

Open Water Creel Survey Report for Pentwater Lake, Oceana County, 2018

Waterbody	Pentwater Lake
Year	2018
County	Oceana County
Sites	PentwaterLake
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 half 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 Pentwater Lake creel survey from April 1 to October 31, 2018.

Year	Month	Hours
2018	April	13
2018	May	14
2018	June	15
2018	July	16
2018	August	16
2018	September	16
2018	October	14

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

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Yellow Perch	1.8193	7,556	0	0	0	0	0	163	7,718
	7.5240	NAN	0	0	0	0	0	NAN	30,230
Rock bass	0.0216	0	0	91	0	0	0	0	91
	0.0908	0	0	NAN	0	0	0	0	366
Black crappie	0.1918	0	0	366	0	0	0	448	814
	0.6018	0	0	NAN	0	0	0	NAN	2,313
TOTAL HARVEST	2.0327	7,556	0	457	0	0	0	611	8,623
	7.6521	NAN	0	NAN	0	0	0	NAN	30,376
RELEASED									
Northern pike	0.1825	0	542	0	0	232	0	0	774
	0.2648	0	278	0	0	359	0	0	454
Largemouth bass	0.2765	0	615	274	51	232	0	0	1,173
	0.4903	0	599	NAN	97	574	0	0	1,379
Smallmouth bass	0.5480	0	1,704	183	360	77	0	0	2,325
	0.8354	0	1,543	NAN	314	120	0	0	1,740
Yellow Perch	4.3029	16,940	26	0	618	0	0	671	18,255
	16.9678	NAN	57	0	1,209	0	0	1,159	67,780
Pumpkinseed	0.0121	0	0	0	51	0	0	0	51
	0.0287	0	0	0	101	0	0	0	101
Rock bass	0.4138	956	137	457	206	0	0	0	1,755
	0.8338	1,898	264	NAN	255	0	0	0	2,661
Black crappie	0.0418	0	23	0	154	0	0	0	177
	0.0912	0	55	0	302	0	0	0	307
Channel catfish	0.0088	0	0	0	0	0	0	37	37
	0.0371	0	0	0	0	0	0	NAN	149
TOTAL RELEASED	5.7863	17,895	3,047	914	1,441	542	0	708	24,548
	18.5796	NAN	1,701	NAN	1,318	688	0	NAN	71,766
TOTAL CATCH	7.8190	25,451	3,047	1,371	1,441	542	0	1,319	33,171
	21.1005	NAN	1,701	NAN	1,318	688	0	NAN	77,930
ANGLER HOURS		1,322	1,471	411	476	368	0	194	4,242
		NAN	569	NAN	267	249	0	NAN	5,633
ANGLER TRIPS		218	223	98	154	155	0	39	888
		NAN	105	NAN	92	133	0	NAN	987

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

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Smallmouth bass	0.0954	0	0	3	362	0	0	0	365
	0.1058	0	0	6	389	0	0	0	389
Yellow Perch	0.0175	0	0	18	28	21	0	0	67
	0.0216	0	0	25	56	51	0	0	80
Bluegill	0.0461	0	0	0	19	123	34	0	176
	0.0622	0	0	0	37	183	NAN	0	232
Pumpkinseed	0.0177	0	25	4	19	21	0	0	68
	0.0203	0	49	7	37	42	0	0	75
Rock bass	0.0288	0	0	7	103	0	0	0	110
	0.0339	0	0	15	124	0	0	0	125
Rainbow trout	0.0047	18	0	0	0	0	0	0	18
	0.0053	20	0	0	0	0	0	0	20
Redhorse	0.0020	8	0	0	0	0	0	0	8
	0.0041	16	0	0	0	0	0	0	16
Brown bullhead	0.0442	8	0	32	112	17	0	0	169
	0.0511	15	0	42	180	34	0	0	188
Channel catfish	0.0015	0	6	0	0	0	0	0	6
	0.0031	0	12	0	0	0	0	0	12
Freshwater drum	0.0015	0	6	0	0	0	0	0	6
	0.0031	0	12	0	0	0	0	0	12
OTH1	0.0020	8	0	0	0	0	0	0	8
	0.0041	16	0	0	0	0	0	0	16
TOTAL HARVEST	0.2615	41	36	64	642	182	34	0	999
	0.1573	33	52	52	453	198	NAN	0	519
RELEASED									
Northern pike	0.0015	0	6	0	0	0	0	0	6
	0.0028	0	11	0	0	0	0	0	11
Largemouth bass	0.0190	0	8	0	0	65	0	0	73
	0.0242	0	16	0	0	88	0	0	90
Smallmouth bass	0.1189	19	46	69	169	151	0	0	454
	0.0707	31	62	65	197	80	0	0	232
Yellow Perch	0.2491	0	43	154	198	471	85	0	952
	0.1656	0	59	158	187	370	NAN	0	563
Bluegill	0.0583	0	0	41	131	50	0	0	223
	0.0631	0	0	59	215	62	0	0	232
Pumpkinseed	0.1145	0	14	91	232	83	17	0	438
	0.0850	0	20	105	243	127	34	0	296
Rock bass	0.3395	0	65	214	720	281	17	0	1,298
	0.2074	0	131	216	587	251	34	0	688
Redhorse	0.0360	0	0	0	138	0	0	0	138
	0.0531	0	0	0	199	0	0	0	199
Brown bullhead	0.0109	0	6	36	0	0	0	0	42
	0.0192	0	12	71	0	0	0	0	72
Carp	0.0096	0	0	0	26	10	0	0	37
	0.0141	0	0	0	46	26	0	0	53
Bowfin	0.0150	0	0	7	12	37	0	0	57
	0.0173	0	0	15	25	57	0	0	64
Freshwater drum	0.0078	0	0	3	0	27	0	0	30
	0.0096	0	0	6	0	35	0	0	36
TOTAL RELEASED	0.9802	19	189	616	1,627	1,176	119	0	3,746
	0.4096	31	159	310	752	489	NAN	0	1,075
TOTAL CATCH	1.2416	60	225	681	2,269	1,357	154	0	4,746
	0.4897	45	167	314	878	527	NAN	0	1,194
ANGLER HOURS		374	187	617	1,457	981	205	0	3,822
		229	175	384	582	328	NAN	0	1,161
ANGLER TRIPS		102	99	294	855	547	112	0	2,009
		63	94	221	462	317	NAN	0	758

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

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Yellow Perch	0.0370	0	0	0	0	13	0	8	21
	0.0767	0	0	0	0	26	0	NAN	41
Pumpkinseed	0.0057	0	0	0	0	3	0	0	3
	0.0120	0	0	0	0	6	0	0	6
TOTAL HARVEST	0.0427	0	0	0	0	16	0	8	24
	0.0788	0	0	0	0	26	0	NAN	41
RELEASED									
Largemouth bass	0.1680	0	5	20	70	0	0	0	95
	0.5287	0	9	NAN	NAN	0	0	0	291
Smallmouth bass	0.4737	254	12	0	0	0	0	0	267
	1.8352	NAN	21	0	0	0	0	0	1,018
Yellow Perch	0.1194	0	0	0	0	19	0	48	67
	0.3566	0	0	0	0	38	0	NAN	196
Bluegill	0.0427	0	0	0	0	0	0	24	24
	0.1729	0	0	0	0	0	0	NAN	96
Rock bass	0.7607	0	0	0	420	0	0	8	428
	3.0275	0	0	0	NAN	0	0	NAN	1,680
TOTAL RELEASED	1.5645	254	17	20	490	19	0	80	880
	4.0987	NAN	22	NAN	NAN	38	0	NAN	2,233
TOTAL CATCH	1.6072	254	17	20	490	35	0	88	904
	4.1064	NAN	22	NAN	NAN	47	0	NAN	2,234
ANGLER HOURS		78	109	91	193	78	0	14	563
		106	105	98	300	112	0	28	367
ANGLER TRIPS		62	76	67	143	58	0	10	416
		86	82	77	230	86	0	21	284

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

Species	C/H	April	May	June	July	August	September	October	Season
HARVEST									
Smallmouth bass	0.0423	0	0	3	362	0	0	0	365
	0.0615	0	0	6	389	0	0	0	389
Yellow Perch	0.9048	7,556	0	18	28	34	0	171	7,806
	3.6166	NAN	0	25	56	57	0	NAN	30,231
Bluegill	0.0204	0	0	0	19	123	34	0	176
	0.0336	0	0	0	37	183	NAN	0	232
Pumpkinseed	0.0082	0	25	4	19	24	0	0	71
	0.0119	0	49	7	37	42	0	0	75
Rock bass	0.0234	0	0	99	103	0	0	0	202
	0.0533	0	0	NAN	124	0	0	0	414
Black crappie	0.0943	0	0	366	0	0	0	448	814
	0.2839	0	0	NAN	0	0	0	NAN	2,313
Rainbow trout	0.0021	18	0	0	0	0	0	0	18
	0.0031	20	0	0	0	0	0	0	20
Redhorse	0.0009	8	0	0	0	0	0	0	8
	0.0020	16	0	0	0	0	0	0	16
Brown bullhead	0.0196	8	0	32	112	17	0	0	169
	0.0292	15	0	42	180	34	0	0	188
Channel catfish	0.0007	0	6	0	0	0	0	0	6
	0.0015	0	12	0	0	0	0	0	12
Freshwater drum	0.0007	0	6	0	0	0	0	0	6
	0.0015	0	12	0	0	0	0	0	12
OTH1	0.0009	8	0	0	0	0	0	0	8
	0.0020	16	0	0	0	0	0	0	16
TOTAL HARVEST	1.1182	7,597	36	522	642	198	34	619	9,647
	3.7113	NAN	52	NAN	453	199	NAN	NAN	30,563
RELEASED									
Northern pike	0.0904	0	548	0	0	232	0	0	780
	0.1038	0	278	0	0	359	0	0	454
Largemouth bass	0.1553	0	628	294	121	297	0	0	1,340
	0.2339	0	599	NAN	NAN	581	0	0	1,522
Smallmouth bass	0.3530	274	1,763	252	529	228	0	0	3,046
	0.4312	NAN	1,544	NAN	371	144	0	0	2,181
Yellow Perch	2.2341	16,940	69	154	816	490	85	719	19,274
	8.1675	NAN	82	158	1,224	372	NAN	NAN	67,833
Bluegill	0.0286	0	0	41	131	50	0	24	247
	0.0406	0	0	59	215	62	0	NAN	251
Pumpkinseed	0.0567	0	14	91	284	83	17	0	489
	0.0668	0	20	105	263	127	34	0	313
Rock bass	0.4035	956	202	671	1,346	281	17	8	3,481
	0.8342	1,898	294	NAN	NAN	251	34	NAN	6,320
Black crappie	0.0205	0	23	0	154	0	0	0	177
	0.0410	0	55	0	302	0	0	0	307
Redhorse	0.0159	0	0	0	138	0	0	0	138
	0.0279	0	0	0	199	0	0	0	199
Brown bullhead	0.0048	0	6	36	0	0	0	0	42
	0.0096	0	12	71	0	0	0	0	72
Channel catfish	0.0043	0	0	0	0	0	0	37	37
	0.0178	0	0	0	0	0	0	NAN	149
Carp	0.0043	0	0	0	26	10	0	0	37
	0.0074	0	0	0	46	26	0	0	53
Bowfin	0.0066	0	0	7	12	37	0	0	57
	0.0099	0	0	15	25	57	0	0	64
Freshwater drum	0.0035	0	0	3	0	27	0	0	30
	0.0054	0	0	6	0	35	0	0	36
TOTAL RELEASED	3.3817	18,169	3,252	1,550	3,558	1,737	119	788	29,174
	9.2510	NAN	1,708	NAN	NAN	845	NAN	NAN	74,408
TOTAL CATCH	4.4999	25,766	3,289	2,072	4,200	1,935	154	1,407	38,821
	10.3323	NAN	1,709	NAN	NAN	868	NAN	NAN	80,440

ANGLER HOURS	1,775	1,767	1,120	2,127	1,427	205	208	8,627
	NAN	605	NAN	707	427	NAN	NAN	8,535
ANGLER TRIPS	382	399	459	1,152	760	112	50	3,312
	NAN	163	NAN	524	354	NAN	NAN	2,522