# WISCONSIN DEPARTMENT OF NATURAL RESOURCES

## Fisheries Survey Report for Pike Lake, Marathon County, Wisconsin 2021

WATERBODY IDENTIFICATION CODE 1406300


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**Lucas Koenig**
DNR Fisheries Biologist
Wausau, Wisconsin

**Jake Thompson**
DNR Fisheries Technician
Wausau, Wisconsin

# Introduction

Pike Lake is a 205-acre impounded drainage lake with approximately 2.4 shoreline miles in eastern Marathon County, Wisconsin (Figure 1). The maximum depth is 34 feet. Water enters the lake primarily from Rice Lake Creek inlet on the north shore and exits Pike Lake through its outlet stream at the south end which drains into the Plover River. A small impoundment is located on the outflowing creek, which was put in place to raise water levels for recreation (King and Turyk 2007).

The combination of high total phosphorus and chlorophyll *a* (measurement of algae in the water) concentrations and low water clarity found in Pike Lake are typical of a eutrophic but stable lake (UWSP 2014). Many water quality indicators suggest that Pike Lake is a nutrient-rich lake, however, sediment core analysis conducted in 2012 suggested that the lake was once considered mesotrophic and not as nutrient-rich as present day (UWSP 2014). Nutrient-rich lakes often exhibit seasonal algal blooms and insufficient dissolved oxygen levels to support some species of fish, so it's not surprising that minor winterkills had occurred in Pike Lake before an aeration system was installed in 2000.

There are three critical habitat designated areas within the lake totaling 45 acres. These areas were chosen due to the high quality of aquatic plants and substrates that are essential for fish and wildlife habitat and water quality. The Sensitive Area Designation was completed in 2006 and gives protection to these habitat areas from human disturbance (WDNR 2007). Aquatic plants are distributed throughout the lake (48% of the lake, 90% of the littoral zone) and can grow in a maximum depth of 10.5 feet. However, the most abundance plant growth in 2006 was found in ≤1.5 feet deep (Konkel 2007).

The aquatic plant community in Pike Lake is characterized by very good species diversity, high quality and a condition that has been impacted by above average disturbance. The dominant species identified in Pike Lake during 2006 was muskgrass, which occurred at above average density, primarily in depths from 1.5-10 feet. Illinois pondweed was sub-dominant, occurring at half of the sites (Konkel 2007). Healthy aquatic plant communities provide many invaluable benefits to the lake ecosystem. The native plant community benefits the lake ecosystem by improving water quality, providing fish and wildlife habitat and discouraging excessive growth of more aggressive species including non-native plant species. One non-native species, curly-leaf pondweed, occurred but was not common during the 2006 survey.

For a fisheries lake class, Pike Lake is considered a warm dark lake with a complex sportfish assemblage. Lake class is helpful for comparing fish populations with other lakes that have similar productivity characteristics and fish communities. Pike Lake has a history of heavy stocking dating back to 1972, primarily with walleye and yellow perch (Table 1). Walleye have been stocked in most years since stocking began in 1972, and in 2014, Pike Lake was added into the Wisconsin Walleye Initiative (The Wisconsin Walleye Initiative 2022) where approximately 1,018 extended growth Walleye have been stocked on even years. Extended growth Walleye are typically larger in size (6.1-7.6") and have better survival. Wisconsin Department of Natural Resources (DNR) fisheries staff have conducted fall electrofishing surveys to evaluate these Walleye stocking events and identify signs of natural reproduction. Pike Lake is also a reference lake for a study that is evaluating special panfish regulations that are in effect on other lakes throughout the state (Panfish Plan). Additional spring fyke

netting (2002, 2008 and 2021) and electrofishing (2002, 2007, 2015 and 2021) surveys have occurred on Pike Lake which are helpful for monitoring the fishery status and changes over time. Current fishing regulations on Pike Lake follow the general statewide regulations with a few exceptions (Table 2).

# Methods

A comprehensive fishery survey was conducted on Pike Lake during the spring and fall of 2021, including early spring fyke netting for Walleye and Northern Pike (SN1), two early spring electrofishing efforts for Walleye (SE1), one late spring electrofishing effort for bass and panfish (SE2) and one fall electrofishing effort for juvenile Walleye.

## DATA COLLECTION

Following ice-out, eight standard 4-foot frame fyke nets were set on March 27, 2021 and fished until April 4, 2021 (SN1; Figure 1). Net number 4A was moved to a new location (4B) on April 3, 2021 (Figure 1). Total netting effort was 63 net nights. Water temperature ranged from 41 to 45° F during the netting survey. All fish captured were measured to the nearest 0.1 inch. All Walleye and Northern Pike were marked with a top caudal fin clip and sex was recorded when evident based on expression of eggs or milt. Aging structures were collected from a subsample of Walleye (dorsal spine) and Bluegill (otoliths) for age estimation. The goal was to collect structures from five fish per half-inch group from each sex for Walleye, and five Bluegills per half-inch group were sacrificed for otolith removal.

Two DNR standard early spring electrofishing recapture surveys (SE1) took place on the nights of April 4, 2021 (first SE1) and April 6, 2021 (second SE1); water temperatures were 47° F and 55° F, respectively. In total, the entire 2.4 miles of shoreline was surveyed both nights. The purpose of this survey was to capture Walleye and Northern Pike marked during the previous SN1 survey to calculate population estimates. All Walleye, Northern Pike, and Largemouth Bass were captured and measured to the nearest 0.1 inch. Walleye and Northern Pike were examined for previous marks. The first SE1 survey yielded minimal Walleye capture insufficient for calculating a population estimate and was therefore used to mark additional Walleye and Northern Pike. The second SE1 survey yielded sufficient captures of Walleye previously marked during the SN1 survey and was used for calculating a population estimate.

A DNR standard late spring electrofishing survey (SE2) took place on the night of May 17, 2021. Water temperature was 66° F. This time period and water temperature are within the standard protocol window for spring electrofishing surveys for bass and panfish, when water temperatures should range from 55 to 70° F. In total, the entire 2.4 miles of shoreline was surveyed. All gamefish and panfish were collected and measured to the nearest 0.1 inch. Non-gamefish and other fish were observed and counted during the survey.

A DNR standard fall electrofishing survey took place on the night of September 14, 2021. Water temperature was 67° F. In total, the entire 2.4 miles of shoreline was surveyed. All Walleye, Northern Pike, and Largemouth Bass were collected and measured to the nearest 0.1 inch. The purpose of this survey was to capture juvenile Walleye to estimate or document potential natural recruitment of Walleye. Since extended growth Walleye are stocked on only even numbered years, capturing young-of-year Walleye in 2021 would verify some level of natural reproduction.

## DATA ANALYSIS

For SN1, SE1 and SE2, length frequency distributions were generated for gamefish and panfish species, including Walleye, Northern Pike, Largemouth Bass, Bluegill, Black Crappie and Yellow Perch. Relative abundance, size structure and growth were also evaluated. Relative abundance was indexed using catch per unit of effort (CPE) calculated by gear type for gamefish and panfish species. CPE was calculated as the number of fish captured per net night for the SN1 survey and number of fish captured per shoreline mile for electrofishing surveys.

These CPE values were compared to the 25$^{th}$-75$^{th}$ percentile lake class standard for Wisconsin's complex warm dark lakes that fall within the same lake class as Pike Lake. Proportional size distribution (PSD) is an index used to describe size structure of fish and is calculated as the percentage of quality, preferred or memorable size fish observed within the total catch of stock or greater size fish for a given species. Length designations for stock, quality, preferred and memorable sizes of fish species collected from Pike Lake can be found in Table 3. Growth was evaluated for Walleye and Bluegill by estimating fish age at a given length. Growth was compared to the 50$^{th}$ percentile lake class standard for Wisconsin's complex warm dark lakes that fall within the same lake class as Pike Lake.

The Walleye and Northern Pike population estimates were calculated using the Chapman modification of the Petersen single-census method, where fish were marked during multiple fyke netting events and the first early spring electrofishing event (SN1 and first SE1), followed by a single recapture event (second SE1). Population estimates were calculated as:

$$N = [\ (M + 1)(C + 1)\ /\ (R + 1)\ ] - 1,$$

where $N$ is the estimated population size, $M$ is the total number of fish that were marked, $C$ is the number of fish captured during the recapture event and examined for marks, and $R$ is the number of fish captured during the recapture event that had marks. The resulting population estimates were also divided by the surface area of the lake to determine Walleye Northern Pike population density (fish per acre).

# Results

A total of 1,615 fish representing 11 different species were collected during the spring fyke netting and spring electrofishing surveys (Table 4). Black Crappie, Bluegill and Northern Pike represented 58.2% of the total number of fish captured. An additional 38 fish (Walleye, Northern Pike and Largemouth Bass) were captured during the fall electrofishing survey targeting juvenile Walleye.

## WALLEYE

During the 2021 spring surveys, 98 Walleye were captured (Figure 2). Walleye ranged in length from 7.2-28.0 inches with an average length of 21.5 inches (Table 4; Figure 2). The relative abundance of Walleye was 1.6/net night and 3.1/mile (Table 5). Fyke netting CPE was much lower, and electrofishing CPE was slightly higher than the respective CPEs observed in 2002. The 2021 fyke netting CPE falls within the 25$^{th}$ and 50$^{th}$ percentiles compared to the lake class standard for similar lakes (Table 5). Size structure has improved compared to 2002, with 97% of stock sized Walleye being 15 inches or greater, 81% being 20 inches or greater, and 16% being 25 inches or greater (Table 6). Growth rate and mean length-at-age of Walleye is above

the 50th percentile lake class standard for similar lakes in Wisconsin but tapers off at age 13+, likely due to small sample size of fish aging structures collected for these age classes (Figure 3). Walleye in Pike Lake appear to reach legal size between ages 3-4 which is normal for complex warm dark lakes. During the fall electrofishing survey targeting juvenile Walleye, no young-of-year Walleye were captured and only three yearling Walleye were captured (0.8/mile), likely extended growth Walleye stocked in 2020. Since no young-of-year Walleye were captured in the fall of 2021, no evidence of natural reproduction was identified.
The Walleye population estimate in 2021 was 116 fish, which means there were an estimated 0.6 Walleye/acre in Pike Lake. This population estimate is lower than the last population estimate in 2002. In 2002, the Walleye population was estimated to be 295 fish, or 1.4 Walleye/acre.

## NORTHERN PIKE

During the 2021 spring surveys, 285 Northern Pike were captured (Figure 4). Northern Pike ranged in length from 8.8-31.7 inches with an average length of 21.5 inches (Table 4; Figure 4). The relative abundance of Northern Pike was 4.1/net night and 6.2/mile (Table 5). Fyke netting CPE was higher, and electrofishing CPE was lower than the respective CPEs observed in 2002. The 2021 fyke netting CPE is higher than the 75th percentile compared to the lake class standard for similar lakes (Table 5). Size structure has decreased compared to 2002, with 59% of stock sized Northern Pike being 21 inches or greater, 1.4% being 28 inches or greater, and 0% being 34 inches or greater (Table 6).

The Northern Pike population estimate in 2021 was 1,100 fish, which means there were an estimated 5.3 fish/acre in Pike Lake. This population estimate is much higher than the last population estimate in 2002. In 2002, the Northern Pike population was estimated to be 355 fish, or 1.7 fish/acre.

## LARGEMOUTH BASS

During the 2021 spring surveys, 95 Largemouth Bass were captured (Figure 5). Largemouth Bass ranged in length from 5.2-20.8 inches with an average length of 15.8 inches (Table 4; Figure 5). The relative abundance of Largemouth Bass was 0.3/net night and 11.1/mile (Table 5). Fyke netting and electrofishing CPE were both higher than observed in 2002. The 2021 electrofishing CPE falls within the 25th and 50th percentiles compared to the lake class standard for similar lakes (Table 5). Size structure has shifted compared to 2002, with 97% of stock sized Largemouth Bass being 12 inches or greater, 70% being 15 inches or greater, and 3% being 20 inches or greater (Table 6). The 2002 survey had a greater proportion of memorable size Largemouth Bass (20 inches), but the 2021 survey observed a much higher proportion of preferred size fish (15 inches).

## BLUEGILL

During the 2021 spring surveys, 310 Bluegill were captured (Figure 6). Bluegill ranged in length from 3.1-8.8 inches, with an average length of 5.0 inches (Table 4; Figure 6). The relative abundance of Bluegill was 1.5/net night and 98.2/mile (Table 5). Fyke netting CPE was lower, and electrofishing CPE was much higher than the respective CPEs observed in 2002. The 2021 electrofishing CPE falls within the 25th and 50th percentiles compared to the lake class standard for similar lakes (Table 5). Size structure has slightly improved compared to 2002, with 20% of stock sized Bluegill being 6 inches or greater and 0.3% being 8 inches or greater (Table 6). Growth rate and mean length-at-age of Bluegill in Pike Lake is below the 50th

percentile lake class standard for similar lakes in Wisconsin (Figure 7). However, Bluegill growth rate in 2021 has improved since the 2002 survey and appear to reach 7 inches between ages 7-8, which is slower than normal for complex warm dark lakes.

### BLACK CRAPPIE

During the 2021 spring surveys, 345 Black Crappie were captured (Figure 8). Black Crappie ranged in length from 3.8-11.3 inches, with an average length of 5.7 inches (Table 4; Figure 8). The relative abundance of Black Crappie was 5.4/net night and 3.6/mile (Table 5). Fyke netting CPE was lower, and electrofishing CPE was higher than the respective CPEs observed in 2002. The 2021 fyke netting CPE falls within the 25$^{th}$ and 50$^{th}$ percentiles compared to the lake class standard for similar lakes (Table 5). Size structure has slightly shifted compared to 2002, with 30% of stock sized black crappie being 8 inches or greater and 8% being 10 inches or greater (Table 6). The 2002 survey had a greater proportion of quality size Black Crappie (8 inches), but the 2021 survey observed a higher proportion of preferred size fish (10 inches).

### YELLOW PERCH

During the 2021 spring surveys, 180 Yellow Perch were captured (Figure 9). Yellow Perch ranged in length from 3.0-9.0 inches, with an average length of 4.3 inches (Table 4; Figure 9). The relative abundance of Yellow Perch was 0.2/net night and 75.5/mile (Table 5). Fyke netting CPE was lower, and electrofishing CPE was substantially higher than the respective CPEs observed in 2002. The 2021 fyke netting CPE falls below the 5$^{th}$ percentile compared to the lake class standard for similar lakes (Table 5). Size structure has dramatically decreased compared to 2002, with 1.8% of stock sized Yellow Perch being 8 inches or greater and 0% being 10 inches or greater (Table 6).

## Discussion and Recommendations

The fishery on Pike Lake appears to be diverse and healthy with good populations of gamefish and panfish. Pike Lake offers a range of fishing opportunities for anglers and has a complex fish assemblage with the main predatory fish being Walleye, Northern Pike and Largemouth Bass. The Walleye population is low abundance with excellent size structure that provides the potential for trophy size fish. Based on our 2021 survey results, there were no signs of Walleye natural reproduction.

Since 2014, fall electrofishing surveys targeting juvenile Walleye have only captured juvenile age classes that correspond with even numbered years when Walleye have been stocked. Therefore, the population is predominantly maintained by stocking efforts. Walleye stocking occurred on an annual basis prior to the Wisconsin Walleye Initiative, and the last private Walleye stocking event occurred in 2013. The contribution of Walleye in Pike Lake that would have likely been the result of the Wisconsin Walleye Initiative stocking events (age-7 and younger) was estimated to be 58 fish (50% of the adult population estimate) in 2021. The other 50% of the Walleye population estimate was estimated to be age-8 and older fish, likely a result of the higher frequency and rate of stocking prior to 2014.

The Northern Pike population has substantially increased while size structure has decreased since 2002. Size structure is poor, likely due to the high density of Northern Pike observed in 2021. The 26-inch minimum length limit and daily bag limit of two Northern Pike offers minimal harvest opportunity, with majority of Northern Pike captured in 2021 being sub-legal

in size. Decreasing the density of Northern Pike may reduce competition and increase growth rates. A protected slot regulation may be an option to protect larger fish while decreasing density of smaller fish through new harvest opportunities.

The Largemouth Bass fishery provides quality angling opportunities and was characterized by good size structure and fair catch rates in our 2021 spring surveys. Because the average size Largemouth Bass captured in Pike Lake was above the minimum length limit, it is evident from our surveys that minimal harvest of Largemouth Bass likely occurs. Therefore, no additional management actions are recommended. For “balanced” Largemouth Bass-Bluegill fisheries, PSD-Q values for Largemouth Bass range from 40-70, PSD-P 10-40, and PSD-M 0-10. Bluegill PSD-Q for a balanced fishery ranges from 20-60 and a PSD-P of 5-20. In 2021, Largemouth Bass PSD values were well above, and Bluegill PSD values were below a balanced state, providing a higher quality bass fishery and lower quality Bluegill fishery.

The panfish populations on Pike Lake provide an abundance Bluegill, Black Crappie and Yellow Perch for angling opportunities but is characterized by poor size structure and minimal preferred harvestable size fish. Bluegill growth rates are poor and below the growth rates observed on similar lakes in Wisconsin. Black Crappie and Yellow Perch populations had poor size structure on Pike Lake during our 2021 spring surveys. Harvest rates of preferred size fish can cause poor size structure on panfish populations. However, harvest rates on Pike Lake are unknown. Stocking of panfish is not recommended due to the poor size structure and moderate-high relative abundance in Pike Lake.

## Acknowledgements

The data collected for this report would not have been possible without the work of many DNR staff, including former staff who were present during the 2002 survey. Tim Parks, former Wausau Senior Fisheries Biologist, planned and conducted the 2021 Pike Lake comprehensive survey. Colton Wolosek, former Fisheries Technician, helped conduct the survey and process the fish sacrificed for otolith collection.

## References

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Konkel, D. 2007. Changes in the aquatic plant community of Pike Lake, Marathon County, Wisconsin 1989-2006. Wisconsin Department of Natural Resources, Eau Claire, WI.

University of Wisconsin – Stevens Point (UWSP). 2014. Eastern Marathon County lakes study: Pike Lake, Marathon Co., Wisconsin. Stevens Point, WI.

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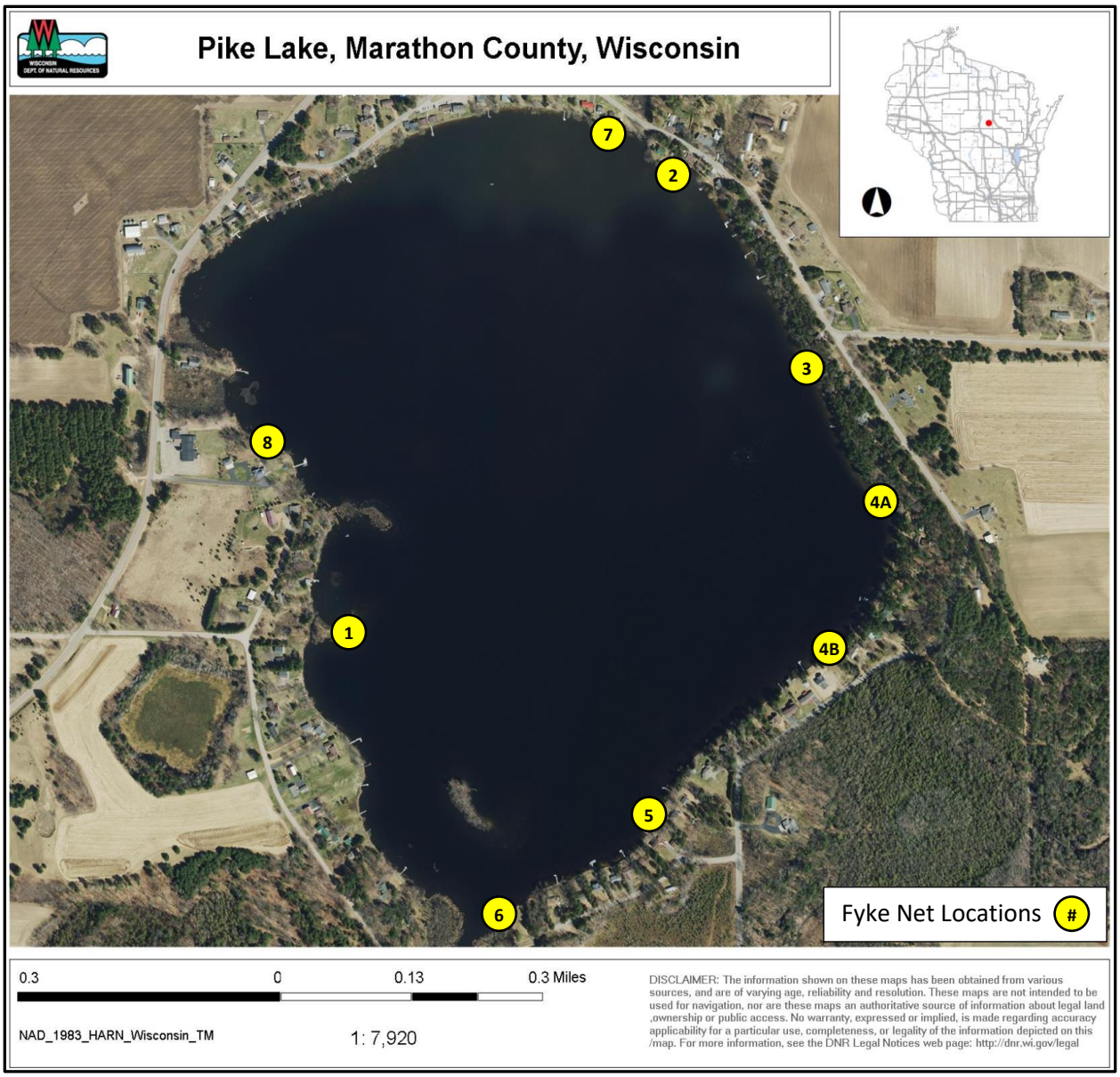


*Figure 1. Map of Pike Lake and fyke net locations from March 27 – April 4, 2021.*

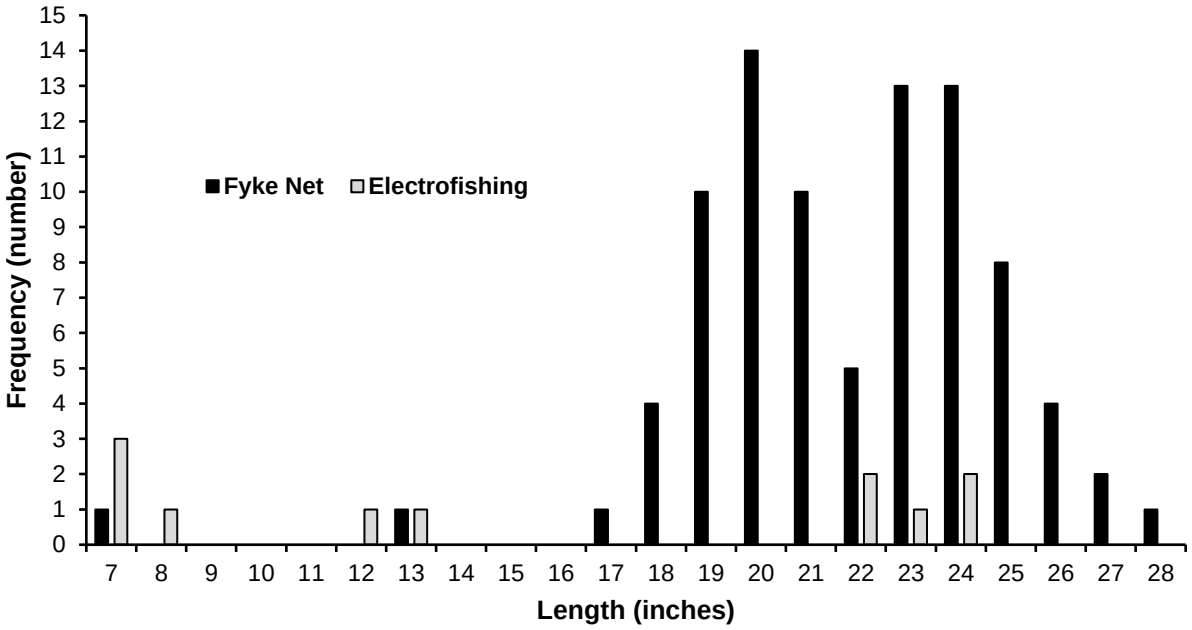


*Figure 2. – Length frequency of Walleye (n = 98) captured in Pike Lake during 2021 spring fyke netting (SN1) and spring electrofishing surveys (SE1 and SE2).*

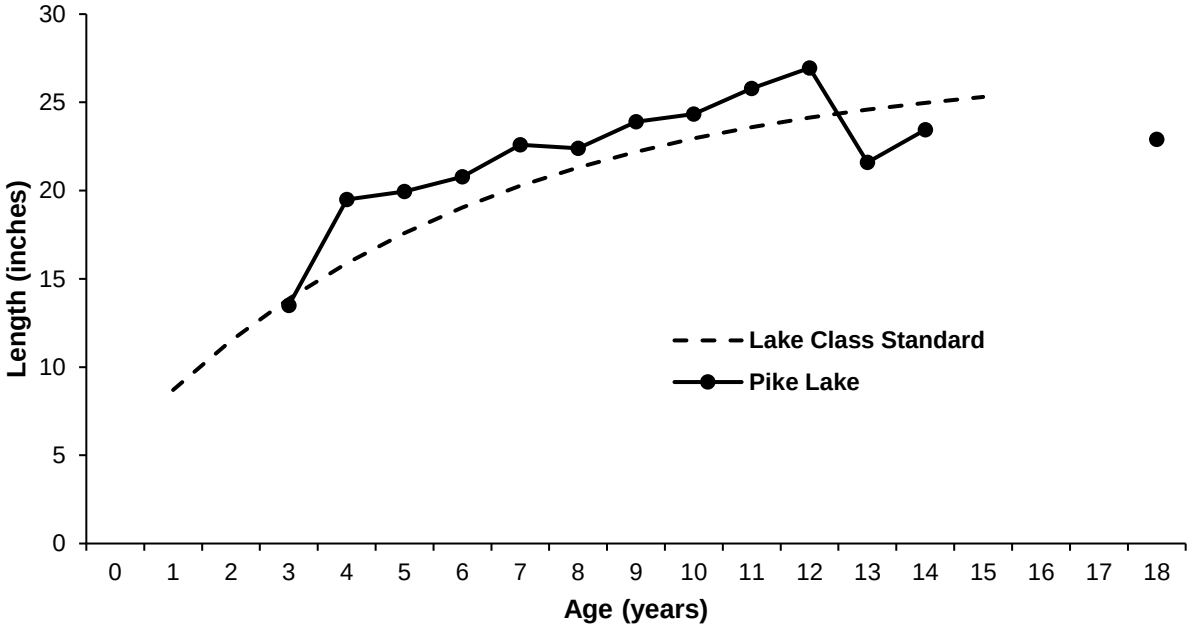


*Figure 3. – Mean length at age of Walleye captured in Pike Lake during 2021 compared to the 50th percentile lake class standard for Wisconsin's complex warm dark lakes.*

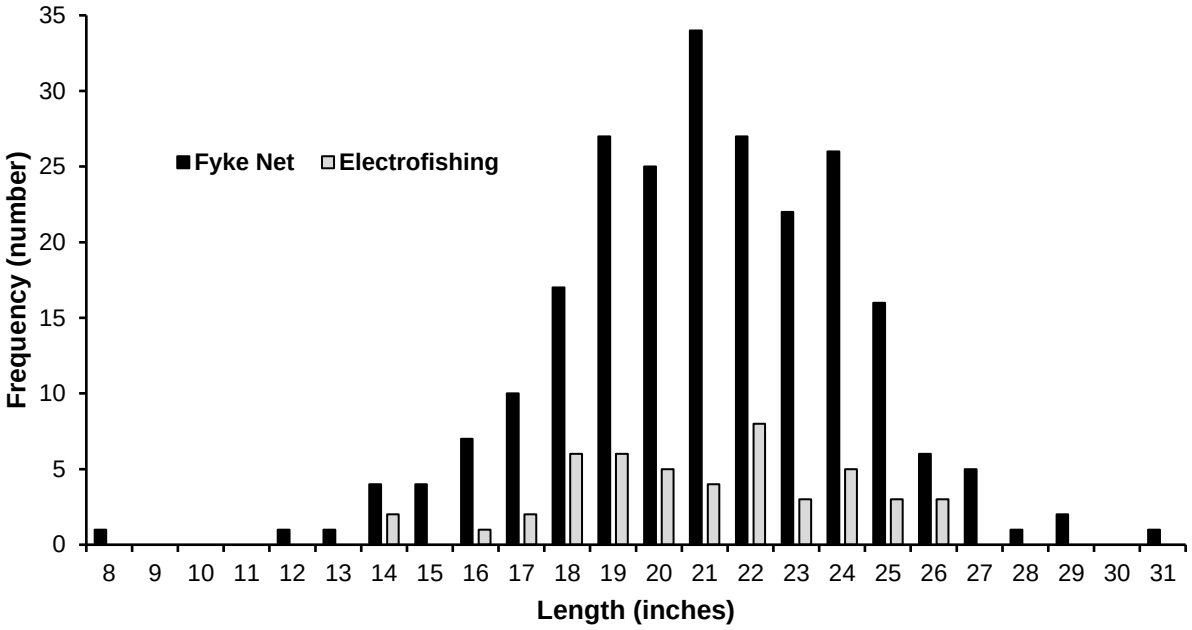


*Figure 4. - Length frequency of Northern Pike (n = 285) captured in Pike Lake during 2021 spring fyke netting (SN1) and spring electrofishing surveys (SE1 and SE2).*

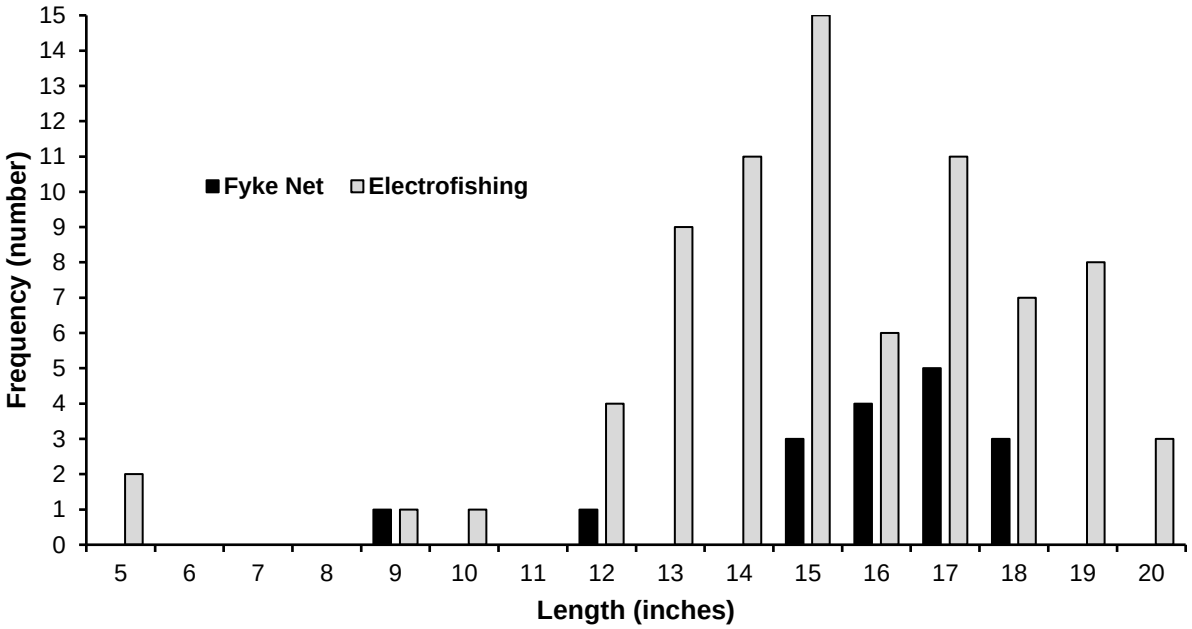


*Figure 5. – Length frequency of Largemouth Bass (n = 95) captured in Pike Lake during 2021 spring fyke netting (SN1) and spring electrofishing surveys (SE1 and SE2).*

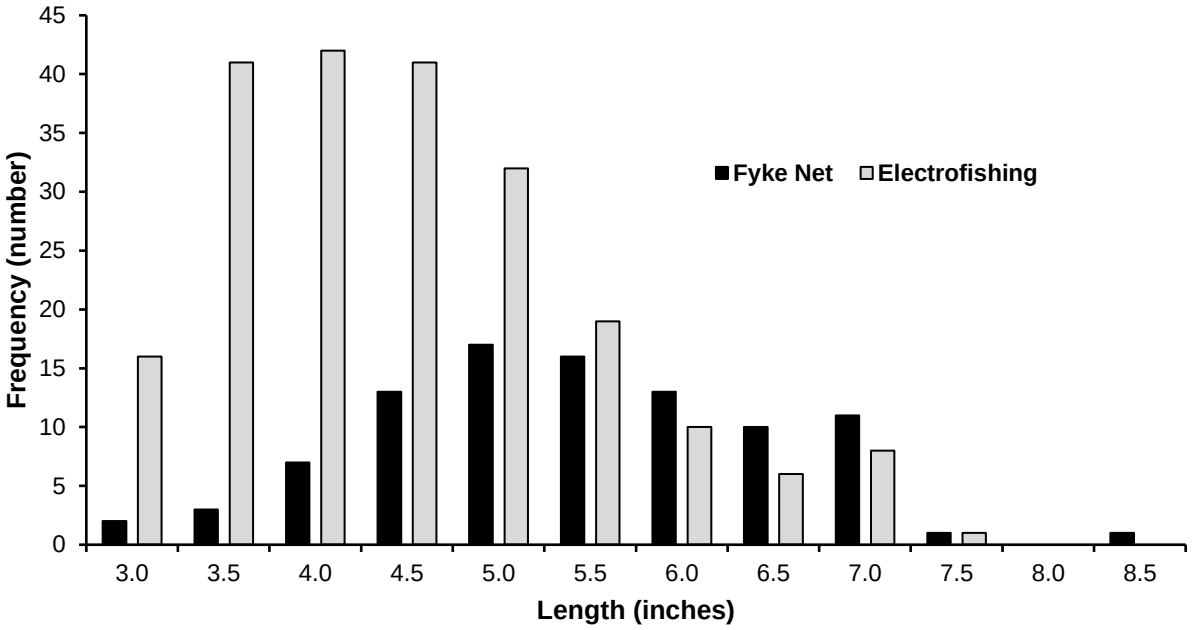


*Figure 6. – Length frequency of Bluegill (n = 310) captured in Pike Lake during 2021 spring fyke netting (SN1) and spring electrofishing surveys (SE2).*

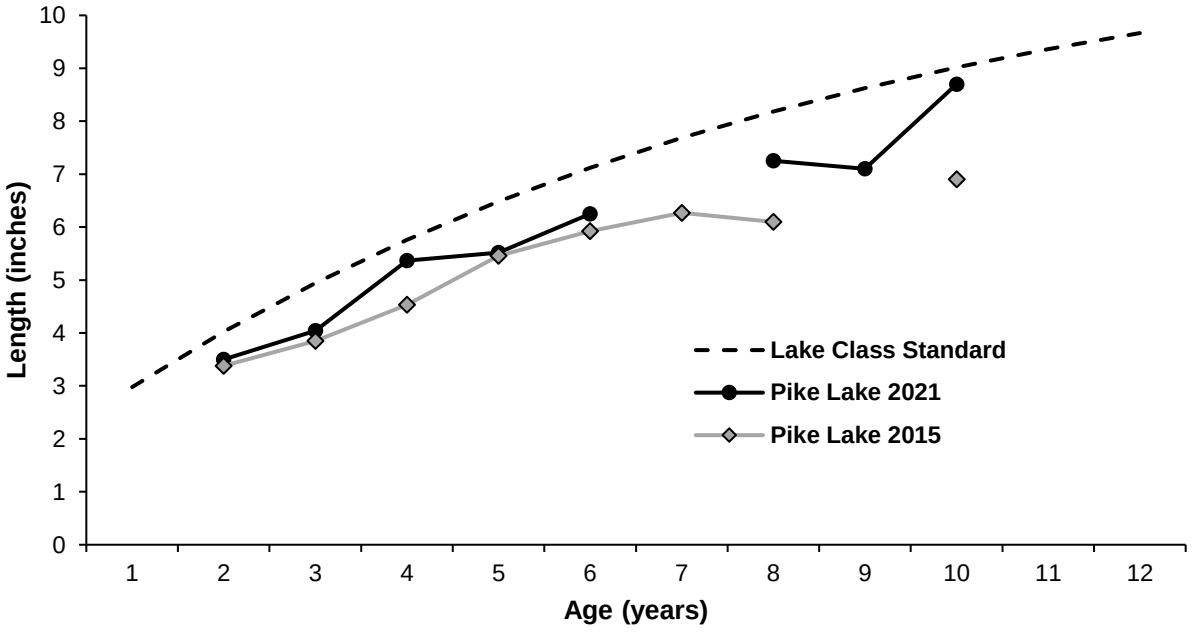


*Figure 7. – Mean length at age of Bluegill captured in Pike Lake during 2021 and 2015 compared to the 50th percentile lake class standard for Wisconsin's complex warm dark lakes.*

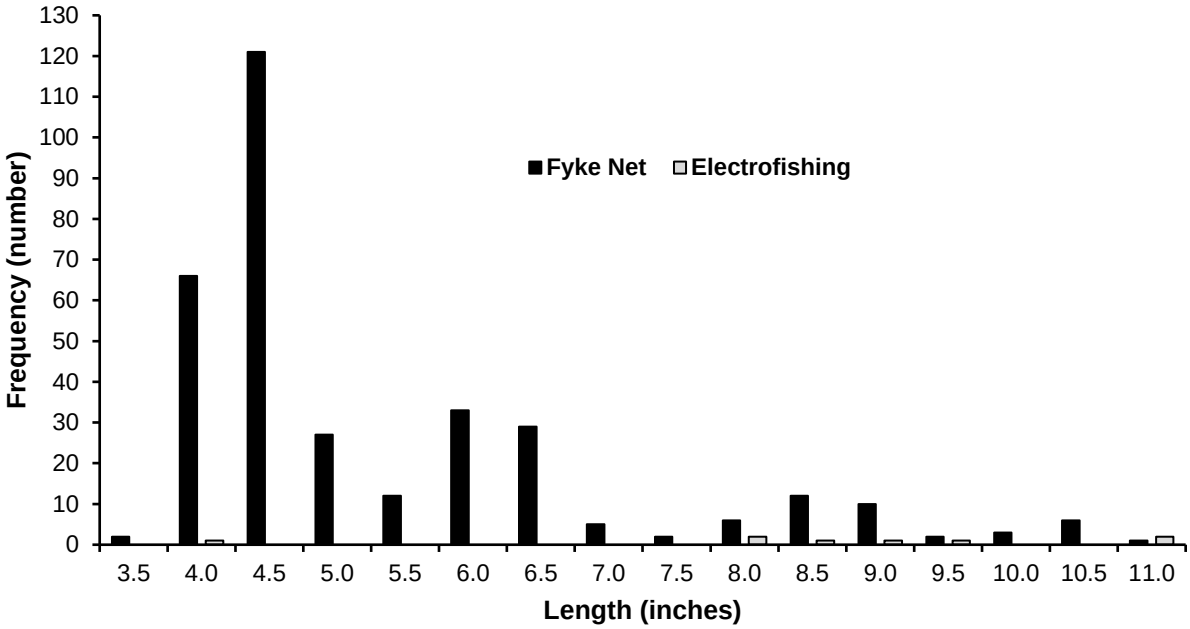


*Figure 8. – Length frequency of Black Crappie (n = 345) captured in Pike Lake during 2021 spring fyke netting (SN1) and spring electrofishing surveys (SE2).*

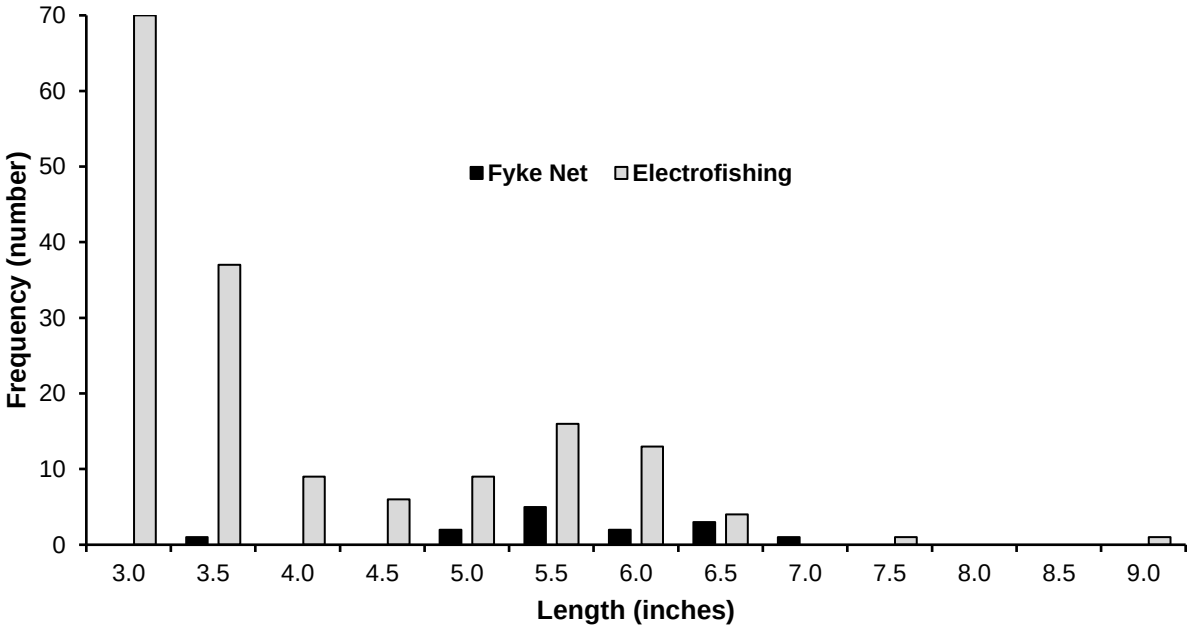


*Figure 9. – Length frequency of Yellow Perch (n = 180) captured in Pike Lake during 2021 spring fyke netting (SN1) and spring electrofishing surveys (SE2).*

*Table 1. – Stocking history from 1972-2020 for Pike Lake, Marathon County, Wisconsin including average length (inches) and number of fish stocked.*

| Year | Species | Average Length | Number Stocked | Year | Species | Average Length | Number Stocked |
|---|---|---|---|---|---|---|---|
| 1972 | Walleye | 5.0 | 26,000 | 2008 | Walleye | 1.5 | 7,036 |
| 1975 | Walleye | 3.0 | 20,000 | | | - | 2,000 |
| 1976 | Brook Trout | - | 2,100 | | Yellow Perch | - | 1,000 |
| 1979 | Walleye | 4.0 | 20,000 | 2009 | Walleye | 8.0 | 1,990 |
| 1980 | Walleye | 5.0 | 10,040 | | Yellow Perch | 8.0 | 847 |
| 1983 | Walleye | 3.0 | 20,000 | 2010 | Walleye | 0.5 | 200,000 |
| 1984 | Walleye | 3.0 | 16,200 | | | 1.8 | 7,015 |
| 1985 | Walleye | 3.0 | 20,400 | | | 10.0 | 1,450 |
| 1986 | Walleye | 3.0 | 20,000 | | Yellow Perch | 10.0 | 1,000 |
| 1987 | Walleye | 3.3 | 120,480 | 2011 | Walleye | 0.5 | 2,000,000 |
| 1988 | Walleye | 5.0 | 9,860 | | | 8.0 | 1,900 |
| 1989 | Walleye | 4.0 | 12,062 | | Yellow Perch | 7.0 | 2,450 |
| 1990 | Walleye | 8.0 | 2,040 | 2012 | Walleye | 0.5 | 1,000,000 |
| 1991 | Walleye | 5.0 | 2,080 | | Yellow Perch | 8.5 | 1,400 |
| 1992 | Walleye | 3.0 | 15,347 | 2013 | Walleye | 8.0 | 1,400 |
| 1994 | Walleye | 2.0 | 4,986 | | Yellow Perch | 6.0 | 1,750 |
| | | 7.2 | 2,050 | 2014 | Walleye | 6.4 | 1,018 |
| 1995 | Walleye | 2.7 | 5,300 | | Yellow Perch | 7.0 | 2,000 |
| 1997 | Walleye | 1.6 | 10,250 | 2015 | Yellow Perch | 9.0 | 1,900 |
| 1999 | Walleye | 1.6 | 10,600 | | Fathead | 2.0 | - |
| 2000 | Walleye | 2.3 | 10,400 | 2016 | Walleye | 7.6 | 1,017 |
| 2002 | Walleye | 1.5 | 10,400 | | Yellow Perch | 7.0 | 1,940 |
| 2004 | Walleye | 1.3 | 10,400 | 2017 | Yellow Perch | 8.0 | 1,800 |
| 2005 | Yellow Perch | 5.0 | 3,500 | | White Sucker | 8.0 | 800 |
| 2006 | Walleye | 1.8 | 10,672 | 2018 | Walleye | 6.1 | 1,018 |
| | Yellow Perch | 5.0 | 4,200 | | Yellow Perch | 9.0 | 1,600 |
| 2007 | Walleye | 7.0 | 1,500 | 2020 | Walleye | 7.5 | 1,018 |

*Table 2. – Current hook and line fishing regulations on Pike Lake for fish species captured during 2021 spring fyke netting (SN1) and spring electrofishing surveys (SE1 and SE2).*

| Common Name of Fish | Season | Minimum Length Limit (inches) | Daily Bag Limit |
|---|---|---|---|
| Walleye | May 7, 2022 – March 5, 2023 | 15”<br>20-24” no harvest<br>>24” only 1 fish | 3 |
| Northern Pike | | 26” | 2 |
| Largemouth Bass | | 14” | 5 |
| Bluegill | Open All Year | None | May and June – 15<br>(Only 5 of any one species)<br><br>Remainder of season – 25 |
| Pumpkinseed | | | |
| Black Crappie | | | |
| Yellow Perch | | | |
| White Sucker | Open All Year | None | Unlimited |
| Bullheads | | | |

*Table 3. – Proportional size distribution (PSD) length categories (inches) used for sport fish species collected from Pike Lake, Marathon County, Wisconsin in 2021 (based on Anderson and Neumann 1996).*

| Common Name of Fish | Stock | Quality (PSD-Q) | Preferred (PSD-P) | Memorable (PSD-M) |
|---|---|---|---|---|
| Walleye | 10 | 15 | 20 | 25 |
| Northern Pike | 14 | 21 | 28 | 34 |
| Largemouth Bass | 8 | 12 | 15 | 20 |
| Bluegill | 3 | 6 | 8 | 10 |
| Black Crappie | 5 | 8 | 10 | 12 |
| Yellow Perch | 5 | 8 | 10 | 12 |

*Table 4. – Total number, percent of total, average length and length range of fish species captured in Pike Lake during 2021 spring fyke netting (SN1) and spring electrofishing surveys (SE1 and SE2).*

| Common Name of Fish | 2021 | | | |
|---|---|---|---|---|
| | Number | Percent | Average Length (inches) | Length Range (inches) |
| Walleye | 98 | 6.1 | 21.5 | 7.2 – 28.0 |
| Northern Pike | 285 | 17.6 | 21.5 | 8.8 – 31.7 |
| Largemouth Bass | 95 | 5.9 | 15.8 | 5.2 – 20.8 |
| Bluegill | 310 | 19.2 | 5.0 | 3.1 – 8.8 |
| Pumpkinseed | 72 | 4.5 | 4.7 | 3.0 – 7.0 |
| Black Crappie | 345 | 21.4 | 5.7 | 3.8 – 11.3 |
| Yellow Perch | 180 | 11.1 | 4.3 | 3.0 – 9.0 |
| White Sucker | 58 | 3.6 | 17.5 | 10.9 – 22.7 |
| Yellow Bullhead | 131 | 8.1 | 10.8 | 5.8 – 13.8 |
| Black Bullhead | 11 | 0.7 | 12.2 | 10.8 – 15.1 |
| Brown Bullhead | 30 | 1.8 | - | - |
| **Total** | **1615** | **100.0%** | **-** | **-** |

*Table 5. – Relative abundance (Catch per effort; CPE) summary for Pike Lake in 2002 and 2021 during spring fyke netting (SN1) and spring electrofishing surveys (SE1 and SE2) compared to the 25$^{th}$ – 75$^{th}$ percentile lake class standard for Wisconsin's complex warm dark lakes.*

| Common Name of Fish | **Fyke Net CPE** (Catch Per Net Night) | | | **Electrofishing CPE** (Catch Per Mile) | | |
|---|---|---|---|---|---|---|
| | 2002 | 2021 | Lake Class Standard | 2002 | 2021 | Lake Class Standard |
| Walleye | 10.0 | 1.6 | 0.4 – 5.8 | 2.9 | 3.1 | - |
| Northern Pike | 2.6 | 4.1 | 0.6 – 3.7 | 15.0 | 6.2 | - |
| Largemouth Bass | 0.2 | 0.3 | - | 6.7 | 11.1 | 8.5 – 37.3 |
| Bluegill | 11.6 | 1.5 | - | 21.7 | 98.2 | 54.1 – 195.9 |
| Black Crappie | 7.7 | 5.4 | 1.5 – 16.5 | 1.3 | 3.6 | - |
| Yellow Perch | 0.4 | 0.2 | 1.0 – 6.9 | 1.3 | 75.5 | - |

*Table 6. – Size Structure of gamefish and panfish species for Pike Lake in 2002 and 2021 during spring fyke netting (SN1) and spring electrofishing surveys (SE1 and SE2).*

| Common Name of Fish | Survey Year | Quality (PSD-Q) | Preferred (PSD-P) | Memorable (PSD-M) |
|---|---|---|---|---|
| Walleye | 2002 | 94.3 | 78.7 | 10.3 |
| | 2021 | 96.8 | 80.6 | 16.1 |
| Northern Pike | 2002 | 51.0 | 7.2 | 2.1 |
| | 2021 | 58.9 | 1.4 | - |
| Largemouth Bass | 2002 | 60.0 | 33.3 | 13.3 |
| | 2021 | 96.8 | 69.9 | 3.2 |
| Bluegill | 2002 | 16.0 | - | - |
| | 2021 | 19.7 | 0.3 | - |
| Black Crappie | 2002 | 44.7 | 4.1 | - |
| | 2021 | 30.3 | 7.7 | - |
| Yellow Perch | 2002 | 40.0 | 10.0 | - |
| | 2021 | 1.8 | - | - |