Wisconsin Department of Natural Resources

2025 Electrofishing Summary Report
Deer Lake, Waushara County
WBIC: 102900

Lake Information

Acres: 15

Max. Depth: 14 ft

Shoreline Miles: 1

Public Access: 1

Lake Class: Simple - Warm Clear

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Introduction

In 2025, the Department of Natural Resources (DNR) conducted a one night electrofishing survey of Deer 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 last survey was after the winterkill of 2008, when no bluegill or largemouth bass were sampled. The following report is a brief summary of that survey including the general status of the fish populations and future management options for Deer Lake.

Survey Effort

Table 1. Survey information for Deer Lake.

Site Location	Survey Dates	Water Temperature (°F)	Target Species	Total Miles Shocked	Number of Netters	Net Nights
Deer Lake	5/7/2025	65	Bass and Panfish	0.8	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	111	5.9	1.8 - 8.9	139	67th	50th	Moderate
Black Crappie	2	9.3	9.1 - 9.5	2.5	30th	NA	Low-Moderate
Pumpkinseed	12	6.1	4.2 - 8.0	15	67th	75th	Moderate
Yellow Perch	15	8.5	4.3 - 9.8	19	69th	NA	Moderate
Largemouth Bass	106	10.0	6.0 - 20.5	133	97th	97th	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

Deer 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. Mini boom shocker was used to electrofish 0.8 miles of shoreline. All species were collected throughout the entire 0.8 mile station.

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 Deer Lake.

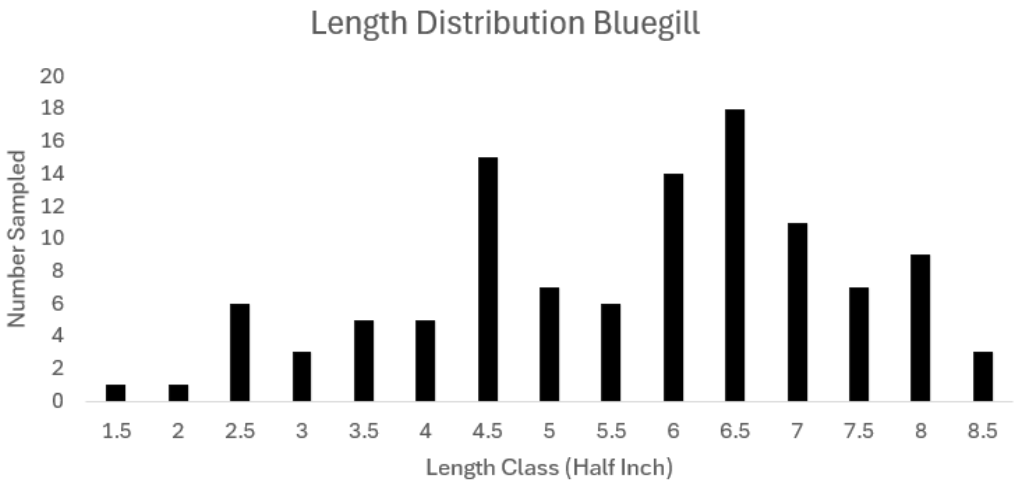

Table 3. 2025 size structure metrics for bluegill on Deer Lake.

Total Number Measured	Average Length (inches)	Length Range (inches)	Stock and Quality Size (inches)	Stock Number	Quality Number	2025 Statewide Percentile Rank	2025 Abundance Rating
111	5.9	1.8 - 8.9	3 and 6	103	62	80th	Good

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

Specie	Count	Number Per Mile	Length Range	Average Length	Stock & Quality Size (inches)	PSD
Bluegill	111	139	1.8 - 8.9	5.9	3 and 6	60
Black crappie	2	2.5	9.1 - 9.5	9.3	5 and 8	Too Few
Pumpkinseed	12	15	4.2 - 8.0	6.1	3 and 6	Too Few
Yellow perch	15	19	4.3 - 9.8	8.5	5 and 8	Too Few

Table 5. Average age for Deer Lake bluegill at 6 inches

Sex	Count	Average Age	Age Range	Lake Class Rating	Regional Rating
Male	12	6.5	3.7	3 - 4	Above Average
Female	8	6.4	3.8	3 - 4	Above Average
All	20	6.5	3.7	3 - 4	Above Average

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 2. Largemouth bass Length distribution from Deer Lake.

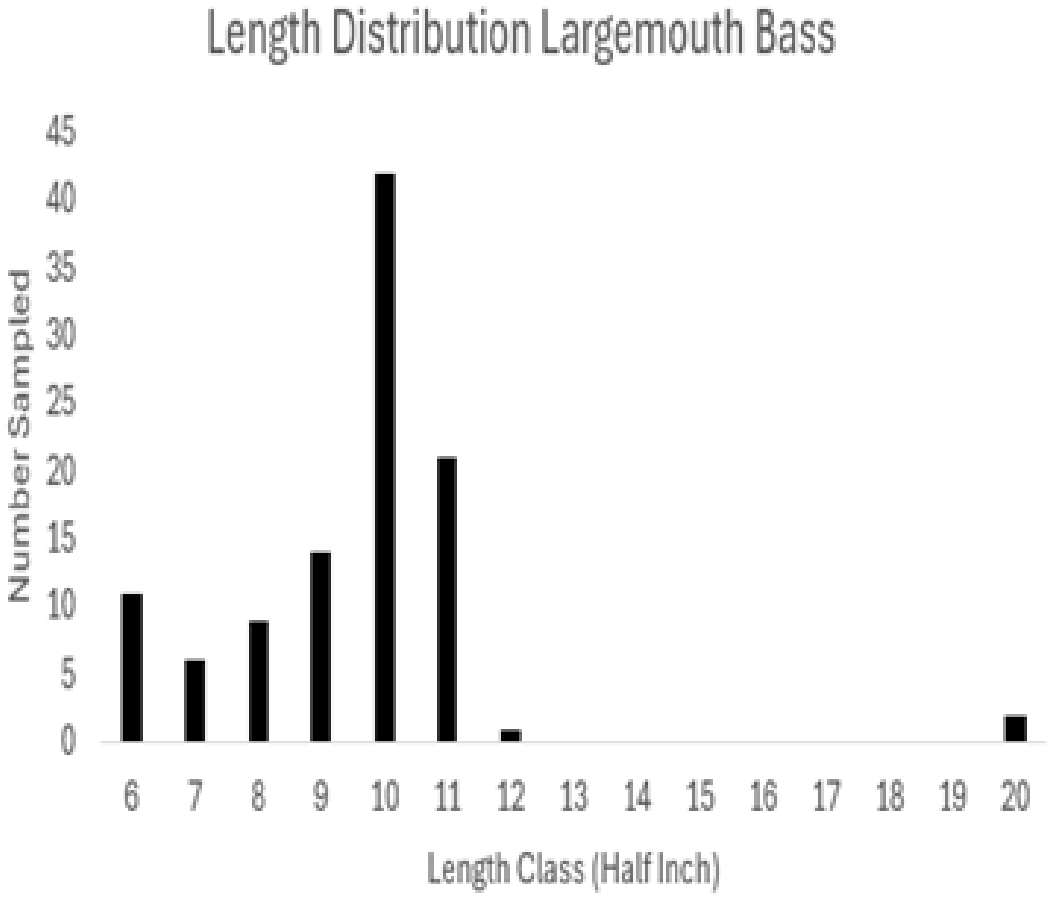

Table 10. 2025 size structure metrics for largemouth bass on Deer Lake.

Total Number Measured	Average Length (inches)	Length Range (inches)	Stock and Quality Size (inches)	Stock Number	PSD	Percentile Rank	Size Rating
106	133	10	6.0 - 20.5	8 and 12	3	1st	Low

Table 11. Average age for Deer Lake largemouth bass at 11 inches.

Sex	Count	Avg. Length	Average Age	Age Range	Lake Class Rating	Regional Rating
Male	2	11.9	8.5	7 - 10	Below Average	Below Average
Female	5	11.1	7.8	7 - 8	Below Average	Below Average
All	7	11.4	8	7 - 10	Below Average	Below Average

Discussion/Recommendations

Bluegill

Abundance from the mini boom survey in 2025 appeared fairly good at 139 per mile. The size structure is good with a PSD = 60, which is at the top of the range (40–60) we like to see and ranks in the 80th percentile compared statewide. Age structures show above average growth taking 3.7 years to reach 6 inches in length. An ideal management goal would be to slightly increase the abundance to 150-175 per mile using the mini-boom and maintain size structure around PSD=40-60. Based on Deer Lakes size, overabundant largemouth bass, growth and average length, it would be a candidate for a reduced panfish bag.

Largemouth Bass

The abundance using the mini boom in 2025 was high at 133 per mile. Size structure of PSD = 3 is very low and a sign of an over abundant slow growing fishery, ranking in the 1st percentile statewide. Deer lake does show the potential to grow large fish evident by the 20.5 inch fish we did sample. Age structures show below average growth taking 8 years to reach 11.4 inches in length. The regional average for an 8 year old largemouth bass is 16.5 inches. An ideal management goal would be to reduce abundance to 50 per mile using the mini boom and increase the size structure PSD $\geq$ 65%. As a follow up management strategy, the 14 inch size limit has been removed on largemouth bass and a 5 bag maintained.

Black Crappie

No black crappie were sampled in 2008 after the winterkill of the winter of 2007-08 and the present survey does not give a true picture of the black crappie population in a lake. With only 2 fish being sampled it's hard to tell how the crappie fishery is doing. Black crappie benefit greatly from nearshore vegetation and wood. They could also benefit from a reduction in largemouth bass numbers.

Pumpkinseed

Pumpkinseed were the only species sampled in the 2008 survey following the winter kill of 2007-08. We sampled 1– 4 inch fish at the time and saw 4 other. They are still present at around 15 per mile and with growth up to 8.0 inches and provide harvest opportunities for anglers.

Yellow Perch

No yellow perch were sampled in 2008 after the winterkill of the winter of 2007-08 and this survey did not give a true picture of the yellow perch population. During this survey 15 yellow perch were sampled up to almost 10 inches, suggesting it is likely that a population of preferred and memorable yellow perch, 9 and 11 inches respectively were present. They were likely not sampled with the mini boom, a poor sampling technique for yellow perch. Yellow perch benefit greatly from nearshore vegetation and wood.