

## Survey Report for Hubbard Lake, Alcona County, Summer, 2006

<b>Waterbody</b>	Hubbard Lake
<b>Year</b>	Summer, 2006
<b>County</b>	Alcona County
<b>Sites</b>	Hubbard
<b>Survey period</b>	April 30 to September 30
<b>Survey design</b>	Roving-roving (roving counts and roving interviews)
<b>Interview type/mode</b>	roving/boat and shore
<b>Count type/mode</b>	progressive/boat and shore
<b>Clerk time</b>	Full time
<b>Survey purpose</b>	Characterize general effort and catch aspects of the fishery

### Notes

Survey followed a roving- roving (roving counts and roving interviews) design. All funding was provided through Fisheries Division. One clerk worked full time to collect angling 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. aerial, progressive counts of boat and shore anglers were made once per day. Survey period for both counts and interviews was April 30 to September 30. Months were estimated separately. Estimates are given in Tables 2-4.

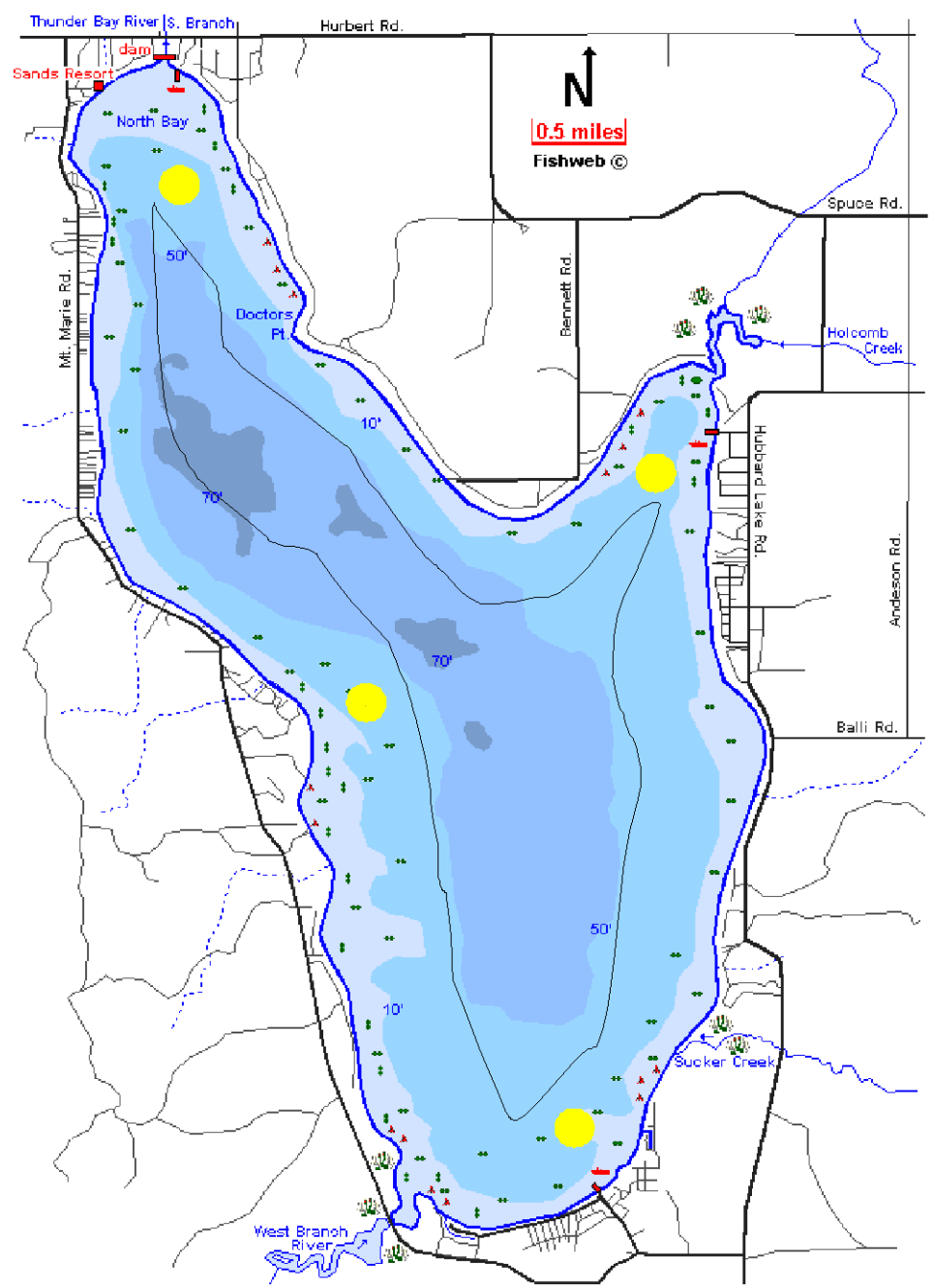


Table 1–Work shifts used to estimate catch and effort at Hubbard Lake, April 30 to September 30, Summer, 2006

	Year	Month	F
1	2006	4	14
2	2006	5	15
3	2006	6	16
4	2006	7	16
5	2006	8	16
6	2006	9	16

Table 2—Estimated harvest, catch per hour, and fishing pressure for boat angling. Two standard errors are given in parentheses.

Species	C/H	April-May	June	July	August	September	Season
<b>HARVEST</b>							
Walleye	0.0671 (0.0220)	147 (163)	400 (271)	362 (225)	700 (377)	663 (371)	2,272 (656)
Northern pike	0.0012 (0.0024)	40 (80)	0 (0)	0 (0)	0 (0)	0 (0)	40 (80)
Smallmouth bass	0.0140 (0.0077)	40 (80)	220 (198)	68 (67)	92 (79)	54 (74)	474 (248)
Yellow Perch	0.2557 (0.1075)	0 (0)	48 (68)	543 (372)	1,541 (759)	6,523 (3,273)	8,655 (3,381)
Channel catfish	0.0010 (0.0020)	0 (0)	0 (0)	0 (0)	0 (0)	34 (68)	34 (68)
<b>TOTAL HARVEST</b>	<b>0.3390 (0.1149)</b>	<b>227 (199)</b>	<b>668 (342)</b>	<b>973 (439)</b>	<b>2,333 (851)</b>	<b>7,274 (3,295)</b>	<b>11,476 (3,455)</b>
<b>RELEASED</b>							
Walleye	0.0544 (0.0217)	47 (71)	42 (62)	405 (253)	390 (214)	960 (582)	1,843 (676)
Northern pike	0.0049 (0.0055)	7 (14)	84 (167)	8 (16)	0 (0)	68 (73)	166 (184)
Largemouth bass	0.0004 (0.0008)	0 (0)	0 (0)	0 (0)	0 (0)	13 (28)	13 (28)
Smallmouth bass	0.1878 (0.0564)	538 (555)	1,366 (650)	336 (290)	2,142 (1,053)	1,974 (864)	6,356 (1,634)
Yellow Perch	0.2206 (0.0952)	0 (0)	0 (0)	685 (456)	941 (547)	5,840 (2,922)	7,466 (3,007)
Bluegill	0.0020 (0.0024)	15 (23)	0 (0)	0 (0)	0 (0)	55 (78)	69 (82)
Pumpkinseed	0.0034 (0.0037)	0 (0)	0 (0)	0 (0)	14 (29)	102 (122)	117 (125)
Rock bass	0.0003 (0.0006)	0 (0)	0 (0)	0 (0)	10 (19)	0 (0)	10 (19)
Rainbow trout	0.0003 (0.0006)	0 (0)	0 (0)	0 (0)	10 (20)	0 (0)	10 (20)
Channel catfish	0.0004 (0.0008)	0 (0)	0 (0)	0 (0)	0 (0)	13 (28)	13 (28)
Carp	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>TOTAL RELEASED</b>	<b>0.4746 (0.1269)</b>	<b>607 (561)</b>	<b>1,491 (674)</b>	<b>1,434 (597)</b>	<b>3,507 (1,206)</b>	<b>9,024 (3,106)</b>	<b>16,064 (3,497)</b>
<b>TOTAL CATCH</b>	<b>0.8136 (0.1926)</b>	<b>834 (595)</b>	<b>2,160 (756)</b>	<b>2,407 (741)</b>	<b>5,840 (1,476)</b>	<b>16,299 (4,529)</b>	<b>27,540 (4,915)</b>
<b>ANGLER HOURS</b>		<b>2,940 (2,444)</b>	<b>5,778 (1,627)</b>	<b>6,337 (1,671)</b>	<b>8,915 (2,594)</b>	<b>9,881 (3,089)</b>	<b>33,850 (5,261)</b>
<b>ANGLER TRIPS</b>		<b>1,216 (1,079)</b>	<b>1,730 (618)</b>	<b>2,039 (627)</b>	<b>2,476 (1,096)</b>	<b>2,112 (785)</b>	<b>9,572 (1,938)</b>

Table 3—Estimated harvest, catch per hour, and fishing pressure for shore angling. Two standard errors are given in parentheses.

Species	C/H	April-May	June	July	August	September	Season
<b>HARVEST</b>							
Walleye	0.0118 (0.0244)	11 (21)	0 (0)	0 (0)	0 (0)	0 (0)	11 (21)
Yellow Perch	0.0866 (0.1787)	0 (0)	78 (156)	0 (0)	0 (0)	0 (0)	78 (156)
Channel catfish	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
<b>TOTAL HARVEST</b>	<b>0.0985 (0.1817)</b>	<b>11 (21)</b>	<b>78 (156)</b>	<b>0 (0)</b>	<b>0 (0)</b>	<b>0 (0)</b>	<b>89 (158)</b>
<b>RELEASED</b>							
Smallmouth bass	0.1189 (0.1527)	96 (125)	11 (22)	0 (0)	0 (0)	0 (0)	107 (127)
Carp	0.0118 (0.0244)	11 (21)	0 (0)	0 (0)	0 (0)	0 (0)	11 (21)
<b>TOTAL RELEASED</b>	<b>0.1308 (0.1569)</b>	<b>107 (127)</b>	<b>11 (22)</b>	<b>0 (0)</b>	<b>0 (0)</b>	<b>0 (0)</b>	<b>118 (129)</b>
<b>TOTAL CATCH</b>	<b>0.2293 (0.2532)</b>	<b>118 (128)</b>	<b>89 (158)</b>	<b>0 (0)</b>	<b>0 (0)</b>	<b>0 (0)</b>	<b>207 (204)</b>
<b>ANGLER HOURS</b>		278 (258)	213 (161)	135 (137)	215 (298)	62 (71)	903 (453)
<b>ANGLER TRIPS</b>		75 (77)	57 (47)	36 (39)	58 (83)	17 (20)	243 (130)

Table 4—Estimated harvest, catch per hour, and fishing pressure for Hubbard Lake. Two standard errors are given in parentheses.

Species	C/H	April-May	June	July	August	September	Season
<b>HARVEST</b>							
Walleye	0.0657 (0.0214)	158 (165)	400 (271)	362 (225)	700 (377)	663 (371)	2,283 (656)
Northern pike	0.0011 (0.0023)	40 (80)	0 (0)	0 (0)	0 (0)	0 (0)	40 (80)
Smallmouth bass	0.0136 (0.0074)	40 (80)	220 (198)	68 (67)	92 (79)	54 (74)	474 (248)
Yellow Perch	0.2513 (0.1046)	0 (0)	126 (170)	543 (372)	1,541 (759)	6,523 (3,273)	8,733 (3,385)
Channel catfish	0.0010 (0.0020)	0 (0)	0 (0)	0 (0)	0 (0)	34 (68)	34 (68)
<b>TOTAL HARVEST</b>	<b>0.3328 (0.1116)</b>	<b>238 (200)</b>	<b>747 (376)</b>	<b>973 (439)</b>	<b>2,333 (851)</b>	<b>7,274 (3,295)</b>	<b>11,565 (3,458)</b>
<b>RELEASED</b>							
Walleye	0.0530 (0.0211)	47 (71)	42 (62)	405 (253)	390 (214)	960 (582)	1,843 (676)
Northern pike	0.0048 (0.0053)	7 (14)	84 (167)	8 (16)	0 (0)	68 (73)	166 (184)
Largemouth bass	0.0004 (0.0008)	0 (0)	0 (0)	0 (0)	0 (0)	13 (28)	13 (28)
Smallmouth bass	0.1860 (0.0550)	634 (569)	1,377 (650)	336 (290)	2,142 (1,053)	1,974 (864)	6,463 (1,639)
Yellow Perch	0.2148 (0.0925)	0 (0)	0 (0)	685 (456)	941 (547)	5,840 (2,922)	7,466 (3,007)
Bluegill	0.0020 (0.0024)	15 (23)	0 (0)	0 (0)	0 (0)	55 (78)	69 (82)
Pumpkinseed	0.0034 (0.0036)	0 (0)	0 (0)	0 (0)	14 (29)	102 (122)	117 (125)
Rock bass	0.0003 (0.0006)	0 (0)	0 (0)	0 (0)	10 (19)	0 (0)	10 (19)
Rainbow trout	0.0003 (0.0006)	0 (0)	0 (0)	0 (0)	10 (20)	0 (0)	10 (20)
Channel catfish	0.0004 (0.0008)	0 (0)	0 (0)	0 (0)	0 (0)	13 (28)	13 (28)
Carp	0.0003 (0.0006)	11 (21)	0 (0)	0 (0)	0 (0)	0 (0)	11 (21)
<b>TOTAL RELEASED</b>	<b>0.4656 (0.1231)</b>	<b>714 (575)</b>	<b>1,502 (674)</b>	<b>1,434 (597)</b>	<b>3,507 (1,206)</b>	<b>9,024 (3,106)</b>	<b>16,182 (3,499)</b>
<b>TOTAL CATCH</b>	<b>0.7984 (0.1864)</b>	<b>951 (608)</b>	<b>2,249 (772)</b>	<b>2,407 (741)</b>	<b>5,840 (1,476)</b>	<b>16,299 (4,529)</b>	<b>27,747 (4,920)</b>
<b>ANGLER HOURS</b>		<b>3,218 (2,457)</b>	<b>5,990 (1,635)</b>	<b>6,472 (1,677)</b>	<b>9,129 (2,611)</b>	<b>9,943 (3,090)</b>	<b>34,753 (5,280)</b>
<b>ANGLER TRIPS</b>		<b>1,290 (1,082)</b>	<b>1,787 (620)</b>	<b>2,076 (628)</b>	<b>2,533 (1,099)</b>	<b>2,128 (785)</b>	<b>9,815 (1,943)</b>