

Open Water Creel Survey Report for Portage Lake, Manistee County, 2018

Waterbody	Portage Lake
Year	2018
County	Manistee County
Sites	PortageLake
Survey period	April 1 to October 31
Survey design	Roving (instantaneous)-access
Count methods/modes	Roving (instantaneous)/boat and shore
Clerk time	1/2 time
Survey purpose	Characterize general effort and catch aspects of the fishery

Notes

This survey followed a roving (instantaneous)-access design. Funding was provided by the Federal Aid to Sport Fish Restoration Project F-81, Study 230499. One clerk worked 1/2 time to collect angling survey data. Three weekdays and two weekend days were randomly selected for sampling during each week of the survey season. No holidays were sampled. Clerk followed a randomized count and interview schedule. One of two shifts was selected each sample day. The entire water body was sampled each day. Roving (instantaneous) counts of boat, pier/dock, and shore anglers were made twice per day. Survey period for both counts and interviews was April 1 to October 31. Months were estimated separately. Estimates are available for boat, pier/dock, and shore. "NAN" in a table means there was not enough information to make a calculation.

Table 1.–Daylight hours used to estimate catch and effort each month of Portage Lake open water creel survey from April 1 to October 31, 2018.

Year	Month	Hours
2018	April	13
2018	May	14
2018	June	15
2018	July	15
2018	August	15
2018	September	15
2018	October	13

Table 2.—Estimated harvest, catch per hour, and fishing pressure for Portage Lake boat angling. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Northern pike	0.0039	0	23	0	0	60	0	0	84
	0.0059	0	46	0	0	118	0	0	127
Largemouth bass	0.0321	0	41	554	98	0	0	0	693
	0.0272	0	79	545	153	0	0	0	572
Smallmouth bass	0.0023	0	0	49	0	0	0	0	49
	0.0045	0	0	97	0	0	0	0	97
Yellow Perch	1.1139	0	1,666	4,817	2,182	1,090	4,254	10,078	24,087
	0.5588	0	1,614	4,141	2,393	1,146	3,910	9,021	11,111
Bluegill	0.3560	0	1,452	3,881	979	534	850	0	7,697
	0.2025	0	2,392	2,814	1,204	593	1,198	0	4,108
Pumpkinseed	0.0419	0	253	267	386	0	0	0	906
	0.0402	0	473	276	650	0	0	0	850
Rock bass	0.1079	0	116	862	456	571	327	0	2,333
	0.0777	0	188	688	875	1,005	574	0	1,617
TOTAL HARVEST	1.6579	0	3,552	10,430	4,102	2,256	5,431	10,078	35,849
	0.6440	0	2,932	5,091	2,896	1,640	4,130	9,021	12,001
RELEASED									
Northern pike	0.0099	0	0	147	0	27	41	0	215
	0.0094	0	0	174	0	52	79	0	198
Largemouth bass	0.8133	0	3,944	8,890	2,508	381	1,184	678	17,585
	0.3279	0	3,193	4,527	2,325	464	1,240	644	6,186
Smallmouth bass	0.1322	0	731	1,191	478	53	204	202	2,859
	0.0720	0	738	1,003	623	71	332	225	1,451
Yellow Perch	2.0112	0	3,823	14,844	3,327	1,343	6,704	13,447	43,488
	1.1067	0	4,597	14,172	4,138	1,445	5,408	15,126	22,343
Bluegill	0.0642	0	207	591	46	240	306	0	1,389
	0.0511	0	394	872	95	297	363	0	1,070
Pumpkinseed	0.0053	0	70	0	46	0	0	0	115
	0.0079	0	141	0	95	0	0	0	170
Rock bass	0.1959	0	1,128	1,779	478	851	0	0	4,235
	0.1225	0	1,209	1,670	628	1,293	0	0	2,514
Black crappie	0.0167	0	0	0	228	134	0	0	362
	0.0253	0	0	0	468	275	0	0	543
Brown bullhead	0.0011	0	23	0	0	0	0	0	23
	0.0021	0	45	0	0	0	0	0	45
Channel catfish	0.0012	0	0	0	0	27	0	0	27
	0.0026	0	0	0	0	55	0	0	55
Bowfin	0.0011	0	23	0	0	0	0	0	23
	0.0021	0	46	0	0	0	0	0	46
Freshwater drum	0.0011	0	23	0	0	0	0	0	23
	0.0022	0	47	0	0	0	0	0	47
TOTAL RELEASED	3.2532	0	9,972	27,442	7,109	3,055	8,439	14,327	70,344
	1.2576	0	5,789	15,031	4,853	2,037	5,571	15,141	23,397
TOTAL CATCH	4.9111	0	13,524	37,872	11,211	5,312	13,870	24,405	106,193
	1.5540	0	6,489	15,870	5,651	2,615	6,935	17,625	26,296
ANGLER HOURS		182	2,618	7,894	3,305	1,818	2,941	2,865	21,623
		NAN	1,211	2,530	1,669	840	1,970	1,541	4,260
ANGLER TRIPS		47	579	1,703	800	441	720	783	5,073
		NAN	263	588	408	196	511	481	1,072

Table 3.—Estimated harvest, catch per hour, and fishing pressure for Portage Lake pier/dock angling. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Yellow Perch	0.0526	0	0	34	0	0	0	0	34
	0.1073	0	0	65	0	0	0	0	65
Bluegill	0.2457	0	0	158	0	0	0	0	158
	0.5006	0	0	306	0	0	0	0	306
Pumpkinseed	0.0175	0	0	11	0	0	0	0	11
	0.0358	0	0	22	0	0	0	0	22
Rock bass	0.0526	0	0	34	0	0	0	0	34
	0.1073	0	0	65	0	0	0	0	65
TOTAL HARVEST	0.3685	0	0	236	0	0	0	0	236
	0.5493	0	0	320	0	0	0	0	320
RELEASED									
Bluegill	1.4566	0	0	934	0	0	0	0	934
	5.8964	0	0	NAN	0	0	0	0	3,735
Rock bass	0.0877	0	0	56	0	0	0	0	56
	0.2093	0	0	130	0	0	0	0	130
TOTAL RELEASED	1.5444	0	0	990	0	0	0	0	990
	6.2516	0	0	NAN	0	0	0	0	3,960
TOTAL CATCH	1.9129	0	0	1,226	0	0	0	0	1,226
	6.3106	0	0	NAN	0	0	0	0	3,973
ANGLER HOURS		0	221	214	158	49	0	0	641
		0	246	191	228	99	0	0	398
ANGLER TRIPS		0	74	130	135	42	0	0	381
		0	90	139	210	88	0	0	282

Table 4.—Estimated harvest, catch per hour, and fishing pressure for Portage Lake shore angling. Two standard errors are given below the estimates.

	April	May	June	July	August	September	October	Season
ANGLER HOURS	0	126	90	0	25	0	0	241
	0	252	120	0	49	0	0	283
ANGLER TRIPS	0	39	28	0	8	0	0	74
	0	87	46	0	17	0	0	100

Table 5.—Estimated harvest, catch per hour, and fishing pressure for Portage Lake all modes combined. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Northern pike	0.0037	0	23	0	0	60	0	0	84
	0.0057	0	46	0	0	118	0	0	127
Largemouth bass	0.0308	0	41	554	98	0	0	0	693
	0.0261	0	79	545	153	0	0	0	572
Smallmouth bass	0.0022	0	0	49	0	0	0	0	49
	0.0043	0	0	97	0	0	0	0	97
Yellow Perch	1.0718	0	1,666	4,850	2,182	1,090	4,254	10,078	24,121
	0.5343	0	1,614	4,141	2,393	1,146	3,910	9,021	11,111
Bluegill	0.3490	0	1,452	4,039	979	534	850	0	7,854
	0.1947	0	2,392	2,830	1,204	593	1,198	0	4,119
Pumpkinseed	0.0408	0	253	278	386	0	0	0	917
	0.0386	0	473	277	650	0	0	0	850
Rock bass	0.1052	0	116	896	456	571	327	0	2,367
	0.0746	0	188	691	875	1,005	574	0	1,618
TOTAL HARVEST	1.6034	0	3,552	10,666	4,102	2,256	5,431	10,078	36,085
	0.6147	0	2,932	5,101	2,896	1,640	4,130	9,021	12,005
RELEASED									
Northern pike	0.0095	0	0	147	0	27	41	0	215
	0.0090	0	0	174	0	52	79	0	198
Largemouth bass	0.7814	0	3,944	8,890	2,508	381	1,184	678	17,585
	0.3126	0	3,193	4,527	2,325	464	1,240	644	6,186
Smallmouth bass	0.1270	0	731	1,191	478	53	204	202	2,859
	0.0689	0	738	1,003	623	71	332	225	1,451
Yellow Perch	1.9324	0	3,823	14,844	3,327	1,343	6,704	13,447	43,488
	1.0589	0	4,597	14,172	4,138	1,445	5,408	15,126	22,343
Bluegill	0.1032	0	207	1,524	46	240	306	0	2,323
	0.2730	0	394	NAN	95	297	363	0	6,129
Pumpkinseed	0.0051	0	70	0	46	0	0	0	115
	0.0076	0	141	0	95	0	0	0	170
Rock bass	0.1907	0	1,128	1,835	478	851	0	0	4,292
	0.1176	0	1,209	1,675	628	1,293	0	0	2,517
Black crappie	0.0161	0	0	0	228	134	0	0	362
	0.0243	0	0	0	468	275	0	0	543
Brown bullhead	0.0010	0	23	0	0	0	0	0	23
	0.0020	0	45	0	0	0	0	0	45
Channel catfish	0.0012	0	0	0	0	27	0	0	27
	0.0025	0	0	0	0	55	0	0	55
Bowfin	0.0010	0	23	0	0	0	0	0	23
	0.0021	0	46	0	0	0	0	0	46
Freshwater drum	0.0010	0	23	0	0	0	0	0	23
	0.0021	0	47	0	0	0	0	0	47
TOTAL RELEASED	3.1697	0	9,972	28,432	7,109	3,055	8,439	14,327	71,334
	5.1514	0	5,789	NAN	4,853	2,037	5,571	15,141	115,133
TOTAL CATCH	4.7732	0	13,524	39,098	11,211	5,312	13,870	24,405	107,420
	5.2234	0	6,489	NAN	5,651	2,615	6,935	17,625	115,757
ANGLER HOURS		182	2,964	8,198	3,463	1,892	2,941	2,865	22,505
		NAN	1,261	2,540	1,685	848	1,970	1,541	4,288
ANGLER TRIPS		47	691	1,861	935	491	720	783	5,528
		NAN	291	606	459	216	511	481	1,113