

# Manitowoc County



Fish



Surveys



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# Lake Survey Protocols

All lakes should be designated as one of the following:

- 1) “**High Profile**” lakes (lakes sampled most intensively on a relatively short rotation of about 4 years; generally lakes > 1,000 acres). Aging should be completed for species of importance.
- 2) “**Public Access**” lakes (lakes sampled less intensively on a somewhat longer rotation of about 8 years – generally lakes between 100 and 1,000 acres); aging should be completed on about 25% of these lakes;
- 3) “**Minor Fishery**” lakes (lakes of relatively low importance that are sampled on a much longer rotation of about 10 years). Aging is not needed on these lakes.

# Survey Design

## Spring Surveys

- Fyke Nets
  - walleye
  - northern pike
  - yellow perch
- Spawning Fish
- Biological Data
- Age Structures
- Mark Fish



# Survey Design (cont.)

## Late Spring/Early Summer

- Night Electroshocking
  - bass
  - bluegill
  - crappie
- Spawning Fish
- Biological Data
- Age Structures
- Recapture Marked Fish

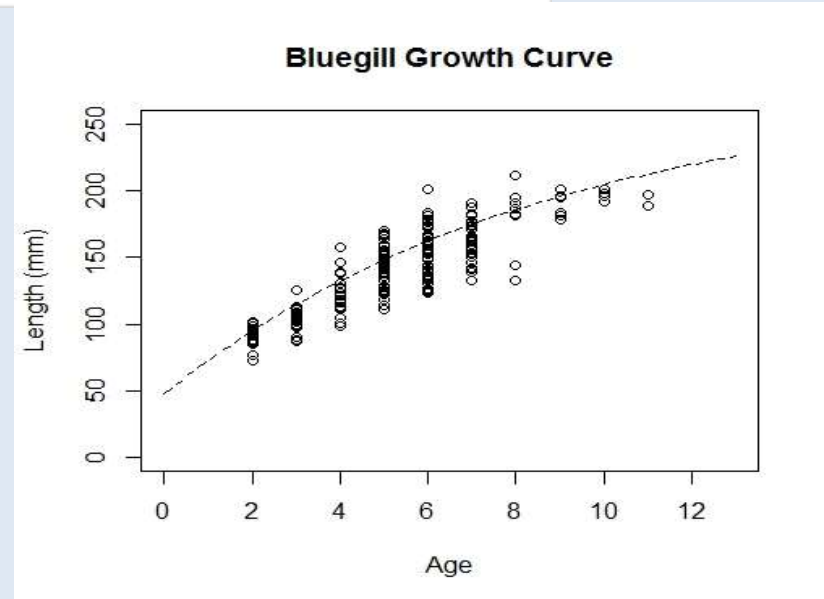
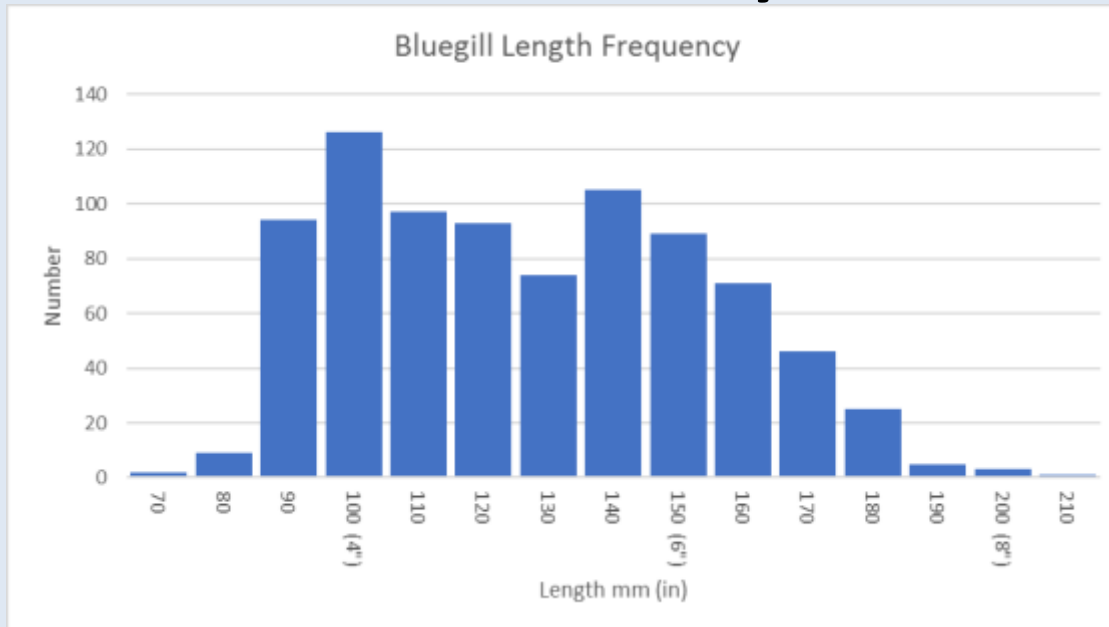
## Fall

- Night Electroshocking
- General Survey,
- YOY Production

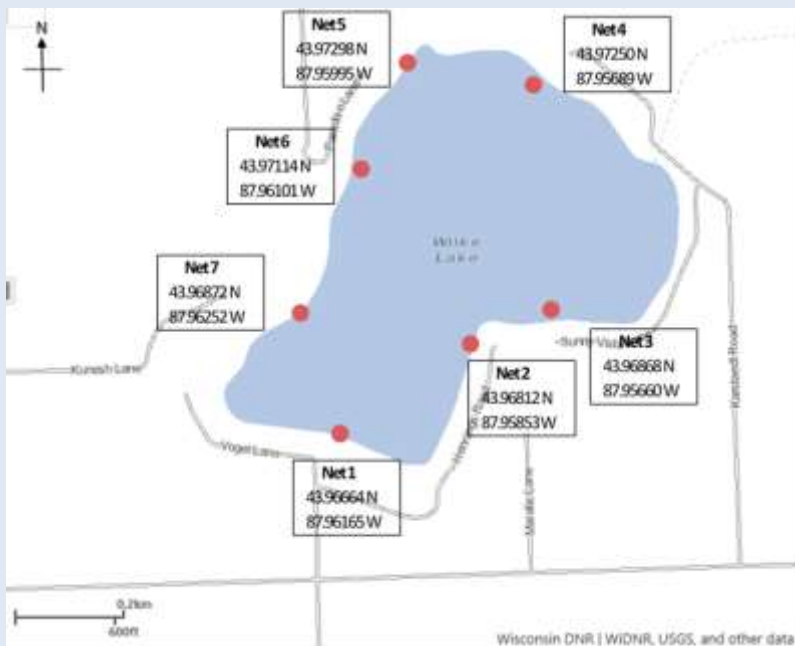




# Data Analysis



# Wilke Lake (2018)



## • Summary (Full Survey)

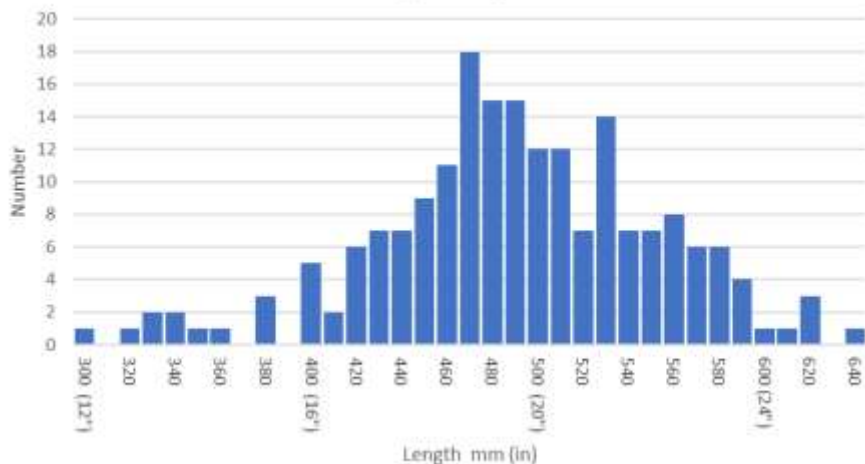
### – Fyke Nets

- 7 nets set for 8 nights
- Caught 1,520 Fish, 13 species
- Bluegill, Y. Bullhead, NP most common

### – Electroshocking

- Entire Shoreline 1.4 hours shocked
- Caught 539 Fish, 9 species
- Bluegill, YP and LMB most common

Northern Pike Length Distribution



# Survey Summary

- **N. Pike**
  - Most common gamefish, numbers slightly less than past surveys. Mostly small fish (12"-26") with slow growth rates.
- **LM Bass**
  - Modest numbers captured, slightly up from past surveys. Average growth, (8"-18") with missing year classes noted.
- **Walleye**
  - Caught in low abundance, no reproduction, dependent on stocking, 10"-24" in length.
- **Bluegill**
  - Most common fish captured with average size of 5". Population numbers slightly decreasing. Somewhat slow growing (3"-8").
- **Black Crappie**
  - Increasing numbers with several strong YC's. Average size 9", good growth rate (4"-13").
- **Yellow Perch**
  - Fewer perch captured than in earlier studies. Small fish (3"-8").



# Wilke Lake

## RECOMMENDATIONS

- Consider a more restrictive regulation, 18” minimum, 1 bag for Largemouth Bass to improve bass numbers and to provide more predation on slow growing Bluegill.
- Evaluate the continuation of Walleye stocking by the State. This survey and other surveys have found poor survival and no natural reproduction by Walleye. If Walleye stocking is continued, consider a more restrictive regulation, 18” minimum and 3 bag to improve Walleye number and to increase predation on Bluegill.
- Evaluate the current Northern Pike regulation.
- Work with the Wilke Lake Association to install fish sticks or other woody habitat design to improve habitat for bass.



# Summary

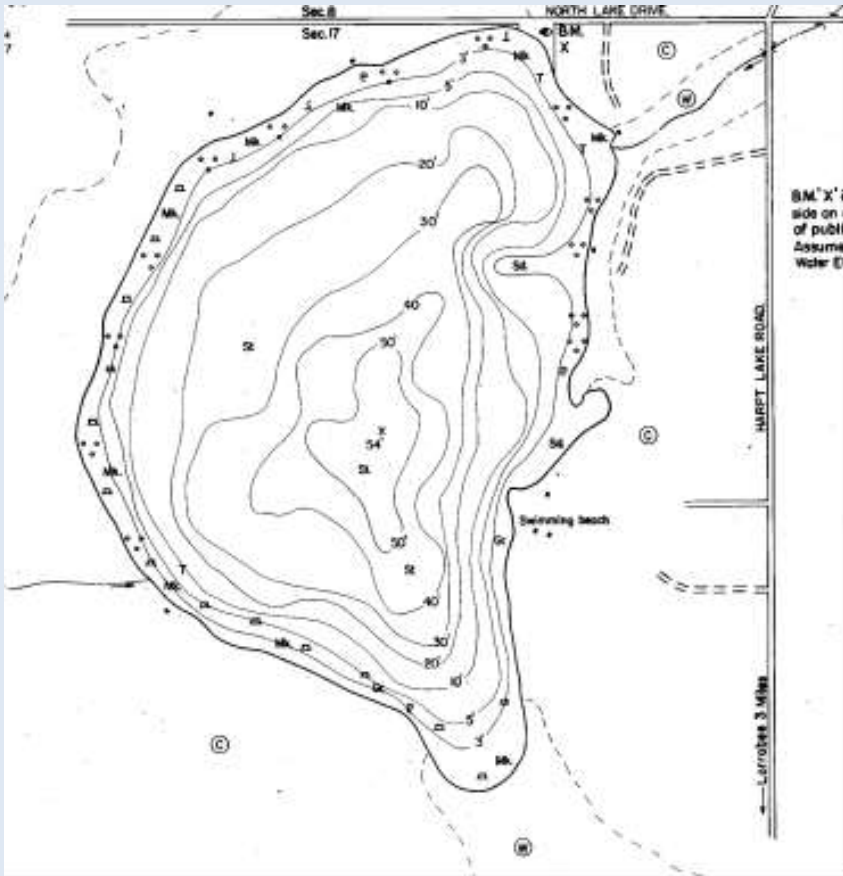
- Largemouth Bass
  - Numbers down sharply from last survey, with missing year classes and poor recruitment (6"-16")
- Bluegill
  - Numbers down, only small (young) fish captured (3"-6")
- Black Crappie
  - (6"-8")
- Yellow Perch
  - (4"-7")
  - Both species increased in abundance since last survey.

# Shoe Lake

## Recommendations

- Only can make limited recommendations based on a limited survey.
- Continue 10 year monitoring cycle, but survey in next 5 years if able.
- Dominant fish are low DO tolerant suggesting poor water quality.
- Evaluate at next survey to determine if stocking needed.

# Harpt Lake 2019 (Preliminary)



- Fyke Nets
  - 7 nets, set 8 nights
  - Captured 2,475 fish, 12 species
  - Y. Bullhead, Bluegill, LMB and NP dominated catch
  - Good mix of sizes
- Electroshocking
  - 32 minutes, entire shoreline, ~200 fish
  - Bass and Bluegill dominated catch

# Spring Lake 2019 (Preliminary)



- Electroshocking
  - Entire shoreline, 29 minutes
  - ~200 fish captured
  - Bass and Bluegill dominated catch
  - Other fish- NP, BC, P.Seed, Y. Bullhead
  - Similar to 2010 survey in size and numbers

# Panfish Management in Wisconsin

1. Protect habitat

2. Harvest management

- Statewide Regulations (94% of lakes)
  - Daily bag limit of 25
  - No minimum length limit
- Special regulations (6% of lakes)
  - Reduced bag limits, minimum lengths

3. Limited stocking

4. Conduct study to see if panfish management can be improved



# Manitowoc County Lakes

## Panfish Study Lakes

- Study began in 2016, continue through March 1, 2026.
  - Spring Lake- Control no changes
  - Harpt Lake- 25/10
  - Pigeon Lake- 25/10
  - Bullhead Lake- 15/5 during May and June
  - English Lake- 15/5 all year
  - Long Lake- 15/5 all year
- Field Evaluations 2019 through 2021
  - Harpt and Spring- 2019, Pigeon and English- 2020, Long and Bullhead- 2021
- Statewide Report by end of regulation.



# Questions?

