

Open Water Creel Survey Report for PentwaterLake, Oceana County, 2016

Waterbody	Pentwater Lake
Year	2016
County	Oceana County
Sites	PentwaterLake
Survey period	April 1 to October 19
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

Survey followed a roving (instantaneous)-access design. All funding was provided through Fisheries Division. One clerk worked 1/2 time to collect angler survey data. 2 weekend days and 3 week 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 once per day. Survey period for both counts and interviews was April 1 to October 19. Months were estimated separately. Estimates are available for boat, pier/dock and shore. “NAN” in a table means insufficient data to make an estimate.

Table –Day light hours used to estimate catch and effort at PentwaterLake, April 1 to October 19, 2016.

Year	Month	Day Light Hours
2016	4	16
2016	5	17
2016	6	18
2016	7	19
2016	8	20
2016	9	21
2016	10	22

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

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Black crappie	0.2330	0	0	0	376	0	0	0	376
	0.9955	0	0	0	NAN	0	0	0	1,505
TOTAL HARVEST	0.2330	0	0	0	376	0	0	0	376
	0.9955	0	0	0	NAN	0	0	0	1,505
RELEASED									
Northern pike	0.0764	0	0	123	0	0	0	0	123
	0.3266	0	0	NAN	0	0	0	0	494
Smallmouth bass	1.8768	0	857	1,234	0	914	0	25	3,031
	4.7999	0	1,250	NAN	0	NAN	0	NAN	6,271
Rock bass	0.3058	0	0	494	0	0	0	0	494
	1.3065	0	0	NAN	0	0	0	0	1,975
TOTAL RELEASED	2.2590	0	857	1,851	0	914	0	25	3,648
	6.1884	0	1,250	NAN	0	NAN	0	NAN	8,354
TOTAL CATCH	2.4919	0	857	1,851	376	914	0	25	4,024
	6.4549	0	1,250	NAN	NAN	NAN	0	NAN	8,489
ANGLER HOURS		224	446	432	105	320	0	88	1,615
		NAN	407	NAN	NAN	NAN	0	NAN	2,427
ANGLER TRIPS		72	143	138	33	102	0	28	517
		NAN	166	NAN	NAN	NAN	0	NAN	783

Estimated harvest, catch per hour, and fishing pressure for Pentwater Lake pier/dock fishery.
Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Northern pike	0.0142	0	36	0	0	0	2	56	95
	0.0211	0	72	0	0	0	5	119	139
Smallmouth bass	0.0437	0	178	38	62	0	14	0	292
	0.0545	0	332	61	114	0	21	0	357
Yellow Perch	0.0259	70	0	0	103	0	0	0	173
	0.0212	111	0	0	77	0	0	0	135
Bluegill	0.0053	0	36	0	0	0	0	0	36
	0.0100	0	66	0	0	0	0	0	66
Rock bass	0.0390	0	125	136	0	0	0	0	260
	0.0555	0	251	265	0	0	0	0	365
Rainbow trout	0.0041	28	0	0	0	0	0	0	28
	0.0056	37	0	0	0	0	0	0	37
Brown trout	0.0055	37	0	0	0	0	0	0	37
	0.0064	42	0	0	0	0	0	0	42
Brown bullhead	0.0224	0	0	0	99	51	0	0	149
	0.0205	0	0	0	107	77	0	0	132
Chinook salmon	0.0026	0	0	0	0	8	10	0	17
	0.0038	0	0	0	0	15	20	0	25
Freshwater drum	0.0059	0	21	0	19	0	0	0	39
	0.0085	0	42	0	37	0	0	0	56
Goby	0.0068	45	0	0	0	0	0	0	45
	0.0155	103	0	0	0	0	0	0	103
TOTAL HARVEST	0.1755	180	395	173	282	58	26	56	1,172
	0.0970	162	430	272	178	78	29	119	581
RELEASED									
Northern pike	0.0260	85	61	0	0	0	0	28	174
	0.0327	166	121	0	0	0	0	59	214
Largemouth bass	0.0225	0	0	14	32	29	37	38	151
	0.0193	0	0	25	65	45	50	76	123
Smallmouth bass	0.1259	255	192	94	161	27	26	85	840
	0.0984	499	276	97	201	54	27	103	624
Yellow Perch	0.4044	170	0	61	1,089	1,350	30	0	2,700
	0.8576	342	0	100	1,756	NAN	60	0	5,688
Bluegill	0.0241	0	0	87	0	73	0	0	161
	0.0253	0	0	119	0	113	0	0	164
Pumpkinseed	0.0174	0	0	43	0	73	0	0	116
	0.0205	0	0	73	0	113	0	0	134
Rock bass	0.0823	0	21	239	14	275	0	0	549
	0.1767	0	42	400	29	NAN	0	0	1,172
Black crappie	0.0077	0	0	51	0	0	0	0	51
	0.0155	0	0	103	0	0	0	0	103
Rainbow trout	0.0031	0	0	0	21	0	0	0	21
	0.0036	0	0	0	23	0	0	0	23
Common white sucker	0.0130	0	0	49	0	0	0	38	87
	0.0160	0	0	72	0	0	0	76	105
Brown bullhead	0.0022	0	0	0	0	15	0	0	15
	0.0034	0	0	0	0	23	0	0	23
Freshwater drum	0.0242	0	0	7	14	137	3	0	161
	0.0822	0	0	14	29	NAN	7	0	547
Goby	0.0389	52	208	0	0	0	0	0	260
	0.0609	115	385	0	0	0	0	0	401
TOTAL RELEASED	0.7916	562	482	646	1,332	1,979	96	189	5,286
	1.2379	638	491	464	1,769	NAN	83	161	8,165
TOTAL CATCH	0.9671	742	877	820	1,614	2,037	123	246	6,457
	1.2484	658	652	538	1,778	NAN	88	200	8,185
ANGLER HOURS		999	693	936	2,261	986	398	403	6,677
		477	353	1,079	891	496	217	216	1,628
ANGLER TRIPS		345	373	485	1,288	442	206	235	3,374
		182	234	642	788	292	118	152	1,115

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

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Yellow Perch	0.0405	0	40	0	0	0	0	0	40
	0.0843	0	79	0	0	0	0	0	79
Pumpkinseed	0.1622	0	159	0	0	0	0	0	159
	0.3021	0	281	0	0	0	0	0	281
Black crappie	0.2324	227	0	0	0	0	0	0	227
	0.4902	462	0	0	0	0	0	0	462
Brown trout	0.0278	27	0	0	0	0	0	0	27
	0.0343	30	0	0	0	0	0	0	30
Common white sucker	0.1589	155	0	0	0	0	0	0	155
	0.2033	178	0	0	0	0	0	0	178
TOTAL HARVEST	0.6218	410	198	0	0	0	0	0	608
	0.6874	496	292	0	0	0	0	0	575
RELEASED									
Northern pike	0.0232	23	0	0	0	0	0	0	23
	0.0411	38	0	0	0	0	0	0	38
Smallmouth bass	0.0232	23	0	0	0	0	0	0	23
	0.0571	54	0	0	0	0	0	0	54
Yellow Perch	0.4865	0	476	0	0	0	0	0	476
	0.9064	0	844	0	0	0	0	0	844
Pumpkinseed	0.2027	0	198	0	0	0	0	0	198
	0.3644	0	338	0	0	0	0	0	338
Rock bass	0.4887	0	436	0	42	0	0	0	478
	0.8232	0	739	0	NAN	0	0	0	757
Black crappie	0.1162	114	0	0	0	0	0	0	114
	0.2451	231	0	0	0	0	0	0	231
Common white sucker	0.0177	17	0	0	0	0	0	0	17
	0.0368	35	0	0	0	0	0	0	35
TOTAL RELEASED	1.3583	176	1,111	0	42	0	0	0	1,329
	1.4590	243	1,171	0	NAN	0	0	0	1,208
TOTAL CATCH	1.9801	586	1,309	0	42	0	0	0	1,937
	1.7762	552	1,207	0	NAN	0	0	0	1,338
ANGLER HOURS		692	140	120	26	0	0	0	978
		496	206	152	52	0	0	0	560
ANGLER TRIPS		222	43	40	10	0	0	0	316
		251	77	57	22	0	0	0	269

Estimated harvest, catch per hour, and fishing pressure for Pentwater Lake combined fishery.
Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Northern pike	0.0102	0	36	0	0	0	2	56	95
	0.0221	0	72	0	0	0	5	119	139
Smallmouth bass	0.0315	0	178	38	62	0	14	0	292
	0.0631	0	332	61	114	0	21	0	357
Yellow Perch	0.0230	70	40	0	103	0	0	0	213
	0.0402	111	79	0	77	0	0	0	157
Bluegill	0.0038	0	36	0	0	0	0	0	36
	0.0094	0	66	0	0	0	0	0	66
Pumpkinseed	0.0171	0	159	0	0	0	0	0	159
	0.0408	0	281	0	0	0	0	0	281
Rock bass	0.0281	0	125	136	0	0	0	0	260
	0.0595	0	251	265	0	0	0	0	365
Black crappie	0.0651	227	0	0	376	0	0	0	604
	0.1989	462	0	0	NAN	0	0	0	1,574
Rainbow trout	0.0030	28	0	0	0	0	0	0	28
	0.0062	37	0	0	0	0	0	0	37
Brown trout	0.0069	64	0	0	0	0	0	0	64
	0.0123	51	0	0	0	0	0	0	51
Common white sucker	0.0168	155	0	0	0	0	0	0	155
	0.0328	178	0	0	0	0	0	0	178
Brown bullhead	0.0161	0	0	0	99	51	0	0	149
	0.0293	0	0	0	107	77	0	0	132
Chinook salmon	0.0019	0	0	0	0	8	10	0	17
	0.0040	0	0	0	0	15	20	0	25
Freshwater drum	0.0042	0	21	0	19	0	0	0	39
	0.0090	0	42	0	37	0	0	0	56
Goby	0.0049	45	0	0	0	0	0	0	45
	0.0136	103	0	0	0	0	0	0	103
TOTAL HARVEST	0.2326	590	593	173	658	58	26	56	2,156
	0.4740	521	520	272	NAN	78	29	119	2,750
RELEASED									
Northern pike	0.0345	108	61	123	0	0	0	28	320
	0.0800	171	121	NAN	0	0	0	59	540
Largemouth bass	0.0162	0	0	14	32	29	37	38	151
	0.0290	0	0	25	65	45	50	76	123
Smallmouth bass	0.4200	278	1,049	1,329	161	941	26	110	3,894
	0.9819	502	1,280	NAN	201	NAN	27	NAN	6,674
Yellow Perch	0.3426	170	476	61	1,089	1,350	30	0	3,176
	0.8255	342	844	100	1,756	NAN	60	0	5,750
Bluegill	0.0173	0	0	87	0	73	0	0	161
	0.0327	0	0	119	0	113	0	0	164
Pumpkinseed	0.0339	0	198	43	0	73	0	0	315
	0.0667	0	338	73	0	113	0	0	364
Rock bass	0.1641	0	457	733	56	275	0	0	1,521
	0.4348	0	740	NAN	NAN	NAN	0	0	3,225
Black crappie	0.0178	114	0	51	0	0	0	0	165
	0.0393	231	0	103	0	0	0	0	253
Rainbow trout	0.0022	0	0	0	21	0	0	0	21
	0.0043	0	0	0	23	0	0	0	23
Common white sucker	0.0112	17	0	49	0	0	0	38	104
	0.0215	35	0	72	0	0	0	76	110
Brown bullhead	0.0016	0	0	0	0	15	0	0	15
	0.0035	0	0	0	0	23	0	0	23
Freshwater drum	0.0174	0	0	7	14	137	3	0	161
	0.0652	0	0	14	29	NAN	7	0	547
Goby	0.0280	52	208	0	0	0	0	0	260
	0.0621	115	385	0	0	0	0	0	401
TOTAL RELEASED	1.1070	738	2,449	2,498	1,374	2,893	96	214	10,262
	2.4938	682	1,782	NAN	NAN	NAN	83	NAN	16,379

TOTAL CATCH	1,3396	1,329	3,043	2,671	2,032	2,951	123	271	12,418
	2,7830	859	1,856	NAN	NAN	NAN	88	NAN	16,609
ANGLER HOURS		1,915	1,279	1,488	2,392	1,306	398	491	9,270
		NAN	576	NAN	NAN	NAN	217	NAN	14,737
ANGLER TRIPS		639	558	664	1,332	544	206	263	4,206
		NAN	297	NAN	NAN	NAN	118	NAN	6,923