WISCONSIN DEPARTMENT OF NATURAL RESOURCES

2024 Comprehensive Summary Report
Jordan Lake, Adams County

Waterbody Code: 104000

Introduction And Objectives

In 2024, the Wisconsin Department of Natural Resources (DNR) conducted a comprehensive fisheries survey for Jordan Lake in order to provide insight and direction for future fisheries management. Comprehensive fish surveys include both spring fyke netting and spring electrofishing surveys that target gamefish and panfish species. The primary objective was to assess the status of the fishery and compare to past fish surveys and other lakes in Wisconsin. In addition, we wanted to assess the largemouth bass special fishing regulation that went into affect in 2024 and the department's walleye stockings.

DNR Contact

Jennifer Bergman-Fisheries Biologist
Jason Spaeth-Fisheries Technician

473 Griffith Ave
Wisconsin Rapids, WI 54494
Phone: 715- 451-9944
Email: Jennifer.Bergman@wisconsin.gov

Lake Information

Acres: 233
Max. Depth: 92
Shoreline Miles: 3.1
Public Access: 1 boat Landing
Lake Class: Complex/Cool Clear

Regulations

Northern Pike = Min 26" Daily Bag 2
Largemouth Bass = 14" to 18" protected slot, Daily bag of 5, only 1 can be over 18"
Panfish = Daily bag 25

SURVEY INFORMATION						
Gear	Survey Dates	Water Temperature (°F)	Target Species	Miles Shocked	Number of Nets	Net Nights
Netting	3/11-17/2024	41.7 - 44.8	All	-	7	35
Early-Shocking	4/9/2024	43.9	Walleye, Pike	3.1	-	-
Late-Shocking	05/15/2024	65	Gamefish-Panfish	3.0; 1.0	-	-

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. CPUE is compared to statewide data by percentile and ranked by the following benchmarks: low (<33rd percentile); moderate (33rd to 66th percentile); high (>66th-90th percentile), and very high (>90th percentile). 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 where a population estimate (PE) is generated using the number of marked, caught, and recaptured fish in a mark-recapture model. The model used was Chapman Peterson.
- **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. Other important sizes can also be used to describe size structure, such as preferred size (PSD-P), memorable size (PSD-M) and trophy size (PSD-T) or a specific length of a desired size such as a 14" for bass (PSD-14"). PSD is compared to statewide data by percentile and ranked by the following benchmarks: low (<33rd percentile); moderate (33rd to 66th percentile); high (>66th-90th percentile), and very high (>90th percentile).
- **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 length at age 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).

Survey Method

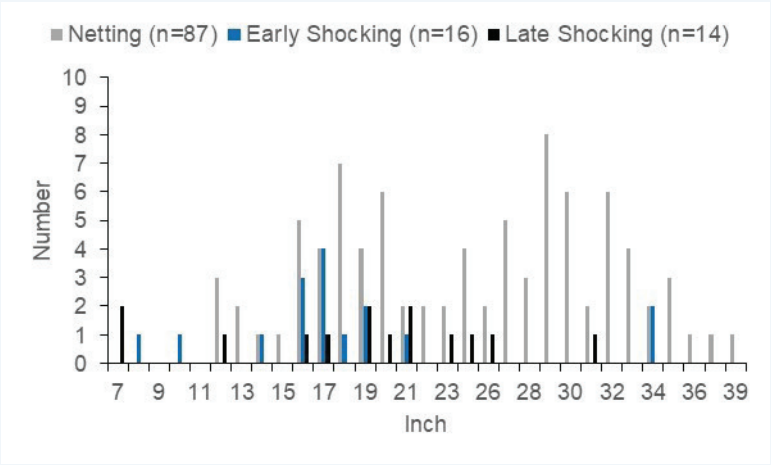
- Jordan Lake was sampled according to DNR Fisheries Monitoring Protocols.
- The primary targets were northern pike, walleye, largemouth bass, and panfish species yet other fish species were sampled too in fyke nets.
- Fyke nets were deployed in areas of the lake that contained spawning habitat or were likely travel areas for walleye and northern pike.
- All fish caught were counted and measured, age was estimated for a subsample. Gamefish were given a partial fin clip.
- Electrofishing using a maxi boom shocker was used to survey the shoreline of the lake for walleye and northern pike in early-spring and late-spring to target largemouth bass (3 miles) and panfish (1 mile). In the early spring survey, fish caught were measured and examined for a fin clip or given a fin clip. During the late-spring survey, gamefish were examined for a fin clip, all fish were measured.

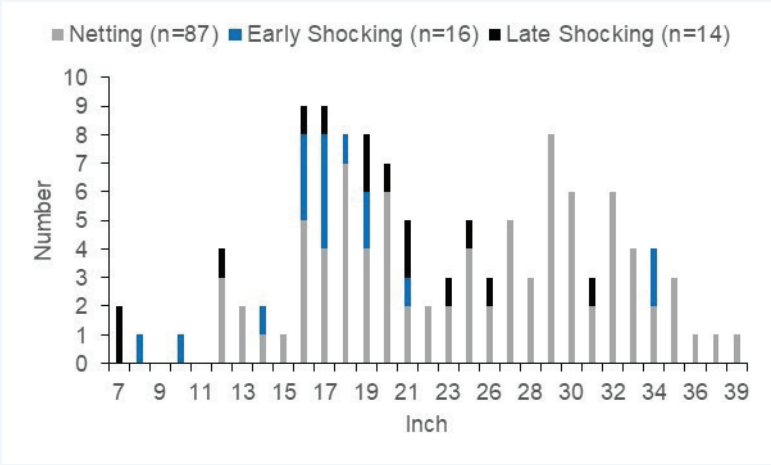
RELATIVE ABUNDANCE — CATCH PER UNIT EFFORT (CPUE)						
Species	Protocol	Total Number Captured	CPUE	Units	Rank	Statewide Percentile
Northern Pike	Early-Spring Fyke Netting	89	2.5	fish/net night	Moderate	61st
Northern Pike	Early-Spring Electrofishing	30	9.7	fish/mile	-	-
Northern Pike	Late-Spring Electrofishing	14	4.7	fish/mile	High	83rd
Walleye	Early-Spring Fyke Netting	24	0.7	fish/net night	Low	22nd
Walleye	Early-Spring Electrofishing	8	2.6	fish/mile	Low	23rd
Largemouth Bass	Early-Spring Fyke Netting	49	1.4	fish/net night	High	82nd
Largemouth Bass	Late-Spring Electrofishing	121	37	fish/mile	High	82nd
Black Crappie	Early-Spring Fyke Netting	249	7.1	fish/net night	Moderate	66th
Black Crappie	Late-Spring Electrofishing	24	24	fish/mile	High	82nd
Bluegill	Early-Spring Fyke Netting	175	5	fish/net night	Moderate	43rd
Bluegill	Late-Spring Electrofishing	185	185	fish/mile	High	75th
Pumpkinseed	Early-Spring Fyke Netting	10	0.3	fish/net night	Low-Moderate	34th
Pumpkinseed	Late-Spring Electrofishing	40	40	fish/mile	High	90th
Yellow Perch	Late-Spring Electrofishing	7	7	fish/mile	Moderate	42nd

Northern Pike

SIZE STRUCTURE METRICS										
Year	Method	Total Number Measured	Average Length (inches)	Length Range (inches)	Stock, Quality, Preferred, Memorable Size (inches)	PSD	PSD-P	PSD-M	Percentile Rank	Size Rating
2013	Late-Shocking	2	-	16.3, 33.2	14,21,28,34	-	-	-	-	-
2024	Netting	87	25.1	12.3-39.0	-	66	45	10	76th	High
2024	Early-Shocking	16	-	8.0-34.4	-	-	-	-	-	-
2024	Late-Shocking	14	-	7.5-31.5	-	-	-	-	-	-

RELATIVE ABUNDANCE (NETTING CPUE = NUMBER PER NET NIGHT ;SHOCKING CPUE = NUMBER PER MILE)				
Method	2013	2024	2024 Statewide Percentile Rank	2024 Abundance Rating
Netting	NA	2.5	61st	Moderate
Early-Shocking	-	5.3	86th	High
Late-Shocking	0.7	4.7	83rd	High





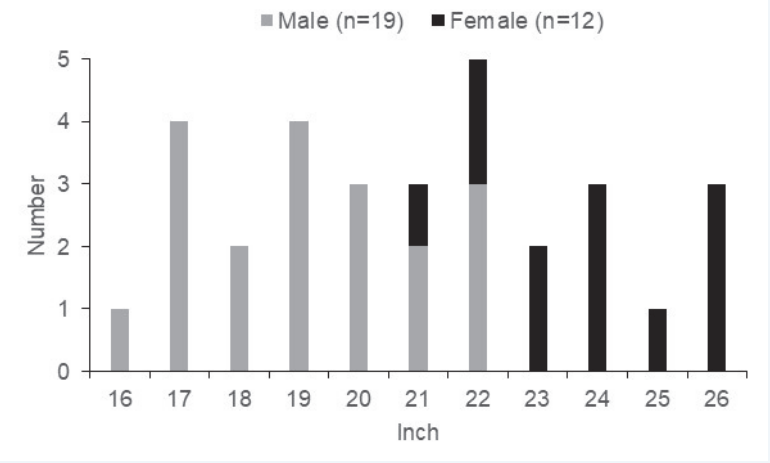
Northern Pike Summary

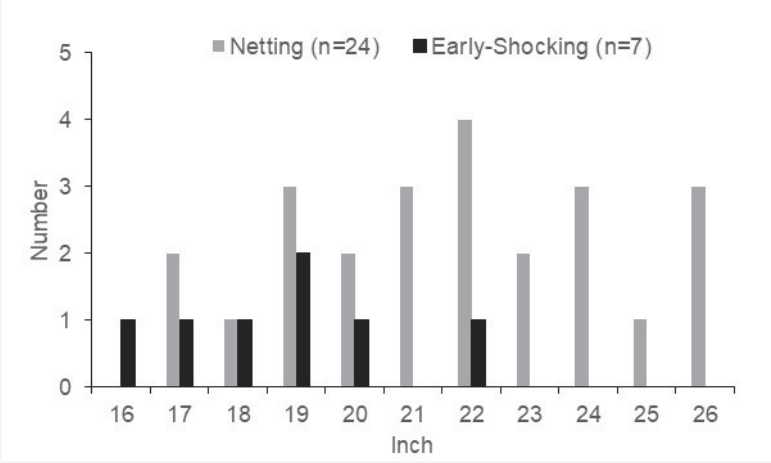
- In 2024 a total of 119 northern pike were caught - 89 by spring fyke netting, 16 during the early spring electrofishing, and 14 during late electrofishing surveys. Two of the northern pike caught in the fyke nets were recaptured fish, none of the northern pike caught during electrofishing surveys were recaptures. The CPUE was 2.5 fish per net night, which is in the 61st percentile and considered moderate. 4.7 and 5.3 fish per mile for electrofishing surveys are both above the 80th percentile and considered high.
- Northern pike ranged in size from 12.3-39.0 inches. Size structure is excellent, 66% of the pike were 21 inches or greater, 45% were 28 inches or larger, and 10% were 34 inches or larger. PSD was in the 76th percentile, very good size structure.
- Growth was indexed using the pelvic fin ray for fish 21 inches and less. Overall growth was within one standard deviation of the growth rate of the average northern pike in Wisconsin. Males were growing slower than females, looking at females only their growth was considered the same as the average northern pike in Wisconsin. The average length of an age-4 female was 19.3 inches and 17.4 inches for a age-4 male.

Walleye

2024 SIZE STRUCTURE METRICS									
Gear	Total Number Measured	Average Length (inches)	Length Range (inches)	Stock, Quality, Preferred, Memorable Size (inches)	PSD	PSD-P	PSD-M	Percentile Rank	Size Rating
Netting	24	22.3	17.8-26.8	10,15,20,25	-	-	-	-	-
Early-Shocking	8	18.9	16.7-22.0	-	-	-	-	-	-

RELATIVE ABUNDANCE (NETTING CPUE = NUMBER PER NET NIGHT ;SHOCKING CPUE = NUMBER PER MILE)				
Method	2013	2024	2024 Statewide Percentile Rank	2024 Abundance Rating
Netting	-	0.7	22nd	Low
Early-Shocking	-	2.6	23rd	Low





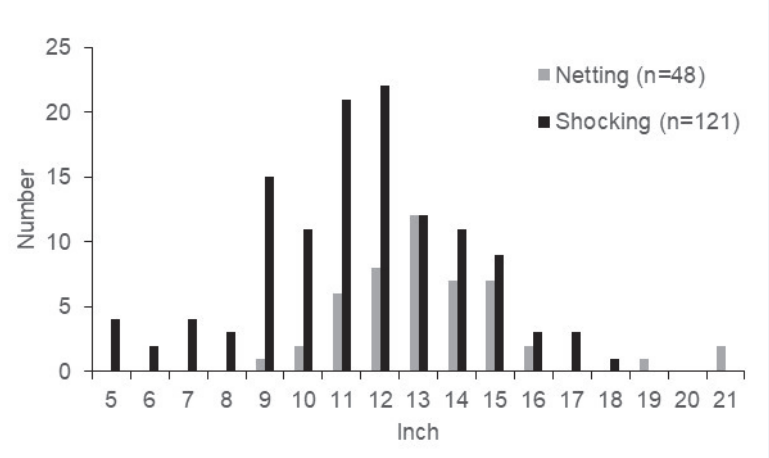
Walleye Summary

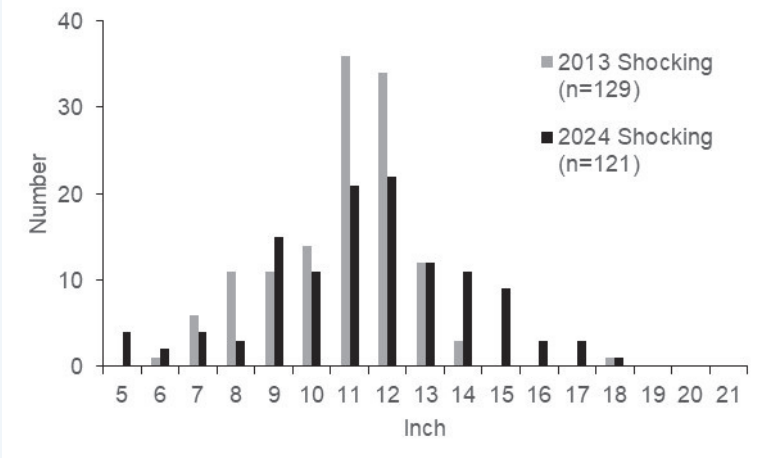
- 32 walleye were captured during the survey, 8 by shocking and 24 by netting. One of the fish caught during electrofishing was a recapture from netting. A minimum sample size of 50 was not met to evaluate size structure statistics and metrics. The 31 walleyes ranged in length from 16.7 to 26.8 inches.
- Jordan lake's walleye abundance is in the 10th percentile when compared to other lakes in its class of (complex/cool clear).
- Walleye stocking by the department was consistent from 2015 until 2021, walleye stocking occurred on odd years at a rate of 10 fish per acre. For stocking to be considered successful by the department, we want to create a stocked fishery of 1.5 walleyes per acre. Sample size was very small to generate a population estimate, yet was estimated using mark-recapture data to be 168 walleye or 0.7 fish per acre.
- Walleye stocking by the department will be discontinued for Jordan Lake to reallocate those fish to other lakes where the fish will have a better chance of surviving and creating a walleye fishery.

Largemouth Bass

SIZE STRUCTURE METRICS											
Year	Method	Total Number Measured	Average Length	Length Range (inches)	Stock, Quality, Preferred, Memorable Size (inches) and ≥ 14 inches	PSD	PSD-P	PSD-M	PSD-14	Percentile Rank	Size Rating
2013	Late-Shocking	129	11.3	6.2-18.7	8,12,15,20,14	41	1	0	3	23rd	Low
2024	Netting	48	13.8	9.2-21.3	-	81	25	4	40	64th	Moderate
2024	Late-Shocking	121	11.9	5.0-18.2	-	55	14	0	24	43th	Moderate

RELATIVE ABUNDANCE (NETTING CPUE = NUMBER PER NET NIGHT; SHOCKING CPUE = NUMBER PER MILE)				
Method	2013	2024	2024 Statewide Percentile Rank	2024 Abundance Rating
Netting	NA	1.4	82nd	High
Late-Shocking	43.6	37.0	82nd	High





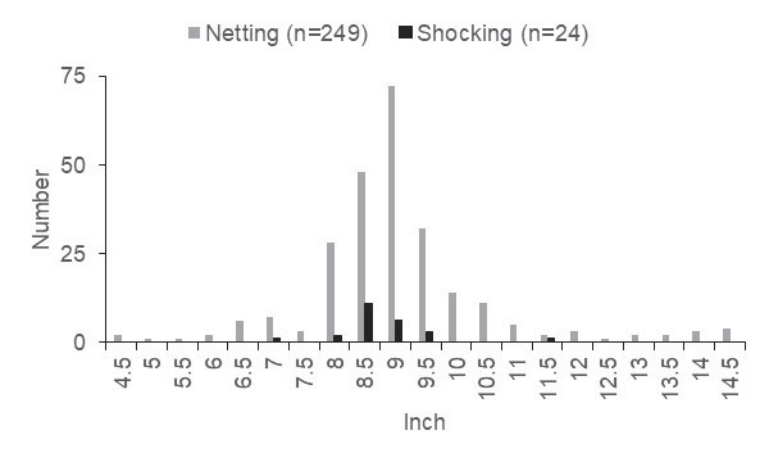
Largemouth Bass Summary

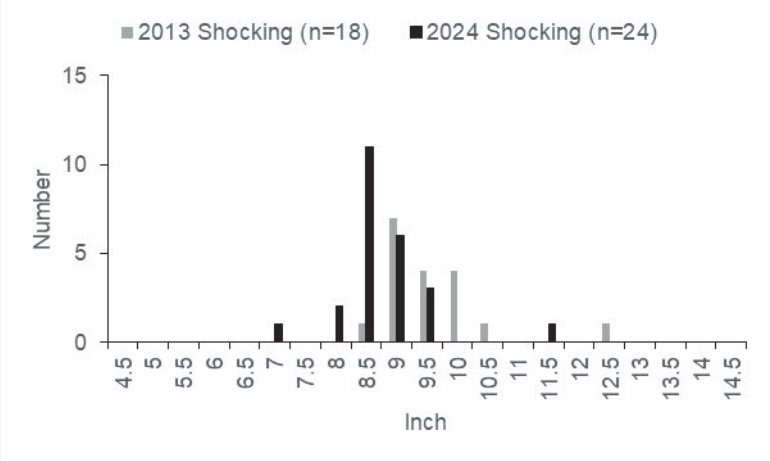
- 360 largemouth bass were captured during the comprehensive survey, 121 by electrofishing and 49 by fyke netting, one fish caught during netting was a recapture.
- Relative abundance of largemouth bass is high, CPUE for netting (1.4 fish per net night) and shocking (37.0 fish per mile) were both in the 82nd statewide percentile . Relative abundance is slightly lower than the 2013 survey, 43.6 fish per mile.
- Largemouth bass ranged in size from 5.0-21.3 inches. Size structure is considered moderate and has improved since 2013. Comparing the 2013 and 2024 electrofishing surveys, in 2013 only 1% of the bass caught were 15 inches or greater and in 2024 14% were 15 inches or greater. In 2013, 3% caught were 14 inches or greater and in 2024 it was 24%. Average size has also increased by 0.6 inches.
- In 2020, a largemouth bass regulation change went into affect from the statewide base regulation (14 inch minimum with a daily bag limit of 5) to a special regulation of a 14-18 inch protected slot with a daily bag limit of 5 of only one can be greater than 18 inches. The objective of this special regulation was to improve the size structure in 10 years from a PSD-14 of 3% to over 16%. The regulation has been in effect for 5 years and the size structure objective has been met.

Black Crappie

SIZE STRUCTURE METRICS										
Year	Method	Total Number Measured	Average Length (inches)	Length Range (inches)	Stock, Quality, Preferred, Memorable Size (inches)	PSD	PSD-P	PSD-M	Percentile Rank	Size Rating
2013	Late-Shocking	18	-	8.8-12.8	5,8,10,12	-	-	-	-	-
2024	Netting	249	9.2	4.7-14.9	-	92	19	6	>90th	Very High
2024	Late-Shocking	24	-	7.4-11.5	-	-	-	-	-	-

RELATIVE ABUNDANCE (NETTING CPUE = NUMBER PER NET NIGHT ;SHOCKING CPUE = NUMBER PER MILE)				
Method	2013	2024	2024 Statewide Percentile Rank	2024 Abundance Rating
Netting	-	7.1	66th	Moderate
Late-Shocking	6.4	24	82nd	High





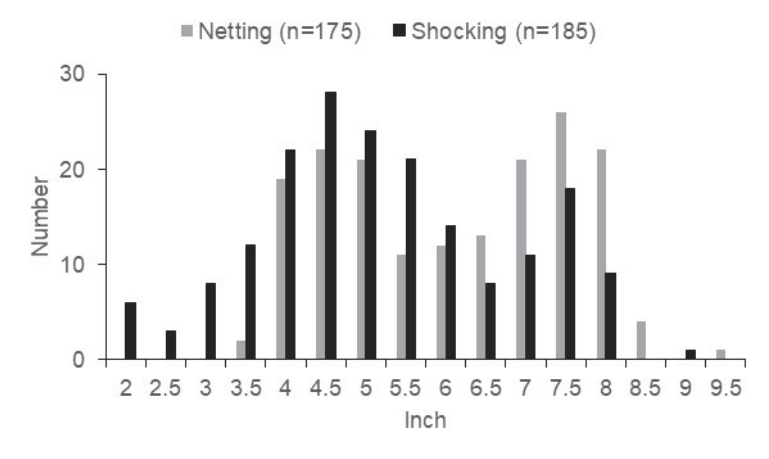
Black Crappie Summary

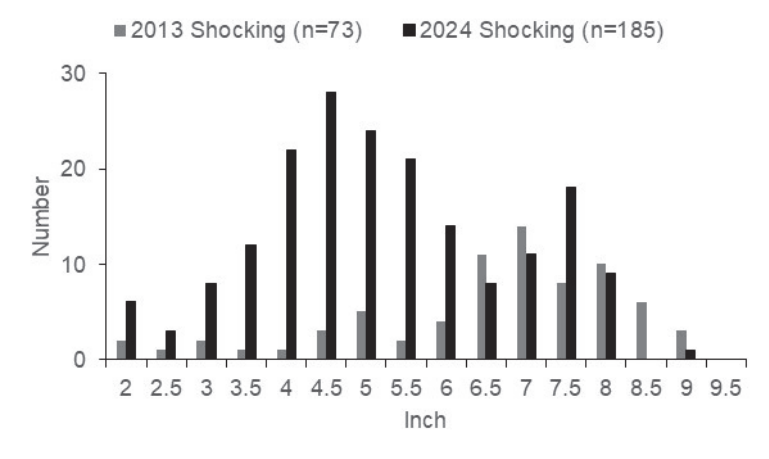
- 273 black crappie were captured during the comprehensive survey, 24 by shocking and 249 by netting.
- Relative Abundance of black crappies was considered moderate-high, CPUE was in the 82nd and 66th percentiles. The 2024 CPUE is greater than the 2013 survey which had ranked black crappie at the 50th percentile. In reference to lake class for Jordan Lake (complex/ cool/ clear), black crappie relative abundance was in the in the 75 percentile and considered high compared to lakes like Jordan Lake.
- Black crappie caught ranged in size from 4.7-14.9 inches, average length was 9.2 inches. Size structure indexed using PSD was greater than the 90th percentile and considered very high. 92 percent of the black crappie captured were 8 inches or greater, 19% were 10 inches or greater, and 6% were 12 inches or greater.
- Growth indexed using 8 inch fish was found to be a bit slower than the average black crappie in Wisconsin, a 4 year old fish was on average 8.2 inches.

Bluegill

SIZE STRUCTURE METRICS									
Year	Method	Total Number Measured	Average Length (inches)	Length Range (inches)	Stock, Quality, Preferred Size (inches)	PSD	PSD-P	Percentile Rank	Size Rating
2013	Late-Shocking	73	6.8	2.3-9.2	3, 6, 8	80	27	93rd	Very High
2024	Netting	175	6.3	3.6-9.6	-	57	16	77th	High
2024	Late-Shocking	185	5.4	2.0-9.2	-	35	6	52nd	Moderate

RELATIVE ABUNDANCE (NETTING CPUE = NUMBER PER NET NIGHT ;SHOCKING CPUE = NUMBER PER MILE)				
Method	2013	2024	2024 Statewide Percentile Rank	2024 Abundance Rating
Netting	-	5	43rd	Moderate
Late-Shocking	26	176	80th	High





Bluegill Summary

- 360 bluegill were captured during the survey, 185 by shocking and 175 by netting. Electrofishing CPUE was 176 fish per mile, which is in the 80th percentile compared to other Wisconsin Lakes and is considered high. The fyke netting CPUE was 5 fish per net night and was in the 43rd percentile and is considered moderate. The 2013 electrofishing survey CPUE was 26 fish per mile and is considered low, yet survey notes indicated the bluegill were not shocking well. There weren't as many smaller bluegills caught in 2013 and potentially those were being missed during the survey.
- Bluegill caught during the 2024 survey ranged from 2.0-9.6 inches. Size structure based on PSD was considered moderate to high. PSD was much higher in 2013, this is being driven by fewer bluegill caught that were 3-5.9 inches. Overall bluegill size structure is good.
- Growth was indexed with a subsample of 5 and 7 inch fish. Growth was found to be the same as the average bluegill in Wisconsin, the average length of a 4 year old bluegill was 5.4 inches and the average length of a 5 year old was 7.3 inches.

Other Species

- The numbers of other fish species caught in 2013 and 2024 are listed. Fyke nets capture more species of fish based on gear and season, just because a fish was not caught in 2013 doesn't mean the fish species was not present in the lake.

Fish Species	2013	2024
Black Bullhead	-	5
White Sucker	-	1
Pumpkinseed	6	10
Yellow Bullhead	-	145
Yellow Perch	5	1
Smallmouth Bass	-	1

Full Summary

Northern Pike

Jordan Lake has an exceptional northern pike fishery. Relative abundance is high and size structure indexed by PSD is in the 76th percentile compared to other Wisconsin Lakes. The fishing regulation is a 26 inch minimum 2 daily bag limit. 45% of the northern pike caught during netting were over 28 inches. Jordan Lake has a maximum depth of 92 feet, which provides cool water refugia and habitat for northern pike to thrive.



Northern Pike

Walleye

The department's walleye stocking of 10 fish per acre on odd years since 2015 has not created a walleye fishery the department would consider a success. There were stockings in 2008 and 2012 as well. Walleye relative abundance is low and ranks in the 22-23rd percentile compared to other lakes in Wisconsin. There are large walleye in the lake, up to 26.8 inches. The department is not going to continue to stock walleye into Jordan Lake, walleye are expensive and these fish need to be reallocated to lakes that are known to have higher survival of walleye.

Largemouth Bass

Jordan Lake has an excellent largemouth bass fishery. Relative abundance is high and in the 82nd percentile compared to other Wisconsin lakes. Size structure is good and has improved since 2013. In 2024, 14% of bass caught were 15 inches or larger while in 2013 only 1% of largemouth bass were 15 inches or larger. In 2024, 24% of bass caught were 14 inches or greater and in 2013 it was 3%. Average size has also increased by 0.6 inches. In 2020, the largemouth bass regulation changed from the statewide base regulation (14 inch minimum with a daily bag limit of 5) to a special regulation of a 14-18 inch protected slot with a daily bag limit of 5 of only one can be greater than 18 inches. The objective of this special regulation was to improve the size structure in 10 years from a the percent of bass 14 inches or greater to be over 16%. The regulation has been in effect for 5 years and the size structure objective has been met. This regulation is providing anglers with an opportunity to harvest abundant largemouth bass while creating a catch and release fishery of big bass.



Largemouth Bass

Black Crappie

Black crappie are abundant in Jordan Lake, relative abundance was greater than the 90th percentile compared to other Wisconsin lakes. Size structure is in the 66th percentile, 92% of black crappies were 8 inches or larger. The largest black crappie caught was 14.9 inches. Growth indexed using 8 inch fish were found to be less than the average black crappie in Wisconsin. This slow growth might be attributed to the abundant population relative to the amount of food available.

Bluegill

Bluegill in Jordan Lake are abundant, size structure is good, and growth is average. Relative abundance was high and in the 80th percentile compared to other Wisconsin Lakes. 35% were 6 inches or larger and 6% were 8 inches or larger. Jordan Lake has shown the ability to produce bluegill over 9 inches, the largest bluegill in the survey was 9.6 inches.



Fyke Netting

Recommendations

Jordan Lake provides an excellent fishery for northern pike, largemouth bass, black crappie and bluegill. The lake should continue to be managed for these fisheries. Fish stocking is not recommended as the fishery is thriving, stocking on top of natural reproduction can have negative consequences. Walleye stocking was not successful due to poor survival of fish either due to habitat, available food resources, or predation by the abundant population of predators. Efforts to improve the fishery should focus on adding nearshore woody habitat, trees in the water were observed during the survey at some locations in the lake yet wood was not abundant. Wood is good for multiple fish species and for fish at different life stages. Adding wood to the lake can provide protection for shorelines, increase opportunities for anglers, and increase habitat for aquatic invertebrates and wildlife. Studies have shown that the productivity of a lake increases with wood. Search Fish Sticks on dnr.wisconsin.gov to learn how to improve nearshore habitat. Efforts to protect water quality and manage the aquatic plants for a healthy diverse native community is important as these are elements of fish habitat too.

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