



LAKE CARLTON

FISHERIES STATUS SUMMARY

LOCATION – Lake Carlton is in Whiteside County just north of Morrison off Route 78 within Morrison-Rookwood State Park.

DESCRIPTION – Lake Carlton was built in 1969 and is a 77-acre lake with a maximum depth of 24 feet and an average depth of 12 feet. The lake has 2.9 miles of shoreline and a watershed of 1,478 acres. The lake has a two-lane boat ramp and a concession stand that offers boat rentals.

STATUS OF THE SPORT FISHERY –Lake Carlton receives an annual stocking of Channel catfish and Saugeye. Muskie are currently stocked every other year. Below is a description of the fishery.

Muskie:

Lake Carlton was sampled with 5- 4x6 ft. 1.5 inch mesh trap nets for Muskie. The nets were fished for two nights. Total Catch per unit effort (CPUE) was 0.5 fish a net night, which is below average for this lake. Size distribution was the same as historical samples with the 30–38-inch fish as the dominate group sampled. Average size for the 2024 collection was 819 mm.

1. Management Plan:	2016	2017	2018	2019	2020	2021	2022	2023	2024
Net nights: (# nets)	1(6)	2(5)	2(5)	2(5)	NS	2(5)	2(5)	2(5)	2(5)
CPUE (fish/nn)(n)	0.7(4)	1.7(17)	1.8(18)	4.5(45)		3.2(32)	2(20)	2.7(27)	0.5(5)
CPUE 20.1-29.9	0.0	0.2	0.0	0.1		1.0	0.2	0.0	0.0
CPUE 29.9-38.2	0.5	1.2	1.3	3.4		1.8	1.6	2.1	0.5
CPUE 38.2-42.1	0.2	0.3	0.4	0.7		0.3	0.1	0.6	0.0
CPUE 42.1-50.0	0.0	0.0	0.1	0.3		0.1	0.1	0.0	0.0
CPUE 50+	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0
RSD 36	50	41	44	98		34	35	44	20
Avg. Length mm	898	877	917	909		859	865	898	819

2. Avg Wr by Sex:	2016	2017	2018	2019	2020	2021	2022	2023	2024
20.1-29.9									
Avg Wr Female	NA			87	NA	91			
Avg Wr Male		89		81		90	86		
30.0-38.2									
Avg Wr Female		79	93	87		91	87	95	101
Avg Wr Male		80	84	81		90	88	88	87
38.2-42.1									
Avg Wr Female		117	83	89		84	89	98	
Avg Wr Male		74	84			83		82	
42.1-50.0									
Avg Wr Female			79	77		89	79		
Avg Wr Male									
50+									

Largemouth Bass:

The Largemouth bass population was sampled on 9/25/2024 by one DC electrofishing boat with two dippers for a total of 60 minutes as part of the Fall community sample (Tables 1 and 2). Total catch per unit effort (CPUE) was the 2nd lowest CPUE rate in the past 9 years. Sampling in the fall of 2023 was hindered by late summer Lotus beds. Average Fall relative weights (Wr's) fell slightly for fish between 8-15 inches from 2023 fall samples .

The Largemouth bass population was also sampled in the Spring on 5/18/2022 to evaluation age and growth conditions (Tables 3, 4 and 5). Of the 97 fish sampled 67 fish were aged. Age and growth data shows a population that grows well until age 4 and then growth slows from age 5 on. Further analysis will be required to identify the bottleneck at age 5 and beyond.

1. Fall electrofishing: Goal	2017	2018	2019	2020	2021	2022	2023	2024	
# Stock (200mm)	>100	119	96	141	106	111	133	73	64
PSD (95% CI)	40-60	50	29	34	65	60	44 (11)	44(14)	20(12)
RSD 14	10-20	11	9	9	11	27	13	12	5
RSD 18	0-10	0	0	0	1	0	1	0	0
Effort(Min)		60	60	60	60	60	60	60	60

2. Fall diurnal DC electrofishing CPUE (fish/hr) and Average Wr of each length group of Largemouth bass collected at Lake Carlton

Year	<8	8-12	12.1-15	15.1-20	> 20	Total
2016	84.0	60.0	55.0	4.0	0.0	203.0
2017	38.0	68.0	23.0	5.0	0.0	134.0
2018	68.0	93.0	44.0	4.0	0.0	209.0
2019	83.0	37.0	60.0	9.0	0.0	189.0
Avg Wr (103)	(99)	(94)	(93)			
2020	74.0	45.0	62.0	4.0	0.0	185.0
Avg Wr (106)	(97)	(94)	(95)			
2021	185.0	74.0	53.0	6.0	0.0	318.0
Avg Wr (122)	(105)	(98)	(99)			
2022	104.0	41.0	27.0	5.0	0.0	177.0
Avg Wr (107)	(99)	(93)	(98)			
2023	41.0	30.0	12.0	1.0	0.0	84.0
Avg Wr (102)	(94)	(91)	(90)			
2024	35.0	51.0	11.0	2.0	0.0	99.0
Avg Wr (100)	(89)	(80)	(91)			

3. Spring Electrofishing Population assessment

Management Plan	: Goal	2022
# Stock (200mm)	>100	64
PSD (95% CI)	40-60	53 (15)
Mean length Age 3*		9.78" (248.4mm)

*Average length of age 3 fish aged

4. Spring Electrofishing CPUE (fish/nn) of each length group of Largemouth Bass collected at Lake Carlton

Year	<8	8-12	12.1-15	15.1-20	> 20	Total
2022	33.0	30.0	28.0	6.0	0.0	97.0

5. Age length key of Largemouth Bass collected from Lake Carlton collected 5/18/2022

Length (mm)	Age 1	Age 2	Age 3	Age 4	Age 5	Age 6	Age 7	Age 8	Age 9	Total
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80	1									1
90	1									1
100	3									3
110	4									4
120	1									1
130	5									5
140	3	1								4
150	1	1								2
160										0
170										0
180			1							1
190										0
200										0
210		1								1
220		2	2							4
230			2							2
240										0
250			1							1
260			2	3						5
270				4						4
280			1	2						3
290				2						2
300										0
310				3	1					4
320					1	1				2
330					1	1	1			3
340					1	1	3			5
350						1		1		2
360						1	2			3
370							1	1		2
380										0
390									1	1
400								1		1
Total	19	6	8	14	3	5	8	2	2	67

Bluegill:

The Bluegill population was sampled using DC electrofishing in the fall as part of the annual survey. A total of 215 bluegill were sampled. Size distribution of the 2024 sample was like previous years with 3–6-inch fish dominating the sample. Catch rates of fish than 6 inches did increase from 2023 survey and 3rd highest for the past 9 years. The 2022 strong year class has moved into the 6-8-inch size class. Relative weights remain good for all size groups sampled.

<u>1.Fall electrofishing:</u>	<u>Goal:</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
#Stock(80mm)	>100	357	96	290	250	269	140	139	170	148
PSD (95% CI)	20-60	15	37	45	17	23	31(8)	19	12(5)	41(10)
RSD 7	10-15	1	0	11	3	5	2	4	5	16
RSD 8	0-10	0	0	0	1	1	0	0	0	1

2.Fall diurnal DC electrofishing CPUE (fish/hr) of each length group of Bluegill collected at Lake Carlton

<u>Year</u>	<u><3</u>	<u>3.1-6</u>	<u>6.1-8</u>	<u>8.1-10</u>	<u>Total</u>
2016	69.0	302.0	55.0	0.0	426.0
2017	21.0	72.0	35.0	0.0	128.0

2018	117.0	161.0	129.0	0.0	407.0
2019	106.0	207.0	40.0	3.0	356.0
Avg Wr		(89)	(97)	(86)	
2020	81.0	207.0	61.0	1.0	350.0
Avg Wr		(93)	(95)	(100)	
2021	99.0	96.0	44.0	0.0	239.0
Avg Wr		(113)	(99)		
2022	133.0	113.0	26.0	0.0	272.0
Avg Wr		(94)	(92)		
2023	96.0	150.0	20.0	0.0	266.0
Avg Wr		(97)	(90)		
2024	67.0	87.0	59.0	2.0	215.0
Avg Wr		(98)	(92)	(89)	

Redear Sunfish:

The 2024 survey fall survey showed increased overall catch rates for the second year in a row. The 2024 survey had the highest catch rates for fish in the 9–11-inch range. Relative weights for all size groups remain excellent. The increase in catch rates in the 7-11- inch range will provide for quality fishing in 2025.

1.Fall DC electrofishing CPUE (fish/hr) of each length group of Redear sunfish collected at Lake Carlton.

<u>Year</u>	<u><4</u>	<u>4-7.1</u>	<u>7.1-9.1</u>	<u>9.1-11</u>	<u>>11</u>	<u>Total</u>
2016	0.0	4.0	7.0	2.0	0.0	13.0
2017	3.0	16.0	6.0	0.0	0.0	25.0
2018	0.0	7.0	4.0	0.0	0.0	11.0
2019	0.0	2.0	3.0	1.0	0.0	6.0
2020	3.0	2.0	3.0	1.0	0.0	9.0
Avg Wr		(116)	(116)	(117)		
2021	4.0	12.0	0.0	4.0	0.0	20.0
Avg Wr		(117)	(117)	(127)		
2022	0.0	0.0	4.0	0.0	4.0	4.0
Avg Wr			(123)			
2023	2.0	40.0	5.0	1.0	0.0	48.0
Avg Wr		(107)	(121)	(114)		
2024	2.0	12.0	35.0	7.0	0.0	56.0
Avg Wr		(104)	(108)	(106)		

Saugeye:

The Saugeye population is doing very well at Lake Carlton. In 2023 one 30 min nocturnal DC electrofishing survey was done with 2 dippers. Numbers for harvestable size fish have remained stable and will provide for great fishing opportunities. Catch rates for fish over 22 inches was at an all time high in the 2023 season.

<u>1. Spring electrofishing:</u>	<u>2017</u>	<u>2019</u>	<u>2021</u>	<u>2023</u>	
# Stock(230mm)		59	25	29	38
PSD		85	96	100	84
RSD18	54	48	59	32	
Years to 14 inches		n/a	n/a	n/a	n/a

2.Spring nocturnal DC electrofishing CPUE (fish/hr) of each length group of Saugeye collected at Lake Carlton

<u>Year</u>	<u><9.1</u>	<u>9.1-13.8</u>	<u>13.8-18.1</u>	<u>18.1-22</u>	<u>> 22</u>	<u>Total</u>
2017	0.0	18.0	36.0	56.0	8.0	118.0
2019	0.0	2.0	24.0	16.0	8.0	50.0
2021	0.0	10.0	14.0	24.0	10.0	58.0
2023	0.0	2.0	26.0	34.0	16.0	78.0

Crappie:

The Crappie population at Lake Carlton was sampled with 1.0-inch bar mesh trap nets. A total of 25 crappies were collected (25 BLC). The Black crappie population is low density and made of only 2 age groups, Age 1 and Age 3. Population characteristics should be used with caution due to the low catch rates. This is the first time the Crappie population has been evaluated with fall trap nets. The lack of more age groups indicates a possible Crappie spawning issue. Low density Crappie fisheries do allow for better growth as indicated by the age data. Black Crappie are reaching 10.8-inches by age 3+ which is outstanding. The lack of White Crappie is also good to see since White crappie have been shown to feed on fish earlier in life than Black Crappie that have a better ability to feed on aquatic insects when fish prey are not available. If White Crappie were to show up it would be like Johnson Sauk Trail with stunting issues and compounding issues in the Largemouth population.

Black crappie:

<u>Management Plan</u>	<u>: Goal</u>	<u>2021</u>
# Stock (130mm)	>100	25
PSD (95% CI)	40-60	12 (12)
RSD 8	15-25	12
RSD 10	5-10	12
Mean length Age 2+		n/a
CPUE \geq 8.0 inches		0.2
CPUE age-1		1.1
Net nights: (# nets)		2(10)
CPUE (fish/nn) (n)		1.25(25)

2. Fall trap netting CPUE (fish/nn) of each length group of Black crappie collected at Lake Carlton

<u>Year</u>	<u><5</u>	<u>5.1-8</u>	<u>8.1-10</u>	<u>10.1-12</u>	<u>12.1-15</u>	<u>>15</u>	<u>Total</u>
2021	0.0	1.1	0.0	0.2		0.0	1.25

3. Age length key of Black crappie collected from Lake Carlton 10/26-27/2021

<u>Length (mm)</u>	<u>Age - 1</u>	<u>Age - 2</u>	<u>Age - 3</u>	<u>Total</u>
140	1			1
150	4			4
160	10			10
170	2			2
180	4			4
190	1			1
200				0
210				0
220				0
230				0
240				0
250			1	1
260				0
270				0

280			2	2
Total	22	0	3	25

FISHING REGULATIONS – Statewide fishing regulations apply at this lake (see current Illinois Fishing Information booklet and IFISHILLINOIS website <http://www.ifishillinois.org/> for specific details).

Additional Site Specific fishing regulations:

All Fish	2 Pole and Line Fishing Only except
Large or Smallmouth Bass	1 Fish Daily Creel Limit (14" Minimum Length Limit)
Bluegill or Redear Sunfish	No Daily Creel Limit (No Minimum Length Limit)
Channel Catfish	6 Fish Daily Creel Limit (No Minimum Length Limit)
Pure Muskellunge	1 Fish Daily creel Limit (36" Minimum Length Limit)
Walleye, Sauger, or Hybrid Walleye.	6 Fish Daily Creel Limit (14" Minimum Length Limit)
White, Black, or Hybrid Crappie	25 Fish Daily Creel Limit (No Minimum Length Limit)

CONTACT INFORMATION – Morrison-Rookwood State Park: 815-772-4708
 IDNR Fisheries County Biologist: 630-360-4185

Lake Map:

