

# Ohio's Lake Erie Fisheries

## 2024 Annual Data Report



*Prepared*

*April 2025*

*By:*

Lake Erie Fisheries Units\*

Ohio Department of Natural Resources

Division of Wildlife



Fairport Harbor Fisheries Research Unit  
1190 High Street  
Fairport Harbor, Ohio 44077

Sandusky Fisheries Research Unit  
305 E. Shoreline Drive  
Sandusky, Ohio 44870

Mike DeWine, *Governor* Mary Mertz, *Director*

Kendra Wecker, *Chief*



*\*Most work was completed under Federal Aid in Sport Fish Restoration Project  
F-69-P, Fish Management in Ohio*



# Ohio's Lake Erie Fisheries

## 2024 Annual Data Report



*Prepared*  
*April 2025*

*By:*

Lake Erie Fisheries Units\*  
Ohio Department of Natural Resources  
Division of Wildlife



Fairport Harbor Fisheries Research Unit  
1190 High Street  
Fairport Harbor, Ohio 44077  
e-mail: [Ann.Gorman@dnr.ohio.gov](mailto:Ann.Gorman@dnr.ohio.gov)

Sandusky Fisheries Research Unit  
305 E. Shoreline Drive  
Sandusky, Ohio 44870  
e-mail: [Eric.Weimer@dnr.ohio.gov](mailto:Eric.Weimer@dnr.ohio.gov)

Ann Marie Gorman, *Supervisor*  
Andrew Gable  
Peter Jenkins  
Amanda Popovich  
Brandon Slone  
Samantha Truckly

Eric Weimer, *Supervisor*  
Matt Faust  
Brian Schmidt  
Zak Slagle  
Heather Luken  
Jim McFee  
Jill Conner

Travis Hartman, *Lake Erie Fisheries Program Administrator*  
John Navarro, *Executive Administrator, Fish Management and Research (acting)*  
Kendra Wecker, *Chief*  
Mary Mertz, *Director*  
Mike DeWine, *Governor*



*\*Most work was completed under Federal Aid in Sport Fish Restoration Project F-69-P, Fish Management in Ohio*

*Citation:*

*Ohio Department of Natural Resources - Division of Wildlife (ODNR-DOW). 2025. Ohio's Lake Erie Fisheries, 2024. Annual data report. Federal Aid in Fish Restoration Project F-69-P. Ohio Department of Natural Resources, Division of Wildlife, Lake Erie Fisheries Units, Fairport Harbor and Sandusky. 86 pp.*

## Table of Contents

Executive Summary .....	2
Ohio’s Lake Erie Fisheries Assessment 2024.....	3
Sampling Effort.....	3
Fisheries Management Strategies Discussion.....	3
Interagency Strategy Development and Evaluation.....	3
Strategy Development and Evaluation.....	4
Conclusions.....	5
References.....	5
Tables and Figures .....	7
Sampling Effort.....	7
Sport Fishery .....	12
Commercial Fishery .....	37
Population Assessment .....	46
Fisheries Management and Strategies.....	63
Appendix: Lake Erie Fisheries Sampling Protocol .....	68

*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 near you prior to using this data or before citing research and management findings.



## Ohio Department of Natural Resources DIVISION OF WILDLIFE

### Executive Summary

The ODNR-DOW Lake Erie Fisheries Unit (DOW), which includes research stations in Fairport Harbor and Sandusky, manages the fisheries in the 2.3 million acres of Lake Erie that are within Ohio's jurisdiction. Lake Erie's recreational and commercial fisheries contribute upwards of \$1 billion to Ohio's economy, and these fish populations have great ecosystem value. Annual fisheries assessments using bottom trawls, gill nets, angler creel surveys, and commercial catch reporting are conducted by the research stations to monitor the status of fish populations and to ensure the sustainable harvest of these shared resources.

#### ***Walleye***

- The 2024 hatch index was below average, ranking 24<sup>th</sup> since 1988 in the Ohio's West Zone trawl surveys.
- Angler effort and harvest indicate that walleye are the most targeted sportfish in Ohio's Lake Erie waters.
- Angler harvest rate in 2024 was the second highest since 1980.
- Exceptional fishing is expected to continue in 2025, with most fish being 15-24 inches long.

#### ***Yellow Perch***

- Hatch indices in the West Zone have been near or above average for eleven years. The Central Zone had the first above-average hatch index since 2014. East Zone hatches have been below average since 2014.
- Angler effort suggests yellow perch are the second most targeted sportfish by Ohio's anglers in Lake Erie.
- Angler harvest for 2024 was estimated at 1.2 million fish with a harvest rate of 2.25 fish per angler hour. Harvest rates and harvest decreased below average in 2024 in the West Zone, while harvest and effort in the Central and East Zones were among the lowest since the creel survey began in 1975.
- The commercial fishing harvest rate of 74 pounds per lift was a decrease from 2023 and was well below the 10-year average of 114 pounds per lift.
- In 2025, anglers can expect the best fishing in the West Zone, but reduced adult populations due to poor hatches will result in lower catch rates in the Central and East Zones.

#### ***Black Bass***

- The smallmouth bass angler catch rate (0.75 fish per hour) was above average, ranking 6<sup>th</sup> since 2006.
- At a harvest rate of 3%, this fishery continues to be a predominantly catch-and-release fishery.
- The average size of a harvested smallmouth bass was 17.1 inches long with a weight of 3.0 pounds.
- The largemouth bass angler catch rate was near average (1.57 fish per hour).
- The average size of a harvested largemouth bass was 16.4 inches with a weight of 2.5 pounds.

#### ***Steelhead Trout***

- In 2024, DOW hatchery personnel raised and stocked seven Lake Erie tributaries with 466,520 Steelhead that were a mix of Shasta and Manistee River strains. The annual stocking target is 450,000 fish.
- The open-lake recreational harvest was 14,839 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 in 2025.

#### ***Forage Fish Community***

- Forage fish abundance in trawl surveys remained below average across all zones in 2024.
- West Zone catches were dominated by young white perch, followed by yellow perch, gizzard shad, trout perch, and freshwater drum. Catches in the Central and East zones were primarily composed of young white perch, gizzard shad, and trout perch.
- Emerald shiner abundances continue to be among the lowest lakewide levels in the time series.
- In the Central and East zones, alewife abundance remained elevated like in 2023.



## Ohio Department of Natural Resources DIVISION OF WILDLIFE

### Ohio's Lake Erie Fisheries Assessment 2024

#### Lake Erie Fisheries Monitoring Program

The mission of the Ohio Department of Natural Resources Division of Wildlife (ODNR-DOW) is to conserve and improve fish and wildlife resources and their habitats for sustainable use and appreciation by all. The Lake Erie Fisheries Program within the ODNR-DOW manages sport and commercial fisheries for the 2.24 million acres of Lake Erie under Ohio's jurisdiction. In this report, we summarize the annual Lake Erie fish and fisheries assessment, research, and other projects conducted by our fisheries personnel at our Sandusky and Fairport Harbor Fisheries Research Stations. These projects provide information on fishery harvest and effort, baseline stock assessment data for important sport, commercial, and forage fish species, and how various parts of the food web are responding to changes in the Lake Erie ecosystem.

Objectives of Ohio's Lake Erie Fisheries Assessment Program:

1. To monitor the fish community with standardized bottom trawl, gill net, electrofishing, and hydroacoustic gears to obtain detailed age-specific relative abundance, recruitment, growth rates, maturation rates, diets, and distribution for walleye, yellow perch, white bass, white perch, smallmouth bass, steelhead, and lake whitefish, and general age-0, age-1 and older relative abundance for all other species.
2. To conduct creel on targeted sport fisheries for walleye, yellow perch, white bass, smallmouth bass, and steelhead trout in the lake during April–October, and for walleye fisheries in the Sandusky and Maumee Rivers during March–April, to quantify catch, effort, and size and age characteristics of the sport harvest.
3. To collect water temperature, dissolved oxygen, water transparency, phytoplankton, zooplankton size/species composition, total phosphorus, and benthos data following protocols of the Forage Task Group to assess forage base conditions.

#### Sampling Effort

Specific trend data (Tables 1.1.1-5.1.5 and Figures 1.1.1-1.1.4) and a complete description of long-term monitoring sampling methods (Appendix) are found in this report. In 2024, deviations from the sampling protocol were typically due to weather, logistical, and vessel constraints. Assessments were able to proceed as normal and the resulting data are comparable to the historic time series. Please see Tables 1.1.1–1.1.2 and Figures 1.1.1–1.1.4 for a summary of the 2024 sampling effort.

#### *Fisheries Management Strategies Discussion*

##### Interagency Strategy Development and Evaluation

Staff members within the ODNR-DOW Lake Erie Fisheries program participate in the Great Lakes Fishery Commission's Lake Erie Committee (GLFC/LEC), its Task Groups, and the Standing Technical Committee (STC). Members contribute to task group meetings, reports, and presentations that address walleye, yellow

perch, forage species, coldwater fish, habitat, fish community, and human dimension management and research issues. Annual outputs from GLFC/LEC activities include the derivation of Lake Erie walleye and yellow perch quotas, reports from all technical subcommittees, minutes from all meetings, various scientific presentations, consultation with public advisors and stakeholders, and the Lake Erie Fisheries Data and Angler reports.

## **Strategy Development and Evaluation**

### *Percid Management*

Personnel at the ODNR-DOW Lake Erie Fisheries Units use assessment and fisheries data to evaluate current fisheries regulations and the status of threatened, endangered, nuisance, and exotic species. Evaluations of specific implemented regulations occur after a suitable time has passed for detecting a population response. The status of key sport fish populations and associated fisheries is compiled and reviewed annually relative to time series trends, emerging environmental issues of concern, stakeholder requests, and any specific restoration objectives that may be in place. For sauger, pilot work is underway to establish reasonable restoration targets before management actions (e.g., stocking) are considered. For walleye and yellow perch, formal Ohio Administrative Code Sections deal directly with daily limits for these species, based upon Ohio's portion of the Total Allowable Catch (TAC).

Establishment of Ohio walleye and yellow perch daily limits for sport anglers and determination of the yellow perch sport and commercial sharing formula are two important management strategies determined annually. The Ohio angler walleye and yellow perch daily limits are set following the determination of the TAC at the GLFC/LEC meeting at the end of March each year. Ohio's walleye TAC share (in number of fish) is determined by incorporating the GLFC/LEC TAC and an established GLFC/LEC agency sharing formula (WTG 2025). From this Ohio share, angler daily limits are determined within the management framework, based on safe harvest levels established through analyses of harvest, effort, and catch rate patterns over the last several decades (Table 5.1.1). The entire Ohio walleye share is allocated to sport anglers.

Ohio's yellow perch TAC share (in pounds of fish) is determined by incorporating the GLFC/LEC TAC in each of the three Management Units in which Ohio has jurisdiction and the established GLFC/LEC agency sharing formulas in those units (YPTG 2025). From these Ohio shares, angler daily limits are determined within the management framework, based on safe harvest levels established through analyses of harvest, effort, and catch rate patterns over the last several decades. Shares of yellow perch for Ohio's commercial fisheries are determined, as guided by the ODNR-DOW Utilization of Lake Erie Fisheries Resources Policy and guidance from the Ohio Lake Erie Fishing Regulatory Reform Task Force, based upon the remaining TAC share after allocation to the sport fishery in each of the management units. Individual Transferrable Quotas are then assigned to each individual trap net license in each Management Unit based upon historic fishing activity in each of the management units. For sport anglers, the new daily limit regulations, by management unit or fishing zone, will take effect on May 1 and will be effective through April 30 of the following year (Table 5.1.2).

### *Lake Trout Restoration*

The LEC created a Lake Trout Restoration Plan that details activities to restore self-sustaining populations of lake trout in Lake Erie (LEC 2021). Activities that ODNR-DOW staff were actively involved with included assisting with stocking of lake trout in alternative locations outside of the eastern basin and acoustic telemetry studies of lake trout movement. Since fall 2012, lake trout have been stocked in Ohio waters of Lake Erie and the ODNR-DOW continued this stocking program with the assistance of the Allegheny National Fish Hatchery



in Warren, PA, and the LEC's Coldwater Task Group (Table 5.1.3). All lake trout released had adipose fin clips and coded wire tags implanted so that ODNR-DOW can track migration, return rates, and the success of these stockings from future recaptures. Progress toward rehabilitation objectives is currently being evaluated by the LEC Coldwater Task Group. The Coldwater Task Group recently completed a new Lake Trout Rehabilitation plan for the years 2021-2030, available on the GLFC website at [glfc.org](http://glfc.org).

### *Fish Production and Stocking*

ODNR-DOW personnel annually request 600,000 steelhead eggs from nearby Great Lakes agencies for hatching and rearing steelhead at our Castalia State Fish Hatchery (CSFH) and stocking into select Ohio tributaries of Lake Erie (Table 5.1.4). Steelhead eggs are requested as eyed eggs from the Michigan Department of Natural Resources (DNR) taken at the weir in the Little Manistee River, Michigan, and held at Wolf Lake (MI) State Fish Hatchery. Wisconsin DNR also collects Wisconsin strain steelhead eggs from Ganaraska and Chambers Creek and provides them to Ohio as eyed eggs from the Wild Rose (WI) State fish hatchery. As these agencies have recently had difficulties meeting our full request for 2024 stocking, we procured eyed eggs of the Shasta strain from the federal hatchery system. Annual targeted steelhead stocking numbers is 450,000 reared at CSFH, with the target size of yearlings stocked being 175-225 mm in length. In 2024, 466,520 steelhead yearlings were stocked by ODNR-DOW, and an additional 48,800 were stocked by the Pennsylvania Fish and Boat Commission (PAFBC) in Conneaut Creek as part of a cooperative agreement between each agency. The 48,800 yearling steelhead stocked by PAFBC was below their stocking objective of 75,000 fish/year in Conneaut Creek due to a production shortage. Surplus fish were provided by ODNR-DOW for Conneaut Creek to account for this shortage. A 305 mm (12") minimum size limit remains in effect for steelhead with the daily limit being five fish from May 16 to August 31, 2023, and two fish from September 1, 2023, to May 15, 2024. In 2024, the ODNR-DOW added a seventh tributary, the Cuyahoga River, to the list of steelhead stocking streams. This additional stream represents a reallocation of stocking effort and not an increase in the total number of fish stocked. The ODNR-DOW expects to continue stocking the seven tributaries as production goals are met.

### *Conclusions*

The Division of Wildlife Lake Erie staff will continue to assess Lake Erie fish stocks annually with our standard programs. Division staff will continue to improve these assessment efforts through new gear development, evaluation, and ongoing collaborative research projects with universities and other agencies. These data are essential to fisheries management, both within Ohio waters and across Lake Erie jurisdictions. Changes in the Lake Erie ecosystem will be addressed through new research and management, including work applied to harmful algal blooms, hypoxia, and their effects on fish populations and fisheries. Opportunities will be sought to assess, restore and enhance fish habitat in the Lake Erie basin through Lake Management Plan initiatives, partnerships with other Department of Natural Resources divisions, and targeted research to understand where fish species and specific spawning populations occur in the lake and how their populations can be enhanced. We will also assist in the implementation of strategic, tactical, and operational plans to move these initiatives forward. With new research and continued annual monitoring, the Ohio Division of Wildlife will ensure Lake Erie's natural resources are managed sustainably for current and future generations of stakeholders.

### *References*

Lake Erie Committee. 2021. A plan to support Lake Trout rehabilitation in Lake Erie, 2021-2030. Great Lakes Fishery Commission, 20 pp.

Walleye Task Group. 2025. 2024 Report of the Lake Erie Walleye Task Group, March 2025. Presented to the Standing Technical Committee, Lake Erie Committee of the Great Lakes Fishery Commission, Ann Arbor, Michigan, USA.

Yellow Perch Task Group. 2025. 2024 Report of the Lake Erie Yellow Perch Task Group, March 2025. Presented to the Standing Technical Committee, Lake Erie Committee of the Great Lakes Fishery Commission, Ann Arbor, Michigan, USA.

*Tables and Figures*

**Sampling Effort**

*List of Tables*

Table 1.1.1. Fishery-dependent sampling effort, by area and month, for the creel survey in the Ohio waters of Lake Erie during 2024. .... 8

Table 1.1.2. Fishery-independent sampling effort, by management unit and month and survey, in the Ohio waters of Lake Erie during 2024. .... 9

*List of Figures*

Figure 1.1.1. Stations sampled with trawls in the Ohio waters of Lake Erie during 2024. Management Unit 1 sites were sampled with a flat-bottom otter trawl and MU 2/3 sites were sampled with a two-seam Yankee trawl with a roller sweep. .... 10

Figure 1.1.2. Locations of September smallmouth bass gill nets in 2024. Eight nets were set in each Management Unit. .... 10

Figure 1.1.3. Stations sampled with 1200-ft keged monofilament gill nets during the fall of 2024. .... 11

Figure 1.1.4. Location of nearshore fish community assessment sites sampled in 2024. .... 11

Table 1.1.1 Fishery-dependent sampling effort, by area and month, for the creel survey in the Ohio waters of Lake Erie during 2024.

Survey	Survey Month	Management Unit 1			Management Unit 2		MU 3	Total
		Area			Area		Area	
		1	2	3	4	5	6	
Creel Interviews	April	41	91					132
	May	147	282	108	59	101	57	754
	June	85	240	104	86	116	158	789
	July	81	180	99	77	154	203	794
	August	99	96	70	13	98	161	537
	September	67	49	49	4	49	122	340
	October	20	41	45	28	78	67	279
	Total	540	979	475	267	596	768	3,625

Boat Counts	Survey Month	Management Unit 1			Management Unit 2		MU 3	Total
		Area			Area		Area	
		1	2	3	4	5	6	
	April	190	335					525
	May	330	315	417	190	221	147	1,620
	June	337	302	418	438	372	388	2,255
	July	362	328	394	396	340	396	2,216
	August	374	330	418	436	374	391	2,323
	September	374	297	407	388	354	388	2,208
	October	221	195	242	378	306	360	1,702
	Total	2,188	2,102	2,296	2,226	1,967	2,070	12,849

Table 1.1.2 Fishery-independent sampling effort, by management unit and month and survey, in the Ohio waters of Lake Erie during 2024.

Survey	Survey Month	Management Unit	Dates Sampled	Sample Sites (n)		Number of Fish		
				Planned	Accomplished	Aged	Measured	Caught
Bottom Trawl	May	1	N/A	0	0	518	12,572	65,478
	June		6/20	23	7			
	July		7/22–7/23	23	21			
	August		8/22–8/26	37	37			
	Fall		9/19–10/1	37	35			
	June	2	6/11-6/17	33	32	1,289	5,810	24,127
	August		8/14-8/27	33	32			
	Fall		10/17-10/28	33	23			
	June	3	6/11-6/28	24	24	1,158	4,924	30,584
	August		8/15-8/22	24	23			
	Fall		10/18-10/22	24	24			
Smallmouth Gill Net	September	1	9/4–9/10	8	8	102	102	1,004
		2	9/5–9/12	8	8	61	63	563
		3	9/4–9/11	8	8	59	60	356
Walleye Gill Net	Fall	1	10/2-10/10	12	12	381	698	1,186
		2	10/17-10/24	24	12	387	685	1,350
		3	10/2-10/17	16	12	220	274	769
Electrofishing	Summer	1	6/4–7/8	12	14	53	177	4,718
		2	7/23–7/29	6	6	35	215	352
		3	7/19-7/23	9	9	14	114	446
Lower Trophic	April to October	1	4/10–9/10	95	103			
		2	4/10-9/24	52	48			
		3	4/10-9/24	52	44			

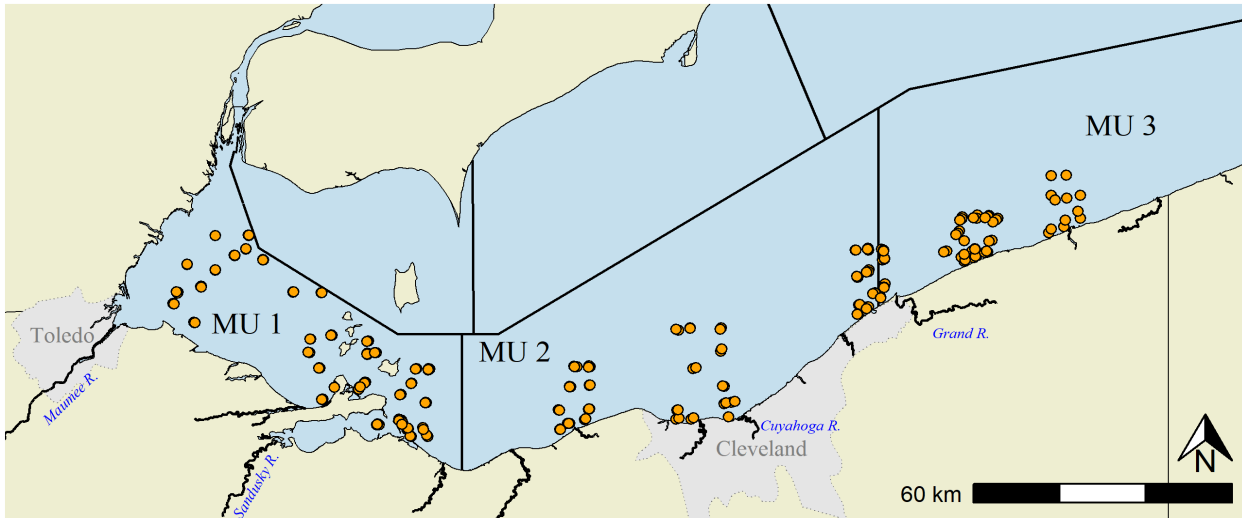


Figure 1.1.1. Stations sampled with trawls in the Ohio waters of Lake Erie during 2024. Management Unit 1 sites were sampled with a flat-bottom otter trawl and MU 2/3 sites were sampled with a two-seam Yankee trawl with a roller sweep.

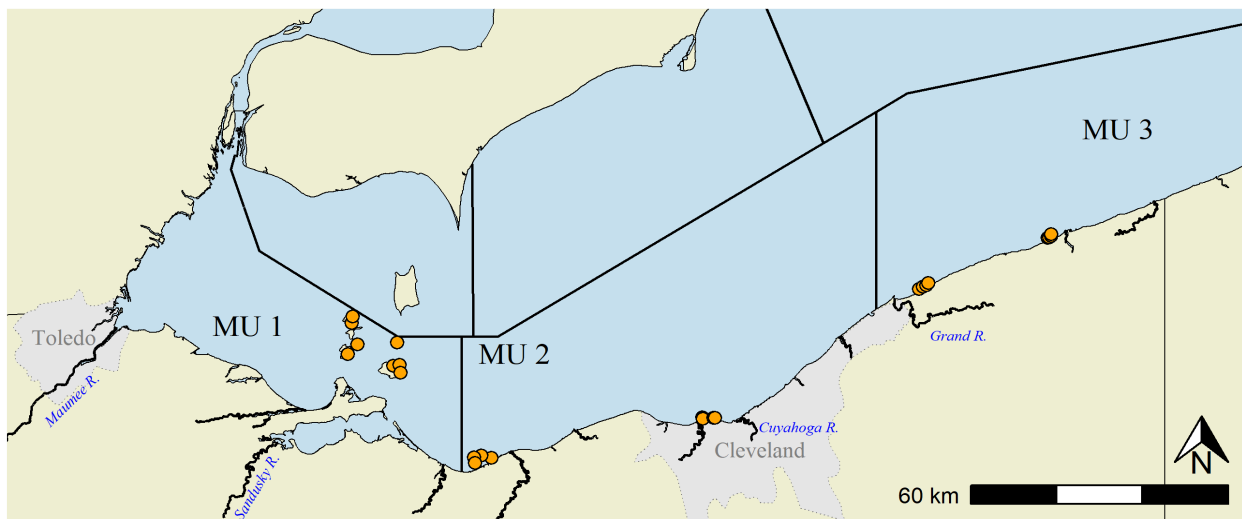


Figure 1.1.2. Locations of September smallmouth bass gill nets in 2024. Eight nets were set in each Management Unit.

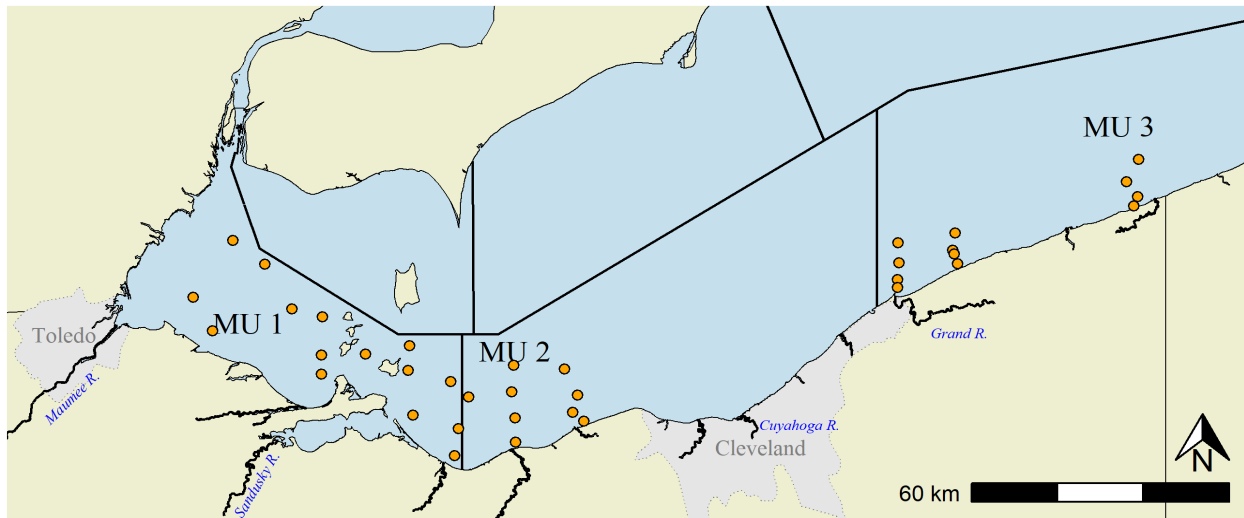


Figure 1.1.3. Stations sampled with 1200-ft keged monofilament gill nets during the fall of 2024.

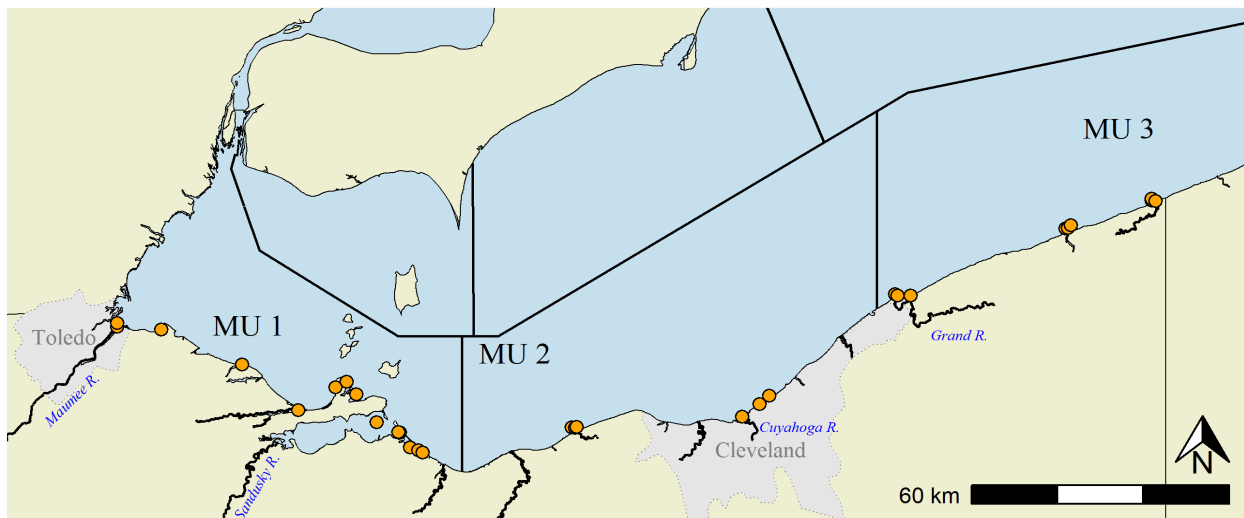


Figure 1.1.4. Location of nearshore fish community assessment sites sampled in 2024.

## Sport Fishery

### *List of Tables*

Table 2.1.1. Private boat angler harvest (numbers of fish) of major species, by management unit and month, in the Ohio waters of Lake Erie during 2024. ....	14
Table 2.1.2. Charter boat angler harvest (numbers of fish) of major species, by management unit and month, in the Ohio waters of Lake Erie during 2024. ....	15
Table 2.1.3. Private and charter combined angler harvest (numbers of fish) of major species, by management unit, in the Ohio waters of Lake Erie during 2024.....	16
Table 2.1.4. Estimated numbers of released fish (top) and number of released fish that were legal size and percent released fish of legal size (bottom) in the private and charter boat fisheries, by management unit, in the Ohio waters of Lake Erie during 2024.....	17
Table 2.1.5. Private boat angler hours for target species, by management unit and month, in the Ohio waters of Lake Erie during 2024.....	18
Table 2.1.6. Charter boat angler hours for target species, by management unit and month, in the Ohio waters of Lake Erie during 2024. ....	19
Table 2.1.7. Private and charter combined angler hours for target species, by management unit, in the Ohio waters of Lake Erie during 2024. ....	20
Table 2.1.8. Characteristics of private boat angler trips, by major target species, in the Ohio waters of Lake Erie during 2024. ....	21
Table 2.1.9. Characteristics of charter boat angler trips, by major target species, in the Ohio waters of Lake Erie during 2024. ....	22
Table 2.1.10. Walleye sport angler harvest (thousands of fish) by management unit and fishery, 1975–2024..	23
Table 2.1.11. Walleye sport targeted angler effort (thousands of angler hours) by management unit and fishery, 1975–2024.....	24
Table 2.1.12. Walleye sport targeted harvest rate (fish per angler hour), by management unit and fishery, 1975–2024.....	25
Table 2.1.13. Private boat angler hours seeking walleye and walleye harvest per angler hour, by fishing method, in the Ohio waters of Lake Erie during 2024.....	26
Table 2.1.14. Walleye sport harvest (numbers), year-class composition (% comp), mean length (mm), mean weight (g) by age, and mean age (yr), by management unit, for Ohio's private and charter boat fisheries in 2024.....	27



Table 2.1.15. Yellow perch sport angler harvest (thousands of fish) by management unit and fishery, 1980–2024. Data from 1975–77 are also available.....	28
Table 2.1.16. Yellow perch targeted angler effort (thousands of angler hours) by management unit and fishery, 1980–2024. Data from 1975–77 are also available. ....	29
Table 2.1.17. Yellow perch sport targeted harvest rate (fish per angler hour) by management unit and fishery, 1980–2024. Data from 1975–77 are also available.....	30
Table 2.1.18. Yellow perch sport harvest (numbers), year-class composition (% comp), mean length (mm), mean weight (g), by age, and mean age (yr), by management unit, for Ohio's private and charter boat fisheries in 2024. ....	31
Table 2.1.19. Smallmouth bass sport angler harvest (thousands of fish) by management unit and fishery, 1980–2024. Data from 1975–77 are also available.....	32
Table 2.1.20. Smallmouth bass sport targeted angler effort (thousands of angler hours) by management unit and fishery, 1980–2024. Data from 1975–77 are also available.....	33
Table 2.1.21. Smallmouth bass targeted catch rate (fish per angler hour) by management unit and fishery, 2000–2024. Data from 1975–1999 are also available. ....	34
Table 2.2.1. Summary of angler hours, harvest rates, and harvest (number of fish) from spring creel surveys for anglers seeking walleye on the Sandusky and Maumee rivers from 1975–2024. Prior to 2004, both incomplete and complete trip interviews were used to calculate effort and harvest; since 2004, only completed trip interviews have been used. ....	35
Table 2.2.2. Summary of angler hours, harvest rates, and harvest (number of fish) from spring creel surveys for anglers seeking white bass on the Sandusky and Maumee rivers from 1975–2024. Prior to 2004, both incomplete and complete trip interviews were used to calculate effort and harvest; since 2004, only completed trip interviews have been used. ....	36

Table 2.1.1. Private boat angler harvest (numbers of fish) of major species, by management unit and month, in the Ohio waters of Lake Erie during 2024.

Management Unit	Month	Walleye	Yellow Perch	White Bass	Smallmouth Bass	Largemouth Bass	Freshwater Drum	Channel Catfish	White Perch	Steelhead Trout	Others <sup>a</sup>	Total
1	April	103,135	471	481	403	0	0	127	101	0	0	104,718
	May	306,110	4,199	3,951	241	241	0	2,401	356	0	3,604	321,103
	June	166,744	7,820	1,307	0	0	1,449	1,048	714	0	2,443	181,525
	July	158,270	353,291	115	0	0	471	336	127	115	169	512,894
	August	25,740	422,289	1,052	0	1,524	291	889	1,659	0	154	453,598
	September	15,779	199,354	307	0	0	442	1,016	870	0	468	218,236
	October	29,833	131,461	2,176	0	0	69	0	69	0	0	163,608
	Total	805,611	1,118,885	9,389	644	1,765	2,722	5,817	3,896	115	6,838	1,955,682
2	April	2,156	0	0	0	0	0	0	0	0	0	2,156
	May	102,865	5,579	729	0	0	85	352	122	0	122	109,854
	June	242,657	8,310	1,315	0	0	76	345	216	0	1,080	253,999
	July	205,225	4,940	607	0	0	617	909	1,505	2,877	0	216,680
	August	55,253	5,265	1,100	73	0	73	291	218	1,004	0	63,277
	September	35,604	7,254	515	386	1,288	773	212	258	469	0	46,759
	October	45,611	13,521	594	120	0	79	199	159	2,496	0	62,779
	Total	689,371	44,869	4,860	579	1,288	1,703	2,308	2,478	6,846	1,202	755,504
3	May	32,677	640	0	383	0	1,439	192	64	0	255	35,650
	June	141,256	2,449	120	0	0	366	395	2,950	303	2,748	150,587
	July	290,402	2,272	2,510	0	0	0	293	376	2,677	0	298,530
	August	146,611	4,032	300	1,217	0	1,106	0	0	1,599	0	154,865
	September	89,801	999	720	0	0	0	0	0	982	91	92,593
	October	2,560	0	29	197	0	0	0	0	1,225	0	4,011
	Total	703,307	10,392	3,679	1,797	0	2,911	880	3,390	6,786	3,094	736,236
Combined	April	105,291	471	481	403	0	0	127	101	0	0	106,874
	May	441,652	10,418	4,680	624	241	1,524	2,945	542	0	3,981	466,607
	June	550,657	18,579	2,742	0	0	1,891	1,788	3,880	303	6,271	586,111
	July	653,897	360,503	3,232	0	0	1,088	1,538	2,008	5,669	169	1,028,104
	August	227,604	431,586	2,452	1,290	1,524	1,470	1,180	1,877	2,603	154	671,740
	September	141,184	207,607	1,542	386	1,288	1,215	1,228	1,128	1,451	559	357,588
	October	78,004	144,982	2,799	317	0	148	199	228	3,721	0	230,398
	Total	2,198,289	1,174,146	17,928	3,020	3,053	7,336	9,005	9,764	13,747	11,134	3,447,422

<sup>a</sup>"Others" include Bluegill, Round Goby, Rock Bass, Black Crappie, Brown Trout, and Common Carp.

Table 2.1.2. Charter boat angler harvest (numbers of fish) of major species, by management unit and month, in the Ohio waters of Lake Erie during 2024.

Management Unit		Walleye	Yellow Perch	White Bass	Smallmouth Bass	Freshwater Drum	Channel Catfish	White Perch	Steelhead Trout	Others <sup>a</sup>	Total
1	April	14,380	33	0	0	0	0	0	0	0	14,413
	May	71,634	1,973	437	0	0	205	140	26	0	74,415
	June	30,723	884	74	10	9	1,149	163	0	0	33,012
	July	29,060	6,003	37	16	32	368	65	0	0	35,581
	August	12,665	14,343	0	51	0	1,690	15	0	0	28,764
	September	6,703	16,906	0	31	0	2,115	0	0	0	25,755
	October	8,353	4,966	0	0	0	4,448	0	0	0	17,767
	Total	173,518	45,108	548	108	41	9,975	383	26	0	229,707
2	May	9,353	0	0	0	0	0	555	0	0	9,908
	June	19,193	261	30	0	0	20	0	0	0	19,504
	July	8,479	28	61	0	0	0	0	248	0	8,816
	August	1,795	67	0	0	0	0	45	19	0	1,926
	September	227	8	0	0	0	0	0	0	0	235
	October	3,657	0	0	0	0	0	0	0	0	3,657
	Total	42,704	364	91	0	0	20	600	267	0	44,046
3	May	3,545	0	32	0	0	0	0	0	0	3,577
	June	10,215	36	24	0	0	0	45	121	0	10,441
	July	10,839	0	6	0	0	0	16	163	0	11,024
	August	14,669	0	10	0	87	0	0	443	0	15,209
	September	6,674	0	0	0	0	0	0	72	0	6,746
	October	0	0	0	0	0	0	0	0	0	0
	Total	45,942	36	72	0	87	0	61	799	0	46,997
Combined	April	14,380	33	0	0	0	0	0	0	0	14,413
	May	84,532	1,973	469	0	0	205	695	26	0	87,900
	June	60,131	1,181	128	10	9	1,169	208	121	0	62,957
	July	48,378	6,031	104	16	32	368	81	411	0	55,421
	August	29,129	14,410	10	51	87	1,690	60	462	0	45,899
	September	13,604	16,914	0	31	0	2,115	0	72	0	32,736
	October	12,010	4,966	0	0	0	4,448	0	0	0	21,424
	Total	262,164	45,508	711	108	128	9,995	1,044	1,092	0	320,750

<sup>a</sup> No record of other species harvested from charter interviews.

Table 2.1.3. Private and charter combined angler harvest (numbers of fish) of major species, by management unit, in the Ohio waters of Lake Erie during 2024.

Management			Yellow	White	Smallmouth	Largemouth	Freshwater	Channel	White	Steelhead		
Unit	Fishery	Walleye	Perch	Bass	Bass	Bass	Drum	Catfish	Perch	Trout	Others <sup>a</sup>	Total
1	Private	805,611	1,118,885	9,389	644	1,765	2,722	5,817	3,896	115	6,838	1,955,682
	Charter	173,518	45,108	548	108	0	41	9,975	383	26	0	229,707
	All	979,129	1,163,993	9,937	752	1,765	2,763	15,792	4,279	141	6,838	2,185,389
2	Private	689,371	44,869	4,860	579	1,288	1,703	2,308	2,478	6,846	1,202	755,504
	Charter	42,704	364	91	0	0	0	20	600	267	0	44,046
	All	732,075	45,233	4,951	579	1,288	1,703	2,328	3,078	7,113	1,202	799,550
3	Private	703,307	10,392	3,679	1,797	0	2,911	880	3,390	6,786	3,094	736,236
	Charter	45,942	36	72	0	0	87	0	61	799	0	46,997
	All	749,249	10,428	3,751	1,797	0	2,998	880	3,451	7,585	3,094	783,233
Combined	Private	2,198,289	1,174,146	17,928	3,020	3,053	7,336	9,005	9,764	13,747	11,134	3,447,422
	Charter	262,164	45,508	711	108	0	128	9,995	1,044	1,092	0	320,750
	All	2,460,453	1,219,654	18,639	3,128	3,053	7,464	19,000	10,808	14,839	11,134	3,768,172

<sup>a</sup> "Others" include Bluegill, Round Goby, Rock Bass, Black Crappie, Brown Trout, and Common Carp.

Table 2.1.4. Estimated numbers of released fish (top) and number of released fish that were legal size and percent released fish of legal size (bottom) in the private and charter boat fisheries, by management unit, in the Ohio waters of Lake Erie during 2024.

Management Unit	Fishery	Walleye	Yellow Perch	White Bass	Smallmouth Bass	Largemouth Bass	Freshwater Drum	Channel Catfish	White Perch	Steelhead Trout	Others	Total
1	Private	511,789	233,076	81,480	58,831	75,226	319,943	48,778	134,330	0	31,222	1,494,675
	Charter	98,023	9,426	4,906	1,515	0	40,929	23,633	21,046	0	8,262	207,740
	All	609,812	242,502	86,386	60,346	75,226	360,872	72,411	155,376	0	39,484	1,702,415
2	Private	692,253	11,074	45,442	13,165	29,764	120,142	15,633	44,294	1,511	19,011	992,289
	Charter	24,463	10	885	8	0	4,994	532	2,440	0	10	33,342
	All	716,716	11,084	46,327	13,173	29,764	125,136	16,165	46,734	1,511	19,021	1,025,631
3	Private	545,795	2,185	17,924	15,873	4,085	65,652	7,979	21,226	7,332	5,755	693,806
	Charter	15,375	17	330	693	0	538	0	317	160	8	17,438
	All	561,170	2,202	18,254	16,566	4,085	66,190	7,979	21,543	7,492	5,763	711,244
Combined	Private	1,749,837	246,335	144,846	87,869	109,075	505,737	72,390	199,850	8,843	55,988	3,180,770
	Charter	137,861	9,453	6,121	2,216	0	46,461	24,165	23,803	160	8,280	258,520
	All	1,887,698	255,788	150,967	90,085	109,075	552,198	96,555	223,653	9,003	64,268	3,439,290

Management Unit	Fishery	Legal size <sup>a</sup> Walleye	Percent Legal size <sup>a</sup>	Legal size <sup>a</sup> Smallmouth Ba	Percent Legal size <sup>a</sup>	Legal size <sup>a</sup> Largemouth Ba	Percent Legal size <sup>a</sup>	Legal size <sup>a</sup> Total
1	Private	72,604	14.19%	32,572	55.36%	29,529	39.25%	134,705
	Charter	2,381	2.43%	636	42.01%	0	-	3,017
	All	74,984	12.30%	33,208	55.03%	29,529	39.25%	137,722
2	Private	144,682	20.90%	4,380	33.27%	9,545	32.07%	158,607
	Charter	3,569	14.59%	8	100.00%	0	-	3,577
	All	148,251	20.68%	4,388	33.31%	9,545	32.07%	162,184
3	Private	148,944	27.29%	11,097	69.91%	1,521	37.23%	161,562
	Charter	2,537	16.50%	693	100.00%	0	-	3,230
	All	151,481	26.99%	11,790	71.17%	1,521	37.23%	164,792
Combined	Private	366,230	20.93%	48,049	54.68%	40,595	37.22%	454,874
	Charter	8,486	6.16%	1,337	60.35%	0	-	9,824
	All	374,717	19.85%	49,386	54.82%	40,595	37.22%	464,698

<sup>a</sup> Legal size refers to the estimated number of fish over the legal size limit (15" for walleye, 14" for smallmouth and largemouth bass) that were released, calculated by applying the percent of legal fish released by fishery, district, and month. Only interviews with responses were used to estimate percentage of legal released fish. Legal size released fish are a sub-set of the total number of released fish that are in the top portion of the table.

Table 2.1.5. Private boat angler hours for target species, by management unit and month, in the Ohio waters of Lake Erie during 2024.

Management Unit	Month	Walleye	Yellow Perch	White Bass	Smallmouth Bass	Largemouth Bass	Steelhead Trout	Walleye/Steelhead	Channel Catfish	Crappie	Anything	Total <sup>a</sup> Hours
1	April	129,597	0	0	1,892	0	0	0	0	0	0	131,488
	May	399,425	0	0	22,036	6,354	0	0	0	1,741	2,799	432,355
	June	283,988	5,199	0	12,690	5,837	0	0	0	0	8,923	317,202
	July	207,415	129,579	0	14,415	4,681	0	0	0	0	4,697	360,787
	August	53,403	183,864	1,132	6,020	5,416	0	0	0	0	1,602	251,437
	September	24,868	100,240	0	11,864	4,731	0	0	369	0	2,083	144,277
	October	41,060	51,211	866	877	2,954	0	0	0	0	0	96,968
	Total	1,139,756	470,093	1,998	69,793	29,973	0	0	369	1,741	20,104	1,734,514
2	April	901	0	0	0	0	0	0	0	0	0	901
	May	144,393	0	0	2,569	574	0	0	0	0	3,577	151,113
	June	250,518	0	441	3,409	4,389	0	0	0	0	3,460	262,217
	July	271,370	0	0	1,389	9130	4,472	1,376	0	0	3,306	291,043
	August	96,526	11,329	0	0	1,401	0	0	1,773	0	3,546	114,575
	September	62,400	7,332	0	1,571	3,465	314	0	0	0	0	75,082
	October	76,534	13,402	0	0	887	4,019	0	0	0	574	95,416
	Total	902,642	32,063	441	8,938	19,846	8,805	1,376	1,773	0	14,463	990,347
3	May	60,394	1,558	0	13,350	0	0	0	0	0	0	75,301
	June	167,074	0	0	5,047	0	0	0	3,695	0	422	177,389
	July	209,509	0	0	2,074	0	0	0	0	0	0	211,583
	August	95,676	3,812	0	5206	378	0	0	0	0	1,419	106,491
	September	86,095	2,045	0	4300	0	622	0	0	0	0	93,062
	October	4,585	488	0	1160	0	8,458	0	0	0	1,005	15,696
	Total	623,333	7,903	0	31,136	378	9,080	0	3,695	0	2,846	679,522
Combined	April	130,498	0	0	1,892	0	0	0	0	0	0	132,389
	May	604,212	1,558	0	37,954	6,928	0	0	0	1,741	6,376	658,769
	June	701,580	5,199	441	21,146	10,226	0	0	3,695	0	12,805	756,808
	July	688,294	129,579	0	17,878	13,811	4,472	1,376	0	0	8,003	863,413
	August	245,605	199,005	1,132	11,226	7,195	0	0	1,773	0	6,567	472,503
	September	173,363	109,617	0	17,735	8,196	936	0	369	0	2,083	312,421
	October	122,179	65,101	866	2,037	3,841	12,477	0	0	0	1,579	208,080
	Total	2,665,731	510,059	2,439	109,867	50,197	17,885	1,376	5,837	1,741	37,413	3,404,383

<sup>a</sup>Total hours incorporates targeted anglers hours from small fisheries such as bluegill, rock bass, and common carp.

Table 2.1.6. Charter boat angler hours for target species, by management unit and month, in the Ohio waters of Lake Erie during 2024.

Management Unit	Month	Walleye	Yellow Perch	Steelhead Trout	Smallmouth Bass	Total <sup>a</sup> Hours
1	April	18,865	0	0	0	18,865
	May	69,057	0	0	0	69,057
	June	42,686	0	0	214	43,134
	July	32,944	1,117	0	345	34,406
	August	20,138	6,063	0	0	26,201
	September	14,423	6,736	0	0	21,159
	October	13,942	9,663	0	0	23,605
	Total	212,055	23,579	0	559	236,427
2	May	8,621	0	0	0	8,621
	June	19,386	0	0	0	19,386
	July	7,993	0	646	0	8,639
	August	2,733	0	0	0	2,733
	September	324	0	0	0	324
	October	2,617	0	0	0	2,617
	Total	41,674	0	646	0	42,320
3	May	3,307	0	0	529	3,836
	June	8,109	0	0	0	8,109
	July	5,494	0	0	0	5,494
	August	6,424	0	0	0	6,424
	September	4,497	0	0	0	4,497
	October	0	0	0	0	0
	Total	27,831	0	0	529	28,360
Combined	April	18,865	0	0	0	18,865
	May	80,985	0	0	529	81,514
	June	70,181	0	0	214	70,629
	July	46,431	1,117	646	345	48,539
	August	29,295	6,063	0	0	35,358
	September	19,244	6,736	0	0	25,980
	October	16,559	9,663	0	0	26,222
	Total	281,560	23,579	646	1,088	307,107

<sup>a</sup>Total hours incorporates targeted anglers hours from small fisheries such as channel catfish

Table 2.1.7. Private and charter combined angler hours for target species, by management unit, in the Ohio waters of Lake Erie during 2024.

Management Unit	Fishery	Walleye	Yellow Perch	White Bass	Smallmouth Bass	Largemouth Bass	Steelhead Trout	Walleye/Steelhead	Channel Catfish	Crappie	Anything	Total <sup>a</sup> Hours
1	Private	1,139,756	470,093	1,998	69,793	29,973	0	0	369	1,741	20,104	1,734,514
	Charter	212,055	23,579	0	559	0	0	0	234	0	0	236,427
	All	1,351,811	493,672	1,998	70,352	29,973	0	0	603	1,741	20,104	1,970,941
2	Private	902,642	32,063	441	8,938	19,846	8,805	1,376	1,773	0	14,463	990,347
	Charter	41,674	0	0	0	0	646	0	0	0	0	42,320
	All	944,316	32,063	441	8,938	19,846	9,451	1,376	1,773	0	14,463	1,032,667
3	Private	623,333	7,903	0	31,136	378	9,080	0	3,695	0	2,846	679,522
	Charter	27,831	0	0	529	0	0	0	0	0	0	28,360
	All	651,164	7,903	0	31,665	378	9,080	0	3,695	0	2,846	707,882
Combined	Private	2,665,731	510,059	2,439	109,867	50,197	17,885	1,376	5,837	1,741	37,413	3,404,383
	Charter	281,560	23,579	0	1,088	0	646	0	234	0	0	307,107
	All	2,947,291	533,638	2,439	110,955	50,197	18,531	1,376	6,071	1,741	37,413	3,711,490

<sup>a</sup>Total hours incorporates targeted anglers hours from small fisheries such as bluegill, rock bass, and common carp.



Table 2.1.8. Characteristics of private boat angler trips, by major target species, in the Ohio waters of Lake Erie during 2024.

Target Species	Management Unit	Number of Interviews	Boat Trips	Angler Trips	Target Species			Angler Harvest Success <sup>a</sup>		
					Harvested per Angler Hour	Released per Angler Hour	Total per Angler Hour	Fish per Angler Trip	Fish per Boat Trip	% Boat Limit <sup>b</sup>
Walleye	1	642	76,260	213,085	0.7	0.43	1.12	3.77	10.52	35.72
	2	589	69,780	182,897	0.75	0.75	1.5	3.55	9.3	30.92
	3	504	53,490	153,056	1.1	0.85	1.95	4.48	12.83	51.61
	Total	1,735	199,530	549,038	0.81	0.63	1.44	3.89	10.71	38.3
Yellow Perch	1	309	38,284	94,756	2.37	0.53	2.9	12.09	29.92	13.74
	2	28	2,820	6,700	0.77	0.15	0.93	3.82	9.07	16.68
	3	7	553	1,555	0.41	0.02	0.43	2.07	5.8	0
	Total	344	41,657	103,011	2.24	0.5	2.74	11.4	28.19	13.76
Smallmouth Bass	1	40	5,701	11,503	0	0.76	0.76	0	0	0
	2	11	1,107	1,821	0.04	0.83	0.87	0.17	0.28	0
	3	29	3,031	5,788	0.06	0.64	0.7	0.31	0.6	0
	Total	80	9,839	19,112	0.02	0.73	0.75	0.11	0.22	0
Largemouth Bass	1	29	3,018	5,195	0.03	1.8	1.83	0.12	0.21	3.57
	2	21	1,859	3,311	0	1.17	1.17	0	0	0
	3	1	94	94	0	1.75	1.75	0	0	-
	Total	51	4,971	8,600	0.02	1.55	1.57	0.08	0.13	2.17
White Bass	1	2	285	572	1.94	0.36	2.3	6.78	13.57	-
	2	1	147	147	0	0	0	0	0	-
	3	0	0	0	-	-	-	-	-	-
	Total	2	432	719	1.59	0.3	1.89	5.4	8.95	-
Steelhead Trout	1	0	0	0	-	-	-	-	-	-
	2	8	590	1,508	0.27	0	0.27	1.59	4.07	17.68
	3	38	1,219	2,132	0.14	0.36	0.5	0.59	1.03	20.04
	Total	46	1,809	3,640	0.2	0.18	0.39	1	2.02	19.27
Other Species	Total	277	6,100	13,087						
All Species	Total	2,536	264,338	697,207						

<sup>a</sup> Angler success reported in numbers of fish.

<sup>b</sup> Boat limits were defined as those boats for which each individual angler had a personal limit. There is no daily limit for white bass.

Note: Daily personal bag limits during 2024: 6 walleye; 30 yellow perch for MU1 and MU3 and 10 for MU2;

1 black bass from May 1 to June 21 and 5 black bass from June 22 to April 30;

5 trout and salmon in the aggregate from May 16 to August 31, and 2 trout and salmon in the aggregate from September 1 to May 15.

Table 2.1.9. Characteristics of charter boat angler trips, by major target species, in the Ohio waters of Lake Erie during 2024.

Target Species	Management Unit	Number of Interviews	Boat Trips	Angler Trips	Target Species			Angler Harvest Success <sup>a</sup>		
					Harvested per Angler Hour	Released per Angler Hour	Total per Angler Hour	Fish per Angler Trip	Fish per Boat Trip	% Boat <sup>b</sup> Limit Trips
Walleye	1	491	6,655	38,716	0.81	0.46	1.27	4.43	25.76	30.39
	2	101	1,377	8,166	0.99	0.53	1.52	4.86	28.82	29.04
	3	146	1,539	8,479	1.64	0.51	2.15	5.37	29.59	50.28
	Total	738	9,571	55,361	0.92	0.47	1.39	4.64	26.82	33.4
Yellow Perch	1	36	932	4,643	2.45	0.47	2.92	12.33	61.41	9.12
	2	0	0	0	-	-	-	-	-	-
	3	0	0	0	-	-	-	-	-	-
	Total	36	932	4,643	2.45	0.47	2.92	12.33	61.41	9.12
Smallmouth Bass	1	2	24	97	0	0.66	0.66	0	0	0
	2	0	0	0	-	-	-	-	-	-
	3	1	44	88	0	0.83	0.83	0	0	0
	Total	3	68	185	0	0.75	0.75	0	0	0
Steelhead Trout	1	0	0	0	-	-	-	-	-	-
	2	1	14	86	0.44	0	0.44	3.33	20	0
	3	0	0	0	-	-	-	-	-	-
	Total	1	14	86	0.44	0	0.44	3.33	20	0
All Species	Total	778	10,585	60,275						

<sup>a</sup> Angler success reported in numbers of fish.

<sup>b</sup> Boat limits were defined as those boats for which each individual angler had a personal limit.

Note: Daily personal bag limits during 2024: 6 walleye; 30 yellow perch for MU1 and MU3 and 10 for MU2;

1 black bass from May 1 to June 21 and 5 black bass from June 22 to April 30;

5 trout and salmon in the aggregate from May 16 to August 31, and 2 trout and salmon in the aggregate from September 1 to May 15.

Table 2.1.10. Walleye sport angler harvest (thousands of fish) by management unit and fishery, 1975–2024.

Year	Management Unit 1			Management Unit 2			Management Unit 3			Lakewide		
	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>
	Boat	Boat		Boat	Boat		Boat	Boat		Boat	Boat	
1975–77 mean	905	32	937	26	-	26	2	-	2	933	32	965
1978–79 "	2,264	160	2,424	-	-	-	-	-	-	-	-	-
1980	1,921	172	2,093	48	0	48	24	0	24	1,993	172	2,165
1981	2,606	238	2,844	37	0	37	48	0	48	2,691	238	2,929
1982	2,692	262	2,954	46	0	46	8	8	8	2,746	262	3,008
1983	1,369	255	1,624	193	4	197	24	0	24	1,586	259	1,845
1984	2,710	375	3,085	764	13	777	173	3	176	3,647	391	4,038
1985	2,828	519	3,347	279	16	295	83	6	89	3,190	541	3,731
1986	3,173	570	3,743	455	25	480	163	13	176	3,791	608	4,399
1987	3,061	693	3,754	504	48	552	110	22	132	3,675	763	4,438
1988	3,047	696	3,744	534	51	584	513	49	562	4,095	796	4,890
1989	2,155	736	2,891	763	104	867	375	59	434	3,293	599	4,192
1990	940	526	1,466	355	35	390	363	63	426	1,658	624	2,282
1991	700	404	1,104	195	20	215	210	48	258	1,105	472	1,577
1992	1,014	465	1,479	306	32	338	224	41	265	1,544	538	2,082
1993	1,448	398	1,846	417	33	450	331	41	372	2,196	472	2,668
1994	649	343	992	250	41	291	160	26	186	1,059	410	1,469
1995	834	327	1,161	146	13	159	88	27	115	1,068	367	1,435
1996	1,049	393	1,442	589	56	645	188	41	229	1,826	490	2,316
1997	647	282	929	162	26	188	100	33	132	908	341	1,249
1998	1,290	500	1,790	181	34	215	217	82	299	1,688	616	2,304
1999	525	287	812	99	39	139	64	19	83	689	345	1,034
2000	465	209	674	140	24	165	72	21	93	678	255	932
2001	711	230	941	155	16	171	30	16	46	896	262	1,158
2002	349	167	516	125	16	141	34	11	46	509	194	702
2003	484	231	715	213	18	232	33	35	68	730	285	1,015
2004	362	153	515	248	24	272	56	17	73	666	194	859
2005	242	133	374	95	16	110	91	35	126	427	184	610
2006	899	296	1,195	471	32	503	145	26	171	1,515	354	1,869
2007	1,171	242	1,414	550	28	578	136	33	169	1,857	304	2,160
2008	392	133	524	315	18	333	186	39	225	892	190	1,083
2009	461	92	553	278	8	287	83	45	128	821	146	967
2010	498	89	587	247	10	257	86	29	114	831	127	958
2011	190	33	224	94	11	104	59	31	89	342	75	417
2012	493	103	596	226	7	233	69	24	93	788	133	921
2013	641	116	757	183	7	190	100	36	136	924	159	1,083
2014	720	188	909	170	7	177	190	28	218	1,080	223	1,303
2015	649	97	746	179	9	187	98	42	140	925	148	1,073
2016	470	107	577	130	9	139	92	48	140	691	164	856
2017	468	123	592	310	6	316	278	76	353	1,056	205	1,261
2018	807	148	955	647	19	666	324	27	351	1,778	194	1,972
2019	1,076	221	1,297	905	42	947	283	31	314	2,264	294	2,558
2020 <sup>b</sup>	-	-	537	-	-	908	-	-	528	-	-	1,973
2021	995	323	1,318	774	37	810	298	80	378	2,067	429	2,506
2022	1,005	293	1,298	678	92	771	368	145	513	2,051	530	2,581
2023	917	182	1,099	639	39	677	275	38	313	1,831	259	2,090
2024	806	174	979	689	43	732	703	46	749	2,198	262	2,460

<sup>a</sup> Totals may differ due to rounding.<sup>b</sup> Private and charter harvest calculations were pooled due to low sample sizes and data deficiencies caused by the COVID-19 Pandemic.

Table 2.1.11. Walleye sport targeted angler effort (thousands of angler hours) by management unit and fishery, 1975–2024.

Year	Management Unit 1			Management Unit 2			Management Unit 3			Lakewide		
	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>
	Boat	Boat		Boat	Boat		Boat	Boat		Boat	Boat	
1975-77 mean	1,501	36	1,537	125	-	125	8	-	8	1,634	36	1,670
1978-79 "	3,381	149	3,530	-	-	-	-	-	-	-	149	-
1980	3,718	220	3,938	237	0	237	187	0	187	4,142	220	4,362
1981	5,412	354	5,766	264	0	264	382	0	382	6,058	354	6,412
1982	5,530	398	5,928	220	3	223	114	0	114	5,861	401	6,265
1983	3,695	473	4,168	557	11	568	128	0	128	4,380	484	4,864
1984	3,485	592	4,077	1,291	31	1,322	384	8	392	5,160	631	5,791
1985	3,902	704	4,606	1,034	44	1,078	443	21	464	5,379	769	6,148
1986	5,639	798	6,437	1,039	47	1,086	512	26	538	7,190	871	8,061
1987	5,651	979	6,630	1,343	88	1,431	431	41	472	7,425	1,108	8,533
1988	6,483	1,064	7,547	1,560	117	1,677	1,018	63	1,081	9,061	1,243	10,305
1989	4,203	1,043	5,246	1,354	178	1,532	800	83	883	6,358	1,303	7,661
1990	3,046	1,070	4,116	1,574	101	1,675	789	80	869	5,409	1,251	6,660
1991	2,645	910	3,555	1,160	60	1,220	635	79	714	4,440	1,049	5,489
1992	2,978	976	3,954	1,093	75	1,169	568	72	640	4,639	1,124	5,763
1993	3,214	731	3,945	1,278	70	1,348	991	71	1,062	5,483	872	6,355
1994	2,114	694	2,808	933	92	1,025	554	45	599	3,601	831	4,432
1995	2,536	651	3,187	771	31	803	323	31	354	3,630	713	4,343
1996	2,381	679	3,060	1,065	67	1,132	443	53	495	3,889	799	4,688
1997	2,194	554	2,748	809	55	864	430	62	492	3,434	670	4,104
1998	2,454	555	3,010	580	56	635	333	76	409	3,367	687	4,054
1999	1,875	494	2,368	511	92	603	287	37	323	2,672	623	3,295
2000	1,499	477	1,975	502	38	540	240	41	281	2,240	556	2,796
2001	1,624	328	1,952	645	52	697	226	35	261	2,496	414	2,910
2002	1,078	316	1,393	397	47	444	202	44	246	1,677	407	2,084
2003	1,376	343	1,719	645	30	675	164	72	236	2,186	445	2,631
2004	983	273	1,257	703	33	736	151	28	179	1,837	335	2,171
2005	854	326	1,180	534	38	573	205	56	261	1,593	420	2,013
2006	1,451	306	1,757	861	39	899	233	27	260	2,545	372	2,917
2007	1,803	274	2,076	1,112	35	1,147	279	42	321	3,193	350	3,543
2008	854	173	1,027	780	31	810	313	44	357	1,947	248	2,195
2009	913	150	1,063	761	16	777	219	70	289	1,894	236	2,130
2010	1,235	168	1,403	632	20	652	185	34	219	2,053	221	2,274
2011	769	93	862	320	26	346	170	48	218	1,258	167	1,425
2012	1,074	209	1,283	544	16	560	153	30	182	1,771	254	2,026
2013	1,230	194	1,424	488	15	503	191	45	236	1,909	254	2,162
2014	1,253	299	1,552	445	14	459	405	36	441	2,103	349	2,451
2015	1,262	167	1,430	543	21	564	276	65	341	2,081	253	2,334
2016	1,234	280	1,514	420	19	439	300	98	397	1,954	396	2,350
2017	1,106	246	1,351	714	12	726	426	76	501	2,245	333	2,578
2018	1,069	170	1,239	791	22	813	334	19	354	2,195	211	2,406
2019	1,524	215	1,739	995	41	1,036	287	21	307	2,806	276	3,082
2020 <sup>b</sup>	-	-	1,111	-	-	1,511	-	-	659	-	-	3,281
2021	1,728	420	2,148	1,377	53	1,430	521	63	584	3,627	536	4,163
2022	1,549	342	1,891	1,090	128	1,219	391	107	498	3,030	577	3,607
2023	1,592	263	1,855	978	40	1,018	345	31	376	2,915	334	3,249
2024	1,140	212	1,352	903	42	944	623	28	651	2,666	282	2,948

<sup>a</sup> Totals may differ due to rounding.

<sup>b</sup> Private and charter harvest calculations were pooled due to low sample sizes and data deficiencies caused by the COVID-19 Pandemic.

Table 2.1.12. Walleye sport targeted harvest rate (fish per angler hour) by management unit and fishery, 1975–2024.

Year	Management Unit 1			Management Unit 2			Management Unit 3			Lakewide		
	Private Charter		Total <sup>a</sup>	Private Charter		Total <sup>a</sup>	Private Charter		Total <sup>a</sup>	Private Charter		Total <sup>a</sup>
	Boat	Boat		Boat	Boat		Boat	Boat		Boat	Boat	
1975-77 mean <sup>b</sup>	0.35	0.76	0.36	0.16	-	0.16	0.16	-	0.16	0.34	0.76	0.35
1978-79 mean <sup>b</sup>	0.51	1.04	0.53	-	-	-	-	-	-	-	-	-
1980	0.41	0.77	0.44	0.15	-	0.15	0.08	-	0.08	0.38	0.77	0.40
1981	0.32	0.67	0.34	0.13	-	0.13	0.10	-	0.10	0.30	0.67	0.32
1982	0.47	0.65	0.48	0.18	0.11	0.18	0.07	-	0.07	0.45	0.65	0.46
1983	0.30	0.54	0.33	0.24	0.34	0.24	0.13	-	0.13	0.29	0.54	0.31
1984	0.62	0.63	0.62	0.45	0.40	0.45	0.37	0.38	0.37	0.56	0.62	0.57
1985	0.59	0.73	0.61	0.22	0.36	0.23	0.16	0.28	0.17	0.49	0.70	0.52
1986	0.54	0.71	0.56	0.41	0.52	0.42	0.30	0.50	0.31	0.50	0.69	0.52
1987	0.52	0.71	0.55	0.36	0.54	0.37	0.25	0.55	0.28	0.48	0.69	0.51
1988	0.54	0.65	0.56	0.33	0.42	0.34	0.54	0.78	0.55	0.40	0.64	0.52
1989	0.51	0.71	0.55	0.55	0.58	0.55	0.46	0.72	0.48	0.51	0.69	0.54
1990	0.33	0.49	0.37	0.22	0.34	0.23	0.47	0.79	0.50	0.32	0.50	0.35
1991	0.26	0.44	0.31	0.17	0.34	0.18	0.33	0.61	0.36	0.25	0.45	0.29
1992	0.34	0.48	0.37	0.27	0.42	0.28	0.39	0.57	0.41	0.33	0.48	0.36
1993	0.44	0.54	0.46	0.32	0.47	0.33	0.33	0.58	0.35	0.39	0.54	0.41
1994	0.30	0.49	0.35	0.26	0.44	0.28	0.28	0.58	0.30	0.29	0.49	0.33
1995	0.32	0.49	0.35	0.18	0.43	0.19	0.27	0.87	0.32	0.28	0.51	0.32
1996	0.43	0.60	0.47	0.54	0.85	0.56	0.43	0.77	0.47	0.46	0.63	0.49
1997	0.28	0.48	0.32	0.18	0.47	0.20	0.22	0.50	0.26	0.25	0.48	0.29
1998	0.52	0.87	0.58	0.28	0.61	0.31	0.64	1.01	0.71	0.49	0.87	0.55
1999	0.26	0.57	0.33	0.20	0.41	0.23	0.22	0.49	0.25	0.25	0.54	0.30
2000	0.31	0.45	0.34	0.29	0.59	0.31	0.29	0.51	0.32	0.30	0.46	0.33
2001	0.42	0.71	0.47	0.23	0.29	0.23	0.13	0.40	0.17	0.34	0.63	0.38
2002	0.32	0.52	0.37	0.28	0.32	0.28	0.16	0.25	0.18	0.29	0.47	0.33
2003	0.36	0.63	0.41	0.32	0.57	0.33	0.20	0.49	0.29	0.34	0.60	0.38
2004	0.36	0.55	0.40	0.34	0.59	0.35	0.35	0.58	0.39	0.35	0.56	0.38
2005	0.28	0.41	0.32	0.17	0.36	0.18	0.42	0.64	0.47	0.26	0.43	0.30
2006	0.62	0.97	0.68	0.53	0.79	0.54	0.62	0.97	0.66	0.59	0.95	0.64
2007	0.65	0.86	0.68	0.47	0.83	0.48	0.47	0.80	0.51	0.57	0.85	0.60
2008	0.44	0.74	0.49	0.39	0.60	0.40	0.59	0.85	0.62	0.45	0.74	0.48
2009	0.49	0.60	0.51	0.36	0.56	0.36	0.36	0.63	0.43	0.42	0.60	0.44
2010	0.39	0.53	0.41	0.38	0.53	0.38	0.45	0.84	0.51	0.40	0.57	0.42
2011	0.24	0.35	0.25	0.28	0.44	0.29	0.34	0.64	0.41	0.26	0.45	0.28
2012	0.44	0.50	0.45	0.42	0.38	0.42	0.44	0.80	0.50	0.44	0.52	0.45
2013	0.53	0.59	0.54	0.38	0.56	0.39	0.50	0.77	0.55	0.49	0.62	0.50
2014	0.56	0.63	0.57	0.37	0.52	0.37	0.46	0.76	0.48	0.50	0.64	0.52
2015	0.49	0.58	0.50	0.32	0.43	0.32	0.34	0.64	0.40	0.43	0.58	0.45
2016	0.38	0.38	0.38	0.30	0.48	0.31	0.29	0.49	0.34	0.35	0.41	0.36
2017	0.42	0.49	0.43	0.43	0.55	0.43	0.64	0.99	0.69	0.46	0.61	0.48
2018	0.74	0.88	0.76	0.80	0.90	0.80	0.95	1.29	0.97	0.79	0.92	0.80
2019	0.72	1.03	0.76	0.90	1.04	0.91	0.98	1.52	1.02	0.81	1.07	0.83
2020 <sup>c</sup>	-	-	0.48	-	-	0.60	-	-	0.80	-	-	0.60
2021	0.58	0.77	0.62	0.55	0.74	0.56	0.56	1.26	0.64	0.57	0.82	0.60
2022	0.65	0.86	0.69	0.61	0.69	0.62	0.91	1.30	0.99	0.67	0.90	0.71
2023	0.52	0.71	0.55	0.63	0.96	0.64	0.80	1.21	0.83	0.59	0.79	0.61
2024	0.70	0.81	0.72	0.75	0.99	0.76	1.10	1.64	1.12	0.81	0.92	0.82

<sup>a</sup> Totals may differ due to rounding.<sup>b</sup> Targeted harvest rate means for grouped time periods reflect an average of annual values, not weighted means.<sup>c</sup> Private and charter harvest calculations were pooled due to low sample sizes and data deficiencies caused by the COVID-19 Pandemic.

Table 2.1.13. Private boat angler hours seeking walleye and walleye harvest per angler hour, by fishing method<sup>a</sup>, in the Ohio waters of Lake Erie during 2024.

Management Unit	Month	Walleye Angler Hours	Casting		Trolling		All
			Hours (%)	Harvest Rate	Hours (%)	Harvest Rate	Harvest Rate
1	April	129,597	24.68	0.92	75.32	0.69	0.75
	May	399,425	23.01	0.59	76.99	0.83	0.77
	June	283,988	28.98	0.32	71.02	0.70	0.59
	July	207,415	32.14	0.64	67.86	0.78	0.73
	August	53,403	33.25	0.45	66.75	0.40	0.41
	September	24,868	51.38	0.63	48.62	0.70	0.66
	October	41,060	14.59	0.51	85.41	0.71	0.68
	Total	1,139,756	27.14	0.56	72.86	0.75	0.70
2	April <sup>b</sup>	901	.	.	100.00	2.40	2.40
	May <sup>c</sup>	144,393	20.34	0.77	72.83	0.71	0.71
	June	250,518	40.48	0.85	58.65	1.04	0.96
	July	271,370	28.90	0.63	69.93	0.78	0.73
	August	96,526	20.21	0.22	79.79	0.61	0.54
	September	62,400	8.89	0.30	91.11	0.59	0.56
	October	76,534	4.09	0.21	95.91	0.58	0.57
	Total	902,642	26.30	0.69	72.02	0.77	0.75
3	May <sup>c</sup>	60,394	40.14	0.41	59.86	0.61	0.53
	June	167,074	40.38	0.64	59.62	0.96	0.83
	July	209,509	25.94	0.87	74.06	1.50	1.34
	August	95,676	9.93	0.55	90.07	1.60	1.50
	September	86,095	16.91	0.63	83.09	1.12	1.04
	October	4,585	23.36	0.20	76.64	0.63	0.53
	Total	623,333	27.46	0.67	72.54	1.26	1.10
Combined	April	130,498	24.51	0.92	75.49	0.71	0.76
	May	604,212	24.08	0.60	74.29	0.78	0.73
	June	701,580	35.80	0.62	63.89	0.87	0.78
	July	688,294	28.97	0.70	70.56	1.01	0.92
	August	245,605	19.04	0.38	80.96	1.00	0.88
	September	173,363	18.97	0.57	81.03	0.87	0.81
	October	122,179	8.34	0.39	91.66	0.62	0.60
	Total	2,665,731	26.93	0.63	72.50	0.88	0.81

<sup>a</sup> A 99.4% response level was achieved for the question regarding fishing method.

<sup>b</sup> MU2 responses reported in MU1 survey.

<sup>c</sup> Surveys begin mid-May.

Table 2.1.14. Walleye sport harvest (numbers), year-class composition (% comp), mean length (mm), mean weight (g) by age, and mean age (yr), by management unit, for Ohio's private and charter boat fisheries in 2024.

Management Unit	Year Class Age	2022 2	2021 3	2020 4	2019 5	2018 6	2017 7	2016 8	2015 9	2014 10
1	Numbers	35,623	368,285	121,376	230,805	79,172	13,388	8,408	113,981	6,257
	% Comp	3.64%	37.61%	12.40%	23.57%	8.09%	1.37%	0.86%	11.64%	0.64%
	Length	411	416	470	489	527	563	545	597	586
	Weight	633	661	977	1110	1406	1758	1559	2103	1971
2	Numbers	38,028	314,593	94,003	148,538	62,855	13,929	3,337	47,447	6,842
	% Comp	5.19%	42.97%	12.84%	20.29%	8.59%	1.90%	0.46%	6.48%	0.93%
	Length	416	424	475	499	528	549	565	606	601
	Weight	662	705	1,017	1,190	1,419	1,638	1,772	2,191	2,142
3	Numbers	35,326	262,705	83,779	179,449	68,084	15,733	9,515	77,121	14,759
	% Comp	4.71%	35.06%	11.18%	23.95%	9.09%	2.10%	1.27%	10.29%	1.97%
	Length	419	434	482	523	552	550	614	629	626
	Weight	678	763	1,066	1,384	1,657	1,617	2,241	2,436	2,398
Total <sup>a</sup>	Numbers	108,977	945,583	299,158	558,792	210,111	43,050	21,260	238,548	27,859
	% Comp	4.44%	38.52%	12.16%	22.68%	8.51%	1.74%	0.86%	9.68%	1.13%
	Length	415	423	474	502	535	554	578	609	611
	Weight	657	704	1,014	1,219	1,491	1,667	1,893	2,228	2,240

Management Unit	Year Class Age	2013 11	2012 12	2010 14	Total <sup>a</sup>	Mean	Sample (N)
1	Numbers	1,182	331	320	979,129		
	% Comp	0.12%	0.03%	0.03%		4.66 yr	
	Length	666	532	711		474 mm	6,388 lengths
	Weight	2,889	1,414	3,522		1068 g	
2	Numbers	.	299	2,203	732,075		
	% Comp	.	0.04%	0.30%		4.33 yr	
	Length	.	530	720		472 mm	2,709 lengths
	Weight	.	1,394	3,673		1044 g	
3	Numbers	631	294	1,855	749,249		
	% Comp	0.08%	0.04%	0.25%		4.76 yr	
	Length	719	570	722		500 mm	1,315 lengths
	Weight	3,656	1,753	3,688		1274 g	
Total <sup>a</sup>	Numbers	1,813	925	4,378	2,460,453		
	% Comp	0.07%	0.04%	0.18%		4.59 yr	926 ages
	Length	685	543	720		481 mm	10,412 lengths
	Weight	3,160	1,515	3,669		1,124 g	

<sup>a</sup> Totals may differ due to rounding.

Table 2.1.15. Yellow perch sport angler harvest (thousands of fish) by management unit and fishery, 1980–2024. Data from 1975–77 are also available.

Year	Management Unit 1			Management Unit 2			Management Unit 3			Lakewide		
	Private Boat	Charter Boat	Total <sup>a</sup>	Private Boat	Charter Boat	Total <sup>a</sup>	Private Boat	Charter Boat	Total <sup>a</sup>	Private Boat	Charter Boat	Total <sup>a</sup>
1980	10,076	138	10,214	1,014	0	1,014	146	0	146	11,236	138	11,374
1981	9,895	345	10,240	506	2	508	243	0	243	10,644	347	10,991
1982	9,039	166	9,205	2,132	37	2,169	428	0	428	11,599	203	11,802
1983	3,846	103	3,949	912	14	926	75	<1	75	4,833	117	4,950
1984	6,042	259	6,301	2,522	78	2,600	266	3	269	8,830	340	9,170
1985	4,455	323	4,778	2,259	33	2,292	193	4	197	6,907	360	7,267
1986	6,371	326	6,697	1,860	72	1,932	355	22	377	8,586	420	9,006
1987	4,625	269	4,894	1,840	97	1,937	472	29	501	6,937	395	7,332
1988	4,130	549	4,679	841	93	934	406	15	421	5,377	657	6,034
1989	3,042	436	3,478	1,923	144	2,067	1,031	27	1,058	5,996	607	6,603
1990	516	112	628	616	44	660	46	20	66	1,178	176	1,354
1991	1,654	145	1,799	996	54	1,050	88	27	115	2,738	226	2,964
1992	987	130	1,117	1,033	45	1,078	159	17	176	2,179	192	2,371
1993	1,383	199	1,582	981	75	1,056	165	6	171	2,529	280	2,809
1994	1,004	77	1,081	1,840	37	1,877	399	9	408	3,243	123	3,366
1995	2,608	230	2,838	1,415	3	1,418	56	1	57	4,080	233	4,313
1996	3,897	123	4,020	1,446	4	1,450	193	3	196	5,536	131	5,667
1997	3,261	203	3,464	1,680	21	1,701	383	18	401	5,324	243	5,567
1998	3,528	180	3,708	1,075	23	1,098	369	28	397	4,972	231	5,203
1999	3,063	199	3,262	1,597	79	1,676	584	54	638	5,244	331	5,575
2000	2,957	105	3,062	1,730	40	1,771	636	45	680	5,322	190	5,512
2001	2,433	209	2,642	1,976	62	2,037	787	50	837	5,195	321	5,517
2002	3,097	193	3,290	2,062	65	2,127	1,093	82	1,175	6,252	340	6,592
2003	3,850	324	4,174	2,101	90	2,191	764	82	846	6,715	496	7,211
2004	2,501	102	2,603	2,487	112	2,600	1,523	130	1,653	6,512	344	6,856
2005	2,386	207	2,593	2,169	72	2,242	921	73	994	5,477	352	5,829
2006	3,033	140	3,173	1,930	47	1,977	448	33	481	5,411	220	5,630
2007	2,660	157	2,817	1,417	47	1,465	709	72	781	4,786	276	5,063
2008	1,368	49	1,417	1,547	48	1,595	984	93	1,077	3,898	190	4,089
2009	1,829	24	1,852	1,300	17	1,317	942	115	1,057	4,071	156	4,226
2010	2,720	66	2,786	1,565	18	1,583	679	87	766	4,963	171	5,135
2011	2,484	53	2,538	999	23	1,022	673	92	765	4,156	169	4,325
2012	3,253	106	3,358	1,396	37	1,433	656	55	711	5,305	198	5,502
2013	2,662	137	2,799	1,177	9	1,185	1,114	101	1,215	4,953	247	5,200
2014	1,730	121	1,851	743	24	768	1,336	64	1,401	3,810	209	4,019
2015	1,978	115	2,093	321	1	322	620	80	699	2,919	195	3,114
2016	3,091	328	3,419	268	2	270	302	66	368	3,661	396	4,057
2017	2,607	186	2,792	113	<1	113	90	4	94	2,810	190	3,000
2018	1,536	76	1,612	54	1	55	33	3	36	1,623	80	1,703
2019	500	32	531	22	<1	23	4	<1	4	526	32	559
2020 <sup>b</sup>	-	-	800	-	-	30	-	-	7	-	-	837
2021	1,178	123	1,301	8	<1	9	16	<1	16	1,202	123	1,325
2022	1,246	76	1,321	23	3	26	4	<1	5	1,273	79	1,352
2023	2,531	118	2,649	18	<1	18	6	-	6	2,555	118	2,672
2024	1,119	45	1,164	45	<1	45	10	<1	10	1,174	46	1,220

<sup>a</sup> Totals may differ due to rounding.

<sup>u</sup> Private and charter harvest calculations were pooled due to low sample sizes and data deficiencies caused by the COVID-19 Pandemic.



Table 2.1.16. Yellow perch targeted angler effort (thousands of angler hours) by management unit and fishery, 1980–2024. Data from 1975–77 are also available.

Year	Management Unit 1			Management Unit 2			Management Unit 3			Lakewide		
	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>
	Boat	Boat		Boat	Boat		Boat	Boat		Boat	Boat	
1980	2,032	22	2,054	652	<1	652	181	0	181	2,865	22	2,887
1981	2,121	38	2,159	312	1	313	178	0	178	2,611	39	2,650
1982	2,328	30	2,358	921	21	942	211	0	211	3,460	51	3,511
1983	1,094	19	1,113	524	21	545	104	<1	104	1,722	40	1,762
1984	833	36	869	651	38	689	105	1	106	1,589	75	1,664
1985	791	46	837	652	19	671	125	2	127	1,568	67	1,635
1986	1,351	53	1,404	436	26	462	116	6	122	1,903	85	1,988
1987	1,001	45	1,046	393	37	430	120	10	130	1,514	92	1,606
1988	1,062	91	1,153	362	40	402	167	6	173	1,591	137	1,728
1989	926	103	1,029	525	48	573	243	5	248	1,694	156	1,850
1990	302	47	349	367	34	401	26	6	32	695	87	782
1991	650	50	700	432	20	452	46	8	54	1,128	78	1,206
1992	322	28	350	329	13	342	79	5	84	730	46	776
1993	479	51	530	303	18	321	94	3	97	876	72	948
1994	452	18	470	529	10	539	169	5	174	1,150	33	1,183
1995	561	38	599	387	1	388	41	1	42	990	39	1,029
1996	736	18	754	316	1	317	69	1	70	1,121	20	1,141
1997	807	28	835	571	4	575	121	5	126	1,500	37	1,537
1998	829	34	863	417	5	422	105	7	112	1,351	46	1,397
1999	896	46	942	548	16	564	166	10	176	1,609	72	1,681
2000	943	23	966	594	7	602	207	8	215	1,744	38	1,782
2001	687	34	721	581	14	595	257	12	269	1,525	59	1,585
2002	863	37	900	647	12	659	390	27	417	1,900	76	1,976
2003	1,119	64	1,183	614	19	633	240	17	257	1,973	99	2,072
2004	815	18	834	633	26	659	343	25	369	1,792	70	1,862
2005	769	48	817	772	13	785	293	13	306	1,834	74	1,908
2006	663	21	684	489	11	499	134	6	140	1,285	38	1,323
2007	787	37	824	491	8	499	203	16	219	1,481	61	1,541
2008	504	15	519	438	12	450	220	14	234	1,162	42	1,203
2009	571	7	578	412	5	418	266	24	290	1,250	36	1,286
2010	787	11	798	497	6	503	165	18	182	1,449	34	1,483
2011	716	13	729	388	7	395	166	17	183	1,270	37	1,307
2012	875	21	896	447	9	456	147	8	154	1,469	38	1,507
2013	911	35	946	426	3	428	218	15	232	1,555	52	1,607
2014	595	36	631	274	6	280	326	10	337	1,195	53	1,248
2015	630	29	659	217	<1	218	198	14	212	1,046	43	1,089
2016	760	65	824	203	1	205	162	19	182	1,126	85	1,211
2017	729	47	775	119	<1	119	57	1	58	905	48	953
2018	479	22	501	45	<1	46	15	2	17	539	24	563
2019	275	9	284	25	<1	25	2	0	2	302	9	311
2020 <sup>b</sup>	-	-	501	-	-	19	-	-	4	-	-	533
2021	585	43	628	2	<1	2	10	<1	10	597	43	640
2022	597	24	621	21	5	27	2	<1	2	621	29	650
2023	893	30	924	4	-	4	3	-	3	900	30	930
2024	470	24	494	32	-	32	8	-	8	510	24	534

<sup>a</sup> Totals may differ due to rounding.

<sup>b</sup> Private and charter harvest calculations were pooled due to low sample sizes and data deficiencies caused by the COVID-19 Pandemic.

Table 2.1.17. Yellow perch sport targeted harvest rate (fish per angler hour) by management unit and fishery, 1980–2024. Data from 1975–77 are also available.

Year	Management Unit 1			Management Unit 2			Management Unit 3			Lakewide		
	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>
	Boat	Boat		Boat	Boat		Boat	Boat		Boat	Boat	
1980	5.1	5.7	5.1	1.6	8.1	1.6	0.7	-	0.7	4.0	5.7	4.0
1981	4.4	7.5	4.5	1.8	0.5	1.8	0.7	-	0.7	3.8	7.3	3.9
1982	4.4	5.2	4.4	2.6	2.1	2.6	2.2	-	2.2	3.8	3.9	3.8
1983	3.8	4.9	3.8	1.6	0.6	1.5	0.7	0.9	0.7	2.9	2.6	2.9
1984	7.3	6.4	7.3	4.1	2.0	4.0	2.3	3.4	2.3	5.7	4.1	5.6
1985	5.2	6.4	5.2	3.2	1.7	3.2	1.4	1.9	1.4	4.1	4.9	4.1
1986	4.3	5.3	4.3	4.5	2.7	4.4	2.8	3.5	2.8	1.3	4.4	4.3
1987	3.8	4.8	3.8	4.1	2.5	4.0	3.7	2.9	3.6	3.9	3.4	3.9
1988	4.1	5.4	4.2	2.5	2.1	2.4	2.7	2.6	2.7	3.6	4.3	3.6
1989	2.7	3.4	2.8	3.4	2.8	3.4	4.1	5.0	4.1	3.1	3.3	3.1
1990	1.3	1.7	1.4	1.5	1.2	1.5	1.6	3.3	1.9	1.9	1.7	1.4
1991	2.4	2.5	2.4	2.2	2.6	2.2	1.8	3.2	2.0	2.0	2.6	2.3
1992	2.7	4.0	2.8	3.0	3.3	3.0	1.8	3.2	1.8	1.8	3.7	2.8
1993	2.5	3.5	2.6	3.0	4.1	3.1	1.6	2.2	1.7	1.7	3.6	2.7
1994	2.2	2.7	2.2	3.3	4.0	3.3	2.3	2.0	2.3	2.3	3.0	2.7
1995	4.2	5.1	4.3	3.5	4.1	3.5	1.3	1.6	1.3	1.3	5.0	3.8
1996	4.9	4.7	4.9	4.2	3.3	4.2	2.8	3.5	2.8	2.8	4.5	4.6
1997	3.7	4.3	3.7	2.8	4.8	2.8	3.1	3.5	3.1	3.1	4.2	3.3
1998	3.8	3.4	3.8	2.6	4.5	2.6	3.6	4.2	3.6	3.6	3.6	3.4
1999	3.3	3.5	3.3	3.0	4.5	3.0	3.5	5.1	3.6	3.6	4.0	3.2
2000	3.0	2.7	3.0	2.9	5.6	3.0	3.0	5.3	3.1	3.0	3.8	3.0
2001	3.4	5.2	3.5	3.2	4.1	3.2	2.9	4.8	3.0	3.2	4.8	3.3
2002	3.4	4.2	3.4	3.1	4.9	3.1	2.7	2.8	2.7	3.2	3.8	3.2
2003	3.4	4.5	3.5	3.3	4.3	3.3	3.0	4.5	3.1	3.3	4.5	3.4
2004	3.0	4.0	3.0	3.7	4.5	3.7	4.3	5.0	4.4	3.5	4.5	3.5
2005	3.1	3.6	3.1	2.8	4.8	2.8	3.1	5.6	3.2	3.0	4.1	3.0
2006	4.2	5.4	4.2	3.7	3.8	3.7	3.2	5.6	3.3	3.9	4.9	3.9
2007	3.3	3.9	3.4	2.8	6.2	2.8	3.4	4.3	3.5	3.2	4.3	3.2
2008	2.7	3.0	2.7	3.4	3.9	3.4	4.1	5.5	4.2	3.2	4.1	3.3
2009	3.1	3.4	3.1	3.0	3.4	3.0	3.4	4.5	3.5	3.2	4.1	3.2
2010	3.4	4.7	3.4	3.2	2.9	3.2	3.9	5.0	4.0	3.4	4.6	3.4
2011	3.5	3.9	3.5	2.6	2.9	2.6	4.0	5.2	4.1	3.3	4.3	3.3
2012	3.6	4.4	3.6	3.0	4.2	3.1	4.4	6.7	4.5	3.5	4.8	3.5
2013	2.7	3.5	2.8	2.6	3.2	2.6	4.9	6.6	5.0	3.0	4.3	3.1
2014	3.0	3.1	3.0	2.7	3.9	2.7	3.9	6.1	4.0	3.2	3.8	3.2
2015	3.1	3.6	3.1	1.5	3.0	1.5	3.1	5.6	3.2	2.7	4.2	2.8
2016	4.0	5.1	4.1	1.2	1.6	1.2	1.7	3.5	1.9	3.2	4.7	3.3
2017	3.4	3.7	3.4	0.8	0.0	0.8	1.4	1.3	1.4	2.9	3.7	2.9
2018	2.9	3.3	2.9	0.8	0.7	0.8	1.7	1.2	1.6	2.7	3.1	2.7
2019	1.7	3.1	1.7	0.4	0.5	0.4	0.1	-	0.1	1.6	3.1	1.6
2020 <sup>b</sup>	-	-	1.6	-	-	1.1	-	-	1.4	-	-	1.6
2021	1.9	2.7	2.0	0.1	-	0.1	1.2	-	1.2	1.9	2.7	1.9
2022	2.0	2.9	2.1	0.5	0.4	0.5	0.4	-	0.4	2.0	2.5	2.0
2023	2.9	4.2	2.9	0.7	-	0.7	1.3	0.0	1.3	2.9	4.2	2.9
2024	2.4	2.5	2.4	0.8	-	0.8	0.4	-	0.4	2.2	2.5	2.3

<sup>a</sup> Totals may differ due to rounding.

<sup>b</sup> Private and charter harvest calculations were pooled due to low sample sizes and data deficiencies caused by the COVID-19 Pandemic.

Table 2.1.18. Yellow perch sport harvest (numbers), year-class composition (% comp), mean length (mm), mean weight (g), by age, and mean age (yr), by management unit, for Ohio's private and charter boat fisheries in 2024.

Management Unit	Year Class Age <sup>b</sup>	2023 1	2022 2	2021 3	2020 4	2019 5	2018 6	2017 7	2016 8	2015 9	2014 10	2013 11	Total <sup>a</sup>	Mean	Sample (N)
1	Numbers	60,263	426,834	593,855	63,553	14,233	5,255	.	.	.	.	.	1,163,993		
	% Comp	5.18%	36.67%	51.02%	5.46%	1.22%	0.45%	.	.	.	.	.		2.62 yr	862 ages
	Length	174	209	232	244	249	320	.	.	.	.	.		222 mm	2,706 lengths
	Weight	64	116	161	193	206	415	.	.	.	.	.		143 g	
2	Numbers	653	2,904	26,765	4,893	3,463	3,788	368	924	877	598	.	45,233		
	% Comp	1.44%	6.42%	59.17%	10.82%	7.66%	8.38%	0.81%	2.04%	1.94%	1.32%	.		3.76 yr	561 ages
	Length	191	216	260	266	280	313	313	351	340	342	.		268 mm	221 lengths
	Weight	89	133	243	254	290	424	402	638	557	545	.		273 g	
3	Numbers	11	114	4437	1,938	1721	1105	628	159	.	190	126	10,428		
	% Comp	0.10%	1.09%	42.55%	18.58%	16.50%	10.60%	6.02%	1.52%	.	1.82%	1.21%		4.36 yr	700 ages
	Length	190	215	262	269	276	312	325	318	.	350	325		277 mm	206 lengths <sup>c</sup>
	Weight	88	130	248	264	287	426	479	454	.	604	476		301 g	
Total <sup>a</sup>	Numbers	60,927	429,852	625,057	70,384	19,417	10,148	996	1,083	877	788	126	1,219,654		
	% Comp	4.79%	35.19%	51.40%	5.84%	1.66%	0.81%	0.08%	0.09%	0.07%	0.06%	0.01%		2.68 yr	2,123 ages
	Length	174	209	233	246	259	316	321	346	340	344	325		224 mm	2,963 lengths
	Weight	65	116	166	199	233	419	451	611	557	559	476		150 g	

<sup>a</sup> Totals may differ due to rounding.

<sup>b</sup> Yellow perch ages were assigned to creel lengths using yellow perch age-length relationships from ODNR trawl surveys and commercial catches.

<sup>c</sup> Due to a low sample size of creel lengths, the yellow perch catch-at-age model for Management Unit 3 borrows 170 lengths from nearby grids in Management Unit 2 (Cleveland and east).

Table 2.1.19. Smallmouth bass sport angler harvest (thousands of fish) by management unit and fishery, 1980–2024. Data from 1975–77 are also available.

Year	Management Unit 1			Management Unit 2			Management Unit 3			Lakewide		
	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>
	Boat	Boat		Boat	Boat		Boat	Boat		Boat		
1980	13.3	1.7	15.0	4.3	0.0	4.3	19.5	0.0	19.5	37.1	1.7	38.8
1981	12.3	4.2	16.5	4.7	0.0	4.7	14.7	0.0	14.7	31.7	4.2	35.9
1982	63.8	4.1	67.9	2.7	0.0	2.7	12.9	0.0	12.9	79.4	4.1	83.5
1983	44.5	6.8	51.3	6.3	0.0	6.3	9.9	0.0	9.9	60.7	6.8	67.5
1984	12.2	6.0	18.2	3.5	0.0	3.5	7.9	0.0	7.9	23.6	6.0	29.6
1985	10.1	2.4	12.5	4.2	1.0	4.3	5.1	<0.1	5.1	19.4	2.5	21.9
1986	17.5	3.5	21.0	1.7	<0.1	1.7	7.1	<0.1	7.1	26.3	3.6	29.9
1987	19.7	7.7	27.4	5.3	<0.1	5.3	3.1	<0.1	3.1	28.1	7.9	36.0
1988	10.5	9.1	19.6	3.5	0.8	4.3	4.1	0.2	4.3	18.1	10.1	28.2
1989	10.7	11.2	21.9	0.5	0.2	0.7	2.9	0.4	3.3	14.1	11.8	25.9
1990	19.7	6.9	26.6	10.5	0.6	11.1	1.1	0.4	1.5	31.3	7.9	39.2
1991	24.7	6.3	31.0	5.5	0.4	5.9	3.4	0.9	4.3	33.6	7.6	41.2
1992	15.6	9.6	25.2	4.4	0.3	4.7	5.2	1.3	6.5	25.2	11.2	36.4
1993	11.7	5.7	17.4	4.1	0.6	4.7	17.2	0.5	17.7	33.0	6.8	39.8
1994	19.7	8.0	27.7	4.7	0.0	4.7	8.8	0.3	9.1	33.2	8.3	41.5
1995	58.8	18.6	77.4	6.2	0.0	6.2	10.6	0.2	10.8	75.6	18.9	94.5
1996	25.0	5.7	30.7	16.7	3.7	20.4	22.6	2.7	25.3	64.4	12.1	76.5
1997	23.9	8.8	32.7	36.5	12.2	48.6	26.5	3.9	30.4	86.9	24.9	111.8
1998	34.5	21.1	55.6	8.7	4.9	13.6	3.7	1.9	5.6	46.9	27.9	74.8
1999	53.9	13.9	67.8	5.5	1.2	6.7	16.3	1.5	17.8	75.7	16.5	92.2
2000	18.0	10.0	28.0	15.2	0.1	15.2	9.1	0.9	10.0	42.3	10.9	53.2
2001	19.4	5.7	25.1	13.7	0.2	13.9	9.5	1.1	10.6	42.5	7.1	49.6
2002	15.0	7.4	22.4	12.5	2.4	14.8	4.0	0.8	4.7	31.5	10.5	42.0
2003	29.6	5.4	35.0	8.2	0.0	8.2	6.9	0.8	7.7	44.7	6.2	50.9
2004	4.6	1.2	5.9	3.3	<0.1	3.3	0.9	0.0	0.9	8.8	1.2	10.1
2005	4.6	0.5	5.2	1.4	<0.1	1.4	0.9	0.0	0.9	6.9	0.6	7.4
2006	5.2	2.4	7.6	2.2	<0.1	2.2	1.3	0.0	1.3	8.7	2.4	11.1
2007	2.4	0.3	2.7	1.2	0.0	1.2	1.4	0.1	1.4	5.0	0.3	5.3
2008	0.1	0.1	0.2	0.4	0.0	0.4	0.6	0.1	0.6	1.1	0.2	1.3
2009	1.5	0.3	1.9	1.5	0.0	1.5	0.0	0.0	0.0	3.1	0.3	3.4
2010	1.0	0.4	1.4	1.2	0.0	1.2	0.2	0.0	0.2	2.4	0.4	2.7
2011	1.7	1.0	2.6	0.1	<0.1	0.1	0.2	0.0	0.2	1.9	1.0	2.9
2012	2.8	0.2	3.0	0.1	0.0	0.1	0.3	0.0	0.3	3.2	0.2	3.4
2013	7.1	0.7	7.8	0.2	0.0	0.2	0.1	0.0	0.1	7.4	0.7	8.0
2014	1.7	4.0	5.7	0.1	0.0	0.1	0.7	0.0	0.7	2.5	4.0	6.5
2015	1.5	2.6	4.1	0.1	<0.1	0.1	0.1	0.0	0.1	1.7	2.6	4.3
2016	0.3	0.1	0.4	0.1	0.0	0.1	0.2	0.0	0.2	0.6	0.1	0.7
2017	1.3	0.6	1.9	0.1	0.0	0.1	0.2	0.0	0.2	1.6	0.6	2.2
2018	0.5	0.7	1.2	0.1	0.0	0.1	0.1	0.0	0.1	0.7	0.7	1.4
2019	1.4	3.1	4.5	0.0	0.0	0.0	0.2	0.0	0.2	1.7	3.1	4.8
2020 <sup>b</sup>	-	-	-	-	-	-	-	-	-	-	-	-
2021	4.7	3.1	7.8	0.8	0.0	0.8	0.6	0.0	0.6	6.0	3.1	9.2
2022	2.5	1.1	3.6	0.1	0.0	0.1	0.5	0.0	0.5	3.1	1.1	4.2
2023	1.5	1.4	2.9	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.4	2.9
2024	0.6	0.1	0.8	0.6	0.0	0.6	1.8	0.0	1.8	3.0	0.1	3.1

<sup>a</sup> Totals may differ due to rounding.

<sup>b</sup> Data insufficient due to the COVID-19 Pandemic.

Table 2.1.20. Smallmouth bass sport targeted angler effort (thousands of angler hours) by management unit and fishery, 1980–2024. Data from 1975–77 are also available.

Year	Management Unit 1			Management Unit 2			Management Unit 3			Lakewide		
	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>
	Boat	Boat		Boat	Boat		Boat	Boat		Boat	Boat	
1980	28.1	2.5	30.6	5.6	0.0	56.0	13.5	0.0	13.5	47.2	2.5	49.7
1981	14.4	5.1	19.5	6.4	0.0	6.4	61.7	0.0	61.7	82.6	5.1	87.7
1982	92.0	6.6	98.6	8.0	0.0	8.0	12.7	0.0	12.7	112.8	6.6	119.4
1983	119.4	12.0	131.4	4.9	0.0	4.9	17.8	0.0	17.8	142.1	12.0	154.1
1984	65.9	10.6	76.5	2.4	0.0	2.4	15.2	0.0	15.2	83.5	10.6	94.1
1985	18.0	2.2	20.2	0.2	0.1	0.3	14.0	0.1	14.1	32.2	2.4	34.6
1986	30.2	4.2	34.4	1.4	0.2	1.6	14.3	<0.1	14.3	45.9	4.4	50.3
1987	24.7	10.2	34.9	2.4	0.1	2.5	6.9	0.2	7.1	34.0	10.5	44.5
1988	28.9	14.7	43.6	1.7	0.5	2.2	5.9	0.4	6.3	36.5	15.6	52.1
1989	38.5	22.3	60.8	0.0	0.2	0.2	4.0	0.8	4.8	42.5	23.3	65.8
1990	80.7	13.5	94.2	4.5	1.5	6.0	7.7	1.1	8.8	92.9	16.1	109.0
1991	85.8	11.0	96.8	10.1	0.2	10.3	5.4	1.4	6.8	101.3	12.6	113.9
1992	114.3	13.8	128.1	14.3	0.3	14.6	18.6	2.6	21.2	147.2	16.7	163.9
1993	110.8	13.2	124.0	13.6	0.9	14.5	48.9	0.9	49.8	173.3	15.0	188.3
1994	114.4	15.3	129.7	35.7	0.0	35.7	38.5	1.2	39.7	188.6	16.5	205.1
1995	224.0	21.8	245.8	56.7	0.0	56.7	53.5	1.1	54.6	334.1	22.9	357.0
1996	107.6	15.2	122.8	91.1	2.8	93.9	69.1	4.2	73.3	267.7	22.3	290.0
1997	142.8	17.3	160.1	137.9	8.7	146.6	85.4	7.5	92.9	366.1	33.4	399.5
1998	342.5	23.4	365.9	69.4	6.8	76.2	30.0	4.2	34.2	441.9	34.4	476.3
1999	294.8	27.0	321.8	86.2	3.4	89.6	67.4	2.1	69.5	448.4	32.5	480.9
2000	172.1	28.9	201.0	98.3	0.8	99.1	58.8	4.8	63.6	329.2	34.5	363.7
2001	219.8	16.0	235.8	120.9	0.2	121.1	76.2	5.9	82.1	417.0	22.1	439.1
2002	136.1	20.1	156.2	127.8	1.9	129.7	47.7	8.5	56.2	311.6	30.5	342.0
2003	211.8	8.1	220.0	89.4	0.5	89.9	43.9	4.4	48.3	345.1	13.0	358.1
2004	100.4	4.0	104.3	87.4	0.2	87.7	20.3	0.4	20.6	208.1	4.6	212.7
2005	105.7	1.9	107.6	98.5	3.2	101.7	40.0	0.0	40.0	244.1	5.1	249.3
2006	58.2	5.3	63.5	81.9	0.1	82.0	31.3	0.0	31.3	171.4	5.4	176.8
2007	90.2	0.2	90.4	99.1	0.0	99.1	33.6	0.0	33.6	222.9	0.2	223.1
2008	44.0	0.2	44.2	41.8	0.0	41.8	26.3	0.6	26.9	112.1	0.8	112.8
2009	61.7	0.8	62.5	75.5	0.0	75.5	36.4	0.2	36.6	173.7	1.0	174.7
2010	59.4	1.2	60.6	22.5	0.0	22.5	13.2	0.0	13.2	95.1	1.2	96.3
2011	52.1	1.1	53.2	20.4	0.0	20.4	7.7	0.5	8.2	80.3	1.6	81.9
2012	41.7	0.4	42.1	10.3	0.0	10.3	7.4	0.1	7.5	59.3	0.5	59.8
2013	55.9	0.3	56.2	14.5	0.0	14.5	8.1	0.0	8.1	78.5	0.3	78.8
2014	38.1	6.8	44.9	2.8	0.0	2.8	19.5	0.0	19.5	60.3	6.8	67.1
2015	42.9	5.8	48.7	20.8	0.0	20.8	23.5	0.0	23.5	87.1	5.8	93.0
2016	18.6	0.2	18.7	9.1	0.0	9.1	25.6	0.0	25.6	53.3	0.2	53.4
2017	32.4	1.8	34.2	11.9	0.0	11.9	13.6	0.0	13.6	57.9	1.8	59.7
2018	27.9	1.2	29.1	6.4	0.0	6.4	12.4	0.0	12.4	46.6	1.2	47.8
2019	61.2	6.0	67.1	8.1	0.0	8.1	11.2	0.0	11.2	80.5	6.0	86.4
2020 <sup>b</sup>	-	-	-	-	-	-	-	-	-	-	-	-
2021	134.6	5.4	140.0	7.5	0.0	7.5	26.0	0.0	26.0	168.1	5.4	173.5
2022	144.3	2.6	146.9	18.3	0.0	18.3	15.1	0.0	15.1	177.7	2.6	180.3
2023	190.8	12.6	203.4	4.2	0.0	4.2	14.9	0.0	14.9	209.9	12.6	222.5
2024	69.8	0.6	70.4	8.9	0.0	8.9	31.1	0.5	31.7	109.9	1.1	111.0

<sup>a</sup> Totals may differ due to rounding.

<sup>b</sup> Data insufficient due to the COVID-19 Pandemic.

Table 2.1.21. Smallmouth bass targeted catch rate (fish per angler hour) by mangement unit and fishery, 2000–2024. Data from 1975–1999 are also available.

Year	Management Unit 1			Management Unit 2			Management Unit 3			Lakewide		
	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>	Private	Charter	Total <sup>a</sup>
	Boat	Boat		Boat	Boat		Boat	Boat		Boat	Boat	
2000	0.54	0.89	0.59	0.95	0.06	0.94	0.79	0.49	0.77	0.70	0.82	0.71
2001	0.65	0.83	0.66	0.76	0.00	0.76	0.66	0.39	0.64	0.68	0.70	0.68
2002	0.40	0.55	0.42	0.49	0.70	0.49	0.51	0.49	0.51	0.46	0.54	0.47
2003	0.53	0.70	0.54	0.54	0.15	0.54	0.70	0.82	0.71	0.56	0.72	0.57
2004	0.36	0.64	0.37	0.38	0.00	0.38	0.53	1.10	0.54	0.38	0.64	0.39
2005	0.44	0.40	0.44	0.25	0.38	0.25	0.65	-	0.65	0.40	0.39	0.40
2006	0.41	0.68	0.43	0.34	0.15	0.34	0.86	-	0.86	0.46	0.67	0.47
2007	0.48	0.00	0.48	0.23	-	0.23	0.76	-	0.76	0.41	0.00	0.41
2008	0.44	0.31	0.44	0.34	-	0.34	0.70	0.40	0.69	0.46	0.38	0.46
2009	0.32	0.52	0.32	0.27	-	0.27	0.80	0.20	0.80	0.40	0.47	0.40
2010	0.40	0.91	0.41	0.34	-	0.34	0.75	-	0.75	0.44	0.91	0.45
2011	0.48	0.72	0.48	0.26	-	0.26	1.50	0.21	1.43	0.52	0.57	0.52
2012	0.97	0.27	0.96	0.18	-	0.18	0.46	0.25	0.46	0.77	0.27	0.77
2013	0.69	2.50	0.70	0.25	-	0.25	0.75	-	0.75	0.61	2.50	0.62
2014	0.89	1.03	0.91	0.36	-	0.36	0.91	-	0.91	0.87	1.03	0.89
2015	0.85	0.98	0.87	0.58	-	0.58	0.54	-	0.54	0.70	0.98	0.72
2016	1.13	0.70	1.13	0.31	-	0.31	0.45	-	0.45	0.66	0.70	0.66
2017	0.58	0.35	0.57	0.32	-	0.32	0.71	-	0.71	0.56	0.35	0.55
2018	0.55	0.53	0.54	0.03	-	0.03	0.42	-	0.42	0.44	0.53	0.44
2019	0.75	0.92	0.77	0.87	-	0.87	0.74	-	0.74	0.76	0.92	0.77
2020 <sup>b</sup>	0.10	-	-	0.64	-	0.64	0.19	-	0.19	-	-	-
2021	0.64	0.89	0.65	0.63	-	0.63	0.33	-	0.33	0.59	0.89	0.60
2022	0.80	0.53	0.80	1.28	-	1.28	1.20	-	1.20	0.89	0.53	0.88
2023	1.17	0.18	1.11	1.40	-	1.40	0.93	-	0.93	1.15	0.18	1.10
2024	0.76	0.66	0.76	0.87	-	0.87	0.70	0.83	0.70	0.75	0.75	0.75

<sup>a</sup> Totals may differ due to rounding.

<sup>b</sup> Data insufficient due to the COVID-19 Pandemic.

Table 2.2.1. Summary of angler hours, harvest rates, and harvest (number of fish) from spring creel surveys for anglers seeking walleye on the Sandusky and Maumee rivers from 1975–2024. Prior to 2004, both incomplete and complete trip interviews were used to calculate effort and harvest; since 2004, only completed trip interviews have been used.

Year <sup>a</sup>	Dates	Sandusky River			Maumee River		
		Angler Hours	Harvest Rate	Harvest	Angler Hours	Harvest Rate	Harvest
1975		87,500	0.11	9,725	112,500	0.14	15,475
1976		29,700	0.38	11,231	36,700	0.15	5,336
1977		27,700	0.42	11,509	41,600	0.15	6,136
1978 <sup>b</sup>	Mid-March–4/30	63,500	0.12	9,289	73,900	0.29	22,747
1979 <sup>b</sup>	Mid-March–4/30	94,400	0.11	8,212	184,800	0.18	33,614
1980		45,000	0.08	4,247	155,800	0.23	38,442
1981		36,100	0.05	2,180	161,700	0.11	21,415
1982		40,500	0.07	3,656	201,400	0.16	37,300
1984		29,300	0.06	3,740	143,200	0.17	28,899
1990		25,000	0.09	2,261	247,000	0.25	69,871
1993		46,300	0.13	5,771	250,600	0.36	92,146
1997		32,498	0.29	9,716	150,300	0.13	19,477
1998		26,650	0.28	7,849	150,671	0.31	47,502
2001		22,221	0.18	4,070	137,000	0.24	32,612
2002 <sup>b</sup>	Mid-March–4/30	26,237	0.18	4,620	132,342	0.25	32,889
2003 <sup>b</sup>	Mid-March–4/30	20,704	0.1	2,075	138,454	0.27	37,335
2004 <sup>b</sup>	Mid-March–4/30	26,291	0.16	4,258	99,580	0.28	27,853
2005 <sup>b</sup>	Mid-March–4/30	23,937	0.16	3,774	152,808	0.18	27,041
2006 <sup>b</sup>	Mid-March–4/30	25,618	0.08	2,230	171,999	0.2	34,533
2007 <sup>b</sup>	Mid-March–4/30	13,852	0.08	1,089	102,567	0.17	17,595
2008 <sup>b</sup>	Mid-March–4/30	15,999	0.17	2,840	125,342	0.22	27,701
2009 <sup>b</sup>	Mid-March–4/30	22,774	0.16	3,802	194,187	0.29	57,247
2010 <sup>b</sup>	Mid-March–4/30	35,263	0.13	4,623	187,302	0.38	71,465
2011 <sup>b</sup>	Mid-March–4/30	22,796	0.13	3,055	133,015	0.26	34,895
2012 <sup>b</sup>	Mid-March–4/30	22,244	0.21	4,814	109,847	0.24	26,004
2013 <sup>b</sup>	Mid-March–4/30	32,990	0.31	10,327	107,687	0.34	37,040
2014		25,067	0.18	4,457	94,691	0.35	33,206
2015 <sup>c</sup>	3/23–5/31	16,443	0.09	1,479	127,947	0.31	39,813
2016	3/15–5/29	21,945	0.1	2,297	124,695	0.17	21,066
2017	3/22–5/28	30,667	0.11	3,670	144,792	0.23	34,174
2018 <sup>b</sup>	3/16–4/29	32,352	0.2	6,457	137,039	0.29	39,101
2019 <sup>b</sup>	3/15–4/28	20,523	0.09	1,794	31,867	0.22	7,149
2020 <sup>d</sup>	-	-	-	-	-	-	-
2021	3/18–6/2	22,076	0.08	1,706	104,509	0.19	20,342
2022	3/17–5/30	20,936	0.17	3,507	119,754	0.16	19,440
2023 <sup>b</sup>	3/23–4/30	27,064	0.28	7,665	86,835	0.74	64,384
2024 <sup>b</sup>	3/15–4/31	27,287	0.31	8,329	100,191	0.51	50,934

<sup>a</sup> Missing years were not surveyed.

<sup>b</sup> Only the walleye fishery was surveyed, so these years represent underestimates of true values.

<sup>c</sup> Delayed survey start due to ice in the rivers.

<sup>d</sup> Survey was not conducted due to COVID-19 in 2020.

Table 2.2.2. Summary of angler hours, harvest rates, and harvest (number of fish) from spring creel surveys for anglers seeking white bass on the Sandusky and Maumee rivers from 1975–2024. Prior to 2004, both incomplete and complete trip interviews were used to calculate effort and harvest; since 2004, only completed trip interviews have been used.

Year <sup>a</sup>	Dates	Sandusky River			Maumee River		
		Angler Hours	Harvest Rate	Harvest	Angler Hours	Harvest Rate	Harvest
1975		75,900	1.76	133,763	43,800	0.84	36,731
1976		78,900	2.14	168,807	81,600	1.52	124,235
1977		145,500	1.32	191,706	40,800	2	79,995
1978	Mid-March–4/30	-	-	-	-	-	-
1979	Mid-March–4/30	-	-	-	-	-	-
1980		43,400	0.83	39,200	46,700	1.34	87,700
1981		218,200	1.08	240,078	93,200	1.48	165,500
1982		197,300	0.94	165,126	133,100	1.05	172,372
1984		135,400	1.88	278,051	59,900	1.56	137,091
1990		590	0.1	245	56,100	0.75	66,633
1993		48,100	0.86	43,853	2,400	0.03	33
1997		28,697	0.94	27,763	32,700	1.24	45,317
1998		35,437	2.07	75,332	14,053	1.76	33,622
2001		69,983	2.65	186,696	-	-	-
2002	Mid-March–4/30	1,669	0.38	1,028	4,451	0.28	4,556
2003	Mid-March–4/30	9,410	1.32	13,609	1,610	2.76	6,165
2004	Mid-March–4/30	3,375	1.72	7,133	1,702	0.35	2,247
2005	Mid-March–4/30	1,224	0.6	791	359	0	371
2006	Mid-March–4/30	7,893	1.34	11,942	1,132	0.4	3,350
2007	Mid-March–4/30	2,557	0.66	3,213	0	-	154
2008	Mid-March–4/30	6,347	1.72	10,943	1,575	0.33	3,124
2009	Mid-March–4/30	4,652	2.1	10,831	1,518	0.67	1,518
2010	Mid-March–4/30	5,926	0.65	5,033	0	-	2,058
2011	Mid-March–4/30	0	-	-	0	-	-
2012	Mid-March–4/30	10,432	2.21	24,225	4,293	1.23	8,673
2013	Mid-March–4/30	0	-	-	0	-	805
2014		27,642	5.13	142,997	15,945	2.18	35,338
2015 <sup>b</sup>	3/23–5/31	48,631	3.83	186,489	27,103	1.54	45,063
2016	3/15–5/29	48,242	2.27	111,604	32,851	2.89	98,333
2017	3/22–5/28	21,408	1.3	29,294	25,530	4.01	110,926
2018	3/16–4/29	3,210	2.26	7,564	811	0	203
2019	3/15–4/28	0	-	-	0	-	-
2020 <sup>c</sup>	-	-	-	-	-	-	-
2021	3/18–6/2	26,503	1.73	45,973	26,542	2.22	59,404
2022	3/17–5/30	17,865	1.92	35,019	7,707	2.91	14,928
2023	3/23–4/30	1,657	0.91	1,852	1,782	1.78	3,273
2024	3/15–4/31	4,502	0.7	3,134	0	-	0

<sup>a</sup> Missing years were not surveyed.

<sup>b</sup> Delayed survey start due to ice in the rivers.

<sup>c</sup> Survey was not conducted due to COVID-19 in 2020.



**Commercial Fishery**

*List of Tables*

Table 3.1.1. Annual commercial harvest (pounds) from the Ohio waters of Lake Erie, by species, 2015–2024..... 38

Table 3.1.2. Commercial harvest (pounds) from the Ohio waters of Lake Erie, by species, gear, and management unit in 2024..... 39

Table 3.1.3. Monthly commercial harvest (pounds) from the Ohio waters of Lake Erie in 2024..... 40

Table 3.1.4. Dockside value, in dollars, of the commercial harvest in the Ohio waters of Lake Erie, 2015 – 2024..... 41

Table 3.1.5. Annual commercial fishing effort in the Ohio waters of Lake Erie, by management unit and gear, 2015–2024..... 42

Table 3.1.6. Ohio's yellow perch total allowable catch (TAC), commercial harvest, sport harvest, and combined harvest (millions of pounds), by management unit, 1996–2024..... 43

Table 3.1.7. Annual harvest rates of major commercial species in the Ohio waters of Lake Erie, by gear, 2015–2024. .... 44

Table 3.1.8. Yellow perch commercial harvest (numbers), year class composition (% comp.), mean length (mm), mean weight (g), and mean age (yr), by management unit, in 2024 ..... 45

Table 3.1.1. Annual commercial harvest (pounds) from the Ohio waters of Lake Erie, by species, 2015–2024.

Year	Buffalo	Bullhead	Burbot <sup>a</sup>	Carp	Channel	Freshwater	Gar <sup>d</sup>	Gizzard	Goldfish	Quillback	Suckers	White	White	Whitefish	Yellow	Total
					Catfish	Drum		Shad				Bass	Perch		Perch <sup>b,c</sup>	
2015	224,515	14,636	238	81,241	419,732	903,341	-	24,293	25,133	129,521	4,603	801,601	634,378	51,066	1,271,091	4,585,389
2016	184,528	26,117	243	90,862	376,613	689,474	-	91,087	31,477	101,763	8,179	403,998	916,127	24,169	1,141,222	4,085,859
2017	174,445	6,108	173	49,408	361,660	510,902	-	446,032	14,466	96,948	9,672	323,999	918,909	701	1,487,689	4,401,112
2018	94,318	12,812	10	37,358	343,976	550,398	-	131,815	34,640	79,428	9,437	246,058	804,243	4,020	1,407,187	3,755,700
2019	225,744	6,773	221	68,304	460,818	645,203	-	24,943	34,579	117,077	12,292	229,729	1,020,241	31,409	930,963	3,808,296
2020	213,392	5,555	187	59,493	504,127	739,980	-	39,453	10,054	124,502	6,181	411,591	1,178,225	30,973	556,456	3,880,169
2021	272,951	13,787	35	46,216	605,148	768,082	-	113,828	20,540	95,842	4,059	351,644	880,500	37,360	505,014	3,715,006
2022	247,224	12,664	93	72,570	694,985	610,290	748	78,506	31,836	112,169	2,746	403,985	1,038,896	53,068	494,288	3,854,068
2023	221,271	9,134	283	67,650	815,181	1,129,483	1,573	296,635	42,916	102,793	2,783	332,689	1,276,792	54,735	698,271	5,052,189
2024	237,060	6,070	61	50,194	937,816	342,397	702	120,428	16,310	100,350	3,227	392,066	951,638	11,970	670,681	3,840,970
Mean	209,545	11,366	154	62,330	552,006	688,955	1,008	136,702	26,195	106,039	6,318	389,736	961,995	29,947	916,286	4,097,876

<sup>a</sup> The commercial harvest of burbot was reinstated in 1995 following a 1971 closure.

<sup>b</sup> A spring closure (March–April) on commercial yellow perch harvest was enacted in 1993.

<sup>c</sup> Management Unit 1 was closed to commercial yellow perch harvest in 2008, 2009, 2012, 2013, 2014, and 2015.

<sup>d</sup> The commercial harvest of gar species was explicitly reported beginning in 2022.

Table 3.1.2. Commercial harvest (pounds) from the Ohio waters of Lake Erie, by species, gear, and management unit in 2024.

Gear	Management	Buffalo	Bullhead	Burbot	Carp	Channel	Freshwater	Gar	Gizzard	Goldfish	Quillback	Suckers	White	White	Whitefish	Yellow	Total
	Unit					Catfish	Drum		Shad				Bass	Perch		Perch	
Trap Net	1	137,004	445	18	40,265	509,335	273,288	702	3578	207	89,662	3,047	378,649	918,723	11,857	436,029	2,802,809
	2	0	0	32	9	818	0	0	0	0	0	0	0	10,130	18	77,788	88,795
	3	0	0	11	0	9,378	1,845	0	0	0	3,532	0	62	12,525	95	156,864	184,312
	Total	137,004	445	61	40,274	519,531	275,133	702	3578	207	93,194	3,047	378,711	941,378	11,970	670,681	3,075,916
Seines	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sandusky Bay	100,056	5,625	0	9,920	416,278	67,264	0	116,850	16,103	7,156	180	13,355	10,260	0	0	763,047
	Inland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	100,056	5,625	0	9,920	416,278	67,264	0	116,850	16,103	7,156	180	13,355	10,260	0	0	763,047
Trotlines	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Sandusky Bay	0	0	0	0	2,007	0	0	0	0	0	0	0	0	0	0	2,007
	Inland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	2,007	0	0	0	0	0	0	0	0	0	0	2,007
Carp Aprons	Inland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	137,004	445	18	40,265	509,335	273,288	702	3,578	207	89,662	3,047	378,649	918,723	11,857	436,029	2,802,809
	2	0	0	32	9	818	0	0	0	0	0	0	0	10,130	18	77,788	88,795
	3	0	0	11	0	9,378	1,845	0	0	0	3,532	0	62	12,525	95	156,864	184,312
	Sandusky Bay	100,056	5,625	0	9,920	418,285	67,264	0	116,850	16,103	7,156	180	13,355	10,260	0	0	765,054
	Inland	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total	237,060	6,070	61	50,194	937,816	342,397	702	120,428	16,310	100,350	3,227	392,066	951,638	11,970	670,681	3,840,970

Table 3.1.3. Monthly commercial harvest (pounds) from the Ohio waters of Lake Erie in 2024.

Species	March	April	May	June	July	August	September	October	November	December	Total
Buffalo	23,751	82,082	39,445	15,828	1,259	10,868	15,247	25,476	20,296	2,808	237,060
Bullhead	2,831	2,364	470	388	6	1	1	6	3	0	6,070
Burbot	0	0	46	0	0	15	0	0	0	0	61
Carp	9,768	8,615	14,265	3,858	413	1,371	2,899	5,052	3,692	261	50,194
Channel Catfish	218,054	342,267	158,811	52,024	12,412	25,746	36,643	54,762	36,837	260	937,816
Freshwater Drum	87,551	63,915	63,580	23,864	10,165	20,063	23,069	31,247	18,943	0	342,397
Gar	0	335	353	10	0	0	0	2	2	0	702
Gizzard Shad	27,046	71,608	20,692	477	60	10	0	0	535	0	120,428
Goldfish	11,013	2,826	1,282	1,088	0	0	44	25	32	0	16,310
Quillback	23,025	12,911	30,691	5,355	6,188	4,027	4,040	6,109	7,784	220	100,350
Suckers	732	207	1,989	137	6	20	10	82	44	0	3,227
White Bass	74,653	103,241	169,588	4,905	141	179	666	14,935	23,745	13	392,066
White Perch	219,963	481,661	174,888	9,955	7,123	6,925	9,149	19,533	22,441	0	951,638
Whitefish	149	72	31	33	11	3	7	274	7,368	4,022	11,970
Yellow Perch <sup>a</sup>	0	0	190,301	98,706	129,526	87,249	96,103	46,376	22,402	18	670,681
Total	698,536	1,172,104	866,432	216,628	167,310	156,477	187,878	203,879	164,124	7,602	3,840,970

<sup>a</sup> A spring (March - April) closure on commercial yellow perch harvest was enacted in 1993.

Table 3.1.4. Dockside value<sup>a</sup>, in dollars, of the commercial harvest in the Ohio waters of Lake Erie, 2015-2024.

Year	Carp	Channel Catfish	Freshwater Drum	White Bass	White Perch	Yellow Perch	Others	Total Value
2015	20,267	151,668	188,861	572,157	287,471	3,494,286	209,649	4,924,359
2016	22,716	147,576	146,375	318,450	415,602	3,750,768	181,445	4,982,932
2017	14,822	117,482	138,288	308,973	415,860	4,585,556	151,789	5,732,770
2018	11,193	130,818	144,815	231,621	359,683	2,763,433	111,304	3,752,867
2019	20,491	144,337	169,810	253,702	420,611	2,478,489	226,194	3,713,634
2020	17,848	182,239	221,994	468,732	576,446	1,827,355	212,797	3,507,411
2021	15,428	240,479	235,431	465,489	502,249	2,093,660	266,809	3,819,544
2022	23,994	239,660	189,013	608,221	622,859	2,215,680	287,404	4,186,830
2023	27,060	247,868	347,418	537,593	803,524	3,307,374	316,622	5,587,459
2024	19,768	297,425	114,115	597,997	578,980	2,891,266	227,578	4,727,129
Mean	19,359	189,955	189,612	436,294	498,329	2,940,787	219,159	4,493,494

<sup>a</sup> Estimated value based on average weekly dockside prices and weekly landings, in pounds, by species.

Table 3.1.5. Annual commercial fishing effort<sup>a</sup> in the Ohio waters of Lake Erie, by management unit and gear, 2015–2024.

Year	MU1		MU2		MU3	Sandusky Bay	Inland	Total	
	Trap Net	Seine	Trap Net	Seine	Trap Net	Seine	Seine	Trap Net	Seine
2015	2,558	2.5	6,363	1.5	1,067	341.7	175.0	9,988	520.7
2016	3,708	42.1	4,571	3.0	2,002	412.7	111.4	10,281	569.1
2017	5,374	0.0	2,598	0.0	1,679	343.0	53.3	9,651	396.3
2018	4,755	2.6	1,574	0.0	2,233	389.3	10.6	8,562	402.5
2019	5,200	34.0	2,250	0.0	2,909	336.9	0.0	10,359	370.9
2020	5,705	0.0	2,278	0.0	1,811	340.1	0.0	9,794	340.1
2021	5,831	0.0	899	0.0	2,099	293.9	0.0	8,829	293.9
2022	6,747	0.0	1,577	0.0	2,449	244.5	2.3	10,909	260.7
2023	8,978	0.0	313	0.0	1,784	299.3	3.3	11,075	302.6
2024	9,268	0.0	285	0.0	1,666	253.3	0.0	11,219	253.3
Mean	5,812.4	8.1	2,270.8	0.5	1,969.9	325.5	35.6	10,066.7	371.0

<sup>a</sup> In units of trap net lifts or thousands of feet of seine net.

Table 3.1.6. Ohio's yellow perch total allowable catch (TAC), commercial harvest, sport harvest, and combined harvest (millions of pounds), by management unit, 1996–2024.

Year <sup>a</sup>	Ohio's TAC			Ohio's Commercial Harvest			Ohio's Sport Harvest			Ohio's Combined Harvest		
	MU 1	MU 2	MU 3	MU 1 <sup>b</sup>	MU 2	MU 3	MU 1	MU 2	MU 3	MU 1	MU 2	MU 3
1996	0.619	0.720	0.188	0.200	0.323	0.103	0.925	0.500	0.083	1.126	0.823	0.187
1997	1.080	1.426	0.299	0.212	0.499	0.055	0.859	0.581	0.165	1.071	1.080	0.220
1998	1.191	1.406	0.365	0.184	0.305	0.090	0.785	0.323	0.185	0.969	0.628	0.275
1999	1.070	1.368	0.299	0.201	0.390	0.106	0.708	0.584	0.246	0.909	0.974	0.353
2000	1.041	1.457	0.369	0.241	0.565	0.157	0.798	0.604	0.287	1.039	1.169	0.443
2001	0.851	1.699	0.491	0.179	0.905	0.004	0.736	0.842	0.460	0.916	1.747	0.465
2002	1.466	1.991	0.568	0.338	1.100	0.000	0.979	0.887	0.640	1.317	1.987	0.640
2003	1.258	2.167	0.858	0.250	1.255	0.000	1.156	0.858	0.482	1.406	2.113	0.482
2004	1.929	2.418	0.768	0.289	1.288	0.000	0.802	0.959	0.659	1.091	2.246	0.659
2005	1.843	2.523	1.066	0.357	1.163	0.043	0.608	0.680	0.414	0.965	1.843	0.458
2006	1.516	4.040	1.930	0.236	0.744	0.070	0.820	0.649	0.201	1.055	1.394	0.271
2007	0.833	2.418	1.670	0.201	1.702	0.048	0.782	0.543	0.343	0.983	2.245	0.391
2008	0.708	2.300	1.380	0.000	1.377	0.139	0.410	0.628	0.490	0.410	2.005	0.629
2009	1.026	2.890	1.361	0.000	1.339	0.112	0.464	0.463	0.485	0.464	1.802	0.597
2010	1.053	2.176	2.025	0.196	0.936	0.153	0.694	0.522	0.324	0.890	1.458	0.477
2011	1.042	1.924	2.025	0.156	1.071	0.328	0.640	0.329	0.309	0.796	1.400	0.637
2012	0.905	2.176	2.268	0.000	1.285	0.469	0.883	0.567	0.278	0.883	1.852	0.747
2013	0.905	2.176	1.814	0.000	1.230	0.300	0.789	0.491	0.496	0.789	1.721	0.796
2014	0.801	2.012	1.605	0.000	1.280	0.266	0.391	0.263	0.714	0.391	1.543	0.980
2015	0.801	2.421	1.284	0.000	1.005	0.266	0.486	0.127	0.307	0.486	1.132	0.573
2016	1.153	1.499	1.223	0.103	0.688	0.350	0.783	0.105	0.173	0.886	0.793	0.523
2017	1.540	1.761	1.223	0.447	0.590	0.450	0.792	0.053	0.054	1.240	0.644	0.504
2018	1.525	1.761	1.223	0.440	0.528	0.439	0.516	0.031	0.022	0.956	0.559	0.460
2019	1.220	1.201	1.093	0.193	0.420	0.318	0.164	0.014	0.003	0.358	0.433	0.321
2020	1.061	1.099	0.978	0.137	0.249	0.171	0.255	0.019	0.004	0.391	0.268	0.176
2021	1.274	0.335	0.832	0.183	0.116	0.206	0.443	0.005	0.014	0.626	0.121	0.220
2022	1.528	0.292	0.988	0.189	0.098	0.208	0.470	0.020	0.004	0.659	0.118	0.211
2023	1.222	0.259	0.999	0.415	0.065	0.219	0.840	0.011	0.004	1.255	0.076	0.222
2024	1.439	0.311	0.860	0.436	0.078	0.157	0.367	0.027	0.007	0.803	0.105	0.164

<sup>a</sup> From 1996 through 2007, MU 2 and MU 3 were combined into a "central basin" quota in Ohio waters.

<sup>b</sup> All TAC in Management Unit 1 (the western basin) was allocated to sport harvest in 2008, 2009, 2012, 2013, 2014, and 2015.

Table 3.1.7. Annual harvest rates<sup>a</sup> of major commercial species in the Ohio waters of Lake Erie, by gear, 2015–2024.

Year	Yellow Perch	White Bass		White Perch		Channel Catfish		Whitefish
	Trap Net	Trap Net	Seine	Trap Net	Seine	Trap Net	Seine	Trap Net
2015	172.3	206.0	147.6	107.8	52.6	61.3	459.9	36.3
2016	127.4	108.2	134.8	134.6	80.8	41.8	427.6	14.8
2017	184.2	119.0	71.1	132.0	25.4	51.0	550.4	1.4
2018	193.2	81.8	117.9	155.7	78.8	50.9	435.7	2.3
2019	104.6	63.1	69.4	127.2	71.2	72.8	594.6	13.9
2020	75.9	80.0	205.1	162.6	109.5	62.6	557.4	18.9
2021	75.9	69.7	90.7	65.4	148.3	70.4	1027.6	39.5
2022	55.4	90.5	113.8	152.3	71.6	82.0	1387.3	35.0
2023	79.6	65.6	66.5	156.2	69.1	78.9	1270.4	36.2
2024	73.7	82.5	52.7	103.7	42.6	84.1	1643.5	14.4
Mean	114.2	96.6	107.0	129.8	75.0	65.6	835.4	21.3

<sup>a</sup> Pounds per trap net lift, pounds per 1,000 feet of seine haul.



Table 3.1.8. Yellow perch commercial harvest (numbers), year class composition (% comp.), mean length (mm), mean weight (g), and mean age (yr), by management unit, in 2024.

Management Unit	Year Class Age	2022 2	2021 3	2020 4	2019 5	2018 6	2017 7	2016 8	2015 9	2014 10	2013 11	2012 12	2011 13	2010 14	Total	Mean	Sample (N)
1	Numbers	215,385	904,711	86,309	19,172	10,281	0	0	0	0	0	0	0	0	1,235,859		
	% Comp	17.43%	73.21%	6.98%	1.55%	0.83%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%		2.95 yr	382
	Length	224	237	245	265	301	-	-	-	-	-	-	-	-		236 mm	1,863
	Weight	140	159	185	228	341	-	-	-	-	-	-	-	-		160 g	
2	Numbers	0	149,065	28,144	10,287	6,211	582	970	582	388	0	0	0	0	196,230		
	% Comp	0.00%	75.96%	14.34%	5.24%	3.17%	0.30%	0.49%	0.30%	0.20%	0.00%	0.00%	0.00%	0.00%		3.41 yr	214
	Length	-	239	246	261	290	332	317	334	336	-	-	-	-		244 mm	797
	Weight	-	165	187	231	321	454	404	518	461	-	-	-	-		180 g	
3	Numbers	61,144	190,501	46,539	26,845	7,121	3,370	1,707	854	1,045	404	0	0	427	339,955		
	% Comp	17.99%	56.04%	13.69%	7.90%	2.09%	0.99%	0.50%	0.25%	0.31%	0.12%	0.00%	0.00%	0.13%		3.30 yr	468
	Length	224	247	252	268	304	313	309	323	334	331	-	-	307		248 mm	1,213
	Weight	151	204	217	264	374	399	387	477	483	438	-	-	339		209 gr	
Total	Numbers	276,529	1,244,277	160,992	56,304	23,613	3,952	2,678	1,436	1,433	404	0	0	427	1,772,044		
	% Comp	15.61%	70.22%	9.09%	3.18%	1.33%	0.22%	0.15%	0.08%	0.08%	0.02%	0.00%	0.00%	0.02%		3.07 yr	1,064
	Length	224	238	247	265	299	315	312	327	335	331	-	-	307		239 mm	3,873
	Weight	143	166	195	245	346	407	393	494	477	438	-	-	339		172 g	

## Population Assessment

### List of Tables

Table 4.1.1. Arithmetic mean catch-per-hectare of age-0 fish for selected species during August trawls in the Ohio waters of Lake Erie Management Unit 1, 1992–2024. Catches prior to 2002 are standardized to the R/V <i>Explorer</i> with fishing power corrections. Data are available from 1969–present, but surveys prior to 1987 are not directly comparable to the current standardized survey. Data from 1988–present are combined with Ontario trawl data for interagency decision making.....	48
Table 4.1.2. Arithmetic mean catch-per-hectare of age-0 fish for selected species during September trawls in the Ohio waters of Lake Erie Management Unit 2, 1990–2024. Data are available 1969–1989 but are not directly comparable to the survey beginning in 1990. ....	49
Table 4.1.3. Arithmetic mean catch-per-hectare of age-0 fish for selected species during September trawls in the Ohio waters of Lake Erie Management Unit 3, 1990–2024. Data are available 1969–1989 but are not directly comparable to the survey beginning in 1990. ....	50
Table 4.1.4. Arithmetic mean catch-per-hectare of age-1 fish for selected species during August trawls in the Ohio waters of Lake Erie Management Unit 1, 1992–2024. White perch, white bass, walleye, and yellow perch are yearlings only; all other species are yearling and older ages. Data prior to 2002 standardized to new R/V <i>Explorer</i> with fishing power corrections. Data are available from 1969–present, but surveys prior to 1987 are not directly comparable to the current standardized survey..	51
Table 4.1.5. Arithmetic mean catch-per-hectare of age-1 fish for selected species during September trawls in the Ohio waters of Lake Erie Management Unit 2, 1990–2024. White perch, white bass, walleye, yellow perch, smallmouth bass, and lake whitefish are yearlings only. All other species are yearling and older ages.....	52
Table 4.1.6. Arithmetic mean catch-per-hectare of age-1 fish for selected species during September trawls in the Ohio waters of Lake Erie Management Unit 3, 1990–2024. White perch, white bass, walleye, yellow perch, smallmouth bass, and lake whitefish are yearlings only. All other species are yearling and older ages.....	53
Table 4.1.7. Mean total length (mm) for age-0 fishes of select species during Management Unit 1 August trawl surveys in the Ohio waters of Lake Erie, 1992–2024. Data are available from 1969-present.....	54
Table 4.1.8. Mean total length (mm) for age-0 fishes of select species during Management Unit 2 fall trawl surveys in the Ohio waters of Lake Erie, 1990–2024. ....	55
Table 4.1.9. Mean total length (mm) for age-0 fishes of select species during Management Unit 3 fall trawl surveys in the Ohio waters of Lake Erie, 1990–2024. ....	56
Table 4.1.10. Relative abundance of age-2 and older yellow perch from fall trawl surveys in Management Unit 1 waters of Lake Erie, 1990–2024.....	57

Table 4.1.11. Relative abundance of age-2 and older yellow perch from fall trawl surveys in Management Unit 2 waters of Lake Erie, 1990–2024.....	58
Table 4.1.12. Relative abundance of age-2 and older yellow perch from fall trawl surveys in Management Unit 3 waters of Lake Erie, 1990–2024.....	59
Table 4.1.13. Relative abundance (arithmetic mean) of age-1 and older walleye from fall canned gill net surveys in Management Unit 1 waters of Lake Erie, 1978–2024. Nets were changed from multifilament to monofilament beginning in 2016.....	60
Table 4.1.14. Relative abundance (arithmetic mean) of age-1 and older walleye from fall canned gill net surveys in Management Unit 2 waters of Lake Erie, 1983–2024. Nets were changed from multifilament to monofilament beginning in 2016.....	61
Table 4.1.15. Relative abundance (arithmetic mean) of age-1 and older walleye from fall canned gill net surveys in Management Unit 3 waters of Lake Erie, 2003–2024. Nets were changed from multifilament to monofilament beginning in 2016.....	62

Table 4.1.1. Arithmetic mean catch-per-hectare of age-0 fish for selected species during August trawls in the Ohio waters of Lake Erie Management Unit 1, 1992–2024. Catches prior to 2002 are standardized to the current R/V *Explorer* with fishing power corrections. Data are available from 1969–present, but surveys prior to 1987 are not directly comparable to the current standardized survey. Data from 1988–present are combined with Ontario trawl data for interagency decision making.

Year	Trawls (n)	Walleye	Yellow Perch	White Perch	White Bass	Rainbow Smelt	Emerald Shiner	Spottail Shiner	Alewife	Gizzard Shad	Trout- Perch	Freshwater Drum	Silver Chub
1992	39	6.6	60.7	877.6	39.4	477.9	0.8	13.2	4357.4	289.8	46.3	31.9	10.0
1993	37	111.0	1164.2	2012.0	156.8	14.5	18.2	13.9	475.4	2154.6	443.4	286.3	2.3
1994	40	63.4	508.5	728.7	33.3	62.5	101.6	49.7	3.7	973.4	77.9	46.9	13.6
1995	38	2.9	348.9	692.9	16.7	0.0	25.7	24.1	7.3	148.7	111.4	26.3	42.7
1996	39	83.3	3290.8	1750.0	88.4	201.3	40.2	36.7	4.3	400.9	204.3	258.7	184.4
1997	40	24.0	52.2	616.9	225.6	394.8	91.0	44.6	37.7	1598.4	133.3	23.4	6.7
1998	39	12.2	174.5	541.3	21.8	13.1	11.2	93.6	2.2	167.5	184.6	55.4	121.1
1999	37	30.6	270.1	1036.9	37.6	2.2	8.4	71.8	0.5	426.0	138.4	263.3	164.7
2000	30	4.5	186.4	2321.4	68.3	749.0	80.7	3.0	15.2	899.7	290.2	45.8	4.9
2001	31	24.8	322.1	1863.9	213.8	0.7	31.0	64.7	24.4	642.8	103.7	336.0	0.1
2002	35	0.1	33.1	1037.4	42.6	51.5	62.5	12.8	87.6	1649.1	273.2	80.9	3.7
2003	37	155.6	1509.9	2336.2	210.2	82.9	1.3	2.1	0.1	173.8	76.9	77.5	1.1
2004	34	3.6	40.9	4269.0	38.8	42.3	177.8	5.7	0.0	41.6	382.7	147.7	11.4
2005	34	10.3	124.2	3955.4	84.2	0.0	159.3	98.4	1.8	279.2	273.9	151.9	0.0
2006	31	1.3	180.2	2139.5	43.8	151.9	129.4	4.2	0.0	159.5	124.4	47.5	0.0
2007	34	21.5	592.9	4214.7	8.1	6.9	91.2	12.6	0.1	75.0	128.1	288.5	0.1
2008	29	7.6	267.0	4071.0	50.3	113.8	37.1	10.8	0.0	465.2	72.4	108.5	0.1
2009	32	5.5	186.0	3248.0	95.6	2550.3	135.3	7.9	0.0	816.2	21.3	55.6	2.0
2010	22	23.4	58.2	4698.6	84.4	0.0	51.8	39.4	0.4	34.6	109.1	412.4	3.2
2011	37	4.9	29.9	1176.1	26.8	1.5	9.3	8.3	0.0	260.1	242.1	106.2	0.5
2012	35	5.7	74.5	4603.6	71.8	0.0	165.2	7.8	0.0	245.0	55.6	289.2	0.0
2013	35	10.7	398.7	2800.1	31.9	80.3	15.0	0.6	3.3	1987.0	101.5	69.7	0.2
2014	34	19.6	668.9	2172.0	4.8	22.9	0.6	5.6	0.0	316.1	25.3	21.2	0.0
2015	34	61.5	264.9	1629.8	9.1	133.7	11.4	3.8	0.0	421.6	28.0	162.8	5.4
2016	36	6.7	329.4	2855.2	35.2	0.0	0.3	23.5	0.0	15.6	42.4	98.5	0.1
2017	36	20.6	279.5	4333.4	92.2	28.7	1.3	3.0	0.1	336.2	100.9	23.8	0.4
2018	36	112.0	514.1	2289.2	30.0	0.0	9.2	6.7	0.0	76.4	69.6	206.6	5.7
2019	34	143.8	466.9	1304.8	25.1	9.1	0.2	5.8	0.0	13.3	41.0	64.5	2.2
2020	33	48.2	535.8	1333.9	28.3	0.2	0.1	1.5	1.4	67.6	33.9	67.2	39.4
2021	34	89.8	379.7	1390.5	13.4	31.4	0.6	7.3	0.0	29.1	35.6	228.8	1.3
2022	36	42.0	484.6	1147.8	6.7	31.2	0.0	10.6	0.1	31.1	87.2	139.9	6.2
2023	35	60.8	181.0	1638.3	8.5	106.4	0.3	15.7	0.0	37.3	157.5	76.5	57.8
2024	37	9.0	254.2	1628.0	3.1	0.1	0.8	21.9	0.8	44.0	152.2	56.7	9.1
Mean <sup>a</sup>	34.8	38.1	436.8	2,221.4	60.7	167.5	45.9	22.2	157.0	476.0	131.7	134.4	21.6

<sup>a</sup> Long-term mean CPH, 1992–2023.

Table 4.1.2. Arithmetic mean catch-per-hectare of age-0 fish for selected species during September trawls in the Ohio waters of Lake Erie Management Unit 2, 1990-2024. Data are available 1969-1989 but are not directly comparable to the survey beginning in 1990.

Year	Trawls (n)	Walleye	Yellow Perch	White Perch <sup>a</sup>	White Bass	Smallmouth Bass	Lake Whitefish	Rainbow Smelt	Round Goby <sup>a</sup>	Emerald Shiner	Spottail Shiner	Alewife	Gizzard Shad	Trout-Perch	Freshwater Drum	Silver Chub
1990	9	1.8	52.2	3,086.3	29.0	0.0	0.0	492.0	0.0	2.9	0.0	0.3	14.9	3.2	23.1	0.0
1991	16	3.4	9.3	1,312.4	8.0	0.0	0.0	12.8	0.0	34.5	0.0	0.5	3.8	6.0	6.5	0.0
1992	18	1.2	36.3	186.2	0.6	0.0	0.2	923.2	0.0	73.7	0.0	20.0	11.9	47.8	0.0	0.0
1993	19	0.0	10.6	97.3	36.6	1.0	0.8	27.0	0.0	1.1	0.1	0.0	3.0	1.2	0.3	0.0
1994	19	5.7	71.9	368.0	125.5	0.3	2.5	2,681.8	2.7	20.5	2.6	7.1	16.3	0.0	2.3	0.0
1995	34	0.0	2.8	3.1	21.9	0.0	0.4	400.8	21.4	7.1	0.3	11.2	3.8	1.1	0.7	0.0
1996	35	14.9	129.6	229.3	39.6	0.2	0.6	395.6	7.8	17.5	11.5	10.9	75.2	1.3	0.8	0.0
1997	47	0.6	11.6	202.3	8.1	0.1	0.0	256.2	55.9	140.2	13.3	10.6	11.5	0.0	0.8	0.0
1998	40	1.0	72.6	91.5	41.2	0.2	0.1	335.0	127.1	3,682.0	1.3	8.8	30.9	0.4	5.4	0.0
1999	42	4.4	68.3	293.0	137.5	0.1	0.0	101.4	95.6	350.9	5.5	29.5	88.9	5.4	9.4	0.0
2000	42	0.2	18.2	475.6	18.3	0.0	0.0	160.0	24.1	129.1	0.4	62.1	113.0	0.7	0.7	0.0
2001	42	6.0	119.2	710.2	163.2	0.0	0.2	2.3	40.4	47.6	5.3	45.4	51.6	1.9	75.5	0.0
2002	42	0.0	3.3	204.3	24.7	0.0	0.0	370.0	43.5	20.2	0.9	57.4	19.0	0.6	12.9	0.0
2003	38	38.3	136.9	289.2	112.3	0.0	0.4	2,367.7	21.5	394.1	0.0	0.1	365.7	1.7	4.5	0.0
2004	29	0.0	7.7	718.7	1.2	0.0	0.1	415.9	15.0	8.1	0.0	0.0	0.5	17.6	12.9	0.1
2005	33	0.6	43.9	1,047.2	69.2	0.1	0.1	8.7	40.8	630.4	0.1	0.0	13.4	0.1	1.1	0.0
2006	32	0.2	11.3	431.3	24.6	0.0	0.0	99.9	15.0	712.8	0.0	3.1	40.9	0.2	6.6	0.0
2007	32	1.0	151.0	1,096.2	23.4	0.1	0.0	78.4	26.8	36.3	2.1	0.0	183.8	0.9	0.2	0.0
2008	33	1.2	32.1	470.6	94.4	0.1	0.0	765.8	19.1	25.1	3.4	0.0	34.3	0.3	1.2	0.0
2009	32	3.0	1.6	379.0	18.7	0.0	0.0	267.8	24.5	7.5	0.4	0.0	52.6	0.5	25.5	0.0
2010	10	0.2	41.1	254.8	241.8	0.4	0.0	776.2	28.4	8.8	0.0	0.0	2.6	0.7	1.3	0.0
2011	32	2.2	10.3	346.6	12.7	0.0	0.0	29.8	100.8	361.7	0.6	0.0	675.8	1.3	17.9	0.0
2012	33	0.8	69.2	1,709.6	112.2	0.0	0.0	84.4	18.2	951.3	0.0	0.0	98.7	0.0	5.1	0.0
2013	33	2.0	8.9	174.7	5.1	0.0	0.0	126.0	17.5	2,218.5	0.0	52.1	304.2	0.1	0.9	0.0
2014	8	1.4	37.7	135.0	6.1	0.0	0.0	747.8	6.3	1,369.3	2.5	0.0	33.8	0.3	1.7	0.0
2015	12	31.3	19.6	371.0	3.9	0.0	0.4	447.0	56.8	3.5	0.0	0.0	568.1	0.4	2.9	0.0
2016	24	0.8	0.5	15.3	12.9	0.0	0.0	219.4	14.5	0.0	0.0	0.0	12.0	0.0	2.0	0.0
2017	33	2.7	19.0	200.8	20.9	0.0	0.0	347.1	27.3	0.0	0.0	30.3	201.6	0.0	0.0	0.0
2018	12	22.1	28.4	163.1	17.7	0.0	0.0	1.7	2.8	1.3	0.0	0.0	13.7	0.0	23.9	0.0
2019	12	31.4	0.2	10.8	8.7	0.0	0.0	145.5	13.3	0.0	0.0	0.0	9.7	0.0	12.1	0.0
2020	29	21.5	5.7	194.4	13.4	0.0	0.1	6.3	9.7	6.6	0.0	0.0	166.6	0.1	19.6	0.0
2021	20	52.3	13.0	96.3	3.5	0.0	0.0	1,355.5	9.3	6.5	0.0	0.0	13.3	0.0	2.8	0.0
2022	33	16.9	3.0	8.1	9.0	0.0	0.0	1,454.8	110.1	198.6	0.3	1.7	83.3	0.1	1.4	0.0
2023	32	58.7	12.9	276.3	5.4	0.0	0.0	43.8	5.5	3.3	0.0	5.8	60.2	1.0	1.7	0.0
2024	23	10.7	52.5	145.7	3.9	0.0	0.0	29.5	16.5	44.7	0.0	0.0	120.3	87.2	21.7	1.0
Mean <sup>b</sup>	28.1	9.6	37.1	460.2	43.3	0.1	0.2	469.0	29.5	337.4	1.5	10.5	99.4	2.8	8.3	0.0

<sup>a</sup> Round Goby were first caught in 1994 in this survey.

<sup>b</sup> Long-term mean CPH, 1990-2023.

Table 4.1.3. Arithmetic mean catch-per-hectare of age-0 fish for selected species during September trawls in the Ohio waters of Lake Erie Management Unit 3, 1990-2024. Data are available 1969-1989 but are not directly comparable to the survey beginning in 1990.

Year	Trawls (n)	Walleye	Yellow Perch	White Perch	White Bass	Smallmouth Bass	Lake Whitefish	Rainbow Smelt	Round Gobys <sup>a</sup>	Emerald Shiner	Spottail Shiner	Alewife	Gizzard Shad	Trout-Perch	Freshwater Drum
1990	15	0.7	21.2	1,082.3	37.9	0.0	0.0	1,196.7	0.0	163.1	1.0	0.4	48.0	15.2	0.7
1991	16	0.0	1.2	1,154.0	12.4	0.2	0.0	14.8	0.0	102.1	0.1	12.3	2.0	2.4	0.0
1992	18	0.0	31.3	184.1	0.0	0.0	0.5	617.8	0.0	67.8	0.4	52.0	18.3	17.8	0.0
1993	19	0.0	27.3	98.3	22.1	3.5	1.8	31.7	0.0	2.8	10.2	0.0	13.5	14.5	0.5
1994	19	3.0	16.1	157.4	105.9	0.2	0.8	640.1	2.9	16.5	9.5	14.2	11.2	0.0	0.0
1995	24	0.0	14.1	73.1	17.2	0.1	0.3	1,722.5	71.0	37.2	1.9	15.3	2.6	10.8	0.1
1996	30	2.7	116.5	526.8	87.8	0.2	2.7	2,522.9	57.0	68.1	18.0	7.8	243.0	25.2	0.1
1997	29	0.1	2.6	2.4	22.6	0.1	0.0	563.2	117.0	5.9	0.1	17.1	8.7	2.1	0.0
1998	18	0.4	38.1	52.3	41.7	0.0	0.2	953.8	186.7	150.5	2.7	0.1	34.8	1.3	0.0
1999	33	0.0	25.7	37.1	91.0	1.1	0.2	254.4	151.5	712.7	3.5	12.9	22.0	5.2	0.1
2000	31	0.1	1.6	6.4	22.5	0.0	0.0	988.2	125.2	423.7	0.0	10.1	34.0	0.3	0.0
2001	5	0.0	13.6	57.6	18.0	0.0	0.0	0.0	39.6	2.2	0.7	0.0	1.8	0.0	19.1
2002	33	0.0	3.0	7.7	10.5	0.0	0.0	176.6	51.4	0.7	0.1	1.6	17.2	0.2	0.1
2003	33	3.3	53.2	75.0	103.5	0.6	3.0	4,040.4	59.7	1,300.1	0.4	0.0	22.2	1.5	0.0
2004	25	0.0	1.9	108.0	0.3	0.0	0.2	388.9	173.9	0.8	0.0	0.0	0.3	1.4	0.0
2005	25	0.4	156.2	2,034.5	58.2	1.1	1.3	44.4	148.1	279.8	1.1	0.0	15.7	1.6	1.3
2006	25	0.0	18.9	46.1	8.1	4.9	0.0	570.7	46.3	1,115.1	0.2	3.6	30.7	0.1	1.2
2007	25	0.0	177.8	1,095.9	13.0	0.3	0.1	702.4	273.1	63.7	0.5	0.0	15.5	5.4	0.0
2008	24	0.2	52.8	91.6	37.8	0.3	0.0	3,997.7	26.3	20.2	0.2	0.0	63.1	0.1	0.2
2009	23	0.0	0.5	34.6	2.5	0.0	0.0	0.3	1.0	1.7	0.0	0.0	3.9	0.2	0.0
2010	8	1.1	96.3	190.3	211.5	0.3	0.0	421.6	41.8	234.9	0.0	0.0	8.5	1.4	0.6
2011	24	0.2	15.1	72.1	0.7	0.2	0.0	247.3	256.0	103.7	0.3	0.0	4.2	2.2	0.1
2012	24	0.0	134.4	661.9	130.0	0.0	0.0	319.1	53.9	2,188.5	0.0	0.1	28.7	0.2	0.0
2013	24	0.0	8.9	200.1	0.2	0.0	0.0	12.8	45.8	306.2	0.0	36.1	39.5	0.0	0.2
2014	12	0.2	49.1	99.4	1.1	0.0	0.0	1,709.5	86.2	650.1	0.0	0.0	7.3	0.6	0.0
2015	11	9.4	18.6	338.8	4.0	0.0	0.4	236.4	66.8	13.2	0.4	0.0	455.6	1.2	0.6
2016	24	1.6	1.6	5.4	15.9	0.0	0.0	1,383.4	29.9	0.0	0.0	0.0	1.2	0.0	0.0
2017	24	4.3	39.1	44.4	26.1	0.0	0.0	898.7	31.1	0.0	0.0	223.6	214.8	0.2	0.0
2018	12	42.0	50.8	248.8	19.3	0.0	0.4	1.7	4.2	0.0	0.0	0.0	12.3	0.0	3.5
2019	24	17.6	6.8	67.6	9.1	0.0	0.0	305.3	13.4	0.0	0.0	0.0	14.2	0.3	0.6
2020	24	5.0	3.9	67.7	19.8	0.0	0.1	49.7	21.7	1.7	0.0	0.0	35.8	0.8	1.7
2021	12	36.5	2.2	40.5	24.2	0.0	0.0	165.9	7.3	0.6	0.0	0.6	57.6	0.0	9.5
2022	24	10.2	2.7	4.2	6.7	0.0	0.0	561.1	25.6	12.3	0.4	1.1	82.6	2.8	0.1
2023	23	22.5	3.0	68.9	6.5	0.0	0.0	217.7	11.5	2.4	1.1	6.5	95.8	3.1	0.0
2024	24	7.0	8.9	39.3	6.8	0.2	0.2	33.9	39.7	24.4	0.0	9.9	32.6	39.1	8.3
Mean <sup>b</sup>	22	4.8	36.5	271.7	35.8	0.4	0.4	780.0	67.1	243.8	1.6	12.4	47.6	3.5	1.2

<sup>a</sup> Round Gobys were first caught in 1994 in this survey.

<sup>b</sup> Long-term mean CPH, 1990-2023.

Table 4.1.4. Arithmetic mean catch-per-hectare of age-1 fish for selected species during August trawls in the Ohio waters of Lake Erie Management Unit 1, 1992–2024. White perch, white bass, walleye, and yellow perch are yearlings only; all other species are yearling and older ages. Catches prior to 2002 are standardized to the R/V *Explorer* fishing power. Data are available from 1969–present, but surveys prior to 1987 are not directly comparable to the current standardized survey.

Year	Trawls (n)	Walleye	Yellow Perch	White Perch	White Bass	Rainbow Smelt	Round Goby <sup>a</sup>	Emerald Shiner	Spottail Shiner	Trout- Perch	Freshwater Drum	Silver Chub
1992	35	3.1	0.7	1.3	0.5	0.0	-	1.0	6.9	15.4	77.7	7.0
1993	40	0.3	3.7	2.6	0.0	10.0	-	47.6	11.2	14.2	11.6	18.6
1994	38	1.2	73.1	6.9	0.1	0.0	-	0.7	6.8	22.8	5.8	6.5
1995	38	1.2	0.1	0.0	0.0	0.2	-	6.1	8.1	14.1	28.1	11.3
1996	41	0.3	82.3	6.6	0.1	0.4	0.5	2.5	12.9	40.8	38.1	6.1
1997	39	4.6	104.9	3.5	1.0	0.5	12.7	84.1	29.7	57.3	21.0	25.3
1998	41	2.4	16.0	1.5	0.4	0.0	207.0	15.0	43.1	73.5	59.6	30.8
1999	38	0.4	47.1	19.9	0.7	0.0	193.6	17.7	33.6	50.6	79.4	19.0
2000	31	1.5	38.0	11.5	0.7	0.0	76.6	21.6	4.5	25.9	127.1	9.2
2001	37	0.4	10.3	3.9	0.0	0.2	104.3	2.8	7.6	57.4	166.3	8.3
2002	39	4.2	86.5	11.2	0.5	0.0	158.7	59.9	29.1	42.2	98.8	14.2
2003	36	0.0	7.1	46.0	1.3	0.0	103.0	6.0	11.4	39.8	168.4	1.8
2004	37	10.2	127.7	58.3	0.2	0.2	56.7	3.6	6.0	39.4	179.5	5.5
2005	31	0.5	2.0	1.6	0.0	0.0	75.8	0.5	3.5	33.8	78.9	6.3
2006	34	1.2	12.5	42.1	0.0	0.1	131.2	33.9	18.5	60.8	62.4	1.8
2007	29	0.0	23.6	0.5	0.0	0.0	196.0	18.7	10.2	48.2	43.8	1.2
2008	31	2.3	15.3	11.0	0.0	0.0	58.4	19.6	3.9	20.4	35.2	1.2
2009	30	1.5	57.0	4.8	0.0	1.4	226.9	9.2	5.4	17.5	81.1	0.3
2010	31	3.0	17.8	4.1	1.6	0.0	46.4	16.9	2.4	19.6	38.5	0.3
2011	37	0.7	10.0	4.1	0.2	0.0	18.4	27.9	8.1	15.0	77.2	1.1
2012	34	1.2	6.0	15.6	0.7	0.0	15.9	22.2	5.1	10.5	42.5	0.8
2013	36	0.2	3.6	25.5	0.4	0.1	46.2	6.3	12.4	13.4	57.3	0.2
2014	33	0.4	17.8	2.8	0.0	0.0	31.7	10.4	1.0	12.4	33.0	0.1
2015	34	2.4	53.0	3.8	0.0	0.5	25.0	0.1	4.4	11.6	18.9	0.2
2016	37	11.5	21.7	3.8	0.0	0.0	24.5	0.3	2.6	4.7	42.2	2.5
2017	37	0.9	1.0	1.5	0.0	5.5	25.7	11.6	1.9	28.0	43.1	1.2
2018	31	0.9	17.4	0.9	0.1	0.0	10.5	0.4	1.3	27.8	21.0	1.6
2019	34	7.8	69.8	58.0	0.1	0.0	9.1	1.7	0.0	33.9	104.4	6.0
2020	33	47.0	14.9	4.8	0.0	0.0	8.4	0.1	0.1	13.0	74.4	5.6
2021	34	6.8	23.5	4.1	0.0	0.0	16.6	0.0	2.0	10.9	105.2	5.7
2022	36	15.6	71.4	23.0	0.5	0.0	46.1	0.1	0.4	17.2	67.2	2.9
2023	35	9.9	26.3	8.0	0.1	0.3	11.4	0.0	2.5	66.4	43.0	2.5
2024	37	6.8	10.8	8.6	0.1	0.0	23.5	0.0	3.4	85.1	23.8	11.0
Mean <sup>b</sup>	35.2	4.5	33.2	12.3	0.3	0.6	69.2	14.0	9.3	30.0	66.6	6.4

<sup>a</sup> Round Goby were first caught in 1996 in this survey; all ages are combined.

<sup>b</sup> Long-term mean CPH, 1992–2022.

Table 4.1.5. Arithmetic mean catch-per-hectare of age-1 fish for selected species during September trawls in the Ohio waters of Lake Erie Management Unit 2, 1990-2024. Data are available prior for 1969-1989 but are not directly comparable to the survey beginning in 1990. White perch, white bass, walleye, yellow perch, smallmouth bass, and lake whitefish are yearlings only. All other species are yearling and older ages.

Year	Trawls (n)	Walleye	Yellow Perch	White Perch	White Bass	Smallmouth Bass	Lake Whitefish	Rainbow Smelt	Round Goby <sup>a</sup>	Emerald Shiner	Spottail Shiner	Alewife	Gizzard Shad	Trout- Perch	Freshwater Drum	Silver Chub
1990	9	0.2	23.0	89.4	0.0	0.0	0.0	13.2	-	2.5	0.0	0.0	1.5	4.1	89.3	0.0
1991	16	0.4	50.0	316.4	0.0	0.0	0.0	60.8	-	45.3	0.4	0.0	0.0	17.6	38.0	0.0
1992	18	3.3	15.0	199.1	0.3	0.0	0.0	22.0	-	4.0	0.0	0.0	0.0	13.5	16.3	0.0
1993	19	0.6	49.0	1.8	0.0	0.0	0.1	88.3	-	2.8	0.0	0.0	0.8	5.8	49.4	0.3
1994	19	3.2	12.0	1.8	0.0	0.0	1.0	97.4	4.6	4.7	1.4	0.0	0.0	2.0	14.0	0.1
1995	34	4.3	73.5	36.3	3.7	0.1	1.3	154.4	68.4	27.0	4.4	0.0	0.2	7.4	18.3	0.3
1996	35	0.0	13.2	24.7	0.4	0.1	0.3	45.1	153.6	9.7	15.0	0.0	0.0	4.9	34.9	0.4
1997	47	9.2	147.3	49.5	13.7	0.0	0.7	309.0	161.9	151.8	13.4	0.0	0.1	17.2	45.2	1.1
1998	40	1.1	6.0	4.6	0.3	0.4	0.0	72.9	179.8	1518.9	25.1	0.0	0.1	17.5	32.3	0.7
1999	42	1.0	41.8	39.3	5.1	0.1	0.3	222.9	102.3	436.5	6.1	0.0	0.8	9.0	77.1	1.9
2000	42	5.2	56.9	77.8	24.7	0.0	0.1	65.2	35.1	127.0	7.3	1.1	3.5	13.9	21.4	2.3
2001	42	0.6	5.3	18.7	0.9	0.0	0.0	60.3	52.1	89.0	2.9	0.0	0.2	3.0	17.3	0.9
2002	42	3.0	46.1	94.9	4.6	0.0	0.2	35.8	53.5	221.6	6.3	2.6	1.3	26.2	14.8	2.9
2003	38	0.1	2.9	26.1	6.0	0.0	0.0	20.7	27.5	61.0	1.4	0.0	0.0	10.7	22.4	1.7
2004	29	19.7	224.2	93.1	5.8	0.0	0.9	275.3	31.2	1.7	5.8	0.0	0.1	10.8	21.4	1.9
2005	33	1.3	19.2	34.0	0.5	0.1	0.1	40.7	38.3	266.7	0.2	0.0	0.5	17.1	18.9	2.1
2006	32	0.6	4.3	32.2	6.3	0.0	0.0	4.9	18.3	166.0	0.8	0.0	0.2	4.0	35.9	0.7
2007	32	0.6	20.7	24.0	0.5	0.0	0.0	41.3	26.9	300.0	1.6	0.0	0.0	4.2	39.5	0.1
2008	33	2.5	55.0	81.7	1.7	0.0	0.0	7.4	64.8	601.2	2.4	0.0	0.0	3.3	27.9	0.7
2009	32	1.0	20.2	45.8	1.8	0.0	0.0	368.8	60.4	127.7	1.9	0.0	0.0	0.9	9.6	0.0
2010	10	1.5	11.9	32.6	0.2	0.0	0.0	9.0	44.0	51.5	0.0	0.0	0.0	0.7	10.8	0.0
2011	32	1.1	6.3	25.9	14.9	0.0	0.0	15.6	68.6	138.2	20.7	0.0	0.0	3.3	37.3	0.3
2012	33	0.6	7.4	45.8	0.9	0.0	0.0	9.1	11.8	998.8	0.0	0.0	0.5	1.6	38.8	0.0
2013	33	0.1	34.9	195.9	22.3	0.0	0.0	8.1	24.3	298.0	0.5	0.0	0.3	3.3	23.7	0.8
2014	8	0.6	15.4	5.8	2.2	0.0	0.0	34.9	6.9	55.8	1.7	0.0	0.8	0.6	8.5	0.0
2015	12	4.6	41.3	1.7	0.0	0.0	0.2	340.8	35.8	0.9	0.0	0.0	0.0	0.7	7.7	0.0
2016	24	38.7	5.0	47.5	0.1	0.0	0.5	0.5	3.7	1.3	0.0	0.0	2.9	0.0	19.1	0.0
2017	33	2.9	3.7	29.9	1.3	0.0	0.1	53.8	19.6	0.0	0.0	0.0	0.2	0.4	48.5	0.0
2018	12	2.1	7.9	3.5	0.4	0.0	0.0	16.7	4.5	0.0	0.7	0.0	0.0	2.0	8.3	0.0
2019	12	4.5	4.5	12.1	0.2	0.0	0.0	0.0	10.4	0.0	0.0	0.0	0.0	0.6	22.7	0.0
2020	29	41.0	4.9	34.5	1.1	0.0	0.0	52.1	8.4	0.1	0.0	0.0	2.4	0.5	36.8	0.2
2021	20	7.6	13.0	9.4	0.2	0.0	0.0	15.0	1.3	0.1	0.0	0.0	0.6	1.1	11.2	0.0
2022	33	12.8	4.8	18.0	1.3	0.0	0.0	61.4	6.1	1.4	0.0	0.0	0.7	0.3	30.6	0.0
2023	32	15.1	4.7	101.7	0.3	0.0	0.0	3.0	4.5	0.0	0.0	0.0	3.5	25.0	48.7	0.0
2024	23	8.8	5.6	53.5	0.5	0.0	0.0	0.0	14.5	0.0	0.0	0.0	0.6	79.9	29.4	0.5
Mean <sup>b</sup>	28	6	30	55	4	0	0	77	44	168	4	0	1	7	29	1

<sup>a</sup> Round Goby were first caught in 1994 in this survey.

<sup>b</sup> Long-term mean CPH, 1990-2023.



Table 4.1.6. Arithmetic mean catch-per-hectare of age-1 fish for selected species during September trawls in the Ohio waters of Lake Erie Managment Unit 3, 1990-2024. Data are available for 1969-1989 but are not directly comparable with the survey beginning in 1990. White perch, white bass, walleye, yellow perch, smallmouth bass, and lake whitefish are yearlings only. All other species are yearling and older ages.

Year	Trawls (n)	Walleye	Yellow Perch	White Perch	White Bass	Smallmouth Bass	Lake Whitefish	Rainbow Smelt	Round Goby <sup>a</sup>	Emerald Shiner	Spottail Shiner	Alewife	Gizzard Shad	Trout- Perch	Freshwater Drum	Silver Chub
1990	15	1.2	12.4	67.5	0.1	0.0	0.0	18.0	-	87.4	2.2	0.0	0.0	10.8	31.6	0.0
1991	16	0.6	19.7	166.8	0.0	0.0	0.0	124.8	-	96.4	0.5	0.4	0.4	3.2	11.2	1.0
1992	18	0.0	3.3	28.2	0.6	0.0	0.0	56.2	-	3.6	1.0	0.1	0.0	24.7	18.4	0.7
1993	19	0.0	12.1	1.1	0.0	0.0	0.9	176.1	-	19.5	0.5	0.0	0.2	14.9	15.3	0.0
1994	19	2.1	3.4	0.0	0.0	0.8	0.5	15.7	0.6	4.7	6.3	0.0	0.0	20.8	1.5	0.0
1995	24	1.4	27.5	10.5	3.1	0.0	1.1	138.4	30.3	45.6	19.3	0.2	0.1	16.7	12.3	0.4
1996	30	0.1	3.5	4.1	0.1	1.5	1.6	127.4	101.3	24.2	5.0	0.0	0.1	18.0	9.6	0.0
1997	29	2.5	40.0	34.7	15.2	0.1	0.7	320.1	358.9	2.6	2.2	0.0	0.1	12.7	9.9	0.0
1998	18	1.0	3.7	0.2	0.3	2.0	0.0	67.8	118.6	22.8	5.0	0.2	0.1	14.8	6.8	0.3
1999	33	0.0	41.7	17.4	2.5	1.7	0.2	1628.3	93.6	529.2	6.3	0.0	0.3	10.4	6.8	0.5
2000	31	0.3	19.4	51.7	14.0	0.3	0.1	171.6	120.6	656.3	6.8	0.1	1.6	12.6	3.8	0.3
2001	5	0.0	0.4	0.4	1.8	0.7	0.0	2.2	88.4	0.7	1.1	0.0	0.0	2.2	14.7	0.0
2002	33	0.7	51.9	223.6	6.1	1.1	2.3	163.2	44.1	101.5	4.4	0.4	1.5	8.6	15.0	0.1
2003	33	0.1	1.0	11.1	0.9	0.1	0.2	209.9	134.1	611.0	0.9	0.0	2.2	4.0	3.3	0.2
2004	25	9.8	45.2	27.0	6.8	0.0	0.6	995.0	148.8	0.4	0.2	0.0	0.2	7.7	5.7	0.0
2005	25	0.9	132.3	20.1	0.1	0.7	0.5	30.0	263.0	479.6	3.8	0.0	0.2	76.2	10.2	2.3
2006	25	0.2	12.5	38.5	15.8	2.0	0.1	15.8	78.9	451.1	0.7	0.0	0.1	4.8	15.1	0.2
2007	25	0.1	37.0	16.8	1.1	0.8	0.0	371.0	185.6	27.8	0.6	0.1	0.0	6.7	40.7	0.2
2008	24	0.8	26.4	36.6	1.2	0.0	0.0	48.7	167.8	1159.4	2.9	0.0	0.0	8.4	3.7	0.0
2009	23	0.0	139.4	282.3	0.9	0.0	0.0	98.2	19.3	167.8	0.0	0.0	0.1	1.5	5.2	0.0
2010	8	0.0	12.4	44.8	1.7	0.0	0.0	49.8	36.0	375.1	0.0	0.0	0.0	5.0	13.2	0.0
2011	24	0.7	55.5	49.8	17.7	0.6	0.0	186.0	118.1	149.7	3.1	0.0	0.3	7.9	31.1	0.0
2012	24	0.2	23.3	7.7	0.6	0.0	0.0	95.4	27.0	433.2	3.0	0.0	0.1	11.7	4.0	0.0
2013	24	0.1	109.5	546.9	21.7	0.0	0.0	200.7	46.3	8.4	2.9	0.0	0.1	1.0	8.8	2.5
2014	12	0.9	24.2	4.4	1.1	0.0	0.0	6.2	89.1	333.5	0.0	0.0	0.0	0.4	7.3	0.0
2015	11	1.6	30.2	1.4	0.6	0.0	0.2	295.4	72.4	1.8	0.0	0.0	0.2	3.0	6.6	0.0
2016	24	22.0	8.7	55.4	0.1	0.0	1.4	17.1	16.1	0.0	0.0	0.2	1.0	0.1	6.1	0.0
2017	24	5.0	7.6	17.6	1.6	0.0	0.0	35.7	14.3	0.0	0.0	0.0	0.6	0.3	18.7	0.0
2018	12	2.4	6.6	6.6	0.0	0.0	0.0	9.4	3.5	0.0	0.0	0.0	0.0	5.3	11.9	0.2
2019	24	17.1	7.4	41.5	0.7	0.0	0.2	0.3	22.6	0.0	0.0	0.0	0.0	2.0	22.8	0.0
2020	24	18.1	0.6	12.5	1.6	0.0	0.1	129.9	17.7	0.5	0.0	0.0	0.4	2.1	4.6	0.0
2021	12	6.8	4.8	38.3	0.6	0.0	0.2	3.3	6.2	0.0	0.0	0.2	0.2	0.7	12.5	0.0
2022	24	11.6	2.8	8.0	0.3	0.0	0.0	38.9	16.0	0.6	0.3	0.1	1.1	9.6	18.9	0.0
2023	23	13.8	4.5	25.4	1.1	0.4	0.0	2.6	8.2	0.0	1.6	0.0	0.0	10.1	19.3	0.0
2024	24	8.9	6.0	34.3	0.6	0.0	0.0	0.3	30.1	6.1	0.0	0.4	1.7	66.8	8.3	0.0
Mean <sup>b</sup>	22	4	27	56	4	0	0	172	82	170	2	0	0	10	13	0

<sup>a</sup> Round Goby were first caught in 1994 in this survey.

<sup>b</sup> Long-term mean CPH, 1990-2023.

Table 4.1.7. Mean total length (mm) for age-0 fishes of select species during Management Unit 1 August trawl surveys in the Ohio waters of Lake Erie, 1992–2024. Data are available from 1969–present.

Year	Walleye Perch	Yellow Perch	White Perch	White Bass	Smallmouth Bass	Rainbow Smelt	Round Goby <sup>a</sup>	Emerald Shiner	Spottail Shiner	Alewife	Gizzard Shad	Trout- Perch	Freshwater Drum	Silver Chub
1992	145	66	47	46	-	50	-	44	59	56	72	57	60	39
1993	126	71	51	63	-	41	-	49	70	60	85	59	86	28
1994	130	68	61	73	102	40	-	41	66	99	98	61	101	34
1995	126	73	65	74	96	-	-	52	61	74	86	55	85	34
1996	128	63	53	68	-	38	-	40	60	50	87	58	85	46
1997	118	59	55	63	66	41	86	46	53	59	83	52	75	37
1998	131	72	62	78	102	39	80	53	68	47	96	58	99	32
1999	138	69	69	77	92	40	85	53	66	56	96	60	97	34
2000	149	69	57	58	-	46	92	47	66	55	71	60	66	51
2001	145	71	57	71	91	37	75	50	67	67	86	56	91	47
2002	161	68	68	83	88	45	84	54	64	58	71	60	79	55
2003	109	57	52	56	-	39	73	46	60	29	80	49	73	42
2004	146	66	49	48	-	44	60	47	65	-	89	60	76	51
2005	132	62	58	68	95	-	61	47	59	36	79	46	95	-
2006	179	78	61	81	94	40	77	53	63	-	72	59	109	-
2007	154	70	59	77	99	42	54	47	68	37	92	59	104	61
2008	140	77	62	68	102	44	55	55	66	-	90	60	95	42
2009	133	72	57	56	-	47	71	51	66	-	81	58	90	52
2010	148	76	67	82	81	-	66	57	72	33	104	60	105	70
2011	140	66	60	74	92	34	56	48	60	-	79	53	77	61
2012	171	70	60	82	95	-	66	51	73	-	90	62	99	-
2013	149	70	61	48	93	45	68	47	76	70	74	60	92	53
2014	140	69	62	60	83	46	63	52	67	-	91	57	111	-
2015	139	63	64	46	-	44	52	44	55	-	94	62	72	56
2016	126	74	68	74	87	-	68	52	65	-	94	56	95	51
2017	126	70	58	57	-	45	69	60	60	85	88	56	83	55
2018	124	70	71	81	-	-	71	63	65	-	101	56	107	61
2019	112	69	72	83	-	38	78	51	67	-	108	53	99	64
2020	106	69	67	68	89	-	67	52	65	30	105	51	94	48
2021	106	74	65	65	82	42	73	49	63	-	89	55	93	47
2022	110	73	72	80	-	39	61	-	64	34	97	63	89	71
2023	123	73	73	86	-	44	67	50	70	-	98	63	105	54
2024	124	74	70	88	105	47	77	55	70	49	90	63	111	70
Mean <sup>b</sup>	135	69	61	68	91	42	70	50	65	54	88	57	90	49

<sup>a</sup> Round Goby were first caught in 1996 in this survey; all ages are combined.

<sup>b</sup> Long-term mean total length, 1987–2023.

Table 4.1.8. Mean total length (mm) for age-0 fishes of select species during Management Unit 2 fall trawl surveys in the Ohio waters of Lake Erie, 1990-2024.

Year	Walleye	Yellow Perch	White Perch	White Bass	Smallmouth Bass	Lake Whitefish	Rainbow Smelt	Round Goby <sup>a</sup>	Emerald Shiner	Spottail Shiner	Alewife	Gizzard Shad	Trout-Perch	Freshwater Drum
1990	214	78	69	106	-	-	64	-	60	-	-	112	75	102
1991	208	92	85	143	-	-	69	-	69	-	79	136	84	78
1992	201	72	67	101	-	133	59	-	56	-	86	94	76	-
1993	-	88	74	87	121	125	65	-	67	68	-	114	68	52
1994	196	81	72	125	103	136	63	56	63	76	131	121	-	136
1995	-	72	80	121	-	126	53	49	61	62	104	129	52	51
1996	179	69	73	119	111	125	53	39	56	69	116	112	68	34
1997	183	76	76	85	60	-	62	40	55	54	92	107	-	63
1998	220	92	102	130	114	123	60	50	67	85	129	117	66	79
1999	187	88	87	124	108	187	53	48	62	73	120	124	76	43
2000	207	89	84	117	-	-	71	53	61	61	106	106	73	53
2001	189	85	78	112	-	135	49	51	73	77	130	119	78	130
2002	-	79	83	146	132	-	54	54	62	74	99	109	78	129
2003	180	76	81	114	-	140	62	45	63	-	120	122	74	93
2004	-	71	63	113	-	102	56	43	58	-	-	116	74	102
2005	189	85	88	129	139	102	42	48	68	43	-	140	67	163
2006	236	76	90	120	-	-	64	49	63	-	98	134	75	58
2007	208	76	84	118	123	-	54	42	64	83	-	125	67	49
2008	197	82	79	120	102	-	57	37	61	33	-	128	75	152
2009	203	85	79	102	-	-	63	44	66	79	-	122	63	132
2010	199	91	96	122	146	-	57	50	68	-	-	153	79	129
2011	199	77	89	129	-	-	50	45	63	36	-	118	67	85
2012	228	81	83	135	-	-	61	46	63	-	-	128	-	113
2013	216	78	85	141	-	-	56	48	58	-	117	102	78	133
2014	210	74	77	143	-	-	59	46	59	67	-	139	50	145
2015	209	72	71	137	-	165	63	51	70	-	-	113	81	147
2016	192	84	93	132	-	-	45	37	-	-	-	147	-	143
2017	182	73	77	106	-	-	50	45	-	-	112	112	-	-
2018	152	94	97	130	-	-	53	47	82	-	-	131	-	159
2019	142	88	85	129	-	-	59	47	-	-	-	148	-	155
2020	127	94	95	115	-	135	64	49	75	-	-	125	79	136
2021	142	93	103	134	-	-	60	40	78	-	-	139	-	157
2022	157	89	89	136	-	-	57	48	75	39	114	133	69	150
2023	141	91	89	125	-	-	60	45	70	-	125	136	76	134
2024	164	98	101	142	-	149	58	43	63	-	-	132	75	116
Mean <sup>a</sup>	190	82	83	122	114	133	58	46	65	63	110	124	72	109

<sup>a</sup> Round Goby were first caught in 1994 in this survey.

<sup>b</sup> Long-term mean total length, 1990-2023.

Table 4.1.9. Mean total length (mm) for age-0 fishes of select species during Management Unit 3 fall trawl surveys in the Ohio waters of Lake Erie, 1990-2024.

Year	Walleye Perch	Yellow Perch	White Perch	White Bass	Smallmouth Bass	Lake Whitefish	Rainbow Smelt	Round Goby <sup>a</sup>	Emerald Shiner	Spottail Shiner	Alewife	Gizzard Shad	Trout- Perch	Freshwater Drum
1990	194	72	64	110	-	-	65	-	58	63	124	107	75	101
1991	-	75	77	133	102	-	65	-	69	79	103	102	77	-
1992	-	69	58	-	-	140	66	-	56	65	79	86	70	-
1993	-	79	71	93	110	129	63	-	65	74	-	104	67	51
1994	195	78	65	130	107	129	63	50	63	66	119	130	-	-
1995	-	68	60	125	86	113	57	46	58	67	115	111	61	74
1996	191	67	64	124	102	133	52	38	53	62	103	100	64	79
1997	113	63	52	83	95	-	61	39	48	-	104	108	42	-
1998	218	80	85	127	145	130	61	51	68	77	139	120	70	-
1999	178	82	74	129	109	128	69	51	65	66	116	121	70	31
2000	214	85	89	115	-	-	74	53	64	-	88	101	73	-
2001	-	75	72	130	-	-	-	45	60	77	-	142	-	140
2002	-	83	79	161	-	-	54	54	68	73	77	103	67	104
2003	188	68	69	113	131	136	62	49	63	58	-	101	70	-
2004	-	81	68	117	-	105	58	48	49	-	-	110	70	-
2005	185	81	87	132	141	111	44	51	67	78	-	139	68	163
2006	-	74	87	122	105	-	63	48	64	77	116	136	66	33
2007	-	65	81	132	128	103	54	42	61	58	-	111	56	-
2008	233	80	79	125	120	-	62	39	57	45	-	117	76	167
2009	-	95	85	115	-	-	63	46	56	-	-	99	72	-
2010	201	84	98	145	119	-	59	46	64	-	-	133	72	98
2011	189	75	71	129	134	-	49	48	55	71	-	123	68	124
2012	-	85	93	139	-	-	64	47	65	-	128	119	65	-
2013	-	64	83	136	-	-	52	51	56	-	119	84	-	144
2014	182	64	73	126	-	-	51	45	64	-	-	126	51	-
2015	214	76	78	132	-	159	66	51	67	74	-	105	80	123
2016	190	74	88	137	-	-	46	42	-	-	-	164	-	-
2017	170	73	70	103	-	-	51	43	-	-	89	106	69	-
2018	156	90	98	130	-	149	59	51	-	-	-	137	-	152
2019	147	73	87	131	-	-	58	46	-	-	-	140	66	136
2020	141	77	88	131	-	116	65	50	78	-	-	129	74	147
2021	150	92	101	138	-	-	60	50	82	-	150	130	-	156
2022	164	82	83	132	-	-	55	44	77	64	112	119	66	181
2023	144	80	81	119	-	-	64	46	-	72	119	128	73	-
2024	178	94	96	139	-	-	54	49	72	-	98	138	78	-
Mean <sup>b</sup>	180	77	78	126	116	127	59	47	63	68	111	117	68	116

<sup>a</sup> Round Goby were first caught in 1994 in this survey.

<sup>b</sup> Long-term mean total length, 1990-2023.

Table 4.1.10. Relative abundance <sup>a,b</sup> of age-2 and older yellow perch from fall trawl surveys in Management Unit 1 waters of Lake Erie, 1990–2024.

Year	Trawls (n)	Age <sup>c</sup>					
		2	3	4	5	6+	All
1990	10	6.7	4.5	5.9	2.0	1.1	20.1
1991	10	3.3	3.6	0.8	0.9	0.6	9.3
1992	35	61.1	22.1	1.3	2.0	3.9	90.4
1993	40	7.1	5.2	0.4	0.0	0.0	12.7
1994	38	7.5	4.3	1.7	0.0	0.9	14.3
1995	38	15.7	0.9	0.0	0.9	0.0	17.5
1996	41	113.5	26.5	1.2	0.0	0.0	141.3
1997	39	50.2	36.3	6.2	0.0	0.4	93.1
1998	41	99.0	26.1	10.2	0.0	0.0	135.2
1999	38	17.8	41.2	7.1	1.6	0.0	67.8
2000	31	55.7	15.6	12.8	0.6	0.0	84.7
2001	37	49.4	36.3	8.9	11.7	0.5	106.8
2002	39	25.4	53.9	10.8	3.6	3.8	97.5
2003	36	71.2	4.3	13.9	8.1	3.8	101.3
2004	37	19.1	27.8	0.6	5.3	5.0	57.7
2005	31	24.8	0.5	5.8	0.2	0.0	31.3
2006	34	0.9	27.0	0.4	2.8	0.0	31.1
2007	29	17.0	0.1	9.7	0.0	1.0	27.8
2008	31	16.7	3.8	0.5	3.3	0.1	24.4
2009	30	7.8	1.0	0.2	0.1	0.5	9.7
2010	31	27.8	13.0	0.6	0.5	0.2	42.1
2011	37	10.6	10.6	7.8	1.4	0.0	30.4
2012	34	13.3	10.4	6.5	3.7	0.0	33.9
2013	36	3.1	9.2	3.8	4.1	0.4	20.6
2014	33	7.6	1.9	1.6	0.7	1.1	12.9
2015	34	21.6	0.6	0.0	0.4	0.1	22.7
2016	37	40.2	7.6	0.3	0.0	0.2	48.3
2017	37	29.2	37.9	4.4	0.3	0.0	71.8
2018	31	7.7	7.2	10.2	2.3	0.4	27.8
2019	33	5.5	1.8	1.5	2.6	0.6	12.0
2020	33	20.6	1.3	0.2	0.3	0.4	22.8
2021 <sup>a</sup>	-	-	-	-	-	-	-
2022	36	5.4	1.9	1.4	0.0	0.0	8.8
2023	36	16.2	1.9	0.3	0.1	0.1	18.6
2024	37	5.7	5.2	0.7	0.0	0.1	11.7
Mean <sup>e</sup>	33.7	26.6	13.5	4.2	1.8	0.8	46.9

<sup>a</sup> Arithmetic mean of catch per hectare.

<sup>b</sup> Data prior to 2002 standardized to new vessels with fishing power corrections (FPC).

<sup>c</sup> Scales were used to age fish prior to 2003, otoliths from 2003–present.

<sup>d</sup> No trawling due to vessel equipment failure.

<sup>e</sup> Long-term mean CPH, 1990–2023.

Table 4.1.11. Relative abundance<sup>a,b</sup> of age-2 and older yellow perch from fall trawl surveys in Management Unit 2 waters of Lake Erie, 1990–2024.

Year	Trawls (n)	Age <sup>c</sup>					
		2	3	4	5	6+	All
1990	11	8.3	3.0	11.4	2.7	1.5	26.9
1991	19	15.2	2.9	0.7	2.0	1.2	22.0
1992	22	39.7	7.7	0.2	0.2	0.9	48.7
1993	23	7.0	21.4	1.6	1.0	1.0	32.0
1994	23	8.1	4.8	2.5	1.1	0.9	17.4
1995	37	28.2	16.6	12.4	6.3	2.1	65.6
1996	37	38.5	15.1	2.6	0.3	0.9	57.4
1997	47	20.6	22.5	4.3	0.0	0.2	47.6
1998	40	38.8	18.7	7.4	1.7	0.2	66.8
1999	42	12.3	40.2	2.8	1.2	0.7	57.2
2000	42	59.5	11.6	20.8	3.0	3.0	97.9
2001	42	18.8	17.2	3.5	3.5	0.4	43.4
2002	42	5.9	24.4	12.1	1.0	1.0	44.4
2003	38	36.1	2.1	4.7	3.9	1.5	48.3
2004	29	7.8	43.0	1.1	0.6	1.6	54.1
2005	33	92.8	6.7	25.7	0.9	2.1	128.2
2006	32	3.5	80.8	5.9	26.2	14.5	130.9
2007	32	29.6	11.1	81.2	1.2	4.8	127.9
2008	33	17.1	13.7	2.1	19.7	1.9	54.5
2009	32	18.4	3.9	3.0	0.4	3.5	29.2
2010	10	9.9	8.3	1.1	0.4	0.7	20.4
2011	32	10.4	17.2	29.6	5.9	4.6	67.7
2012	33	16.3	7.1	10.7	3.3	1.3	38.7
2013	33	8.6	6.7	1.5	2.6	2.3	21.7
2014	8	48.4	18.7	6.6	0.8	5.2	79.7
2015	12	3.3	12.5	3.9	0.9	1.1	21.7
2016	24	7.6	4.0	5.6	1.3	1.1	19.6
2017	33	21.8	19.0	2.9	3.1	1.7	48.5
2018	12	7.2	2.4	1.1	0.6	0.4	11.7
2019	12	0.2	0.2	1.3	0.7	0.6	3.0
2020	29	8.2	1.1	1.4	0.0	0.1	10.8
2021	20	7.8	3.7	1.4	0.6	0.1	13.6
2022	33	4.2	2.4	0.4	0.0	0.1	7.1
2023	32	7.3	1.0	0.5	0.1	0.2	9.0
2024	23	1.4	2.9	0.6	0.2	0.3	5.3
Mean <sup>d</sup>	28.8	19.6	13.9	8.1	2.9	1.9	46.3

<sup>a</sup> Arithmetic mean of catch per hectare.

<sup>b</sup> Data prior to 1995 standardized to new vessels with fishing power corrections (FPC).

<sup>c</sup> Scales were used to age fish prior to 2003, otoliths from 2003-present.

<sup>d</sup> Long-term mean CPH, 1990-2023.

Table 4.1.12. Relative abundance<sup>a,b</sup> of age-2 and older yellow perch from fall trawl surveys in Management Unit 3 waters of Lake Erie, 1990–2024.

Year	Trawls (n)	Age <sup>c</sup>					All
		2	3	4	5	6+	
1990	15	6.4	2.4	6.6	1.6	4.4	21.4
1991	17	8.0	3.0	1.8	5.7	2.5	21.0
1992	18	6.6	3.0	0.7	0.3	1.3	11.9
1993	19	2.9	7.4	1.7	1.5	0.5	14.0
1994	19	2.5	2.2	0.5	0.4	0.9	6.5
1995	24	25.1	5.0	1.9	1.0	0.5	33.5
1996	30	9.8	3.3	0.8	0.1	0.5	14.5
1997	29	10.6	15.0	2.7	0.7	0.2	29.2
1998	18	19.3	7.2	2.2	1.2	1.1	31.0
1999	33	9.1	21.6	2.5	1.6	1.5	36.3
2000	31	51.5	10.2	27.5	3.1	3.3	95.6
2001	5	5.5	10.1	0.9	2.3	0.5	19.3
2002	33	10.4	42.1	59.6	10.9	3.8	126.8
2003	33	14.1	1.9	5.9	10.4	3.5	35.8
2004	25	2.7	59.2	2.1	4.7	8.5	77.2
2005	25	278.8	7.7	37.9	5.1	17.2	346.7
2006	25	9.0	43.3	1.8	6.3	4.0	64.4
2007	25	38.2	5.5	46.6	1.2	8.4	99.9
2008	24	15.0	7.6	0.6	11.5	3.4	38.1
2009	23	116.1	84.4	21.5	3.0	9.1	234.1
2010	8	17.3	12.1	1.1	0.3	2.5	33.3
2011	24	50.0	76.9	64.3	21.1	4.7	217.0
2012	24	32.3	15.0	13.1	14.3	4.5	79.2
2013	24	38.8	28.2	10.3	7.9	15.0	100.2
2014	12	29.2	6.1	3.9	2.8	4.8	46.8
2015	11	4.0	7.8	3.4	1.2	3.6	20.0
2016	24	9.8	4.2	5.9	1.7	4.3	25.9
2017	24	9.5	7.3	1.9	1.7	1.2	21.6
2018	12	2.2	2.4	3.7	0.0	2.0	10.3
2019	24	1.4	0.6	1.7	1.3	0.9	5.9
2020	24	4.1	1.5	0.6	0.3	0.2	6.7
2021	12	1.3	2.6	0.7	0.2	0.0	4.8
2022	24	3.0	1.3	0.4	0.0	0.8	5.5
2023	23	2.9	0.5	0.0	0.1	0.3	3.7
2024	24	0.8	0.6	0.2	0.4	0.2	2.2
Mean <sup>d</sup>	21.8	24.9	15.0	9.9	3.7	3.5	57.0

<sup>a</sup> Arithmetic mean of catch per hectare.

<sup>b</sup> Data prior to 1995 standardized to new vessels with fishing power corrections (FPC).

<sup>c</sup> Scales were used to age fish prior to 2003, otoliths from 2003-present.

<sup>d</sup> Long-term mean CPH, 1990-2023.

Table 4.1.13. Relative abundance (arithmetic mean) of age-1 and older walleye from fall canned gill net surveys in Management Unit 1 waters of Lake Erie, 1978–2024. Nets were changed from multifilament to monofilament beginning in 2016.

Year	Gill Nets (n) <sup>b</sup>	Age <sup>a</sup>							
		1	2	3	4	5	6	7+	All
1978	4	153.0	7.3	33.3	6.3	0.0	0.5	0.0	200.8
1979	4	80.0	95.5	5.0	10.8	1.8	0.3	0.3	193.5
1980	4	38.0	80.8	33.0	0.5	0.8	0.0	0.0	153.0
1981	4	152.5	65.3	43.3	17.5	1.8	1.8	0.5	282.5
1982	4	80.0	103.0	17.3	9.3	3.8	0.0	0.5	213.8
1983	2	54.5	14.0	15.5	7.0	3.5	1.5	0.0	96.0
1984	2	4.0	152.5	15.0	14.5	3.0	2.0	1.0	192.0
1985	2	87.0	3.0	111.5	5.5	2.5	0.0	0.5	210.0
1986	2	61.5	54.5	1.5	49.5	6.0	3.5	1.0	178.5
1987	7	16.7	21.1	20.6	1.7	34.4	2.7	0.7	98.0
1988	8	47.0	248.0	21.9	17.4	4.5	21.8	3.3	302.1
1989	6	41.7	34.3	111.8	25.8	15.5	1.7	11.8	242.7
1990	9	22.3	45.8	19.1	70.4	11.1	10.8	5.7	185.2
1991	7	29.7	11.0	8.4	3.6	18.4	3.1	2.6	76.9
1992	8	49.8	41.3	6.5	3.6	3.8	15.9	7.4	143.6
1993	2	7.0	87.5	13.0	4.5	4.5	2.5	6.0	125.0
1994	2	22.0	0.5	12.0	6.5	1.5	0.5	1.0	44.0
1995	2	92.0	52.0	4.5	10.5	3.5	1.0	2.5	166.0
1996	8	2.9	58.0	16.0	2.3	4.6	1.3	1.0	86.0
1997	8	19.6	1.5	21.3	7.4	1.0	3.4	2.0	56.1
1998	6	21.5	57.3	0.3	7.5	2.7	0.5	0.5	90.3
1999	7	26.0	33.7	31.3	4.4	5.0	4.0	1.3	105.7
2000	8	77.6	23.4	14.0	10.4	1.4	2.3	1.1	130.1
2001	5	8.4	94.2	16.4	6.2	5.8	0.8	1.4	133.2
2002	7	74.6	11.9	61.9	5.0	1.9	2.9	0.0	158.0
2003	7	0.0	41.7	2.4	7.7	0.4	0.7	0.4	53.4
2004	11	40.4	0.1	12.3	0.5	3.0	0.5	0.7	57.5
2005	12	2.5	59.6	0.2	2.3	0.3	1.6	0.6	67.1
2006	11	14.4	3.7	45.9	0.1	2.2	0.2	1.1	67.6
2007	12	4.7	18.1	0.8	27.6	0.3	0.8	0.5	52.8
2008	10	57.2	4.1	11.3	0.5	24.0	0.1	2.7	99.9
2009	11	18.2	41.9	2.3	3.9	0.2	16.5	1.9	85.1
2010	12	27.8	14.3	20.5	0.3	3.8	0.3	11.3	78.4
2011	12	32.1	13.3	5.3	10.8	0.3	0.6	8.9	71.3
2012	13	38.7	34.2	7.0	4.4	6.2	0.1	6.0	97.2
2013	13	13.0	16.3	8.2	1.4	0.3	1.7	1.5	42.8
2014	12	25.1	11.6	10.5	4.8	1.2	0.1	2.8	56.2
2015	12	33.8	11.0	3.6	3.6	2.6	0.4	2.8	58.2
2016	11	29.2	5.4	0.5	0.5	0.5	0.4	0.2	36.7
2017	12	9.9	26.5	4.2	0.2	0.2	0.3	0.3	42.8
2018	12	8.2	3.5	15.5	1.7	0.3	0.0	0.3	29.9
2019	12	16.3	11.0	5.5	16.5	2.9	0.4	0.3	52.9
2020	12	10.9	21.6	4.9	1.6	9.0	1.1	0.4	49.5
2021	12	6.0	16.3	7.8	1.4	0.5	2.1	0.8	34.8
2022	12	12.3	9.6	15.8	4.6	0.6	0.3	2.4	45.6
2023	12	10.0	13.1	2.5	2.8	0.4	0.0	1.2	30.0
2024	11	11.9	18.4	10.7	1.5	2.2	0.6	0.8	46.1
Mean <sup>c</sup>	8	36.5	38.6	18.3	8.8	4.4	2.4	2.2	110.3

<sup>a</sup> Scales were used to age fish before 2003, otoliths from 2003–present.

<sup>b</sup> N = number of stations sampled.

<sup>c</sup> Long-term mean includes data from the start of the survey to 2023.



Table 4.1.14. Relative abundance (arithmetic mean) of age-1 and older walleye from fall canned gill net surveys in Management Unit 2 waters of Lake Erie, 1983–2024. Nets were changed from multifilament to monofilament beginning in 2016.

Year	Gill Nets (n) <sup>b</sup>	Age <sup>a</sup>							
		1	2	3	4	5	6	7+	All
1983	2	31.5	21.5	16.0	4.0	4.5	1.0	0.5	79.0
1984	5	1.0	91.2	7.2	5.4	0.6	0.4	0.4	106.2
1985	5	43.4	1.4	62.4	6.0	2.0	0.4	0.4	116.0
1986	5	73.4	54.0	1.4	32.8	2.8	3.6	0.8	169.6
1987	13	22.2	27.5	29.7	1.5	33.8	4.4	1.5	120.5
1988	12	10.7	113.8	25.5	19.0	3.4	13.4	1.5	187.3
1989	8	21.9	24.4	82.1	19.3	13.4	0.9	10.6	172.9
1990	14	11.0	22.4	13.4	35.5	6.2	5.3	2.2	96.1
1991	17	12.1	6.4	7.5	2.8	15.4	2.3	1.6	48.1
1992	13	20.9	29.0	6.2	3.0	2.8	19.5	6.5	88.1
1993	5	9.2	34.6	12.8	2.6	2.2	1.2	4.2	66.8
1994	5	13.6	6.4	12.4	8.0	3.4	1.8	2.0	47.6
1995	6	15.0	33.5	16.3	26.3	8.0	3.7	3.5	106.3
1996	6	3.7	90.7	24.7	4.7	9.5	3.8	3.2	140.2
1997	6	42.0	3.0	36.5	9.8	1.3	8.8	1.5	103.0
1998	6	11.0	37.5	0.8	9.7	2.0	1.2	1.5	64.0
1999	7	26.7	32.4	48.1	5.3	9.9	6.9	1.6	131.0
2000	9	26.6	7.2	2.6	4.6	0.3	1.2	0.6	43.1
2001	4	4.3	53.8	13.0	7.8	11.0	1.0	4.5	95.3
2002	6	38.8	3.3	33.2	8.2	4.7	3.7	1.3	93.2
2003	6	0.0	38.7	3.7	11.7	2.7	1.2	3.5	61.3
2004	16	37.6	0.1	12.5	0.4	4.7	1.1	2.7	59.1
2005	23	2.8	82.5	0.2	11.8	0.5	2.0	2.1	102.2
2006	24	12.3	5.0	91.5	0.2	6.5	0.4	3.3	119.3
2007	13	4.9	6.7	4.1	30.5	0.3	2.1	1.1	49.8
2008	18	33.8	4.5	7.0	2.9	38.4	0.2	9.1	95.9
2009	22	8.7	34.9	7.6	9.5	1.5	53.9	9.7	126.1
2010	22	18.0	19.8	34.2	1.2	2.5	0.8	23.3	100.1
2011	17	44.1	19.4	8.9	12.2	1.5	1.5	15.1	102.6
2012	13	25.2	22.3	6.8	3.5	5.1	0.8	7.4	72.2
2013	23	9.8	24.3	19.0	3.0	2.2	4.2	5.1	67.6
2014	12	4.2	3.3	5.9	2.9	0.5	0.4	1.8	19.3
2015	12	28.9	9.9	5.5	3.8	3.8	0.8	4.7	58.4
2016	11	26.2	11.7	3.5	0.6	0.8	0.5	1.2	44.5
2017	12	2.2	22.8	5.6	0.6	0.3	0.5	1.6	33.6
2018	12	4.4	2.7	33.3	4.1	0.5	0.0	0.6	45.5
2019	13	13.4	9.5	3.4	28.9	1.9	0.0	0.1	57.2
2020	17	9.4	25.8	4.8	0.5	23.3	1.3	0.9	66.1
2021	21	5.1	20.7	9.6	1.3	0.3	7.6	0.7	45.3
2022	25	10.1	7.1	15.5	5.8	1.1	0.6	2.4	42.6
2023	22	4.5	24.2	7.1	13.5	6.1	0.4	5.0	60.8
2024	10	7.8	15.5	28.2	2.4	5.1	0.7	1.2	60.9
Mean <sup>c</sup>	12	18.2	26.6	18.1	8.9	5.9	4.0	3.7	85.5

<sup>a</sup> Scales were used to age fish before 2003, otoliths from 2003-present.

<sup>b</sup> N = number of stations sampled.

<sup>c</sup> Long-term mean includes data from the start of the survey to 2023.

Table 4.1.15. Relative abundance (arithmetic mean) of age-1 and older walleye from fall canned gill net surveys in Management Unit 3 waters of Lake Erie, 2003–2024. Nets were changed from multifilament to monofilament beginning in 2016.

Year	Gill Nets (n) <sup>b</sup>	Age <sup>a</sup>							
		1	2	3	4	5	6	7+	All
2003	2	1.5	8.0	0.5	1.5	1.0	0.0	3.0	15.5
2004	9	22.3	0.3	4.8	0.7	1.3	0.8	1.4	31.7
2005	4	1.0	44.3	0.0	8.3	0.0	0.5	1.3	55.3
2006	16	2.4	1.1	23.8	0.3	2.2	0.4	1.5	31.6
2007	4	1.3	1.5	0.8	13.5	0.3	2.5	2.0	21.8
2008	15	3.4	3.8	2.6	0.7	10.3	0.1	2.8	23.7
2009	15	3.3	8.6	2.5	3.2	0.5	8.8	2.2	29.1
2010	15	1.2	2.9	6.9	0.9	1.5	0.2	6.4	20.0
2011	15	17.8	5.8	5.3	6.7	2.3	2.6	6.6	47.1
2012	10	4.6	10.5	3.1	1.5	3.5	0.3	8.2	31.9
2013	6	4.3	2.2	11.0	7.7	3.5	1.8	8.0	38.5
2014	-	-	-	-	-	-	-	-	-
2015	5	6.7	0.8	2.8	1.0	2.6	0.6	3.4	18.0
2016	8	14.8	1.0	1.8	0.3	0.4	0.6	0.6	19.5
2017	10	2.8	29.1	1.7	0.1	1.1	0.4	2.8	38.1
2018	-	-	-	-	-	-	-	-	-
2019	10	6.7	2.3	0.7	4.2	1.2	0.1	0.2	15.4
2020	-	-	-	-	-	-	-	-	-
2021	16	0.6	4.8	5.8	1.4	0.3	0.3	0.1	13.1
2022	11	16.5	8.5	16.3	5.4	2.5	2.0	4.3	55.4
2023	13	3.4	15.9	3.8	4.3	1.5	0.2	1.3	30.4
2024	12	2.5	7.6	7.2	1.5	0.5	0.5	0.4	20.2
Mean <sup>c</sup>	10	6.4	8.4	5.2	3.4	2.0	1.2	3.1	29.8

<sup>a</sup> Scales were used to age fish before 2003, otoliths from 2003-present.

<sup>b</sup> N = number of stations sampled.

<sup>c</sup> Long-term mean includes data from the start of the survey to 2023.

**Fisheries Management and Strategies**

*List of Tables*

Table 5.1.1. Daily walleye limits for anglers in Ohio waters of Lake Erie and its tributaries based on the regulations framework in 2025.....64

Table 5.1.2. Daily yellow perch limits for anglers in Ohio waters of Lake Erie and its tributaries based on the regulations framework in 2025.....64

Table 5.1.3. Lake trout stocked in Ohio waters of Lake Erie, 2012–2024. In 2024, stocked fish were Seneca Lake strain and Lake Champlain strain lake trout from the USFWS Allegheny National Fish Hatchery.....65

Table 5.1.4. Steelhead stocked in Ohio drainages of Lake Erie, 2019–2024. In 2024, stocking strains were Shasta and Manistee River. Data prior to 2019 available upon request. ....66

Table 5.1.5. Ohio's 2024 sport and commercial harvest (pounds) of major species. Management Unit 1 commercial harvest includes Sandusky Bay and the Inland fishing district.....67

Table 5.1.1. Daily walleye limits for anglers in Ohio waters of Lake Erie and its tributaries based on the regulations framework in 2025.

If the Ohio TAC is: (numbers of walleyes)	Daily Bag Limit	
	May - February	March - April
greater than or equal to 3,000,000	6	6
950,000 to < 3,000,000	6	4
850,000 - < 950,000	5	4
750,000 - < 850,000	4	4
650,000 - < 750,000	3	3
550,000 - < 650,000	2	2
less than 550,000	1	1

Table 5.1.2. Daily yellow perch limits for anglers in Ohio waters of Lake Erie and its tributaries based on the regulations framework in 2025.

Daily Bag Limit	Lake Erie Ohio Yellow Perch TAC (pounds of fish)		
	West Zone	Central Zone	East Zone
30	$\geq 800,000$	$\geq 1,600,000$	$\geq 800,000$
20	400,000-799,999	800,000-1,599,999	400,000-799,999
10	< 400,000	< 800,000	< 400,000

Table 5.1.3. Lake trout stocked in Ohio waters of Lake Erie, 2012–2024. In 2024, stocked fish were Seneca Lake strain and Lake Champlain strain lake trout from the USFWS Allegheny National Fish Hatchery.

Year	Month	Location	Age	Number stocked
2012	Apr	Catawba ramp	Age-0	82,400
2012	Apr	Fairport Harbor ramp	Age-0	41,300
2012 Total				123,700
2013	Apr	Catawba ramp	Age-1	40,900
2013	Apr	Fairport Harbor ramp	Age-1	41,300
2013 Total				82,200
2014	Apr	Catawba ramp	Age-1	40,894
2014	Apr	Fairport Harbor ramp	Age-1	40,148
2014	Oct	Fairport Harbor ramp	Age-0	40,179
2014	Oct	Catawba ramp	Age-0	40,364
2014 Total				161,585
2015	Apr	Catawba ramp	Age-1	41,357
2015	Apr	Fairport Harbor ramp	Age-1	41,194
2015	Oct	Catawba ramp	Age-0	40,778
2015	Oct	Fairport Harbor ramp	Age-0	40,924
2015 Total				164,253
2016	Apr	Offshore Catawba, South Bass Island area	Age-1	40,112
2016	Apr	Fairport Harbor ramp	Age-1	35,959
2016 Total				76,071
2017	May	Offshore Catawba, South Bass Island area	Age-1	39,000
2017	May	Fairport Harbor ramp	Age-1	38,704
2017 Total				77,704
2018	May	Catawba ramp	Age-1	39,830
2018	May	Fairport Harbor ramp	Age-1	39,400
2018 Total				79,230
2019	May	Catawba ramp	Age-1	40,012
2019	May	Fairport Harbor ramp	Age-1	40,014
2019 Total				80,026

*Lake Trout were not stocked in Ohio in 2020 due to COVID-19 Restrictions.*

2021	Apr	Fairport Harbor ramp	Age-1	118,523
2021 Total				118,523
2022	Apr	Fairport Harbor ramp	Age-1	79,800
2022 Total				79,800
2023	Apr	Fairport Harbor ramp	Age-1	0
2023 Total				0
2024	Apr	Fairport Harbor ramp	Age-1	117,022
2024 Total				117,022

Table 5.1.4. Steelhead stocked in Ohio drainages of Lake Erie, 2019–2024. In 2024, stocking strains were Shasta and Manistee River. Data prior to 2019 available upon request.

Year	Stocking season	Location	Age	Number stocked	Avg length (mm)
2019	Spring	Ashtabula River	Age-1	55,870	195
2019	Spring	Chagrin River	Age-1	109,285	188
2019	Spring	Conneaut Creek	Age-1	75,021	192
2019	Spring	Grand River	Age-1	99,448	193
2019	Spring	Rocky River	Age-1	96,576	187
2019	Spring	Vermilion River	Age-1	73,645	200
2019	Fall	Cleveland Harbor	Age-0	76,568	135
2019 Total				586,413	
2020	Spring	Ashtabula River	Age-1	50,294	179
2020	Spring	Chagrin River	Age-1	90,756	176
2020	Spring	Conneaut Creek	Age-1	75,116	179
2020	Spring	Grand River	Age-1	90,584	175
2020	Spring	Rocky River	Age-1	97,969	179
2020	Fall	Vermilion River	Age-0	64,546	182
2020 Total				469,265	
2021	Spring	Ashtabula River	Age-1	56,686	191
2021	Spring	Chagrin River	Age-1	92,221	193
2021	Spring	Conneaut Creek	Age-1	81,966	193
2021	Spring	Grand River	Age-1	102,114	193
2021	Spring	Rocky River	Age-1	100,532	193
2021	Fall	Vermilion River	Age-0	65,453	203
2021 Total				498,972	
2022	Spring	Ashtabula River	Age-1	53,313	183
2022	Spring	Chagrin River	Age-1	93,169	183
2022	Spring	Conneaut Creek	Age-1	80,777	185
2022	Spring	Grand River	Age-1	90,169	180
2022	Spring	Rocky River	Age-1	94,530	191
2022	Spring	Vermilion River	Age-1	58,954	216
2022 Total				470,912	
2023	Spring	Ashtabula River	Age-1	50,032	174
2023	Spring	Chagrin River	Age-1	94,450	180
2023	Spring	Conneaut Creek	Age-1	75,005	179
2023	Spring	Grand River	Age-1	96,610	183
2023	Spring	Rocky River	Age-1	93,801	180
2023	Fall	Vermilion River	Age-1	55,000	174
2023 Total				464,898	
2024	Spring	Ashtabula River	Age-1	50,957	174
2024	Spring	Chagrin River	Age-1	80,530	173
2024	Spring	Conneaut Creek	Age-1	63,898	172
2024	Spring	Cuyahoga River	Age-1	60,061	174
2024	Spring	Grand River	Age-1	79,999	174
2024	Spring	Rocky River	Age-1	81,051	173
2024	Spring	Vermilion River	Age-1	50,024	172
2024 Total				466,520	

Table 5.1.5. Ohio's 2024 sport and commercial harvest (pounds) of major species. Management Unit 1 commercial harvest includes Sandusky Bay and the Inland fishing district.

Species	Management Unit	Sport Harvest			Commercial Harvest			Grand Total
		Private Boat	Charter Boat	Sport Total	Trap Net	Seine & Trotline	Commercial Total	
Walleye	1	1,902,811	402,829	2,305,640	-	-	-	2,305,640
	2	1,587,766	97,541	1,685,307	-	-	-	1,685,307
	3	1,975,140	129,287	2,104,427	-	-	-	2,104,427
	Total	5,465,718	629,657	6,095,375	-	-	-	6,095,375
Yellow Perch	1	352,525	14,462	366,987	436,029	-	436,029	803,016
	2	27,022	205	27,227	77,788	-	77,788	105,015
	3	6,897	24	6,921	156,864	-	156,864	163,785
	Total	386,444	14,691	401,135	670,681	-	670,681	1,071,816
White Bass <sup>a</sup>	1	11,278	658	11,937	378,649	13,355	392,004	403,941
	2	4,419	83	4,502	0	0	0	4,502
	3	3,345	65	3,411	62	0	62	3,473
	Total	19,042	806	19,849	378,711	13,355	392,066	411,915
Smallmouth Bass <sup>b</sup>	1	2,187	367	2,554	-	-	-	2,554
	2	1,966	0	1,966	-	-	-	1,966
	3	6,103	0	6,103	-	-	-	6,103
	Total	10,256	367	10,623	-	-	-	10,623
Freshwater Drum <sup>b</sup>	1	6,116	92	6,209	273,288	67,264	340,552	346,761
	2	3,827	0	3,827	0	0	0	3,827
	3	6,541	195	6,737	1,845	0	1,845	8,582
	Total	16,484	288	16,772	275,133	67,264	342,397	359,169
Channel Catfish <sup>a</sup>	1	18,676	32,026	50,701	509,335	418,285	927,620	978,321
	2	10,528	91	10,620	818	0	818	11,438
	3	4,014	0	4,014	9,378	0	9,378	13,392
	Total	33,219	32,117	65,335	519,531	418,285	937,816	1,003,151
White Perch <sup>a</sup>	1	2,142	211	2,352	918,723	10,260	928,983	931,335
	2	1,676	406	2,081	10,130	0	10,130	12,211
	3	2,292	41	2,333	12,525	0	12,525	14,858
	Total	6,109	657	6,767	941,378	10,260	951,638	958,405
Steelhead Trout <sup>c</sup>	1	556	126	682	-	-	-	682
	2	33,099	1,291	34,390	-	-	-	34,390
	3	36,308	4,275	40,583	-	-	-	40,583
	Total	69,964	5,692	75,655	-	-	-	75,655
Other Species <sup>d</sup>	1	-	-	-	286,785	255,890	542,675	542,675
	2	-	-	-	59	0	59	59
	3	-	-	-	3,638	0	3,638	3,638
	Total	-	-	-	290,482	255,890	546,372	546,372
All Species	Total	6,007,236	684,275	6,691,511	3,075,916	765,054	3,840,970	10,532,481

<sup>a</sup> MU2 and MU3 lengths pooled for calculating sport harvest weight.

<sup>b</sup> MU1, MU2, and MU3 lengths pooled for calculating sport harvest weight.

<sup>c</sup> MU1 and MU2 lengths pooled for calculating sport harvest weight.

<sup>d</sup> Commercial harvest of "Other Species" includes buffalo, bullhead, burbot, carp, gar, gizzard shad, goldfish, quillback, suckers, and lake whitefish.

# **Appendix: Standard Sampling Protocols for Ohio Department of Natural Resources Division of Wildlife Lake Erie Fisheries Surveys**

Updated 04/02/2025

The Lake Erie Unit of the Ohio Department of Natural Resources Division of Wildlife (ODNR-DOW) conducts annual assessments of recreational and commercial fish harvest, abundance of recreationally and commercially important fish species, abundance of key forage fish, and descriptions of trophic condition of Lake Erie and its tributaries. Many of these surveys form long time series of data useful for monitoring changes in the Lake Erie ecosystem and identifying factors that may influence those changes. The following are standard sampling protocols currently used by the Sandusky and Fairport Harbor Fisheries Research Stations of the ODNR-DOW Lake Erie Unit to conduct those assessments. Ohio surveys are conducted in three Management Units (MUs; Figure 1): MU1 (west basin), MU2 (west central basin), and MU3 (east central basin).

## **Sport Fishery Summary (*FSDS01*)**

### **Open Lake Sport Fisheries**

Ohio's private boat fishery has been assessed in some form by an access point direct contact creel survey since 1975. The current creel survey targeting both private and charter boat fisheries is conducted from Toledo to Conneaut at 40 major boat departure sites along Ohio's portion of the Lake Erie shoreline (Figure 1). These sites are grouped into six areas: Areas 1-3 are surveyed from May 1 to mid-October, and areas 4-6 from early-May to late-October. Portions of Areas 1-3 are also surveyed from April 1-30. Three weekdays and two weekend days are surveyed each week in each survey area. Survey dates and count and interview schedules are randomly selected. Each survey day includes time interval counts of boats returning from Lake Erie at all major harbors and completed trip interviews of people on boats returning to marinas, docks, and ramps within the harbors.

Boat effort is estimated from counts of private and charter boats returning to major harbor areas during 20-minute count intervals at 39 access points. Boat counts are scheduled to include coverage of the busiest hours of the day: 900-2000 hours (military time) for April, 1000-2100 hours for May, 930-2130 hours for June and July, 930-2030 hours for August, 1000-2000 hours for September, and 1100-1900 hours for October. Boat counts included all vessels except sailboats, commercial boats, and government boats that are assumed not to be involved in fishing. Boat count means and variances are expanded with monthly constants for count locations per area, count intervals per day, and days per month.

Completed trip interviews are obtained from boaters returning to harbor areas. Boat interviews identify the type of fishery (private or charter), number of anglers per boat, hours fished, the number of each species harvested and released, the grid location where the majority of time was spent fishing, and the primary target species. The duration of the fishing trip is defined as the time when actual fishing began until fishing was completed.

Calculations of angler hours and catch are computed following standard procedures (Table 1). Survey data are stratified by type of fishery, month, survey area, and weekday or weekend. The



primary location fished is coded into a grid and catch district (Figure 2). Estimates for private and charter boat fisheries are summarized by grid, district, and month.

Catch per unit effort (catch rate) is expressed as the number of fish harvested per angler hour. Catch rates are calculated for all targeted species. Differences in fishing methods, areas, and seasons for each target species do not allow catch per unit effort to be comparable across target species. If more than one species is indicated as the primary target species, they are recorded to "anything that bites" and not included in species analyses.

Angler harvest is sampled weekly to obtain fish lengths. Mean weights in grams are obtained by using species-specific length-weight regressions (Table 2). Otoliths collected from cleaning house sampling, commercial catch sampling, and fishery independent surveys are used to estimate the age of walleye, yellow perch, smallmouth bass, white bass, and white perch. An age-length key computer program assigns an age to measured fish in predetermined increments (25 mm for walleye and smallmouth bass, 10 mm for all other species) based on the age structure of sampled fish. Age structure by percent, mean length, and mean weight are calculated for each MU and season for walleye and yellow perch. Mean length and weight is calculated for smallmouth bass, white bass, white perch, freshwater drum, channel catfish, and steelhead trout.

Additional questions may be asked during the angler survey to improve Division of Wildlife understanding of angler demographics, values, and behavior. These additional questions may vary by year; past questions include zip code, angling method, and rating of trip success.

### **Sandusky and Maumee Rivers Tributary Fisheries**

A direct contact creel survey is conducted on the Sandusky and Maumee rivers from mid-March to the end of May when possible. This includes most of the spring tributary walleye and white bass fisheries, a recommendation based on our past survey results. Surveys are conducted from Ewing Island to Jerome Road on the Maumee River, and from Brady's Island to Rodger Young Park on the Sandusky River (Figure 3). Two weekdays and both weekend days are surveyed each week of the survey. All survey sites are scheduled to be sampled on each day worked. Instantaneous angler counts are completed at each site. After the count is completed at a site, the clerk stays for a pre-determined amount of time to interview anglers and collect biological data from harvested fish. Survey dates and times of counts are randomly selected within strata for month, survey location, and weekday-weekend. Angler interviews are conducted to determine hours fished, target species sought, and the number of each species harvested and released. Only completed-trip interviews are used to estimate harvest. Angler effort is estimated from instantaneous counts during daylight hours which included 0800-2000 in March, 0800-2030 in April, and 0800-2100 in May. Mean counts are expanded to angler hours by constants for daylight hours per day, days per month, and the number of count locations on each river.

Walleye length and sex data are collected to characterize harvested fish size and age by sex. Walleye lengths observed in the fisheries are categorized by sex and placed into 25-mm length bins for each river. Otoliths are collected from walleye sampled in electrofishing survey assessments and used to develop an age-length key for each river and apply proportions of ages for each 25-mm length bin, by sex, to estimate age-specific harvest for each river.

### **Commercial Fishery Summary (*FSNS01*)**

Beginning in late 2008, licensed commercial trap net operators submit electronic catch reports to track harvest and fishing effort. These data are summarized to determine total harvest (in pounds) and fishing effort for all species by month, statistical grid, and MU. The dollar value of Ohio's

commercial fish harvest is estimated based on average weekly prices reported by cooperating processing facilities and applied to weekly reported landings. Lake Erie and inland commercial fishing district seine and trotline effort and harvest are summarized based on reports submitted monthly by license holders.

Yellow perch landings are sampled in spring and fall at peak harvest areas to determine mean length, weight, and estimate age structure of the commercial harvest. Age distributions (from otoliths), length data, and length-weight regression equations are used to estimate harvested age groups in pounds and numbers.

## **Population Assessments (FSDS01)**

Assessment surveys are conducted annually to assess the relative abundance and growth of major predator (walleye, yellow perch, white bass, smallmouth bass) and forage (white perch, gizzard shad, emerald shiners, rainbow smelt, round goby) species in the Ohio waters of Lake Erie. Information from trawl and gill net surveys are collected for interagency (Great Lakes Fishery Commission's Lake Erie Committee [LEC]) population modeling purposes and to assess temporal and spatial changes in the Lake Erie fish community. Other surveys are designed to assess specific species, fish communities, or trophic status to inform and assist with Lake Erie fisheries management in Ohio.

### **Trawl Surveys**

All bottom trawl relative abundance indices are computed as arithmetic mean catch-per-hectare (CPHA). Due to a change in vessel in 2002, the West Basin indices prior to 2002 are adjusted with fishing power correction (FPC) factors (Tyson et al. 2006). Similarly, a change in trawl net configuration occurred in the Central Basin in 1995, so FPCs were applied to those indices prior to 1995. The derived FPCs are species- and age-group specific and are applied to those groups for which there were adequate samples to determine statistical differences based upon an a priori decision rule (Monro 1998, Tyson et al. 2006). Further, all catches were converted to catch per hectare (CPHA) based on the sample-specific area swept by the trawl. Area is estimated by multiplying net gape width (measured during an interagency SCANMAR mensuration equipment exercise in 1992; Forage Task Group 1994) by distance travelled while trawling (using waypoints collected with an onboard GPS receiver). This increases sample comparability by considering variability in vessel speed and distance towed at different sites instead of just using a fixed amount of time, as previously calculated.

Any reference to average length or weight of fish refers to mean total length in millimeters (mm) and mean wet weight in grams (g). Selected fish species are analyzed for sex and maturity. A sub-sample of selected species are sampled for age estimation and diet composition through laboratory examination. Fish ages are estimated using otoliths removed from a length-stratified random subsample of each of the primary-reported species. Before 2003, ages for walleye were estimated using scales, thus these age estimates for walleye older than age-4 should be used with caution. Since 2003, ages for walleye have been estimated with sagittal otoliths. Age-length keys are used to assign ages to non-sampled species based on age and length distributions for each species, month, and management unit.

#### *West Basin Trawl Survey*

In MU1, trawl surveys are conducted with the Research Vessel (R/V) *Explorer*, docked in Sandusky. Trawling is stratified over four depth strata (0–3 m, 3–6 m, 6–9 m, and > 9 m) with effort

allocated in proportion to the number of available sampling units (2.5-minute grids) per strata. One 10-minute tow is conducted at each site using a flat-bottom semi-balloon otter trawl with a 10.7-m head rope, 13-mm bar mesh in the cod end, and a 5-mm stretched mesh liner in the cod end. The August interagency survey and the September survey target 37 fixed sites (Figure 4); only 23 sites are planned during May, June, and July due to the logistic constraints imposed by other field projects. Relative abundance results are summarized for the reduced survey and are available upon request.

A water temperature (°C) and dissolved oxygen level (D.O.; mg/L) profile is recorded at each site prior to trawling; a second D.O. profile may also be recorded when hypoxia may be present (July and August). A Secchi depth (m) is measured at each site prior to deploying the trawl. An Effort Status is assigned at the completion of the 10-minute tow; an Effort Status of 1 is assigned to 'good' tows, where other numeric Effort Status are assigned based on the resulting tow (i.e., hung net, torn net, debris in the trawl). Only data from tows when Effort Status = 1 are included in index calculation. Sites with bottom D.O. less than 2.0 mg/l are excluded from index calculations due to potential hypoxia-induced avoidance by fish (Forage Task Group 2012; Kraus et al. 2015).

Following the retrieval of the trawl, the catch is sorted by species and relative length (proxy for age) and counted. Seasonal species-specific age-length keys are used to assign fish ages. Age classes vary by species; walleye, yellow perch, white bass, and white perch are classified as Age-0, Age-1, or Age-2+, while most other species are classified into Age-0 and Age-1+. Round goby are not sorted by age. Once sorted, the catch is counted by species and age, and a subsample of up to 30 individuals from each species/age are measured for total length (mm). In circumstances with high catches, the catch may be subsampled by weight due to time constraints. Typically, these subsamples are still sorted by species and age, weighed, and 10% (by weight) are counted; this count is then multiplied by 10 to estimate the total catch. In cases of prohibitively high catches, the entire catch may be subsampled without sorting, although this method is known to be less accurate than sorting-then-subsampling (ODNR-DOW, unpublished data).

Yearling and adult yellow perch are retained by site for additional laboratory analysis (total length, weight, sex, maturity) and otolith removal for estimating ages. A subset of each forage fish species is retained for precise length/weight measurements in the laboratory.

Abundance indices are available for select species each survey May–September by contacting the Sandusky Fisheries Research Station. Some August and September survey data are available in Ohio's Lake Erie Fisheries Annual Data Report. August survey data are also combined with Ontario Ministry of Natural Resources (OMNR) trawl data to form the basin-wide Interagency trawl summary under the direction of the LEC and are available in the Walleye, Yellow Perch, and Forage Task Group annual reports. Fishing Power Corrections (FPCs) are applied to Ohio trawl catches for the entire time series to correct to the OMNR R/V *Keenosay* (Tyson et al. 2006).

### *Central Basin Trawl Survey*

Central basin bottom trawl surveys are conducted with the R/V *Grandon* docked in Fairport Harbor. Trawling is conducted before (June), during (August), and after (October) lake stratification and includes a total of 57 trawls spanning three transects in MU2 (Lorain, Cleveland, and Chagrin) and 2 transects in MU3 (Perry and Ashtabula; Figure 4). Three stations per depth strata (5–10 m, 10–15 m, 15–20 m, and >20 m) are trawled at each transect using a Yankee two-seam bottom trawl with a 10.4-m head rope, 25-mm bar mesh in the cod end, 13-mm stretched mesh liner, and 25.4-cm roller gear. Five-minute tows are conducted at sites with depths less than 10 m; ten-minute tows at sites greater than 10 m. Trawl catches are enumerated by species and age (which is determined from the previous month's survey). Indices are weighted to account for uneven sampling by site and station depth.

One vertical profile of temperature and D.O. is collected monthly at each depth strata in each transect before the trawl is deployed. If D.O. readings are less than ~4 mg/L, additional profiles are

collected at the beginning and end of all trawls in that strata to better assess the role that hypoxia plays regarding fish distributions. Catch rates include trawls that were conducted in hypoxic conditions. These trawls are included for two main reasons. First, omitting extreme low catches in hypoxic areas can artificially inflate index values (Kraus et al. 2015). Second, individual trawls are difficult to classify as hypoxic or normoxic over the entire 800m of distance swept due to the patchy nature of the hypoxic zone in the central basin.

Biological information is also collected in addition to catch data. Age classes match those in MU1 except gobies in MU2 and MU3 are further divided into age-0 and age-1+. From each trawl, the lengths of ten of each species and age class are recorded in the field. Subsamples of yellow perch, walleye, white bass, whitefish, white perch, smallmouth bass, steelhead, and rarely collected species are taken for additional length, weight, sex, maturity, age estimation, and diet sampling in the laboratory. Using a stratified random subsample for selected species, diet samples are taken by removing the stomach contents of the fish and examining the mouth, throat, and digestive tract for any ingested items. Fish with inverted or empty stomachs are not included in the diet analyses. Samples of fish, plankton, and other invertebrates are identified to the lowest discernable taxa. Counts, or wet weight of diet items, are converted to dry weights for caloric value of fish consumption by using in-house developed conversion tables for prey number or wet weight to dry weight. Diet analysis summaries are reported as percent dry weight except where noted.

Survey data from October are presented in this report, but information from the remaining surveys is available by contacting the Fairport Fisheries Research Station. Trawl data from MU 2 and MU 3 are also included in annual reports of the Yellow Perch, Forage, and Coldwater Task Groups.

## **Fall Gill Net Surveys**

A fall gill net survey designed to assess adult abundance of walleye and white bass in Lake Erie began in 1978. The survey design has changed through the years, including expanded effort and changing survey gear. While the initial survey focused on the west basin, the survey was expanded in 1983 to include the central basin due to the migratory nature of walleye in Lake Erie and to get broader spatial coverage of walleye habitat. In 2016, monofilament, rather than multifilament, gill nets were used for the first time to better characterize the age structure of walleye in Ohio's waters of Lake Erie (Vandergoot et al. 2011; Kraus et al. 2017).

Fifty-two gill net sites are targeted for sampling from Toledo to Conneaut (Figure 5), including 12, 24, and 16 in MU1, MU2, and MU3, respectively. In MUs 2 and 3, sites are selected by 5-m depth strata (< 5, 5–10, 10–15, 15–20, and >20 m) from transects that correspond with the trawl survey. Overnight sets of monofilament gill nets are suspended (canned) 1.8 m below the surface at each station. Nets consist of a gang of 12 randomly ordered panels, each 30.5 m (length) by 1.8 m (height) and range from 38 to 178 mm stretched mesh in 12-mm increments. Effort is expressed as number of nets set.

One notable change to survey sites occurred in 2024. Site 17 was moved 4 kilometers north to avoid conflicts with freighter traffic entering and exiting Sandusky Bay.

Abiotic information (water temperature and D.O. at 2 meters, Secchi depth) are recorded at each net site. Nets are retrieved and transported to either the Sandusky or Fairport Harbor Fisheries Research Station to be processed. Catch is enumerated for non-sportfish species using length-based age classes. All sportfish species (walleye, white bass, white perch, yellow perch, steelhead, lake whitefish, smallmouth bass, burbot) undergo biological data collections (length, weight, sex, and maturity). Otoliths are removed from a random length-stratified sample of male and female walleye, white bass, and white perch in each MU; otoliths are used to estimate fish age and inform sex- and MU-specific age-length keys that apply age estimates to the rest of the catch.

Diet information for walleye, steelhead, smallmouth bass, and burbot is recorded for fish from each gill net site. For walleye: 5 diets from fish > 500 mm and 5 diets from fish < 500 mm are taken (maximum of 10 per site). For steelhead, smallmouth bass, and burbot, diet information is recorded for all fish encountered within a site. White bass (n=5 per site) diet information is only recorded from one near-shore (<15 m) and one off-shore (>15 m) site at each transect. All diet items are identified by species and length type; length measurements (mm) are recorded as: total length (TL), fork length (FL), standard length (SL) or backbone length (BB).

Relative abundance indices of age-1 and older walleye and white bass are calculated from fall gill net catches as the arithmetic mean of the catch per gill net set. Age-specific catch rates are reported by species across MUs. Survey results are available in the ODNR-DOW annual Lake Erie Fisheries status report and are used by the LEC Walleye and Coldwater Task Groups.

## **Smallmouth Bass Gill Net Surveys**

Standard annual fall gill net and bottom trawl surveys historically did not capture sufficient smallmouth bass to describe population dynamics; therefore, a smallmouth bass assessment gill net survey was initiated in 2006. The current survey objective is to sample adult smallmouth bass for assessment and population analysis; as the popularity of catch-and-release has increased, the ability of ODNR-DOW to obtain creel samples has been eliminated.

The smallmouth bass gill net survey has evolved over time to improve survey efficiency. Prior to 2017, each net consisted of a gang of 13 sections (original order was randomly determined and fixed in following years; 198 m gang length): 15.2 m long by 2.4 m tall, with stretched mesh sizes from 25-178 mm (in 13 mm increments; i.e., panels of 25, 38, 152, 178, 102, 165, 64, 127, 51, 76, 89, 140 and 114 mm). Beginning in 2017, the panel number and mesh sizes were modified with the following in mind: (1) increase catch of target-age smallmouth bass (Ages 0-3), (2) reduce catch of older smallmouth bass (Age 4+) (3) maintain by-catch at reasonable levels and (4) reduce effort and expense by using fewer, but targeted, panels. The 2017 configuration change reduced the total net length (152 m gang length) by eliminating the least efficient mesh sizes (< 64 mm and > 114) and doubling the number of the most efficient size (64 – 114 mm; 10 panels; configuration: 64, 102, 89, 114, 102, 64, 76, 89, 114, and 76 mm). An evaluation of this 2017 configuration revealed that the new net configuration did not appear effective: catches of ages 1-3 Smallmouth Bass were actually lower, while bycatches were greater for all MUs (Slagle and Knight 2019). To reduce bycatch, each station replaced the smallest mesh (64 mm) with various larger meshes: Fairport in 2021 and Sandusky in 2024. The current 10-panel configuration and order is: 1<sup>st</sup> panel variable (114, 127, 140, 152 mm), 102, 89, 114, 102, 6<sup>th</sup> panel variable (114, 127, 140, 152 mm), 76, 89, 114, and 76 mm at the Sandusky Station; 1<sup>st</sup> panel variable (140, 152, 165 mm), 102, 89, 114, 102, 6<sup>th</sup> panel variable (140, 152, 165 mm), 127, 89, 114, and 127 mm at the Fairport Station. In 2022, the objectives were changed to: 1) Sample adult Smallmouth Bass for assessment and population analysis and to obtain biological data, and 2) Explore optimal conditions to maximize Smallmouth Bass catch rates and create fixed sites for future surveys, including the incorporation of substrate mapping to better optimize site selection.

Catch rates are expressed in number of fish caught per net per night fished. Sampling is conducted during the first two weeks of September, preferably after the fall turnover. However, September trawling and subsequent fall gillnetting often preclude waiting on the fall turnover. Nets are fished overnight, set after 1600 hours and pulled before 1100.

For each net set, the date and time set and pulled, depth and coordinates at the beginning and end of each net station, water temperature (surface and bottom), bottom D.O. and Secchi depth are all recorded. Each smallmouth bass is weighed (g) and measured (mm). Sex and maturity are visually assessed, and aging structures (otoliths) are removed. Diets are collected in the lab. Diet items are

identified to species when possible and measured (mm) as total (TL), fork (FL), standard (SL) or backbone (BB) length. Bycatch is enumerated by age-code according to trawl-length age-code break guidelines. Optionally, ten bycatch fish are measured by species and age-code per net. No diet collections are performed for bycatch.

#### *West Basin*

In MU1, two locales are typically sampled (the Bass islands and Kelleys Island) with four net sets in each locale. Historically, sites were randomly distributed around the locales; beginning in 2016, productive sites have been fixed (Figure 6).

#### *Central Basin*

In MU2, sampling does not occur every year; therefore, sites are not fixed at this time. Generally, sample locales are located off Vermilion near Ruggles Reef and Sherod Park (2-4 sets) and near Avon (2-4 sets) and are sampled as weather permits. MU2 site selection will change in future surveys in response to sites with higher catch rates of smallmouth bass and targeting new areas with optimal habitat. In 2024, MU2 was sampled with four sets each near Rocky River and Ruggles Reef. In MU3, two locales (Perry and Ashtabula) were sampled, with four net sets each (Figure 6). Fixed sites were established in 2016 in MU3 but may be modified if hypoxic waters are present. All nets are set in <30' of water over rocky substrate.

### **Hydroacoustic Surveys**

Lake Erie hydroacoustic surveys estimate important forage fish densities including Gizzard Shad and Emerald Shiner in the West Basin (WB), Rainbow Smelt and Emerald Shiner in the Central Basin (CB), and Rainbow Smelt in the East Basin (EB). Historical survey designs were based on cross-lake transects that routinely experienced challenges that inhibited survey completion. In 2022, hydroacoustic surveys across the three basins implemented a new standardized whole-lake approach following a multi-year survey evaluation and redesign process. The new stratified-random grid approach reduces the overall survey effort, emphasizes data collection in strata with the greatest variability, and provides greater operational flexibility. A thorough description of historical surveys and the redesign process can be found in FTG (2022). Implementation and evaluation of the standardized whole-lake survey design continued during 2023.

#### *Field Methods*

The whole-lake survey design uses a stratified approach within each of the three basins (Fig. 3.0.1). Each basin is subdivided into smaller strata based in part on depth, water quality characteristics, forage species compositions, and historical strata. Total sampling effort (i.e., kilometer of transect) in each basin was established through an analysis of historical data to achieve a target precision (Relative Standard Error < 15%). Within basins, sampling effort across strata was apportioned based on strata size and historical data variance. Random sites are selected from within each strata using a 5-minute grid (Figure 7). Transects (5 km) must pass through the centroid of the grid but can be surveyed in any direction based on weather or logistical considerations. Hydroacoustic transect data are collected with the ODNR R/V *Almar* in the WB, USGS R/V *Muskie* in the CB, and OMNR R/V *Erie Explorer* in the EB.

Data collection begins 0.5 h after sunset and is completed by 0.5 h before sunrise. Collection settings during the survey in the Central and East basins include 4 pings per second (pps), a 0.4 milli-second (msec) pulse length, and a -130 dB minimum collection threshold (Table 3.0.1), following recommendations in Parker-Stetter et al. (2009). Collection settings in the West Basin use 10 pps and a 0.2 msec pulse duration to accommodate shallow waters and high fish densities.

The sampling environment (water temperature) is set to the temperature at 2 m depth on the evening of sampling. Temperature and dissolved oxygen profiles are collected at each grid. Sampling generally occurs around the new moon phase in July.

Currently, midwater trawling only occurs in the CB with the OMNR R/V *Keenosau* operating in Ontario waters and the ODNR R/V *Grandon* operating in U.S. waters. Midwater trawl samples are collected at grid locations in concordance with the hydroacoustic data collection. Up to four midwater trawls are conducted in each grid, with trawl depths distributed among the epilimnion, metalimnion, and hypolimnion to capture the fish community distribution across depths. Trawl catch is sorted by species and age group, and a subsample of fish are measured (total length). Temperature and dissolved oxygen profiles are collected at each sample grid.

### *Data Analysis*

Hydroacoustic data are analyzed using the ‘erieacoustics’ R package (Holden and DuFour 2023) which interacts with standardized processing templates developed in Myriax software Echoview 14.0 (Echoview 2023). Each 500-m sample interval (EDSU; elementary distance sampling unit) is partitioned vertically into epilimnetic and hypolimnetic layers based on fish distribution and water temperature profiles. Analyses produce areal fish density (fish per hectare) estimates and size frequency distributions for each EDSU and layer along each 5-km transect.

Trawl catches are associated with the sampled stratum, grid, and layer. Similar to hydroacoustic data, trawl samples are partitioned into epilimnetic and hypolimnetic layers based on trawl depth and thermocline depths identified by hydroacoustic data and temperature profiles. Trawl catches are clustered into five species groups, including all ages of Emerald Shiner, age-0 Rainbow Smelt, age-1+ Rainbow Smelt, age-0 Yellow Perch, and others. For complete results, please see the Forage Task Group report (FTG 2025).

### **Lower Trophic and Limnological Sampling**

Lower trophic and limnological samples are collected in a cooperative effort between ODNR-DOW, The Ohio State University, and the Forage Task Group (FTG) of the Lake Erie Committee. This program seeks to monitor long-term trends in lower trophic level interactions that affect the recruitment of sportfish species in Lake Erie. As part of this effort, sixteen sites are sampled bi-weekly in Ohio waters from May through October (in some years beginning in April; Figure 8). Lower trophic sampling sites have been selected to represent the range of physical and chemical processes within each of the MUs. There are eight sites in MU1, four sites in MU2, and four sites in MU3.

At each lower trophic site, weather conditions, wave height, and water depth are recorded. Water clarity is estimated using a Secchi disk lowered over the shady side of the vessel. A YSI ProDSS water quality sonde is used to measure surface and bottom temperature and dissolved oxygen; a profile of these two parameters is also recorded across the water column. Zooplankton samples are collected by fishing a 0.5-m diameter, 63- $\mu$ m mesh conical plankton net down to 1 m off the bottom, then retrieved. A flow meter is used to estimate the volume of water filtered by the net. The resulting zooplankton sample is then fixed with a 10% formalin solution.

Composite water samples are collected at each site (integrated sample of twice the Secchi depth) and preserved for later processing of chlorophyll-a, and phytoplankton. A 1000-ml water sample is collected for measuring chlorophyll-a; the water sample is filtered after sampling, and the frozen filter is sent to the Ohio State University for processing. Another water sample is fixed with Lugol’s Solution and sent to the Ohio State University for phytoplankton species identification. A final water sample is collected at four sites (two sites each in MUs 1 and 2), frozen, and transported

to the National Center for Water Quality Research at Heidelberg University for phosphorus analysis. A subset of these data is submitted to the Forage Task Group for inclusion in the FTG Lower Trophic Level Assessment Database; summaries of lakewide water quality parameters can be found in the FTG annual reports, available at the Great Lakes Fishery Commission website ([www.glfc.org](http://www.glfc.org)).

### *West Basin*

Management Unit 1 sites are located within the Maumee River plume, the Detroit River plume, between the islands, and east of the islands near the MU1-MU2 boundary (Figure 8). Site depths range from 6.0 m to 13.5 m.

### *Central Basin*

Central basin sites are located near the MU2-MU3 boundary at Chagrin and Perry (Figure 8). At both locations, sites are in four depth strata that correspond to those used in the central basin bottom trawl surveys (5-10 m, 10-15 m, 15-20 m, >20 m).

## **Assessment of the Nearshore Fish Community**

In 2011, ODW collaborated with the University of Toledo to develop a nearshore survey that would maximize habitats and species richness sampled while minimizing resource requirements (i.e., labor, number of good weather days, etc.). Prior to this work, ODW lacked information on the present status and trends in the littoral fish community. The goals of the survey were to (1) assess the composition and abundance of the fish community in the nearshore habitats of the west basin of Lake Erie and (2) track changes to the nearshore fish community over time. This early work established early summer, nighttime electrofishing as optimal for maximum number of species detected for any one method (Ross et al. 2016). Sampling begins in June and runs through July in MU1 and from July through August for MU2 and MU3.

Sampling methodology is adapted from that developed by the Ohio Environmental Protection Agency (OEPA) for sampling the shoreline of Lake Erie. Both basins are sampled using a 7 m Midwest Lake Electrofishing Systems aluminum boat with a 120-volt, 7000-watt Honda EU7000is generator operated at 60 Hz with a 5.0 GPP Midwest Lake Electrofishing Systems Infinity control box. Electrofishing is conducted with DC current at 60 pulses per second. Conductivity ( $\mu\text{S}/\text{cm}$ ) is measured using an Extech EC100 conductivity meter. Power is adjusted for varying conductivity conditions to target 5-6 amps, generally ranging from 40 to 60% power (Miranda 2009). Electricity is transferred through the water by two 1.2 m circumference dangler anodes (suspended ~ 10 cm below the water from two 2.6 m booms) and cathode (the boat hull). Two netters collect as many fish as possible from the bow platform of the electrofishing vessel; however, in 2020 only one netter was used due to COVID-19 safety protocols.

Electrofishing begins 0.5 h after sunset. The start and end locations of each transect are preloaded onto the Lowrance HDS-12 chartplotter prior to departure that evening. Catches are processed following the completion of each site. Fish are sorted by age class (young-of-year, juvenile, and adult) and species based on size classes used on other ODNR-DOW Lake Erie surveys (e.g., gillnet and trawl). Fish are enumerated and weighed by species and age classes. Weights (g) and lengths (total lengths in mm) of individual sportfish (usually, bluegill, largemouth and smallmouth basses) are also recorded. All individuals are examined, and deformities and injuries are recorded. Fish that are not able to be easily identified or catches that are too high to easily handle in the field are preserved on ice and brought back to the lab for identification and weighing. Since 2016, a subset of largemouth bass are sacrificed for age and growth. In addition to fish data, surface water temperature ( $^{\circ}\text{C}$ ) and depths at the start and end of each transect (m) are recorded from the Lowrance



HDS-12 chartplotter. Electrofishing time (seconds) is recorded from the control box for each site/transect.

Stock density indices (Willis et al. 1993) are calculated for bluegill and largemouth bass, and two different indices of biotic integrity (IBI) are calculated to help describe the relative habitat quality using the characteristics of the fish community present at each site. The first IBI was developed for Great Lakes coastal areas by Minns et al. (1994) and has been used in this survey since 2009. This IBI uses a scale from 0 to 100 (with the higher score indicating greater biotic integrity) to assign a relative measure of fish community quality. The second IBI calculated is one used by the Ohio Environmental Protection Agency in Lake Erie lacustrine habitats (Thoma 1999). Used for the first time in 2013 to describe the sites in this survey, this IBI uses a scale to assign a relative measure of habitat quality based on the calculated numeric value for each site (0-17 = very poor, 17-31 = poor, 31-42 = fair, 42-50 = good, and >50 = exceptional).

### *West Basin*

Twenty assessment sites located in MU1 along the Ohio shoreline of Lake Erie from the Maumee River mouth to just east of the Vermilion River were selected by Ross (2013; Figure 9); two have since been discontinued (20 and 21). These sites were selected to sample within a suite of geomorphic shoreline features (beach, bedrock, bluff/bank, and wetland) and within areas affected by regional water masses. These sites reflect the range of physical and hydrologic influences on the nearshore fish community of this portion of Lake Erie.

Ten standard sites are sampled annually and two rotational sites that are sampled a minimum of every five years. Each year, a variable number of sites are completed due to inclement weather and time constraints imposed by other projects (range = 10–20). Ross et al. (2016) found that 75% of species richness could be determined with only 11 sites. In 2018, a review of previous years' data revealed that this rotation was not frequently achieved due to weather and time restrictions. Therefore, beginning in 2018 the survey moved away from attempting a rotation and focus more on sites that are most likely to support a diverse fish community and are easier to access. Since 2018, 14–17 sites have been sampled annually. Most sites consist of a 500-meter stretch of shoreline; four sites (6, 7, 9, and 17) have shorter sampling distances due to the limited availability of the desired habitat to be sampled or limited access caused by fluctuating water levels.

### *Central Basin*

In 2016 the nearshore survey was expanded to the central basin as a cooperative project among the University of Toledo's Lake Erie Center, OEPA, ODNR- Office of Coastal Management and ODNR-DOW (Simonson 2017). The specific goal of the cooperative project was to examine relationships between coastal shoreline habitat and the nearshore fish community and identify locations that will become standard sampling sites for the nearshore survey sites.

Sites were selected to provide even coverage of geomorphic shoreline types based on dominant substrate geology, extent of vegetation, river plumes, exposure to wind/wave energy, and potential areas for future habitat improvement. Based on Simonson's work, 2018 sites were selected in MU 2 and 3 near major harbors (Lorain, Cleveland, Fairport, Ashtabula, and Conneaut), with two transects inside the break walls and one transect outside the harbor being surveyed (15 total sites; Figure 9). This survey design is intended to align the survey with the Lake Erie Committee's Fish Community Objectives (Francis et al. 2020) focus on Centrarchid and Esocid assessment and habitat while preserving some open lake sites. Sampling protocols are identical to those used in MU1 to maintain sampling consistency across management units.

## References

- Echoview Software Pty Ltd, 2022. Echoview Software, Version 12.1. Echoview Software Pty Ltd, Hobart, Australia.
- Forage Task Group. 1994. Report of the Lake Erie Forage Task Group. Lake Erie Committee, Great Lakes Fishery Commission.
- Forage Task Group. 2012. Report of the Lake Erie Forage Task Group 2012. Lake Erie Committee, Great Lakes Fishery Commission.
- Forage Task Group. 2025. 2024 Report of the Lake Erie Forage Task Group. Presented to the Standing Technical Committee, Lake Erie Committee of the Great Lakes Fishery Commission, Ann Arbor, Michigan, USA.
- Francis, J., Hartman, T., Kuhn, K., Locke, B., and J. Robinson. 2020. Fish Community Objectives for the Lake Erie Basin. Available at [www.glfc.org/pubs/FisheryMgmtDocs/Fmd20-01.pdf](http://www.glfc.org/pubs/FisheryMgmtDocs/Fmd20-01.pdf)
- Holden, J., and DuFour, M. 2023. erieacoustics: Analysis Tools for Erie Acoustic Surveys. R package version 0.3.0.
- Kraus R.T., C. T. Knight, T. M. Farmer, A. M. Gorman, P. D. Collingsworth, J. Warren, P. M. Kocovsky, and J. D. Conroy. 2015. Dynamic hypoxic zones in Lake Erie compress fish habitat, altering vulnerability to fishing gears. *Canadian Journal of Fisheries and Aquatic Sciences* 72: 1–10.
- Kraus R.T., C.S. Vandergoot, P.M. Kocovsky, M.W. Rogers, H.A. Cook, and T.O. Brenden. 2017. Reconciling catch differences from multiple fishery independent gill net surveys. *Fisheries Research* 188 (2017) 17–22.
- Minns, C.K., V.W. Cairns, R.G. Randall, and J.E. Moore. 1994. An Index of Biotic Integrity (IBI) for fish assemblages in the littoral zone of Great Lakes' Areas of Concern. *Canadian Journal of Fisheries and Aquatic Sciences* 51:1804-1822.
- Miranda, L. E. 2009. Standardizing electrofishing power for boat electrofishing. Pages 223–230 in S. A. Bonar, W. A. Hubert, and D. W. Willis, editors. *Standard methods for sampling North American freshwater fishes*. American Fisheries Society, Bethesda, Maryland.
- Monro, P.T. 1998. A decision rule based on the mean square error for correcting relative fishing power differences in trawl survey data. *Fishery Bulletin* 96: 538-546.
- Parker-Stetter, S. L., L. G. Rudstam, P. J. Sullivan and D. M. Warner. 2009. Standard operating procedures for fisheries acoustic surveys in the Great Lakes. Great Lakes Fishery Commission Special Publication. 09-01.
- Ross, J. E. 2013. A coastal monitoring program for a large lake fish community: the first step in capturing long-term trends and addressing evolving questions. Master's thesis. University of Toledo.

- Ross, J. E., C. M. Mayer, J. T. Tyson, and E. J. Weimer. 2016. Comparison of electrofishing techniques and effort allocation across diel time periods, seasons, sites, and habitat in the Ohio coastal waters of western Lake Erie. *North American Journal of Fisheries Management* 36(1):85–95.
- Simonson, M. A. 2017. Modeling nearshore fish community response to shoreline types in Lake Erie. Master's thesis. University of Toledo Department of Biology.
- Thoma, R.F. 1999. Biological monitoring and an Index of Biotic Integrity for Lake Erie's nearshore waters. In *Assessing the Sustainability and Biological Integrity of Water Resources Using Fish Communities*. T.P. Simon (eds.). CRC Press. New York. pp. 417-461.
- Tyson, J.T., T.B. Johnson, C.T. Knight, and M.T. Bur. 2006. Intercalibration of research survey vessels on Lake Erie. *North American Journal of Fisheries Management* 26: 559-570.
- Vandergoot, C.S., P.M. Kocovsky, T.O. Brenden, and W. Liu. 2011. Selectivity evaluation for two experimental gill-net configurations used to sample Lake Erie walleyes. *North American Journal of Fisheries Management* 31: 832-842.
- Willis, D.W., B.R. Murphey, and C.S. Guy. 1993. Stock density indices: development, use, and limitations. *Reviews in Fisheries Science* 1:203-22.

Table 1. Method of calculating boat trips, angler hours, and harvest per grid, area, and month.

a) Boat trips for the  $i^{\text{th}}$  area + day of week strata:

$$T_i = (b_i) * (I_i) * (D_i) * (L_i) \quad \text{where:}$$

$T_i$  = estimated number of boat trips

$b_i$  = mean number of boats counted in 20-minute interval

$I_i$  = number of 20-minute count intervals per day

$D_i$  = number of days per month

$L_i$  = number of harbor count locations per area.

b) Grid angler hours for the  $j^{\text{th}}$  grid:

$$E_{ij} = (T_i) * (P_{ij}) * (a_i) * (h_i) \quad \text{where:}$$

$E_{ij}$  = estimated number of angler hours

$P_{ij}$  = proportion of angler hours in each grid in sample interviews

$a_{ij}$  = mean number of anglers per boat

$h_{ij}$  = mean number of angler hours per trip.

c) Grid catch (kept or released) for the  $k^{\text{th}}$  species:

$$C_{ijk} = (T_i) * (f_{ik}) * (p_{ijk}) \quad \text{where:}$$

$C_{ijk}$  = estimated catch of a species.

$f_{ik}$  = mean number of kept or released fish in sample interviews

$p_{ijk}$  = proportion of total fish observed in each grid in sample interviews

d) Grid catch per targeted angler hour for the  $k^{\text{th}}$  species:

$$F_{ijk} = (C_{ijk}) / (E_{ij} * t_{ijk}) \quad \text{where:}$$

$F_{ijk}$  = catch per angler hour

$t_{ijk}$  = proportion of grid effort targeting the  $k^{\text{th}}$  species in sample interviews

Table 2. Length-weight regression equations used for biological sampling of harvest from the Ohio waters of Lake Erie.

Species	Assessment Method	District	Season	Regression Equation <sup>a,b</sup>	Year	SEc Intercept	SEc Slope	Sample Size
Walleye	Sport, gillnet	All	All	$\log W = -5.42510 + 3.14558 \log TL$	2022	0.031	0.012	3,310
Yellow Perch	Creel Survey							
	Commercial, Trawl	1	April-June	$\log W = -4.82073 + 2.96481 \log TL$	2022	0.040	0.017	1,484
	Trawl	1	July-August	$\log W = -5.07307 + 3.07823 \log TL$	2022	0.039	0.018	1,014
	Commercial, Trawl	1	Sept-Oct	$\log W = -5.10818 + 3.07805 \log TL$	2022	0.032	0.014	985
	Sport, Trawl, Commercial	2	May-June	$\log W = -5.25042 + 3.14559 \log TL$	2022	0.015	0.007	1,505
	Sport, Trawl, Commercial	2	July-August	$\log W = -5.34597 + 3.19976 \log TL$	2022	0.013	0.006	1,642
	Sport, Trawl, Commercial	2	Sept-Oct	$\log W = -5.46343 + 3.24655 \log TL$	2022	0.016	0.007	1,198
	Commercial, Trawl	3	May-June	$\log W = -5.36400 + 3.19809 \log TL$	2022	0.024	0.010	592
	Commercial, Trawl	3	July-August	$\log W = -5.28169 + 3.16879 \log TL$	2022	0.019	0.008	1,060
	Trawl	3	Sept-Oct	$\log W = -5.47567 + 3.25515 \log TL$	2022	0.028	0.013	282
White Bass	Commercial Trap Net							
	Commercial	1	May-July	$\log W = -5.30013 + 3.16544 \log TL$	2022	0.096	0.040	1,045
	Commercial	1	August-December	$\log W = -4.68119 + 2.89650 \log TL$	2022	0.094	0.040	598
	Commercial	2	May-July	$\log W = -4.72498 + 2.92532 \log TL$	2022	0.073	0.031	910
	Commercial	2	August-December	$\log W = -4.94588 + 3.02936 \log TL$	2022	0.063	0.026	952
	Commercial	3	May-July	$\log W = -5.19670 + 3.12792 \log TL$	2022	0.069	0.029	562
	Commercial	3	August-December	$\log W = -4.92543 + 3.01318 \log TL$	2022	0.088	0.037	395
	Gillnet	All	All	$\log W = -5.38884 + 3.22080 \log TL$	2015	0.049	0.019	2,405
	Gillnet	All	All	$\log W = -5.76573 + 3.41786 \log TL$	2015	0.020	0.008	2,017
	Sport	All	All	$\log W = -4.46342 + 2.90185 \log TL$	2013	0.206	0.078	118
Steelhead Trout	Electrofishing	All	All	$\log W = -4.08257 + 2.67595 \log TL$	2017	0.281	0.103	38
Channel Catfish	Trawl	All	All	$\log W = -6.15014 + 3.43989 \log TL$	2015	0.179	0.067	64
Freshwater Drum	Trawl	All	All	$\log W = -5.2402 + 3.1206 \log TL$	2014	0.194	0.076	89
Lake Whitefish	Commercial	All	All	$\log W = -7.07507 + 3.75576 \log TL$	2015	0.446	0.161	145

<sup>a</sup> W = weight in grams; TL = total length in millimeters.

<sup>b</sup> Log values are log 10

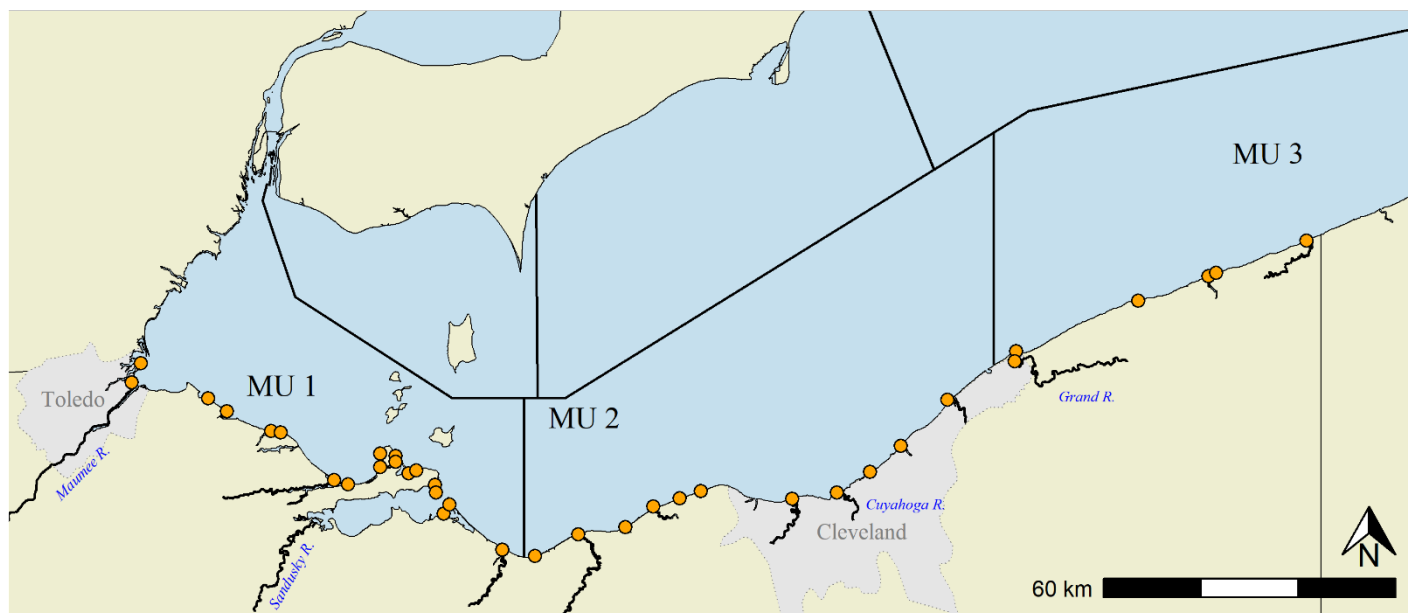


Figure 1. Creel survey areas and major boat harbor count locations for Ohio's Lake Erie open water creel survey.

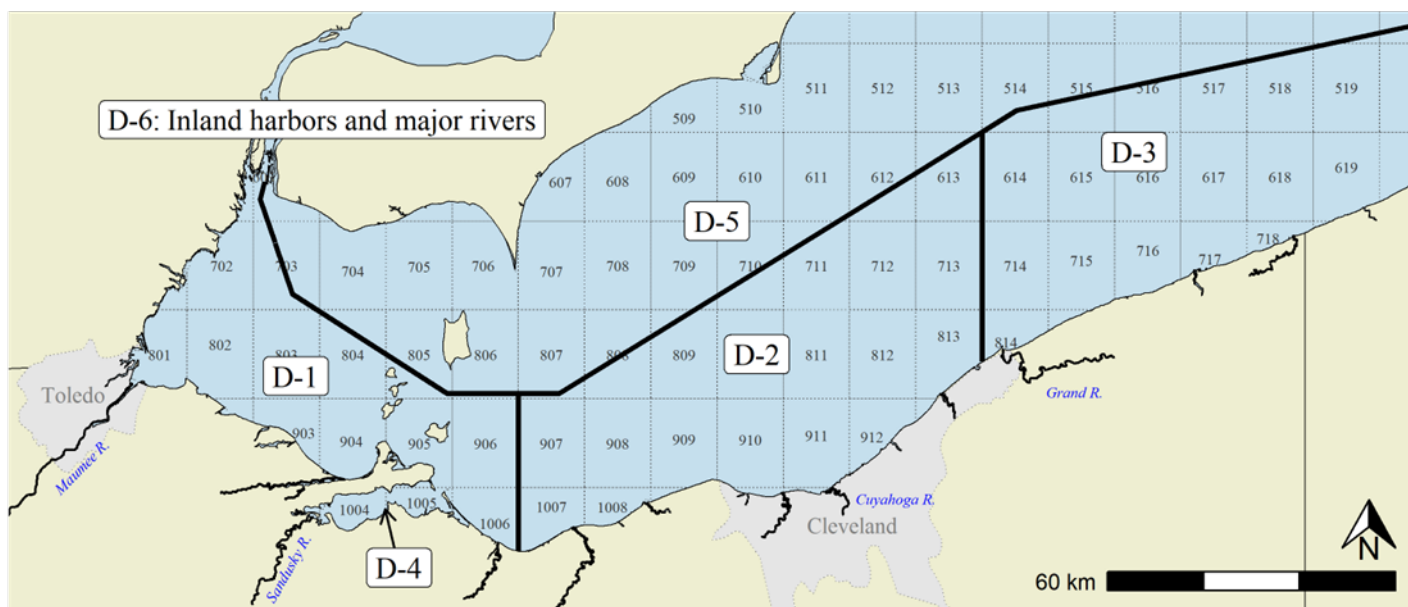
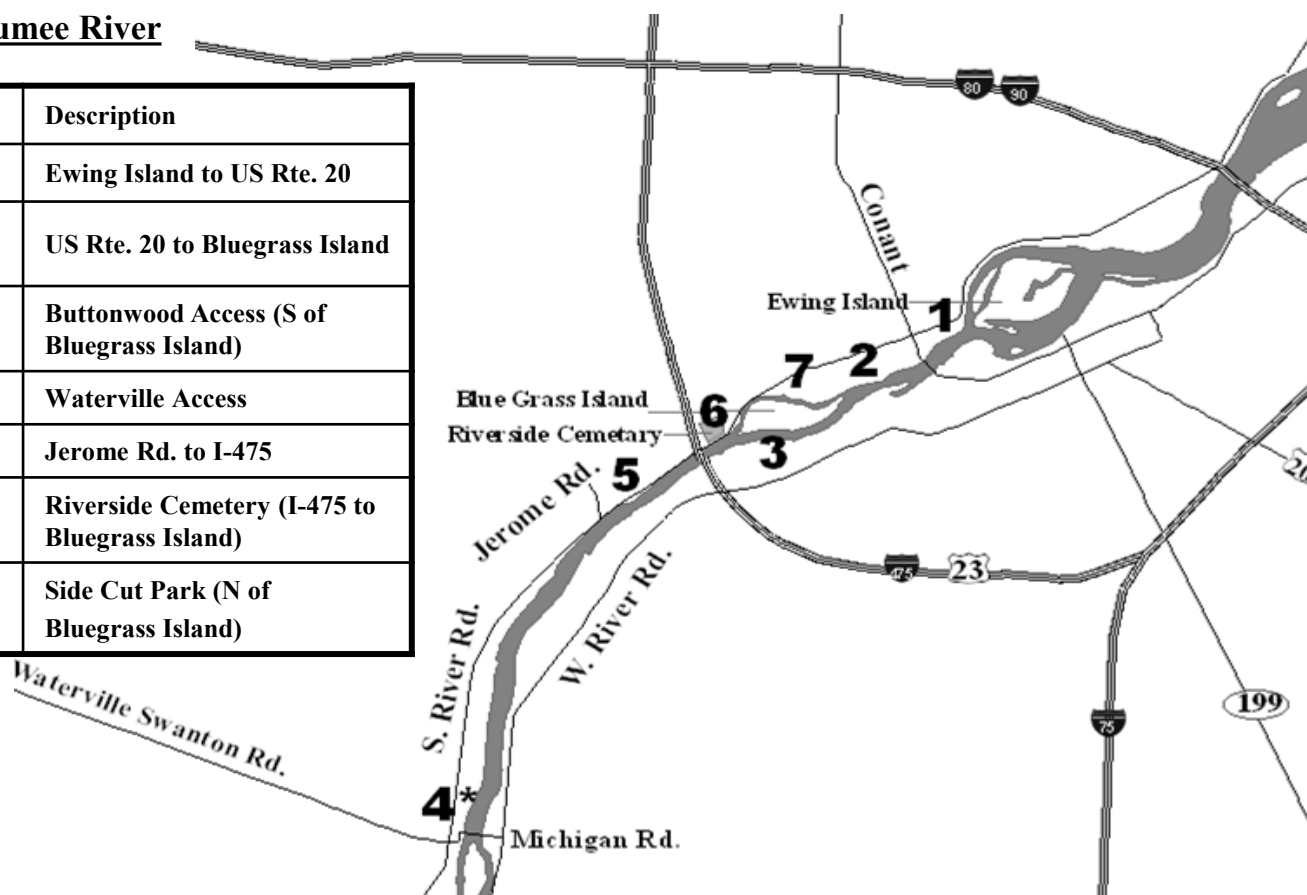


Figure 2. Locations of districts and grids (10 minute latitude x 10 minute longitude) used for sport and commercial reporting in Ohio waters of Lake Erie.

## Maumee River

Site	Description
1	Ewing Island to US Rte. 20
2	US Rte. 20 to Bluegrass Island
3	Buttonwood Access (S of Bluegrass Island)
4*	Waterville Access
5	Jerome Rd. to I-475
6	Riverside Cemetery (I-475 to Bluegrass Island)
7	Side Cut Park (N of Bluegrass Island)



## Sandusky River

Site	Description
1	Brady Island to State St. (US Rte. 20)
2	State St. to Hayes Ave.
3	Hayes Ave. to Railroad bridge
4	Railroad bridge to Rodger Young Park
5	Rodger Young Park to Tiffin Rd. Access
6**	Tiffin Rd. Access to Ballville Dam

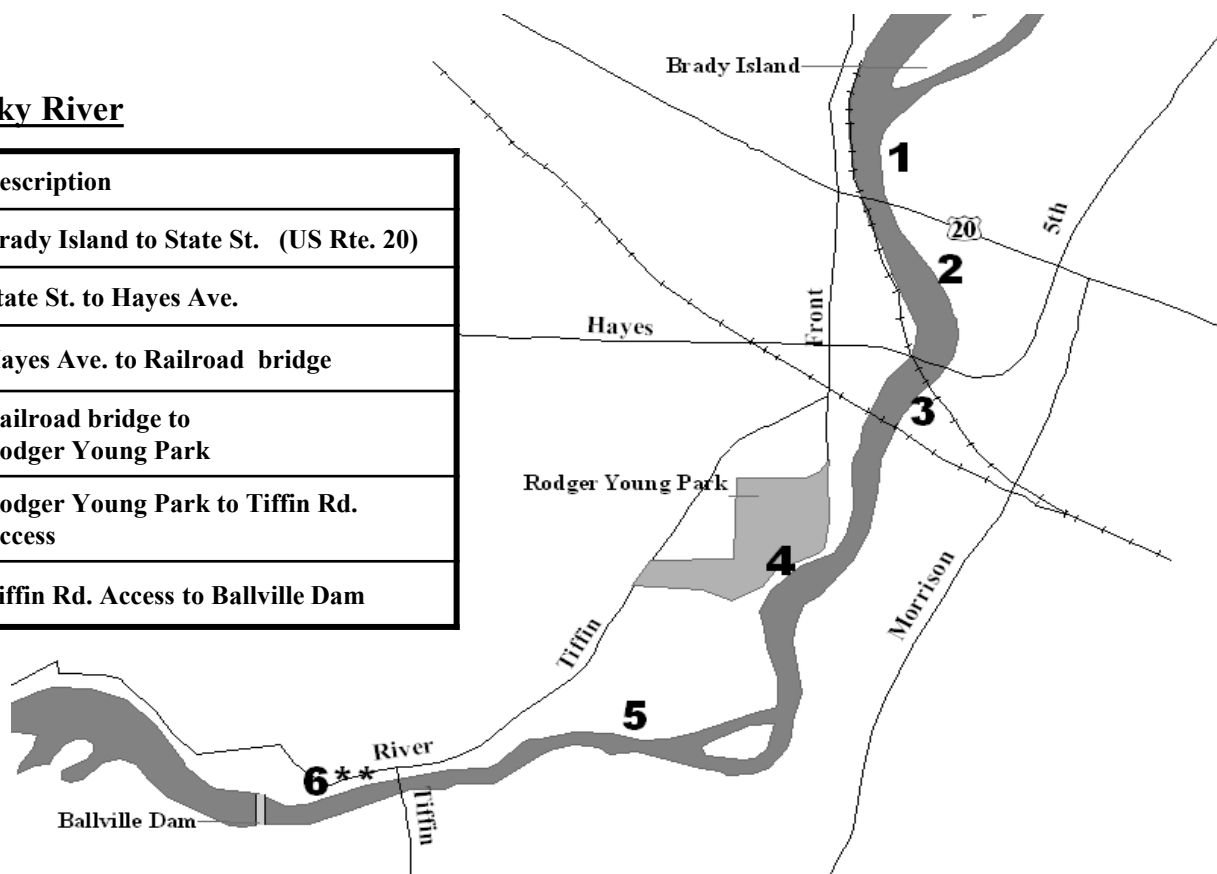


Figure 3. Creel survey locations on the Maumee River (top) and the Sandusky River (bottom). Sites with (\*) are no longer sampled and those with (\*\*) are only sampled during the white bass spawning run.

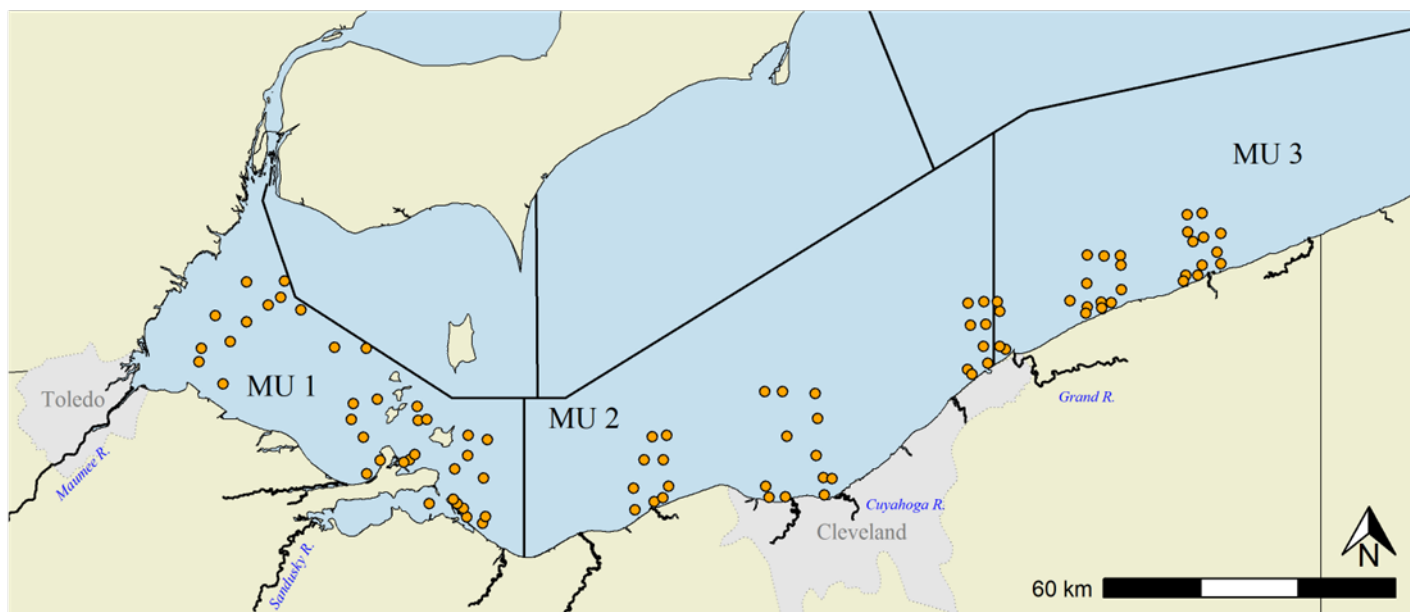


Figure 4. Trawl sampling stations in the Ohio waters of Lake Erie. West basin sites are sampled with a flat-bottom otter trawl and central basin sites are sampled with a two-seam Yankee trawl with a roller sweep.

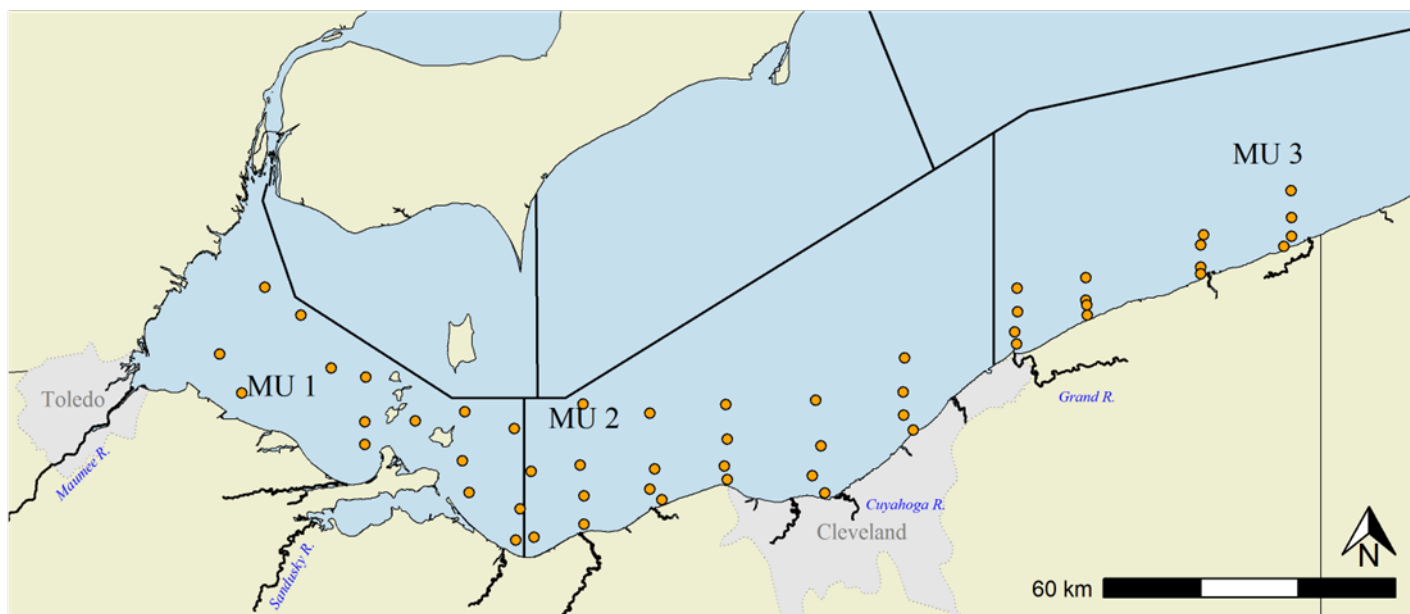


Figure 5. Fall gill net sampling locations in the Ohio waters of Lake Erie. Sites are surveyed with 1200-ft monofilament nets keged ~ 6 ft below the surface. Sites along the MU1-MU2 border are considered MU2 sites during analyses.



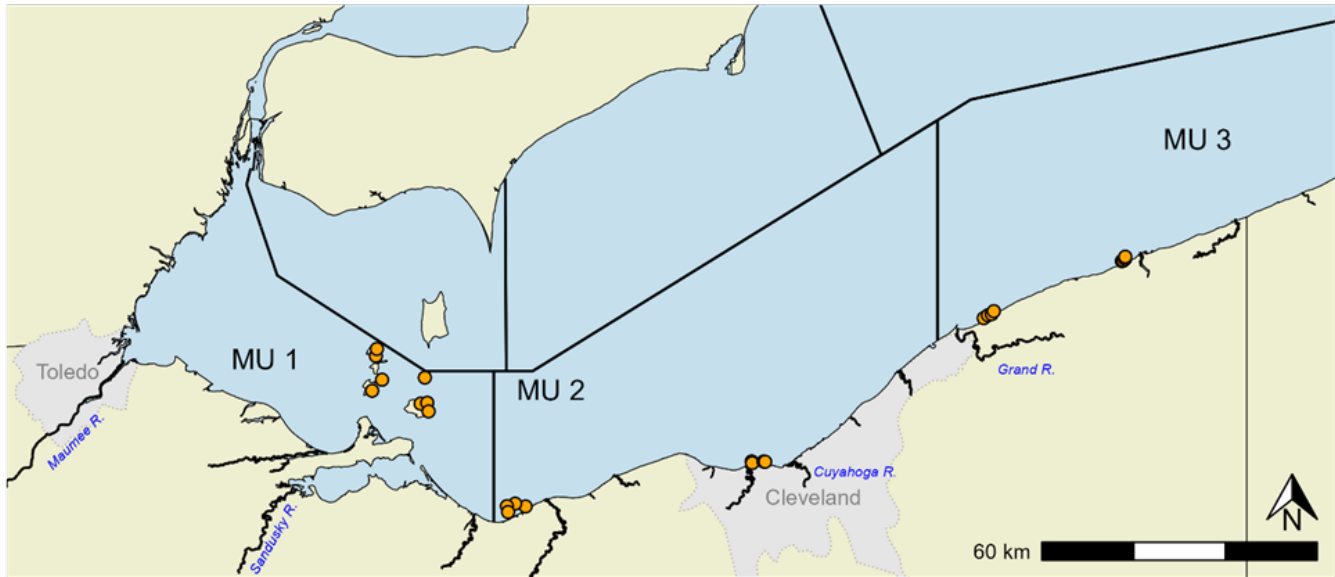


Figure 6. Locations of planned September smallmouth bass gill net sites. Eight sites are sampled in each Management Unit; note that sites may change each year.

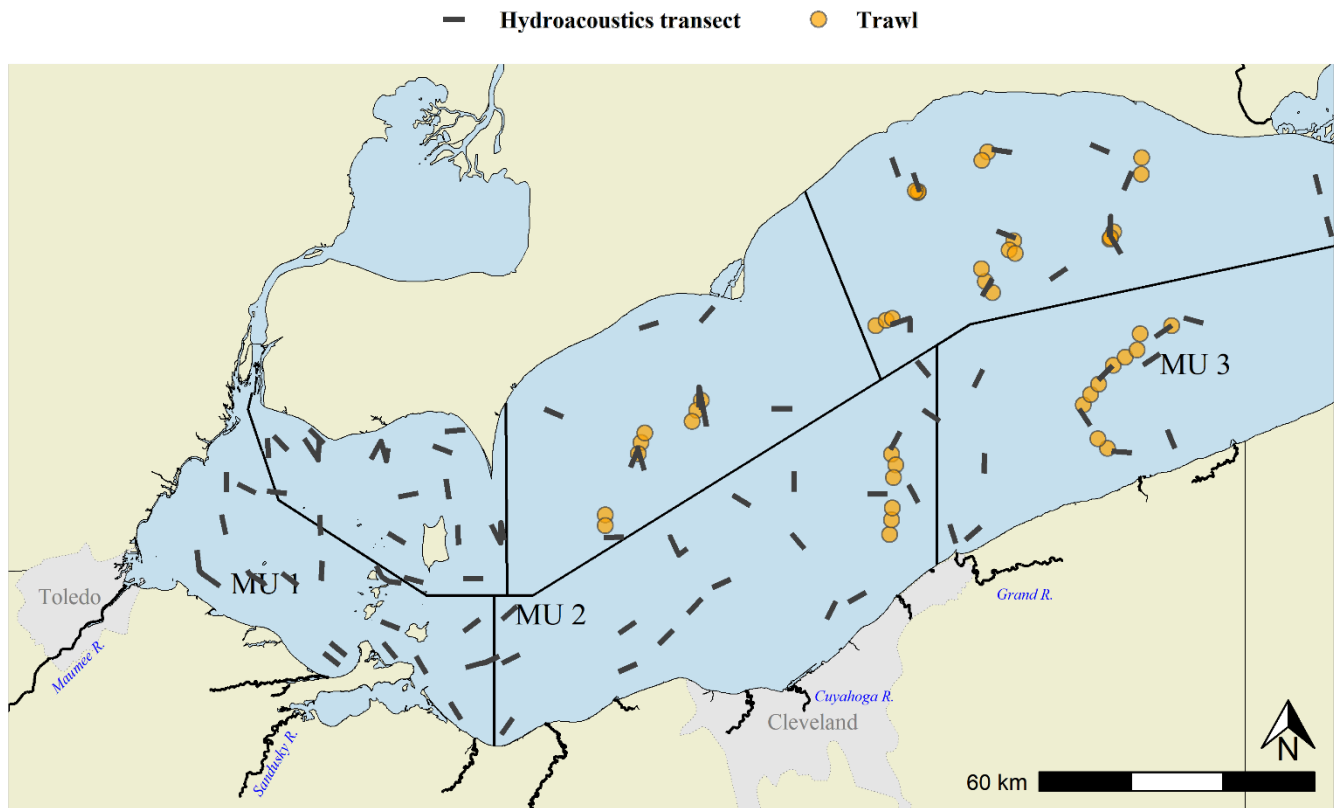


Figure 7. Locations of hydroacoustic transects and midwater trawl sites in the West and Central basins of Lake Erie in 2024. The Central Basin survey is conducted in collaboration with USGS (hydroacoustics) and OMNR (midwater trawls in Canadian waters).

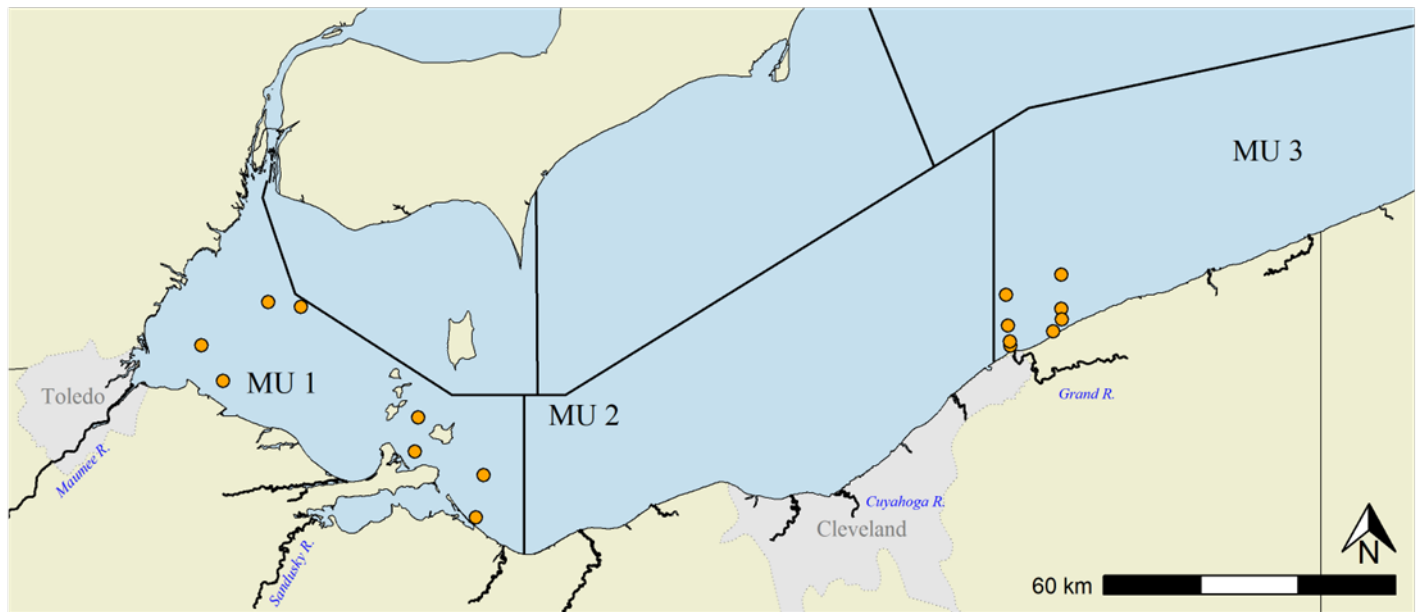


Figure 8. Locations of lower trophic and limnological sampling sites for Ohio's Lake Erie waters.

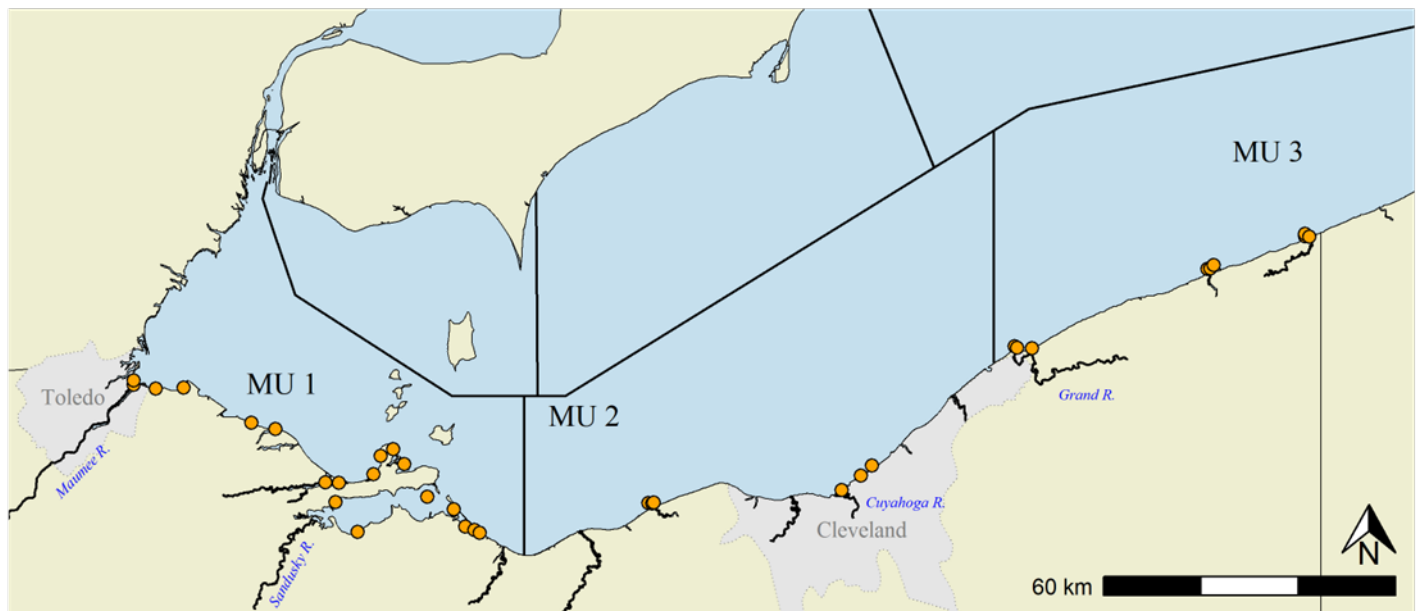


Figure 9. Locations of nearshore electrofishing sites for Ohio's Lake Erie waters.