

Lake Management Status Report

Date of Report: 03/08/21	Fisheries Manager: Fred A. Cronin	District: 16
Lake Name: Horseshoe Lake	County: Madison	Water #: 4606
Ownership (STATE, PUBC, PUBO): STATE		Acreeage: 2107

LM STATUS REPORTS WILL INCLUDE THE FOLLOWING SECTIONS:

1. Listing of the Sport Fish Regulations in Effect
2. Listing of Fisheries Management Activities Completed with Evaluation of Success
3. Lake Management Plan Progress Table
4. Recommendations for Observed Problem Trends

1. Listing of the Sport Fish Regulations in Effect

- A. Recreational use restrictions – waterfowl refuge and hunting area
- B. All Fish – two pole and line fishing only
- C. Largemouth or Smallmouth Bass - 15" minimum length limit – 3 fish/day
- D. Crappie, black, white, or hybrid – 25 fish daily creel limit

2. Listing of the Fisheries Management Activities Completed with Evaluation of Success

- A. 08/27/20 – Stocked 31,800 6.8 inch Channel Catfish
- B. 08/31/20 – Stocked 29,150 6.8 inch Channel Catfish
- C. 09/01/20 – Stocked 19,275 6.8 inch Channel Catfish
- D. 09/30/20 - Population Survey - 3 x 30 minute EF runs

3. Lake Management Plan Progress Table

Largemouth Bass									
	LMP Goals	2006	2008	2010	2012	2014	2016	2018	2020
CPUE (#/hr)	68	66	87	97	50	71	39	41	76
PSD	40-70	95	74	58	72	44	65	86	34
RSD(8-11.9)	30	1	32	45	28	56	39	17	73
RSD(12-14.9)	32	43	27	33	54	13	28	33	9
RSD15	38	52	41	22	18	31	33	50	18
RSD18	5	11	9	4	2	2	1	4	4
Wr	90-110	117	114	109	102	114	109	115	115

The largemouth bass numbers have increased from the previous surveys with a CPUE of 76 in the 2020 survey. The size distribution of the fish collected was good with fish in all size classes. The condition of the fish collected continues to be very good with an average relative weight (Wr) of 115. The increased number of bass with a high percentage of smaller fish should provide good angling opportunities in the next few years.

Bluegill									
	LMP Goals	2006	2008	2010	2012	2014	2016	2018	2020
CPUE (#/hr)	-	380	420	432	105	93	407	228	715
PSD	20-40	50	41	54	72	27	33	53	42
RSD7	10-15	2	5	17	30	6	3	14	10
Wr	90-110	117	117	122	111	133	111	113	115

The size quality of the bluegill population is similar to the previous survey. CPUE is high at 715 fish per hour in the 2020 survey. The RSD7 shows a fair number of fish reaching 7 inches. The condition of the fish is always very good with an average relative weight (Wr) of 115. The bluegill population is fair to good and should provide a good angling opportunity at this lake.

Gizzard Shad									
	LMP Goals	2006	2008	2010	2012	2014	2016	2018	2020
CPUE (#/hr)	150	332	278	341	100	527	148	724	267
<4in (#/hr\%)	45\30	138\42	166\60	258\76	0\0	119\23	17\11	265\36	130\48
4.0-5.9 in	60\40	54\16	76\27	58\17	20\10	339\64	66\45	365\50	50\20
6.0-7.9 in	30\20	84\25	10\4	20\6	132\66	34\6	55\37	31\4	70\25
>8.0 in	15\10	56\17	26\9	5\2	48\24	35\7	10\7	64\9	20\1
Wr	90-110	92	107	102	73	117	110	98	90

Gizzard shad numbers are lower than the previous survey. CPUE from the 2020 survey was 267 per hour. The size distribution shows more fish in the smaller size classes. The shad in this lake are a primary forage fish for largemouth bass, crappie, and other predatory species.

Bigmouth Buffalo									
	LMP Goals	2006	2008	2010	2012	2014	2016	2018	2020
CPUE (#/hr)		21	8	11	7	0	10	21	5
RSD11-16		61	54	80	7	-	50	30	75
RSD16-20		37	46	20	79	-	40	67	0
RSD20		3	0	0	14	-	5	3	25
Wr		85	85	88	84	-	90	86	88

Bigmouth buffalo were collected in lower numbers in the 2020 survey. They were mostly smaller fish in somewhat poor condition.

White Crappie									
	LMP Goals	2006	2008	2010	2012	2014	2016	2018	2020
CPUE (#/hr)		17	38	35	7	7	1	4	9
PSD		97	92	100	63	92	50	100	100
RSD9		76	86	97	0	92	50	100	100
Wr		109	109	104	94	94	101	101	111

Black Crappie									
	LMP Goals	2006	2008	2010	2012	2014	2016	2018	2020
CPUE (#/hr)		13	6	57	4	5	2	5	9
PSD		24	64	6	85	56	0	100	50
RSD9		12	36	1	85	56	0	100	29
Wr		109	110	107	95	108	93	110	96

Crappie are a very important sport fish at Horseshoe Lake. Both white and black crappie were collected in higher numbers in the 2020 survey but the size and condition of the fish was very good. I am confident a quality crappie population is present in his lake.

Channel Catfish

9 channel catfish were collected in the 2020 survey. They ranged from 20-28 inches. The average weight of the channel catfish collected was 4.8 lbs.

4. Recommendations for Observed Problem Trends

Horseshoe Lake presents many challenges to active fishery management. The lake is a large, shallow, fertile, flood plain lake. The lake connects with the Mississippi River via drainage ditches with high water. This allows for uncontrolled fish introduction and escapement. The lake supports high numbers of rough fish including common carp, buffalo, freshwater drum, and yellow bass. Asian carp are also present in the lake and numbers of silver carp have increased rapidly in recent years. The bighead carp numbers are lower but they are growing to enormous sizes. The rough fish undoubtedly compete with and negatively impact reproduction and recruitment of the sport fish. The sediment in the lake contains high levels of contaminants including heavy metals. There is little or no aquatic plant growth in the main body of the lake. Despite these limitations the lake continues to support a good sport fishery for bluegill, crappie, and largemouth bass. The largemouth bass and crappie numbers were both up in the 2020 survey and the lake continues to support decent fishing opportunities for these species. Over 80,000 channel catfish were stocked into the lake in 2020. These fish should provide excellent angling opportunities in the coming years. Alligator gar were stocked for the first time in 2016 as part of a state wide reintroduction project. We hope to see evidence of survival and growth of these fish in future surveys.

SIGNATURES:			
District Fisheries Manager	Date	Regional Fisheries Administrator	Date