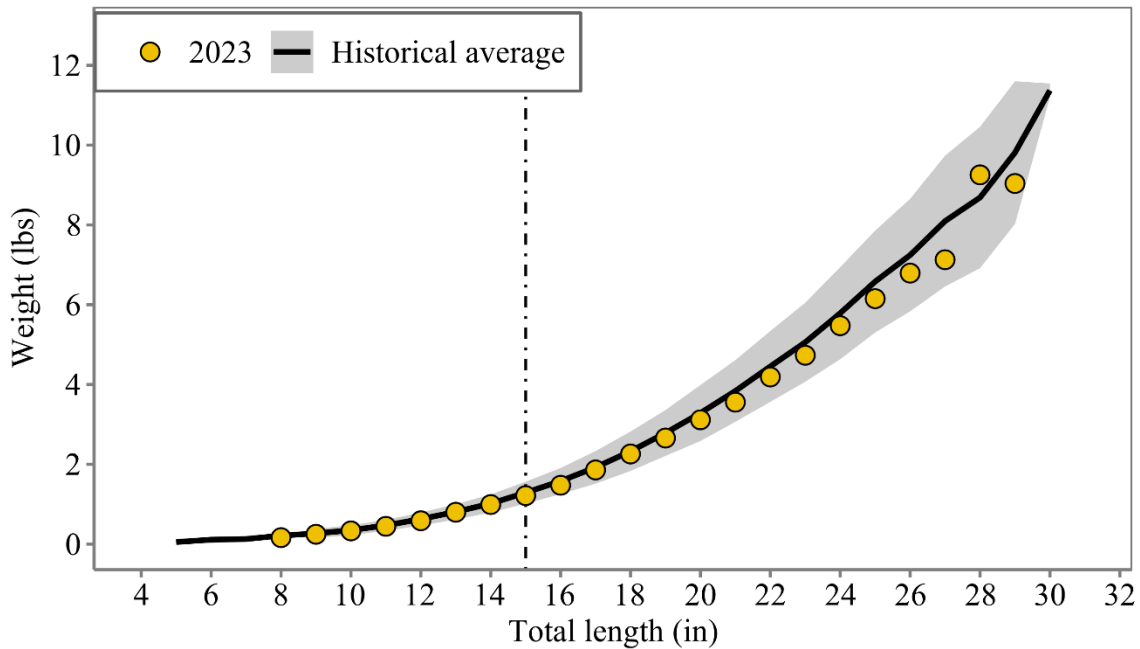


Figure 2.8. Walleye weight at length from the fall gillnet survey across all Ohio waters. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year’s average. The black dotted line indicates the legal minimum length (15 inches). This chart can be used to estimate the weight of a Lake Erie Walleye with a known length.

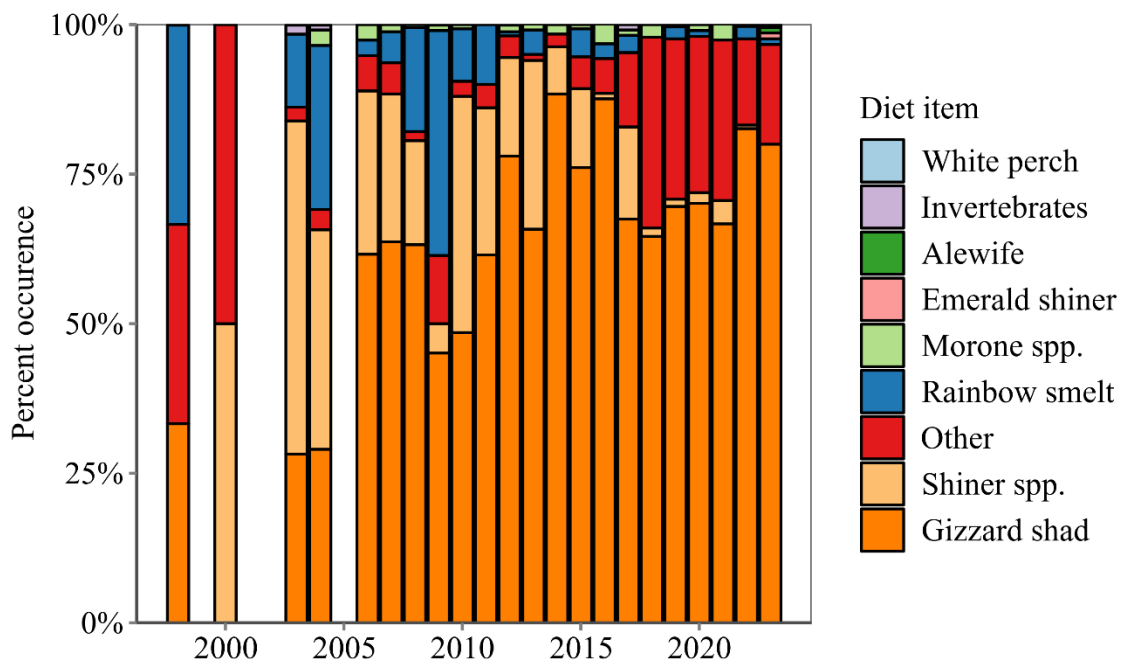


Figure 2.9. Percent occurrence of prey species in age-1+ Walleye diets in the fall across Ohio waters (excluding Walleye with empty stomachs and unidentified gut contents). These data come from October gillnet surveys; Gizzard Shad make up the majority of Walleye diets in Lake Erie in October, while Yellow Perch were not observed at this time.

Yellow Perch

Compared to Walleye, Ohio's Lake Erie Yellow Perch fishery is more complex. Like Walleye, the DOW uses several surveys to assess Yellow Perch, including bottom trawl (hatch success and adult Yellow Perch abundance) and creel (angler interviews). Because there is a commercial fishery for Yellow Perch in Ohio, commercial catch monitoring is also conducted. Yellow Perch are managed using four distinct management units across Lake Erie using the same bi-national collaborative process as Walleye. Ohio manages three management units, referred to as zones: West, Central, and East (Figure 1.2). Each zone receives an annual harvest quota from the Lake Erie Committee that is then broken into recreational and commercial (trap net) quotas within Ohio. In years with high Yellow Perch abundance and high TAC, anglers receive 65% of Ohio's quota and the trap net fishery receives the remaining 35%. In years and zones with low TACs, less quota share is allocated to the commercial fishery and recreational daily limits are reduced to ensure sustainable fishing.

Yellow Perch hatches drive the fishery but are highly variable across Ohio's zones. In general, Yellow Perch are shorter-lived than Walleye, so at least 1 or 2 average to strong hatches are needed every 5–6 years to sustain a strong fishery. In the West Zone, average to strong recruitment has been observed consistently since 2014 (Figure 3.1), while historically hatches in this zone fluctuated. In the Central and East zones, strong hatches were typical every 3–4 years in the 1990s and 2000s; however, recruitment has been very low for at least five years (Figure 3.1). Trends in **adult Yellow Perch** abundance generally follow the hatch trend in each zone across both agency trawl surveys and recreational angler data. In the West Zone, moderate to average catches of adults have been observed in trawl surveys in recent years (Figure 3.2). In the Central and East zones, trawl surveys have consistently caught relatively few adult Yellow Perch for five years (Figure 3.3 and 3.4, respectively). The number of Yellow Perch that anglers harvest, the time that they spend fishing, and the rate at which they catch these fish reflect the population in each zone (Figures 3.5-3.7); high values were seen in the West while very low values were observed in the Central and East zones.

Similar to population differences across Lake Erie, the **sizes and ages of Yellow Perch** differ across Ohio's waters. A three-year-old perch measures 9.0 inches in the West (Figure 3.8), 9.5 inches in the Central (Figure 3.9), and 10.3 inches in the East Zone (Figure 3.10). An average 11 inch Yellow Perch in the West weighs about 1/2 pound (Figure 3.11), 0.65 pounds in the Central Zone (Figure 3.12), and about 0.60 pounds in the East Zone (Figure 3.13). Diet data collected in the Central and East zones show seasonal patterns in what Yellow Perch eat. In June, these fish primarily eat midges (fly larvae) and Spiny Water Fleas, an invasive species of zooplankton which has been increasingly common in Yellow Perch diets in recent years (Figure 3.14). During the peak of summer in July and August, **Spiny Water Fleas are found in over 50% of Yellow Perch stomachs** (Figure 3.15). In October, Yellow Perch were historically more likely to eat fish prey than they are since 2005 (Figure 3.16). In October of 2023, Spiny Water Fleas were the most common food item found in Yellow Perch diets.

Recent trends in Yellow Perch fisheries and populations are expected to continue in 2024. The Yellow Perch fishery in the West Zone should continue to be strong due to consistent, above average hatches, therefore the daily limit will remain at 30 fish in 2024. In the Central Zone, poor recruitment has led to a 10 fish daily limit that will continue this year. The East Zone Yellow Perch population is declining but still abundant enough to maintain a 30 fish daily limit in 2024. **Anglers can expect the best fishing in the West Zone**, but creel data show greater angler success lakewide in late fall at water temperatures less than 65°F. West Zone catch rates also tend to increase in the summer at water temperatures greater than 76°F. These temperatures seem to correspond with seasons in which fewer Spiny Water Fleas are available for Lake Erie fish to eat. Despite lower abundances, anglers can expect to catch larger fish (9–12") in the East Zone compared to the West Zone (7–10"). Although Yellow Perch populations differ around the lake, anglers that adjust the timing and location of when they fish can still have success.

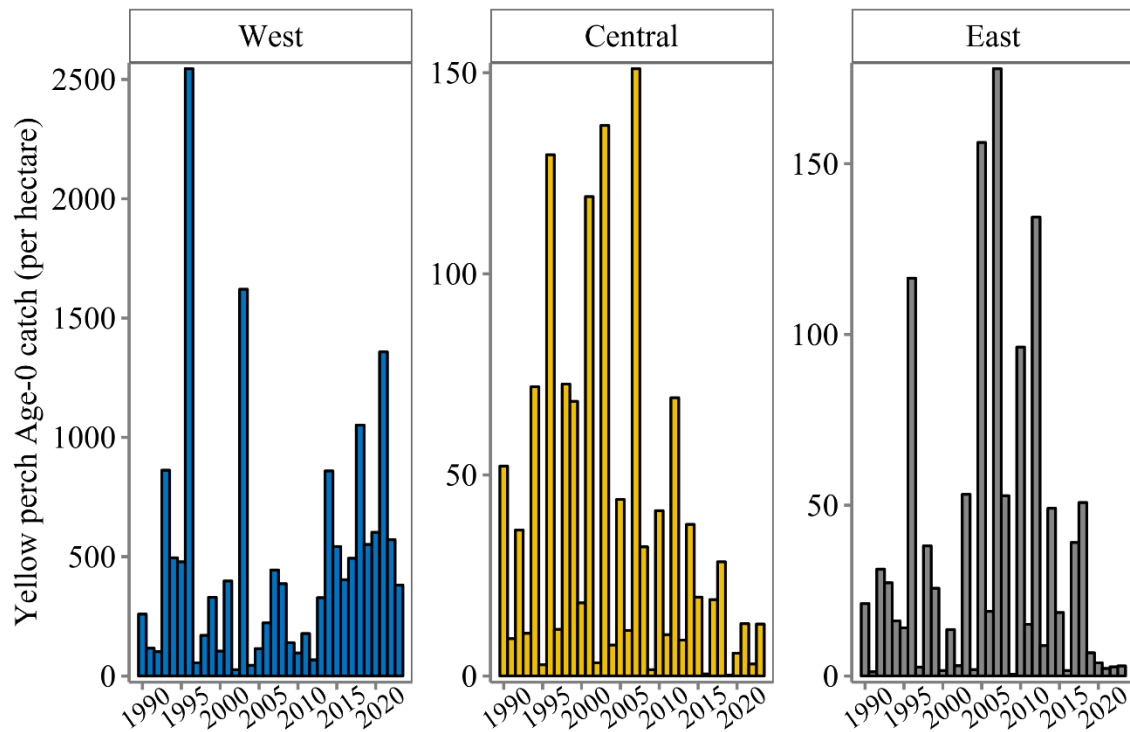


Figure 3.1. Average age-0 Yellow Perch density from trawl surveys for each of Ohio’s zones. This “hatch” or recruitment index is used to help determine how many adult Yellow Perch can be expected in the future. Note that the catch-per-hectare scale differs between panels as the West Zone recruitment is occasionally much greater than the other zones.

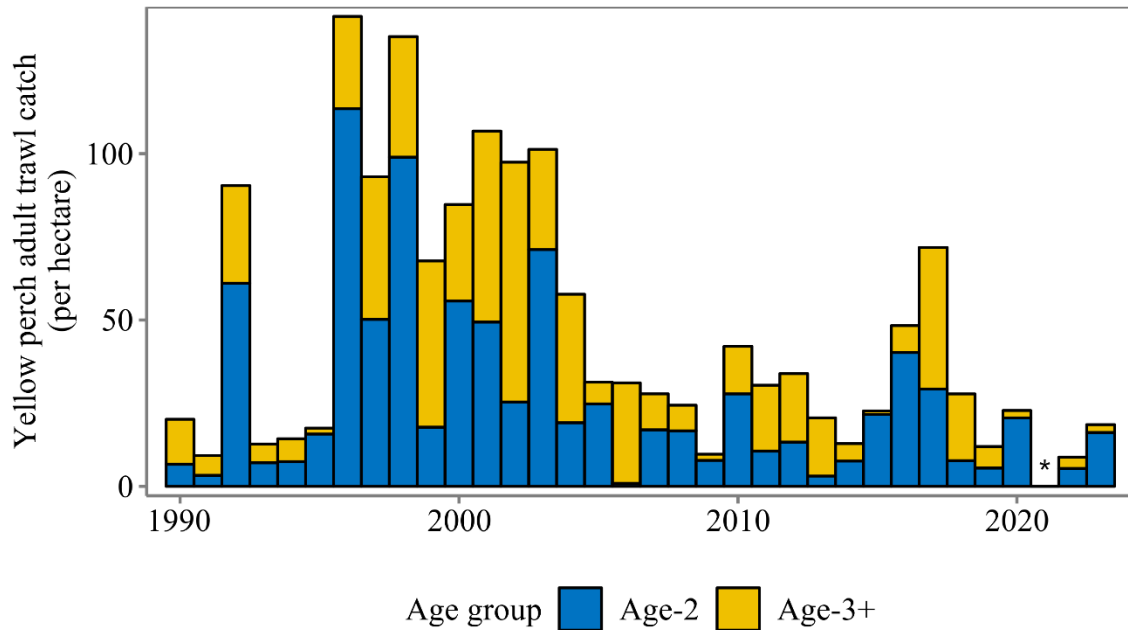


Figure 3.2. Average adult Yellow Perch catch from the trawl survey for the West Zone (west of Huron) split into young (age-2) and older (age-3+). The fall trawl survey did not take place in 2021 due to vessel issues (asterisk).

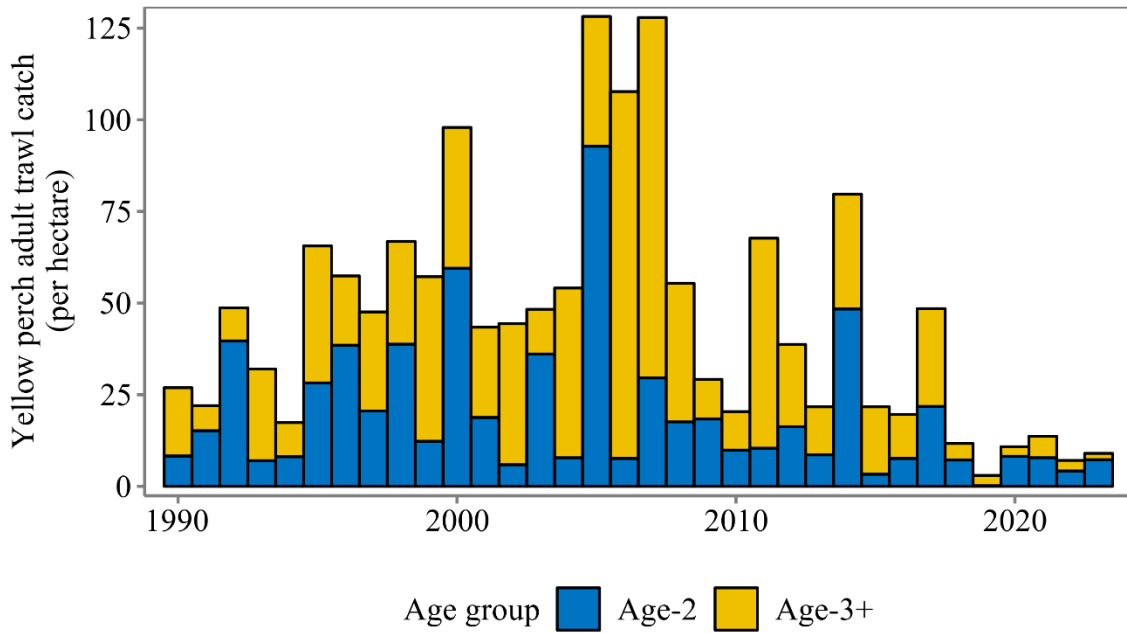


Figure 3.3. Average adult Yellow Perch catch from the trawl survey for the Central Zone (Huron to Fairport Harbor) split into young (age-2) and older (age-3+).

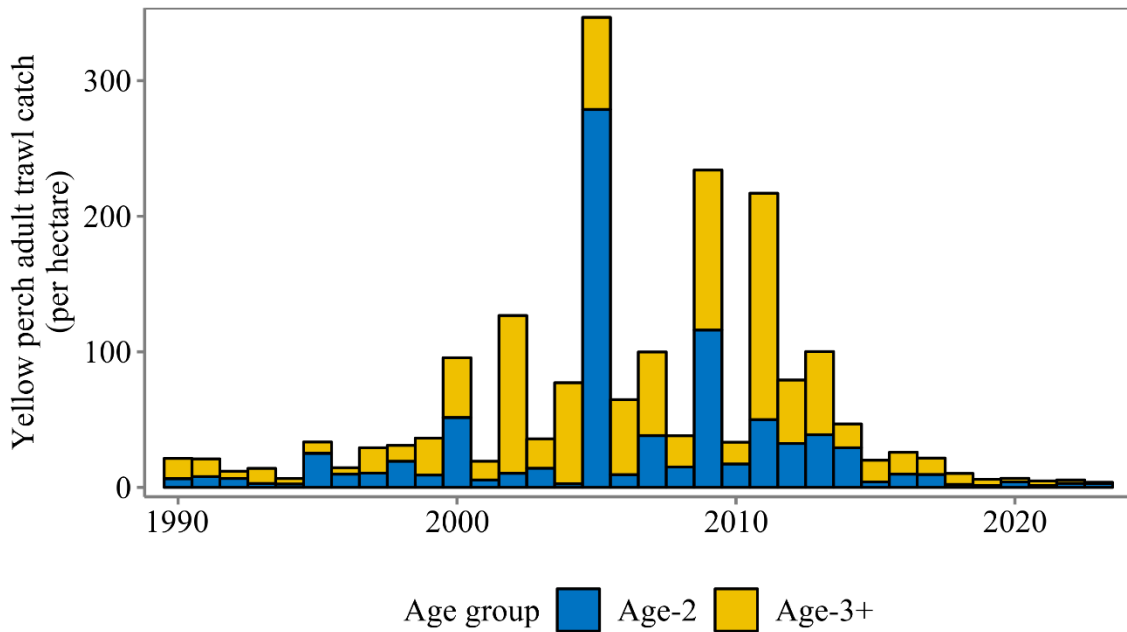


Figure 3.4. Average adult Yellow Perch catch from the trawl survey for the East Zone (east of Fairport Harbor) split into young (age-2) and older (age-3+).

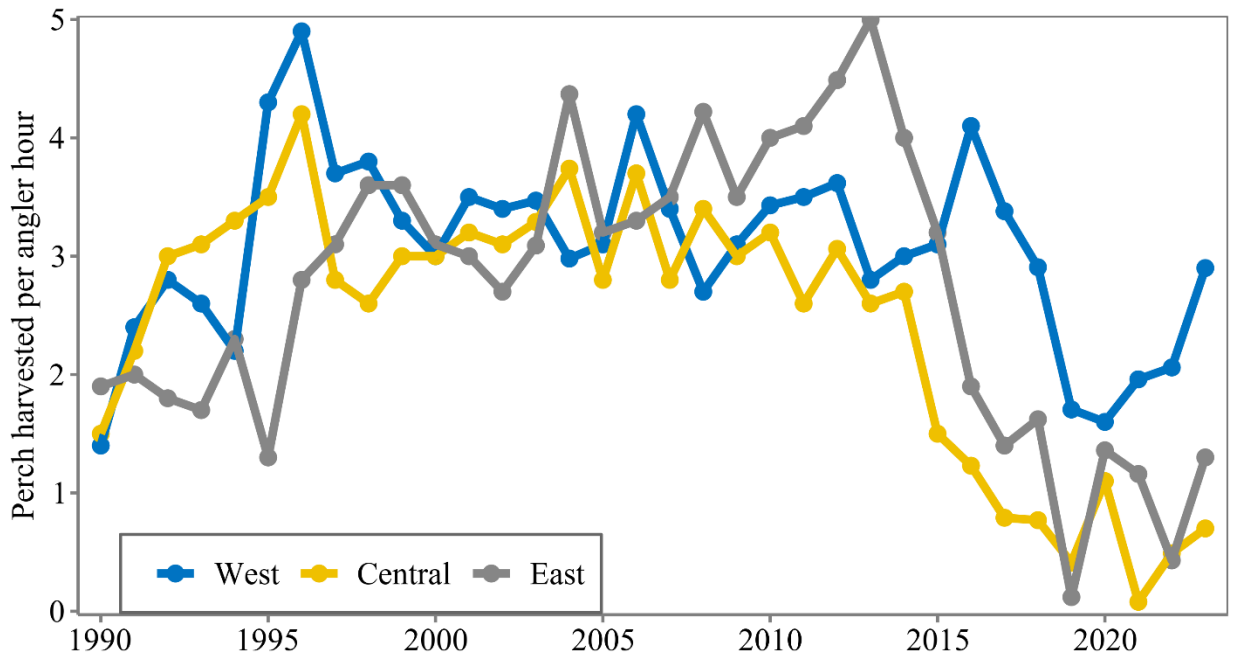


Figure 3.5. Yellow Perch harvest rate (fish harvested per hour per angler) from private boat trips for each of Ohio's zones. Data are from angler interviews taken annually during Ohio's creel survey.

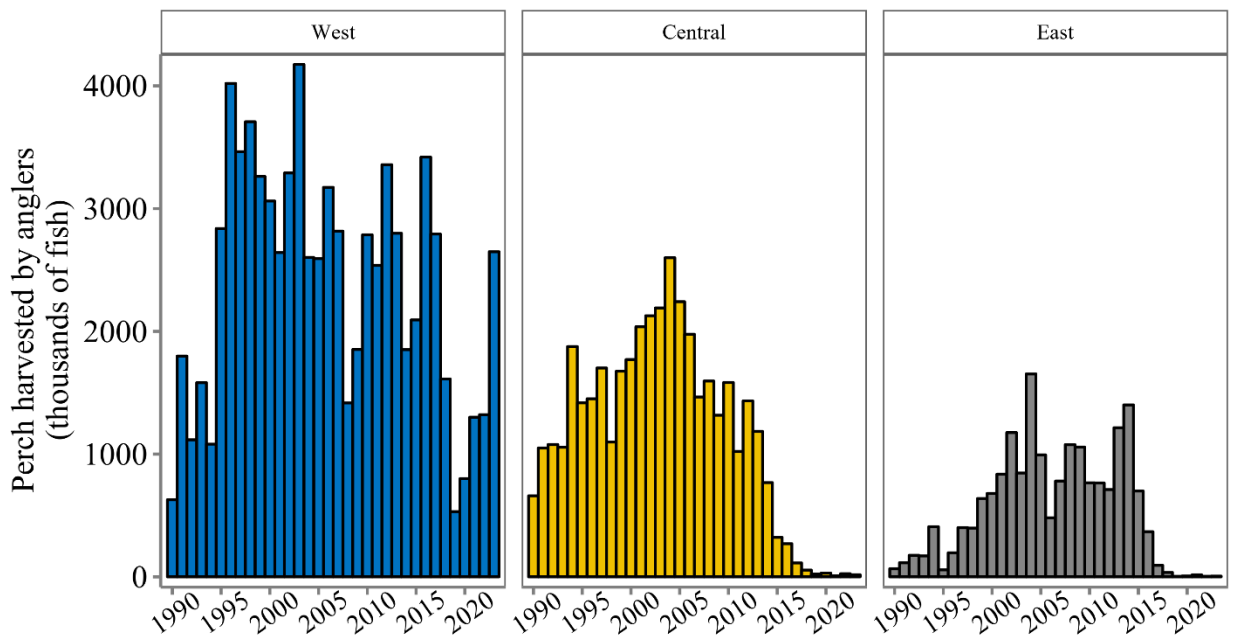


Figure 3.6. Yellow Perch total angler harvest for each of Ohio's zones. Data are from angler interviews taken annually during Ohio's creel survey.

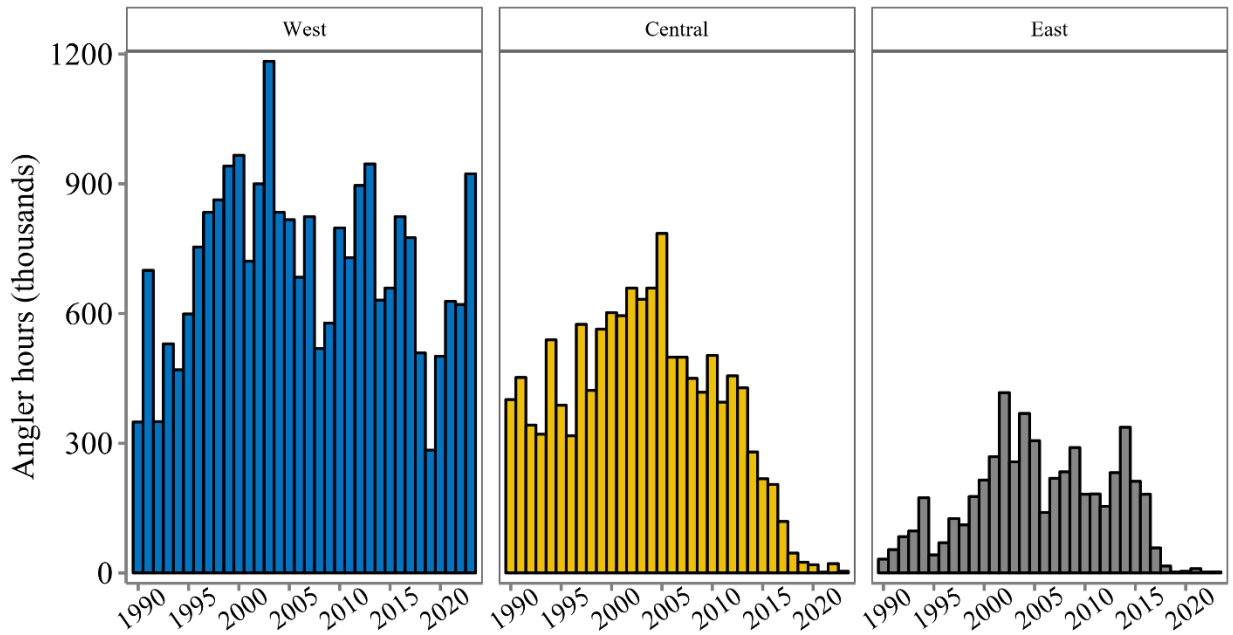


Figure 3.7. Yellow Perch total angler effort (number of hours anglers fished for Yellow Perch) for each of Ohio’s zones. Data are from angler interviews taken annually during Ohio’s creel survey.

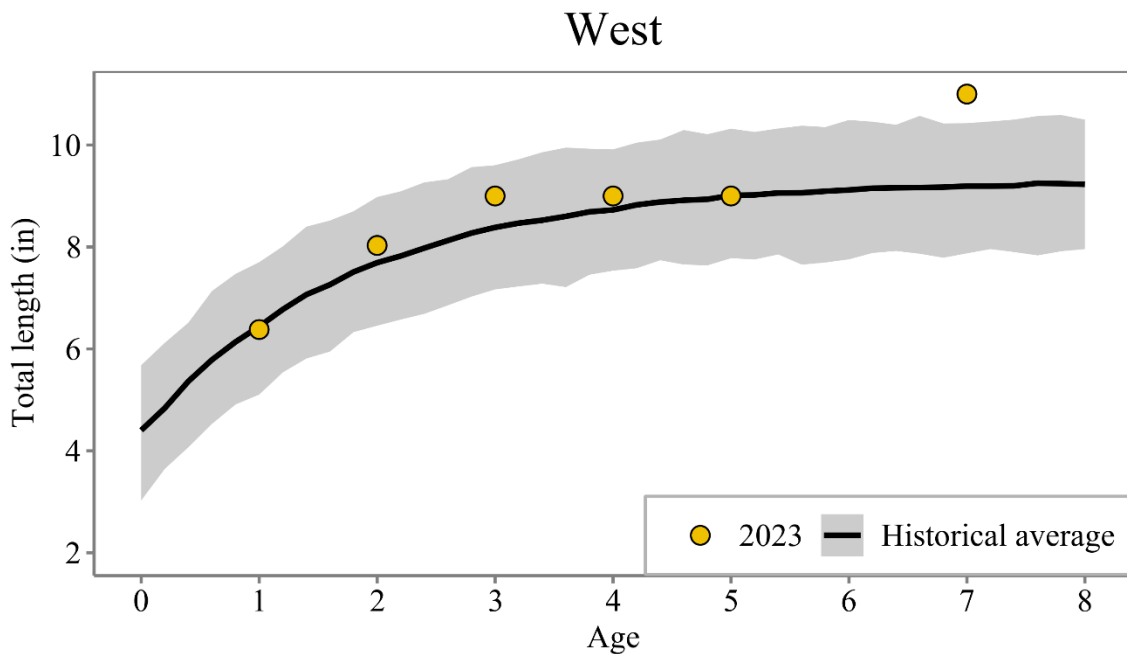


Figure 3.8. Yellow Perch length at age from trawl surveys for the West Zone (Toledo to Huron). This chart can be used to estimate the age of a Yellow Perch with a known length. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year’s average.

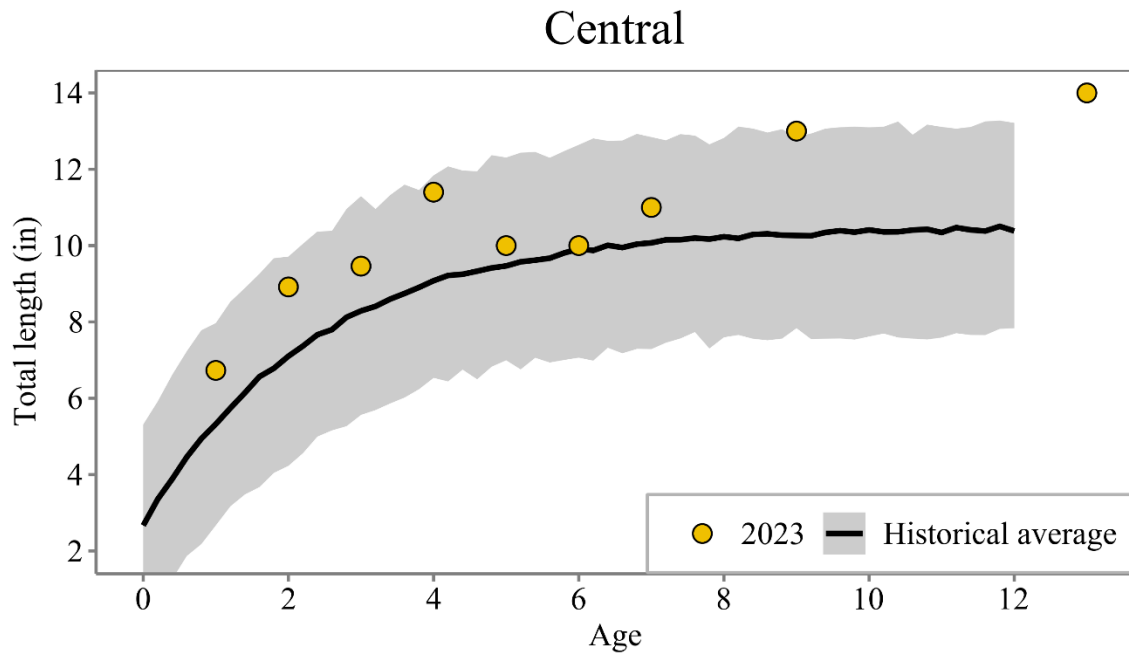


Figure 3.9. Yellow Perch length at age from trawl surveys for the Central Zone (Huron to Fairport Harbor). This chart can be used to estimate the age of a Yellow Perch with a known length. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year's average.

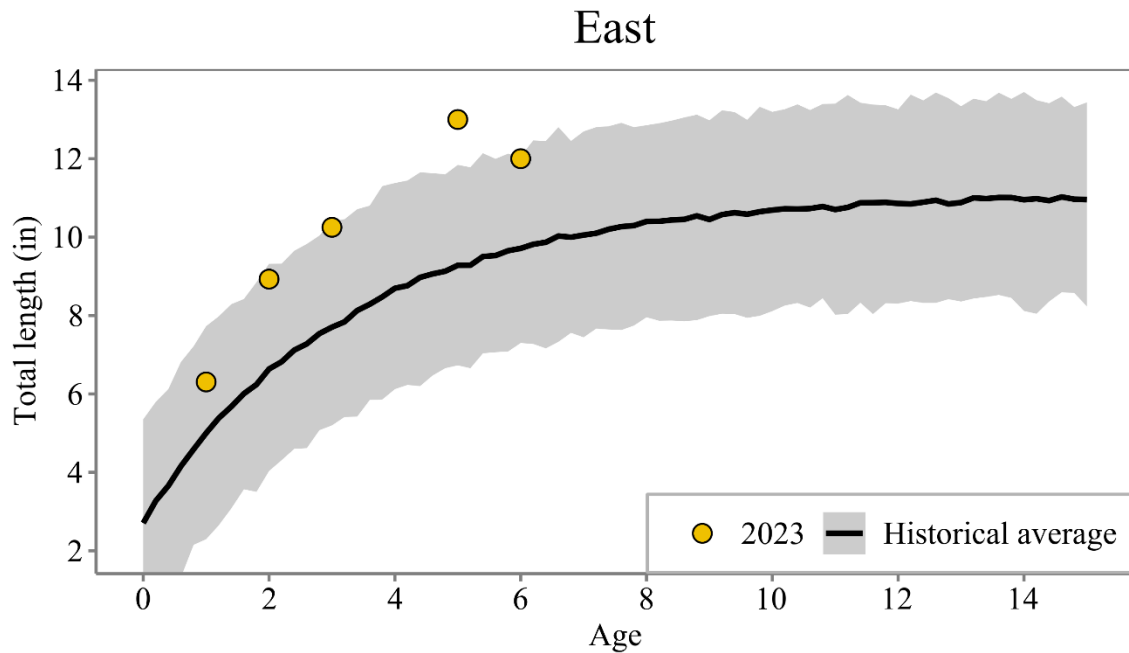


Figure 3.10. Yellow Perch length at age from trawl surveys for the East Zone (east of Fairport Harbor). This chart can be used to estimate the age of a Yellow Perch with a known length. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year's average.

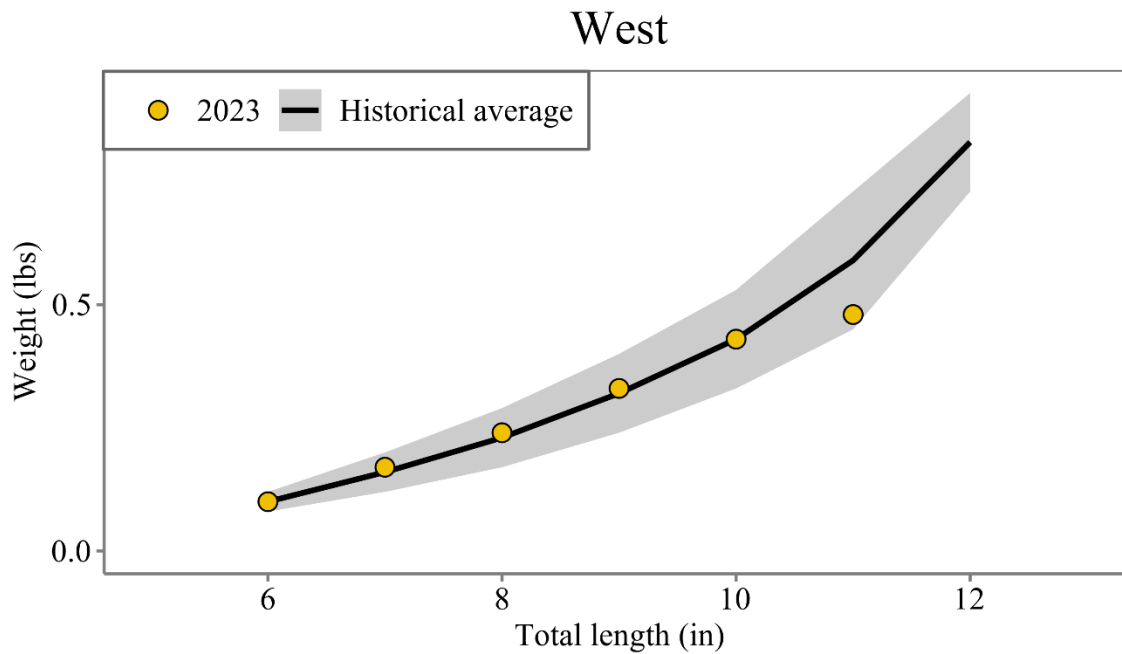


Figure 3.11. Yellow Perch weight at length from trawl surveys for the West Zone (Toledo to Huron). This chart can be used to estimate the weight of a Yellow Perch with a known length. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year's average.

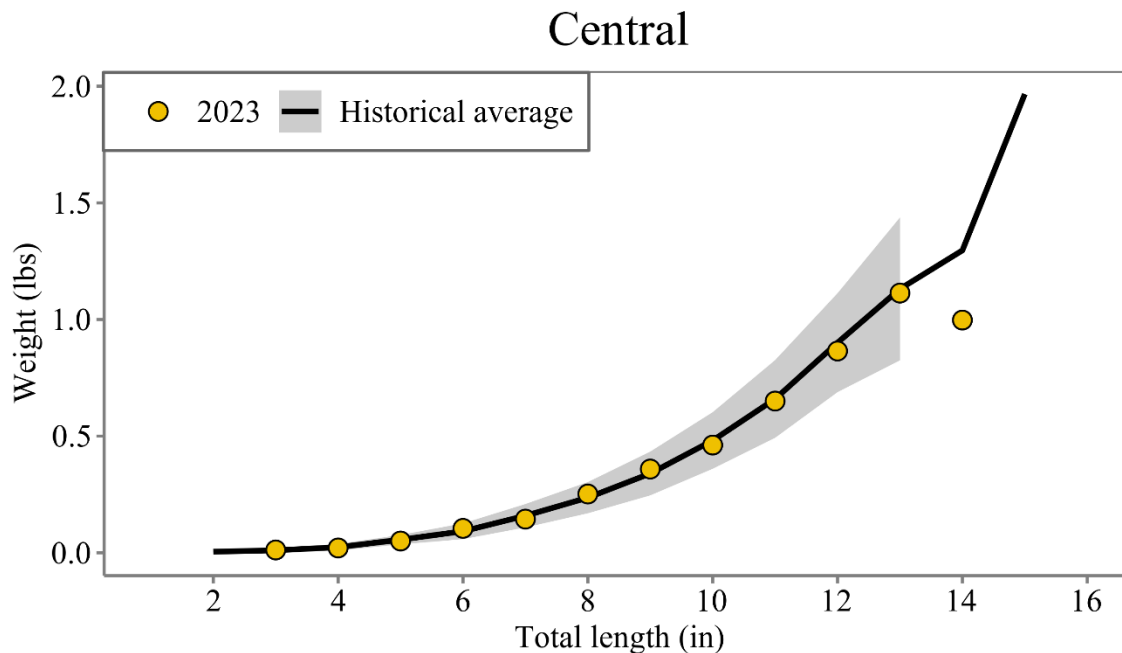


Figure 3.12. Yellow Perch weight at length from trawl surveys for the Central Zone (Huron to Fairport Harbor). This chart can be used to estimate the weight of a Yellow Perch with a known length. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year's average.

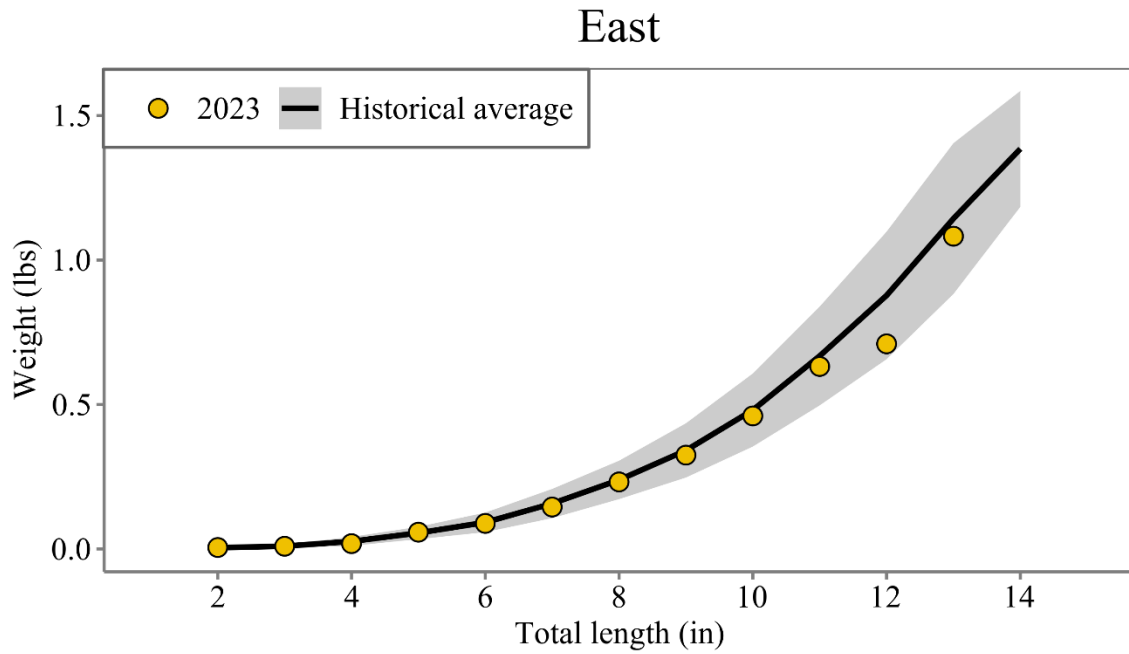


Figure 3.13. Yellow Perch weight at length from trawl surveys for the East Zone (east of Fairport Harbor). This chart can be used to estimate the weight of a Yellow Perch with a known length. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year's average.

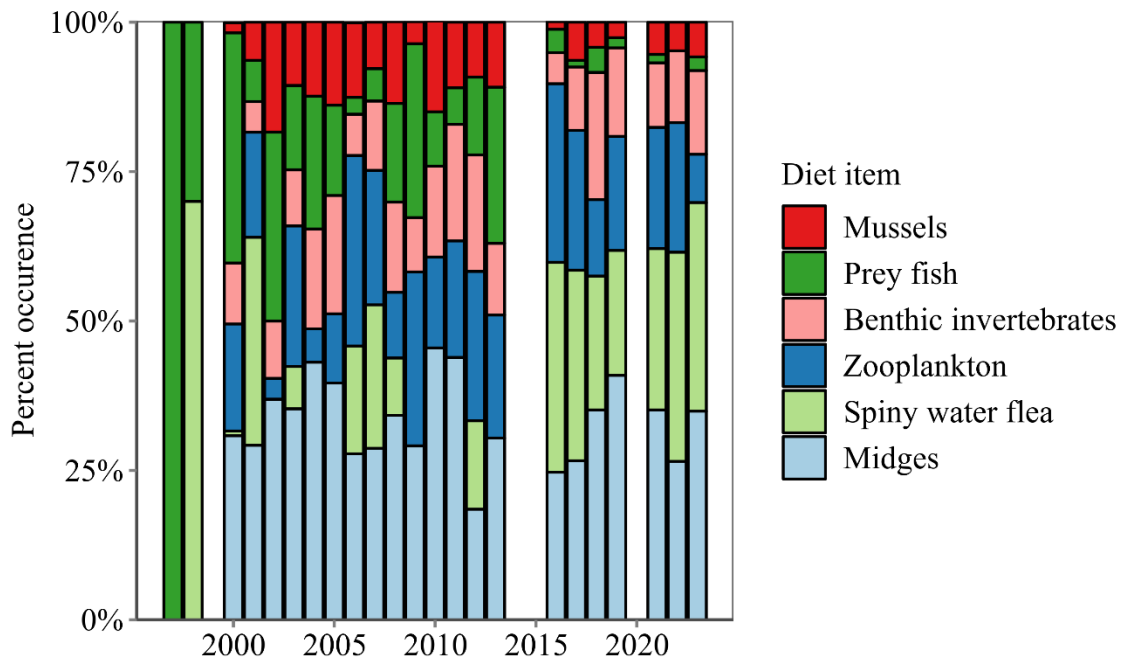


Figure 3.14. Percent occurrence of prey species in age-1+ Yellow Perch diets in June (excluding Yellow Perch with empty stomachs and unidentified gut contents). These data come from Central and East Zone trawl surveys; midge larvae comprise the largest prey percent occurrence in June.

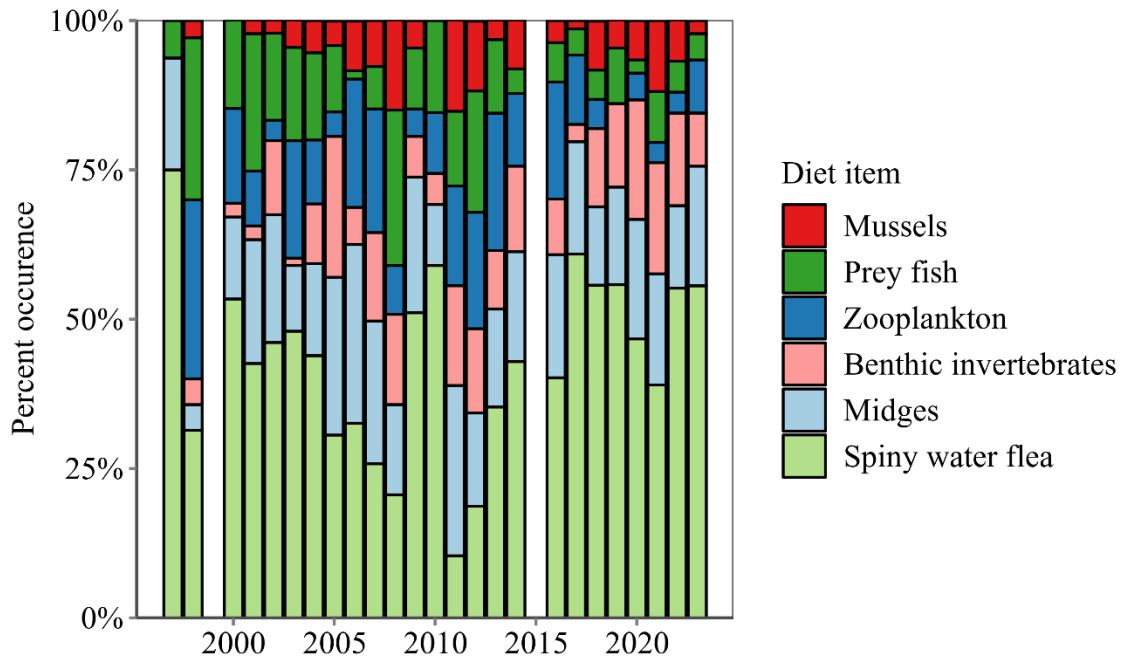


Figure 3.15. Percent occurrence of prey species in age-1+ Yellow Perch diets in July and August (excluding Yellow Perch with empty stomachs and unidentified gut contents). These data come from Central and East Zone trawl surveys; Spiny water flea (*Bythotrephes*) comprise the largest prey percent occurrence in the summer.

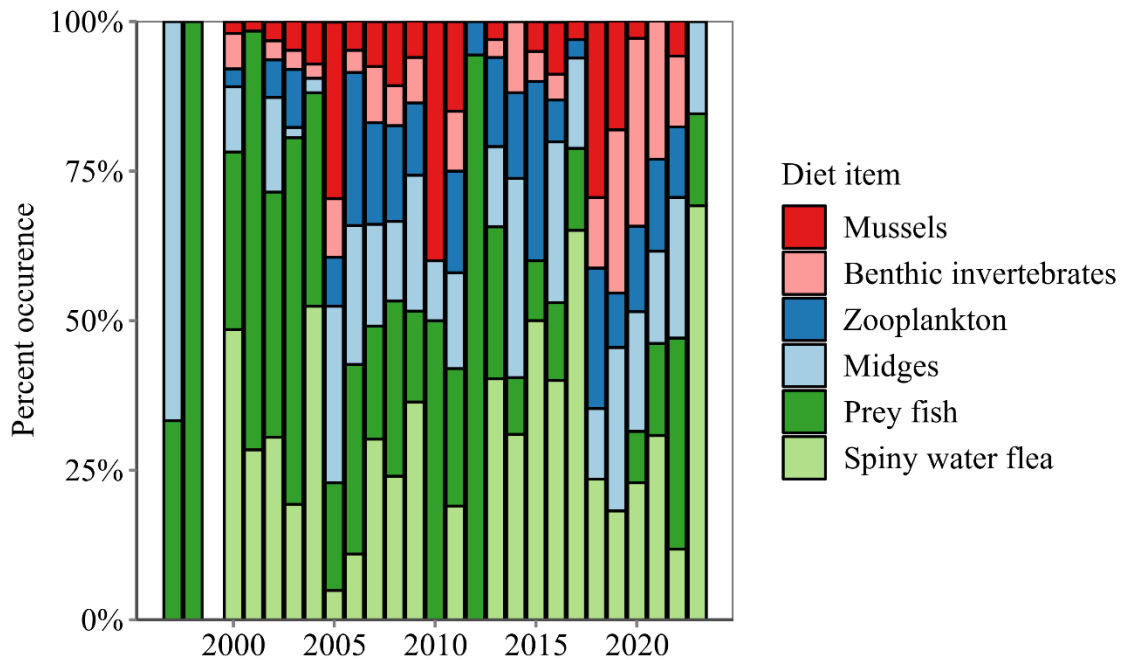


Figure 3.16. Percent occurrence of prey species in age-1+ Yellow Perch diets in October (excluding Yellow Perch with empty stomachs and unidentified gut contents). These data come from trawl surveys; perch diets are more varied in the fall.

Smallmouth and Largemouth Bass

Ohio’s Lake Erie black bass fisheries are less intensively managed than Walleye or Yellow Perch. The DOW monitor trends in the Smallmouth Bass population using a September gill-net survey, while Largemouth Bass are assessed with a summertime electrofishing survey. Fishery performance information comes from the annual creel survey (angler interviews). In the last twenty years, most anglers voluntarily catch-and-release Largemouth and Smallmouth Bass. This ethic, combined with stricter regulations in the early 2000s, has **reduced harvest of Smallmouth Bass** to minimal levels (Figure 4.1). Largemouth Bass harvest is similarly low.

While the DOW does not maintain a hatch or recruitment index for bass, gill-net surveys indicate that the adult **Smallmouth Bass population** is relatively stable (Figure 4.2). Angler catch rates indicate that Smallmouth Bass fisheries are improving and Largemouth Bass fisheries are stable in Lake Erie (Figure 4.3). The 2023 **Smallmouth Bass catch rate** (1.1 fish per hour) was the highest in 24+ years. Angler effort for these species has also increased. Anglers spent 222,500 hours fishing for Smallmouth Bass in 2023, which is the highest level of effort since 2007 (Figure 4.4).

Smallmouth and Largemouth Bass growth was average in 2023. A keeper-sized (14-inch minimum length) Smallmouth Bass is three years old on average (Figure 4.5) and weighs about 1.6 pounds (Figure 4.6). A Largemouth Bass is one year older than a Smallmouth at 14 inches (Figure 4.7) and weighs about 1.5 pounds (Figure 4.8). **Bass diets** also differ across species. Smallmouth Bass primarily eat Round Goby (Figure 4.9), while Largemouth eat a wider range of prey including Round Goby, Gizzard Shad, Emerald Shiner, and many other fishes (Figure 4.10).

In 2024, Ohio anglers should expect strong fisheries for both Smallmouth and Largemouth Bass. Catch rates for both species are expected to remain high. The DOW will continue to monitor these populations to ensure future sustainability. In addition, an ongoing Smallmouth Bass tracking study may reveal seasonal patterns of movement and habitat use to guide future bass management.

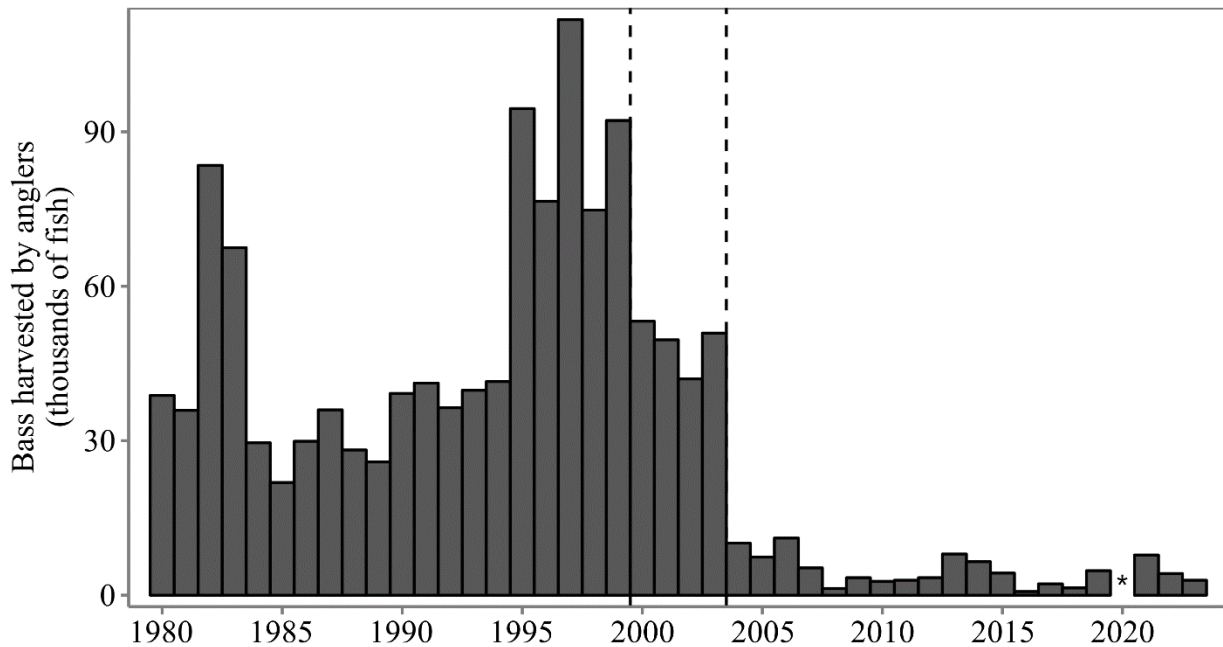


Figure 4.1. Harvest of Smallmouth Bass from Ohio waters of Lake Erie since 1990. Harvest declined substantially with stricter regulations implemented in 2000 and 2004 (dashed lines). Data are from angler interviews taken annually during Ohio’s creel survey and were unavailable for 2020.

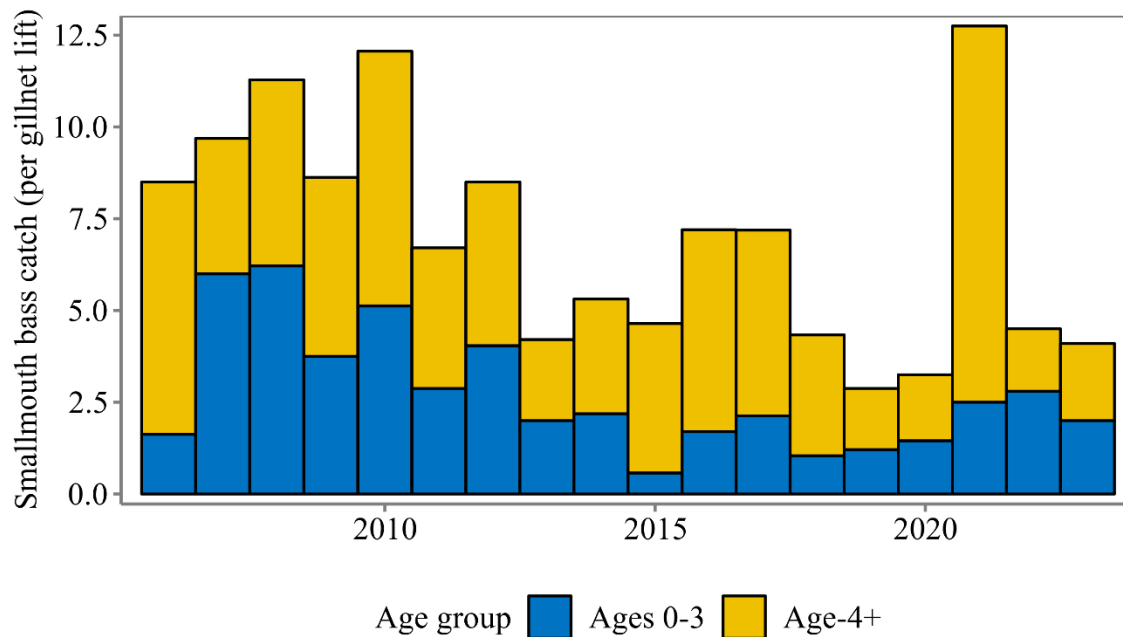


Figure 4.2. Average Smallmouth Bass catch from the September gillnet survey across all Ohio waters split into young (ages-0-3) and adult (age-4+).

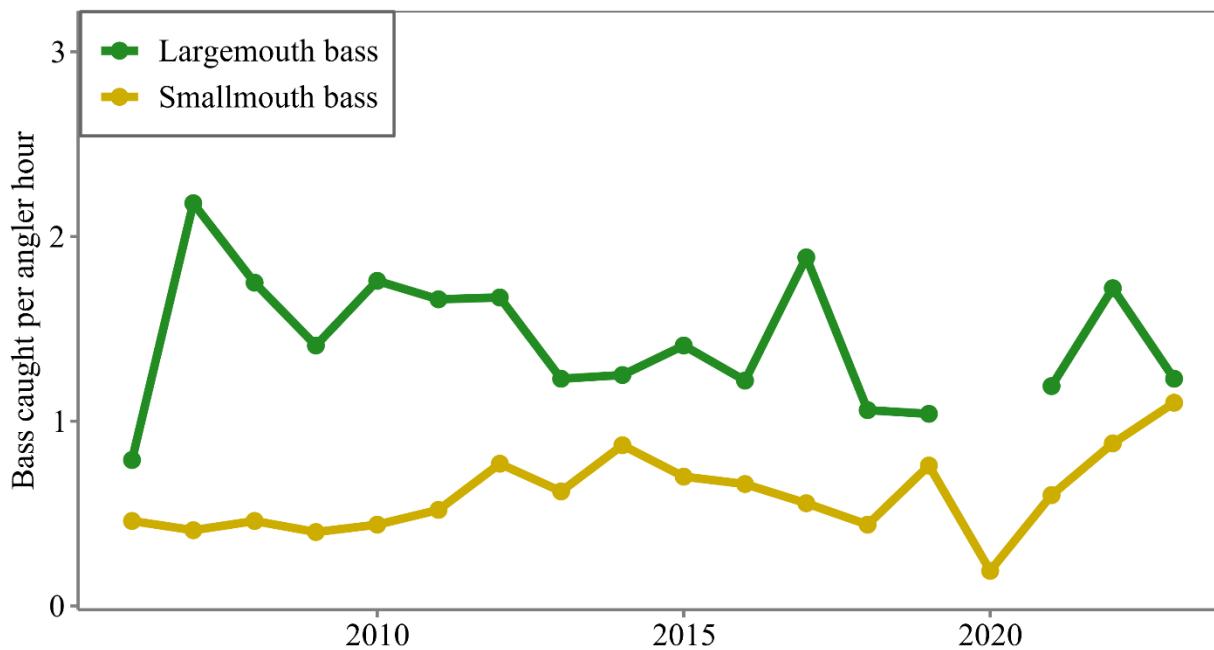


Figure 4.3. Angler catch rates (fish caught per hour per angler) for largemouth and Smallmouth Bass in the Ohio waters of Lake Erie. Data are from angler interviews taken annually during Ohio’s creel survey. Largemouth Bass catch rate recording began in 2006 and was unavailable for 2020.

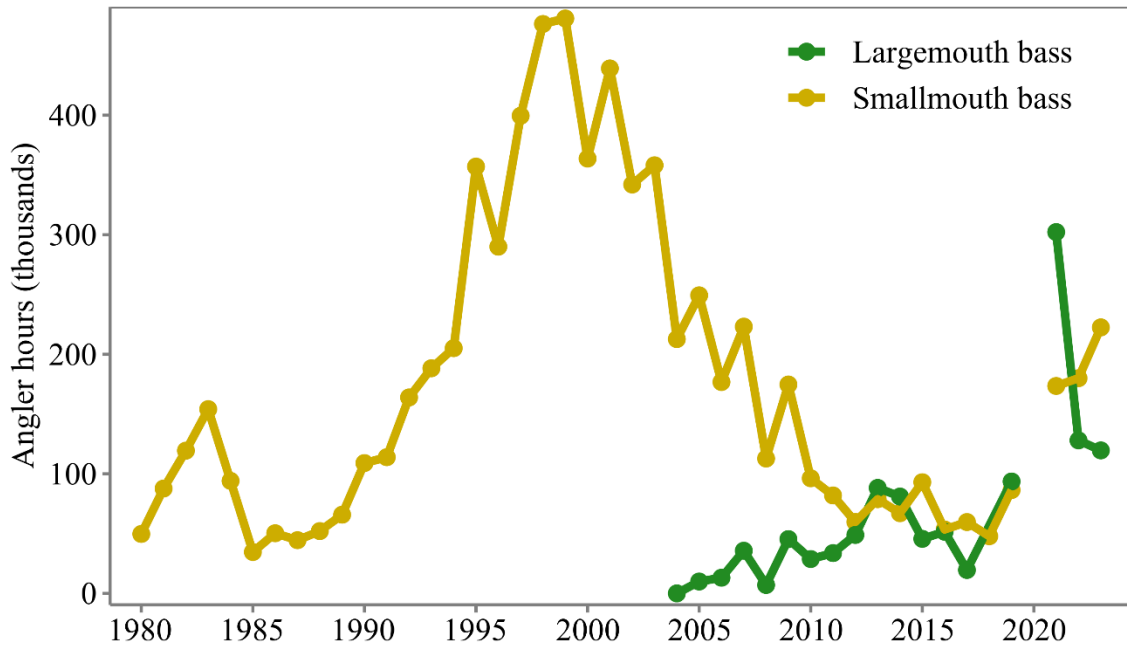


Figure 4.4. Black bass total angler effort (number of hours anglers fished for largemouth and Smallmouth Bass) for all Ohio’s Lake Erie waters. Data are from angler interviews taken annually during Ohio’s creel survey.

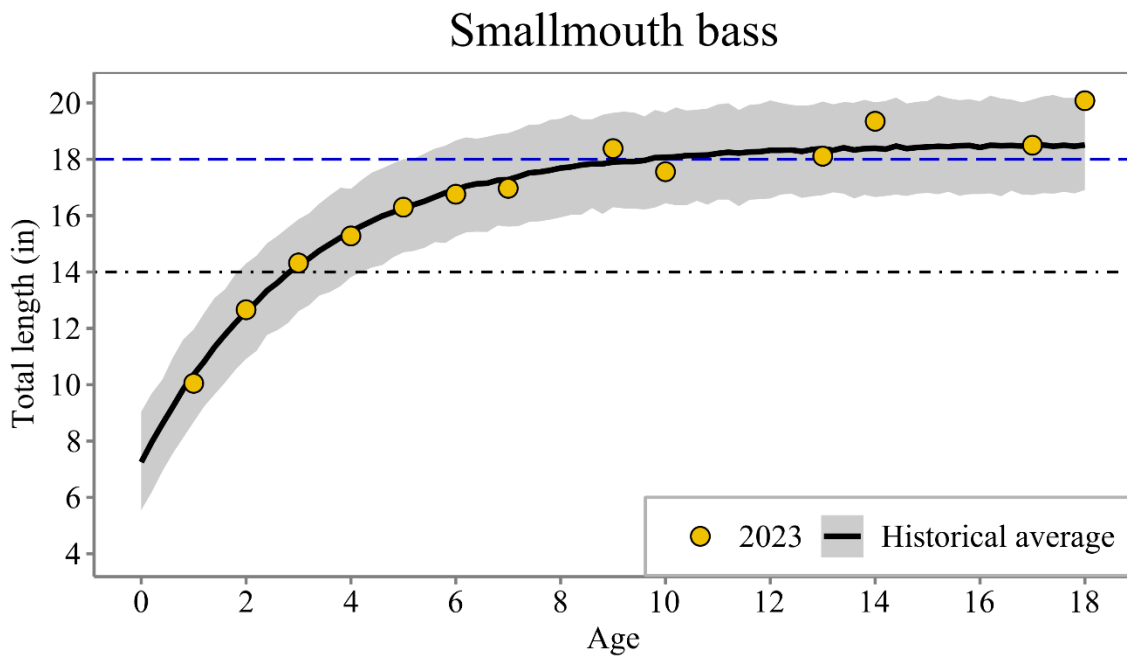


Figure 4.5. Smallmouth Bass length at age from the gillnet survey across all Ohio waters of Lake Erie. This chart can be used to estimate the age of a Smallmouth Bass with a known length. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year’s average. The black dotted line indicates the legal minimum length for most of the year (14 in), while the blue dashed line indicates the spring minimum (18 in).

Smallmouth bass

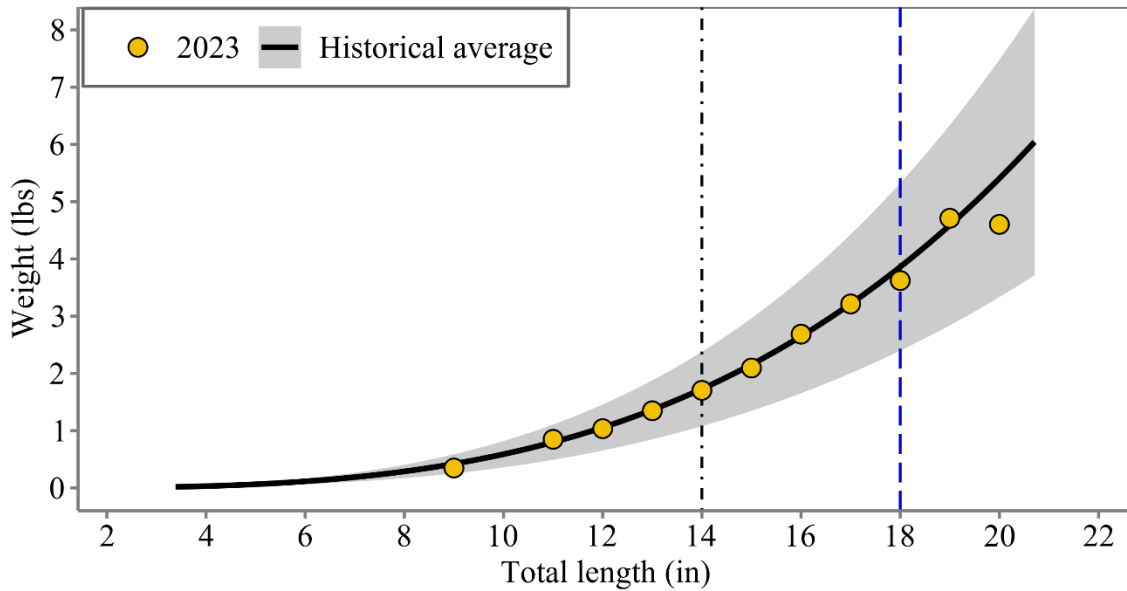


Figure 4.6. Smallmouth Bass weight at length from the gillnet survey across all Ohio waters of Lake Erie. This chart can be used to estimate the weight of a Smallmouth Bass with a known length. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year’s average. The black dotted line indicates the legal minimum length for most of the year (14 in), while the blue dashed line indicates the spring minimum (18 in).

Largemouth bass

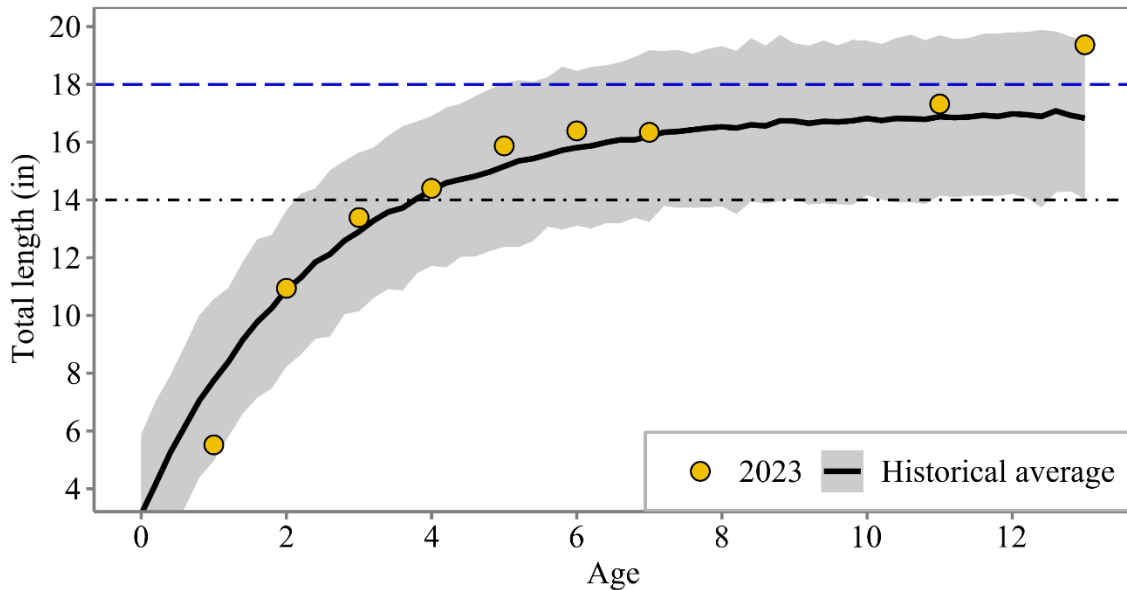


Figure 4.7. Largemouth Bass length at age from the electrofishing survey across Ohio waters. This chart can be used to estimate the age of a Largemouth Bass with a known length. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year’s average. The black dotted line indicates the legal minimum length for most of the year (14 in), while the blue dashed line indicates the spring minimum (18 in).

Largemouth bass

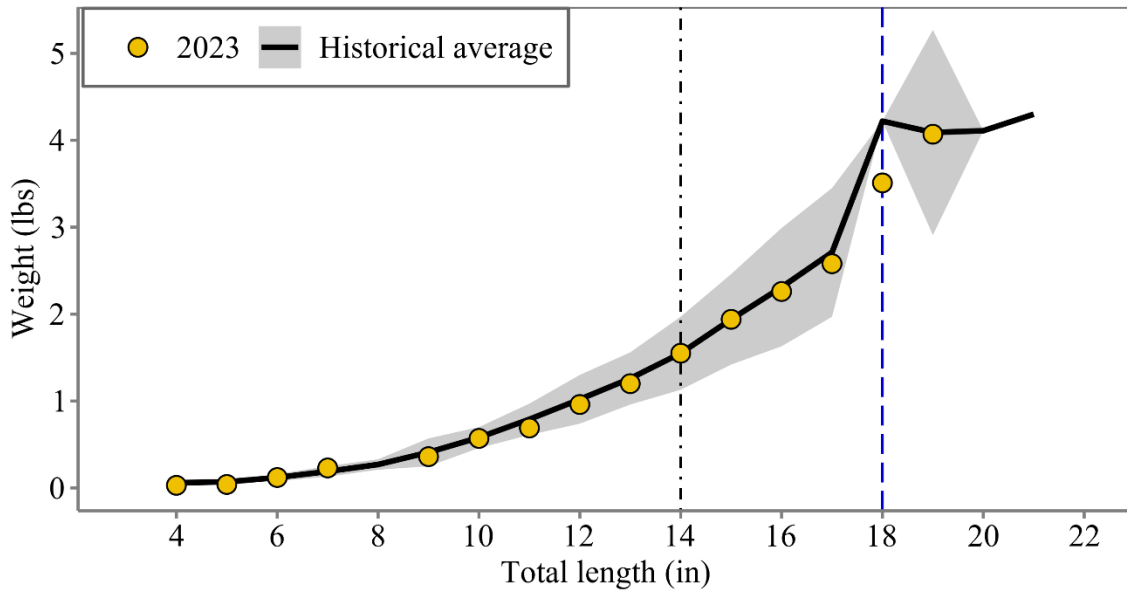


Figure 4.8. Largemouth Bass weight at length from the electrofishing survey across Ohio waters. This chart can be used to estimate the weight of a Largemouth Bass with a known length. The black line indicates the average fish, grey area represents 95% of fish, and yellow points indicate this year’s average. The black dotted line indicates the legal minimum length for most of the year (14 in), while the blue dashed line indicates the spring minimum (18 in).

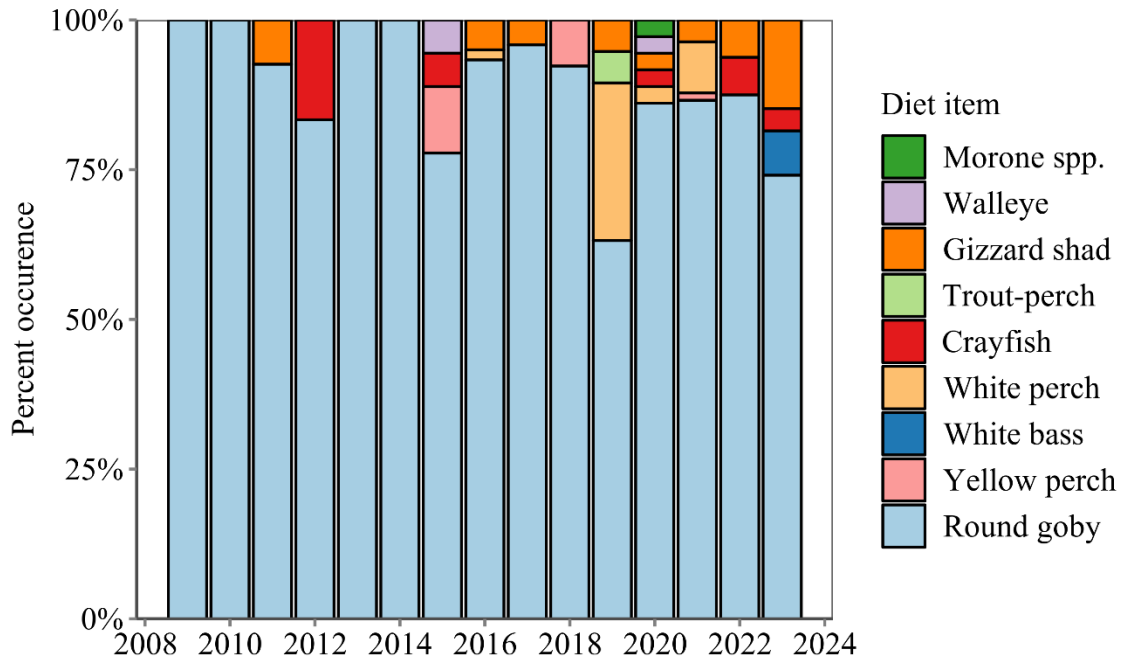


Figure 4.9. Percent occurrence of prey species in age-1+ Smallmouth Bass diets in Ohio waters of Lake Erie (excluding empty stomachs and unidentified gut contents). These data come from early-fall gillnet surveys. Round Goby make up the majority of Smallmouth Bass diets in Lake Erie.

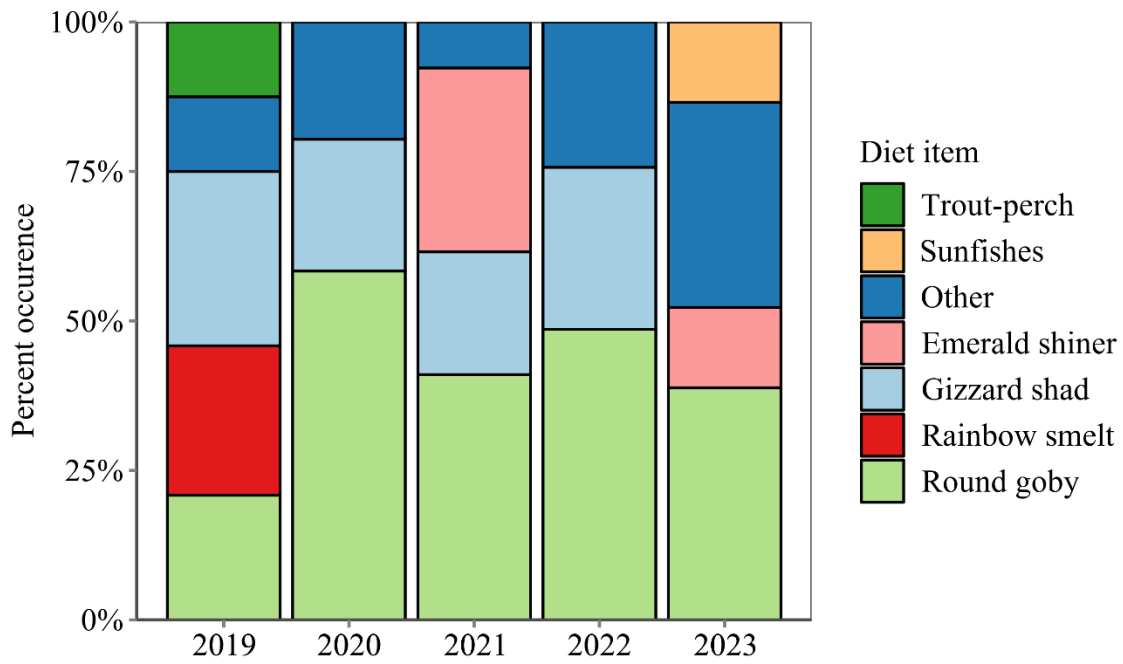


Figure 4.10. Percent occurrence of prey species in age-1+ Largemouth Bass diets (excluding empty stomachs and unidentified gut contents). These data come from summertime electrofishing surveys. Largemouth Bass diets in Lake Erie are highly variable; “Other” includes sunfishes, crayfish, White Perch, and other prey items.

Steelhead

The DOW has stocked Steelhead, the migratory form of Rainbow Trout, into Lake Erie tributaries since 1970. Since 2016, six tributaries have been stocked: Vermilion, Rocky, Chagrin, Grand, and Ashtabula rivers and Conneaut Creek (Figure 1.1). The goal of 450,000 yearling Steelhead has been met every year since 2017 (Figure 5.1).

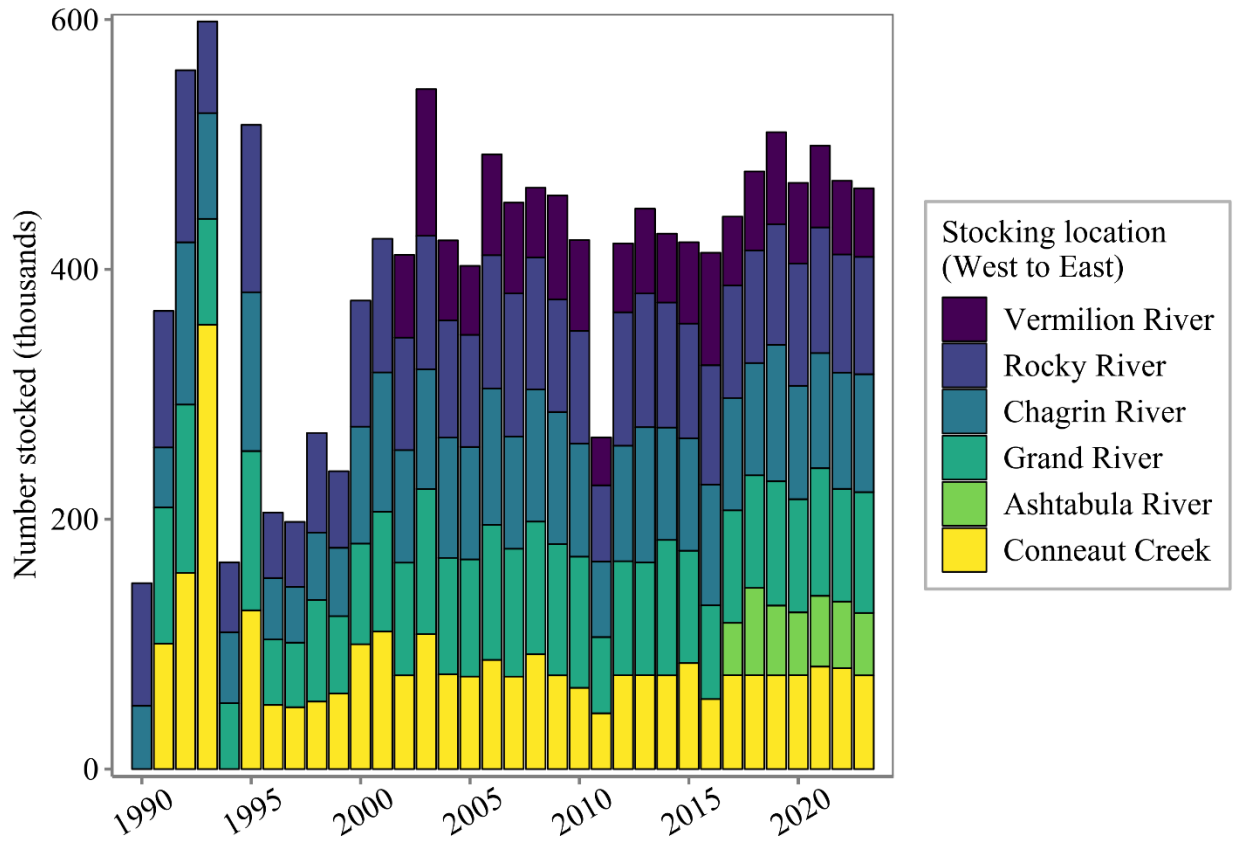


Figure 5.1. Number of Steelhead (in thousands) stocked in Lake Erie tributaries over time. The current target of 450,000 yearling Steelhead was met in 2023.

Forage Fishes

The DOW uses bottom trawl data to track the **status of forage fishes** in Lake Erie. In the West Zone, forage fish total abundance has varied widely in the last ten years (Figure 6.1). Central and East Zone forage abundance is more stable and is typically lower than the productive West. Spiny-rayed prey (such as White Perch and Yellow Perch) dominate the catches in the West Zone (Figure 6.2), while Rainbow Smelt, Gizzard Shad, and Alewife have dominated catches in the Central and East zones in recent years.

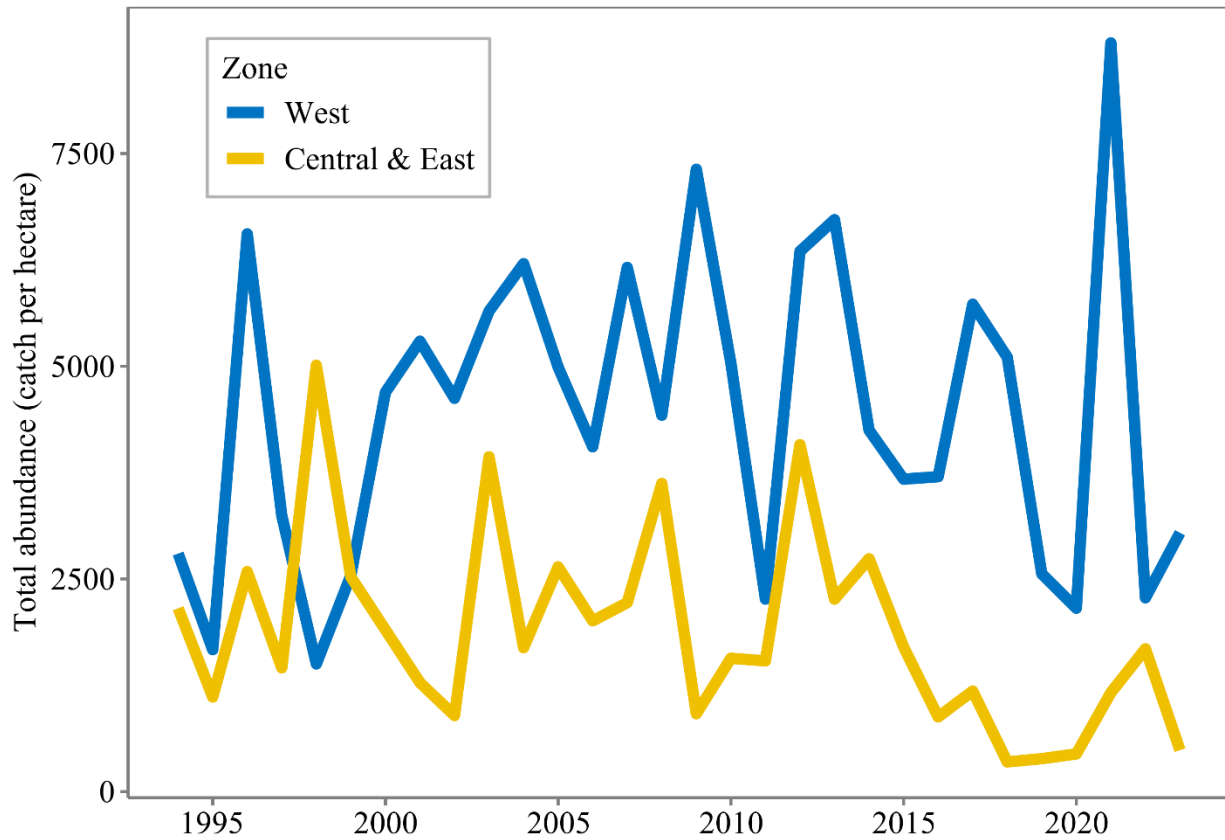


Figure 6.1. Total catch (fish per hectare) of forage fishes over time from the West, Central, and East Zone bottom trawl surveys (Central and East zones combined, in yellow). Forage fishes include any fish that would fit into an adult Walleye mouth (roughly between 2–7 inches) and include Emerald Shiner, Gizzard Shad, White Perch, Rainbow Smelt, and other species (listed in Figure 5.2).

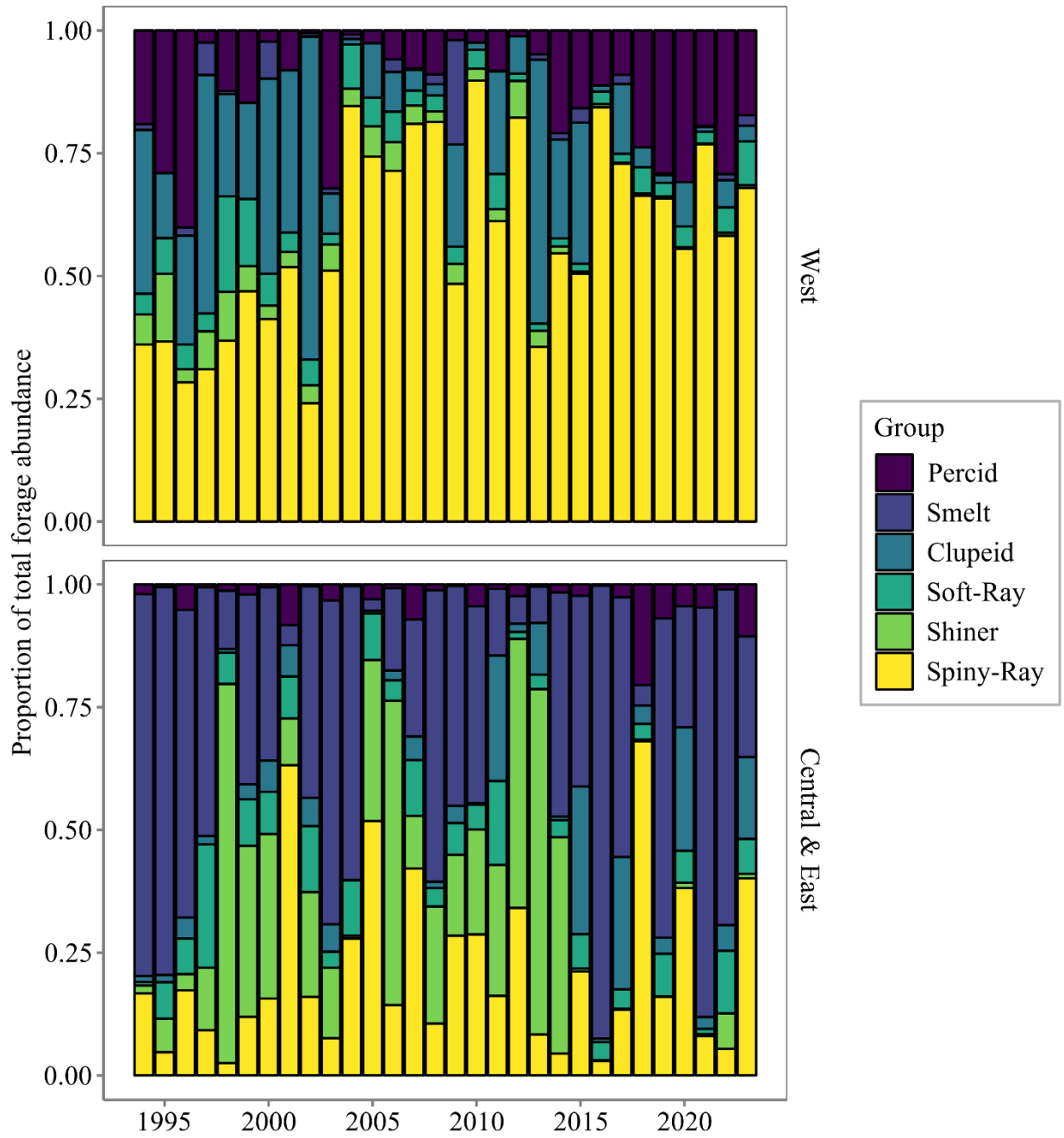


Figure 6.2. Proportion of total forage (percent) for various fish groups over time from the western (top) and central basin (bottom; Central and East Zones) trawl surveys. Western basin indices are from the August interagency survey conducted by both Ohio and Ontario, while central basin indices are from the DOW fall trawl survey. White Perch make up the majority of the West Zone forage populations (yellow), while rainbow smelt make up a greater proportion of central basin forage populations (blue).

Environmental

In addition to fisheries surveys, the DOW also monitors water quality in Lake Erie; metrics such as water temperature, clarity, nutrients, and plankton are quantified on a biweekly basis in collaboration with Ohio State University. Of particular concern is hypoxia, or low dissolved oxygen, which can limit fish habitat and even kill fish in extreme circumstances. In the West Zone, hypoxia is infrequently observed (Figure 7.1). In the Central and East zones, low dissolved oxygen is typically observed offshore in August and September (Figure 7.2). Hypoxia was most prevalent here in September 2023.

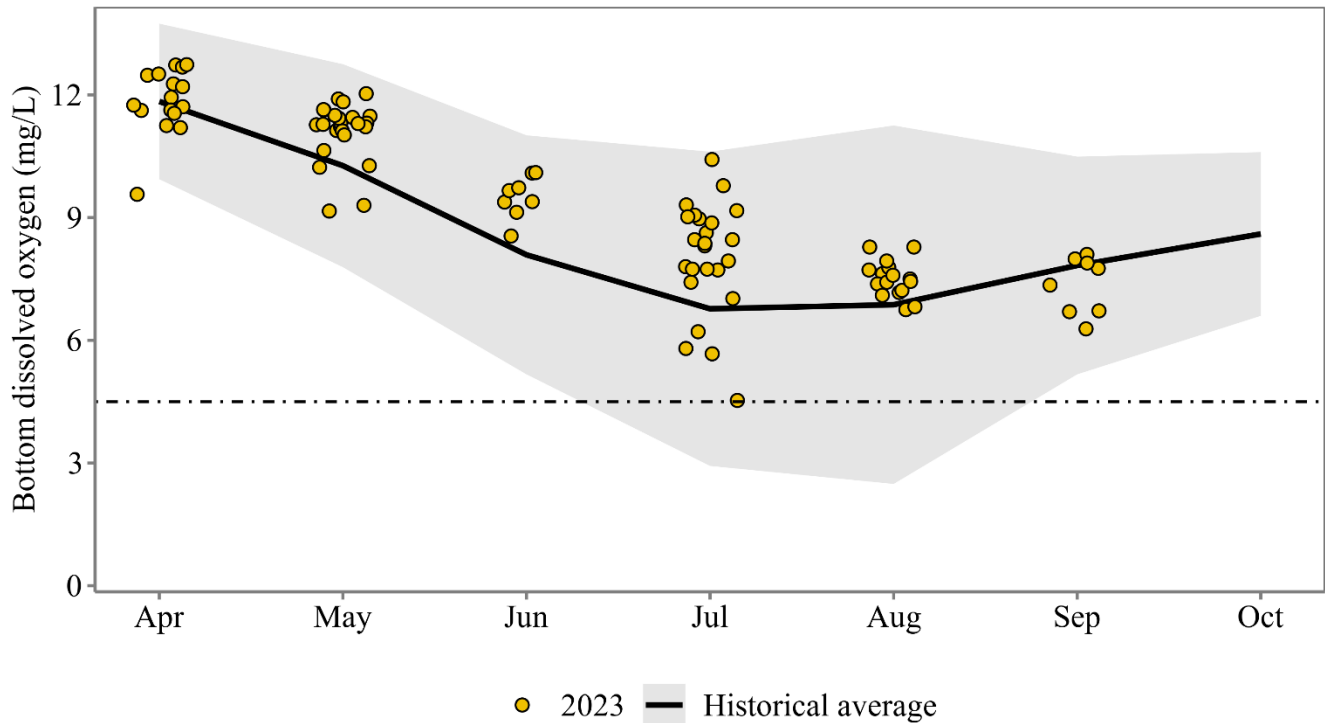


Figure 7.1. West Zone lake bottom dissolved oxygen measurements by month in 2023 (orange points) compared to the ten-year average (black line) and 95% range (grey area). Fish behavior, including feeding, tends to be impacted when dissolved oxygen is below ~ 4.5 mg/L (dashed line), which is typically prevalent in August.

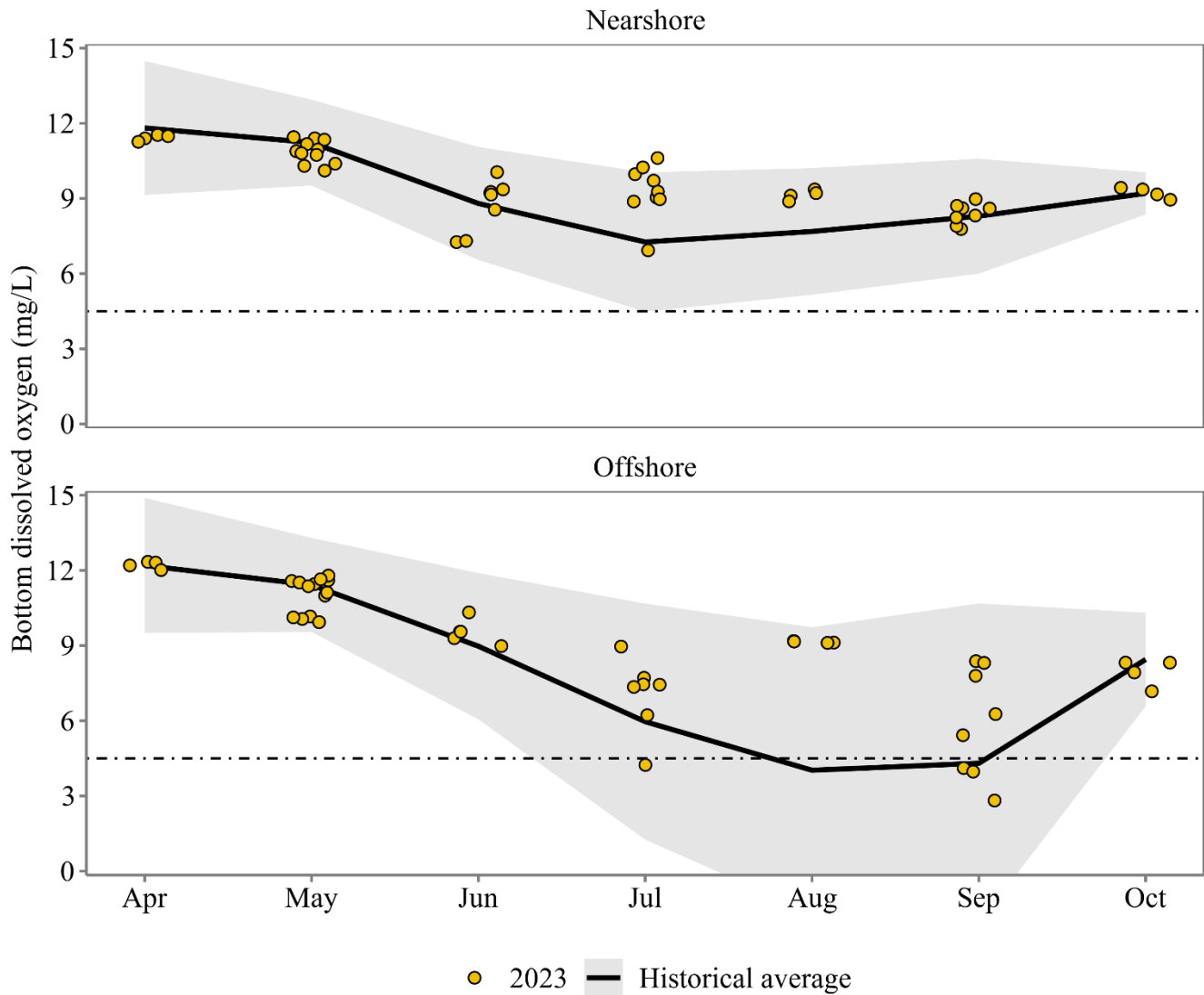


Figure 7.2. Central and East zone lake bottom dissolved oxygen measurements by month in 2023 (orange points) compared to the ten-year average (black line) and 95% range (grey area). Offshore areas (bottom) tend to be more affected by low oxygen than do nearshore areas (top). Fish behavior, including feeding, tends to be impacted when dissolved oxygen is below ~ 4.5 mg/L (dashed line), which is typically prevalent in August.

More Information

This document represents a small summary of the data that Ohio Division of Wildlife biologists collect every year. Greater detail can be found in the Division's annual Status Reports (before 2020) and Data Reports (2020–present). Background information on the multitude of annual surveys can be found in the Data Report Appendix. Additional details and information can be found on the Division's Fishing Lake Erie webpage (ohiodnr.gov/buy-and-apply/hunting-fishing-boating/fishing-resources/fishing-lake-erie), including numerous, topic-specific Fisheries Information Notes. If you have questions, concerns, or would like to use these data, please contact one of the Division of Wildlife's Lake Erie offices:

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