

## Survey Report for Croton Pond, Newaygo, Summer, 2007

<b>Waterbody</b>	CrotonPond
<b>Year</b>	Summer, 2007
<b>County</b>	Newaygo
<b>Sites</b>	CrotonPond
<b>Survey period</b>	April 1 to October 31
<b>Survey design</b>	Roving-access (roving counts and access interviews)
<b>Interview type/mode</b>	access/boat, shore
<b>Count type/mode</b>	roving/boat, shore and non-fishing
<b>Clerk time</b>	full time
<b>Survey purpose</b>	Characterize general effort and catch aspects of the fishery

### Notes

Survey followed a roving-access (roving counts and access interviews) design. All funding was provided through Fisheries Division. One clerk worked full time to collect angler survey data. Both weekend days and 3 randomly selected weekdays were 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. Starting location within the waterbody and direction of travel were randomized for both counting and interviewing. roving counts of anglers were made once per day. Survey period for both counts and interviews was April 1 to October 31. Months were estimated separately. Estimates are given in Tables xxx.



Estimated harvest, catch per hour, and fishing pressure for boat. Two standard errors are given in parentheses.

Species	C/H	April	May	June	July	August	September	October	Season
<b>HARVEST</b>									
Walleye	0.0116 (0.0102)	0 (0)	0 (0)	99 (92)	300 (407)	92 (177)	33 (62)	0 (0)	525 (457)
Northern pike	0.0086 (0.0062)	0 (0)	0 (0)	152 (174)	44 (53)	23 (47)	132 (178)	40 (86)	391 (273)
Largemouth bass	0.0014 (0.0028)	0 (0)	0 (0)	61 (126)	0 (0)	0 (0)	0 (0)	0 (0)	61 (126)
Smallmouth bass	0.0069 (0.0056)	0 (0)	0 (0)	128 (136)	116 (198)	40 (53)	17 (33)	10 (20)	311 (250)
Yellow Perch	0.1337 (0.0691)	342 (320)	60 (73)	70 (91)	1,551 (1,475)	750 (562)	1,228 (1,273)	2,044 (2,193)	6,044 (3,006)
Bluegill	0.4512 (0.2115)	510 (708)	5,243 (3,365)	210 (290)	1,421 (1,138)	3,637 (3,186)	1,261 (1,022)	8,110 (7,667)	20,391 (9,120)
Pumpkinseed	0.0395 (0.0264)	0 (0)	1,061 (866)	20 (41)	0 (0)	17 (31)	166 (313)	521 (715)	1,786 (1,166)
Rock bass	0.0012 (0.0015)	0 (0)	21 (43)	35 (51)	0 (0)	0 (0)	0 (0)	0 (0)	56 (66)
Black crappie	0.0196 (0.0179)	0 (0)	127 (263)	50 (71)	264 (515)	0 (0)	0 (0)	443 (548)	884 (799)
Brown bullhead	0.0028 (0.0051)	0 (0)	0 (0)	0 (0)	128 (232)	0 (0)	0 (0)	0 (0)	128 (232)
<b>TOTAL HARVEST</b>	<b>0.6766 (0.2353)</b>	<b>852 (776)</b>	<b>6,512 (3,485)</b>	<b>825 (418)</b>	<b>3,824 (1,999)</b>	<b>4,558 (3,241)</b>	<b>2,838 (1,673)</b>	<b>11,167 (8,026)</b>	<b>30,577 (9,728)</b>
<b>RELEASED</b>									
Walleye	0.0162 (0.0123)	18 (37)	40 (59)	0 (0)	276 (339)	224 (283)	165 (314)	10 (19)	733 (547)
Northern pike	0.1002 (0.0370)	79 (98)	1,506 (953)	1,341 (802)	854 (777)	211 (202)	431 (422)	106 (110)	4,529 (1,548)
Largemouth bass	0.0218 (0.0107)	0 (0)	60 (86)	350 (297)	290 (281)	40 (58)	83 (99)	163 (170)	986 (465)
Smallmouth bass	0.1622 (0.0749)	898 (1,741)	1,434 (1,057)	1,709 (999)	1,094 (958)	1,408 (1,981)	663 (631)	127 (133)	7,333 (3,226)
Yellow Perch	0.0734 (0.0512)	1,392 (1,458)	40 (59)	175 (354)	1,385 (1,671)	200 (274)	66 (90)	58 (119)	3,317 (2,268)
Bluegill	0.1300 (0.0598)	85 (103)	175 (242)	954 (834)	1,191 (957)	1,461 (1,188)	1,394 (1,610)	614 (975)	5,873 (2,575)
Pumpkinseed	0.0003 (0.0005)	0 (0)	0 (0)	0 (0)	12 (24)	0 (0)	0 (0)	0 (0)	12 (24)
Rock bass	0.0022 (0.0027)	0 (0)	38 (82)	44 (85)	0 (0)	17 (32)	0 (0)	0 (0)	99 (123)
Black crappie	0.0040 (0.0080)	0 (0)	0 (0)	0 (0)	181 (358)	0 (0)	0 (0)	0 (0)	181 (358)
Common white sucker	0.0081 (0.0117)	18 (37)	276 (519)	15 (29)	0 (0)	23 (42)	33 (69)	0 (0)	364 (527)
Brown bullhead	0.0003 (0.0005)	0 (0)	0 (0)	0 (0)	12 (24)	0 (0)	0 (0)	0 (0)	12 (24)
<b>TOTAL RELEASED</b>	<b>0.5186 (0.1334)</b>	<b>2,489 (2,276)</b>	<b>3,571 (1,541)</b>	<b>4,587 (1,600)</b>	<b>5,296 (2,357)</b>	<b>3,584 (2,353)</b>	<b>2,835 (1,814)</b>	<b>1,077 (1,011)</b>	<b>23,439 (5,052)</b>
<b>TOTAL CATCH</b>	<b>1.1952 (0.2949)</b>	<b>3,341 (2,405)</b>	<b>10,083 (3,811)</b>	<b>5,412 (1,653)</b>	<b>9,120 (3,090)</b>	<b>8,142 (4,005)</b>	<b>5,673 (2,468)</b>	<b>12,244 (8,089)</b>	<b>54,016 (10,962)</b>

ANGLER HOURS	2,700	5,216	8,376	11,559	6,397	6,925	4,021	45,194
	(1,575)	(1,558)	(2,105)	(4,381)	(1,651)	(2,234)	(1,989)	(6,341)
ANGLER TRIPS	732	1,217	1,835	2,705	1,465	1,602	1,106	10,661
	(455)	(408)	(531)	(1,057)	(452)	(556)	(606)	(1,629)

Estimated harvest, catch per hour, and fishing pressure for shore. Two standard errors are given in parentheses.

Species	C/H	April	May	June	July	August	September	October	Season
<b>HARVEST</b>									
Walleye	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Northern pike	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Largemouth bass	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Smallmouth bass	0.0134 (0.0238)	0 (0)	0 (0)	0 (0)	71 (125)	0 (0)	0 (0)	0 (0)	71 (125)
Yellow Perch	0.2244 (0.1426)	1,118 (677)	0 (0)	0 (0)	71 (125)	0 (0)	0 (0)	0 (0)	1,189 (689)
Bluegill	0.0287 (0.0075)	0 (0)	0 (0)	0 (0)	0 (0)	152 NAN	0 (0)	0 (0)	152 (0)
Pumpkinseed	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Rock bass	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Black crappie	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Brown bullhead	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>TOTAL HARVEST</b>	<b>0.2666 (0.1494)</b>	<b>1,118 (677)</b>	<b>0 (0)</b>	<b>0 (0)</b>	<b>142 (176)</b>	<b>152 NAN</b>	<b>0 (0)</b>	<b>0 (0)</b>	<b>1,413 (700)</b>
<b>RELEASED</b>									
Walleye	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Northern pike	0.0813 (0.0213)	0 (0)	206 NAN	0 (0)	225 NAN	0 (0)	0 (0)	0 (0)	431 (0)
Largemouth bass	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Smallmouth bass	0.0823 (0.0808)	0 (0)	54 (140)	73 (103)	214 (374)	95 NAN	0 (0)	0 (0)	436 (413)
Yellow Perch	0.0495 (0.0575)	0 (0)	162 (297)	0 (0)	0 (0)	0 (0)	0 (0)	100 NAN	262 (297)
Bluegill	0.0561 (0.0692)	0 (0)	0 (0)	183 (358)	0 (0)	114 NAN	0 (0)	0 (0)	297 (358)
Pumpkinseed	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Rock bass	0.0069 (0.0110)	0 (0)	0 (0)	37 (58)	0 (0)	0 (0)	0 (0)	0 (0)	37 (58)
Black crappie	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Common white sucker	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Brown bullhead	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>TOTAL RELEASED</b>	<b>0.2760 (0.1016)</b>	<b>0 (0)</b>	<b>422 NAN</b>	<b>293 (377)</b>	<b>439 NAN</b>	<b>209 NAN</b>	<b>0 (0)</b>	<b>100 NAN</b>	<b>1,463 (377)</b>
<b>TOTAL CATCH</b>	<b>0.5426 (0.2068)</b>	<b>1,118 (677)</b>	<b>422 NAN</b>	<b>293 (377)</b>	<b>581 NAN</b>	<b>362 NAN</b>	<b>0 (0)</b>	<b>100 NAN</b>	<b>2,876 (795)</b>

ANGLER HOURS	300	742	567	2,331	1,154	132	75	5,300
	(148)	(379)	(514)	(1,127)	(464)	(110)	(90)	(1,391)
ANGLER TRIPS	100	428	324	851	701	44	25	2,472
	(142)	(305)	(308)	(552)	(461)	(69)	(45)	(856)

Estimated harvest, catch per hour, and fishing pressure for Croton Pond. Two standard errors are given in parentheses.

Species	C/H	April	May	June	July	August	September	October	Season
<b>HARVEST</b>									
Walleye	0.0104 (0.0092)	0 (0)	0 (0)	99 (92)	300 (407)	92 (177)	33 (62)	0 (0)	525 (457)
Northern pike	0.0077 (0.0055)	0 (0)	0 (0)	152 (174)	44 (53)	23 (47)	132 (178)	40 (86)	391 (273)
Largemouth bass	0.0012 (0.0025)	0 (0)	0 (0)	61 (126)	0 (0)	0 (0)	0 (0)	0 (0)	61 (126)
Smallmouth bass	0.0076 (0.0056)	0 (0)	0 (0)	128 (136)	187 (234)	40 (53)	17 (33)	10 (20)	382 (279)
Yellow Perch	0.1433 (0.0638)	1,460 (749)	60 (73)	70 (91)	1,622 (1,481)	750 (562)	1,228 (1,273)	2,044 (2,193)	7,234 (3,084)
Bluegill	0.4069 (0.1771)	510 (708)	5,243 (3,365)	210 (290)	1,421 (1,138)	3,789 NAN	1,261 (1,022)	8,110 (7,667)	20,544 (8,546)
Pumpkinseed	0.0354 (0.0235)	0 (0)	1,061 (866)	20 (41)	0 (0)	17 (31)	166 (313)	521 (715)	1,786 (1,166)
Rock bass	0.0011 (0.0013)	0 (0)	21 (43)	35 (51)	0 (0)	0 (0)	0 (0)	0 (0)	56 (66)
Black crappie	0.0175 (0.0160)	0 (0)	127 (263)	50 (71)	264 (515)	0 (0)	0 (0)	443 (548)	884 (799)
Brown bullhead	0.0025 (0.0046)	0 (0)	0 (0)	0 (0)	128 (232)	0 (0)	0 (0)	0 (0)	128 (232)
<b>TOTAL HARVEST</b>	<b>0.6335 (0.1996)</b>	<b>1,970 (1,030)</b>	<b>6,512 (3,485)</b>	<b>825 (418)</b>	<b>3,967 (2,007)</b>	<b>4,710 NAN</b>	<b>2,838 (1,673)</b>	<b>11,167 (8,026)</b>	<b>31,990 (9,199)</b>
<b>RELEASED</b>									
Walleye	0.0145 (0.0110)	18 (37)	40 (59)	0 (0)	276 (339)	224 (283)	165 (314)	10 (19)	733 (547)
Northern pike	0.0982 (0.0225)	79 (98)	1,712 NAN	1,341 (802)	1,079 NAN	211 (202)	431 (422)	106 (110)	4,959 (940)
Largemouth bass	0.0195 (0.0096)	0 (0)	60 (86)	350 (297)	290 (281)	40 (58)	83 (99)	163 (170)	986 (465)
Smallmouth bass	0.1539 (0.0548)	898 (1,741)	1,488 (1,066)	1,782 (1,005)	1,307 (1,029)	1,504 NAN	663 (631)	127 (133)	7,769 (2,579)
Yellow Perch	0.0709 (0.0462)	1,392 (1,458)	203 (303)	175 (354)	1,385 (1,671)	200 (274)	66 (90)	158 NAN	3,579 (2,285)
Bluegill	0.1222 (0.0484)	85 (103)	175 (242)	1,137 (907)	1,191 (957)	1,575 NAN	1,394 (1,610)	614 (975)	6,171 (2,313)
Pumpkinseed	0.0002 (0.0005)	0 (0)	0 (0)	0 (0)	12 (24)	0 (0)	0 (0)	0 (0)	12 (24)
Rock bass	0.0027 (0.0027)	0 (0)	38 (82)	80 (103)	0 (0)	17 (32)	0 (0)	0 (0)	135 (135)
Black crappie	0.0036 (0.0071)	0 (0)	0 (0)	0 (0)	181 (358)	0 (0)	0 (0)	0 (0)	181 (358)
Common white sucker	0.0072 (0.0105)	18 (37)	276 (519)	15 (29)	0 (0)	23 (42)	33 (69)	0 (0)	364 (527)
Brown bullhead	0.0002 (0.0005)	0 (0)	0 (0)	0 (0)	12 (24)	0 (0)	0 (0)	0 (0)	12 (24)
<b>TOTAL RELEASED</b>	<b>0.4932 (0.0917)</b>	<b>2,489 (2,276)</b>	<b>3,993 NAN</b>	<b>4,880 (1,643)</b>	<b>5,735 NAN</b>	<b>3,794 NAN</b>	<b>2,835 (1,814)</b>	<b>1,177 NAN</b>	<b>24,902 (3,342)</b>
<b>TOTAL CATCH</b>	<b>1.1267 (0.2420)</b>	<b>4,460 (2,498)</b>	<b>10,505 NAN</b>	<b>5,705 (1,696)</b>	<b>9,701 NAN</b>	<b>8,504 NAN</b>	<b>5,673 (2,468)</b>	<b>12,344 NAN</b>	<b>56,892 (9,788)</b>

ANGLER HOURS	3,000	5,958	8,943	13,890	7,550	7,057	4,096	50,494
	(1,581)	(1,604)	(2,167)	(4,524)	(1,715)	(2,236)	(1,991)	(6,491)
ANGLER TRIPS	832	1,644	2,159	3,555	2,166	1,646	1,131	13,133
	(476)	(509)	(614)	(1,192)	(646)	(560)	(608)	(1,840)