

Open Water Creel Survey Estimate Report for Pentwater Lake, Oceana County, 2015

Waterbody	Pentwater Lake
Year	2015
County	Oceana County
Sites	Pentwater Lake
Survey period	April 25 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

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 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. One 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. Starting location within the waterbody and direction of travel were randomized for both counting and interviewing. Roving (instantaneous) counts of boat, pier/dock, and shore anglers were made twice per day. Survey period for both counts and interviews was April 25 to October 31. Months were estimated separately. **NAN** in a table means not enough data to make an estimate.

Table 1.–Daylight hours used to estimate catch and effort at Pentwater Lake, April 25 to October 31, 2015.

Year	Month	Daylight hours
2015	4	13
2015	5	14
2015	6	15
2015	7	16
2015	8	16
2015	9	16
2015	10	14

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

Species	C/H	April-May	June	July	August	September	October	Season
HARVEST								
Northern Pike	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Largemouth Bass	0.0039	—	—	—	—	17	—	17
	0.0075	—	—	—	—	30	—	30
Smallmouth Bass	0.0627	280	—	—	—	—	—	280
	0.1323	535	—	—	—	—	—	535
Yellow Perch	0.0390	146	28	—	—	—	—	174
	0.0760	299	39	—	—	—	—	301
Bluegill	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Rock Bass	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Black Crappie	0.2651	—	1,184	—	—	—	—	1,184
	0.6074	—	2,498	—	—	—	—	2,498
Rainbow Trout	0.0072	—	32	—	—	—	—	32
	0.0179	—	75	—	—	—	—	75
Brown Bullhead	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Channel Catfish	0.0063	—	28	—	—	—	—	28
	0.0152	—	63	—	—	—	—	63
Chinook Salmon	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Freshwater Drum	0.0039	—	—	—	—	17	—	17
	0.0093	—	—	—	—	38	—	38
TOTAL HARVEST	0.3881	426	1,272	—	—	35	—	1,733
	0.6726	613	2,500	—	—	49	—	2,574
RELEASED								
Northern pike	0.0824	257	56	55	—	—	—	368
	0.1174	375	127	101	—	—	—	409
Largemouth bass	0.0235	49	56	—	—	—	—	105
	0.0318	55	92	—	—	—	—	107
Smallmouth bass	0.3440	1,266	197	55	—	17	—	1,536
	0.3947	1,054	326	101	—	30	—	1,108
Yellow Perch	0.1593	603	108	—	—	—	—	711
	0.2526	917	170	—	—	—	—	932
Bluegill	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Rock bass	0.3314	1,168	229	82	—	—	—	1,479
	0.4492	1,472	269	202	—	—	—	1,510
Black crappie	0.2370	49	817	192	—	—	—	1,058
	0.3922	65	1,396	471	—	—	—	1,475
Brown trout	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Common White Sucker	0.0096	43	—	—	—	—	—	43
	0.0218	89	—	—	—	—	—	89
Redhorse	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Brown bullhead	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Freshwater drum	0.0188	—	56	27	—	—	—	84
	0.0349	—	127	50	—	—	—	137
OTH1	0.0061	—	—	27	—	—	—	27
	0.0125	—	—	50	—	—	—	50
TOTAL RELEASED	1.2120	3,434	1,521	439	—	17	—	5,411
	1.2282	2,067	1,482	536	—	30	—	2,600
TOTAL CATCH	1.6001	3,860	2,793	439	—	52	—	7,144
	1.6462	2,156	2,906	536	—	57	—	3,659
ANGLER HOURS		1,776	1,116	919	—	496	158	4,465
		1,211	646	NAN	—	281	NAN	3,984
ANGLER TRIPS		311	245	279	—	188	34	1,057
		225	211	NAN	—	119	NAN	1,170

Table 3.—Estimated harvest, catch per hour, and fishing pressure for the 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	0.0025	16	—	—	—	—	—	16
	0.0046	29	—	—	—	—	—	29
Largemouth Bass	0.0017	—	11	—	—	—	—	11
	0.0035	—	22	—	—	—	—	22
Smallmouth Bass	0.0204	—	22	76	29	—	—	127
	0.0276	—	43	152	59	—	—	169
Yellow Perch	0.0049	—	—	—	—	—	31	31
	0.0100	—	—	—	—	—	62	62
Bluegill	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Rock Bass	0.0010	7	—	—	—	—	—	7
	0.0021	13	—	—	—	—	—	13
Black Crappie	0.0437	—	—	272	—	—	—	272
	0.0641	—	—	393	—	—	—	393
Rainbow Trout	0.0040	—	25	—	—	—	—	25
	0.0081	—	50	—	—	—	—	50
Brown Bullhead	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Channel Catfish	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Chinook Salmon	0.0048	—	—	—	—	30	—	30
	0.0092	—	—	—	—	57	—	57
Freshwater Drum	0.0035	—	22	—	—	—	—	22
	0.0070	—	43	—	—	—	—	43
TOTAL HARVEST	0.0865	22	79	348	29	30	31	539
	0.0745	31	82	422	59	57	62	443
RELEASED								
Northern pike	0.0025	16	—	—	—	—	—	16
	0.0046	29	—	—	—	—	—	29
Largemouth bass	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Smallmouth bass	0.0996	71	—	—	529	21	—	621
	0.1682	83	—	—	1,031	45	—	1,036
Yellow Perch	0.0871	98	—	353	—	—	92	543
	0.1006	195	—	549	—	—	185	611
Bluegill	0.0081	—	50	—	—	—	—	50
	0.0163	—	101	—	—	—	—	101
Rock bass	0.0600	10	—	364	—	—	—	374
	0.1007	19	—	620	—	—	—	620
Black crappie	0.0040	—	25	—	—	—	—	25
	0.0081	—	50	—	—	—	—	50
Brown trout	0.0121	—	75	—	—	—	—	75
	0.0244	—	151	—	—	—	—	151
Common White Sucker	0.0034	—	—	—	—	—	21	21
	0.0064	—	—	—	—	—	40	40
Redhorse	0.0244	—	—	152	—	—	—	152
	0.0492	—	—	304	—	—	—	304
Brown bullhead	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Freshwater drum	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
OTH1	0.0098	—	11	50	—	—	—	61
	0.0167	—	22	101	—	—	—	103
TOTAL RELEASED	0.3110	194	161	920	529	21	113	1,938
	0.2392	215	189	888	1,031	45	189	1,404
TOTAL CATCH	0.3975	216	241	1,268	559	51	144	2,477
	0.2576	217	206	983	1,033	73	199	1,472
ANGLER HOURS		392	1,166	2,726	1,196	378	375	6,232
		333	756	1,142	632	345	302	1,612
ANGLER TRIPS		206	647	1,404	694	192	249	3,393
		181	458	1,087	400	176	268	1,299

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

Species	C/H	April-May	June	July	August	September	October	Season
HARVEST								
Northern Pike	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Largemouth Bass	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Smallmouth Bass	0.0161	—	—	—	73	—	—	73
	0.0324	—	—	—	147	—	—	147
Yellow Perch	0.0084	38	—	—	—	—	—	38
	0.0169	76	—	—	—	—	—	76
Bluegill	0.0074	—	—	34	—	—	—	34
	0.0149	—	—	68	—	—	—	68
Rock Bass	0.0420	—	—	118	73	—	—	192
	0.0513	—	—	175	147	—	—	229
Black Crappie	0.0690	315	—	—	—	—	—	315
	0.1392	630	—	—	—	—	—	630
Rainbow Trout	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Brown Bullhead	0.0823	—	274	101	—	—	—	376
	0.0983	—	409	156	—	—	—	438
Channel Catfish	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Chinook Salmon	0.0123	—	—	—	—	56	—	56
	0.0248	—	—	—	—	112	—	112
Freshwater Drum	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
TOTAL HARVEST	0.2375	353	274	253	147	56	—	1,084
	0.1916	635	409	244	207	112	—	828
RELEASED								
Northern pike	0.0113	—	51	—	—	—	—	51
	0.0227	—	103	—	—	—	—	103
Largemouth bass	0.0037	17	—	—	—	—	—	17
	0.0075	34	—	—	—	—	—	34
Smallmouth bass	0.0699	216	21	82	—	—	—	319
	0.0685	249	41	165	—	—	—	301
Yellow Perch	0.1372	—	525	101	—	—	—	626
	0.1212	—	513	126	—	—	—	529
Bluegill	0.0050	—	23	—	—	—	—	23
	0.0101	—	45	—	—	—	—	45
Rock bass	0.0594	68	57	101	—	45	—	271
	0.0571	136	90	175	—	77	—	251
Black crappie	0.0115	53	—	—	—	—	—	53
	0.0232	105	—	—	—	—	—	105
Brown trout	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Common White Sucker	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Redhorse	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
Brown bullhead	0.0037	—	—	17	—	—	—	17
	0.0075	—	—	34	—	—	—	34
Freshwater drum	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
OTH1	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—
TOTAL RELEASED	0.3017	353	676	302	—	45	—	1,376
	0.1679	304	535	273	—	77	—	678
TOTAL CATCH	0.5392	707	951	555	147	101	—	2,460
	0.2731	704	673	367	207	136	—	1,070
ANGLER HOURS		743	1,146	1,286	720	606	62	4,562
		268	781	590	446	409	77	1,184
ANGLER TRIPS		296	720	784	366	341	36	2,544
		237	555	526	345	310	58	927

Table 5.—Total combined estimated harvest, catch per hour, and fishing pressure for the Pentwater Lake fishery. Two standard errors are given below the estimates.

Species	C/H	April-May	June	July	August	September	October	Season
HARVEST								
Northern Pike	0.0010	16	–	–	–	–	–	16
	0.0023	29	–	–	–	–	–	29
Largemouth Bass	0.0018	–	11	–	–	17	–	28
	0.0034	–	22	–	–	30	–	37
Smallmouth Bass	0.0315	280	22	76	103	–	–	480
	0.0560	535	43	152	158	–	–	580
Yellow Perch	0.0159	184	28	–	–	–	31	243
	0.0294	308	39	–	–	–	62	317
Bluegill	0.0022	–	–	34	–	–	–	34
	0.0053	–	–	68	–	–	–	68
Rock Bass	0.0130	7	–	118	73	–	–	198
	0.0227	13	–	175	147	–	–	229
Black Crappie	0.1160	315	1,184	272	–	–	–	1,771
	0.2285	630	2,498	393	–	–	–	2,606
Rainbow Trout	0.0037	–	57	–	–	–	–	57
	0.0077	–	90	–	–	–	–	90
Brown Bullhead	0.0246	–	274	101	–	–	–	376
	0.0431	–	409	156	–	–	–	438
Channel Catfish	0.0018	–	28	–	–	–	–	28
	0.0048	–	63	–	–	–	–	63
Chinook Salmon	0.0056	–	–	–	–	86	–	86
	0.0110	–	–	–	–	126	–	126
Freshwater Drum	0.0026	–	22	–	–	17	–	39
	0.0050	–	43	–	–	38	–	58
TOTAL HARVEST	0.2199	801	1,625	602	176	120	31	3,355
	0.3392	883	2,534	487	216	135	62	2,740
RELEASED								
Northern pike	0.0285	272	108	55	–	–	–	435
	0.0465	376	164	101	–	–	–	422
Largemouth bass	0.0080	66	56	–	–	–	–	122
	0.0128	64	92	–	–	–	–	112
Smallmouth bass	0.1622	1,553	218	137	529	38	–	2,476
	0.2353	1,086	328	193	1,031	54	–	1,547
Yellow Perch	0.1232	701	633	454	–	–	92	1,880
	0.1804	937	541	563	–	–	185	1,234
Bluegill	0.0048	–	73	–	–	–	–	73
	0.0096	–	110	–	–	–	–	110
Rock bass	0.1392	1,245	286	548	–	45	–	2,124
	0.2119	1,478	284	675	–	77	–	1,651
Black crappie	0.0744	101	842	192	–	–	–	1,135
	0.1374	123	1,397	471	–	–	–	1,479
Brown trout	0.0049	–	75	–	–	–	–	75
	0.0118	–	151	–	–	–	–	151
Common White Sucker	0.0042	43	–	–	–	–	21	64
	0.0084	89	–	–	–	–	40	98
Redhorse	0.0100	–	–	152	–	–	–	152
	0.0238	–	–	304	–	–	–	304
Brown bullhead	0.0011	–	–	17	–	–	–	17
	0.0026	–	–	34	–	–	–	34
Freshwater drum	0.0055	–	56	27	–	–	–	84
	0.0115	–	127	50	–	–	–	137
OTH1	0.0058	–	11	78	–	–	–	89
	0.0107	–	22	113	–	–	–	115
TOTAL RELEASED	0.5718	3,981	2,359	1,660	529	83	113	8,726
	0.7743	2,101	1,587	1,073	1,031	94	189	3,032
TOTAL CATCH	0.7917	4,782	3,984	2,262	705	204	144	12,081
	1.0702	2,279	2,990	1,178	1,054	164	199	4,086
ANGLER HOURS		2,910	3,427	4,930	1,916	1,480	595	15,259
		1,285	1,264	NAN	774	605	NAN	19,970
ANGLER TRIPS		813	1,613	2,467	1,060	721	319	6,994
		373	750	NAN	528	376	NAN	10,007