

TIMMS LAKE
Marinette County
2020 Fish Management Report

Christopher C. Long
Senior Fisheries Biologist



Wisconsin Department of Natural Resources
101 N. Ogden Rd.
Suite A
Peshtigo, Wisconsin 54157

SUMMARY

Lake and location:

Timms Lake: 30 acres; T37N, R12E, S17

Physical / chemical attributes (Carson et al. 1977):

Surface acres: 30

Maximum depth (ft): 37

Shoreline length (mi): 1.3

Lake type: Seepage

Basic water chemistry: Medium hard water, slightly alkaline, clear water of high transparency

Littoral substrate: 60% sand; 30% muck; 10% gravel

Purpose of survey:

Determine the current status of the fishery.

Surveys:

Survey Seq No	Survey Begin Date	Survey End Date	Primary Survey Purpose
515094016	14-Jul-20	16-Jul-20	FISHERIES ASSESSMENTS LAKES SUMMER PANFISH
515093290	13-Jul-20	20-Jul-20	FISHERIES ASSESSMENTS LAKES LATE SPRING BASS PAN

Fishery:

The Timms Lake fishery is comprised primarily of largemouth bass and bluegill.

INTRODUCTION

Timms Lake is in far northeast Marinette County in the Township of Niagara. Marinette County owns approximately ½ of the shoreline on this 30-acre seepage lake. Morgan County Park is connected to Timms Lake and offers a beach, picnic area and camping. Fisherman and paddlers may access Timms Lake from the unimproved landing on the southeast side of the lake on Morgan Park Rd.



In 1979, Timms Lake was renovated whereby fish populations were chemically removed. By 1981 it was evident that largemouth bass were still overabundant and slow growing. During this time there was no minimum length limit (MLL) on largemouth bass and harvest of larger fish appeared to be impacting size structure. Therefore, small bass were removed by electrofishing and transferred to other local lakes (1983, 1984, 1987, 1991) in an effort to reduce abundance and improve growth. In 1988, a 12-inch MLL for black bass was established in the northern bass zone. The last fisheries survey of Timms Lake was completed in 1992 and showed a slight improvement in bass size structure and abundance was consistent with other local lakes. It wasn't until 1997 that the current 14-inch MLL for largemouth bass was implemented statewide. No fisheries surveys have been conducted since 1992.

The goal of the 2020 fisheries survey was to assess the status of the fishery by characterizing largemouth bass and bluegill size structure, abundance (CPUE) and mean length at capture (age).

METHODS

Data collection:

Four standard fyke nets (3-foot hoop, $\frac{3}{4}$ -bar, 1.5-inch stretch) were set for 3 consecutive nights from July 14 through July 16, 2020. A standard WDNR electrofishing (EF) boat was used to collect fish on July 20, 2020. Work restrictions related to the COVID-19 pandemic altered the timing of our sampling in 2020 (surveys were conducted after gamefish and panfish had spawned).

All fish collected were measured to the nearest 0.1-inch total length (TL). A subsample of scales and/or dorsal spines was collected for age and growth analysis (5 fish per half inch group). Ages were assigned to each fish using standard WDNR procedures. Age data was calculated for largemouth bass and bluegill.



Data analysis:

Catch per unit effort (CPUE) was calculated as catch divided by sampling effort for each species collected and gear type. Length frequency distributions were tabulated from fish measured during the electrofishing and fyke net samples. Mean length at capture data was calculated for largemouth bass and bluegill and compared to the average of mean length at age for northern Wisconsin.

RESULTS & DISCUSSION

Overall, 240 fish representing 4 species were collected during the 2020 sampling season. Bluegill were the most abundant followed by largemouth bass. Six green sunfish and a golden shiner were also collected.

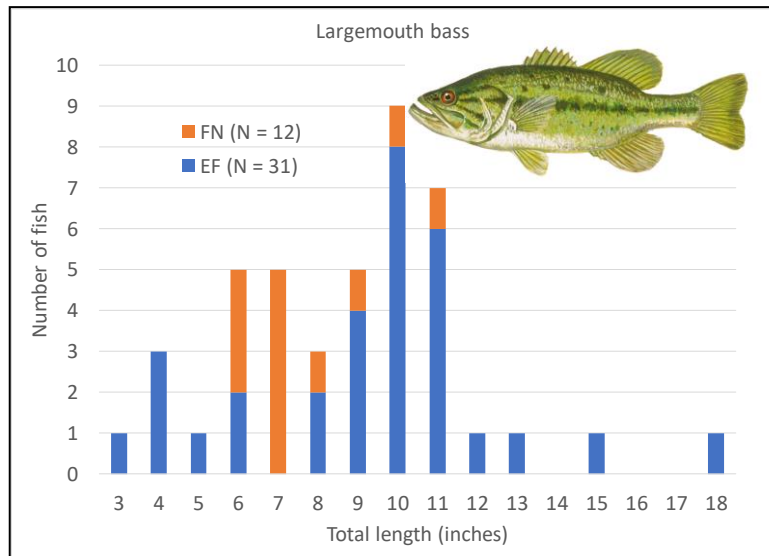
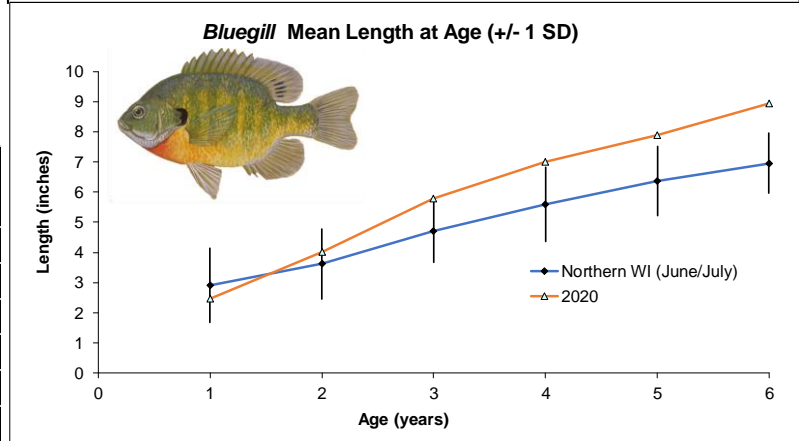
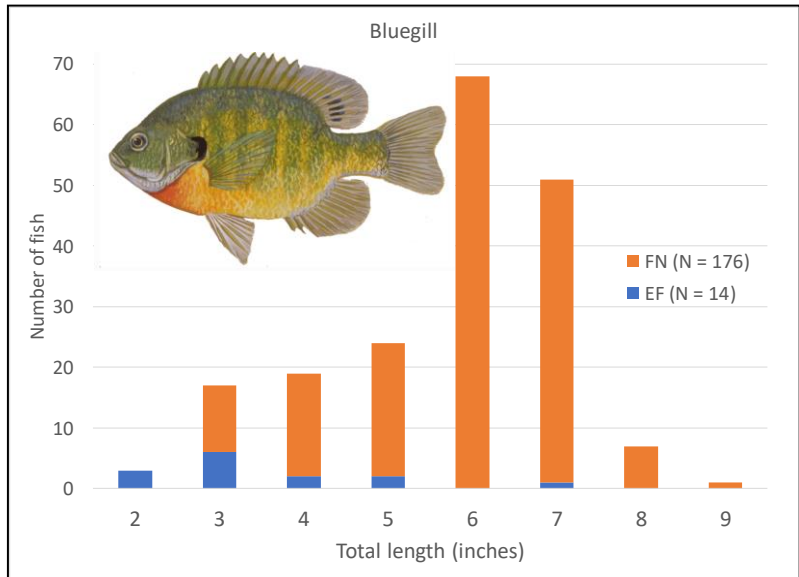
SPECIES COMPOSITION OF FISHES COLLECTED						
*COMMON NAME	TOTAL NUMBER COLLECTED	PERCENT (TOTAL)	NUMBER COLLECTED (FN)	NUMBER COLLECTED (EF)	AVERAGE LENGTH (inches)	LENGTH RANGE (inches)
Bluegill	190	79%	176	14	6.4	2.3-9.1
Largemouth bass	43	18%	12	31	9.7	3.8-18.6
Green sunfish	6	3%	6		4.9	4.0-6.7
Golden shiner	1	0.4%		1	3.9	3.9
TOTALS	240		194	46		

* Common names of fishes recognized by the American Fisheries Society.

A total of 190 **bluegill** was collected which accounted for 79% of the fish collected. This total includes bluegill collected during the electrofishing and fyke netting surveys. Bluegill ranged in length from 2.3 to 9.1 inches and averaged 6.4 inches across both samples. Fyke netting CPUE was 14.7 bluegill/net night. Sixty-seven percent of bluegill collected were > 6 inches and considered harvestable.

A subsample of 54 bluegill was aged from 1 to 6 years old. Bluegill were reaching preferred size (6 inches) between 3 and 4 years old. Compared to the average length at age for northern Wisconsin, bluegill growth was average at ages 1 and 2 and above average from age 3 through age 6.

Age	Number Aged	Average Length	Min	Max
1	3	2.5	2.3	2.8
2	17	4.0	3.0	5.3
3	12	5.8	5.3	6.2
4	11	7.0	5.8	8.0
5	9	7.9	7.2	8.4
6	2	9.0	8.8	9.1



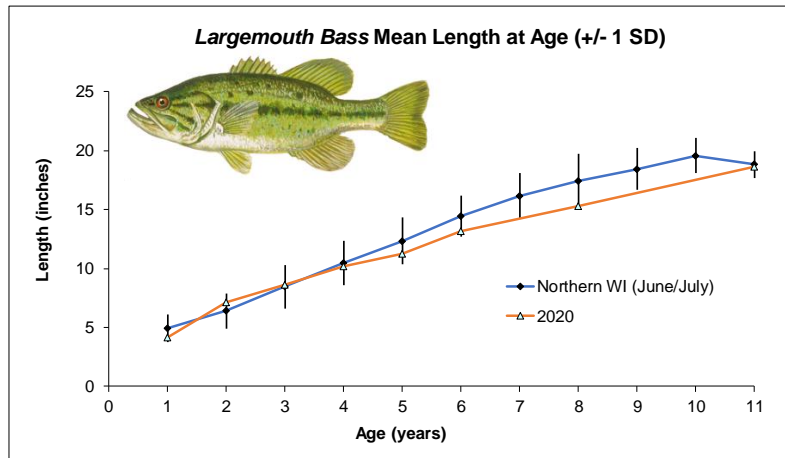
Largemouth bass are the dominant gamefish species in Timms Lake. A total of 43 bass was collected (12 fyke netting and 31 electrofishing). Bass ranged in length from 3.8 to 18.6 inches and averaged 9.7 inches. Electrofishing CPUE was 31.0 bass/mile.

Even though reproduction and recruitment are stable, the extremely low number of fish over 12 inches long is puzzling. It's possible the timing of our sample affected our results however, previous electrofishing surveys (1979 – 1992) were conducted in the fall whereas

the current survey was conducted in the summer, after spawning was complete. The low abundance of bluegill less than 5 inches suggests the largemouth bass population is more abundant than what we observed in our survey. Additionally, bluegill growth was exceptional which also suggests that largemouth bass abundance is much greater than what was observed.

A subsample of 41 largemouth bass was aged from 1 to 11 years old. Growth was slightly below average at most ages however, the number of older fish aged was low. Bass are reaching legal size (14 in) between age 6 and 7. The oldest largemouth bass aged was 11 years old.

Age	Number Aged	Average Length	Min	Max
1	5	4.2	3.8	5.0
2	10	7.2	6.1	8.1
3	2	8.7	8.4	8.9
4	12	10.2	9.1	11.4
5	8	11.2	10.3	11.8
6	2	13.2	12.9	13.5
8	1	15.3	15.3	15.3
11	1	18.6	18.6	18.6



CONCLUSIONS & RECOMMENDATIONS

Typically, gamefish/panfish electrofishing and panfish fyke netting are completed in late May or early June, during peak spawning activity for bass and panfish. In 2020, panfish fyke netting and electrofishing took place well after spawning for all species was finished. This obviously affected our results but still provided information regarding the fishery.

WDNR should partner with Marinette County, and other stakeholder groups, to develop a fish sticks project and improve shore fishing opportunities by constructing/installing a fishing pier. Half of the shoreline is owned by Marinette County and Morgan County Park is connected to Timms Lake. Improvements to the boat landing are recommended since parking is limited.

Timms Lake offers anglers a respectable fishing opportunity for bluegill which are the main staple of the fishery. Bluegill growth was above average, but it appears there are few fish 8 inches and larger. A 10-panfish daily bag limit seems appropriate and should be investigated further. This would maintain good bluegill abundance and improve size structure over time.

Fisheries surveys throughout the 1980's focused on largemouth bass growth and abundance. Based on the 2020 survey, growth is average and largemouth bass do not appear to be stunted. Reproduction and recruitment are stable, but the absence of older/bigger fish could be the result of angler harvest. Therefore, a follow-up survey should be considered within the next several years to evaluate largemouth bass growth and abundance. Plans should be developed to generate a population estimate which would require multiple sampling events over a 4 to 6-week period. This data could be used to determine if another regulation option (i.e. protected slot limit) for largemouth bass is more appropriate than the standard statewide 14-inch MLL.

The current fishing regulations are adequate however, a reduction in the daily panfish bag limit from 25/day to 10/day should be considered. The next fisheries survey of Timms Lake will

depend on if new regulations or habitat projects are implemented, staff availability and other higher priority sampling. Regardless of timing, the next survey will consist of spring/summer fyke netting and gamefish/panfish electrofishing. The survey will focus on the age, growth, abundance, and recruitment of largemouth bass and bluegill.

Boaters are reminded to remove all vegetation from their boat and trailer before leaving to limit the spread of this and other invasive species. A map of Timms Lake can be found at the following internet address; <https://dnr.wi.gov/lakes/maps/DNR/0639800a.pdf>