

Lake Manitou 2016 and 2017 Surveys



Lakes Information: 713 acres; 49 ft Max depth

Located: Rochester, IN; Fulton County

Access: Public Access site on east shore; town ramp

on north shore

GPS Coordinates: N 41.05191, W 86.17507 **Amenities:** at Town launch: Restroom, handicap accessible fishing pier, swimming beach, shelter

Outboard Motor Restriction: None **Fishing Regulations:** Statewide

Recent Stocking: None

Best Fishing: Channel Catfish, Crappie

DNR Contact Information:

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Report Approved By:

Jeremy Price, regional fisheries supervisor

Date approved: May 9, 2019

Methods

Fish

- Dates: Status & Trends (S&T): 6/27 & 28/2016;
 Crappie: 4/25-26/2017; Bass: 5/2 & 11/2017
- Electrofishing: 0.5 hour (S&T), 1 hour each night (Bass) night pulsed DC with 2 dippers
- Trap nets: 2 overnight lifts (S&T); 4 Large style trap nets (Crappie)
- Gill nets: 2 overnight lifts (S&T)

Habitat

• Chemistry: Water clarity and oxygen profiles

Dates: 6/27/2016, 7/20/2016, & 8/9/2017

Vegetation: 7/20/2016 & 8/9/2017

• Depth Map: Bathymetry Map

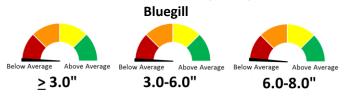
Overall 210 fish were collected representing 14 species, below average catch for Northern Indiana glacial lakes.

- Bluegill was the most abundant species with 44 individuals but total catch was below average. Fish up to 9.0 inches were collected.
- Forty-one Largemouth Bass were collected up to 14.2 inches and age-6. Majority of the Bass (73%) were less than 3 inches and age-0.
- There were 23 Channel Catfish collected from 12.4 to 28.5 inches which is above average for Northern Indiana glacial lakes.
- Nineteen White Bass were collected up to 15.0 inches.
- Channel Catfish and White Bass had not been collected from Manitou until the 2011 fisheries survey since then their populations have expanded creating an additional sport fishery.

Other 40% Largemouth Bass 20% Channel Catfish Bass 9% 11%

Summary

2016 Status and Trends (S&T)



Largemouth Bass



Bluegill and Largemouth Bass catch rates in Lake Manitou compared to regional averages among all glacial lakes in northern Indiana.



Your purchase of fishing equipment and motor boat fuel supports boating access and Sport Fish Restoration.

Indiana Fishing Regulation Guide: http://www.in.gov/dnr/fishwild/2347.htm



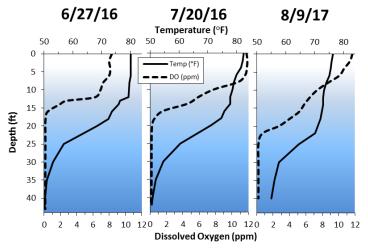
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Species	Num.	Percent Composition by Num.		ngth ge (in)
_		by Nam.	Min	Max
Bluegill	44	21.0	1.9	9.0
Largemouth Bass	41	19.5	1.4	14.2
Gizzard Shad	27	12.9	7.5	14.9
Channel Catfish	23	11.0	12	28.5
White Bass	19	9.0	6.8	15.0
Yellow Perch	18	8.6	1.6	11.5
Brook Silverside	13	6.2	3.1	4.4
Rock Bass	13	6.2	3.4	8.5
Spotted Gar	5	2.4	20	28.7
Black Crappie	2	1.0	9.5	9.9
Yellow Bullhead	2	1.0	2.6	12.9
Golden Shiner	1	0.5	1.7	
Johnny Darter	1	0.5	2.7	
White Sucker	1	0.5	15	
Total	210			

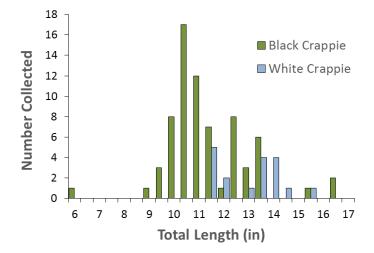


- Oxygen (3 ppm) was available for fish down to 12 to 14 feet in June and July 2016, but was slightly deeper in August 2017 down to 18 feet.
- Water clarity was 3.5 and 3.0 feet in June and July 2016 and decreased to 2.5 feet in August 2017, below average for Northern Indiana glacial lakes.
- Aquatic plants were collected to similar depths in both years (11.5 and 12.0 feet) and coontail was the most frequently collected species.
- Eight and nine species of plants were collected in 2016 and 2017 with only one non-native species was curly-leaf pondweed and was in low abundance.
- Plant coverage in the littoral zone was 68% in 2016 while coverage was 76% in 2017.



2017 Crappie Survey

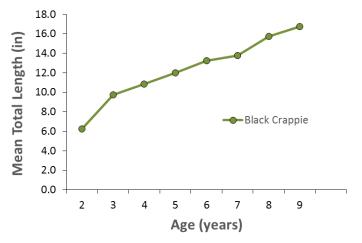
- A total of 70 Black Crappie were collected in four large trap nets that ranged from 6.2 to 16.8 inches and 63% were between 10 and 12 inches.
- Black Crappie were ages-2 to -9, reaching 12.0 inches by age-5.
- Eighteen White Crappies were collected from 11.6 to 15.5 inches.
- White Crappie ages were four to seven years, reaching 12.1 inches by age-4.
- In addition to Crappie, a total of 127 Bluegill were collected up to 9.2 inches and Yellow Perch up to 13.0 inches.





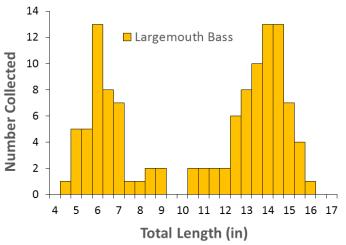
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2017 Largemouth Bass Survey

- There were 115 Largemouth Bass collected in 2.0 h of Electrofishing with an overall catch rate of 57.5 fish/h.
- Bass ranged in length from 4.9 to 16.2 inches and 33% of fish collected were 14.0 inches or longer
- Fish ages ranged from 1 to 9 years excluding age-8 and reached legal length between 4 and 5 years.





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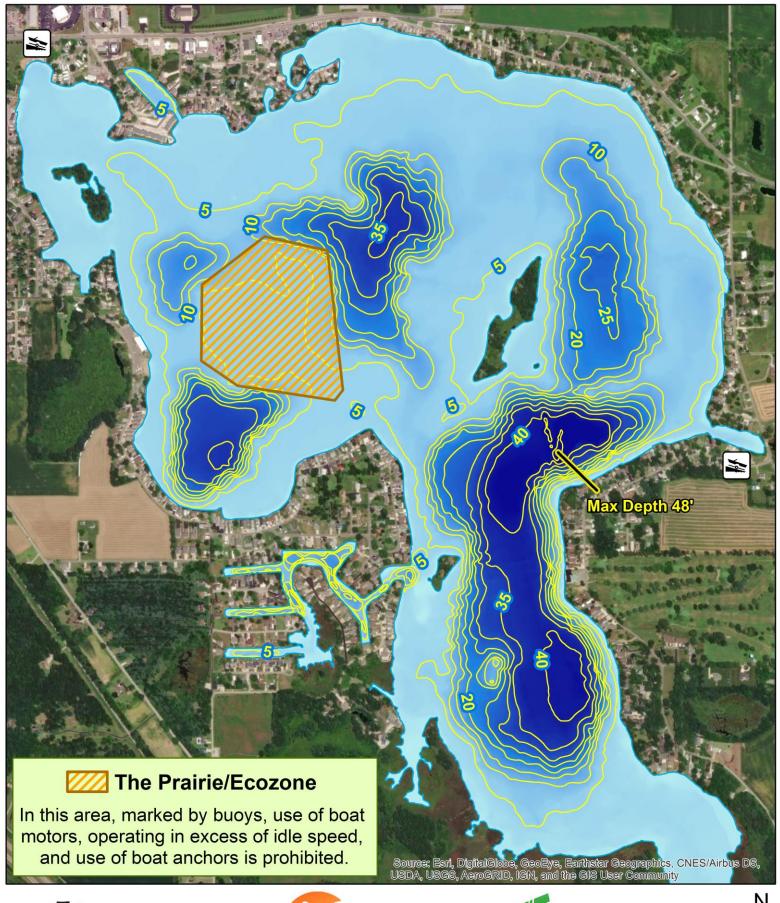
Highlights

- Hydrilla was discovered in Manitou Lake in 2006 prompting lake restrictions and multiple year wholelake vegetation control. Native vegetation has quickly colonized the lake following treatments and no hydrilla has been detected.
- The fish community has been impacted by the necessary vegetation treatments, primarily in declines to Bluegill, Yellow Perch, and Largemouth Bass abundance. These species persist within the lake and will likely increase in abundance with the increase plant community.
- White Bass and Channel Catfish had not been collected until a 2011 fisheries survey, but abundance in the lake has increased.
- Despite only two Black Crappie and no White Crappie collected in the 2016 Status and Trends survey, targeted surveys revealed a robust population of quality sized crappies of multiple ages that should sustain fishing opportunities.
- No bass were collected larger than 16.5 inches in any survey, potentially due to different habitat use than survey locations, but 35% of the bass catch in 2017 were age-2 and should be legal size in 2019 and 2020.
- A spot check survey should be conducted by 2021.



Tom Bacula (biologist) with a couple dandy Black Crappie collected from Lake Manitou in 2016.

Indiana Fishing Regulation Guide: http://www.in.gov/dnr/fishwild/2347.htm





Lake Manitou Fulton County 1,156 acres 7/24/2017 5 ft contours





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