Survey Report for Manistee Lake Open Water Fishery, Manistee County, 2016

Waterbody Manistee Lake

Year 2016

County Manistee County

Sites 129

Survey period February 20 to March 31 **Survey design** Roving (instantaneous)-access

Count methods/modes Roving (instantaneous)/boat and shore

Clerk time full time

Survey purpose Characterize general effort and catch aspects of the fishery

Notes

Survey followed a roving (instantaneous)-access design. Funding was provided by the Federal Aid to Sport Fish Restoration Project F-81, Study 230499. Two clerks worked full time to collect angler survey data. Two weekend days and 3 week days were randomly selected for sampling during each week of the survey season. No holidays were sampled. The clerks followed a randomized count and interview schedule. One of two shifts was selected each sample day. The entire water body was sampled each day. Starting location within the waterbody and direction of travel were randomized for both counting and interviewing. Roving (instantaneous) counts of boat and shore anglers were made once per day. Survey period for both counts and interviews was February 20 to March 31. Months were estimated separately. "NAN" in a table means there was not enough information to make an estimate.

Table 1.—Daylight hours used to estimate catch and effort on Manistee Lake, February 20 to March 31, 2016.

Year	Month	Daylight hours
2016	February	11
2016	March	11

Table 2.–Estimated harvest, catch per hour, and fishing pressure for Manistee Lake boat fishery. Two standard errors are given below the estimates.

Species	C/H	February	March	Season
HARVEST				
Northern Pike	_	_	_	_
	_	_	_	_
Yellow Perch	0.8254	_	613	613
	2.3652	_	966	966
Bluegill	0.0110	_	8	8
· ·	0.0345	_	17	17
Black Crappie	0.0220	_	16	16
	0.0645	_	28	28
Coho Salmon	0.0110	_	8	8
	0.0349	_	17	17
TOTAL HARVEST	0.8694	-	646	646
	2.4544	_	966	966
RELEASED				
Northern pike	0.0110	_	8	8
,	0.0345	_	17	17
Largemouth bass	0.0110	_	8	8
· ·	0.0343	_	16	16
Yellow Perch	1.9335	_	1,436	1,436
	9.0125	_	NAN	5,742
Rainbow trout	0.1111	82	_	82
	0.3466	165	_	165
Brown trout	0.0278	21	_	21
	0.0866	41	_	41
TOTAL RELEASED	2.0944	103	1,452	1,555
	9.2930	170	NAN	5,810
TOTAL CATCH	2.9638	103	2,097	2,201
	10.6417	170	NAN	5,890
ANGLER HOURS		330	413	743
		660	NAN	1,777
ANGLER TRIPS		41	73	114
		83	NAN	304

Table 3.–Estimated harvest, catch per hour, and fishing pressure for Manistee Lake shore fishery. Two standard errors are given below the estimates.

Species	C/H	February	March	Season
HARVEST		-		
Northern Pike	0.0132	_	2	2
	0.0314	_	4	2 4
Yellow Perch	0.0066	_	1	1
	0.0157	_	2	2
Bluegill	_	_	_	_
J	_	_	_	_
Black Crappie	_	_	_	_
	_	_	_	_
Coho Salmon	_	_	_	_
	_	_	_	_
TOTAL HARVEST	0.0197		3	3
10171211711(1201	0.0390	_	4	4
RELEASED	0.0000			<u> </u>
Northern pike	0.0329	_	5	5
Northern pike	0.0323	_	10	10
Largemouth bass	0.0704	_	-	-
Largemouth bass	_	_	_	_
Yellow Perch	_	_	_	_
I GIIOW I GIOII	_	_	_	_
Rainbow trout	_	_	_	_
ivallibow trout	_	_	_	_
Brown trout	_	_	_	_
DIOWII LIOUL	_	_	_	_
TOTAL DELEACED	0.0000	<u>_</u>		
TOTAL RELEASED	0.0329	_	5	5
	0.0784		10	10
TOTAL CATCH	0.0526	-	8	8
	0.0993	_	11	11
ANGLER HOURS		44	106	150
		88	174	195
ANGLER TRIPS		16	17	32
		33	29	44

Table 4.—Estimated harvest, catch per hour, and fishing pressure for the combined shore and boat fishery on Manistee Lake. Two standard errors are given below the estimates.

Northern Pike	Species	C/H	February	March	Season
Yellow Perch 0.0070 - 4 4 Yellow Perch 0.6875 - 614 614 1.9967 - 966 966 Bluegill 0.0092 - 8 8 0.0290 - 17 17 T7 17 16 16 0.0543 - 28 28 Coho Salmon 0.0092 - 8 8 0.0294 - 17 17 TOTAL HARVEST 0.7263 - 649 649 2.0774 - 966 966 RELEASED Northern pike 0.0147 - 13 13 0.0419 - 19 19 Largemouth bass 0.0092 - 8 8 0.0289 - 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 <t< td=""><td>HARVEST</td><td></td><td>-</td><td></td><td></td></t<>	HARVEST		-		
Yellow Perch 0.6875 - 614 614 1.9967 - 966 966 Bluegill 0.0092 - 8 8 0.0290 - 17 17 17 17 17 17 Black Crappie 0.0183 - 16 16 0.0543 - 28 28 Coho Salmon 0.0092 - 8 8 0.0294 - 17 17 TOTAL HARVEST 0.7263 - 649 649 2.0774 - 966 966 RELEASED Northern pike 0.0147 - 13 13 0.0419 - 19 19 19 Largemouth bass 0.0092 - 8 8 0.0289 - 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 <	Northern Pike	0.0022	_	2	2
1.9967		0.0070	_	4	4
Bluegill 0.0092 - 8 8 8 0.0290 - 17 17 Black Crappie 0.0183 - 16 16 0.0543 - 28 28 Coho Salmon 0.0092 - 8 8 8 0.0294 - 17 17 TOTAL HARVEST 0.7263 - 649 649 2.0774 - 966 966 RELEASED Northern pike 0.0147 - 13 13 0.0419 - 19 19 Largemouth bass 0.0092 - 8 8 0.0289 - 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560	Yellow Perch	0.6875	_	614	614
O.0290		1.9967	_	966	966
Black Crappie 0.0183 - 16 16 0.0543 - 28 28 Coho Salmon 0.0092 - 8 8 0.0294 - 17 17 TOTAL HARVEST 0.7263 - 649 649 2.0774 - 966 966 RELEASED Northern pike 0.0147 - 13 13 0.0419 - 19 19 19 Largemouth bass 0.0092 - 8 8 0.0289 - 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103	Bluegill	0.0092	_	8	8
Coho Salmon 0.0543 - 28 28 0.0092 - 8 8 0.0294 - 17 17 TOTAL HARVEST 0.7263 - 649 649 2.0774 - 966 966 RELEASED Northern pike 0.0147 - 13 13 0.0419 - 19 19 Largemouth bass 0.0289 - 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560	· ·	0.0290	_	17	17
Coho Salmon 0.0092 - 8 8 0.0294 - 17 17 TOTAL HARVEST 0.7263 - 649 649 2.0774 - 966 966 RELEASED Northern pike 0.0147 - 13 13 0.0419 - 19 19 19 Largemouth bass 0.0092 - 8 8 0.0289 - 16 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 TOTAL RELEASED 1.7472 103 1,457 1,560	Black Crappie	0.0183	_	16	16
0.0294 - 17 17 TOTAL HARVEST 0.7263 - 649 649 2.0774 - 966 966 RELEASED Northern pike 0.0147 - 13 13 Northern pike 0.0419 - 19 19 Largemouth bass 0.0092 - 8 8 0.0289 - 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 TOTAL RELEASED 1.7472 103 1,457 1,560		0.0543	_	28	28
TOTAL HARVEST 0.7263 - 649 649 2.0774 - 966 966 P66 P66 P66 P66 P66 P66 P66 P66	Coho Salmon	0.0092	_	8	8
2.0774 — 966 966 RELEASED Northern pike 0.0147 — 13 13 Northern pike 0.0419 — 19 19 Largemouth bass 0.0092 — 8 8 0.0289 — 16 16 Yellow Perch 1.6079 — 1,436 1,436 7.5347 — NAN 5,742 Rainbow trout 0.0924 82 — 82 0.2916 165 — 165 Brown trout 0.0231 21 — 21 0.0729 41 — 41 TOTAL RELEASED 1.7472 103 1,457 1,560		0.0294	_	17	17
RELEASED Northern pike 0.0147 - 13 13 0.0419 - 19 19 Largemouth bass 0.0092 - 8 8 0.0289 - 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560	TOTAL HARVEST	0.7263	_	649	649
Northern pike 0.0147 - 13 13 13 0.0419 - 19 19 Largemouth bass 0.0092 - 8 8 8 0.0289 - 16 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560		2.0774	_	966	966
	RELEASED				
Largemouth bass 0.0419 - 19 19 Largemouth bass 0.0092 - 8 8 0.0289 - 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560	Northern pike	0.0147	_	13	13
Vellow Perch 0.0289 - 16 16 Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560	•	0.0419	_	19	19
Yellow Perch 1.6079 - 1,436 1,436 7.5347 - NAN 5,742 Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560	Largemouth bass	0.0092	_	8	8
Rainbow trout 7.5347 - NAN 5,742 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560	· ·	0.0289	_	16	16
Rainbow trout 0.0924 82 - 82 0.2916 165 - 165 Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560	Yellow Perch	1.6079	_	1,436	1,436
Brown trout 0.2916 165 - 165 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560		7.5347	_	NAN	5,742
Brown trout 0.0231 21 - 21 0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560	Rainbow trout	0.0924	82	_	82
0.0729 41 - 41 TOTAL RELEASED 1.7472 103 1,457 1,560		0.2916	165	_	165
TOTAL RELEASED 1.7472 103 1,457 1,560	Brown trout	0.0231	21	_	21
, ,		0.0729	41	_	41
7.7994 170 NAN 5,830	TOTAL RELEASED	1.7472	103	1,457	1,560
		7.7994	170	NAN	5,830
TOTAL CATCH 2.4736 103 2,105 2,209	TOTAL CATCH	2.4736	103	2,105	2,209
8.9594 170 NAN 5,910		8.9594	170	NAN	5,910
ANGLER HOURS 374 519 893	ANGLER HOURS		374	519	
666 NAN 2,180			666	NAN	2,180
ANGLER TRIPS 57 90 146	ANGLER TRIPS				
90 NAN 370			90	NAN	370