

## Open Water Creel Survey Report for East Twin Lake and West Twin Lake, Montmorency County, 2015

<b>Waterbody</b>	Twin Lakes
<b>Year</b>	2015
<b>County</b>	Montmorency County
<b>Sites</b>	East Twin Lake, West Twin Lake
<b>Survey period</b>	May 1 to August 31
<b>Survey design</b>	Roving (instantaneous)-roving
<b>Count methods/modes</b>	Roving (instantaneous)/boat and shore
<b>Clerk time</b>	full time
<b>Survey purpose</b>	Characterize general effort and catch aspects of the fishery

### Notes

This survey followed a roving (instantaneous)-roving design. Funding was provided by the Federal Aid to Sport Fish Restoration Project F-81, Study 230499. One clerk worked full time to collect angling 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 clerk followed a randomized count and interview schedule. One of two shifts was selected each sample day. East Twin Lake and West Twin Lake were both sampled in the same day. Four hours were spent on one lake and then the clerk switched to the other lake for the rest of the shift. Starting location on a lake and direction of travel were randomized for both counting and interviewing. Roving (instantaneous) counts of boat and shore anglers were made twice per day on each lake. Survey period for both counts and interviews was May 1 to August 31. Months were estimated separately. **NAN** in a table means not enough data to make an estimate.

Table1.–Daylight hours used to estimate catch and effort at East Twin Lake and West Twin Lake, May 1 to August 31, 2015.

Year	Month	Daylight hours
2015	5	15
2015	6	16
2015	7	17
2015	8	16

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

Species	C/H	May	June	July	August	Season
<b>HARVEST</b>						
Walleye	0.0721	72	118	153	—	343
	0.0477	68	93	182	—	215
Largemouth Bass	—	—	—	—	—	—
	—	—	—	—	—	—
Smallmouth Bass	0.0063	—	14	16	—	30
	0.0078	—	17	32	—	37
Yellow Perch	0.0014	—	7	—	—	7
	0.0029	—	14	—	—	14
Bluegill	—	—	—	—	—	—
	—	—	—	—	—	—
Rock Bass	—	—	—	—	—	—
	—	—	—	—	—	—
TOTAL HARVEST	0.0799	72	139	169	—	380
	0.0489	68	95	185	—	219
<b>RELEASED</b>						
Walleye	0.0008	—	4	—	—	4
	0.0016	—	7	—	—	7
Northern pike	—	—	—	—	—	—
	—	—	—	—	—	—
Largemouth bass	—	—	—	—	—	—
	—	—	—	—	—	—
Smallmouth bass	0.0530	79	29	116	28	252
	0.0378	102	36	128	40	172
Yellow Perch	0.0650	28	129	76	76	309
	0.0474	45	139	100	123	216
Bluegill	0.0013	—	6	—	—	6
	0.0025	—	12	—	—	12
Pumpkinseed	—	—	—	—	—	—
	—	—	—	—	—	—
Rock bass	—	—	—	—	—	—
	—	—	—	—	—	—
TOTAL RELEASED	0.1201	107	168	191	104	570
	0.0632	111	144	163	130	277
TOTAL CATCH	0.1999	179	307	361	104	950
	0.0847	130	173	246	130	353
ANGLER HOURS		1,007	1,252	1,593	900	4,751
		460	369	681	363	971
ANGLER TRIPS		331	354	631	367	1,682
		210	251	496	210	630

Table 3.– Only 1 shore angler interview was taken with no catch, therefore we could not estimate a shore fishery on East Twin Lake. Counts were made of shore anglers so we were able to estimate angler hours. Two standard errors are given below the estimates.

	May	June	July	August	Season
ANGLER HOURS	–	24	58	13	96
	–	48	41	27	69

Table 4.–Total combined estimated harvest, catch per hour, and fishing pressure for East Twin Lake. Two standard errors are given below the estimates.

Species	C/H	May	June	July	August	Season
<b>HARVEST</b>						
Walleye	0.0707	72	118	153	–	343
	0.0467	68	93	182	–	215
Largemouth Bass	–	–	–	–	–	–
	–	–	–	–	–	–
Smallmouth Bass	0.0062	–	14	16	–	30
	0.0077	–	17	32	–	37
Yellow Perch	0.0014	–	7	–	–	7
	0.0028	–	14	–	–	14
Bluegill	–	–	–	–	–	–
	–	–	–	–	–	–
Rock Bass	–	–	–	–	–	–
	–	–	–	–	–	–
TOTAL HARVEST	0.0783	72	139	169	–	380
	0.0478	68	95	185	–	219
<b>RELEASED</b>						
Walleye	0.0008	–	4	–	–	4
	0.0015	–	7	–	–	7
Northern pike	–	–	–	–	–	–
	–	–	–	–	–	–
Largemouth bass	–	–	–	–	–	–
	–	–	–	–	–	–
Smallmouth bass	0.0520	79	29	116	28	252
	0.0370	102	36	128	40	172
Yellow Perch	0.0637	28	129	76	76	309
	0.0464	45	139	100	123	216
Bluegill	0.0012	–	6	–	–	6
	0.0025	–	12	–	–	12
Pumpkinseed	–	–	–	–	–	–
	–	–	–	–	–	–
Rock bass	–	–	–	–	–	–
	–	–	–	–	–	–
TOTAL RELEASED	0.1177	107	168	191	104	570
	0.0618	111	144	163	130	277
TOTAL CATCH	0.1960	179	307	361	104	950
	0.0827	130	173	246	130	353
ANGLER HOURS		1,007	1,276	1,651	914	4,847
		460	372	683	364	974
ANGLER TRIPS		331	362	650	372	1,714
		210	251	496	210	630

Table 5.—Estimated harvest, catch per hour, and fishing pressure for West Twin Lake boat fishery. Two standard errors are given below the estimates.

Species	C/H	May	June	July	August	Season
<b>HARVEST</b>						
Walleye	0.0676	284	189	216	12	701
	0.0298	221	138	129	25	291
Largemouth Bass	0.0053	35	—	20	—	55
	0.0078	70	—	39	—	80
Smallmouth Bass	0.0034	—	13	22	—	36
	0.0036	—	19	32	—	37
Yellow Perch	0.1153	—	408	383	405	1,195
	0.0760	—	358	370	570	768
Bluegill	0.0966	—	—	496	505	1,002
	0.0719	—	—	452	574	730
Rock Bass	0.0109	—	—	45	68	113
	0.0158	—	—	91	136	163
<b>TOTAL HARVEST</b>	<b>0.2991</b>	<b>319</b>	<b>610</b>	<b>1,182</b>	<b>990</b>	<b>3,102</b>
	<b>0.1162</b>	<b>231</b>	<b>384</b>	<b>607</b>	<b>820</b>	<b>1,115</b>
<b>RELEASED</b>						
Walleye	0.0437	22	71	63	297	453
	0.0387	36	96	61	377	395
Northern pike	0.0055	41	16	—	—	57
	0.0070	67	28	—	—	72
Largemouth bass	0.0315	31	—	264	32	327
	0.0295	62	—	289	64	303
Smallmouth bass	0.1221	173	413	358	323	1,266
	0.0531	168	354	223	256	518
Yellow Perch	0.1377	—	240	956	231	1,428
	0.0815	—	278	708	301	818
Bluegill	0.1681	26	238	240	1,238	1,743
	0.1644	38	252	251	1,647	1,685
Pumpkinseed	—	—	—	—	—	—
	—	—	—	—	—	—
Rock bass	0.7576	209	444	2,590	4,613	7,856
	0.3423	390	452	1,701	2,831	3,356
<b>TOTAL RELEASED</b>	<b>1.2663</b>	<b>502</b>	<b>1,423</b>	<b>4,471</b>	<b>6,735</b>	<b>13,131</b>
	<b>0.4207</b>	<b>437</b>	<b>693</b>	<b>1,896</b>	<b>3,321</b>	<b>3,911</b>
<b>TOTAL CATCH</b>	<b>1.5654</b>	<b>821</b>	<b>2,033</b>	<b>5,653</b>	<b>7,725</b>	<b>16,232</b>
	<b>0.4549</b>	<b>495</b>	<b>792</b>	<b>1,991</b>	<b>3,421</b>	<b>4,067</b>
<b>ANGLER HOURS</b>		<b>1,492</b>	<b>2,200</b>	<b>4,156</b>	<b>2,522</b>	<b>10,369</b>
		<b>696</b>	<b>531</b>	<b>857</b>	<b>910</b>	<b>1,526</b>
<b>ANGLER TRIPS</b>		<b>614</b>	<b>828</b>	<b>1,642</b>	<b>1,140</b>	<b>4,224</b>
		<b>385</b>	<b>392</b>	<b>551</b>	<b>470</b>	<b>909</b>

Table 6.–Estimated harvest, catch per hour, and fishing pressure for West Twin Lake shore fishery. Two standard errors are given below the estimates.

Species	C/H	May	June	July	August	Season
<b>HARVEST</b>						
Walleye	-	-	-	-	-	-
Largemouth Bass	-	-	-	-	-	-
Smallmouth Bass	-	-	-	-	-	-
Yellow Perch	-	-	-	-	-	-
Bluegill	-	-	-	-	-	-
Rock Bass	-	-	-	-	-	-
TOTAL HARVEST	-	-	-	-	-	-
<b>RELEASED</b>						
Walleye	-	-	-	-	-	-
Northern pike	0.0706	-	-	-	13	13
	0.1511	-	-	-	27	27
Largemouth bass	-	-	-	-	-	-
Smallmouth bass	0.0365	-	-	-	7	7
	0.1486	-	-	-	NAN	28
Yellow Perch	0.1801	-	-	-	34	34
	0.7333	-	-	-	NAN	136
Bluegill	0.6670	-	-	78	48	126
	2.0030	-	-	NAN	NAN	366
Pumpkinseed	0.1412	-	-	-	27	27
	0.3022	-	-	-	53	53
Rock bass	-	-	-	-	-	-
	-	-	-	-	-	-
TOTAL RELEASED	1.0954	-	-	78	129	207
	3.2998	-	-	NAN	NAN	603
TOTAL CATCH	1.0954	-	-	78	129	207
	3.2998	-	-	NAN	NAN	603
ANGLER HOURS		31	59	33	66	189
		62	79	39	95	144
ANGLER TRIPS		12	23	13	26	75
		25	33	16	38	59

Table 7.—Total combined estimated harvest, catch per hour, and fishing pressure for West Twin Lake. Two standard errors are given below the estimates.

Species	C/H	May	June	July	August	Season
<b>HARVEST</b>						
Walleye	0.0664	284	189	216	12	701
	0.0292	221	138	129	25	291
Largemouth Bass	0.0052	35	—	20	—	55
	0.0077	70	—	39	—	80
Smallmouth Bass	0.0034	—	13	22	—	36
	0.0036	—	19	32	—	37
Yellow Perch	0.1132	—	408	383	405	1,195
	0.0746	—	358	370	570	768
Bluegill	0.0949	—	—	496	505	1,002
	0.0705	—	—	452	574	730
Rock Bass	0.0107	—	—	45	68	113
	0.0155	—	—	91	136	163
<b>TOTAL HARVEST</b>	<b>0.2938</b>	<b>319</b>	<b>610</b>	<b>1,182</b>	<b>990</b>	<b>3,102</b>
	<b>0.1139</b>	<b>231</b>	<b>384</b>	<b>607</b>	<b>820</b>	<b>1,115</b>
<b>RELEASED</b>						
Walleye	0.0429	22	71	63	297	453
	0.0380	36	96	61	377	395
Northern pike	0.0067	41	16	—	13	70
	0.0074	67	28	—	27	77
Largemouth bass	0.0309	31	—	264	32	327
	0.0290	62	—	289	64	303
Smallmouth bass	0.1206	173	413	358	330	1,273
	0.1331	168	354	223	NAN	1,393
Yellow Perch	0.1385	—	240	956	265	1,462
	0.1253	—	278	708	NAN	1,306
Bluegill	0.1770	26	238	318	1,287	1,869
	0.5034	38	252	NAN	NAN	5,308
Pumpkinseed	0.0025	—	—	—	27	27
	0.0051	—	—	—	53	53
Rock bass	0.7441	209	444	2,590	4,613	7,856
	0.3357	390	452	1,701	2,831	3,356
<b>TOTAL RELEASED</b>	<b>1.2633</b>	<b>502</b>	<b>1,423</b>	<b>4,549</b>	<b>6,864</b>	<b>13,338</b>
	<b>3.1260</b>	<b>437</b>	<b>693</b>	<b>NAN</b>	<b>NAN</b>	<b>32,948</b>
<b>TOTAL CATCH</b>	<b>1.5570</b>	<b>821</b>	<b>2,033</b>	<b>5,731</b>	<b>7,854</b>	<b>16,439</b>
	<b>3.1306</b>	<b>495</b>	<b>792</b>	<b>NAN</b>	<b>NAN</b>	<b>32,967</b>
<b>ANGLER HOURS</b>		<b>1,523</b>	<b>2,258</b>	<b>4,189</b>	<b>2,588</b>	<b>10,558</b>
		<b>699</b>	<b>537</b>	<b>858</b>	<b>915</b>	<b>1,533</b>
<b>ANGLER TRIPS</b>		<b>627</b>	<b>851</b>	<b>1,655</b>	<b>1,166</b>	<b>4,299</b>
		<b>386</b>	<b>394</b>	<b>552</b>	<b>471</b>	<b>911</b>