



# WISCONSIN DEPARTMENT OF NATURAL RESOURCES

## Asylum Bay Spring Electrofishing Report

LAKE: WINNEBAGO

COUNTY: WINNEBAGO

YEAR: 2023

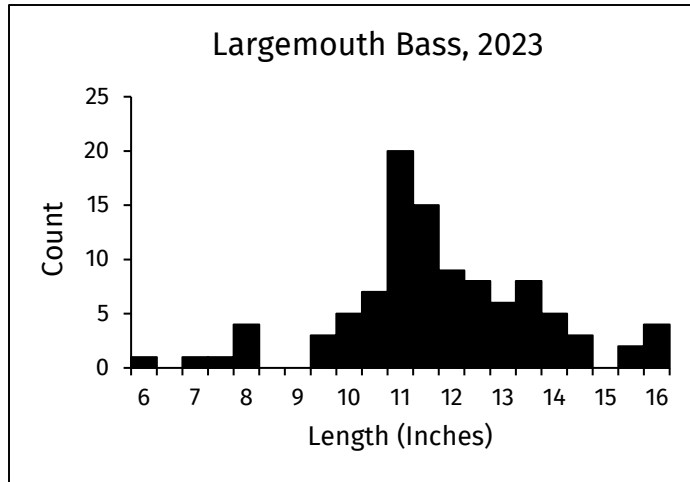
### Introduction

Asylum Bay is located on the central west side of Lake Winnebago near Oshkosh. Asylum Bay receives substantial angling pressure, especially during the ice season and spring panfish angling. Common target species include bluegill, yellow perch, pumpkinseed, northern pike, largemouth bass, and walleye. Asylum Bay is a Winnebago System trend site and gets surveyed on an annual basis. The 2023 spring electrofishing survey was conducted on May 23<sup>rd</sup>. The survey included approximately 2.0 miles of electrofishing and targeted primarily bass and panfish species. The survey station included 0.5 miles targeting all species encountered and the remaining 1.5 miles targeted gamefish species. Water temperature was 67 degrees Fahrenheit. Primary objectives of this survey are to assess species composition, relative abundance, and size structure.



Image 1: Aerial photo of South Asylum Bay.

## LARGEMOUTH BASS



A total of 102 largemouth bass were captured in the 2023 survey (51 fish/mile). Lengths ranged from 6.6-16.8 inches and average length was 12.4 inches.

# Captured Per Mile= 51	
Quality Size ≥ 12"	59
Preferred Size ≥ 15"	9

Figure 1. Length frequency for largemouth bass captured in the 2023 spring electrofishing survey in Asylum Bay.

Table 1. PSD-Q and PSD-P values for largemouth bass captured in the 2023 survey.

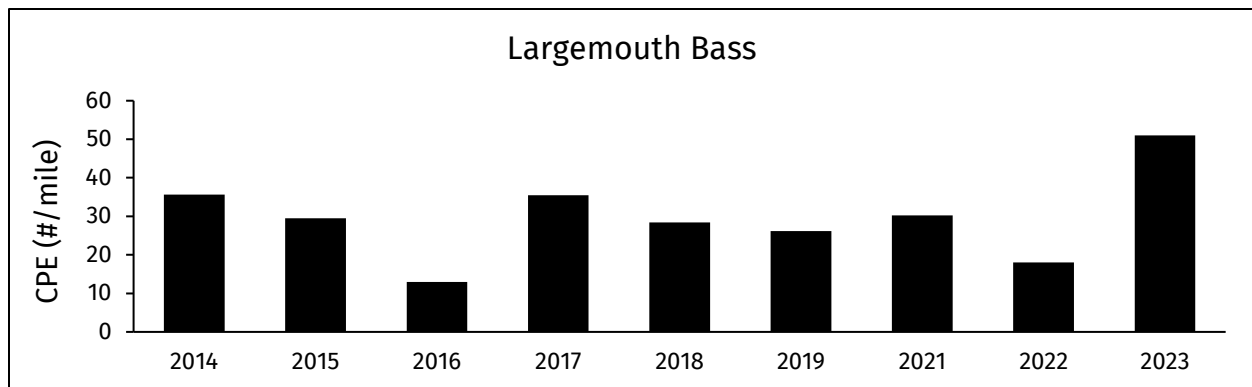
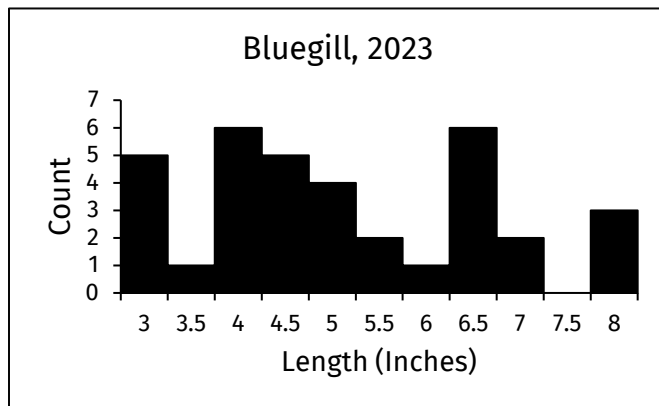


Figure 2. Catch per effort ((CPE)=# of fish captured per mile) for largemouth bass captured in Asylum Bay from 2014 through 2023, no shocking conducted in 2020.

## BLUEGILL



A total of 35 bluegill were captured in the 2023 survey (70 fish/mile). Lengths ranged from 3.2-8.2 inches and average length was 5.4 inches.

# Captured Per Mile = 70	
Quality size > 6.0"	34
Preferred Size > 8"	9

Figure 3. Length frequency for bluegill captured in the 2023 spring electrofishing survey in Asylum Bay.

Table 2. CPE, PSD-Q and PSD-P values for bluegill captured in the 2023 survey.

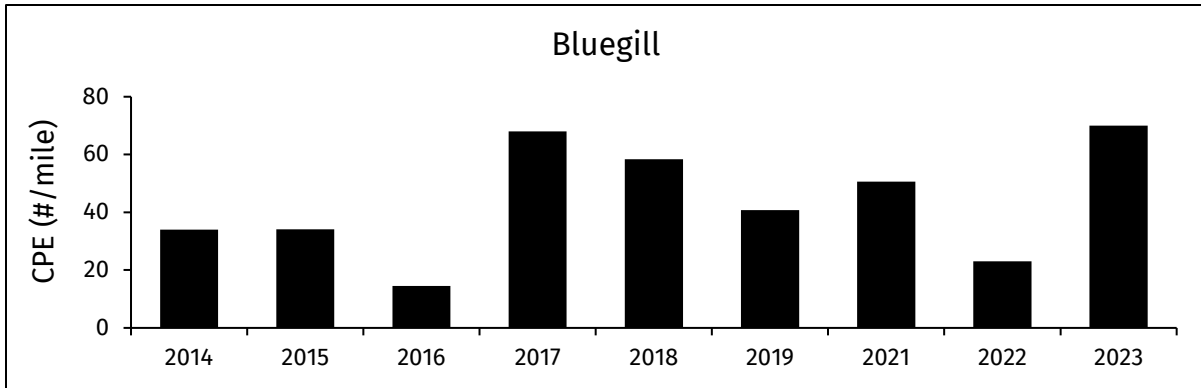
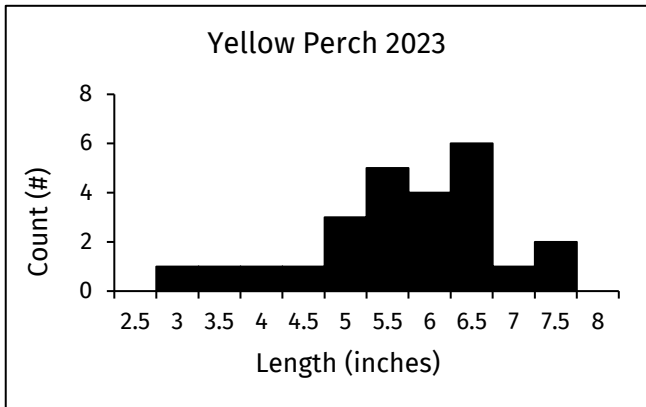


Figure 4. Catch per effort ((CPE)=# of fish captured per mile) for bluegill captured in Asylum Bay from 2014 through 2023, no shocking conducted in 2020.

**YELLOW PERCH**



A total of 25 yellow perch were captured in the 2023 survey (50 fish/mile). Length ranged from 3-7.7 inches and average length was 5.8 inches.

# Captured Per Mile = 50	
Quality size > 8.0"	0
Preferred Size > 10.0"	0

Figure 5. Length frequency for yellow perch captured in the 2023 spring electrofishing survey in Asylum Bay.

Table 3. CPE, PSD-Q and PSD-P values for yellow perch captured in the 2023 survey.

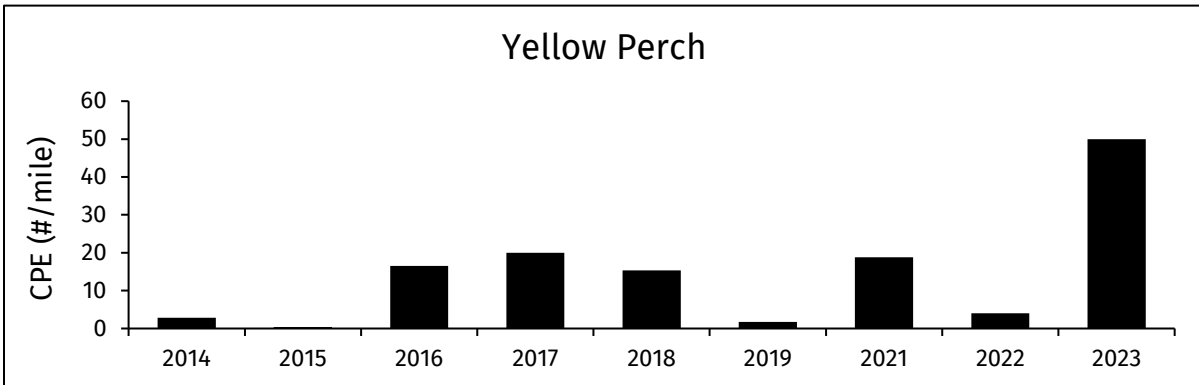
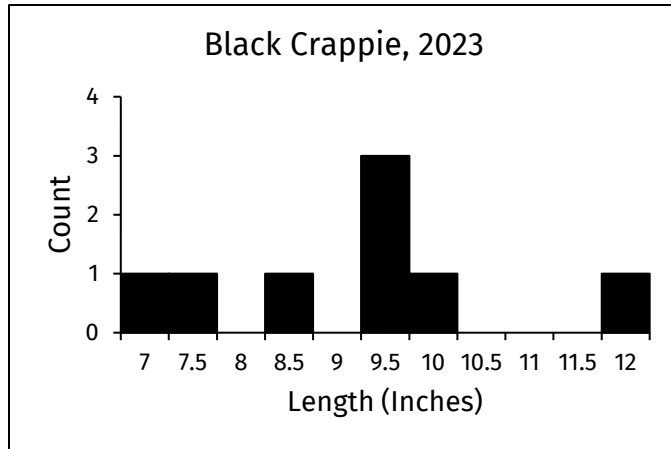


Figure 6. Catch per effort ((CPE)=# of fish captured per mile) for yellow perch captured in Asylum Bay from 2014 through 2023, no shocking conducted in 2020.

## Black Crappie



A total of 8 black crappie were captured in the 2023 survey (16 fish/mile). Length ranged from 7.4-12.1 inches and the average length was 9.4 inches.

# Captured Per Mile = 16	
Quality size > 8.0"	88
Preferred Size > 10.0"	63

Figure 7. Length frequency for black crappie captured in the 2023 spring electrofishing survey in Asylum Bay.

Table 4. CPE, PSD-Q and PSD-P values for black crappie captured in the 2023 survey.

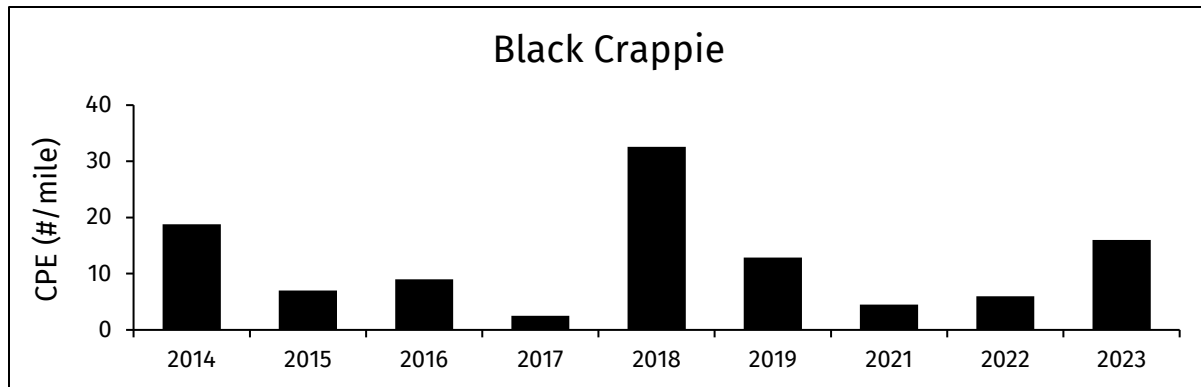
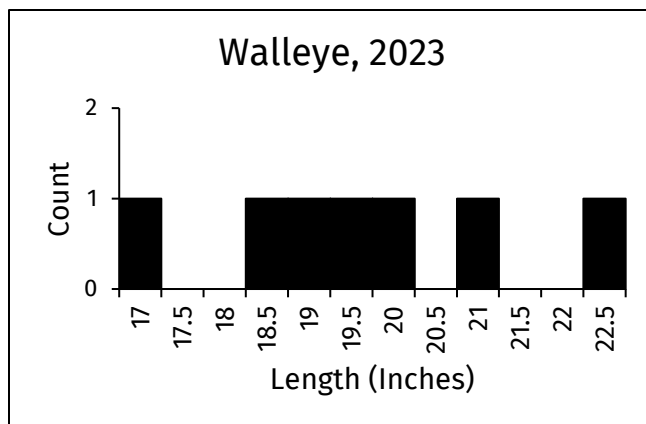


Figure 8. Catch per effort ((CPE)=# of fish captured per mile) for black crappie captured in Asylum Bay from 2014 through 2023, no shocking conducted in 2020.

## WALLEYE



A total of 8 walleye were captured (4 fish / mile). Length ranged from 6-22.5 inches and average length was 18.1 inches.

# Captured Per Mile = 4	
Quality size > 15.0"	88
Preferred Size > 20.0"	38

Figure 9. Length frequency for walleye captured in the 2023 spring electrofishing survey in Asylum Bay.

Table 5. CPE, PSD-Q and PSD-P values for walleye captured in the 2023 survey.

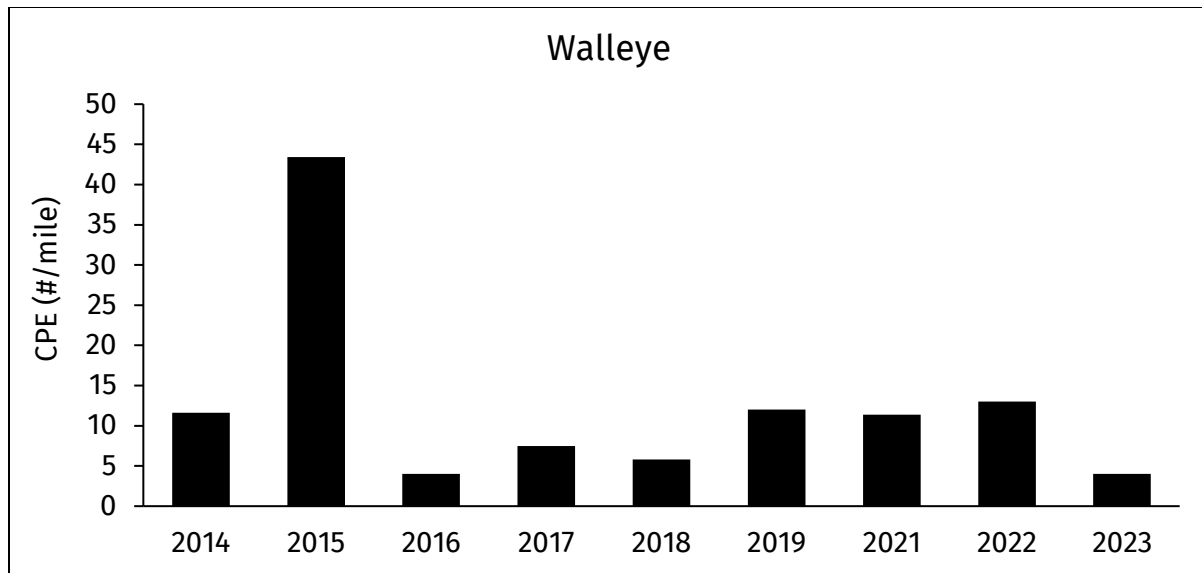


Figure 10. Catch per effort ((CPE)=# of fish captured per mile) for walleye captured in Asylum Bay from 2014 through 2023, no shocking conducted in 2020.

## Summary

A total of 238 fish were sampled in the 2023 survey, representing 16 different species. Gamefish species sampled included largemouth bass, smallmouth bass, northern pike, and walleye. Panfish species sampled included bluegill, black crappie, pumpkinseed, rock bass, and yellow perch. Non-game species sampled included yellow bullhead, brown bullhead, black bullhead, freshwater drum, trout perch, and golden shiner.

Largemouth bass were the most common gamefish species captured in the 2023 survey and showed higher than average catch rates (51 fish/mile) when compared to the sites average from 2014 through 2023 (29.7 fish/mile) and average length in 2023 (12.4 inches) was higher than the 9-year average (11.7 inches). A catch rate of 51 per mile ranks in the 87<sup>th</sup> percentile among statewide catch rate for largemouth bass. The catch rate of fish > 14 inches, 11 fish/mile, ranks in the 88 percentile among statewide catch rates.

The next most common fish species in the 2023 survey was bluegill. The bluegill catch rate of 70 fish/mile ranks in the top 44<sup>th</sup> percentile compared to statewide catch rates. This is the highest bluegill catch observed over the 9 years of data. The average size of bluegill in 2023, 5.4 inches, was below the surveys average, 6.2 inches. Catch rates of bluegill > 6 inches was 24 fish/ mile, which ranks in the 53<sup>rd</sup> percentile.

Yellow perch catch rates in 2023 (50 fish/mile) were the highest observed in this survey, coming in well above the 9-year average of 14.4 fish/mile. The 2023 catch rate lands in the 88<sup>th</sup> percentile compared to statewide catch rates. The average length of yellow perch in 2023 (6.0 inches) was similar to the 9-year average of 5.7 inches.

Black crappie were captured in lesser abundance, compared to bluegill and yellow perch, though size structure was high. Black crappie catch rates in 2023 were 16 fish/mile, just over the surveys average of 12.1 fish/mile. The 2023 catch rate lands in the 74<sup>th</sup> percentile compared to statewide catch rates. The average size of black crappie was favorable at 9.4 inches. Catch rates of fish over 8 inches were 12 fish/mile ranking in the 85<sup>th</sup> percentile statewide.

Another species that is not specifically targeted in this survey but is captured frequently is walleye. 2023 catch rates were considerably decreased, coming in at 4 fish/mile compared to the trend site average of 12.5 fish/mile. Although catch rates were lower than average, size structure was solid. Average length increased from 14.7 inches to 18 inches. Also, proportional stock density of quality sized fish (>15 inches) was 88 in the 2023 survey compared to the trend sites average of 46.5.

Overall, survey results indicate that Asylum Bay will continue to provide quality angling opportunities, particularly for bluegill and yellow perch with catch rates for these two species recording record highs across the nine years of observation. Anglers looking to target walleye in the area may have luck on the rocky shoreline surrounding picnic point. Asylum Bay will continue to be monitored on an annual basis. If you have any questions on this report or anything else related to fisheries management on the Winnebago System, please contact me at the phone or email below.

*Table 1. General fishing regulations for Lake Winnebago, in Winnebago, Fond du Lac, Calumet and Outagamie County, Wisconsin.*

<b>SPECIES</b>	<b>SEASON DATES</b>	<b>DAILY BAG LIMIT</b>	<b>SIZE LIMIT</b>
Panfish	Open all year	25	No size limit
Walleye	Open all year	3	No size limit
Northern pike	May 6, 2023-March 3, 2024	2	26"
Largemouth/Smallmouth bass	Open all year	5	14"

Sincerely,

*Angelo Cozzola*

Winnebago System Gamefish Biologist  
Fisheries Management Bureau/Division of Fish, Wildlife and Parks  
Wisconsin Department of Natural Resources  
(920) 410-9170, [angelo.cozzola@wisconsin.gov](mailto:angelo.cozzola@wisconsin.gov)

Appendix 1. Spring electrofishing II trend data from 2014-2023

<b>2014</b>	Catch/mile	Average Length	Quality PSD	Preferred PSD
Largemouth bass	35.6	12.9	70	16
Bluegill	34	6.5	67	11
Black crappie	18.8	9.8	94	57
Yellow perch	2.8	5.7	14	0
Walleye	11.6	17.7	83	41

<b>2015</b>	Catch/mile	Average Length	Quality PSD	Preferred PSD
Largemouth bass	29.5	12.7	79	3
Bluegill	34.1	7.5	94	33
Black crappie	7	10.1	100	61
Yellow perch	.4	6.7	0	0
Walleye	43.4	13	25	0

<b>2016</b>	Catch/mile	Average Length	Quality PSD	Preferred PSD
Largemouth bass	13	12.2	73	4
Bluegill	14.5	6.2	38	28
Black crappie	9	9.4	83	61
Yellow perch	16.5	4.4	3	0
Walleye	4	13	13	13

<b>2017</b>	Catch/mile	Average Length	Quality PSD	Preferred PSD
Largemouth bass	35.5	9.2	32	17
Bluegill	68	5.1	7	1
Black crappie	2.5	5.8	20	20
Yellow perch	20	4.7	0	0
Walleye	7.5	9.5	20	0

<b>2018</b>	Catch/mile	Average Length	Quality PSD	Preferred PSD
Largemouth bass	28.4	12	52	22
Bluegill	58.4	6.3	68	3
Black crappie	32.6	8.3	35	15
Yellow perch	15.3	6.6	0	0
Walleye	5.8	17.1	82	0

<b>2019</b>	Catch/mile	Average Length	Quality PSD	Preferred PSD
Largemouth bass	26.2	13.1	70	21
Bluegill	40.8	7	87	13
Black crappie	12.9	9.3	97	13
Yellow perch	1.7	7.4	50	0

Walleye	12	14	25	7
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<b><u>2021</u></b>	Catch/mile	Average Length	Quality PSD	Preferred PSD
Largemouth bass	30.2	8.4	27	11
Bluegill	50.6	5	11	2
Black crappie	4.5	8.4	64	55
Yellow perch	18.8	4.3	0	0
Walleye	11.4	13.2	29	0

<b><u>2022</u></b>	Catch/mile	Average Length	Quality PSD	Preferred PSD
Largemouth bass	18	12.7	58	31
Bluegill	23	6.6	74	2
Black crappie	6	7.9	33	0
Yellow perch	4	5.8	0	0
Walleye	13	14.9	54	12

<b><u>2023</u></b>	Catch/mile	Average Length	Quality PSD	Preferred PSD
Largemouth bass	51	12.4	59	9
Bluegill	70	5.4	34	9
Black crappie	16	9.4	75	25
Yellow perch	50	6	0	0
Walleye	4	18	88	38