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Sportfishing Catch and Effort from the Michigan Waters of Lakes Michigan, Huron, and Erie, and their Important Tributary Streams,

April 1, 1986 – March 31, 1987

(Appendices)

Gerald P. Rakoczy
and
Richard D. Rogers

Number 87-6b
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Michigan Department of
Natural Resources

**MICHIGAN DEPARTMENT OF NATURAL RESOURCES
FISHERIES DIVISION**

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OF LAKES MICHIGAN, HURON, AND ERIE, AND
THEIR IMPORTANT TRIBUTARY STREAMS,
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(APPENDICES)**

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SECTION I.

Lake Michigan Catch and Effort Estimates by Site

Appendix 1. Estimated sportfishing catch and effort for New Buffalo, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0503 (0.0254)	15,215 (3,928)	8,253 (8,718)	215 (266)	0 (0)	87 (177)	477 (685)	0 (0)	24,247 (9,592)
Chinook salmon	0.0229 (0.0184)	1,260 (752)	7,117 (7,961)	288 (270)	1,112 (1,320)	826 (811)	417 (556)	0 (0)	11,020 (8,169)
Rainbow trout	0.0165 (0.0241)	244 (247)	965 (1,176)	595 (632)	5,922 (11,230)	201 (360)	0 (0)	0 (0)	7,927 (11,318)
Brown trout	0.0013 (0.0012)	164 (222)	414 (490)	65 (112)	0 (0)	0 (0)	0 (0)	0 (0)	643 (549)
Lake trout	0.0120 (0.0134)	0 (0)	3,340 (4,662)	2,447 (4,078)	0 (0)	0 (0)	0 (0)	0 (0)	5,787 (6,194)
Bluegill	0.0014 (0.0029)	0 (0)	0 (0)	0 (0)	0 (0)	692 (1,412)	0 (0)	0 (0)	692 (1,412)
Largemouth bass	0.0009 (0.0021)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	431 (1,010)	0 (0)	431 (1,010)
Black crappie	0.0007 (0.0013)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	292 (594)	31 (88)	323 (600)
Yellow perch	0.8176 (0.4757)	0 (0)	0 (0)	78,012 (94,460)	11,716 (21,017)	51,609 (41,258)	252,521 (161,708)	0 (0)	393,858 (192,915)
Total	0.9236 (0.4959)	16,883 (4,013)	20,089 (12,757)	81,622 (94,551)	18,750 (23,866)	53,415 (41,292)	254,138 (161,715)	31 (88)	444,928 (193,766)
Angler hours		31,627 (4,979)	107,843 (123,074)	83,706 (35,778)	160,084 (76,121)	33,917 (13,115)	61,976 (21,599)	2,564 (3,546)	481,717 (151,319)
Angler trips		5,678 (985)	14,629 (16,172)	12,579 (5,175)	32,138 (14,773)	7,048 (2,787)	12,230 (4,400)	677 (775)	84,979 (23,136)
Angler days		5,546 (997)	13,305 (13,648)	12,390 (5,123)	32,110 (14,773)	6,876 (2,716)	11,874 (4,336)	637 (760)	82,738 (21,413)

Appendix 2. Estimated sportfishing catch and effort for St. Joseph-Benton Harbor, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0630 (0.0285)	32,656 (14,932)	5,451 (3,335)	0 (0)	128 (268)	0 (0)	0 (0)	0 (0)	38,235 (15,302)
Chinook salmon	0.0478 (0.0187)	5,967 (3,286)	14,716 (7,281)	203 (536)	3,458 (2,968)	1,268 (1,260)	3,403 (4,032)	0 (0)	29,015 (9,526)
Rainbow trout	0.0020 (0.0023)	322 (309)	796 (1,346)	78 (206)	0 (0)	25 (56)	0 (0)	0 (0)	1,221 (1,397)
Brown trout	0.0064 (0.0073)	587 (435)	2,390 (4,284)	0 (0)	736 (798)	192 (389)	0 (0)	0 (0)	3,905 (4,397)
Lake trout	0.0300 (0.0192)	0 (0)	14,430 (10,350)	0 (0)	3,384 (3,723)	403 (648)	0 (0)	0 (0)	18,217 (11,018)
White sucker	<0.0000 (<0.0000)	7 (15)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7 (15)
Channel catfish	0.0067 (0.0097)	9 (21)	0 (0)	0 (0)	3,555 (5,763)	517 (851)	0 (0)	0 (0)	4,081 (5,826)
Smallmouth bass	0.0003 (0.0006)	0 (0)	187 (378)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	187 (378)
Yellow perch	0.9720 (0.5469)	0 (0)	30,631 (18,825)	188,436 (239,435)	354,270 (191,039)	9,515 (12,078)	0 (0)	7,192 (17,956)	590,044 (307,649)
Walleye	0.0065 (0.0112)	0 (0)	3,234 (6,514)	0 (0)	683 (1,433)	0 (0)	0 (0)	0 (0)	3,917 (6,670)
Freshwater drum	0.0034 (0.0053)	0 (0)	0 (0)	0 (0)	2,071 (3,194)	0 (0)	0 (0)	0 (0)	2,071 (3,194)
Burbot	<0.0000 (<0.0000)	21 (48)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	21 (48)
Other	<0.0000 (<0.0000)	21 (48)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	21 (48)

Appendix 2. Continued:

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Total	1.1382 (0.5624)	39,590 (15,299)	71,835 (24,256)	188,717 (239,436)	368,285 (191,219)	11,920 (12,197)	3,403 (4,032)	7,192 (17,956)	690,942 (308,552)
Angler hours		91,743 (34,275)	159,522 (56,853)	74,914 (71,108)	186,779 (75,816)	58,422 (27,038)	34,176 (23,257)	1,504 (3,126)	607,060 (128,426)
Angler trips		16,774 (5,969)	31,047 (11,538)	17,461 (12,086)	35,422 (12,753)	13,847 (5,675)	6,445 (4,066)	725 (1,531)	121,721 (22,990)
Angler days		16,503 (5,941)	30,399 (11,476)	17,454 (12,086)	34,239 (12,529)	13,077 (5,550)	6,086 (4,046)	705 (1,528)	118,463 (22,794)

Appendix 3. Estimated sportfishing catch and effort for Saugatuck, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0131 (0.0092)	1,352 (1,255)	2,682 (2,454)	455 (629)	91 (212)	322 (499)	0 (0)	0 (0)	4,902 (2,879)
Chinook salmon	0.0579 (0.0381)	801 (758)	10,972 (10,180)	2,497 (2,281)	1,780 (2,427)	5,198 (4,340)	388 (780)	0 (0)	21,636 (11,608)
Rainbow trout	0.0024 (0.0022)	42 (68)	469 (600)	113 (196)	40 (93)	229 (359)	0 (0)	0 (0)	893 (735)
Atlantic salmon	0.0014 (0.0029)	0 (0)	0 (0)	529 (1,071)	0 (0)	0 (0)	0 (0)	0 (0)	529 (1,071)
Brown trout	0.0083 (0.0059)	742 (558)	747 (949)	1,020 (1,381)	91 (212)	457 (566)	24 (48)	0 (0)	3,081 (1,867)
Brook trout	0.0025 (0.0052)	0 (0)	0 (0)	951 (1,927)	0 (0)	0 (0)	0 (0)	0 (0)	951 (1,927)
Lake trout	0.0237 (0.0155)	0 (0)	3,294 (3,364)	4,411 (2,946)	960 (1,393)	182 (400)	0 (0)	0 (0)	8,847 (4,701)
Northern pike	0.0006 (0.0012)	0 (0)	0 (0)	0 (0)	218 (424)	0 (0)	0 (0)	0 (0)	218 (424)
White sucker	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	48 (111)	0 (0)	0 (0)	0 (0)	48 (111)
Channel catfish	0.0152 (0.0310)	26 (55)	41 (85)	0 (0)	435 (663)	5,191 (11,384)	0 (0)	0 (0)	5,693 (11,404)
Pumpkinseed	0.0067 (0.0136)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2,520 (5,040)	0 (0)	2,520 (5,040)
Bluegill	0.0090 (0.0183)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3,360 (6,720)	0 (0)	3,360 (6,720)
Smallmouth bass	0.0001 (0.0002)	0 (0)	29 (59)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	29 (59)
Largemouth bass	0.0023 (0.0051)	0 (0)	0 (0)	0 (0)	859 (1,894)	0 (0)	0 (0)	0 (0)	859 (1,894)

Appendix 3. Continued:

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Black crappie	0.0290 (0.0444)	2,374 (5,138)	0 (0)	0 (0)	8,468 (15,248)	0 (0)	0 (0)	0 (0)	10,842 (16,090)
Yellow perch	0.1071 (0.1294)	0 (0)	0 (0)	0 (0)	34,521 (45,333)	5,286 (6,682)	168 (336)	0 (0)	39,975 (45,824)
Walleye	0.0206 (0.0456)	0 (0)	52 (108)	276 (289)	7,362 (16,762)	0 (0)	0 (0)	0 (0)	7,690 (16,765)
Freshwater drum	0.0042 (0.0045)	26 (55)	159 (257)	0 (0)	892 (1,289)	503 (904)	0 (0)	0 (0)	1,580 (1,596)
Total	0.3044 (0.1875)	5,363 (5,373)	18,445 (11,060)	10,252 (4,601)	55,765 (50,817)	17,368 (13,955)	6,460 (8,443)	0 (0)	113,653 (54,961)
Angler hours		24,963 (15,568)	76,386 (54,869)	63,217 (14,221)	106,408 (113,263)	90,352 (62,320)	12,086 (11,914)	0 (0)	373,412 (142,511)
Angler trips		6,355 (3,966)	14,029 (9,929)	9,267 (2,050)	21,813 (23,306)	15,696 (10,662)	2,844 (2,770)	0 (0)	70,004 (27,983)
Angler days		6,239 (3,904)	13,551 (9,690)	9,267 (2,050)	21,813 (23,306)	15,529 (10,664)	2,156 (2,110)	0 (0)	68,555 (27,833)

Appendix 4. Estimated sportfishing catch and effort for South Haven, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Pink salmon	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	29 (62)	0 (0)	0 (0)	29 (62)
Coho salmon	0.0099 (0.0048)	2,164 (1,202)	1,361 (1,166)	231 (443)	0 (0)	132 (212)	0 (0)	0 (0)	3,888 (1,745)
Chinook salmon	0.0488 (0.0245)	1,955 (1,252)	6,198 (3,476)	941 (1,010)	3,315 (2,466)	6,519 (7,710)	161 (136)	0 (0)	19,089 (8,956)
Rainbow trout	0.0039 (0.0034)	59 (93)	238 (382)	440 (887)	604 (854)	76 (155)	0 (0)	92 (112)	1,509 (1,307)
Brown trout	0.0019 (0.0011)	275 (215)	156 (214)	115 (133)	71 (146)	94 (142)	16 (23)	0 (0)	727 (390)
Lake trout	0.0118 (0.0063)	0 (0)	933 (651)	1,409 (1,468)	1,193 (1,314)	1,076 (1,037)	0 (0)	0 (0)	4,611 (2,320)
Channel catfish	0.0002 (0.0005)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	65 (156)	0 (0)	65 (156)
Yellow perch	0.7872 (0.4092)	16 (32)	0 (0)	26,178 (22,872)	262,830 (147,500)	18,470 (16,728)	353 (850)	0 (0)	307,847 (150,200)
Freshwater drum	0.0002 (0.0004)	0 (0)	0 (0)	0 (0)	87 (175)	0 (0)	0 (0)	0 (0)	87 (175)
Total	0.8639 (0.4148)	4,469 (1,752)	8,886 (3,749)	29,314 (22,963)	268,100 (147,529)	26,396 (18,451)	595 (875)	92 (112)	337,852 (150,501)
Angler hours		35,226 (15,601)	35,827 (17,201)	92,437 (17,761)	131,496 (34,350)	85,832 (53,547)	5,580 (3,136)	4,680 (1,001)	391,078 (70,091)
Angler trips		7,743 (2,918)	6,350 (2,758)	20,038 (3,912)	27,276 (6,319)	18,699 (11,244)	1,696 (1,271)	1,308 (344)	83,110 (14,125)
Angler days		7,496 (2,915)	6,193 (2,752)	20,038 (3,912)	25,961 (6,113)	16,797 (9,160)	1,298 (994)	1,154 (335)	78,937 (12,400)

Appendix 5. Estimated sportfishing catch and effort for Holland, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0012 (0.0016)	48 (121)	9 (26)	0 (0)	0 (0)	219 (319)	0 (0)	0 (0)	276 (342)
Chinook salmon	0.0308 (0.0250)	797 (1,057)	13 (37)	0 (0)	0 (0)	2,943 (2,677)	3,615 (4,333)	0 (0)	7,368 (5,202)
Rainbow trout	0.0126 (0.0178)	50 (101)	29 (74)	0 (0)	0 (0)	0 (0)	2,775 (4,063)	164 (339)	3,018 (4,079)
Brown trout	0.0031 (0.0040)	49 (125)	37 (85)	0 (0)	0 (0)	326 (466)	0 (0)	325 (762)	737 (906)
Lake trout	0.0016 (0.0027)	0 (0)	0 (0)	0 (0)	0 (0)	372 (602)	0 (0)	0 (0)	372 (602)
Bluegill	0.0002 (0.0004)	0 (0)	0 (0)	0 (0)	0 (0)	48 (99)	0 (0)	0 (0)	48 (99)
Black crappie	0.0094 (0.0198)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2,247 (4,645)	2,247 (4,645)
Yellow perch	0.1144 (0.0940)	79 (159)	408 (990)	2,481 (3,999)	15,436 (17,096)	6,118 (6,355)	0 (0)	2,860 (5,912)	27,382 (19,611)
Round whitefish	0.0004 (0.0006)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	84 (127)	84 (127)
Total	0.1735 (0.1130)	1,023 (1,088)	496 (997)	2,481 (3,999)	15,436 (17,096)	10,026 (6,946)	6,390 (5,940)	5,680 (7,566)	41,532 (21,242)
Angler hours		8,355 (6,122)	83,716 (88,373)	6,934 (1,970)	17,451 (4,380)	54,938 (29,611)	51,155 (21,659)	16,823 (10,008)	239,372 (96,522)
Angler trips		3,084 (1,112)	22,547 (22,197)	3,277 (1,062)	9,306 (2,541)	15,366 (7,355)	13,483 (5,423)	5,670 (3,092)	72,733 (24,384)
Angler days		3,084 (1,112)	22,515 (22,196)	3,277 (1,062)	8,794 (2,490)	15,366 (7,355)	13,436 (5,421)	5,670 (3,092)	72,142 (24,378)

Appendix 6. Estimated sportfishing catch and effort for the Port Sheldon boat fishery, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0168 (0.0100)	554 (634)	663 (893)	126 (162)	324 (543)	563 (365)	0 (0)	0 (0)	2,230 (1,286)
Chinook salmon	0.0718 (0.0293)	2,817 (2,618)	1,612 (1,572)	190 (194)	1,251 (870)	3,647 (1,670)	0 (0)	0 (0)	9,517 (3,593)
Rainbow trout	0.0005 (0.0010)	0 (0)	0 (0)	0 (0)	0 (0)	60 (121)	0 (0)	0 (0)	60 (121)
Brown trout	0.0112 (0.0109)	701 (1,084)	624 (893)	66 (134)	97 (197)	0 (0)	0 (0)	0 (0)	1,488 (1,425)
Lake trout	0.0191 (0.0128)	0 (0)	1,075 (1,314)	970 (835)	479 (527)	0 (0)	0 (0)	0 (0)	2,524 (1,644)
Yellow perch	0.4324 (0.1891)	0 (0)	0 (0)	15,807 (11,403)	29,461 (16,634)	9,076 (10,262)	2,937 (5,972)	0 (0)	57,281 (23,403)
Walleye	0.0098 (0.0198)	0 (0)	0 (0)	0 (0)	1,300 (2,625)	0 (0)	0 (0)	0 (0)	1,300 (2,625)
Total	0.5617 (0.2009)	4,072 (2,904)	3,974 (2,407)	17,159 (11,437)	32,912 (16,880)	13,346 (10,404)	2,937 (5,972)	0 (0)	74,400 (23,956)
Angler hours		20,378 (7,447)	20,041 (14,012)	17,612 (6,356)	29,818 (6,866)	34,005 (8,367)	10,608 (4,030)	3,211 (3,745)	132,462 (20,630)
Angler trips		5,187 (2,150)	4,022 (2,739)	4,143 (1,503)	8,632 (2,096)	7,051 (1,826)	2,357 (924)	0 (0)	31,392 (4,792)
Angler days		5,187 (2,150)	4,022 (2,739)	4,143 (1,503)	8,632 (2,096)	7,051 (1,826)	2,357 (924)	0 (0)	31,392 (4,792)

Appendix 7. Estimated sportfishing catch and effort for Grand Haven, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0032 (0.0031)	0 (0)	272 (500)	185 (272)	254 (360)	391 (405)	1,079 (1,949)	28 (63)	2,209 (2,102)
Chinook salmon	0.0981 (0.0476)	645 (1,405)	33,495 (25,945)	1,729 (1,008)	15,727 (10,579)	12,714 (8,987)	4,388 (4,098)	0 (0)	68,698 (29,759)
Rainbow trout	0.0030 (0.0033)	367 (575)	70 (101)	135 (233)	1,040 (2,140)	123 (197)	240 (362)	144 (187)	2,119 (2,276)
Brown trout	0.0042 (0.0043)	243 (454)	2,482 (2,879)	115 (149)	0 (0)	64 (135)	4 (8)	0 (0)	2,908 (2,922)
Lake trout	0.0210 (0.0118)	0 (0)	2,123 (2,620)	2,843 (2,132)	8,996 (6,756)	769 (822)	0 (0)	0 (0)	14,731 (7,598)
Channel catfish	0.0008 (0.0014)	0 (0)	0 (0)	0 (0)	0 (0)	508 (981)	0 (0)	60 (125)	568 (989)
Yellow perch	0.1142 (0.0495)	0 (0)	954 (1,910)	7,988 (4,317)	60,984 (29,228)	4,767 (3,386)	5,111 (3,098)	168 (350)	79,972 (29,962)
Round whitefish	0.0002 (0.0003)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	150 (233)	150 (233)
Total	0.2446 (0.0814)	1,255 (1,585)	39,396 (26,310)	12,995 (4,934)	87,001 (31,883)	19,336 (9,700)	10,822 (5,506)	550 (481)	171,355 (43,130)
Angler hours		45,653 (17,612)	132,375 (67,766)	63,899 (44,842)	225,071 (90,504)	156,593 (80,538)	71,608 (40,718)	5,344 (2,705)	700,543 (152,499)
Angler trips		8,012 (3,993)	25,238 (12,059)	13,338 (8,269)	42,425 (14,462)	31,535 (14,065)	13,360 (6,220)	1,936 (1,020)	135,844 (26,009)
Angler days		8,012 (3,993)	25,073 (12,056)	13,207 (8,267)	42,425 (14,462)	31,535 (14,065)	13,222 (6,217)	1,781 (960)	135,255 (26,003)

Appendix 7. Estimated sportfishing catch and effort for Grand Haven, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0032 (0.0031)	0 (0)	272 (500)	185 (272)	254 (360)	391 (405)	1,079 (1,949)	28 (63)	2,209 (2,102)
Chinook salmon	0.0981 (0.0476)	645 (1,405)	33,495 (25,945)	1,729 (1,008)	15,727 (10,579)	12,714 (8,987)	4,388 (4,098)	0 (0)	68,698 (29,759)
Rainbow trout	0.0030 (0.0033)	367 (575)	70 (101)	135 (233)	1,040 (2,140)	123 (197)	240 (362)	144 (187)	2,119 (2,276)
Brown trout	0.0042 (0.0043)	243 (454)	2,482 (2,879)	115 (149)	0 (0)	64 (135)	4 (8)	0 (0)	2,908 (2,922)
Lake trout	0.0210 (0.0118)	0 (0)	2,123 (2,620)	2,843 (2,132)	8,996 (6,756)	769 (822)	0 (0)	0 (0)	14,731 (7,598)
Channel catfish	0.0008 (0.0014)	0 (0)	0 (0)	0 (0)	0 (0)	508 (981)	0 (0)	60 (125)	568 (989)
Yellow perch	0.1142 (0.0495)	0 (0)	954 (1,910)	7,988 (4,317)	60,984 (29,228)	4,767 (3,386)	5,111 (3,098)	168 (350)	79,972 (29,962)
Round whitefish	0.0002 (0.0003)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	150 (233)	150 (233)
Total	0.2446 (0.0814)	1,255 (1,585)	39,396 (26,310)	12,995 (4,934)	87,001 (31,883)	19,336 (9,700)	10,822 (5,506)	550 (481)	171,355 (43,130)
Angler hours		45,653 (17,612)	132,375 (67,766)	63,899 (44,842)	225,071 (90,504)	156,593 (80,538)	71,608 (40,718)	5,344 (2,705)	700,543 (152,499)
Angler trips		8,012 (3,993)	25,238 (12,059)	13,338 (8,269)	42,425 (14,462)	31,535 (14,065)	13,360 (6,220)	1,936 (1,020)	135,844 (26,009)
Angler days		8,012 (3,993)	25,073 (12,056)	13,207 (8,267)	42,425 (14,462)	31,535 (14,065)	13,222 (6,217)	1,781 (960)	135,255 (26,003)

Appendix 8. Estimated sportfishing catch and effort for Muskegon, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0065 (0.0069)	1,447 (2,108)	169 (341)	63 (134)	135 (292)	0 (0)	273 (426)	0 (0)	2,087 (2,201)
Chinook salmon	0.0889 (0.0337)	3,250 (2,630)	13,758 (7,281)	1,583 (1,961)	4,673 (4,665)	2,639 (1,720)	2,444 (2,165)	70 (142)	28,417 (9,654)
Rainbow trout	0.0028 (0.0027)	188 (382)	524 (728)	0 (0)	0 (0)	148 (220)	32 (66)	0 (0)	892 (854)
Brown trout	0.0076 (0.0064)	2,164 (1,983)	95 (203)	98 (157)	58 (88)	25 (52)	0 (0)	0 (0)	2,440 (2,002)
Lake trout	0.0191 (0.0108)	249 (519)	2,347 (1,804)	1,786 (1,799)	1,716 (2,041)	0 (0)	0 (0)	0 (0)	6,098 (3,305)
Smallmouth bass	0.0004 (0.0006)	0 (0)	0 (0)	0 (0)	69 (138)	49 (104)	0 (0)	0 (0)	118 (173)
Yellow perch	0.1674 (0.1620)	29,178 (44,070)	700 (1,425)	1,669 (1,465)	4,107 (3,593)	7,264 (5,402)	10,598 (24,805)	0 (0)	53,516 (51,027)
Freshwater drum	0.0002 (0.0003)	0 (0)	0 (0)	0 (0)	23 (46)	49 (104)	0 (0)	0 (0)	72 (114)
Total	0.2930 (0.1703)	36,476 (44,248)	17,593 (7,680)	5,199 (3,045)	10,781 (6,241)	10,174 (5,676)	13,347 (24,903)	70 (142)	93,640 (52,130)
Angler hours		78,796 (16,059)	65,307 (19,184)	25,105 (16,369)	36,688 (24,055)	52,804 (16,415)	59,410 (33,346)	1,526 (524)	319,636 (53,425)
Angler trips		21,186 (4,284)	12,908 (3,606)	6,004 (3,448)	9,443 (6,051)	13,418 (4,025)	13,563 (7,397)	874 (415)	77,396 (12,286)
Angler days		21,186 (4,284)	12,908 (3,606)	5,975 (3,447)	9,419 (6,050)	13,418 (4,025)	13,349 (7,389)	874 (415)	77,129 (12,280)

Appendix 10. Estimated sportfishing catch and effort for Ludington, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0328 (0.0186)	1,660 (1,779)	1,086 (1,934)	229 (491)	6,615 (6,670)	15,015 (10,614)	2,561 (1,929)	183 (227)	27,349 (12,964)
Chinook salmon	0.1552 (0.1031)	950 (1,006)	45,656 (70,319)	9,124 (8,357)	22,359 (17,377)	44,617 (21,167)	5,742 (3,547)	940 (875)	129,388 (76,019)
Rainbow trout	0.0057 (0.0043)	165 (259)	300 (626)	0 (0)	1,853 (2,535)	1,202 (1,640)	605 (646)	610 (569)	4,735 (3,212)
Brown trout	0.0126 (0.0065)	5,458 (3,362)	1,685 (1,039)	991 (1,304)	1,080 (1,348)	1,285 (1,572)	0 (0)	26 (45)	10,525 (4,286)
Lake trout	0.0182 (0.0122)	0 (0)	487 (839)	8,733 (7,359)	5,653 (5,039)	243 (502)	0 (0)	47 (102)	15,163 (8,973)
White sucker	<0.0000 (<0.0000)	0 (0)	0 (0)	0 (0)	14 (30)	0 (0)	0 (0)	0 (0)	14 (30)
Rock bass	0.0027 (0.0056)	0 (0)	0 (0)	0 (0)	2,271 (4,697)	0 (0)	0 (0)	0 (0)	2,271 (4,697)
Yellow perch	0.0776 (0.0609)	0 (0)	0 (0)	13,188 (19,506)	19,197 (21,911)	32,327 (36,303)	0 (0)	0 (0)	64,712 (46,674)
Round whitefish	0.0001 (0.0001)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	120 (153)	120 (153)
Total	0.3050 (0.1444)	8,233 (3,943)	49,214 (70,361)	32,265 (22,504)	59,042 (29,703)	94,689 (43,405)	8,908 (4,089)	1,926 (1,085)	254,277 (90,867)
Angler hours		25,036 (15,084)	154,493 (219,702)	99,957 (59,128)	210,378 (91,173)	258,710 (73,734)	63,879 (32,087)	21,310 (16,438)	833,763 (258,924)
Angler trips		6,865 (3,558)	28,735 (36,439)	21,343 (12,178)	47,326 (18,741)	46,459 (12,010)	11,440 (5,604)	5,024 (3,859)	167,192 (45,061)
Angler days		5,649 (3,095)	23,957 (30,814)	18,391 (10,517)	41,955 (17,405)	39,966 (11,183)	8,929 (4,303)	4,726 (3,849)	143,573 (39,128)

Appendix 11. Estimated sportfishing catch and effort for Manistee, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0147 (0.0081)	200 (208)	764 (912)	215 (283)	951 (1,455)	2,943 (1,846)	4,411 (4,412)	505 (451)	9,989 (5,114)
Chinook salmon	0.1023 (0.0388)	742 (773)	13,767 (10,210)	1,869 (1,647)	9,517 (8,188)	32,257 (15,694)	11,215 (8,136)	295 (386)	69,662 (22,074)
Rainbow trout	0.0090 (0.0057)	222 (213)	212 (353)	178 (234)	448 (1,015)	2,010 (2,333)	1,848 (2,438)	1,184 (797)	6,102 (3,644)
Brown trout	0.0339 (0.0187)	12,602 (6,855)	9,137 (9,513)	784 (1,059)	0 (0)	478 (740)	75 (0)	15 (36)	23,091 (11,797)
Lake trout	0.0085 (0.0057)	0 (0)	413 (379)	2,255 (2,123)	2,068 (2,750)	955 (1,127)	124 (270)	0 (0)	5,815 (3,682)
Northern pike	0.0004 (0.0008)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	256 (497)	0 (0)	256 (497)
Rock bass	0.0010 (0.0019)	0 (0)	0 (0)	46 (92)	646 (1,297)	0 (0)	0 (0)	0 (0)	692 (1,300)
Smallmouth bass	0.0009 (0.0019)	0 (0)	0 (0)	0 (0)	0 (0)	642 (1,331)	0 (0)	0 (0)	642 (1,331)
Yellow perch	0.3321 (0.2056)	8,678 (6,793)	10,048 (9,798)	7,284 (6,680)	82,035 (92,970)	83,973 (75,216)	34,164 (53,814)	17 (38)	226,199 (131,847)
Lake whitefish	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	37 (75)	37 (75)
Round whitefish	0.0024 (0.0024)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1,610 (1,564)	1,610 (1,564)

Appendix 11. Continued:

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Total	0.5052 (0.2236)	22,444 (9,686)	34,341 (17,083)	12,631 (7,287)	95,665 (93,396)	123,258 (76,917)	52,093 (54,661)	3,663 (1,855)	344,095 (134,421)
Angler hours		45,411 (15,736)	72,315 (47,383)	66,850 (26,003)	159,111 (83,220)	208,391 (68,175)	111,857 (72,946)	17,209 (7,473)	681,144 (141,842)
Angler trips		11,003 (3,705)	15,915 (10,003)	16,925 (5,645)	30,141 (16,849)	44,420 (13,945)	24,936 (14,718)	4,176 (1,641)	147,516 (29,040)
Angler days		8,755 (3,158)	13,068 (8,635)	16,018 (5,402)	24,594 (12,911)	35,928 (12,666)	19,175 (12,302)	3,263 (1,381)	120,801 (24,374)

Appendix 12. Estimated sportfishing catch and effort for Frankfort-Elberta, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0172 (0.0151)	0 (0)	0 (0)	0 (0)	1,913 (3,201)	8,350 (7,721)	0 (0)	0 (0)	0 (0)	10,263 (8,358)
Chinook salmon	0.1092 (0.0704)	180 (253)	11,665 (15,471)	8,140 (13,341)	16,680 (22,380)	26,838 (19,774)	1,577 (3,163)	0 (0)	0 (0)	65,080 (36,322)
Rainbow trout	0.0040 (0.0029)	218 (311)	262 (312)	241 (492)	110 (144)	749 (767)	537 (1,090)	234 (469)	45 (49)	2,396 (1,567)
Brown trout	0.0311 (0.0160)	10,420 (2,464)	1,569 (1,112)	3,397 (6,052)	1,276 (2,285)	1,520 (2,254)	358 (727)	0 (0)	0 (0)	18,540 (7,400)
Brook trout	0.0003 (0.0005)	165 (337)	37 (80)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	202 (346)
Lake trout	0.0565 (0.0701)	0 (0)	1,409 (870)	23,381 (38,101)	8,690 (13,204)	174 (224)	0 (0)	0 (0)	0 (0)	33,654 (40,334)
Rock bass	0.0002 (0.0003)	0 (0)	0 (0)	0 (0)	90 (195)	41 (82)	0 (0)	0 (0)	0 (0)	131 (212)
Smallmouth bass	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	46 (94)	0 (0)	0 (0)	0 (0)	46 (94)
Yellow perch	0.0064 (0.0089)	0 (0)	0 (0)	0 (0)	2,971 (4,866)	824 (1,630)	0 (0)	0 (0)	0 (0)	3,795 (5,132)
Round whitefish	0.0258 (0.0228)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	14,362 (12,579)	989 (922)	15,351 (12,613)

Appendix 12. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Total	0.2509 (0.1256)	10,983 (2,519)	14,942 (15,539)	35,159 (40,823)	31,730 (26,729)	38,542 (21,425)	2,472 (3,424)	14,596 (12,588)	1,034 (923)	149,458 (57,086)
Angler hours		42,445 (7,124)	48,006 (18,170)	114,601 (83,280)	126,933 (122,387)	206,921 (121,683)	32,960 (6,290)	21,540 (2,416)	2,325 (624)	595,731 (192,737)
Angler trips		11,156 (2,334)	9,995 (3,383)	29,825 (21,824)	25,669 (21,690)	43,759 (23,680)	9,636 (2,024)	6,183 (1,147)	668 (184)	136,891 (39,113)
Angler days		8,966 (1,930)	7,713 (2,555)	29,187 (21,820)	23,902 (20,334)	32,002 (18,160)	8,580 (1,942)	4,745 (1,103)	419 (135)	115,514 (35,137)

Appendix 13. Estimated sportfishing catch and effort for the Leland boat fishery, 1986.
Two standard errors in parentheses.

Species	Total catch per hour	Month				Season total
		May	Jun	Jul	Aug	
Coho salmon	0.0041 (0.0105)	0 (0)	0 (0)	349 (870)	0 (0)	349 (870)
Chinook salmon	0.0854 (0.1521)	0 (0)	0 (0)	7,257 (12,196)	0 (0)	7,257 (12,196)
Lake trout	0.0048 (0.0123)	0 (0)	0 (0)	407 (1,015)	0 (0)	407 (1,015)
Total	0.0943 (0.1547)	0 (0)	0 (0)	8,013 (12,269)	0 (0)	8,013 (12,269)
Angler hours		0 (0)	24,098 (30,340)	60,888 (39,746)	0 (0)	84,986 (50,003)
Angler trips		0 (0)	3,742 (4,344)	13,704 (8,009)	0 (0)	17,446 (9,111)
Angler days		0 (0)	3,742 (4,344)	13,704 (8,009)	0 (0)	17,446 (9,111)

Appendix 14. Estimated sportfishing catch and effort for west Grand Traverse Bay, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Chinook salmon	0.0223 (0.0107)	0 (0)	0 (0)	0 (0)	1,960 (1,274)	88 (178)	1,124 (1,178)	738 (560)	3,910 (1,832)
Rainbow trout	0.0026 (0.0045)	457 (787)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	457 (787)
Brown trout	0.0012 (0.0018)	0 (0)	0 (0)	121 (244)	0 (0)	0 (0)	82 (172)	0 (0)	203 (299)
Brook trout	0.0016 (0.0024)	0 (0)	0 (0)	0 (0)	0 (0)	285 (429)	0 (0)	0 (0)	285 (429)
Lake trout	0.0477 (0.0208)	0 (0)	239 (299)	3,805 (2,593)	658 (779)	3,663 (2,241)	0 (0)	0 (0)	8,365 (3,527)
Smallmouth bass	0.0093 (0.0110)	0 (0)	241 (516)	531 (1,075)	0 (0)	856 (1,495)	0 (0)	0 (0)	1,628 (1,912)
Yellow perch	0.4388 (0.2507)	24,079 (36,075)	1,808 (3,677)	2,841 (4,806)	4,009 (4,026)	5,365 (6,284)	25,808 (20,080)	13,061 (8,228)	76,971 (43,181)
Freshwater drum	0.0262 (0.0339)	0 (0)	0 (0)	69 (106)	4,528 (5,923)	0 (0)	0 (0)	0 (0)	4,597 (5,924)
Lake whitefish	0.1304 (0.0607)	0 (0)	274 (275)	9,431 (7,982)	5,357 (4,483)	7,803 (4,830)	0 (0)	0 (0)	22,865 (10,354)
Round whitefish	0.0560 (0.0432)	0 (0)	0 (0)	0 (0)	289 (583)	7,496 (7,267)	1,601 (1,703)	433 (552)	9,819 (7,507)
Burbot	0.0001 (0.0002)	0 (0)	0 (0)	25 (50)	0 (0)	0 (0)	0 (0)	0 (0)	25 (50)

Appendix 14. Continued:

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Total	0.7362 (0.2722)	24,536 (36,084)	2,562 (3,735)	16,823 (9,735)	16,801 (8,600)	25,556 (11,095)	28,615 (20,187)	14,232 (8,265)	129,125 (45,647)
Angler hours		18,287 (5,542)	10,672 (3,120)	23,108 (5,488)	43,430 (10,074)	37,455 (8,800)	30,512 (10,043)	11,934 (3,265)	175,398 (19,000)
Angler trips		5,404 (1,785)	2,947 (903)	6,070 (1,516)	10,841 (2,756)	8,821 (2,162)	7,712 (2,449)	2,966 (828)	44,761 (5,025)
Angler days		4,109 (1,867)	2,947 (903)	6,070 (1,516)	9,776 (2,766)	7,897 (2,110)	6,774 (2,306)	2,360 (712)	39,933 (4,952)

Appendix 15. Estimated sportfishing catch and effort for east Grand Traverse Bay, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Chinook salmon	0.0100 (0.0078)	0 (0)	0 (0)	0 (0)	386 (571)	535 (556)	243 (403)	0 (0)	1,164 (893)
Brown trout	0.0013 (0.0027)	0 (0)	0 (0)	0 (0)	152 (310)	0 (0)	0 (0)	0 (0)	152 (310)
Lake trout	0.0256 (0.0143)	0 (0)	467 (698)	817 (813)	1,641 (1,210)	48 (97)	0 (0)	0 (0)	2,973 (1,619)
White sucker	0.0021 (0.0031)	0 (0)	0 (0)	239 (351)	0 (0)	0 (0)	0 (0)	0 (0)	239 (351)
Smallmouth bass	0.0006 (0.0012)	0 (0)	0 (0)	0 (0)	0 (0)	68 (139)	0 (0)	0 (0)	68 (139)
Yellow perch	1.2051 (0.4715)	50,109 (33,234)	7,329 (11,773)	18,431 (16,607)	0 (0)	18,954 (18,228)	31,340 (26,373)	13,641 (11,019)	139,804 (51,654)
Lake whitefish	0.2592 (0.0927)	0 (0)	5,122 (4,082)	1,233 (1,208)	16,359 (8,417)	4,473 (2,756)	502 (1,026)	2,381 (1,740)	30,070 (10,032)
Round whitefish	0.0032 (0.0067)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	373 (778)	373 (778)
Burbot	0.0009 (0.0018)	0 (0)	0 (0)	0 (0)	0 (0)	107 (216)	0 (0)	0 (0)	107 (216)
Total	1.5080 (0.4937)	50,109 (33,234)	12,918 (12,480)	20,720 (16,674)	18,538 (8,528)	24,185 (18,446)	32,085 (26,396)	16,395 (11,183)	174,950 (52,660)
Angler hours		8,946 (2,746)	12,937 (5,138)	12,000 (4,575)	28,951 (8,056)	31,940 (7,770)	14,153 (5,952)	7,087 (2,763)	116,014 (14,940)
Angler trips		1,601 (550)	2,808 (1,137)	2,568 (977)	7,471 (2,129)	8,744 (2,176)	2,990 (1,145)	1,708 (669)	27,890 (3,685)
Angler days		1,601 (550)	2,743 (1,133)	2,568 (977)	6,183 (1,920)	7,601 (2,006)	2,482 (1,038)	1,708 (669)	24,886 (3,432)

Appendix 16. Estimated sportfishing catch and effort for Elk Rapids, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Chinook salmon	0.0159 (0.0094)	0 (0)	0 (0)	0 (0)	66 (135)	0 (0)	322 (243)	306 (289)	694 (401)
Rainbow trout	0.0217 (0.0153)	471 (543)	0 (0)	11 (21)	0 (0)	0 (0)	106 (170)	359 (323)	947 (655)
Brown trout	0.0014 (0.0028)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	59 (118)	59 (118)
Lake trout	0.0047 (0.0077)	0 (0)	0 (0)	205 (336)	0 (0)	0 (0)	0 (0)	0 (0)	205 (336)
White sucker	0.0002 (0.0004)	0 (0)	0 (0)	9 (18)	0 (0)	0 (0)	0 (0)	0 (0)	9 (18)
Channel catfish	0.0003 (0.0006)	0 (0)	0 (0)	14 (29)	0 (0)	0 (0)	0 (0)	0 (0)	14 (29)
Bluegill	0.0010 (0.0020)	0 (0)	0 (0)	0 (0)	0 (0)	42 (85)	0 (0)	0 (0)	42 (85)
Smallmouth bass	0.0095 (0.0153)	0 (0)	0 (0)	6 (12)	409 (665)	0 (0)	0 (0)	0 (0)	415 (665)
Yellow perch	0.7074 (0.3232)	2,090 (4,527)	13,757 (7,883)	1,970 (1,462)	0 (0)	0 (0)	0 (0)	13,020 (9,776)	30,837 (13,429)
Lake whitefish	0.0216 (0.0370)	0 (0)	0 (0)	0 (0)	746 (1,585)	194 (240)	0 (0)	0 (0)	940 (1,603)
Total	0.7897 (0.3296)	2,561 (4,559)	13,757 (7,883)	2,215 (1,501)	1,221 (1,724)	236 (255)	428 (297)	13,744 (9,786)	34,162 (13,567)
Angler hours		4,425 (2,645)	6,097 (1,876)	4,727 (1,136)	13,298 (4,495)	6,265 (1,550)	2,808 (1,066)	5,970 (916)	43,590 (6,032)
Angler trips		1,293 (896)	1,798 (599)	1,622 (601)	4,007 (1,459)	1,723 (440)	1,043 (494)	1,655 (299)	13,141 (2,044)
Angler days		902 (579)	1,506 (494)	1,491 (606)	2,604 (1,242)	1,605 (447)	642 (331)	1,255 (287)	10,005 (1,697)

Appendix 17. Estimated sportfishing catch and effort for Charlevoix, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month						Season total
		May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0011 (0.0020)	0 (0)	0 (0)	17 (34)	92 (192)	0 (0)	0 (0)	109 (195)
Chinook salmon	0.1003 (0.0442)	0 (0)	0 (0)	3,851 (2,246)	5,345 (2,867)	799 (520)	32 (26)	10,027 (3,679)
Rainbow trout	0.0010 (0.0014)	0 (0)	0 (0)	76 (123)	22 (45)	0 (0)	0 (0)	98 (131)
Lake trout	0.0664 (0.0384)	743 (1,645)	2,250 (1,671)	2,674 (2,354)	973 (1,045)	0 (0)	0 (0)	6,640 (3,483)
Channel catfish	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	12 (26)	0 (0)	12 (26)
Rock bass	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7 (15)	7 (15)
Smallmouth bass	0.0004 (0.0009)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	42 (90)	42 (90)
Yellow perch	0.1549 (0.1465)	0 (0)	0 (0)	0 (0)	83 (133)	0 (0)	15,410 (14,150)	15,493 (14,151)
Lake whitefish	0.0012 (0.0011)	0 (0)	116 (101)	0 (0)	0 (0)	0 (0)	0 (0)	116 (101)
Total	0.3254 (0.1701)	743 (1,645)	2,366 (1,674)	6,618 (3,256)	6,515 (3,061)	811 (521)	15,491 (14,150)	32,544 (15,032)
Angler hours		1,708 (1,071)	7,019 (3,690)	30,764 (14,743)	42,530 (17,221)	9,855 (6,296)	8,138 (5,417)	100,014 (24,447)
Angler trips		740 (615)	1,856 (924)	6,204 (3,076)	10,415 (3,980)	2,440 (1,515)	1,938 (1,308)	23,593 (5,526)
Angler days		686 (613)	1,845 (920)	5,917 (2,924)	10,315 (3,950)	2,440 (1,515)	1,938 (1,308)	23,141 (5,420)

Appendix 18. Estimated sportfishing catch and effort for Petoskey, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Chinook salmon	0.0496 (0.0212)	0 (0)	0 (0)	6 (12)	157 (154)	1,584 (689)	80 (99)	71 (135)	0 (0)	1,898 (726)
Rainbow trout	0.0107 (0.0086)	0 (0)	0 (0)	0 (0)	19 (42)	60 (89)	0 (0)	258 (298)	72 (65)	409 (320)
Brown trout	0.0009 (0.0010)	22 (34)	3 (6)	5 (11)	5 (12)	0 (0)	0 (0)	0 (0)	0 (0)	35 (38)
Lake trout	0.0705 (0.0311)	0 (0)	333 (255)	902 (782)	255 (224)	1,207 (657)	0 (0)	0 (0)	0 (0)	2,697 (1,076)
White sucker	0.0003 (0.0006)	0 (0)	0 (0)	0 (0)	12 (24)	0 (0)	0 (0)	0 (0)	0 (0)	12 (24)
Smallmouth bass	0.0020 (0.0041)	0 (0)	0 (0)	0 (0)	0 (0)	76 (154)	0 (0)	0 (0)	0 (0)	76 (154)
Yellow perch	0.1055 (0.1220)	0 (0)	0 (0)	109 (223)	2,115 (2,454)	114 (232)	1,699 (3,883)	0 (0)	0 (0)	4,037 (4,605)
Freshwater drum	0.0001 (0.0002)	0 (0)	0 (0)	4 (8)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (8)
Total	0.2395 (0.1333)	22 (34)	336 (255)	1,026 (813)	2,563 (2,470)	3,041 (996)	1,779 (3,884)	329 (327)	72 (65)	9,168 (4,798)
Angler hours		825 (437)	2,333 (786)	3,451 (2,233)	5,712 (2,093)	21,089 (6,235)	1,966 (1,119)	2,208 (1,459)	698 (357)	38,282 (7,250)
Angler trips		195 (107)	842 (286)	1,020 (820)	1,780 (525)	4,823 (1,441)	539 (265)	352 (233)	132 (71)	9,683 (1,802)
Angler days		195 (107)	749 (271)	983 (817)	1,676 (510)	4,320 (1,316)	539 (265)	352 (233)	132 (71)	8,946 (1,695)

Appendix 19. Estimated sportfishing catch and effort for Harbor Springs, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Chinook salmon	0.0158 (0.0186)	0 (0)	0 (0)	0 (0)	381 (443)	0 (0)	0 (0)	0 (0)	0 (0)	381 (443)
Rainbow trout	0.0017 (0.0033)	0 (0)	0 (0)	0 (0)	40 (78)	0 (0)	0 (0)	0 (0)	0 (0)	40 (78)
Brown trout	0.0005 (0.0010)	12 (24)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	12 (24)
Lake trout	0.0028 (0.0041)	0 (0)	0 (0)	0 (0)	67 (98)	0 (0)	0 (0)	0 (0)	0 (0)	67 (98)
White sucker	0.0022 (0.0045)	53 (109)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	53 (109)
Smallmouth bass	0.0006 (0.0012)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	14 (29)	0 (0)	0 (0)	14 (29)
White crappie	0.0077 (0.0169)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	184 (402)	0 (0)	184 (402)
Yellow perch	1.0546 (0.4724)	18 (36)	1,879 (1,950)	572 (882)	962 (1,385)	162 (330)	17,249 (8,648)	2,274 (3,417)	2,242 (3,661)	25,358 (10,319)
Total	1.0858 (0.4756)	83 (117)	1,879 (1,950)	572 (882)	1,450 (1,460)	162 (330)	17,263 (8,648)	2,458 (3,441)	2,242 (3,661)	26,109 (10,338)
Angler hours		3,377 (763)	3,344 (1,027)	1,542 (917)	3,686 (2,253)	1,862 (480)	4,755 (1,946)	3,435 (1,782)	2,045 (2,356)	24,046 (4,505)
Angler trips		1,442 (331)	1,678 (572)	556 (361)	1,056 (703)	921 (254)	888 (385)	948 (467)	433 (471)	7,922 (1,309)
Angler days		892 (202)	1,678 (572)	500 (323)	1,036 (700)	853 (256)	888 (385)	948 (467)	433 (471)	7,228 (1,271)

Appendix 20. Estimated sportfishing catch and effort for Manistique and Thompson, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month						Season total
		Apr	May	Jun	Jul	Aug	Sep	
Coho salmon	0.0055 (0.0049)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	222 (198)	222 (198)
Chinook salmon	0.1047 (0.0382)	0 (0)	0 (0)	0 (0)	1,290 (805)	1,111 (745)	1,806 (954)	4,207 (1,454)
Rainbow trout	0.0169 (0.0130)	103 (137)	260 (234)	0 (0)	42 (50)	201 (410)	73 (150)	679 (516)
Brown trout	0.0017 (0.0022)	0 (0)	13 (28)	0 (0)	0 (0)	20 (41)	37 (75)	70 (90)
Splake	0.0010 (0.0022)	39 (86)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	39 (86)
Northern pike	0.0034 (0.0060)	0 (0)	0 (0)	0 (0)	0 (0)	135 (237)	0 (0)	135 (237)
Redhorse (spp.)	0.0002 (0.0004)	0 (0)	0 (0)	0 (0)	10 (20)	0 (0)	0 (0)	10 (20)
Channel catfish	0.0030 (0.0052)	0 (0)	0 (0)	0 (0)	33 (67)	89 (200)	0 (0)	122 (211)
Rock bass	0.0015 (0.0030)	0 (0)	0 (0)	0 (0)	59 (119)	0 (0)	0 (0)	59 (119)
Smallmouth bass	0.0021 (0.0043)	0 (0)	0 (0)	0 (0)	84 (170)	0 (0)	0 (0)	84 (170)
Yellow perch	0.0670 (0.0751)	0 (0)	0 (0)	0 (0)	2,584 (2,993)	109 (227)	0 (0)	2,693 (3,002)
Walleye	0.0125 (0.0106)	0 (0)	28 (57)	0 (0)	299 (406)	234 (94)	0 (0)	501 (421)
Other	0.0004 (0.0008)	0 (0)	0 (0)	0 (0)	96 (32)	0 (0)	0 (0)	16 (32)

Appendix 20. Continued:

Species	Total catch per hour	Month						Season total
		Apr	May	Jun	Jul	Aug	Sep	
Total	0.2198 (0.0891)	142 (162)	301 (242)	0 (0)	4,357 (3,134)	1,899 (939)	2,138 (989)	8,837 (3,430)
Angler hours		1,585 (1,298)	1,402 (566)	0 (0)	18,127 (2,564)	9,460 (2,770)	9,625 (2,360)	40,199 (4,671)
Angler trips		442 (393)	581 (255)	0 (0)	5,233 (1,141)	3,676 (1,444)	2,142 (575)	12,074 (1,984)
Angler days		442 (393)	581 (255)	0 (0)	5,073 (1,145)	3,451 (1,297)	2,094 (567)	11,641 (1,880)

Appendix 22. Estimated sportfishing catch and effort for Little Bay de Noc, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0002 (0.0004)	0 (0)	0 (0)	0 (0)	50 (101)	0 (0)	0 (0)	0 (0)	50 (101)
Chinook salmon	0.0079 (0.0051)	0 (0)	0 (0)	0 (0)	0 (0)	568 (865)	734 (498)	285 (191)	1,587 (1,016)
Rainbow trout	0.0001 (0.0002)	0 (0)	17 (34)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	17 (34)
Brown trout	0.0002 (0.0004)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	48 (99)	48 (99)
Northern pike	0.0181 (0.0080)	0 (0)	1,294 (922)	407 (301)	659 (671)	929 (964)	22 (34)	305 (319)	3,616 (1,557)
White sucker	0.0002 (0.0005)	0 (0)	0 (0)	40 (100)	0 (0)	0 (0)	0 (0)	0 (0)	40 (100)
Yellow bullhead	0.0001 (0.0002)	0 (0)	0 (0)	21 (42)	0 (0)	0 (0)	0 (0)	0 (0)	21 (42)
Channel catfish	0.0007 (0.0012)	0 (0)	120 (241)	16 (25)	0 (0)	0 (0)	0 (0)	0 (0)	136 (242)
White bass	0.0002 (0.0003)	0 (0)	0 (0)	10 (20)	25 (50)	0 (0)	0 (0)	0 (0)	35 (54)
Rock bass	0.0054 (0.0033)	0 (0)	324 (431)	598 (440)	70 (142)	98 (197)	0 (0)	0 (0)	1,090 (662)
Green sunfish	0.0012 (0.0024)	0 (0)	0 (0)	0 (0)	0 (0)	239 (482)	0 (0)	0 (0)	239 (482)
Pumpkinseed	0.0143 (0.0169)	0 (0)	348 (580)	345 (504)	2,067 (3,278)	98 (197)	0 (0)	0 (0)	2,858 (3,373)
Smallmouth bass	0.0063 (0.0070)	0 (0)	166 (199)	969 (1,363)	50 (101)	66 (134)	0 (0)	0 (0)	1,251 (1,388)
Largemouth bass	0.0009 (0.0018)	0 (0)	0 (0)	0 (0)	176 (354)	0 (0)	0 (0)	0 (0)	176 (354)

Appendix 22. Continued:

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
White crappie	0.0022 (0.0044)	0 (0)	441 (890)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	441 (890)
Black crappie	0.0125 (0.0273)	0 (0)	0 (0)	2,139 (5,409)	176 (354)	177 (357)	0 (0)	0 (0)	2,492 (5,432)
Yellow perch	0.6988 (0.2653)	52,667 (35,093)	11,693 (7,603)	9,998 (12,092)	16,621 (12,243)	38,613 (30,394)	1,901 (3,067)	8,335 (8,635)	139,828 (50,923)
Walleye	0.0979 (0.0280)	0 (0)	12,760 (3,712)	1,516 (843)	4,539 (3,371)	733 (1,047)	50 (105)	0 (0)	19,598 (5,192)
Freshwater drum	0.0004 (0.0007)	0 (0)	80 (161)	8 (16)	0 (0)	0 (0)	0 (0)	0 (0)	88 (162)
Total	0.8677 (0.2744)	52,667 (35,093)	27,243 (8,595)	16,067 (13,364)	24,433 (13,143)	41,521 (30,447)	2,707 (3,109)	8,973 (8,644)	173,611 (51,654)
Angler hours		10,637 (5,783)	60,324 (13,192)	32,013 (12,752)	34,405 (4,326)	52,784 (8,146)	5,398 (1,890)	4,525 (1,295)	200,086 (21,457)
Angler trips		3,461 (1,829)	12,403 (2,672)	9,605 (5,534)	18,073 (3,822)	20,301 (6,091)	1,372 (547)	913 (259)	66,128 (9,653)
Angler days		3,461 (1,829)	12,360 (2,662)	9,605 (5,534)	18,135 (3,828)	20,301 (6,091)	1,332 (539)	913 (259)	66,107 (9,652)

Appendix 23. Estimated sportfishing catch and effort for Ford River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month					Season total
		May	Jun	Jul	Aug	Sep	
Chinook salmon	0.0322 (0.0275)	0 (0)	10 (20)	178 (190)	1,068 (1,050)	0 (0)	1,256 (1,067)
Lake trout	0.0003 (0.0006)	0 (0)	10 (20)	0 (0)	0 (0)	0 (0)	10 (20)
Northern pike	0.0046 (0.0093)	0 (0)	179 (362)	0 (0)	0 (0)	0 (0)	179 (362)
Smallmouth bass	0.2727 (0.0747)	8,120 (2,309)	2,248 (1,410)	264 (320)	0 (0)	0 (0)	10,632 (2,724)
Yellow perch	0.0130 (0.0193)	0 (0)	0 (0)	506 (749)	0 (0)	0 (0)	506 (749)
Other	0.0055 (0.0112)	216 (440)	0 (0)	0 (0)	0 (0)	0 (0)	216 (440)
Total	0.3283 (0.0850)	8,336 (2,351)	2,447 (1,456)	948 (836)	1,068 (1,050)	0 (0)	12,799 (3,074)
Angler hours		13,656 (1,960)	8,133 (1,420)	7,229 (1,099)	9,969 (2,685)	0 (0)	38,987 (3,778)
Angler trips		4,523 (824)	2,609 (469)	2,732 (484)	3,249 (1,032)	0 (0)	13,113 (1,483)
Angler days		4,523 (824)	2,609 (469)	2,732 (484)	3,249 (1,032)	0 (0)	13,113 (1,483)

Appendix 24. Estimated sportfishing catch and effort for Stoney Point-Cedar River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month						Season total
		Apr	May	Jun	Jul	Aug	Sep	
Chinook salmon	0.0090 (0.0097)	5 (11)	0 (0)	0 (0)	281 (304)	0 (0)	0 (0)	286 (304)
Brown trout	0.0302 (0.0142)	809 (400)	20 (43)	0 (0)	132 (149)	0 (0)	0 (0)	961 (429)
Brook trout	0.0035 (0.0033)	112 (103)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	112 (103)
Splake	0.0028 (0.0030)	90 (96)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	90 (96)
Northern pike	0.0016 (0.0016)	0 (0)	8 (16)	20 (28)	24 (38)	0 (0)	0 (0)	52 (50)
Rock bass	0.0066 (0.0103)	0 (0)	175 (321)	20 (30)	14 (29)	0 (0)	0 (0)	209 (324)
Smallmouth bass	0.0343 (0.0212)	0 (0)	424 (451)	277 (212)	389 (423)	0 (0)	0 (0)	1,090 (654)
Black crappie	0.0114 (0.0205)	0 (0)	0 (0)	44 (91)	319 (643)	0 (0)	0 (0)	363 (649)
Yellow perch	0.2804 (0.1187)	136 (233)	168 (249)	2,949 (1,979)	5,592 (2,914)	0 (0)	77 (165)	8,922 (3,543)
Total	0.3798 (0.1293)	1,152 (484)	795 (609)	3,310 (1,993)	6,751 (3,033)	0 (0)	77 (165)	12,085 (3,715)
Angler hours		10,051 (3,224)	3,342 (1,283)	3,274 (1,434)	14,011 (2,718)	0 (0)	1,138 (485)	31,816 (4,660)
Angler trips		2,198 (699)	1,584 (668)	771 (347)	4,841 (1,250)	0 (0)	418 (233)	9,812 (1,635)
Angler days		2,109 (673)	1,524 (656)	745 (335)	4,404 (1,122)	0 (0)	418 (233)	9,200 (1,519)

Appendix 25. Estimated sportfishing catch and effort for Menominee, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month						Season total
		Apr	May	Jun	Jul	Aug	Sep	
Pink salmon	0.0002 (0.0004)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9 (19)	9 (19)
Coho salmon	<0.0000 (<0.0000)	0 (0)	0 (0)	0 (0)	1 (2)	0 (0)	0 (0)	1 (2)
Chinook salmon	0.0112 (0.0056)	0 (0)	0 (0)	0 (0)	193 (108)	102 (78)	178 (189)	473 (231)
Rainbow trout	0.0009 (0.0008)	2 (4)	0 (0)	0 (0)	8 (12)	28 (33)	0 (0)	38 (35)
Brown trout	0.0366 (0.0184)	597 (601)	0 (0)	7 (8)	403 (224)	502 (409)	43 (48)	1,552 (762)
Brook trout	0.0001 (0.0002)	4 (9)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (9)
Lake trout	0.0005 (0.0007)	0 (0)	21 (29)	0 (0)	0 (0)	0 (0)	0 (0)	21 (29)
Splake	0.0027 (0.0024)	100 (99)	0 (0)	0 (0)	0 (0)	16 (26)	0 (0)	116 (102)
Northern pike	0.0012 (0.0015)	2 (4)	22 (47)	0 (0)	0 (0)	0 (0)	28 (42)	52 (63)
White bass	0.0003 (0.0006)	0 (0)	0 (0)	0 (0)	0 (0)	14 (28)	0 (0)	14 (28)
Rock bass	0.0092 (0.0104)	171 (253)	219 (357)	0 (0)	0 (0)	0 (0)	0 (0)	390 (438)
Bluegill	0.0001 (0.0002)	0 (0)	5 (11)	0 (0)	0 (0)	0 (0)	0 (0)	5 (11)
Smallmouth bass	0.0248 (0.0315)	306 (451)	108 (116)	0 (0)	627 (1,248)	0 (0)	12 (26)	1,053 (1,332)
White crappie	0.0004 (0.0008)	0 (0)	19 (39)	0 (0)	0 (0)	0 (0)	0 (0)	19 (39)

Appendix 25. Continued:

Species	Total catch per hour	Month						Season total
		Apr	May	Jun	Jul	Aug	Sep	
Black crappie	0.0055 (0.0112)	0 (0)	0 (0)	235 (479)	0 (0)	0 (0)	0 (0)	235 (479)
Yellow perch	0.4973 (0.1514)	3,675 (2,267)	8,111 (3,625)	4,364 (2,471)	1,762 (1,868)	3,170 (2,949)	0 (0)	21,082 (6,047)
Walleye	0.0066 (0.0095)	0 (0)	183 (350)	0 (0)	95 (196)	0 (0)	0 (0)	278 (401)
Total	0.5978 (0.1605)	4,857 (2,404)	8,688 (3,662)	4,606 (2,517)	3,089 (2,269)	3,832 (2,979)	270 (202)	25,342 (6,292)
Angler hours		8,161 (2,695)	9,302 (1,566)	6,467 (1,650)	7,221 (1,607)	8,670 (1,736)	2,571 (827)	42,392 (4,326)
Angler trips		3,103 (1,163)	3,558 (725)	2,871 (822)	2,992 (1,033)	3,093 (706)	985 (353)	16,602 (2,060)
Angler days		2,989 (1,132)	3,200 (649)	2,366 (692)	2,730 (947)	2,986 (702)	985 (353)	15,256 (1,922)

SECTION II.

Lake Huron Catch and Effort Estimates by Site

Appendix 26. Estimated sportfishing catch and effort for Port Huron, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0006 (0.0007)	32 (40)	30 (64)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	62 (75)
Chinook salmon	0.0140 (0.0086)	1,288 (834)	78 (106)	24 (48)	0 (0)	0 (0)	10 (21)	0 (0)	1,400 (842)
Rainbow trout	0.0006 (0.0007)	0 (0)	9 (19)	7 (14)	21 (42)	19 (38)	0 (0)	0 (0)	56 (61)
Brown trout	0.0004 (0.0006)	40 (61)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	40 (61)
Lake trout	0.0002 (0.0004)	0 (0)	0 (0)	24 (48)	0 (0)	0 (0)	0 (0)	0 (0)	24 (48)
Channel catfish	0.0012 (0.0023)	0 (0)	0 (0)	0 (0)	23 (47)	0 (0)	0 (0)	98 (225)	121 (230)
White bass	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	14 (29)	0 (0)	0 (0)	14 (29)
Yellow perch	0.0849 (0.0497)	16 (34)	49 (104)	2,148 (2,525)	4,494 (2,775)	389 (674)	69 (139)	1,320 (3,036)	8,485 (4,876)
Walleye	0.3255 (0.0765)	0 (0)	754 (786)	2,623 (2,953)	11,954 (3,292)	14,509 (4,639)	2,402 (1,623)	283 (454)	32,525 (6,674)
Freshwater drum	0.0010 (0.0023)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	98 (225)	98 (225)

Appendix 26. Continued:

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Total	0.4286 (0.0966)	1,376 (838)	920 (803)	4,826 (3,886)	16,492 (4,306)	14,931 (4,688)	2,481 (1,629)	1,799 (3,086)	42,825 (8,315)
Angler hours		13,328 (6,145)	5,851 (3,243)	8,953 (3,228)	29,268 (4,173)	29,475 (6,268)	9,538 (2,388)	3,503 (3,066)	99,916 (11,424)
Angler trips		2,290 (1,072)	1,100 (613)	1,584 (592)	6,278 (972)	5,461 (1,169)	1,466 (451)	985 (795)	19,164 (2,241)
Angler days		2,240 (1,052)	926 (532)	1,495 (570)	6,186 (969)	5,413 (1,165)	1,444 (444)	985 (795)	18,689 (2,200)

Appendix 27. Estimated sportfishing catch and effort for Lexington to Port Sanilac, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0090 (0.0045)	1,364 (1,059)	344 (332)	1,126 (788)	118 (181)	0 (0)	95 (190)	0 (0)	0 (0)	3,047 (1,386)
Chinook salmon	0.0495 (0.0204)	11,316 (5,703)	2,177 (1,621)	1,845 (879)	172 (197)	477 (370)	602 (421)	156 (230)	0 (0)	16,745 (6,027)
Rainbow trout	0.0007 (0.0005)	84 (99)	82 (86)	59 (73)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	225 (150)
Brown trout	0.0006 (0.0005)	130 (141)	45 (67)	0 (0)	16 (34)	0 (0)	0 (0)	0 (0)	0 (0)	191 (160)
Brook trout	0.0004 (0.0008)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	151 (303)	0 (0)	0 (0)	151 (303)
Lake trout	0.0008 (0.0007)	0 (0)	152 (186)	132 (128)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	284 (226)
White sucker	0.0001 (0.0002)	31 (64)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	31 (64)
Channel catfish	0.0002 (0.0003)	0 (0)	0 (0)	0 (0)	35 (73)	17 (36)	0 (0)	0 (0)	0 (0)	52 (81)
White bass	0.0001 (0.0002)	0 (0)	0 (0)	31 (63)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	31 (63)
Yellow perch	0.1263 (0.0455)	668 (825)	4,094 (3,388)	8,795 (5,848)	20,915 (9,846)	7,414 (4,343)	829 (1,502)	0 (0)	0 (0)	42,715 (12,823)
Walleye	0.0020 (0.0028)	11 (23)	23 (43)	0 (0)	100 (149)	498 (909)	41 (60)	0 (0)	0 (0)	673 (924)
Freshwater drum	0.0020 (0.0018)	0 (0)	0 (0)	55 (110)	612 (609)	24 (51)	0 (0)	0 (0)	0 (0)	691 (621)
Burbot	0.0001 (0.0002)	47 (97)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	47 (97)

Appendix 27. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Total	0.1919 (0.0570)	13,651 (5,863)	6,917 (3,777)	12,043 (5,969)	21,968 (9,870)	8,430 (4,453)	1,718 (1,601)	156 (230)	0 (0)	64,883 (14,287)
Angler hours		98,110 (44,951)	53,034 (38,926)	37,099 (10,994)	46,349 (14,778)	35,218 (13,036)	57,979 (22,531)	9,830 (2,578)	570 (227)	338,189 (67,523)
Angler trips		19,718 (8,889)	8,757 (5,709)	8,059 (2,120)	12,013 (3,661)	8,448 (3,093)	12,681 (4,707)	4,772 (1,507)	202 (115)	74,650 (12,787)
Angler days		19,082 (8,643)	8,032 (5,216)	6,842 (1,916)	11,513 (3,471)	8,177 (3,041)	11,669 (4,256)	4,611 (1,495)	197 (115)	70,123 (12,134)

Appendix 28. Estimated sportfishing catch and effort for Eagle Bay to Harbor Beach, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0039 (0.0032)	454 (492)	576 (952)	447 (614)	0 (0)	116 (171)	0 (0)	0 (0)	0 (0)	1,593 (1,247)
Chinook salmon	0.0426 (0.0169)	2,832 (2,513)	1,042 (1,004)	792 (682)	2,698 (2,470)	5,140 (2,697)	4,573 (3,426)	209 (262)	0 (0)	17,286 (5,742)
Rainbow trout	0.0006 (0.0009)	217 (368)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	35 (84)	252 (377)
Brown trout	0.0073 (0.0056)	893 (991)	823 (1,726)	78 (114)	740 (763)	279 (313)	15 (24)	119 (127)	0 (0)	2,947 (2,161)
Lake trout	0.0324 (0.0182)	32 (74)	4,309 (4,576)	4,872 (4,544)	2,511 (2,039)	1,403 (940)	0 (0)	0 (0)	0 (0)	13,127 (6,829)
Northern pike	0.0002 (0.0005)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	89 (204)	0 (0)	0 (0)	89 (204)
Channel catfish	0.0009 (0.0008)	61 (129)	0 (0)	23 (47)	121 (200)	101 (125)	68 (138)	0 (0)	0 (0)	374 (306)
White bass	0.0002 (0.0004)	0 (0)	85 (174)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	85 (174)
Smallmouth bass	0.0085 (0.0111)	0 (0)	2,706 (4,181)	725 (1,480)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3,431 (4,435)
Yellow perch	0.4345 (0.1853)	64,391 (52,056)	7,071 (6,382)	8,949 (6,665)	32,541 (16,421)	54,242 (31,599)	8,924 (12,066)	103 (150)	0 (0)	176,221 (64,875)
Walleye	0.0098 (0.0131)	0 (0)	0 (0)	0 (0)	0 (0)	3,684 (5,194)	277 (378)	0 (0)	0 (0)	3,961 (5,208)
Freshwater drum	0.0016 (0.0021)	45 (105)	247 (518)	0 (0)	313 (683)	0 (0)	51 (104)	0 (0)	0 (0)	656 (870)

Appendix 28. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Total	0.5425 (0.2001)	68,925 (52,130)	16,859 (9,184)	15,886 (8,253)	38,924 (16,763)	64,965 (32,152)	13,997 (12,552)	431 (328)	35 (84)	220,022 (65,897)
Angler hours		35,346 (25,453)	45,738 (18,394)	48,597 (15,954)	84,665 (37,871)	105,068 (40,357)	78,250 (57,549)	7,549 (2,568)	390 (352)	405,603 (87,305)
Angler trips		7,483 (4,668)	9,054 (3,502)	9,294 (2,884)	18,122 (7,599)	20,880 (8,028)	16,954 (11,654)	2,429 (786)	300 (328)	84,516 (17,352)
Angler days		7,483 (4,668)	7,562 (3,191)	7,860 (2,528)	17,622 (7,330)	18,997 (7,329)	15,209 (10,486)	2,082 (694)	194 (238)	77,009 (16,009)

Appendix 29. Estimated sportfishing catch and effort for Port Austin to Sand Point, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0017 (0.0029)	0 (0)	0 (0)	132 (280)	644 (1,303)	0 (0)	0 (0)	0 (0)	0 (0)	776 (1,333)
Chinook salmon	0.0150 (0.0097)	308 (478)	653 (1,123)	214 (266)	3,858 (3,816)	1,119 (718)	548 (542)	9 (19)	0 (0)	6,709 (4,115)
Rainbow trout	0.0070 (0.0145)	3,135 (6,457)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3,135 (6,457)
Brown trout	0.0016 (0.0017)	380 (459)	0 (0)	0 (0)	279 (584)	0 (0)	0 (0)	35 (53)	0 (0)	694 (745)
Lake trout	0.0317 (0.0147)	0 (0)	1,841 (2,111)	4,224 (2,843)	5,553 (4,316)	2,521 (2,047)	0 (0)	0 (0)	0 (0)	14,139 (5,946)
Northern pike	0.0001 (0.0001)	0 (0)	14 (29)	0 (0)	0 (0)	0 (0)	0 (0)	13 (26)	0 (0)	27 (39)
Channel catfish	0.0325 (0.0349)	0 (0)	0 (0)	45 (92)	454 (618)	0 (0)	14,018 (15,305)	0 (0)	0 (0)	14,517 (15,318)
Rock bass	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	34 (69)	13 (27)	0 (0)	0 (0)	0 (0)	47 (74)
Black crappie	0.0012 (0.0022)	0 (0)	74 (156)	0 (0)	0 (0)	459 (945)	0 (0)	0 (0)	0 (0)	533 (958)
Yellow perch	0.7574 (0.2892)	132,675 (70,989)	3,759 (3,234)	22,305 (19,837)	116,612 (73,190)	29,994 (20,629)	23,187 (28,309)	8,972 (10,276)	300 (453)	337,804 (110,150)
Walleye	0.0176 (0.0136)	1,229 (2,582)	0 (0)	1,320 (2,095)	2,780 (2,814)	2,431 (3,960)	106 (237)	0 (0)	0 (0)	7,866 (5,892)
Freshwater drum	0.0003 (0.0005)	0 (0)	0 (0)	0 (0)	113 (228)	0 (0)	32 (70)	0 (0)	0 (0)	145 (239)

Appendix 29. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Total	0.8663 (0.3040)	137,727 (71,332)	6,341 (4,025)	28,240 (20,153)	130,327 (73,487)	36,537 (21,139)	37,891 (32,187)	9,029 (10,276)	300 (453)	386,392 (111,802)
Angler hours		46,179 (19,017)	28,470 (14,515)	55,313 (18,428)	179,245 (67,860)	79,747 (40,631)	42,418 (25,826)	14,290 (3,554)	350 (428)	446,012 (88,587)
Angler trips		9,359 (3,817)	7,472 (3,754)	13,241 (4,358)	34,943 (12,370)	17,971 (7,871)	14,136 (8,287)	5,908 (1,484)	106 (134)	103,136 (18,262)
Angler days		9,326 (3,815)	5,840 (3,250)	12,476 (4,272)	32,687 (11,762)	16,811 (7,675)	12,764 (7,602)	5,232 (1,463)	92 (113)	95,228 (17,337)

Appendix 30. Estimated sportfishing catch and effort for Sand Point to Sebewaing, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Northern pike	0.0003 (0.0004)	0 (0)	8 (16)	0 (0)	41 (63)	0 (0)	0 (0)	0 (0)	0 (0)	49 (65)
White sucker	0.0007 (0.0010)	81 (173)	61 (109)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	142 (204)
Redhorse (spp.)	0.0003 (0.0007)	0 (0)	59 (130)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	59 (130)
Yellow bullhead	0.0019 (0.0027)	0 (0)	0 (0)	0 (0)	0 (0)	253 (527)	0 (0)	0 (0)	0 (0)	253 (527)
Brown bullhead	0.0168 (0.0144)	326 (582)	951 (867)	1,069 (1,836)	0 (0)	104 (182)	842 (1,781)	0 (0)	0 (0)	3,292 (2,769)
Channel catfish	0.0615 (0.0248)	20 (43)	2,156 (1,789)	7,202 (3,771)	2,025 (1,340)	380 (579)	262 (554)	0 (0)	0 (0)	12,045 (4,457)
White bass	0.0017 (0.0026)	0 (0)	35 (56)	234 (479)	57 (117)	0 (0)	0 (0)	0 (0)	0 (0)	326 (496)
Rock bass	0.0023 (0.0031)	0 (0)	416 (621)	0 (0)	28 (58)	16 (34)	0 (0)	0 (0)	0 (0)	460 (625)
Green sunfish	0.0009 (0.0014)	86 (185)	94 (198)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	180 (271)
Pumpkinseed	0.0045 (0.0045)	242 (520)	345 (391)	18 (37)	284 (582)	0 (0)	0 (0)	0 (0)	0 (0)	889 (874)
Bluegill	0.0054 (0.0054)	0 (0)	52 (61)	537 (681)	475 (791)	0 (0)	0 (0)	0 (0)	0 (0)	1,064 (1,046)
Smallmouth bass	0.0006 (0.0008)	0 (0)	25 (52)	0 (0)	66 (136)	26 (55)	0 (0)	0 (0)	0 (0)	117 (156)
Largemouth bass	0.0065 (0.0051)	0 (0)	453 (324)	266 (355)	536 (863)	26 (41)	0 (0)	0 (0)	0 (0)	1,281 (989)
White crappie	0.0078 (0.0166)	1,504 (3,246)	0 (0)	24 (50)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1,528 (3,246)

Appendix 30. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Black crappie	0.0058 (0.0064)	107 (168)	530 (719)	0 (0)	477 (981)	18 (37)	0 (0)	0 (0)	0 (0)	1,132 (1,228)
Yellow perch	0.7730 (0.3892)	52,243 (27,754)	4,390 (3,310)	7,992 (7,165)	15,506 (9,913)	30,750 (25,454)	5,495 (12,348)	35,088 (59,228)	0 (0)	151,464 (72,382)
Walleye	0.0540 (0.0206)	0 (0)	239 (245)	462 (574)	8,401 (3,444)	1,478 (1,081)	0 (0)	0 (0)	0 (0)	10,580 (3,663)
Freshwater drum	0.0103 (0.0075)	0 (0)	10 (21)	1,590 (1,375)	242 (302)	182 (276)	0 (0)	0 (0)	0 (0)	2,024 (1,435)
Other	0.0147 (0.0143)	0 (0)	2,890 (2,774)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2,890 (2,774)
Total	0.9685 (0.4023)	54,609 (27,956)	12,714 (4,889)	19,394 (8,484)	28,138 (10,711)	33,233 (25,491)	6,599 (12,488)	35,088 (59,228)	0 (0)	189,775 (72,841)
Angler hours		15,161 (8,318)	13,972 (4,496)	38,333 (10,044)	68,224 (21,114)	33,446 (10,243)	17,569 (14,290)	9,236 (4,681)	0 (0)	195,941 (31,099)
Angler trips		5,163 (2,979)	2,475 (978)	6,009 (1,783)	13,378 (4,252)	9,620 (2,666)	3,974 (2,980)	2,911 (1,488)	0 (0)	43,530 (7,021)
Angler days		5,121 (2,969)	2,397 (941)	6,009 (1,783)	13,325 (4,234)	8,405 (2,658)	3,974 (2,980)	2,911 (1,488)	0 (0)	42,142 (6,998)

Appendix 31. Estimated sportfishing catch and effort for Sebawaing to Essexville, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Brown trout	0.0001 (0.0002)	14 (30)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	14 (30)
Northern pike	0.0001 (0.0002)	0 (0)	15 (31)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	15 (31)
White sucker	0.0065 (0.0067)	725 (797)	60 (95)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	785 (803)
Black bullhead	0.0012 (0.0016)	62 (99)	81 (163)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	143 (191)
Yellow bullhead	0.0010 (0.0012)	41 (85)	0 (0)	0 (0)	0 (0)	39 (80)	0 (0)	47 (98)	0 (0)	127 (152)
Brown bullhead	0.0587 (0.0478)	1,499 (1,017)	758 (384)	3,130 (5,511)	419 (343)	342 (428)	394 (505)	592 (518)	0 (0)	7,134 (5,690)
Channel catfish	0.1158 (0.0505)	265 (295)	5,116 (4,148)	3,163 (2,685)	3,962 (2,630)	530 (759)	933 (805)	116 (183)	0 (0)	14,085 (5,716)
White bass	0.0029 (0.0037)	3 (6)	194 (411)	36 (49)	34 (69)	34 (70)	49 (109)	0 (0)	0 (0)	350 (439)
Rock bass	0.0010 (0.0007)	11 (17)	27 (54)	46 (42)	0 (0)	0 (0)	20 (40)	19 (29)	0 (0)	123 (86)
Green sunfish	0.0001 (0.0002)	17 (36)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	17 (36)
Pumpkinseed	0.0008 (0.0008)	0 (0)	32 (65)	46 (53)	0 (0)	19 (40)	0 (0)	0 (0)	0 (0)	97 (93)
Bluegill	0.0004 (0.0005)	44 (53)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	44 (53)
Redear sunfish	0.0117 (0.0069)	0 (0)	4 (8)	0 (0)	192 (255)	68 (140)	828 (663)	328 (343)	0 (0)	1,420 (801)
Smallmouth bass	0.0033 (0.0049)	0 (0)	194 (411)	0 (0)	0 (0)	0 (0)	0 (0)	213 (442)	0 (0)	407 (604)

Appendix 31. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Largemouth bass	0.0020 (0.0021)	0 (0)	208 (242)	0 (0)	0 (0)	0 (0)	31 (64)	0 (0)	0 (0)	239 (250)
White crappie	<0.0000 (<0.0000)	3 (6)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (6)
Black crappie	0.0013 (0.0015)	94 (155)	7 (12)	0 (0)	0 (0)	0 (0)	53 (84)	0 (0)	0 (0)	154 (177)
Yellow perch	1.5294 (0.7734)	11,598 (7,833)	4,178 (6,124)	14,927 (8,631)	19,885 (13,930)	26,176 (29,589)	60,806 (79,690)	28,957 (14,267)	19,458 (12,671)	185,985 (89,205)
Walleye	0.0084 (0.0062)	0 (0)	0 (0)	61 (82)	547 (638)	369 (331)	47 (117)	0 (0)	0 (0)	1,024 (733)
Freshwater drum	0.0089 (0.0051)	95 (182)	23 (32)	178 (209)	624 (495)	165 (163)	0 (0)	0 (0)	0 (0)	1,085 (591)
Other	0.0095 (0.0122)	47 (64)	1,074 (1,475)	0 (0)	35 (71)	0 (0)	3 (5)	0 (0)	0 (0)	1,159 (1,478)
Total	1.7632 (0.7891)	14,518 (7,950)	11,971 (7,581)	21,587 (10,589)	25,698 (14,206)	27,742 (29,605)	63,164 (79,699)	30,272 (14,289)	19,458 (12,671)	214,410 (89,598)
Angler hours		8,746 (3,230)	14,865 (4,895)	20,573 (5,119)	23,981 (7,128)	20,126 (6,626)	13,874 (13,571)	12,381 (4,211)	7,060 (4,721)	121,606 (19,481)
Angler trips		2,760 (1,055)	4,459 (1,331)	4,827 (1,221)	6,135 (1,796)	4,747 (1,589)	3,780 (2,577)	4,511 (1,720)	3,774 (2,447)	34,993 (5,071)
Angler days		2,503 (966)	3,838 (1,196)	4,260 (1,114)	5,520 (1,715)	4,298 (1,514)	3,246 (2,542)	3,780 (1,411)	2,727 (1,737)	30,172 (4,506)

Appendix 32. Estimated sportfishing catch and effort for the mouth of the Saginaw River to Essexville, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Brown bullhead	0.0018 (0.0020)	0 (0)	0 (0)	0 (0)	132 (269)	322 (409)	0 (0)	0 (0)	0 (0)	454 (490)
Channel catfish	0.0316 (0.0589)	0 (0)	319 (712)	130 (266)	807 (952)	6,909 (15,073)	0 (0)	0 (0)	0 (0)	8,165 (15,122)
White bass	0.0167 (0.0088)	63 (141)	1,082 (1,372)	3,038 (1,566)	0 (0)	44 (90)	73 (148)	0 (0)	0 (0)	4,300 (2,094)
Pumpkinseed	0.0002 (0.0004)	0 (0)	0 (0)	0 (0)	0 (0)	44 (90)	0 (0)	0 (0)	0 (0)	44 (90)
Bluegill	0.0002 (0.0004)	46 (98)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	46 (98)
Redear sunfish	0.0005 (0.0006)	0 (0)	0 (0)	0 (0)	0 (0)	103 (154)	37 (78)	0 (0)	0 (0)	140 (173)
Yellow perch	1.4531 (0.8386)	51,626 (34,466)	4,124 (3,839)	40,672 (26,626)	12,249 (19,561)	114,562 (129,474)	118,750 (147,653)	16,871 (9,407)	16,182 (20,007)	375,036 (203,342)
Walleye	0.0609 (0.0903)	0 (0)	73 (162)	0 (0)	12,686 (22,358)	2,781 (5,730)	119 (292)	50 (103)	0 (0)	15,709 (23,083)
Freshwater drum	0.0171 (0.0214)	0 (0)	0 (0)	3,375 (5,384)	896 (799)	48 (71)	99 (208)	0 (0)	0 (0)	4,418 (5,447)
Other	<0.0000 (<0.0000)	0 (0)	10 (21)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	10 (21)

Appendix 32. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Total	1.5821 (0.8547)	51,735 (34,466)	5,608 (4,142)	47,215 (27,211)	26,770 (29,734)	124,813 (130,475)	119,078 (147,654)	16,921 (9,408)	16,182 (20,007)	408,322 (205,290)
Angler hours		12,070 (6,125)	29,575 (14,373)	54,378 (18,734)	85,807 (28,961)	44,452 (23,423)	24,547 (24,825)	4,739 (1,618)	2,520 (1,777)	258,088 (51,034)
Angler trips		3,071 (1,453)	6,557 (2,715)	16,368 (4,422)	19,654 (6,772)	10,285 (4,669)	5,306 (3,718)	2,576 (1,135)	1,311 (1,219)	65,128 (10,644)
Angler days		2,909 (1,413)	6,448 (2,716)	16,368 (4,422)	19,654 (6,772)	10,051 (4,659)	5,242 (3,713)	2,381 (1,081)	1,311 (1,219)	64,364 (10,627)

Appendix 33. Estimated sportfishing catch and effort for the mouth of the Saginaw River to Saganing Creek, by all modes of fishing, 1986.
Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Rainbow smelt	0.0005 (0.0012)	120 (279)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	120 (279)
Northern pike	0.0008 (0.0015)	0 (0)	188 (340)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	188 (340)
Yellow bullhead	0.0138 (0.0139)	1,446 (2,110)	1,370 (2,104)	227 (463)	0 (0)	0 (0)	0 (0)	22 (48)	0 (0)	3,065 (3,016)
Brown bullhead	0.0023 (0.0022)	226 (341)	117 (204)	130 (273)	0 (0)	43 (88)	0 (0)	0 (0)	0 (0)	516 (490)
Channel catfish	0.1040 (0.0431)	807 (1,452)	1,984 (2,147)	5,497 (3,777)	9,080 (5,862)	4,550 (2,999)	771 (1,460)	368 (572)	0 (0)	23,057 (8,173)
White perch	0.0002 (0.0003)	0 (0)	15 (33)	35 (74)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	50 (81)
White bass	0.1728 (0.0948)	2,324 (2,932)	18,758 (15,558)	12,642 (9,084)	345 (580)	1,306 (1,633)	2,914 (6,055)	0 (0)	0 (0)	38,289 (19,309)
Rock bass	0.0003 (0.0005)	53 (124)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	22 (48)	0 (0)	75 (133)
Pumpkinseed	0.0009 (0.0013)	0 (0)	58 (105)	0 (0)	0 (0)	149 (267)	0 (0)	0 (0)	0 (0)	207 (287)
Bluegill	<0.0000 (<0.0000)	7 (16)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7 (16)
Redear sunfish	0.0023 (0.0041)	0 (0)	17 (37)	0 (0)	425 (897)	61 (126)	7 (15)	0 (0)	0 (0)	510 (907)
Largemouth bass	0.0036 (0.0034)	0 (0)	50 (103)	19 (39)	628 (699)	92 (149)	0 (0)	0 (0)	0 (0)	789 (723)
Black crappie	0.0003 (0.0005)	0 (0)	44 (94)	0 (0)	28 (59)	0 (0)	0 (0)	0 (0)	0 (0)	72 (111)
Yellow perch	1.2743 (0.4538)	23,760 (17,167)	13,796 (10,519)	30,155 (16,184)	75,344 (44,169)	57,345 (36,265)	32,342 (42,462)	44,148 (25,659)	5,517 (4,829)	282,407 (80,113)

Appendix 33. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Walleye	0.0763 (0.0321)	36 (83)	1,872 (1,542)	4,862 (2,739)	8,126 (5,071)	1,947 (1,358)	45 (109)	0 (0)	14 (23)	16,902 (6,120)
Freshwater drum	0.0055 (0.0035)	62 (107)	507 (583)	305 (296)	190 (244)	150 (166)	7 (15)	0 (0)	0 (0)	1,221 (725)
Other	0.0025 (0.0025)	42 (96)	105 (191)	113 (232)	38 (77)	0 (0)	0 (0)	256 (428)	0 (0)	554 (537)
Total	1.6607 (0.5182)	28,883 (17,610)	38,881 (19,097)	53,985 (19,148)	94,204 (44,863)	65,643 (36,453)	36,086 (42,917)	44,816 (25,669)	5,531 (4,829)	368,029 (83,109)
Angler hours		15,462 (9,950)	32,030 (17,343)	37,946 (13,931)	75,014 (34,443)	42,097 (17,095)	12,529 (14,118)	5,889 (2,353)	649 (465)	221,616 (47,723)
Angler trips		5,896 (4,010)	7,335 (3,638)	8,975 (3,081)	15,953 (7,144)	8,203 (3,397)	2,513 (2,747)	1,563 (539)	179 (124)	50,617 (10,452)
Angler days		5,214 (3,445)	7,210 (3,615)	8,975 (3,081)	15,144 (6,923)	7,742 (3,272)	2,513 (2,747)	1,416 (511)	179 (124)	48,393 (10,044)

Appendix 34. Estimated sportfishing catch and effort for Au Gres to Saganing Creek, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0009 (0.0014)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	303 (453)	0 (0)	0 (0)	303 (453)
Lake trout	<0.0000 (<0.0000)	0 (0)	12 (25)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	12 (25)
Northern pike	<0.0000 (<0.0000)	0 (0)	0 (0)	0 (0)	8 (18)	0 (0)	0 (0)	0 (0)	0 (0)	8 (18)
White sucker	0.0217 (0.0361)	7,686 (12,735)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7,686 (12,735)
Yellow bullhead	0.0013 (0.0023)	0 (0)	81 (176)	391 (803)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	472 (822)
Brown bullhead	0.0004 (0.0004)	0 (0)	86 (103)	49 (99)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	135 (143)
Channel catfish	0.0167 (0.0123)	0 (0)	304 (250)	3,789 (3,851)	1,225 (1,399)	605 (1,171)	0 (0)	0 (0)	0 (0)	5,923 (4,269)
White perch	0.0001 (0.0002)	21 (42)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	21 (42)
Rock bass	0.0004 (0.0005)	10 (21)	113 (166)	15 (34)	15 (33)	0 (0)	0 (0)	0 (0)	0 (0)	153 (174)
Bluegill	0.0003 (0.0006)	0 (0)	0 (0)	92 (187)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	92 (187)
Longear sunfish	0.0021 (0.0045)	0 (0)	740 (1,597)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	740 (1,597)
Redear sunfish	0.0001 (0.0002)	0 (0)	24 (52)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	24 (52)
Smallmouth bass	0.0013 (0.0016)	0 (0)	0 (0)	353 (517)	102 (211)	0 (0)	0 (0)	0 (0)	0 (0)	455 (558)
Largemouth bass	0.0017 (0.0022)	0 (0)	443 (689)	163 (335)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	606 (766)

Appendix 34. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
White crappie	<0.0000 (<0.0000)	0 (0)	0 (0)	12 (25)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	12 (25)
Yellow perch	1.0902 (0.2893)	60,635 (20,105)	12,813 (7,860)	83,724 (38,855)	140,974 (60,806)	61,469 (27,047)	16,107 (22,674)	8,214 (4,062)	1,829 (1,002)	385,765 (83,284)
Walleye	0.0186 (0.0135)	0 (0)	0 (0)	329 (597)	5,032 (4,497)	1,220 (1,125)	0 (0)	0 (0)	0 (0)	6,581 (4,674)
Freshwater drum	0.0061 (0.0077)	0 (0)	0 (0)	767 (1,041)	211 (337)	1,168 (2,451)	0 (0)	0 (0)	0 (0)	2,146 (2,684)
Other	0.0013 (0.0015)	0 (0)	288 (470)	180 (229)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	468 (523)
Total	1.1632 (0.2989)	68,352 (23,799)	14,904 (8,072)	89,864 (39,078)	147,567 (60,989)	64,462 (27,206)	16,410 (22,679)	8,214 (4,062)	1,829 (1,002)	411,602 (84,559)
Angler hours		31,801 (9,053)	28,975 (13,622)	65,792 (20,495)	105,718 (32,056)	68,048 (25,045)	34,590 (24,769)	17,882 (5,265)	1,057 (526)	353,863 (54,625)
Angler trips		9,668 (2,991)	7,951 (3,184)	16,495 (4,898)	22,231 (6,420)	17,512 (6,587)	10,243 (7,499)	5,756 (1,581)	414 (211)	90,270 (13,655)
Angler days		9,685 (2,992)	7,951 (3,184)	16,495 (4,898)	21,795 (6,308)	17,311 (6,577)	10,243 (7,499)	5,699 (1,581)	414 (211)	89,593 (13,598)

Appendix 35. Estimated sportfishing catch and effort for Tawas, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0018 (0.0016)	216 (508)	0 (0)	0 (0)	0 (0)	74 (92)	368 (266)	0 (0)	0 (0)	658 (581)
Chinook salmon	0.0110 (0.0043)	0 (0)	43 (67)	67 (137)	931 (613)	1,136 (738)	1,732 (1,004)	180 (235)	0 (0)	4,089 (1,417)
Rainbow trout	0.0021 (0.0021)	350 (673)	45 (58)	48 (97)	211 (324)	0 (0)	0 (0)	79 (84)	39 (65)	772 (763)
Brown trout	0.0183 (0.0143)	5,272 (5,117)	592 (273)	131 (271)	428 (391)	17 (35)	102 (113)	236 (224)	4 (9)	6,782 (5,153)
Lake trout	0.0147 (0.0060)	43 (90)	10 (20)	1,755 (979)	3,631 (1,729)	0 (0)	0 (0)	0 (0)	0 (0)	5,439 (1,989)
Rainbow smelt	0.0406 (0.0601)	14,507 (22,070)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	486 (384)	35 (42)	15,028 (22,073)
Northern pike	0.0008 (0.0009)	14 (30)	8 (17)	0 (0)	38 (78)	148 (300)	59 (83)	26 (41)	0 (0)	293 (325)
White sucker	0.0035 (0.0029)	633 (868)	214 (387)	395 (442)	8 (17)	0 (0)	0 (0)	44 (79)	0 (0)	1,294 (1,051)
Black bullhead	<0.0000 (<0.0000)	0 (0)	0 (0)	0 (0)	13 (28)	0 (0)	0 (0)	0 (0)	0 (0)	13 (28)
Channel catfish	0.0002 (0.0003)	0 (0)	0 (0)	14 (29)	0 (0)	0 (0)	8 (12)	42 (78)	0 (0)	64 (84)
White bass	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	49 (99)	0 (0)	0 (0)	0 (0)	0 (0)	49 (99)
Rock bass	0.0017 (0.0009)	0 (0)	152 (127)	60 (79)	412 (264)	0 (0)	0 (0)	3 (6)	0 (0)	627 (303)
Bluegill	0.0012 (0.0010)	0 (0)	111 (145)	0 (0)	341 (321)	0 (0)	0 (0)	0 (0)	0 (0)	452 (352)
Smallmouth bass	0.0002 (0.0002)	0 (0)	23 (34)	0 (0)	48 (74)	0 (0)	0 (0)	4 (8)	0 (0)	75 (82)

Appendix 35. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Yellow perch	0.2708 (0.1893)	47,853 (65,446)	4,109 (2,036)	2,286 (1,541)	1,669 (1,808)	431 (791)	14,350 (12,455)	26,823 (12,683)	2,830 (1,976)	100,351 (67,923)
Walleye	0.0016 (0.0013)	0 (0)	15 (31)	138 (203)	369 (420)	0 (0)	83 (98)	0 (0)	1 (2)	606 (478)
Burbot	0.0002 (0.0001)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	49 (38)	27 (25)	76 (45)
Other	<0.0000 (<0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1 (3)	1 (3)
Total	0.3688 (0.2039)	68,888 (69,267)	5,322 (2,102)	4,894 (1,918)	8,148 (2,695)	1,806 (1,127)	16,702 (12,499)	27,972 (12,694)	2,937 (1,978)	136,669 (71,665)
Angler hours		109,708 (55,753)	26,437 (7,154)	55,363 (14,840)	56,249 (15,703)	59,865 (17,019)	42,441 (16,138)	18,951 (4,848)	1,582 (773)	370,596 (64,812)
Angler trips		20,653 (10,019)	4,967 (1,341)	14,482 (3,322)	12,904 (3,024)	15,355 (3,980)	10,843 (3,748)	5,458 (1,435)	564 (297)	85,226 (12,426)
Angler days		16,133 (9,056)	4,033 (1,106)	11,659 (2,727)	11,861 (2,773)	15,334 (3,979)	9,832 (3,545)	5,182 (1,399)	551 (289)	74,585 (11,349)

Appendix 36. Estimated sportfishing catch and effort for Oscoda, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0004 (0.0005)	0 (0)	12 (26)	0 (0)	0 (0)	72 (108)	0 (0)	0 (0)	84 (111)
Chinook salmon	0.0281 (0.0142)	487 (703)	102 (119)	784 (1,217)	395 (410)	3,503 (2,088)	806 (616)	59 (115)	6,136 (2,629)
Rainbow trout	0.0001 (0.0002)	0 (0)	15 (33)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	15 (33)
Brown trout	0.0007 (0.0009)	15 (33)	0 (0)	0 (0)	0 (0)	116 (179)	12 (26)	0 (0)	143 (184)
Lake trout	0.0400 (0.0246)	0 (0)	285 (311)	6,331 (4,613)	1,420 (1,329)	708 (506)	0 (0)	0 (0)	8,744 (4,837)
Channel catfish	0.0002 (0.0003)	0 (0)	0 (0)	26 (57)	0 (0)	27 (56)	0 (0)	0 (0)	53 (80)
Yellow perch	0.0006 (0.0013)	121 (254)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	121 (254)
Total	0.0701 (0.0315)	623 (748)	414 (336)	7,141 (4,771)	1,815 (1,391)	4,426 (2,159)	818 (617)	59 (115)	15,296 (5,516)
Angler hours		11,692 (5,871)	8,787 (6,562)	36,697 (24,346)	38,242 (26,339)	82,324 (37,639)	39,069 (25,905)	1,518 (1,252)	218,329 (58,765)
Angler trips		2,509 (1,260)	1,920 (1,443)	7,963 (4,661)	9,329 (6,502)	18,098 (8,247)	7,453 (4,767)	395 (345)	47,667 (12,591)
Angler days		2,453 (1,231)	1,681 (1,285)	7,597 (4,461)	8,022 (5,600)	14,987 (6,885)	6,072 (3,840)	395 (345)	41,207 (10,803)

Appendix 37. Estimated sportfishing catch and effort for the Harrisville boat fishery, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Coho salmon	0.0027 (0.0023)	0 (0)	4 (9)	0 (0)	36 (79)	0 (0)	0 (0)	320 (286)	360 (297)
Chinook salmon	0.0453 (0.0209)	0 (0)	43 (52)	128 (158)	320 (271)	1,127 (679)	4,088 (2,128)	371 (395)	6,077 (2,291)
Brown trout	0.0004 (0.0004)	0 (0)	9 (17)	0 (0)	31 (46)	5 (10)	7 (15)	0 (0)	52 (52)
Brook trout	0.0001 (0.0002)	0 (0)	4 (9)	0 (0)	4 (10)	0 (0)	0 (0)	0 (0)	8 (13)
Lake trout	0.0711 (0.0400)	0 (0)	86 (97)	2,473 (2,367)	5,660 (3,984)	1,325 (991)	0 (0)	0 (0)	9,544 (4,740)
Channel catfish	0.0005 (0.0006)	0 (0)	0 (0)	0 (0)	0 (0)	35 (57)	11 (23)	26 (55)	72 (82)
Yellow perch	<0.0000 (<0.0000)	0 (0)	5 (12)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	5 (12)
Total	0.1201 (0.0505)	0 (0)	151 (113)	2,601 (2,372)	6,051 (3,994)	2,492 (1,203)	4,106 (2,128)	717 (491)	16,118 (5,273)
Angler hours		0 (0)	3,259 (2,970)	11,023 (9,766)	30,594 (19,652)	30,861 (17,214)	51,176 (21,484)	7,277 (3,405)	134,190 (35,495)
Angler trips		0 (0)	736 (674)	2,285 (1,850)	6,328 (4,076)	6,904 (3,787)	10,861 (4,580)	1,507 (707)	28,621 (7,504)
Angler days		0 (0)	736 (674)	2,269 (1,835)	5,324 (3,430)	5,219 (2,881)	8,393 (3,557)	1,507 (707)	23,448 (6,086)

Appendix 38. Estimated sportfishing catch and effort for Rockport, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	
Pink salmon	0.0014 (0.0029)	0 (0)	0 (0)	0 (0)	79 (162)	0 (0)	0 (0)	0 (0)	79 (162)
Coho salmon	0.0016 (0.0029)	0 (0)	0 (0)	0 (0)	79 (162)	12 (24)	0 (0)	0 (0)	91 (164)
Chinook salmon	0.1364 (0.0519)	0 (0)	0 (0)	119 (136)	1,975 (1,450)	5,432 (2,161)	54 (67)	0 (0)	7,580 (2,607)
Rainbow trout	0.0013 (0.0018)	0 (0)	0 (0)	0 (0)	71 (96)	0 (0)	0 (0)	0 (0)	71 (96)
Brown trout	0.0006 (0.0012)	0 (0)	0 (0)	0 (0)	32 (65)	0 (0)	0 (0)	0 (0)	32 (65)
Brook trout	0.0014 (0.0029)	0 (0)	0 (0)	0 (0)	79 (162)	0 (0)	0 (0)	0 (0)	79 (162)
Lake trout	0.0051 (0.0048)	0 (0)	0 (0)	28 (59)	172 (215)	83 (142)	0 (0)	0 (0)	283 (264)
Channel catfish	0.0028 (0.0035)	0 (0)	0 (0)	0 (0)	39 (79)	118 (176)	0 (0)	0 (0)	157 (193)
Yellow perch	0.0124 (0.0146)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	692 (805)	692 (805)
Total	0.1631 (0.0564)	0 (0)	0 (0)	147 (148)	2,526 (1,499)	5,645 (2,173)	54 (67)	692 (805)	9,064 (2,765)
Angler hours		0 (0)	0 (0)	2,587 (1,271)	20,699 (6,832)	28,474 (5,643)	3,212 (1,224)	618 (233)	55,590 (9,038)
Angler trips		0 (0)	0 (0)	689 (374)	4,868 (1,664)	5,088 (1,046)	1,307 (371)	277 (157)	12,229 (2,041)
Angler days		0 (0)	0 (0)	689 (374)	4,868 (1,664)	4,888 (1,037)	1,118 (364)	277 (157)	11,840 (2,035)

Appendix 39. Estimated sportfishing catch and effort for the Presque Isle boat fishery, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month				Season total
		May	Jun	Jul	Aug	
Angler hours		504 (202)	5,594 (2,409)	3,737 (921)	3,203 (987)	13,038 (2,769)
Angler trips		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Angler days		0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

Appendix 40. Estimated sportfishing catch and effort for Rogers City, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month						Season total
		May	Jun	Jul	Aug	Sep	Oct	
Pink salmon	0.0004 (0.0006)	22 (46)	0 (0)	38 (77)	0 (0)	0 (0)	0 (0)	60 (90)
Coho salmon	0.0017 (0.0013)	0 (0)	6 (13)	37 (53)	8 (15)	225 (203)	0 (0)	276 (211)
Chinook salmon	0.1186 (0.0356)	0 (0)	92 (136)	1,548 (687)	12,034 (3,858)	5,263 (2,472)	115 (122)	19,052 (4,637)
Brown trout	0.0045 (0.0040)	29 (43)	0 (0)	219 (206)	30 (61)	330 (582)	117 (113)	725 (632)
Lake trout	0.0212 (0.0098)	1,918 (1,063)	774 (767)	552 (609)	166 (177)	0 (0)	0 (0)	3,410 (1,456)
Channel catfish	0.0004 (0.0006)	0 (0)	0 (0)	22 (44)	50 (101)	0 (0)	0 (0)	72 (110)
Rock bass	0.0002 (0.0004)	0 (0)	0 (0)	38 (81)	0 (0)	0 (0)	0 (0)	38 (81)
Yellow perch	0.0058 (0.0080)	0 (0)	0 (0)	928 (1,270)	0 (0)	0 (0)	0 (0)	928 (1,270)
Round whitefish	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	21 (45)	21 (45)
Total	0.1530 (0.0414)	1,969 (1,065)	872 (779)	3,382 (1,586)	12,288 (3,864)	5,818 (2,548)	253 (172)	24,582 (5,070)
Angler hours		5,157 (2,247)	5,396 (2,111)	29,599 (7,049)	84,610 (24,460)	33,912 (11,580)	1,960 (766)	160,634 (28,145)
Angler trips		1,507 (658)	1,509 (596)	7,250 (1,715)	18,554 (5,274)	8,074 (2,735)	633 (264)	37,527 (6,253)
Angler days		1,507 (658)	1,509 (596)	7,250 (1,715)	18,035 (5,161)	7,671 (2,629)	566 (244)	36,538 (6,110)

Appendix 42. Estimated sportfishing catch and effort for the Drummond Island boat fishery, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	14 (36)	40 (82)	0 (0)	0 (0)	54 (90)
Chinook salmon	0.0023 (0.0020)	248 (526)	0 (0)	165 (248)	412 (523)	89 (117)	0 (0)	0 (0)	914 (791)
Rainbow trout	0.0002 (0.0004)	0 (0)	69 (140)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	69 (140)
Brown trout	0.0001 (0.0003)	0 (0)	0 (0)	0 (0)	30 (77)	0 (0)	0 (0)	0 (0)	30 (77)
Lake trout	0.0022 (0.0031)	496 (1,053)	0 (0)	376 (639)	12 (32)	0 (0)	0 (0)	0 (0)	884 (1,232)
Rainbow smelt	0.0002 (0.0004)	83 (175)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	83 (175)
Northern pike	0.0613 (0.0230)	8,689 (5,362)	2,727 (2,355)	1,678 (1,779)	6,851 (4,728)	1,878 (1,309)	2,323 (1,703)	84 (146)	24,230 (8,028)
Redhorse (spp.)	0.0006 (0.0009)	0 (0)	0 (0)	224 (324)	0 (0)	0 (0)	0 (0)	0 (0)	224 (324)
Black bullhead	0.0084 (0.0164)	0 (0)	0 (0)	3,333 (6,486)	0 (0)	0 (0)	0 (0)	0 (0)	3,333 (6,486)
Yellow bullhead	0.0004 (0.0008)	0 (0)	0 (0)	146 (297)	0 (0)	0 (0)	0 (0)	0 (0)	146 (297)
Brown bullhead	0.0022 (0.0032)	0 (0)	0 (0)	0 (0)	147 (308)	17 (36)	723 (1,232)	0 (0)	887 (1,270)
Channel catfish	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	53 (110)	0 (0)	0 (0)	0 (0)	53 (110)
Rock bass	0.0222 (0.0186)	997 (1,269)	2,606 (2,714)	468 (776)	4,478 (6,467)	0 (0)	209 (343)	0 (0)	8,758 (7,178)
Longear sunfish	0.0039 (0.0081)	0 (0)	1,531 (3,151)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1,531 (3,151)

Appendix 42. Continued:

Species	Total catch per hour	Month							Season total
		May	Jun	Jul	Aug	Sep	Oct	Nov	
Redear sunfish	0.0043 (0.0049)	1,023 (1,736)	231 (341)	330 (674)	116 (158)	0 (0)	0 (0)	0 (0)	1,700 (1,900)
Smallmouth bass	0.0109 (0.0092)	354 (591)	827 (869)	243 (494)	2,801 (3,372)	95 (147)	0 (0)	0 (0)	4,320 (3,569)
Largemouth bass	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	30 (61)	0 (0)	0 (0)	30 (61)
Black crappie	0.0002 (0.0004)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	90 (199)	0 (0)	90 (199)
Yellow perch	0.5735 (0.2239)	54,196 (34,019)	2,373 (1,863)	7,847 (7,340)	14,949 (12,242)	68,862 (31,768)	74,614 (62,185)	3,665 (2,389)	226,506 (79,034)
Walleye	0.0254 (0.0128)	155 (247)	1,072 (1,088)	7,441 (4,373)	1,353 (1,400)	0 (0)	0 (0)	0 (0)	10,021 (4,725)
Round whitefish	0.0016 (0.0024)	0 (0)	273 (563)	364 (742)	0 (0)	0 (0)	0 (0)	0 (0)	637 (931)
Other	0.3019 (0.1484)	0 (0)	0 (0)	118,188 (54,752)	16 (41)	111 (230)	943 (959)	0 (0)	119,258 (54,761)
Total	1.0222 (0.3044)	66,241 (34,533)	11,709 (5,358)	140,803 (55,844)	31,232 (15,093)	71,122 (31,797)	78,902 (62,229)	3,749 (2,393)	403,758 (97,246)
Angler hours		74,187 (29,844)	58,822 (21,143)	140,693 (41,539)	59,787 (34,764)	34,130 (13,573)	26,512 (18,210)	840 (0)	394,971 (69,192)
Angler trips		15,568 (6,441)	16,405 (5,838)	35,529 (10,467)	15,724 (9,138)	7,701 (3,174)	6,894 (4,587)	210 (79)	98,031 (17,313)
Angler days		9,271 (3,819)	8,877 (3,118)	24,244 (7,427)	8,826 (5,176)	5,195 (2,158)	5,177 (3,427)	140 (97)	61,730 (11,076)

Appendix 43. Estimated sportfishing catch and effort for the Cedarville-Hessel boat fishery, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month				Season total
		Aug	Sep	Oct	Nov	
Chinook salmon	0.0103 (0.0128)	0 (0)	478 (586)	0 (0)	0 (0)	478 (586)
Northern pike	0.0432 (0.0312)	0 (0)	1,576 (1,209)	422 (685)	0 (0)	1,998 (1,390)
Rock bass	0.0061 (0.0124)	0 (0)	283 (571)	0 (0)	0 (0)	283 (571)
Redear sunfish	0.0031 (0.0063)	0 (0)	142 (286)	0 (0)	0 (0)	142 (286)
Smallmouth bass	0.0035 (0.0071)	0 (0)	162 (326)	0 (0)	0 (0)	162 (326)
Black crappie	0.0070 (0.0077)	0 (0)	324 (349)	0 (0)	0 (0)	324 (349)
Yellow perch	3.4789 (1.2325)	0 (0)	139,683 (45,565)	21,117 (15,110)	0 (0)	160,800 (48,005)
Other	0.0047 (0.0075)	0 (0)	63 (127)	154 (321)	0 (0)	217 (345)
Total	3.5569 (1.2412)	0 (0)	142,711 (45,592)	21,693 (15,129)	0 (0)	164,404 (48,037)
Angler hours		0 (0)	39,365 (8,073)	6,856 (3,545)	1,185 (782)	46,221 (8,817)
Angler trips		0 (0)	10,802 (2,282)	2,245 (1,232)	0 (0)	13,047 (2,593)
Angler days		0 (0)	7,890 (1,833)	1,747 (940)	0 (0)	9,637 (2,060)

Appendix 44. Estimated sportfishing catch and effort for the St. Ignace boat fishery, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0045 (0.0070)	0 (0)	0 (0)	170 (366)	85 (148)	0 (0)	0 (0)	0 (0)	255 (395)
Chinook salmon	0.0884 (0.0387)	0 (0)	21 (50)	809 (822)	1,895 (1,055)	2,334 (1,387)	0 (0)	0 (0)	5,059 (1,927)
Rainbow trout	0.0003 (0.0006)	0 (0)	0 (0)	0 (0)	0 (0)	18 (37)	0 (0)	0 (0)	18 (37)
Brown trout	0.0008 (0.0016)	0 (0)	0 (0)	43 (88)	0 (0)	0 (0)	0 (0)	0 (0)	43 (88)
Lake trout	0.0004 (0.0008)	0 (0)	0 (0)	0 (0)	21 (44)	0 (0)	0 (0)	0 (0)	21 (44)
Northern pike	0.0074 (0.0075)	0 (0)	0 (0)	0 (0)	322 (392)	100 (144)	0 (0)	0 (0)	422 (418)
White sucker	0.0046 (0.0105)	0 (0)	261 (595)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	261 (595)
Rock bass	0.0006 (0.0014)	0 (0)	33 (78)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	33 (78)
Black crappie	0.0005 (0.0012)	0 (0)	29 (69)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	29 (69)
Yellow perch	0.0267 (0.0290)	0 (0)	148 (298)	1,267 (1,591)	111 (162)	0 (0)	0 (0)	0 (0)	1,526 (1,627)
Lake whitefish	0.0100 (0.0133)	0 (0)	0 (0)	572 (749)	0 (0)	0 (0)	0 (0)	0 (0)	572 (749)
Other	0.0022 (0.0041)	100 (225)	0 (0)	0 (0)	26 (53)	0 (0)	0 (0)	0 (0)	126 (231)

Appendix 43. Continued:

Species	Total catch per hour	Month							Season total
		May	Jun	Jul	Aug	Sep	Oct	Nov	
Total	0.1461 (0.0577)	100 (225)	492 (675)	2,861 (1,977)	2,460 (1,149)	2,452 (1,395)	0 (0)	0 (0)	8,365 (2,771)
Angler hours		3,632 (3,186)	2,087 (1,922)	15,819 (7,893)	18,826 (7,247)	16,345 (4,856)	531 (369)	404 (261)	57,240 (12,344)
Angler trips		1,121 (987)	568 (580)	3,661 (2,053)	4,197 (1,643)	2,978 (973)	228 (160)	0 (0)	12,753 (3,033)
Angler days		697 (623)	344 (342)	2,679 (1,417)	3,036 (1,229)	2,629 (913)	228 (160)	0 (0)	9,613 (2,210)

SECTION III.

Lake Erie Catch and Effort Estimates by Site

Appendix 45. Estimated sportfishing catch and effort for the Lake Erie boat fishery from the mouth of the Raisin River to the Michigan-Ohio state line, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		May	Jun	Jul	Aug	Sep	Oct	Nov	
Yellow bullhead	0.0013 (0.0026)	0 (0)	0 (0)	0 (0)	0 (0)	46 (95)	1,339 (2,704)	0 (0)	1,385 (2,706)
Brown bullhead	0.0013 (0.0013)	274 (414)	0 (0)	320 (592)	529 (1,101)	0 (0)	216 (486)	72 (161)	1,411 (1,413)
Channel catfish	0.0578 (0.0298)	6,851 (7,079)	16,739 (23,507)	9,850 (9,800)	14,371 (12,311)	11,563 (8,316)	1,874 (2,108)	1,704 (2,960)	62,952 (30,539)
White perch	0.0080 (0.0075)	1,116 (941)	2,133 (3,871)	805 (950)	0 (0)	4,616 (6,872)	0 (0)	0 (0)	8,670 (8,000)
White bass	0.0478 (0.0199)	10,740 (8,343)	1,129 (921)	9,516 (7,320)	15,861 (12,914)	12,853 (9,332)	1,696 (3,251)	359 (804)	52,154 (19,726)
Rock bass	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	72 (161)	72 (161)
Pumpkinseed	0.0001 (0.0002)	75 (158)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	75 (158)
Warmouth	<0.0000 (<0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	22 (45)	0 (0)	0 (0)	22 (45)
Bluegill	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	91 (191)	0 (0)	0 (0)	91 (191)
Smallmouth bass	<0.0000 (<0.0000)	0 (0)	0 (0)	52 (107)	0 (0)	0 (0)	0 (0)	0 (0)	52 (107)
White crappie	0.0002 (0.0003)	13 (27)	0 (0)	237 (398)	0 (0)	0 (0)	0 (0)	0 (0)	250 (399)
Black crappie	0.0007 (0.0014)	0 (0)	0 (0)	0 (0)	0 (0)	804 (1,598)	0 (0)	0 (0)	804 (1,598)
Yellow perch	0.4780 (0.1711)	13,044 (7,324)	60,345 (34,148)	28,703 (11,092)	77,650 (53,638)	205,999 (102,443)	125,444 (105,471)	9,764 (24,612)	520,949 (162,617)
Walleye	0.3298 (0.1026)	67,723 (38,945)	176,097 (74,633)	101,151 (31,192)	14,442 (21,884)	46 (95)	0 (0)	0 (0)	359,459 (92,405)

Appendix 45. Continued:

Species	Total catch per hour	Month							Season total
		May	Jun	Jul	Aug	Sep	Oct	Nov	
Freshwater drum	0.0156 (0.0095)	3,003 (2,342)	4,893 (6,091)	2,163 (2,121)	5,720 (7,000)	1,003 (1,177)	271 (607)	0 (0)	17,053 (9,891)
Other	0.0003 (0.0006)	332 (683)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	332 (683)
Total	0.9411 (0.2406)	103,171 (41,196)	261,336 (85,684)	152,797 (35,377)	128,573 (61,029)	237,043 (103,451)	130,840 (105,580)	11,971 (24,803)	1,025,731 (190,996)
Angler hours		197,226 (95,920)	372,203 (130,303)	270,130 (78,654)	111,935 (46,223)	94,046 (36,193)	38,169 (25,158)	6,251 (5,939)	1,089,960 (190,999)
Angler trips		34,337 (16,581)	61,912 (21,171)	47,934 (13,803)	21,765 (9,493)	19,077 (7,326)	8,782 (5,794)	1,397 (1,290)	195,204 (33,056)
Angler days		34,222 (16,512)	61,912 (21,171)	47,659 (13,729)	21,765 (9,493)	18,550 (7,159)	8,782 (5,794)	1,397 (1,290)	194,287 (32,954)

Appendix 46. Estimated sportfishing catch and effort for the Lake Erie boat fishery from Pte. Mouillee to the mouth of the Raisin River, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month							Season total
		May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0001 (0.0002)	51 (104)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	51 (104)
White sucker	0.0001 (0.0001)	0 (0)	0 (0)	57 (117)	34 (68)	0 (0)	0 (0)	0 (0)	91 (135)
Redhorse (spp.)	0.0002 (0.0003)	0 (0)	0 (0)	194 (298)	0 (0)	0 (0)	0 (0)	0 (0)	194 (298)
Yellow bullhead	0.0009 (0.0020)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	905 (1,970)	0 (0)	905 (1,970)
Brown bullhead	0.0003 (0.0006)	0 (0)	344 (709)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	344 (709)
Channel catfish	0.0104 (0.0070)	873 (1,343)	3,491 (5,374)	4,098 (3,615)	1,821 (1,048)	0 (0)	0 (0)	35 (80)	10,318 (6,697)
White perch	0.0021 (0.0014)	1,437 (1,167)	547 (716)	95 (112)	0 (0)	0 (0)	0 (0)	0 (0)	2,079 (1,374)
White bass	0.0245 (0.0178)	2,661 (1,651)	626 (623)	4,048 (4,164)	5,019 (6,318)	11,867 (15,240)	0 (0)	0 (0)	24,221 (17,106)
Rock bass	0.0031 (0.0024)	17 (36)	0 (0)	730 (546)	651 (650)	1,413 (2,103)	249 (564)	0 (0)	3,060 (2,337)
Bluegill	0.0020 (0.0032)	0 (0)	0 (0)	1,969 (3,144)	0 (0)	0 (0)	0 (0)	0 (0)	1,969 (3,144)
White crappie	0.0006 (0.0012)	0 (0)	0 (0)	0 (0)	0 (0)	577 (1,197)	0 (0)	0 (0)	577 (1,197)
Black crappie	<0.0000 (<0.0000)	0 (0)	0 (0)	29 (58)	0 (0)	0 (0)	0 (0)	0 (0)	29 (58)
Yellow perch	0.3267 (0.1602)	7,392 (4,005)	17,343 (10,632)	20,208 (8,390)	21,130 (13,557)	164,961 (125,435)	82,091 (77,237)	10,220 (10,841)	323,345 (148,998)

Appendix 46. Continued:

Species	Total catch per hour	Month							Season total
		May	Jun	Jul	Aug	Sep	Oct	Nov	
Walleye	0.2488 (0.0739)	23,717 (9,411)	105,759 (51,223)	104,783 (29,988)	11,791 (5,490)	157 (336)	0 (0)	0 (0)	246,207 (60,348)
Freshwater drum	0.0133 (0.0060)	5,108 (3,224)	1,960 (1,907)	3,028 (2,955)	1,309 (1,372)	844 (1,172)	905 (1,970)	0 (0)	13,154 (5,468)
Total	0.6331 (0.1950)	41,256 (10,996)	130,070 (52,638)	139,239 (31,924)	41,755 (16,039)	179,819 (126,386)	84,150 (77,289)	10,255 (10,841)	626,544 (161,965)
Angler hours		168,300 (69,970)	317,180 (121,072)	300,034 (72,931)	112,610 (37,889)	59,678 (27,496)	27,268 (19,434)	4,638 (3,300)	989,708 (165,690)
Angler trips		29,372 (11,600)	53,264 (20,800)	50,269 (12,208)	22,036 (7,622)	13,035 (6,134)	7,104 (5,009)	981 (735)	176,061 (28,941)
Angler days		28,895 (11,489)	52,769 (20,586)	49,640 (12,044)	21,897 (7,562)	12,687 (6,038)	7,104 (5,009)	981 (735)	173,973 (28,638)

SECTION IV.

River Catch and Effort Estimates by Site

Appendix 47. Estimated sportfishing catch and effort for the St. Joseph River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month										Season total
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Chinook salmon	0.0369 (0.0117)	3 (4)	0 (0)	136 (216)	0 (0)	0 (0)	0 (0)	3,129 (1,211)	2,237 (1,177)	120 (111)	0 (0)	5,625 (1,706)
Rainbow trout	0.0286 (0.0092)	1,427 (537)	144 (319)	36 (58)	0 (0)	0 (0)	0 (0)	47 (95)	453 (512)	2,036 (1,045)	215 (205)	4,358 (1,341)
Atlantic salmon	<0.0000 (<0.0000)	6 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6 (13)
Brown trout	0.0081 (0.0078)	192 (144)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	779 (1,140)	57 (84)	201 (224)	2 (4)	1,231 (1,174)
White sucker	0.0191 (0.0192)	473 (708)	1,632 (2,502)	617 (1,258)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	189 (386)	0 (0)	2,911 (2,914)
Channel catfish	0.0097 (0.0081)	0 (0)	0 (0)	289 (460)	0 (0)	0 (0)	0 (0)	1,192 (1,147)	0 (0)	0 (0)	0 (0)	1,481 (1,236)
Rock bass	0.0006 (0.0013)	0 (0)	99 (219)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	99 (219)
Bluegill	0.0006 (0.0013)	0 (0)	99 (219)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	99 (219)
Smallmouth bass	0.0003 (0.0006)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	43 (86)	0 (0)	0 (0)	0 (0)	43 (86)
Black crappie	0.0019 (0.0039)	0 (0)	0 (0)	288 (587)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	288 (587)
Yellow perch	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	12 (24)	0 (0)	12 (24)
Walleye	0.0026 (0.0028)	0 (0)	0 (0)	202 (403)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	140 (140)	61 (57)	403 (430)

Appendix 47. Continued:

Species	Total catch per hour	Month										Season total
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Total	0.1085 (0.0288)	2,101 (900)	1,974 (2,541)	1,568 (1,533)	0 (0)	0 (0)	0 (0)	5,190 (2,024)	2,747 (1,286)	2,698 (1,151)	278 (213)	16,556 (4,091)
Angler hours		19,394 (2,916)	6,203 (4,095)	6,058 (1,614)	0 (0)	0 (0)	0 (0)	54,460 (9,356)	34,329 (9,051)	29,332 (4,023)	2,748 (659)	152,524 (14,627)
Angler trips		3,879 (558)	1,064 (790)	1,146 (342)	0 (0)	0 (0)	0 (0)	8,654 (1,662)	5,866 (1,597)	5,584 (779)	731 (267)	26,924 (2,654)
Angler days		3,621 (548)	942 (722)	860 (412)	0 (0)	0 (0)	0 (0)	7,262 (1,500)	5,644 (1,556)	5,538 (777)	731 (267)	24,598 (2,517)

Appendix 48. Estimated sportfishing catch and effort for the Kalamazoo River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month										Season total	
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Coho salmon	0.0003 (0.0004)	3 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4 (9)	4 (9)	0 (0)	11 (15)
Chinook salmon	0.0266 (0.0173)	6 (13)	18 (36)	0 (0)	0 (0)	0 (0)	0 (0)	732 (578)	174 (141)	16 (18)	0 (0)	0 (0)	946 (596)
Rainbow trout	0.0203 (0.0086)	316 (170)	146 (165)	0 (0)	0 (0)	0 (0)	0 (0)	58 (118)	106 (90)	97 (53)	0 (0)	0 (0)	723 (285)
Brown trout	0.0098 (0.0102)	45 (49)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	287 (355)	11 (23)	5 (6)	0 (0)	0 (0)	348 (359)
Brook trout	0.0001 (0.0002)	3 (7)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (7)
Northern pike	0.0017 (0.0024)	0 (0)	0 (0)	60 (85)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	60 (85)
White sucker	0.0101 (0.0130)	312 (449)	46 (91)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	358 (458)
Channel catfish	0.0199 (0.0262)	0 (0)	56 (112)	0 (0)	0 (0)	0 (0)	0 (0)	644 (919)	7 (14)	0 (0)	0 (0)	0 (0)	707 (926)
Rock bass	0.0040 (0.0057)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	143 (204)	0 (0)	0 (0)	0 (0)	0 (0)	143 (204)
Bluegill	0.0025 (0.0035)	0 (0)	0 (0)	88 (124)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	88 (124)
Largemouth bass	0.0003 (0.0004)	0 (0)	0 (0)	12 (17)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	12 (17)
Yellow perch	0.0020 (0.0029)	0 (0)	0 (0)	72 (102)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	72 (102)
Walleye	0.0013 (0.0014)	0 (0)	0 (0)	27 (38)	0 (0)	0 (0)	0 (0)	0 (0)	17 (29)	1 (1)	0 (0)	0 (0)	45 (48)
Other	0.0004 (0.0007)	2 (5)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	13 (26)	0 (0)	0 (0)	0 (0)	15 (26)

Appendix 48. Continued:

Species	Total catch per hour	Month										Season total
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Total	0.0992 (0.0399)	687 (483)	266 (222)	259 (186)	0 (0)	0 (0)	0 (0)	1,864 (1,166)	332 (174)	123 (57)	0 (0)	3,531 (1,308)
Angler hours		7,458 (2,484)	6,105 (412)	248 (225)	0 (0)	0 (0)	0 (0)	15,348 (4,608)	5,328 (1,774)	864 (223)	252 (145)	35,603 (5,554)
Angler trips		1,309 (424)	1,577 (296)	16 (17)	0 (0)	0 (0)	0 (0)	3,499 (1,134)	927 (317)	198 (58)	100 (82)	7,626 (1,290)
Angler days		1,146 (369)	1,577 (296)	5 (6)	0 (0)	0 (0)	0 (0)	3,439 (1,131)	867 (302)	193 (57)	100 (82)	7,327 (1,267)

Appendix 49. Estimated sportfishing catch and effort for the Grand River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0012 (0.0018)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	40 (59)	0 (0)	40 (59)
Chinook salmon	0.0589 (0.0532)	17 (28)	0 (0)	0 (0)	0 (0)	0 (0)	1,199 (1,595)	793 (769)	0 (0)	2,009 (1,771)
Rainbow trout	0.0553 (0.0304)	1,009 (823)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	515 (391)	361 (336)	1,885 (971)
Brown trout	0.0021 (0.0029)	12 (25)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	59 (95)	0 (0)	71 (98)
Lake trout	0.0006 (0.0012)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	22 (45)	0 (0)	22 (45)
White sucker	0.0024 (0.0036)	81 (121)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	81 (121)
Channel catfish	0.0003 (0.0006)	10 (21)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	10 (21)
Rock bass	0.0011 (0.0022)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	37 (75)	0 (0)	37 (75)
Black crappie	0.0011 (0.0022)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	37 (75)	0 (0)	37 (75)
Walleye	0.0211 (0.0157)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	704 (515)	15 (31)	719 (516)
Freshwater drum	0.0003 (0.0006)	10 (21)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	10 (21)

Appendix 49. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Total	0.1449 (0.0675)	1,139 (833)	0 (0)	0 (0)	0 (0)	0 (0)	1,199 (1,595)	2,207 (1,017)	376 (337)	4,921 (2,094)
Angler hours		7,608 (4,210)	0 (0)	0 (0)	0 (0)	0 (0)	12,792 (3,660)	11,293 (3,090)	2,405 (1,703)	34,098 (6,601)
Angler trips		2,435 (1,425)	0 (0)	0 (0)	0 (0)	0 (0)	3,762 (1,341)	3,690 (1,104)	579 (394)	10,466 (2,281)
Angler days		2,069 (1,226)	0 (0)	0 (0)	0 (0)	0 (0)	3,762 (1,341)	3,058 (967)	579 (394)	9,468 (2,096)

Appendix 50. Estimated sportfishing catch and effort for the Muskegon River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	<0.0000 (<0.0000)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3 (6)	3 (6)
Chinook salmon	0.1094 (0.0486)	27 (54)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	6,512 (2,924)	123 (111)	6,662 (2,927)
Rainbow trout	0.0484 (0.0181)	2,053 (665)	297 (347)	0 (0)	0 (0)	0 (0)	0 (0)	453 (773)	143 (92)	2,946 (1,081)
Brown trout	0.0087 (0.0129)	0 (0)	7 (15)	0 (0)	0 (0)	0 (0)	0 (0)	503 (785)	19 (38)	529 (786)
Northern pike	0.0006 (0.0012)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	36 (73)	0 (0)	36 (73)
Bluegill	0.0011 (0.0016)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	70 (100)	70 (100)
Yellow perch	0.0619 (0.0515)	578 (894)	2,784 (2,930)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	405 (610)	3,767 (3,123)
Walleye	0.0012 (0.0024)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	73 (146)	0 (0)	73 (146)
Total	0.2313 (0.0754)	2,658 (1,116)	3,088 (2,951)	0 (0)	0 (0)	0 (0)	0 (0)	7,577 (3,129)	763 (636)	14,086 (4,489)
Angler hours		24,979 (2,857)	6,912 (1,478)	0 (0)	0 (0)	0 (0)	0 (0)	25,278 (2,421)	3,730 (941)	60,899 (4,134)
Angler trips		4,021 (520)	1,177 (309)	0 (0)	0 (0)	0 (0)	0 (0)	5,163 (853)	636 (171)	10,997 (1,060)
Angler days		3,662 (499)	1,177 (309)	0 (0)	0 (0)	0 (0)	0 (0)	4,244 (826)	592 (167)	9,675 (1,027)

Appendix 51. Estimated sportfishing catch and effort for the Betsie River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0297 (0.0261)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	543 (464)	1,404 (1,620)	0 (0)	1,947 (1,685)
Chinook salmon	0.0469 (0.0360)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2,179 (2,133)	860 (908)	32 (41)	3,071 (2,319)
Rainbow trout	0.0397 (0.0221)	530 (316)	280 (598)	0 (0)	0 (0)	0 (0)	43 (87)	1,585 (1,219)	162 (114)	2,600 (1,401)
Brown trout	0.0127 (0.0121)	446 (655)	0 (0)	0 (0)	0 (0)	0 (0)	136 (199)	249 (380)	0 (0)	831 (783)
Total	0.1289 (0.0534)	976 (727)	280 (598)	0 (0)	0 (0)	0 (0)	2,901 (2,194)	4,098 (2,254)	194 (121)	8,449 (3,286)
Angler hours		4,140 (596)	1,876 (925)	0 (0)	0 (0)	0 (0)	30,636 (5,733)	24,360 (7,351)	4,530 (628)	65,542 (9,408)
Angler trips		1,242 (332)	561 (294)	0 (0)	0 (0)	0 (0)	7,846 (1,451)	4,671 (1,522)	1,079 (183)	15,399 (2,157)
Angler days		670 (210)	432 (209)	0 (0)	0 (0)	0 (0)	7,846 (1,451)	3,267 (1,147)	634 (122)	12,849 (1,877)

Appendix 52. Estimated sportfishing catch and effort for Platte Bay the the Platte River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month										Season total
		Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Coho salmon	0.0439 (0.0484)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1,937 (2,112)	0 (0)	0 (0)	0 (0)	1,937 (2,112)
Chinook salmon	0.0281 (0.0175)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1,231 (747)	0 (0)	10 (14)	0 (0)	1,241 (747)
Rainbow trout	0.0250 (0.0150)	0 (0)	251 (324)	87 (97)	0 (0)	0 (0)	0 (0)	79 (162)	552 (512)	135 (70)	0 (0)	1,104 (638)
Atlantic salmon	0.0006 (0.0013)	0 (0)	25 (52)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	25 (52)
Brown trout	0.0133 (0.0172)	0 (0)	375 (735)	159 (132)	0 (0)	0 (0)	0 (0)	53 (77)	0 (0)	0 (0)	0 (0)	587 (751)
Lake trout	0.0002 (0.0004)	0 (0)	0 (0)	7 (13)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7 (13)
Total	0.1110 (0.0584)	0 (0)	651 (805)	253 (164)	0 (0)	0 (0)	0 (0)	3,300 (2,247)	552 (512)	145 (71)	0 (0)	4,901 (2,448)
Angler hours		0 (0)	4,620 (2,015)	2,480 (678)	0 (0)	0 (0)	0 (0)	28,565 (6,784)	7,135 (1,652)	1,350 (388)	0 (0)	44,150 (7,309)
Angler trips		0 (0)	1,139 (524)	670 (190)	0 (0)	0 (0)	0 (0)	7,031 (1,898)	1,695 (437)	330 (112)	0 (0)	10,865 (2,029)
Angler days		0 (0)	646 (316)	468 (144)	0 (0)	0 (0)	0 (0)	6,645 (1,835)	1,103 (306)	190 (66)	0 (0)	9,052 (1,894)

Appendix 53. Estimated sportfishing catch and effort for the Bear River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0054 (0.0085)	121 (246)	0 (0)	0 (0)	0 (0)	0 (0)	34 (69)	0 (0)	8 (16)	163 (256)
Chinook salmon	0.0549 (0.0323)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1,017 (669)	624 (673)	15 (31)	1,656 (949)
Rainbow trout	0.0428 (0.0233)	829 (613)	234 (232)	0 (0)	0 (0)	0 (0)	90 (154)	58 (76)	79 (81)	1,290 (682)
Brown trout	0.0015 (0.0030)	0 (0)	44 (88)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	44 (88)
Brook trout	0.0012 (0.0024)	0 (0)	37 (75)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	37 (75)
Rock bass	0.0031 (0.0063)	0 (0)	92 (188)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	92 (188)
Smallmouth bass	0.0031 (0.0063)	0 (0)	92 (188)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	92 (188)
Yellow perch	0.0021 (0.0043)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	63 (129)	0 (0)	0 (0)	63 (129)
Total	0.1140 (0.0438)	950 (661)	499 (371)	0 (0)	0 (0)	0 (0)	1,204 (702)	682 (677)	102 (88)	3,437 (1,238)
Angler hours		12,300 (2,984)	3,350 (773)	0 (0)	899 (446)	0 (0)	7,632 (1,861)	5,675 (1,817)	1,185 (301)	30,142 (4,044)
Angler trips		2,724 (1,226)	1,590 (448)	0 (0)	0 (0)	0 (0)	2,189 (703)	1,188 (594)	286 (78)	7,977 (1,599)
Angler days		2,016 (1,032)	1,379 (402)	0 (0)	0 (0)	0 (0)	2,169 (695)	1,188 (594)	286 (78)	7,038 (1,438)

Appendix 54. Estimated sportfishing catch and effort for the Saginaw River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Brown bullhead	0.0226 (0.0203)	16 (33)	548 (677)	84 (105)	106 (132)	114 (121)	78 (107)	0 (0)	0 (0)	946 (717)
Channel catfish	0.0542 (0.0503)	0 (0)	844 (1,260)	745 (1,176)	162 (150)	489 (492)	31 (43)	0 (0)	0 (0)	2,271 (1,799)
White bass	0.0225 (0.0432)	20 (42)	0 (0)	859 (1,748)	22 (32)	0 (0)	42 (90)	0 (0)	0 (0)	943 (1,751)
Pumpkinseed	0.0020 (0.0043)	0 (0)	0 (0)	0 (0)	0 (0)	83 (174)	0 (0)	0 (0)	0 (0)	83 (174)
Yellow perch	0.1856 (0.1554)	4,530 (4,599)	1,381 (2,017)	5 (10)	170 (311)	704 (1,076)	622 (1,260)	362 (525)	0 (0)	7,774 (5,323)
Freshwater drum	1.2150 (2.7957)	450 (742)	35 (71)	49,904 (114,523)	397 (493)	13 (20)	22 (37)	82 (136)	0 (0)	50,903 (114,527)
Other	0.0086 (0.0088)	0 (0)	213 (270)	13 (16)	0 (0)	18 (38)	0 (0)	115 (176)	0 (0)	359 (325)
Total	1.5103 (2.8324)	5,016 (4,659)	3,021 (2,488)	51,610 (114,542)	857 (617)	1,421 (1,203)	795 (1,269)	559 (570)	0 (0)	63,279 (114,680)
Angler hours		2,604 (1,847)	6,043 (3,905)	24,478 (19,660)	3,500 (1,035)	3,042 (1,094)	1,306 (804)	924 (523)	0 (0)	41,897 (20,208)
Angler trips		919 (658)	2,586 (1,818)	13,776 (13,984)	1,295 (990)	1,543 (731)	421 (363)	596 (372)	0 (0)	21,136 (14,180)
Angler days		879 (623)	2,493 (1,816)	13,737 (13,984)	1,213 (986)	1,307 (639)	366 (318)	512 (321)	0 (0)	20,507 (14,171)

Appendix 55. Estimated sportfishing catch and effort for the Tittabawassee River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month	Season total
		May	
Northern pike	0.0004 (0.0007)	82 (134)	82 (134)
Brown bullhead	0.0261 (0.0242)	5,513 (4,431)	5,513 (4,431)
Channel catfish	0.0005 (0.0008)	101 (158)	101 (158)
White perch	0.0002 (0.0005)	42 (96)	42 (96)
White bass	0.0781 (0.0712)	16,513 (13,009)	16,513 (13,009)
Rock bass	0.0006 (0.0009)	117 (177)	117 (177)
Pumpkinseed	0.0006 (0.0014)	126 (289)	126 (289)
Black crappie	0.0023 (0.0036)	495 (737)	495 (737)
Yellow perch	0.0070 (0.0092)	1,478 (1,824)	1,478 (1,824)
Walleye	0.0693 (0.0774)	14,643 (14,901)	14,643 (14,901)
Freshwater drum	0.0106 (0.0108)	2,237 (2,033)	2,237 (2,033)
Other	0.0019 (0.0035)	405 (721)	405 (721)
Total	0.1976 (0.1328)	41,752 (20,484)	41,752 (20,484)
Angler hours		211,344 (97,000)	211,344 (97,000)
Angler trips		47,052 (15,425)	47,052 (15,425)
Angler days		44,351 (14,475)	44,351 (14,475)

Appendix 56. Estimated sportfishing catch and effort for the Au Sable River, by all modes of fishing, 1986. Two standard errors in parentheses.

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Coho salmon	0.0002 (0.0004)	37 (74)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	37 (74)
Chinook salmon	0.0158 (0.0060)	0 (0)	27 (39)	0 (0)	0 (0)	534 (352)	1,820 (913)	309 (300)	14 (21)	2,704 (1,024)
Rainbow trout	0.0117 (0.0036)	1,007 (446)	364 (220)	27 (54)	17 (34)	27 (55)	0 (0)	466 (338)	88 (72)	1,996 (611)
Brown trout	0.0005 (0.0006)	34 (46)	0 (0)	0 (0)	0 (0)	44 (89)	0 (0)	0 (0)	0 (0)	78 (100)
Lake trout	0.0002 (0.0004)	0 (0)	27 (54)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	27 (54)
Northern pike	0.0002 (0.0003)	0 (0)	0 (0)	15 (31)	17 (33)	0 (0)	0 (0)	0 (0)	0 (0)	32 (45)
White sucker	0.0001 (0.0002)	0 (0)	9 (17)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	9 (17)
Yellow bullhead	0.0006 (0.0008)	0 (0)	0 (0)	108 (136)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	108 (136)
Channel catfish	0.0779 (0.0245)	0 (0)	0 (0)	3,344 (1,285)	4,860 (2,169)	3,805 (2,315)	1,307 (2,338)	0 (0)	0 (0)	13,316 (4,145)
Rock bass	0.0002 (0.0003)	0 (0)	0 (0)	32 (48)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	32 (48)
Bluegill	0.0166 (0.0093)	0 (0)	0 (0)	1,586 (1,209)	908 (914)	347 (495)	0 (0)	0 (0)	0 (0)	2,841 (1,594)
Smallmouth bass	0.0020 (0.0016)	0 (0)	0 (0)	0 (0)	239 (220)	101 (161)	0 (0)	0 (0)	0 (0)	340 (273)
Largemouth bass	0.0001 (0.0002)	0 (0)	0 (0)	0 (0)	0 (0)	9 (18)	0 (0)	0 (0)	0 (0)	9 (18)
Yellow perch	0.0039 (0.0029)	0 (0)	87 (174)	261 (300)	136 (248)	178 (258)	0 (0)	0 (0)	0 (0)	662 (498)

Appendix 56. Continued:

Species	Total catch per hour	Month								Season total
		Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	
Walleye	0.0037 (0.0014)	0 (0)	91 (88)	140 (109)	383 (189)	16 (32)	0 (0)	0 (0)	0 (0)	630 (237)
Freshwater drum	0.0060 (0.0030)	0 (0)	19 (38)	642 (398)	305 (298)	64 (90)	0 (0)	0 (0)	0 (0)	1,030 (507)
Lake whitefish	0.0024 (0.0039)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	403 (656)	0 (0)	403 (656)
Round whitefish	0.0014 (0.0028)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	232 (465)	0 (0)	232 (465)
Total	0.1433 (0.0286)	1,078 (454)	624 (304)	6,155 (1,843)	6,865 (2,403)	5,125 (2,417)	3,127 (2,510)	1,410 (922)	102 (75)	24,486 (4,740)
Angler hours		28,089 (3,116)	15,016 (2,113)	10,843 (1,660)	17,564 (2,516)	21,765 (2,339)	50,039 (5,558)	23,385 (2,983)	4,144 (899)	170,845 (8,326)
Angler trips		5,705 (708)	3,395 (518)	2,301 (369)	3,919 (594)	5,484 (642)	11,646 (1,612)	5,399 (812)	1,059 (250)	38,908 (2,234)
Angler days		4,509 (618)	3,130 (503)	2,204 (365)	3,695 (578)	5,265 (639)	10,155 (1,559)	4,997 (805)	899 (230)	34,854 (2,155)

SECTION V.

Winter Catch and Effort Estimates by Site

Appendix 57. Estimated sportfishing catch and effort for the Huron Bay ice fishery, 1987.
Two standard errors in parentheses.

Species	Total catch per hour	Month		Season total
		Feb	Mar	
Coho salmon	0.0070 (0.0088)	63 (78)	0 (0)	63 (78)
Rainbow trout	0.0004 (0.0008)	0 (0)	4 (8)	4 (8)
Atlantic salmon	0.0002 (0.0003)	2 (3)	0 (0)	2 (3)
Lake trout	0.0030 (0.0042)	15 (27)	12 (25)	27 (37)
Splake	0.0060 (0.0122)	54 (109)	0 (0)	54 (109)
Rainbow smelt	0.1186 (0.1099)	1,072 (961)	0 (0)	1,072 (961)
Northern pike	0.0015 (0.0023)	14 (21)	0 (0)	14 (21)
Yellow perch	0.0090 (0.0119)	81 (105)	0 (0)	81 (105)
Lake whitefish	0.1310 (0.0643)	414 (273)	770 (431)	1,184 (510)
Total	0.2768 (0.1383)	1,715 (1,014)	786 (432)	2,501 (1,102)
Angler hours		4,944 (1,627)	4,092 (1,369)	9,036 (2,126)
Angler trips		1,490 (497)	1,156 (366)	2,646 (617)
Angler days		1,490 (497)	1,156 (366)	2,646 (617)

Appendix 58. Estimated sportfishing catch and effort for the Munising Bay ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month		Season total
		Feb	Mar	
Coho salmon	0.0623 (0.0270)	175 (251)	1,585 (610)	1,760 (660)
Rainbow trout	0.0016 (0.0018)	22 (33)	24 (37)	46 (50)
Brown trout	0.0005 (0.0010)	0 (0)	15 (30)	15 (30)
Lake trout	0.0057 (0.0052)	137 (139)	24 (39)	161 (144)
Splake	0.0036 (0.0045)	101 (125)	0 (0)	101 (125)
Yellow perch	0.0294 (0.0345)	416 (438)	415 (853)	831 (959)
Lake whitefish	0.2410 (0.1208)	6,458 (3,061)	347 (267)	6,805 (3,073)
Round whitefish	0.0016 (0.0026)	36 (73)	10 (14)	46 (74)
Burbot	0.0003 (0.0006)	9 (18)	0 (0)	9 (18)
Other	0.0014 (0.0018)	0 (0)	39 (50)	39 (50)
Total	0.3475 (0.1391)	7,354 (3,109)	2,459 (1,085)	9,813 (3,293)
Angler hours		18,768 (5,869)	9,472 (1,859)	28,240 (6,156)
Angler trips		4,469 (1,424)	2,649 (520)	7,118 (1,516)
Angler days		4,438 (1,422)	2,630 (518)	7,068 (1,513)

Appendix 59. Estimated sportfishing catch and effort for the Little Bay de Noc ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month			Season total
		Jan	Feb	Mar	
Northern pike	0.0366 (0.0552)	7,871 (13,488)	1,146 (425)	0 (0)	9,017 (13,495)
Yellow perch	2.1022 (1.7234)	338,301 (408,212)	83,250 (49,187)	95,821 (46,562)	517,372 (413,793)
Walleye	0.0152 (0.0127)	2,343 (2,981)	1,410 (693)	0 (0)	3,753 (3,060)
Total	2.1541 (1.7264)	348,515 (408,446)	85,806 (49,194)	95,821 (46,562)	530,142 (414,024)
Angler hours		113,128 (25,729)	97,663 (33,050)	35,322 (14,457)	246,113 (44,309)
Angler trips		32,084 (8,262)	22,053 (8,335)	9,077 (3,518)	63,214 (12,252)
Angler days		30,060 (8,164)	21,914 (8,332)	9,034 (3,512)	61,008 (12,182)

Appendix 60. Estimated sportfishing catch and effort for the Big Bay de Noc ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month			Season total
		Jan	Feb	Mar	
Rainbow smelt	0.0058 (0.0096)	417 (670)	0 (0)	0 (0)	417 (670)
Yellow perch	2.4356 (1.7965)	50,390 (29,653)	87,232 (94,564)	36,893 (43,583)	174,515 (108,264)
Total	2.4414 (1.7977)	50,807 (29,661)	87,232 (94,564)	36,893 (43,583)	174,932 (108,266)
Angler hours		39,165 (20,783)	21,867 (15,273)	10,619 (12,328)	71,651 (28,586)
Angler trips		7,991 (4,118)	5,840 (4,136)	2,778 (3,337)	16,609 (6,723)
Angler days		7,991 (4,118)	5,840 (4,136)	2,778 (3,337)	16,609 (6,723)

Appendix 61. Estimated sportfishing catch and effort for the Cedarville-Hessel ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month		Season total
		Feb	Mar	
Northern pike	0.0031 (0.0045)	39 (81)	96 (174)	135 (192)
Yellow perch	0.4419 (0.2422)	12,394 (6,585)	7,130 (6,166)	19,524 (9,021)
Total	0.4450 (0.2428)	12,433 (6,585)	7,226 (6,168)	19,659 (9,023)
Angler hours		30,089 (10,688)	14,092 (7,451)	44,181 (13,029)
Angler trips		6,377 (2,303)	2,873 (1,503)	9,250 (2,750)
Angler days		5,824 (2,148)	2,708 (1,409)	8,532 (2,569)

Appendix 62. Estimated sportfishing catch and effort for the Munsucong Bay ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month		Season total
		Feb	Mar	
Northern pike	0.0111 (0.0098)	758 (626)	0 (0)	758 (626)
White crappie	0.0002 (0.0004)	0 (0)	14 (31)	14 (31)
Yellow perch	0.3422 (0.1922)	5,054 (5,032)	18,415 (9,636)	23,469 (10,871)
Walleye	0.0349 (0.0346)	2,393 (2,244)	0 (0)	2,393 (2,244)
Total	0.3884 (0.2038)	8,205 (5,545)	18,429 (9,636)	26,634 (11,118)
Angler hours		49,572 (20,266)	19,003 (8,008)	68,575 (21,791)
Angler trips		8,729 (3,510)	3,395 (1,512)	12,124 (3,822)
Angler days		7,436 (3,015)	3,373 (1,507)	10,809 (3,371)

Appendix 63. Estimated sportfishing catch and effort for the Sebewaing to Sand Point ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month			Season total
		Jan	Feb	Mar	
Rainbow smelt	0.0023 (0.0042)	445 (898)	48 (99)	0 (0)	493 (903)
Northern pike	0.0030 (0.0045)	274 (575)	388 (811)	0 (0)	662 (994)
Channel catfish	0.0001 (0.0002)	0 (0)	0 (0)	16 (32)	16 (32)
White perch	0.0007 (0.0011)	16 (32)	0 (0)	130 (220)	146 (222)
Black crappie	0.0009 (0.0008)	45 (68)	14 (29)	139 (152)	198 (169)
Yellow perch	5.5018 (1.6803)	392,233 (160,195)	490,863 (182,315)	312,239 (134,114)	1,195,335 (277,286)
Walleye	0.0001 (0.0002)	0 (0)	27 (55)	0 (0)	27 (55)
Total	5.5089 (1.6812)	393,013 (160,199)	491,340 (182,317)	312,524 (134,114)	1,196,877 (277,290)
Angler hours		89,569 (33,296)	77,965 (19,579)	49,727 (19,251)	217,261 (43,157)
Angler trips		20,828 (7,823)	15,149 (3,983)	9,919 (3,691)	45,896 (9,523)
Angler days		20,040 (7,565)	14,249 (3,790)	8,883 (3,375)	43,172 (9,110)

Appendix 64. Estimated sportfishing catch and effort for the mouth of the Saginaw River to Saganing Creek ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month			Season total
		Jan	Feb	Mar	
Rainbow smelt	0.0315 (0.0412)	3,923 (5,079)	0 (0)	0 (0)	3,923 (5,079)
Rock bass	0.0003 (0.0005)	0 (0)	0 (0)	42 (72)	42 (72)
Green sunfish	0.0001 (0.0003)	0 (0)	0 (0)	14 (35)	14 (35)
Pumpkinseed	0.0199 (0.0235)	0 (0)	0 (0)	2,469 (2,877)	2,469 (2,877)
Black crappie	0.0066 (0.0079)	0 (0)	155 (292)	664 (920)	819 (965)
Yellow perch	3.9073 (1.1555)	310,773 (89,185)	92,017 (40,170)	83,137 (58,919)	485,927 (114,189)
Walleye	0.0002 (0.0003)	0 (0)	21 (34)	0 (0)	21 (34)
Total	3.9659 (1.1629)	314,696 (89,330)	92,193 (40,171)	86,326 (58,996)	493,215 (114,342)
Angler hours		73,149 (15,950)	36,545 (11,584)	14,671 (10,484)	124,365 (22,327)
Angler trips		20,257 (4,954)	11,759 (4,199)	4,000 (3,202)	36,016 (7,241)
Angler days		18,600 (4,546)	10,863 (3,985)	3,691 (2,899)	33,154 (6,705)

Appendix 65. Estimated sportfishing catch and effort for the Tawas ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month			Season total
		Jan	Feb	Mar	
Chinook salmon	0.0001 (0.0002)	4 (9)	0 (0)	0 (0)	4 (9)
Rainbow trout	0.0036 (0.0030)	44 (59)	0 (0)	85 (78)	129 (98)
Brown trout	0.0004 (0.0008)	1 (2)	15 (31)	0 (0)	16 (31)
Northern pike	0.0356 (0.0261)	356 (514)	912 (615)	0 (0)	1,268 (802)
Yellow perch	0.5592 (0.4095)	1,884 (2,399)	14,747 (11,823)	3,269 (3,592)	19,900 (12,587)
Walleye	0.0073 (0.0097)	51 (122)	209 (309)	0 (0)	260 (332)
Total	0.6063 (0.4193)	2,340 (2,457)	15,883 (11,843)	3,354 (3,593)	21,577 (12,618)
Angler hours		5,705 (4,645)	26,383 (12,133)	3,499 (1,924)	35,587 (13,133)
Angler trips		1,372 (1,068)	6,232 (3,018)	823 (464)	8,427 (3,235)
Angler days		1,323 (1,018)	6,232 (3,018)	823 (464)	8,378 (3,219)

Appendix 66. Estimated sportfishing catch and effort for the Sand Point to Port Austin ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month			Season total
		Jan	Feb	Mar	
Northern pike	0.0024 (0.0052)	188 (406)	0 (0)	0 (0)	188 (406)
White sucker	0.0037 (0.0041)	0 (0)	0 (0)	294 (321)	294 (321)
Black crappie	0.0003 (0.0006)	0 (0)	23 (46)	0 (0)	23 (46)
Yellow perch	3.1479 (1.0838)	116,540 (50,613)	98,726 (45,554)	34,001 (18,924)	249,267 (70,675)
Walleye	0.0004 (0.0008)	0 (0)	28 (58)	0 (0)	28 (58)
Burbot	0.0002 (0.0003)	0 (0)	0 (0)	18 (28)	18 (28)
Other	0.0001 (0.0002)	0 (0)	0 (0)	5 (10)	5 (10)
Total	3.1550 (1.0847)	116,728 (50,615)	98,777 (45,554)	34,318 (18,927)	249,823 (70,677)
Angler hours		36,688 (12,258)	34,652 (8,886)	7,844 (3,166)	79,184 (15,467)
Angler trips		10,702 (3,744)	8,914 (2,610)	1,854 (812)	21,470 (4,636)
Angler days		10,243 (3,644)	7,251 (2,292)	1,462 (640)	18,956 (4,352)

Appendix 67. Estimated sportfishing catch and effort for the mouth of the Saginaw River to the mouth of the Quanicassee River ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month			Season total
		Jan	Feb	Mar	
Rainbow trout	0.0002 (0.0003)	0 (0)	4 (6)	0 (0)	4 (6)
Brown trout	0.0001 (0.0003)	0 (0)	2 (5)	0 (0)	2 (5)
Northern pike	0.0014 (0.0013)	0 (0)	32 (27)	0 (0)	32 (27)
White sucker	<0.0000 (<0.0000)	0 (0)	1 (2)	0 (0)	1 (2)
White bass	<0.0000 (<0.0000)	0 (0)	1 (1)	0 (0)	1 (1)
Green sunfish	0.0057 (0.0128)	0 (0)	0 (0)	135 (298)	135 (298)
Orange sunfish	0.0148 (0.0303)	0 (0)	0 (0)	350 (702)	350 (702)
Black crappie	0.0378 (0.0471)	0 (0)	0 (0)	890 (1,047)	890 (1,047)
Yellow perch	3.4409 (2.2984)	41,800 (37,781)	28,072 (18,718)	11,237 (6,537)	81,109 (42,667)
Walleye	0.0087 (0.0074)	0 (0)	205 (152)	0 (0)	205 (152)
Total	3.5096 (2.3166)	41,800 (37,781)	28,317 (18,719)	12,612 (6,664)	82,729 (42,687)
Angler hours		10,673 (9,066)	7,638 (2,991)	5,261 (1,734)	23,572 (9,703)
Angler trips		3,352 (2,789)	1,680 (678)	1,581 (560)	6,613 (2,924)
Angler days		2,712 (2,230)	1,588 (661)	1,431 (517)	5,731 (2,383)

Appendix 68. Estimated sportfishing catch and effort for the Au Gres ice fishery, 1987.
Two standard errors in parentheses.

Species	Total catch per hour	Month			Season total
		Jan	Feb	Mar	
Rainbow smelt	0.0103 (0.0207)	961 (1,959)	18 (35)	0 (0)	979 (1,959)
Northern pike	0.0012 (0.0026)	115 (251)	0 (0)	0 (0)	115 (251)
White sucker	0.0223 (0.0426)	15 (32)	0 (0)	2,107 (4,026)	2,122 (4,026)
Pumpkinseed	0.0029 (0.0034)	129 (263)	117 (175)	33 (73)	279 (324)
Bluegill	0.0015 (0.0028)	129 (263)	16 (32)	0 (0)	145 (265)
Black crappie	0.0008 (0.0012)	26 (53)	47 (95)	0 (0)	73 (109)
Yellow perch	8.6631 (3.6740)	270,211 (83,025)	273,283 (109,250)	279,228 (257,112)	822,722 (291,437)
Walleye	0.0008 (0.0009)	53 (74)	25 (52)	0 (0)	78 (90)
Total	8.7030 (3.6794)	271,639 (83,049)	273,506 (109,250)	281,368 (257,144)	826,513 (291,472)
Angler hours		40,218 (10,537)	34,678 (8,890)	20,073 (17,330)	94,969 (22,145)
Angler trips		10,343 (2,817)	7,998 (2,089)	6,411 (5,913)	24,752 (6,875)
Angler days		10,018 (2,746)	7,998 (2,089)	6,411 (5,913)	24,427 (6,846)

Appendix 69. Estimated sportfishing catch and effort for the mouth of the Quanicassee River to Fish Point ice fishery, 1987. Two standard errors in parentheses.

Species	Total catch per hour	Month			Season total
		Jan	Feb	Mar	
Rainbow smelt	0.0149 (0.0127)	1,160 (938)	78 (103)	0 (0)	1,238 (944)
Northern pike	0.0003 (0.0007)	21 (47)	0 (0)	0 (0)	21 (47)
Yellow perch	3.6139 (2.1176)	138,680 (50,116)	79,958 (31,790)	80,711 (119,659)	299,349 (133,568)
Walleye	0.0002 (0.0005)	0 (0)	17 (39)	0 (0)	17 (39)
Total	3.6293 (2.1215)	139,861 (50,125)	80,053 (31,790)	80,711 (119,659)	300,625 (133,572)
Angler hours		36,544 (13,514)	19,373 (6,942)	26,915 (27,551)	82,832 (31,462)
Angler trips		10,319 (3,981)	3,976 (1,406)	7,302 (6,976)	21,597 (8,154)
Angler days		8,861 (3,346)	3,884 (1,386)	6,752 (6,489)	19,497 (7,431)