Wisconsin Department of Natural Resources

2025 Electrofishing Summary Report
Round Lake, Waushara County
WBIC: 197300

Lake Information

Acres: 63

Max. Depth: 19 ft

Shoreline Miles: 1.7

Public Access: 1

Lake Class: Complex - Warm Clear

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Introduction

In 2025, the Department of Natural Resources (DNR) conducted a one night electrofishing survey of Round Lake in order to provide insight and direction for the future fisheries management of this water body. Primary sampling objectives of this survey were to characterize species composition, relative abundance, and size structure. The following report is a brief summary of that survey including the general status of the fish populations and future management options for Round Lake.

Survey Effort

Table 1. Survey information for Round Lake.

Site Location	Survey Dates	Water Temperature (°F)	Target Species	Total Miles Shocked	Number of Netters	Net Nights
Round Lake	5/14/2025	70	All	1.5	2	Boomshocker

Table 2. Relative Abundance — catch per unit effort (CPUE)

Species	Total Number Captured	Average Length (Inches)	Length Range (inches)	CPUE/Mile	Statewide Percentile	Lake Class Percentile	Overall Abundance Rating
Bluegill	181	5.9	1.7 - 9.2	181	76th	50th	Moderate
Warmouth	25	6.8	2.6 - 8.1	25	Non	Managed	Species
Yellow Perch	81	8.4	5.2 - 10.8	81	94th	-	High
Largemouth Bass	292	10.7	6.6 - 21.0	195	99th	99th	High

Metric Descriptions

- **Catch per unit effort (CPUE) is an index used to measure fish population relative abundance**, which simply refers to the number of fish captured per unit of distance or time. For netting surveys, we typically quantify CPUE by the number and size of fish per net night. For electrofishing, we quantify CPUE as the number caught per mile of water electrofished. CPUE indexes are compared to statewide data by percentiles and within lake trends. For example, if a CPUE is in the 90th percentile, it is higher than 90% of the other CPUEs in the state.
- **Total abundance is a metric that describes population size and is estimated by mark and recapture.** In our study, all captured (insert species) were given a partial caudal fin (i.e., tail fin) clip and released. Each time the nets were checked, all (insert species) were examined for a partial caudal fin clip. The number of previously captured individuals (i.e., fin clipped) was recorded, and

proportions of marked individuals to unmarked individuals were used to estimate the total abundance of the (insert species) population.

- **Proportional Stock Density (PSD) is an index used to describe the size structure of fish populations.** It is calculated by dividing the number of quality size fish by the number of stock size fish for a given species. PSD values between 40 - 60 generally describe a balanced fish population.
- **Length frequency distribution (LFD) is a graphical representation of the number or percentage of fish captured by half-inch or one-inch size intervals.** Smaller fish (or younger age classes) may not always be represented in the length frequency due to different habitat usage or sampling gear limitations.
- **Mean age at length is an index used to assess fish growth.** Calcified structures (e.g., otoliths, spines or scales) are collected from a specified length bin of interest (e.g., 7.0-7.5 inches for bluegill). Mean age is compared to statewide data by percentile with growth characterized by the following benchmarks: slow (<33rd percentile); moderate (33rd to 66th percentile); and fast (>66th percentile).
- **Relative weight is an index used to assess the plumpness (i.e., condition) of fish.** It is calculated by comparing the observed weight of a fish to the standard weight (i.e., predicted average weight) of that fish, given its length. A relative weight of 93 means it has average plumpness/weight compared to other fish of the same length. Relative weights above 93 mean they are plumper than average.

Survey Method

Round Lake was sampled according to spring electroshocking (SEII) protocols as outlined in DNR Fisheries Monitoring Protocols. The primary objective for these sampling periods is to count and measure adult bass and panfish. Other gamefish/panfish may be sampled but are considered by-catch as part of this survey. Boom shockers were used to electrofish 1.5 miles of shoreline. Panfish were collected in 1.0 miles and gamefish were collected and measured throughout.

Results

Bluegill

Bluegill (Lepomis macrochirus) is a very common panfish species distributed widely across many Wisconsin waterbodies. Bluegill typically spawn in nearshore areas consisting of sand/mud or gravel substrate at approximately 67-80°F water temperatures.

Figure 1. Bluegill length frequency from Round Lake.

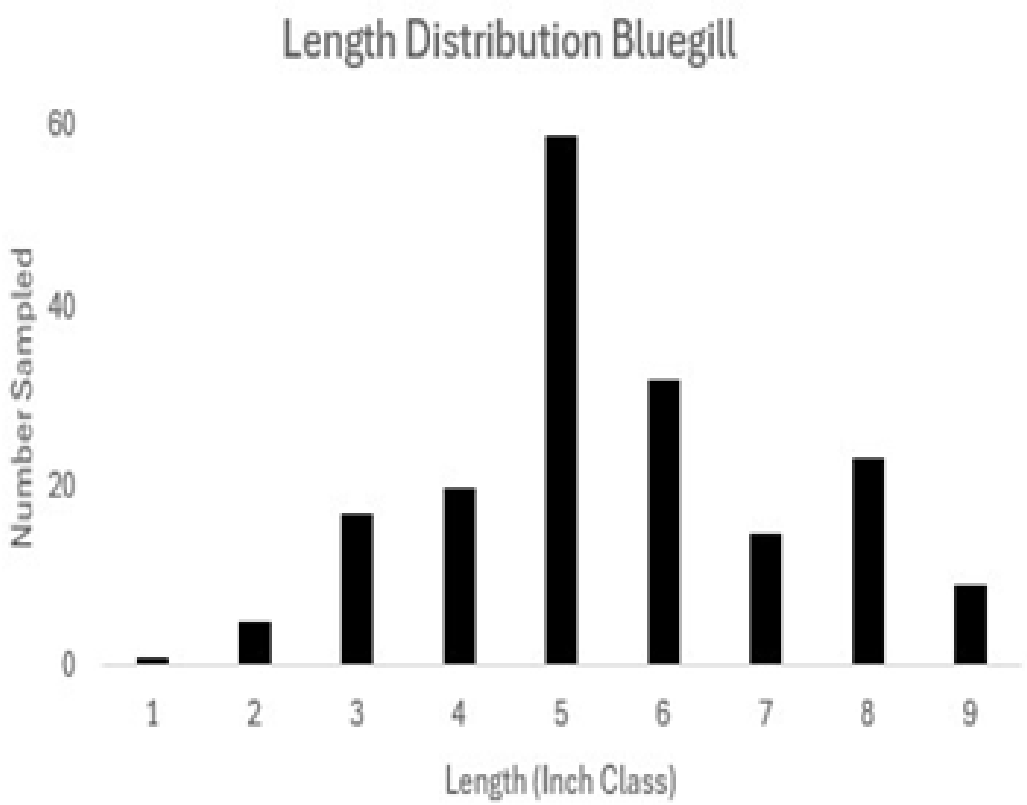

Table 3. 2025 size structure metrics for bluegill on Round Lake.

Total Number Measured	**Average Length (inches)**	**Length Range (inches)**	**Stock and Quality Size (inches)**	**Stock Number**	**Quality Number**
181	5.9	1.7 - 9.2	3 and 6	175	79

Table 4. Electrofishing number per mile for bluegill on Round Lake.

2004	**2008**	**2016**	**2025**	**Historical Average**	**2025 Statewide Percentile Rank**	**2025 Abundance Rating**
284	279	210	181	238.5	76th	Moderate - High

Table 5. Proportional stock density for bluegill on Round Lake.

2004	2008	2016	2025	**Historical Median**	**2025 Statewide Percentile Rank**	**2025 Abundance Rating**
53	51	42	45	48	65th	Moderate

Table 6. Average age for Round Lake bluegill at 6 inches

Sex	Count	Average Age	Age Range	Lake Class Rating	Regional Rating
Male	11	3.55	3 - 4	Above Average	Above Average
Female	11	3.45	3 - 5	Above Average	Above Average
All	22	3.5	3 - 5	Above Average	Above Average

Yellow Perch

Yellow Perch (Perca flavescens) are a common panfish species found throughout many Wisconsin waterbodies. Typically, yellow perch spawn in areas of emergent or submergent vegetation or submerged brush at approximately 45-50° F water temperatures.

Figure 2. Yellow perch length frequency from Round Lake.

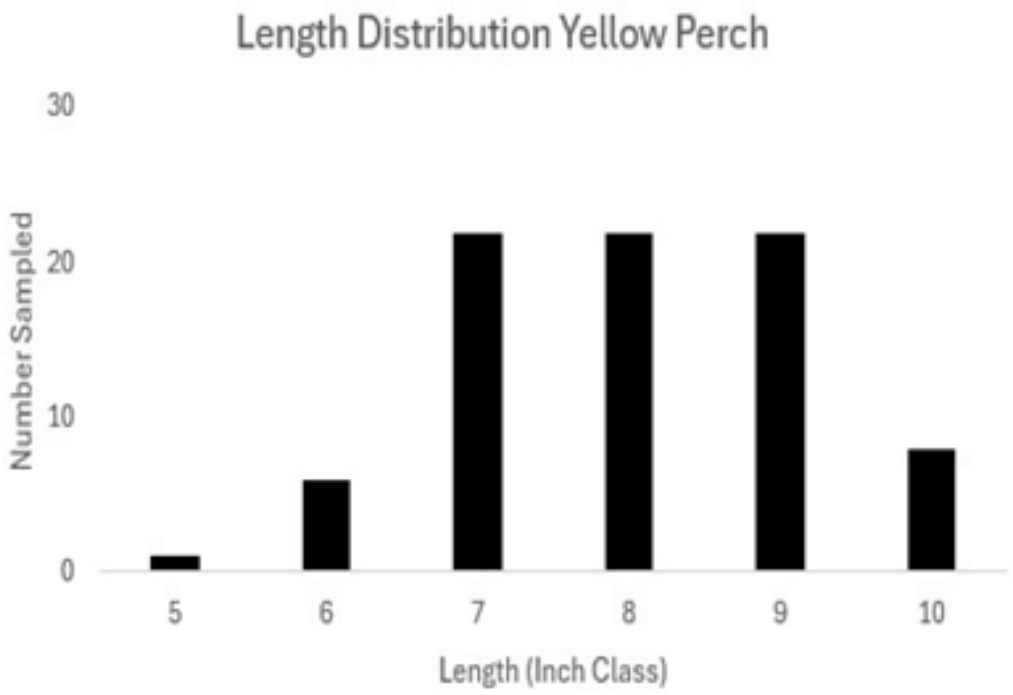

Table 7. 2025 size structure metrics for yellow perch on Round Lake.

Total Number Measured	Average Length (inches)	Length Range (inches)	Stock and Quality Size (inches)	Stock Number	Quality Number
81	8.4	5.2 - 10.8	5 and 8	81	52

Table 8. Electrofishing number per mile for yellow perch on Round Lake.

2004	2008	2016	2025	Historical Average	2025 Statewide Percentile Rank	2025 Abundance Rating
0	0	1	81	20.5	94th	High

Table 9. Proportional stock density for yellow perch on Round Lake.

2025 PSD	Percentile Rank	Size Rating
64	97th	High

Largemouth Bass

Largemouth Bass (Micropterus salmoides) are a common predatory fish species found in many Wisconsin waterbodies. Largemouth bass typically spawn in shallow nearshore areas consisting of sand/mud or gravel substrate at approximately 60-70°F water temperatures. Electrofishing is the preferred sampling gear for largemouth bass. All results presented for largemouth bass are from spring electrofishing surveys.

Figure 3. Largemouth bass Length distribution from Round Lake.

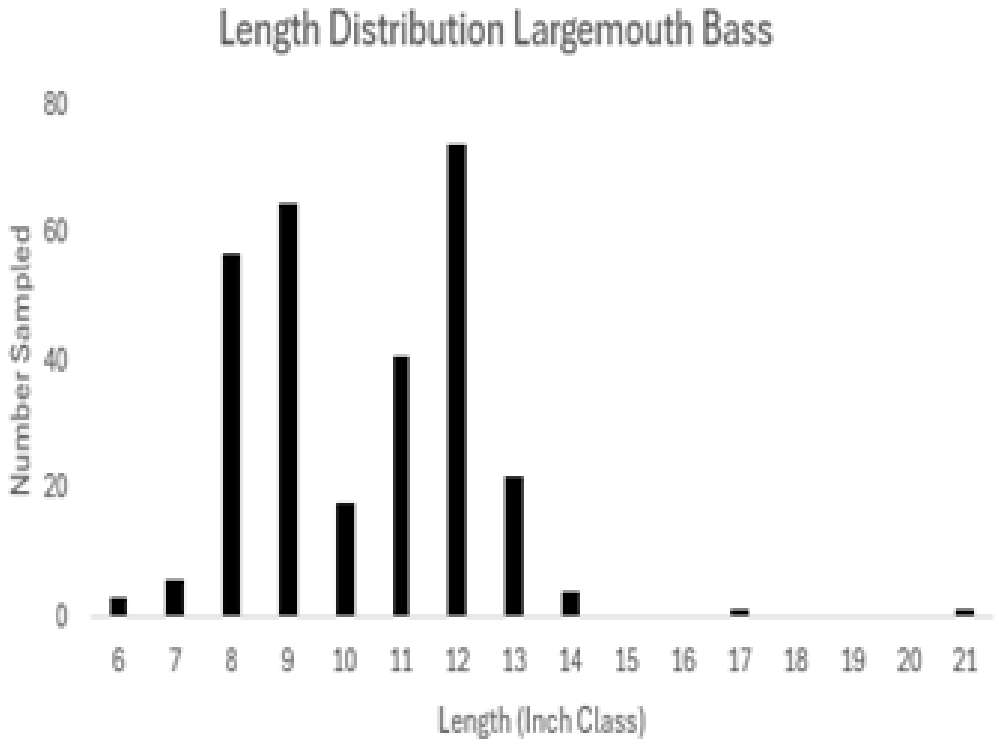

Table 10. 2025 size structure metrics for largemouth bass on Round Lake.

Total Number Measured	Average Length (inches)	Length Range (inches)	Stock and Quality Size (inches)	Stock Number	Quality Number
292	10.7	6.6 - 21.0	8 and 12	283	102

Table 11. Electrofishing number per mile for largemouth bass on Round Lake.

2001	2004	2008	2016	2025	Historical Average	2025 Statewide Percentile Rank	2025 Abundance Rating
159	137	161	114	195	153	99th	High

Table 12. Proportional stock density for largemouth bass on Round Lake.

1986	1987	1997	2001	2004	2008	2016	2025	Historical Median	PSD	Percentile Rank	Size Rating
30	63	5	13	13	5	6	36	21.4	36	19th	Low

Table 13. Average age for Round Lake largemouth bass at 14 inches.

Sex	Count	Average Age	Age Range	Lake Class Rating	Regional Rating
Male	3	9	5 - 12	Below Average	Below Average
Female	4	6.8	5 - 9	Average	Below Average
All	7	7.7	5 - 12	Below Average	Below Average

Discussion/Recommendations

Bluegill

Abundance continues to decrease from 284 per mile in 2004 to 181 per mile as largemouth bass numbers continue to increase. At 181 per mile, it ranks in the 76th percentile statewide. Size structure has remained relatively steady over the years and it's near the historical average of 47.8. The PSD = 45 is at the lower end of what we would like to see and ranks in the 65th percentile. Age structures show above average growth for bluegills taking 3.5 years to reach 6 inches in length. An ideal management option would be to increase the abundance to near 250 per mile and increase size structure (PSD = 50-60). With the mean length less than 6.0 inches and mean age of 6 inch fish being equal or less than 5.7 years, Round Lake meets the growth requirements for a reduced panfish bag which could benefit.

Yellow Perch

Abundance has increased over the years from 1 per mile in 2016 to 81 per mile ranking in the 94th percentile. Stocking of perch over the years and high water potentially flooding suitable spawning habitat has likely contributed to the increase. Size structure is high with PSD = 64 which would rank it at 97th percentile statewide. An ideal management option would be to maintain abundance around 80 per mile and size structure around PSD=60.

Largemouth Bass

Abundance of 195 per mile has continued to increase when compared to the previous surveys and is much higher than the 75 per mile we would like to see, ranking in the 99th percentile compared to lakes statewide. Size structure of PSD = 36 is low, but significantly higher than the 2016 survey where PSD = 6. Size structure is currently ranking in the 19th percentile. An ideal management option would be to decrease abundance to 75 per mile and increase the size structure PSD $\geq$ 65%. This should also help with an increase in panfish abundance. The current slot size limit and bag reduction doesn't seem to be working as expected. Removing the size limit entirely or increasing the less than 14 inch bag limit of the current slot regulation to 5 should be considered.

Other Species and Information

This survey is not intended to assess the walleye fishery but typically gives an idea of presence. The walleye fishery in Round Lake is dependent on stocking which first started in the 1930's, and the local We Really Kare Fishing Club continues to stock every other year. We sampled 23 walleye from 6.6 - 15.8 inches and averaging 8.6 inches. There were 2 adults (14.4 and 15.8 inches) sampled, and the remaining walleye were likely from the fall stocking in 2024. We did not sample any northern pike, but they have been sampled in recent surveys and with an existing walleye population and an over abundant largemouth bass population, increasing the northern pike population is not recommended. Warmouth are found in approximately 5% of lakes in Wisconsin but are common in Round Lake. Warmouth abundance at 25 per mile was similar to the survey in 2016. Fish ranged from 2.6—8.1 inches and averaged 6.8 inches. Warmouth do provide some fishing opportunity, but no active management goals are recommended except to continue monitoring warmouth through our surveys. An electrofishing survey seldom gives a good picture of the black crappie population in a fishery. No black crappie were sampled in our random 1-mile shoreline station, but adult fish were observed spawning deeper in the gamefish only station. Black crappie are periodically stocked by the We Really Kare Fishing Club and have been sampled at lower numbers in previous surveys. Nearshore spawning habitat, especially wood, is one of the main limiting factors for black crappie and yellow perch fisheries in many lakes in this area of the state and Round Lake is no different. Nearshore habitat should be encouraged. Finally, no pumpkinseeds were sampled in this survey. They have been present in low numbers over past surveys with abundance ranging from 10-17 per mile.

History

Round Lake is a 63 acre seepage lake in Waushara County. Surveys were done on Round Lake in 1955 and 1960 by seine. These surveys revealed an overabundant (stunted) bluegill fishery. In 1965 Round Lake was partially chemically treated with toxaphene to reduce the excessive crop of small, slow growing fish. Surveys were done again in 1966, 1967, 1968 and 1969 using a seine to check progress of treatment. It was estimated that 90,000 bluegill (3-5 inches) were killed in the 1965 treatment. In 1967 crappies dominated the catch over bluegill at a 7:1 ratio. In 1968 the ratio had dropped to 3:1 and by 1969 the crappie to bluegill ratio was about 1:1. Stunted bluegills again became a problem by 1969. The PSD percentages for bluegills were 35% in 1967, 6%(1968) and 2% in 1969. In 1970, 1977, 1980 and 1982 bluegills were seined and removed for stocking winter kill lakes, kids fishing ponds and other lakes in need of panfish. Round Lake has historically had an unbalanced predator-prey population. In 1984 the DNR began a study of Round Lake to determine if predator-prey balance could be restored by protecting predator populations. In January, 1986 the lake was closed to fishing for largemouth bass, northern pike and walleye. Panfish seasons remained open. Largemouth bass and bluegill were the dominant predator and prey. Only remnant populations of walleye and northern pike remained from earlier stockings. Stocking efforts in Round Lake since the 1930's have consisted of yellow perch, crappies, bluegill, walleye, largemouth bass, smallmouth bass and northern pike. The walleye fishery is entirely dependent on stocking. Following the closure of the predator season, numbers of largemouth bass over 12 inches increased dramatically, with numbers of smaller 3-6 inches bluegills declining and numbers of larger bluegills 6-8 inches increasing. In 1990 the closed season regulation was removed, and Round Lake was opened to catch and release for largemouth bass. In 1992 a 1 bag, 18 inch minimum restriction was put in place. The 1998 survey showed that the regulation was working great for increasing growth rates and size structure for bluegills but was resulting in an overabundance of largemouth bass less than 14 inches. Condition and growth rates became poor, because of the competition for available food. There was an almost complete absence of bluegill year classes since 1992. In 2000 a special regulation (3 bag, no size limit, 14-18 inches no keep, 1 fish > 18 inches) went into place on Round Lake for largemouth bass. Surveys from 2001 and 2004 show a slight decrease in largemouth abundance and a very slight increase in size structure. Growth rates continue to be poor. Spring and fall electrofishing in 2004 seemed to suggest a high mortality of largemouth bass prior to reaching the protective slot. Spring electrofishing in 2008 showed largemouth numbers continuing to increase with size structure decreasing from a poor PSD=13 to a PSD=5. Bluegill numbers and size structure were relatively unchanged. Spring electrofishing survey in 2016 showed largemouth numbers decreasing and size structure continuing to be very low at PSD = 6. Bluegill abundance decreased from 279 per mile to 210 and size structure decreased from PSD=51 in 2008 to 42 in 2016.