

Survey Report for BigManisteeRiver, Manistee County, 2016

Waterbody	Manistee River
Year	2016
County	Manistee County
Sites	129, 130, 131, 341
Survey period	April 1 to December 14
Survey design	Roving (instantaneous)-roving
Count methods/modes	Roving (instantaneous)/boat and shore
Clerk time	full time
Survey purpose	Characterize general effort and catch aspects of the fishery

Notes

Survey followed a roving (instantaneous)-roving design. Funding was provided by the Federal Aid to Sport Fish Restoration Project F-81, Study 230499. Two clerks worked full time to collect angling survey data. Two weekend days and 3 week days were randomly selected for sampling during each week of the survey season. No holidays were sampled. Clerks followed a randomized count and interview schedule. One of two shifts was selected each sample day. The Manistee River was divided into 2 sections each containing 2 sites:

Section 1	Tippy Dam to High Bridge	Site 130
	High Bridge to Bear Creek Public Access Site	Site 131
Section 2	Bear Creek Public Access Site mouth of Manistee River	Site 341
	Mouth of Manistee River to Stronach (Manistee Lake)	Site 129

All sections were sampled once per day. The sections were randomly selected for sampling. Starting location and direction for a section for counts and interviews was always the upstream point and progressed downstream. Roving (instantaneous) counts of boat and shore anglers were made once per day. Survey period for both counts and interviews was April 1, 2016 to December 14, 2016. Months were estimated separately except for December which was combined with November. Estimates were made for boat and shore angling. “**NAN**” in a table means there was not enough data to make an estimate.

Day light hours used to estimate catch and effort on the Manistee River from April 1 to December 14, 2016.

Year	Month	Day light hours
2016	4	14
2016	5	15
2016	6	16
2016	7	16
2016	8	15
2016	9	13
2016	10	12
2016	11	11
2016	12	11

Table 2a.—Estimated harvest, catch per hour, and fishing pressure for Site 129 boat fishery. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Walleye	0.0042	—	—	40	80	47	—	—	—	168
	0.0044	—	—	82	120	89	—	—	—	170
Northern pike	0.0137	—	—	119	238	189	—	—	—	545
	0.0127	—	—	152	309	354	—	—	—	494
Largemouth bass	0.0125	—	—	81	299	47	69	—	—	496
	0.0091	—	—	148	263	99	137	—	—	346
Smallmouth bass	0.0098	—	—	20	238	28	102	—	—	389
	0.0079	—	—	37	254	56	151	—	—	303
Yellow Perch	0.0678	765	510	59	1,069	48	240	—	—	2,691
	0.0522	1,073	757	89	1,454	68	417	—	—	2,006
Bluegill	0.4818	3,192	453	2,245	3,249	2,890	6,788	260	50	19,127
	0.2718	5,607	516	1,744	3,241	2,709	7,077	520	57	10,146
Pumpkinseed	0.1377	1,368	297	144	683	384	2,590	—	—	5,465
	0.1012	2,528	430	251	998	578	2,657	—	—	3,876
Rock bass	0.0239	15	74	43	402	—	289	—	125	948
	0.0245	30	111	59	832	—	437	—	129	957
Black crappie	0.0737	342	441	208	1,486	—	289	—	159	2,925
	0.0730	646	686	373	2,611	—	451	—	172	2,842
Rainbow trout	0.0074	—	—	—	—	—	—	91	201	292
	0.0062	—	—	—	—	—	—	170	166	238
Brown trout	0.0023	—	—	—	—	—	—	91	—	91
	0.0046	—	—	—	—	—	—	181	—	181
Channel catfish	0.0015	—	—	58	—	—	—	—	—	58
	0.0030	—	—	117	—	—	—	—	—	117
Chinook salmon	0.0080	—	—	—	—	28	290	—	—	318
	0.0097	—	—	—	—	56	377	—	—	381
Coho salmon	0.0087	—	—	—	—	—	—	111	235	345
	0.0077	—	—	—	—	—	—	173	241	297
TOTAL HARVEST	0.8528	5,682	1,775	3,018	7,743	3,661	10,656	552	770	33,858
	0.3324	6,276	1,228	1,823	4,623	2,798	7,609	602	368	11,481
RELEASED										
Walleye	0.0033	—	25	20	54	31	—	—	—	130
	0.0035	—	46	36	108	61	—	—	—	137
Northern pike	0.1953	476	1,000	901	3,557	986	513	295	26	7,754
	0.0800	707	986	748	2,186	701	476	585	37	2,806
Largemouth bass	0.1588	147	376	1,139	3,094	1,061	477	—	11	6,306
	0.0684	234	434	1,075	1,971	663	428	—	23	2,430
Smallmouth bass	0.2344	2,322	898	1,693	2,858	791	667	66	11	9,305
	0.1348	4,206	715	1,563	1,994	724	555	70	23	5,046
Yellow Perch	0.1722	491	977	404	1,414	1,195	2,226	130	—	6,837
	0.0976	653	1,410	497	1,506	1,038	2,684	260	—	3,644
Bluegill	0.3762	—	231	4,575	4,757	2,798	2,057	520	—	14,937
	0.1746	—	298	3,794	4,108	1,866	1,975	1,040	—	6,311
Pumpkinseed	0.0464	228	—	142	885	93	496	—	—	1,843
	0.0338	456	—	206	1,028	131	597	—	—	1,296
Rock bass	0.2856	4,166	1,080	1,995	3,598	277	207	—	14	11,337
	0.2004	6,813	1,015	1,726	2,821	244	317	—	29	7,651
Black crappie	0.1554	98	56	102	5,265	386	263	—	—	6,171
	0.1922	146	73	204	7,506	341	569	—	—	7,539
Rainbow trout	0.0009	—	37	—	—	—	—	—	—	37
	0.0019	—	73	—	—	—	—	—	—	73
Channel catfish	0.0015	—	—	—	26	—	33	—	—	59
	0.0022	—	—	—	52	—	69	—	—	86
Coho salmon	0.0003	—	—	—	—	—	—	—	11	11
	0.0005	—	—	—	—	—	—	—	22	22
Freshwater drum	0.0021	—	—	—	13	—	69	—	—	82
	0.0033	—	—	—	26	—	127	—	—	130
*OTH1 released	0.0114	—	73	159	201	—	—	22	—	455
	0.0104	—	139	267	264	—	—	44	—	403
TOTAL RELEASED	1.6439	7,927	4,754	11,129	25,721	7,618	7,008	1,032	75	65,264
	0.4824	8,082	2,194	4,684	9,860	2,493	3,553	1,224	61	14,479
TOTAL CATCH	2.4967	13,610	6,529	14,147	33,464	11,279	17,664	1,585	845	99,121
	0.6683	10,233	2,514	5,026	10,890	3,747	8,398	1,364	373	18,478
ANGLER HOURS		2,305	2,301	4,834	9,283	9,030	7,850	2,664	1,434	39,701
		2,889	1,624	2,471	4,390	2,768	3,450	1,185	911	7,626
ANGLER TRIPS		1,034	620	1,110	2,456	2,297	2,032	903	415	10,866
		1,444	478	616	1,248	1,000	1,013	488	282	2,568

*OTH1 released= Goby, Sturgeon, Bowfin

Table 2b.—Estimated harvest, catch per hour, and fishing pressure for Site 129 shore fishery. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Yellow Perch	0.0542	—	—	—	—	—	—	—	341	341
	0.1102	—	—	—	—	—	—	—	682	682
Pumpkinseed	0.0334	—	—	—	—	210	—	—	—	210
	0.0678	—	—	—	—	420	—	—	—	420
TOTAL HARVEST	0.0876	—	—	—	—	210	—	—	341	551
	0.1312	—	—	—	—	420	—	—	682	801
RELEASED										
Northern pike	0.0881	—	378	—	176	—	—	—	—	554
	0.2454	—	NAN	—	239	—	—	—	—	1,531
Largemouth bass	0.0232	—	—	—	41	105	—	—	—	146
	0.0363	—	—	—	72	210	—	—	—	222
Smallmouth bass	0.0399	—	19	—	163	70	—	—	—	251
	0.0569	—	38	—	314	140	—	—	—	346
Yellow Perch	0.4644	106	141	178	748	920	—	10	818	2,921
	0.4139	212	281	356	1,375	1,479	—	13	1,157	2,381
Bluegill	0.2599	—	—	67	1,051	517	—	—	—	1,635
	0.3197	—	—	134	1,813	624	—	—	—	1,922
Pumpkinseed	0.1010	35	—	178	84	338	—	—	—	635
	0.1035	71	—	356	153	466	—	—	—	609
Rock bass	0.1132	35	19	533	125	—	—	—	—	712
	0.1783	71	38	1,067	218	—	—	—	—	1,092
Black crappie	0.0246	—	47	—	108	—	—	—	—	154
	0.0406	—	94	—	231	—	—	—	—	249
Rainbow trout	0.0059	37	—	—	—	—	—	—	—	37
	0.0121	75	—	—	—	—	—	—	—	75
Brown trout	0.0284	179	—	—	—	—	—	—	—	179
	0.0483	297	—	—	—	—	—	—	—	297
Common white sucker	0.0056	35	—	—	—	—	—	—	—	35
	0.0114	71	—	—	—	—	—	—	—	71
Carp	0.0032	—	—	—	—	20	—	—	—	20
	0.0067	—	—	—	—	41	—	—	—	41
Goby	0.0573	—	—	178	183	—	—	—	—	361
	0.0780	—	—	356	312	—	—	—	—	473
Gizzard Shad	0.0112	71	—	—	—	—	—	—	—	71
	0.0229	141	—	—	—	—	—	—	—	141
TOTAL RELEASED	1.2260	499	603	1,134	2,678	1,970	0	10	818	7,712
	0.7953	417	NAN	1,239	2,358	1,691	0	13	1,157	4,157
TOTAL CATCH	1.3136	499	603	1,134	2,678	2,180	0	10	1,159	8,263
	0.8232	417	NAN	1,239	2,358	1,742	0	13	1,343	4,234
ANGLER HOURS		840	660	1,403	994	1,300	579	223	291	6,290
		806	971	1,174	1,035	882	454	223	270	2,269
ANGLER TRIPS		412	430	1,147	621	603	519	131	165	4,028
		536	771	1,218	749	600	432	181	196	1,882

Table 3a.—Estimated harvest, catch per hour, and fishing pressure for Site 130 boat fishery. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Walleye	0.0026	—	—	—	47	48	24	—	—	119
	0.0031	—	—	—	94	88	44	—	—	136
Smallmouth bass	0.0007	—	—	—	31	—	—	—	—	31
	0.0014	—	—	—	63	—	—	—	—	63
Rock bass	0.0008	—	—	—	38	—	—	—	—	38
	0.0017	—	—	—	75	—	—	—	—	75
Rainbow trout	0.0385	627	—	69	192	—	—	770	106	1,765
	0.0314	455	—	127	260	—	—	1,187	108	1,308
Brown trout	0.0036	—	—	141	—	—	—	—	26	167
	0.0053	—	—	232	—	—	—	—	50	238
Channel catfish	0.0006	—	—	—	—	—	—	—	26	26
	0.0012	—	—	—	—	—	—	—	55	55
Chinook salmon	0.0262	—	—	—	—	—	473	729	—	1,202
	0.0201	—	—	—	—	—	570	601	—	829
Coho salmon	0.0035	—	—	—	—	—	82	—	78	159
	0.0046	—	—	—	—	—	125	—	164	206
TOTAL HARVEST	0.0765	627	—	210	308	48	578	1,499	235	3,506
	0.0433	455	—	265	293	88	585	1,331	209	1,590
RELEASED										
Walleye	0.0066	162	—	—	—	48	—	91	—	301
	0.0073	246	—	—	—	88	—	182	—	318
Northern pike	0.0003	—	—	—	—	—	—	—	15	15
	0.0007	—	—	—	—	—	—	—	31	31
Smallmouth bass	0.0204	—	—	103	272	515	47	—	—	937
	0.0468	—	—	123	476	NAN	100	—	—	2,122
Rock bass	0.0096	—	—	131	309	—	—	—	—	440
	0.0100	—	—	147	406	—	—	—	—	432
Rainbow trout	0.1665	787	1,870	1,620	1,662	23	238	947	482	7,630
	0.1844	607	NAN	2,216	1,528	47	398	970	347	8,049
Brown trout	0.3838	1,438	2,625	8,330	1,725	23	524	1,659	1,269	17,593
	0.2988	1,113	NAN	5,790	1,716	47	799	1,426	1,246	12,335
Common white sucker	0.0154	136	517	31	23	—	—	—	—	708
	0.0161	147	680	63	47	—	—	—	—	700
Redhorse	0.0026	—	—	—	—	—	—	34	84	119
	0.0038	—	—	—	—	—	—	69	154	169
Chinook salmon	0.0502	—	—	—	—	—	218	2,080	—	2,299
	0.0367	—	—	—	—	—	437	1,426	—	1,491
Coho salmon	0.0077	—	63	—	—	—	159	129	—	352
	0.0071	—	126	—	—	—	205	182	—	302
TOTAL RELEASED	0.6631	2,524	5,074	10,214	3,992	611	1,187	4,941	1,851	30,394
	0.5241	1,300	NAN	6,203	2,381	NAN	1,020	2,253	1,303	21,716
TOTAL CATCH	0.7396	3,152	5,074	10,424	4,300	659	1,765	6,440	2,086	33,900
	0.5368	1,377	NAN	6,208	2,399	NAN	1,176	2,617	1,320	21,774
ANGLER HOURS		10,607	3,056	3,030	3,433	1,379	5,505	15,055	3,771	45,836
		4,556	NAN	1,293	2,224	936	4,406	6,312	1,794	15,498
ANGLER TRIPS		1,653	592	534	941	297	1,040	2,151	909	8,118
		741	NAN	285	579	188	970	931	441	2,935

Table 3b.—Estimated harvest, catch per hour, and fishing pressure for Site 130 shore fishery. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Walleye	0.0020	—	32	—	—	25	—	104	73	235
	0.0022	—	66	—	—	50	—	213	105	252
Yellow Perch	0.0005	—	—	—	—	—	53	—	—	53
	0.0009	—	—	—	—	—	103	—	—	103
Bluegill	0.0015	—	—	—	167	—	—	—	—	167
	0.0018	—	—	—	210	—	—	—	—	210
Rock bass	0.0088	—	448	312	259	—	—	—	—	1,019
	0.0096	—	636	692	548	—	—	—	—	1,088
Black crappie	0.0000	—	—	—	—	—	3	—	—	3
	0.0000	—	—	—	—	—	6	—	—	6
Rainbow trout	0.0384	1,844	461	632	287	—	215	457	531	4,427
	0.0150	1,037	322	697	245	—	328	415	445	1,485
Brown trout	0.0207	—	1,387	173	618	—	59	—	148	2,384
	0.0252	—	2,720	115	877	—	88	—	192	2,868
Common white sucker	0.0053	—	607	—	—	—	—	—	—	607
	0.0057	—	643	—	—	—	—	—	—	643
Lake trout	0.0003	—	—	—	—	—	—	—	37	37
	0.0006	—	—	—	—	—	—	—	74	74
Redhorse	0.0084	—	922	—	—	—	—	52	—	974
	0.0109	—	1,233	—	—	—	—	106	—	1,238
Channel catfish	0.0003	—	—	—	—	39	—	—	—	39
	0.0006	—	—	—	—	67	—	—	—	67
Carp	0.0004	—	48	—	—	—	—	—	—	48
	0.0008	—	96	—	—	—	—	—	—	96
Chinook salmon	0.0385	—	—	—	—	51	1,051	3,336	—	4,438
	0.0214	—	—	—	—	54	880	2,118	—	2,295
Coho salmon	0.0127	—	—	—	—	—	127	1,274	62	1,463
	0.0099	—	—	—	—	—	160	1,093	90	1,108
Goby	0.0003	—	—	—	—	39	—	—	—	39
	0.0006	—	—	—	—	68	—	—	—	68
Goby	0.0069	—	—	—	—	—	800	—	—	800
	0.0135	—	—	—	—	—	1,547	—	—	1,547
TOTAL HARVEST	0.1451	1,844	3,905	1,116	1,331	154	2,308	5,223	851	16,733
	0.0506	1,037	3,139	989	1,083	121	1,822	2,431	510	4,753
RELEASED										
Walleye	0.0034	187	64	—	—	—	—	104	41	396
	0.0031	239	132	—	—	—	—	210	82	354
Northern pike	0.0003	—	—	—	—	39	—	—	—	39
	0.0006	—	—	—	—	74	—	—	—	74
Smallmouth bass	0.0067	—	268	—	65	179	263	—	—	775
	0.0044	—	303	—	130	179	300	—	—	480
Bluegill	0.0075	—	—	575	162	127	—	—	—	865
	0.0075	—	—	785	256	175	—	—	—	844
Rock bass	0.0254	—	1,105	669	596	270	28	261	—	2,928
	0.0168	—	1,242	822	892	445	55	442	—	1,846
Black crappie	0.0007	—	—	—	—	78	—	—	—	78
	0.0014	—	—	—	—	157	—	—	—	157
Rainbow trout	0.0590	1,767	1,828	931	1,044	264	35	157	778	6,805
	0.0212	1,161	1,127	649	776	320	71	203	570	2,028
Brown trout	0.1831	1,507	5,053	2,757	1,484	1,940	714	3,507	4,165	21,127
	0.0645	1,393	3,636	1,569	1,091	2,121	723	2,624	2,533	6,094
Common white sucker	0.0043	27	354	29	—	64	—	—	25	499
	0.0031	54	319	58	—	88	—	—	50	344
Redhorse	0.0071	—	573	—	—	25	165	52	—	816
	0.0087	—	924	—	—	45	330	107	—	988
Brook trout	0.0004	52	—	—	—	—	—	—	—	52
	0.0009	104	—	—	—	—	—	—	—	104
Channel catfish	0.0030	—	—	187	—	—	160	—	—	347
	0.0043	—	—	374	—	—	320	—	—	492
Carp	0.0008	—	38	—	—	—	53	—	—	91
	0.0012	—	75	—	—	—	108	—	—	131
Chinook salmon	0.0115	—	—	—	—	—	230	1,038	62	1,329
	0.0093	—	—	—	—	—	223	1,009	88	1,037
Coho salmon	0.0071	16	430	43	—	—	—	154	178	820
	0.0073	31	757	66	—	—	—	185	246	821
Freshwater drum	0.0002	—	20	—	—	—	—	—	—	20
	0.0004	—	40	—	—	—	—	—	—	40
Goby	0.1825	—	396	207	18,098	2,220	81	50	—	21,051
	0.2322	—	791	333	26,339	2,177	130	100	—	26,443
TOTAL RELEASED	0.5031	3,555	10,130	5,397	21,449	5,207	1,729	5,323	5,249	58,039
	0.2580	1,833	4,278	2,106	26,389	3,105	954	2,870	2,611	27,352

TOTAL CATCH	0.6482	5,399	14,035	6,513	22,780	5,361	4,037	10,546	6,100	74,772
	0.2740	2,106	5,307	2,326	26,412	3,108	2,057	3,761	2,660	27,761
ANGLER HOURS		23,436	7,515	5,232	6,046	3,725	14,253	46,320	8,830	115,357
		7,357	3,423	1,516	2,235	871	7,583	20,006	3,570	23,332
ANGLER TRIPS		4,062	2,005	1,208	1,184	934	4,377	7,629	2,500	23,899
		1,402	960	469	625	409	2,459	3,618	1,059	4,891

Table 4a.—Estimated harvest, catch per hour, and fishing pressure for Site 131 boat fishery. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Walleye	0.0011	—	—	—	—	26	—	—	—	26
	0.0021	—	—	—	—	53	—	—	—	53
Largemouth bass	0.0008	—	—	20	—	—	—	—	—	20
	0.0016	—	—	39	—	—	—	—	—	39
Smallmouth bass	0.0008	—	—	—	19	—	—	—	—	19
	0.0015	—	—	—	38	—	—	—	—	38
Bluegill	0.0024	—	—	59	—	—	—	—	—	59
	0.0047	—	—	117	—	—	—	—	—	117
Rainbow trout	0.0345	105	—	—	22	—	—	303	431	860
	0.0160	103	—	—	44	—	—	229	253	359
Brown trout	0.0015	—	—	—	22	—	—	—	16	38
	0.0022	—	—	—	44	—	—	—	32	54
Chinook salmon	0.0407	—	—	—	—	31	756	228	—	1,015
	0.0289	—	—	—	—	45	667	180	—	692
TOTAL HARVEST	0.0817	105	—	78	63	58	756	530	448	2,037
	0.0358	103	—	124	73	69	667	291	255	794
RELEASED										
Walleye	0.0011	—	—	—	—	26	—	—	—	26
	0.0021	—	—	—	—	53	—	—	—	53
Northern pike	0.0184	—	—	—	228	41	154	36	—	458
	0.0182	—	—	—	293	61	325	51	—	444
Largemouth bass	0.0043	—	—	98	—	9	—	—	—	107
	0.0079	—	—	196	—	19	—	—	—	196
Smallmouth bass	0.0435	—	—	59	711	104	211	—	—	1,085
	0.0346	—	—	117	742	139	337	—	—	835
Yellow Perch	0.0003	—	—	—	—	6	—	—	—	6
	0.0005	—	—	—	—	13	—	—	—	13
Rock bass	0.0180	—	—	212	168	—	51	19	—	450
	0.0165	—	—	312	225	—	110	38	—	402
Rainbow trout	0.0309	24	—	—	—	—	51	338	356	770
	0.0163	34	—	—	—	—	100	240	269	376
Brown trout	0.0081	48	—	56	—	—	—	23	76	202
	0.0071	54	—	112	—	—	—	33	115	173
Common white sucker	0.0019	11	—	—	19	—	—	—	16	46
	0.0022	21	—	—	38	—	—	—	32	54
Redhorse	0.0021	—	—	—	—	—	51	—	—	51
	0.0036	—	—	—	—	—	89	—	—	89
Carp	0.0013	—	—	—	—	—	—	31	—	31
	0.0025	—	—	—	—	—	—	63	—	63
Chinook salmon	0.0145	—	—	—	—	—	167	195	—	362
	0.0117	—	—	—	—	—	223	173	—	283
Goby	0.0005	—	—	—	—	—	13	—	—	13
	0.0011	—	—	—	—	—	26	—	—	26
TOTAL RELEASED	0.1447	83	0	424	1,126	187	699	642	448	3,609
	0.0550	67	0	402	830	162	547	311	294	1,168
TOTAL CATCH	0.2263	187	0	502	1,189	245	1,454	1,172	896	5,645
	0.0724	123	0	421	833	176	863	426	389	1,412
ANGLER HOURS		960	0	976	1,293	2,919	7,258	5,945	5,590	24,941
		639	0	1,104	650	1,645	3,507	2,060	1,863	4,977
ANGLER TRIPS		159	0	146	191	434	1,376	799	868	3,971
		113	0	175	113	289	846	284	307	1,015

Table 4b.—Estimated harvest, catch per hour, and fishing pressure for Site 131 shore fishery. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Common white sucker	0.0160	73	24	—	—	—	—	—	—	97
	0.0258	146	48	—	—	—	—	—	—	154
TOTAL HARVEST	0.0160	73	24	—	—	—	—	—	—	97
	0.0258	146	48	—	—	—	—	—	—	154
RELEASED										
TOTAL RELEASED	—	—	—	—	—	—	—	—	—	—
TOTAL CATCH	0.0160	73	24	—	—	—	—	—	—	97
	0.0258	146	48	—	—	—	—	—	—	154
ANGLER HOURS		389	540	352	537	200	1,390	2,076	587	6,070
		508	532	352	452	400	435	1,349	487	1,810
ANGLER TRIPS		58	80	52	80	30	207	309	87	903
		76	80	53	67	60	66	202	73	271

Table 5a.—Estimated harvest, catch per hour, and fishing pressure for Site 341 boat fishery. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Northern pike	0.0031	—	—	—	—	—	149	15	—	163
	0.0040	—	—	—	—	—	203	30	—	205
Smallmouth bass	0.0002	—	—	10	—	—	—	—	—	10
	0.0004	—	—	20	—	—	—	—	—	20
Bluegill	0.0201	—	—	—	—	1,043	—	—	—	1,043
	0.0372	—	—	—	—	1,918	—	—	—	1,918
Rainbow trout	0.0361	113	32	—	—	—	39	762	929	1,874
	0.0160	148	63	—	—	—	78	465	510	713
Brown trout	0.0020	41	—	—	—	—	—	62	—	103
	0.0027	64	—	—	—	—	—	124	—	140
Chinook salmon	0.0148	—	—	—	—	48	690	32	—	770
	0.0109	—	—	—	—	47	532	50	—	537
Coho salmon	0.0022	—	—	—	—	—	101	11	—	112
	0.0030	—	—	—	—	—	152	22	—	153
TOTAL HARVEST	0.0785	154	32	10	—	1,091	979	882	929	4,076
	0.0449	161	63	20	—	1,919	595	485	510	2,136
RELEASED										
Walleye	0.0176	12	—	—	538	112	255	—	—	916
	0.0137	24	—	—	528	145	406	—	—	682
Northern pike	0.0149	—	—	448	58	—	181	89	—	775
	0.0119	—	—	530	82	—	215	117	—	589
Largemouth bass	0.0022	—	—	80	33	—	—	—	—	113
	0.0023	—	—	98	66	—	—	—	—	118
Smallmouth bass	0.0524	—	236	325	462	841	854	—	—	2,719
	0.0412	—	472	427	537	1,434	1,197	—	—	2,045
Bluegill	0.0056	—	—	—	—	292	—	—	—	292
	0.0104	—	—	—	—	537	—	—	—	537
Rock bass	0.0100	—	—	37	275	11	193	—	—	517
	0.0122	—	—	52	482	23	387	—	—	620
Rainbow trout	0.0362	23	—	—	—	—	52	790	1,016	1,882
	0.0161	44	—	—	—	—	86	484	519	716
Brown trout	0.0004	20	—	—	—	—	—	—	—	20
	0.0008	40	—	—	—	—	—	—	—	40
Common white sucker	0.0091	—	—	240	83	150	—	—	—	473
	0.0090	—	—	360	129	244	—	—	—	454
Lake trout	0.0002	—	—	—	—	—	—	9	—	9
	0.0004	—	—	—	—	—	—	18	—	18
Redhorse	0.0047	—	—	56	—	—	17	173	—	246
	0.0047	—	—	112	—	—	34	205	—	236
Channel catfish	0.0006	—	—	17	15	—	—	—	—	32
	0.0009	—	—	33	30	—	—	—	—	45
Chinook salmon	0.0056	—	—	—	—	—	293	—	—	293
	0.0070	—	—	—	—	—	356	—	—	356
Coho salmon	0.0010	—	—	—	—	—	52	—	—	52
	0.0017	—	—	—	—	—	86	—	—	86
Freshwater drum	0.0041	—	—	—	213	—	—	—	—	213
	0.0040	—	—	—	203	—	—	—	—	203
TOTAL RELEASED	0.1647	55	236	1,202	1,677	1,406	1,898	1,062	1,016	8,552
	0.0624	64	472	787	932	1,558	1,392	539	519	2,576
TOTAL CATCH	0.2432	209	268	1,212	1,677	2,497	2,877	1,944	1,944	12,628
	0.0853	173	477	787	932	2,471	1,514	725	728	3,346
ANGLER HOURS		1,868	293	876	1,356	2,762	20,899	13,654	10,210	51,918
		1,508	278	826	773	1,470	9,343	5,530	4,265	11,911
ANGLER TRIPS		379	53	512	241	424	3,536	2,470	1,547	9,163
		395	67	584	181	255	1,756	1,491	715	2,533

Table 5b.—Estimated harvest, catch per hour, and fishing pressure for Site 341 shore fishery. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Rainbow trout	0.0978	—	—	—	—	—	—	672	—	672
	0.3918	—	—	—	—	—	—	NAN	—	2,688
Common white sucker	0.0041	28	—	—	—	—	—	—	—	28
	0.0068	46	—	—	—	—	—	—	—	46
Redhorse	0.0171	118	—	—	—	—	—	—	—	118
	0.0345	235	—	—	—	—	—	—	—	235
TOTAL HARVEST	0.1190	146	—	—	—	—	—	672	—	818
	0.3938	240	—	—	—	—	—	NAN	—	2,699
RELEASED										
Rainbow trout	0.7242	—	—	—	—	—	—	4,978	—	4,978
	2.9029	—	—	—	—	—	—	NAN	—	19,913
Common white sucker	0.0015	10	—	—	—	—	—	—	—	10
	0.0016	11	—	—	—	—	—	—	—	11
TOTAL RELEASED	0.7257	10	—	—	—	—	—	4,978	—	4,989
	2.9029	11	—	—	—	—	—	NAN	—	19,913
TOTAL CATCH	0.8447	156	—	—	—	—	—	5,650	—	5,806
	2.9314	240	—	—	—	—	—	NAN	—	20,095
ANGLER HOURS		714	150	160	897	618	2,158	1,608	569	6,874
		617	300	161	715	576	1,131	592	368	1,762
ANGLER TRIPS		127	51	55	179	131	561	268	75	1,446
		183	110	69	225	154	542	232	79	692

Table 6.—Estimated harvest, catch per hour, and fishing pressure for Site 129 boat and shore fisheries combined. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Walleye	0.0037	—	—	40	80	47	—	—	—	168
	0.0037	—	—	82	120	89	—	—	—	170
Northern pike	0.0118	—	—	119	238	189	—	—	—	545
	0.0109	—	—	152	309	354	—	—	—	494
Largemouth bass	0.0108	—	—	81	299	47	69	—	—	496
	0.0078	—	—	148	263	99	137	—	—	346
Smallmouth bass	0.0084	—	—	20	238	28	102	—	—	389
	0.0067	—	—	37	254	56	151	—	—	303
Yellow Perch	0.0659	765	510	59	1,069	48	240	—	341	3,032
	0.0475	1,073	757	89	1,454	68	417	—	682	2,119
Bluegill	0.4159	3,192	453	2,245	3,249	2,890	6,788	260	50	19,127
	0.2320	5,607	516	1,744	3,241	2,709	7,077	520	57	10,146
Pumpkinseed	0.1234	1,368	297	144	683	594	2,590	—	—	5,675
	0.0874	2,528	430	251	998	715	2,657	—	—	3,899
Rock bass	0.0206	15	74	43	402	—	289	—	125	948
	0.0211	30	111	59	832	—	437	—	129	957
Black crappie	0.0636	342	441	208	1,486	—	289	—	159	2,925
	0.0628	646	686	373	2,611	—	451	—	172	2,842
Rainbow trout	0.0063	—	—	—	—	—	—	91	201	292
	0.0053	—	—	—	—	—	—	170	166	238
Brown trout	0.0020	—	—	—	—	—	—	91	—	91
	0.0040	—	—	—	—	—	—	181	—	181
Channel catfish	0.0013	—	—	58	—	—	—	—	—	58
	0.0025	—	—	117	—	—	—	—	—	117
Chinook salmon	0.0069	—	—	—	—	28	290	—	—	318
	0.0084	—	—	—	—	56	377	—	—	381
Coho salmon	0.0075	—	—	—	—	—	—	111	235	345
	0.0066	—	—	—	—	—	—	173	241	297
TOTAL HARVEST	0.7482	5,682	1,775	3,018	7,743	3,871	10,656	552	1,111	34,409
	0.2817	6,276	1,228	1,823	4,623	2,829	7,609	602	775	11,509
RELEASED										
Walleye	0.0028	—	25	20	54	31	—	—	—	130
	0.0030	—	46	36	108	61	—	—	—	137
Northern pike	0.1807	476	1,378	901	3,733	986	513	295	26	8,308
	0.1365	707	NAN	748	2,200	701	476	585	37	6,111
Largemouth bass	0.1403	147	376	1,139	3,134	1,166	477	—	11	6,452
	0.0584	234	434	1,075	1,972	696	428	—	23	2,441
Smallmouth bass	0.2078	2,322	917	1,693	3,020	861	667	66	11	9,556
	0.1157	4,206	716	1,563	2,018	738	555	70	23	5,058
Yellow Perch	0.2122	597	1,117	582	2,162	2,115	2,226	140	818	9,758
	0.1015	687	1,438	611	2,039	1,807	2,684	260	1,157	4,353
Bluegill	0.3603	—	231	4,642	5,808	3,315	2,057	520	—	16,572
	0.1564	—	298	3,797	4,491	1,968	1,975	1,040	—	6,597
Pumpkinseed	0.0539	263	—	319	969	430	496	—	—	2,478
	0.0325	461	—	411	1,039	484	597	—	—	1,432
Rock bass	0.2620	4,201	1,099	2,528	3,723	277	207	—	14	12,050
	0.1741	6,813	1,015	2,029	2,830	244	317	—	29	7,729
Black crappie	0.1375	98	103	102	5,373	386	263	—	—	6,325
	0.1657	146	119	204	7,509	341	569	—	—	7,544
Rainbow trout	0.0016	37	37	—	—	—	—	—	—	74
	0.0023	75	73	—	—	—	—	—	—	105
Brown trout	0.0039	179	—	—	—	—	—	—	—	179
	0.0065	297	—	—	—	—	—	—	—	297
Common white sucker	0.0008	35	—	—	—	—	—	—	—	35
	0.0015	71	—	—	—	—	—	—	—	71
Channel catfish	0.0013	—	—	—	26	—	33	—	—	59
	0.0019	—	—	—	52	—	69	—	—	86
Carp	0.0004	—	—	—	—	20	—	—	—	20
	0.0009	—	—	—	—	41	—	—	—	41
Coho salmon	0.0002	—	—	—	—	—	—	—	11	11
	0.0005	—	—	—	—	—	—	—	22	22
Freshwater drum	0.0018	—	—	—	13	—	69	—	—	82
	0.0028	—	—	—	26	—	127	—	—	130
*OTH1	0.0177	—	73	336	384	—	—	22	—	815
	0.0139	—	139	445	409	—	—	44	—	621
Gizzard Shad	0.0015	71	—	—	—	—	—	—	—	71
	0.0031	141	—	—	—	—	—	—	—	141
TOTAL RELEASED	1.5867	8,427	5,357	12,263	28,399	9,588	7,008	1,042	893	72,976
	0.6282	8,093	NAN	4,845	10,138	3,012	3,553	1,224	1,159	25,988
TOTAL CATCH	2.3349	14,109	7,132	15,281	36,142	13,459	17,664	1,594	2,004	107,384
	0.7383	10,241	NAN	5,176	11,142	4,132	8,398	1,364	1,394	28,422

ANGLER HOURS	3,145	2,961	6,237	10,276	10,330	8,428	2,887	1,725	45,991
	2,999	1,892	2,735	4,511	2,905	3,480	1,206	950	7,957
ANGLER TRIPS	1,447	1,050	2,257	3,077	2,900	2,551	1,033	579	14,894
	1,540	907	1,365	1,456	1,166	1,102	520	343	3,184

*OTH1 released= Goby, Sturgeon, Bowfin

Table 7.—Estimated harvest, catch per hour, and fishing pressure for Site 130 boat and shore fisheries combined. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Walleye	0.0022	—	32	—	47	74	24	104	73	354
	0.0019	—	66	—	94	101	44	213	105	286
Smallmouth bass	0.0002	—	—	—	31	—	—	—	—	31
	0.0004	—	—	—	63	—	—	—	—	63
Yellow Perch	0.0003	—	—	—	—	—	53	—	—	53
	0.0006	—	—	—	—	—	103	—	—	103
Bluegill	0.0010	—	—	—	167	—	—	—	—	167
	0.0013	—	—	—	210	—	—	—	—	210
Rock bass	0.0066	—	448	312	297	—	—	—	—	1,057
	0.0071	—	636	692	553	—	—	—	—	1,091
Black crappie	0.0000	—	—	—	—	—	3	—	—	3
	0.0000	—	—	—	—	—	6	—	—	6
Rainbow trout	0.0384	2,472	461	701	479	—	215	1,227	637	6,192
	0.0170	1,133	322	709	357	—	328	1,257	458	1,979
Brown trout	0.0158	—	1,387	314	618	—	59	—	173	2,551
	0.0185	—	2,720	259	877	—	88	—	199	2,878
Common white sucker	0.0038	—	607	—	—	—	—	—	—	607
	0.0042	—	643	—	—	—	—	—	—	643
Lake trout	0.0002	—	—	—	—	—	—	—	37	37
	0.0005	—	—	—	—	—	—	—	74	74
Redhorse	0.0060	—	922	—	—	—	—	52	—	974
	0.0079	—	1,233	—	—	—	—	106	—	1,238
Channel catfish	0.0004	—	—	—	—	39	—	—	26	64
	0.0006	—	—	—	—	67	—	—	55	87
Carp	0.0003	—	48	—	—	—	—	—	—	48
	0.0006	—	96	—	—	—	—	—	—	96
Chinook salmon	0.0350	—	—	—	—	51	1,524	4,065	—	5,640
	0.0185	—	—	—	—	54	1,049	2,202	—	2,440
Coho salmon	0.0101	—	—	—	—	—	208	1,274	140	1,622
	0.0076	—	—	—	—	—	203	1,093	187	1,127
Goby	0.0002	—	—	—	—	39	—	—	—	39
	0.0004	—	—	—	—	68	—	—	—	68
Goby	0.0050	—	—	—	—	—	800	—	—	800
	0.0097	—	—	—	—	—	1,547	—	—	1,547
TOTAL HARVEST	0.1256	2,472	3,905	1,326	1,639	202	2,887	6,722	1,086	20,239
	0.0493	1,133	3,139	1,024	1,122	150	1,914	2,772	551	5,012
RELEASED										
Walleye	0.0043	349	64	—	—	48	—	195	41	697
	0.0032	343	132	—	—	88	—	278	82	476
Northern pike	0.0003	—	—	—	—	39	—	—	15	54
	0.0005	—	—	—	—	74	—	—	31	80
Smallmouth bass	0.0106	—	268	103	337	694	311	—	—	1,713
	0.0180	—	303	123	493	NAN	316	—	—	2,858
Bluegill	0.0054	—	—	575	162	127	—	—	—	865
	0.0055	—	—	785	256	175	—	—	—	844
Rock bass	0.0209	—	1,105	799	905	270	28	261	—	3,368
	0.0134	—	1,242	835	980	445	55	442	—	1,896
Black crappie	0.0005	—	—	—	—	78	—	—	—	78
	0.0010	—	—	—	—	157	—	—	—	157
Rainbow trout	0.0896	2,555	3,698	2,551	2,706	288	274	1,104	1,260	14,435
	0.0981	1,310	NAN	2,309	1,714	323	404	991	668	15,183
Brown trout	0.2402	2,945	7,678	11,086	3,209	1,964	1,237	5,166	5,434	38,720
	0.2102	1,783	NAN	5,998	2,033	2,122	1,077	2,986	2,823	31,766
Common white sucker	0.0075	163	871	60	23	64	—	—	25	1,207
	0.0054	157	751	85	47	88	—	—	50	780
Redhorse	0.0058	—	573	—	—	25	165	86	84	935
	0.0065	—	924	—	—	45	330	128	154	1,002
Brook trout	0.0003	52	—	—	—	—	—	—	—	52
	0.0007	104	—	—	—	—	—	—	—	104
Channel catfish	0.0022	—	—	187	—	—	160	—	—	347
	0.0031	—	—	374	—	—	320	—	—	492
Carp	0.0006	—	38	—	—	—	53	—	—	91
	0.0008	—	75	—	—	—	108	—	—	131
Chinook salmon	0.0225	—	—	—	—	—	448	3,118	62	3,628
	0.0132	—	—	—	—	—	491	1,746	88	1,816
Coho salmon	0.0073	16	493	43	—	—	159	284	178	1,172
	0.0059	31	767	66	—	—	205	259	246	874
Freshwater drum	0.0001	—	20	—	—	—	—	—	—	20
	0.0003	—	40	—	—	—	—	—	—	40
Goby	0.1306	—	396	207	18,098	2,220	81	50	—	21,051
	0.1688	—	791	333	26,339	2,177	130	100	—	26,443

TOTAL RELEASED	0.5486	6,079	15,204	15,611	25,441	5,818	2,916	10,265	7,100	88,433
	0.4700	2,247	NAN	6,550	26,497	NAN	1,396	3,649	2,918	70,809
TOTAL CATCH	0.6742	8,551	19,109	16,938	27,080	6,020	5,802	16,987	8,186	108,672
	0.4859	2,516	NAN	6,630	26,520	NAN	2,369	4,582	2,970	70,986
ANGLER HOURS		34,043	10,571	8,262	9,480	5,104	19,758	61,375	12,601	161,193
		8,653	NAN	1,992	3,153	1,279	8,770	20,978	3,995	49,106
ANGLER TRIPS		5,715	2,597	1,742	2,125	1,231	5,417	9,780	3,409	32,016
		1,585	NAN	549	852	451	2,643	3,736	1,147	11,574

Table 8.—Estimated harvest, catch per hour, and fishing pressure for 131 boat and shore fisheries combined. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Walleye	0.0009	—	—	—	—	26	—	—	—	26
	0.0017	—	—	—	—	53	—	—	—	53
Largemouth bass	0.0006	—	—	20	—	—	—	—	—	20
	0.0013	—	—	39	—	—	—	—	—	39
Smallmouth bass	0.0006	—	—	—	19	—	—	—	—	19
	0.0012	—	—	—	38	—	—	—	—	38
Bluegill	0.0019	—	—	59	—	—	—	—	—	59
	0.0038	—	—	117	—	—	—	—	—	117
Rainbow trout	0.0277	105	—	—	22	—	—	303	431	860
	0.0125	103	—	—	44	—	—	229	253	359
Brown trout	0.0012	—	—	—	22	—	—	—	16	38
	0.0018	—	—	—	44	—	—	—	32	54
Common white sucker	0.0031	73	24	—	—	—	—	—	—	97
	0.0050	146	48	—	—	—	—	—	—	154
Chinook salmon	0.0327	—	—	—	—	31	756	228	—	1,015
	0.0230	—	—	—	—	45	667	180	—	692
TOTAL HARVEST	0.0688	178	24	78	63	58	756	530	448	2,134
	0.0286	179	48	124	73	69	667	291	255	809
RELEASED										
Walleye	0.0009	—	—	—	—	26	—	—	—	26
	0.0017	—	—	—	—	53	—	—	—	53
Northern pike	0.0148	—	—	—	228	41	154	36	—	458
	0.0145	—	—	—	293	61	325	51	—	444
Largemouth bass	0.0035	—	—	98	—	9	—	—	—	107
	0.0064	—	—	196	—	19	—	—	—	196
Smallmouth bass	0.0350	—	—	59	711	104	211	—	—	1,085
	0.0276	—	—	117	742	139	337	—	—	835
Yellow Perch	0.0002	—	—	—	—	6	—	—	—	6
	0.0004	—	—	—	—	13	—	—	—	13
Rock bass	0.0145	—	—	212	168	—	51	19	—	450
	0.0132	—	—	312	225	—	110	38	—	402
Rainbow trout	0.0248	24	—	—	—	—	51	338	356	770
	0.0128	34	—	—	—	—	100	240	269	376
Brown trout	0.0065	48	—	56	—	—	—	23	76	202
	0.0057	54	—	112	—	—	—	33	115	173
Common white sucker	0.0015	11	—	—	19	—	—	—	16	46
	0.0018	21	—	—	38	—	—	—	32	54
Redhorse	0.0017	—	—	—	—	—	51	—	—	51
	0.0029	—	—	—	—	—	89	—	—	89
Carp	0.0010	—	—	—	—	—	—	31	—	31
	0.0020	—	—	—	—	—	—	63	—	63
Chinook salmon	0.0117	—	—	—	—	—	167	195	—	362
	0.0093	—	—	—	—	—	223	173	—	283
Goby	0.0004	—	—	—	—	—	13	—	—	13
	0.0008	—	—	—	—	—	26	—	—	26
TOTAL RELEASED	0.1164	83	—	424	1,126	187	699	642	448	3,609
	0.0426	67	—	402	830	162	547	311	294	1,168
TOTAL CATCH	0.1852	260	24	502	1,189	245	1,454	1,172	896	5,743
	0.0557	191	48	421	833	176	863	426	389	1,421
ANGLER HOURS		1,348	540	1,328	1,830	3,119	8,648	8,021	6,177	31,011
		817	532	1,159	791	1,693	3,534	2,463	1,925	5,296
ANGLER TRIPS		217	80	198	271	463	1,583	1,108	955	4,874
		136	80	183	132	295	849	348	315	1,051

Table 9.—Estimated harvest, catch per hour, and fishing pressure for 341 boat and shore fisheries combined. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Northern pike	0.0028	—	—	—	—	—	149	15	—	163
	0.0035	—	—	—	—	—	203	30	—	205
Smallmouth bass	0.0002	—	—	10	—	—	—	—	—	10
	0.0003	—	—	20	—	—	—	—	—	20
Bluegill	0.0177	—	—	—	—	1,043	—	—	—	1,043
	0.0328	—	—	—	—	1,918	—	—	—	1,918
Rainbow trout	0.0433	113	32	—	—	—	39	1,434	929	2,546
	0.0984	148	63	—	—	—	78	NAN	510	5,762
Brown trout	0.0018	41	—	—	—	—	—	62	—	103
	0.0024	64	—	—	—	—	—	124	—	140
Common white sucker	0.0005	28	—	—	—	—	—	—	—	28
	0.0008	46	—	—	—	—	—	—	—	46
Redhorse	0.0020	118	—	—	—	—	—	—	—	118
	0.0040	235	—	—	—	—	—	—	—	235
Chinook salmon	0.0131	—	—	—	—	48	690	32	—	770
	0.0095	—	—	—	—	47	532	50	—	537
Coho salmon	0.0019	—	—	—	—	—	101	11	—	112
	0.0026	—	—	—	—	—	152	22	—	153
TOTAL HARVEST	0.0832	300	32	10	—	1,091	979	1,554	929	4,894
	0.1129	289	63	20	—	1,919	595	NAN	510	6,560
RELEASED										
Walleye	0.0156	12	—	—	538	112	255	—	—	916
	0.0120	24	—	—	528	145	406	—	—	682
Northern pike	0.0132	—	—	448	58	—	181	89	—	775
	0.0104	—	—	530	82	—	215	117	—	589
Largemouth bass	0.0019	—	—	80	33	—	—	—	—	113
	0.0021	—	—	98	66	—	—	—	—	118
Smallmouth bass	0.0463	—	236	325	462	841	854	—	—	2,719
	0.0361	—	472	427	537	1,434	1,197	—	—	2,045
Bluegill	0.0050	—	—	—	—	292	—	—	—	292
	0.0092	—	—	—	—	537	—	—	—	537
Rock bass	0.0088	—	—	37	275	11	193	—	—	517
	0.0107	—	—	52	482	23	387	—	—	620
Rainbow trout	0.1167	23	—	—	—	—	52	5,769	1,016	6,860
	0.3933	44	—	—	—	—	86	NAN	519	23,081
Brown trout	0.0003	20	—	—	—	—	—	—	—	20
	0.0007	40	—	—	—	—	—	—	—	40
Common white sucker	0.0082	10	—	240	83	150	—	—	—	483
	0.0079	11	—	360	129	244	—	—	—	454
Lake trout	0.0002	—	—	—	—	—	—	9	—	9
	0.0003	—	—	—	—	—	—	18	—	18
Redhorse	0.0042	—	—	56	—	—	17	173	—	246
	0.0041	—	—	112	—	—	34	205	—	236
Channel catfish	0.0005	—	—	17	15	—	—	—	—	32
	0.0008	—	—	33	30	—	—	—	—	45
Chinook salmon	0.0050	—	—	—	—	—	293	—	—	293
	0.0061	—	—	—	—	—	356	—	—	356
Coho salmon	0.0009	—	—	—	—	—	52	—	—	52
	0.0015	—	—	—	—	—	86	—	—	86
Freshwater drum	0.0036	—	—	—	213	—	—	—	—	213
	0.0035	—	—	—	203	—	—	—	—	203
TOTAL RELEASED	0.2303	65	236	1,202	1,677	1,406	1,898	6,040	1,016	13,540
	0.4158	65	472	787	932	1,558	1,392	NAN	519	24,291
TOTAL CATCH	0.3136	365	268	1,212	1,677	2,497	2,877	7,594	1,944	18,434
	0.4328	296	477	787	932	2,471	1,514	NAN	728	25,161
ANGLER HOURS		2,582	443	1,036	2,253	3,379	23,057	15,262	10,780	58,792
		1,630	409	841	1,053	1,579	9,411	5,562	4,281	12,040
ANGLER TRIPS		506	104	567	420	555	4,096	2,738	1,622	10,610
		435	128	588	289	298	1,838	1,509	719	2,626

Table 10.—Estimated harvest, catch per hour, and fishing pressure for the boat fishery all sites combined. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Walleye	0.0019	—	—	40	127	122	24	—	—	313
	0.0014	—	—	82	152	136	44	—	—	224
Northern pike	0.0044	—	—	119	238	189	149	15	—	708
	0.0034	—	—	152	309	354	203	30	—	535
Largemouth bass	0.0032	—	—	100	299	47	69	—	—	515
	0.0022	—	—	154	263	99	137	—	—	349
Smallmouth bass	0.0028	—	—	30	289	28	102	—	—	449
	0.0020	—	—	42	264	56	151	—	—	312
Yellow Perch	0.0166	765	510	59	1,069	48	240	—	—	2,691
	0.0127	1,073	757	89	1,454	68	417	—	—	2,006
Bluegill	0.1246	3,192	453	2,303	3,249	3,933	6,788	260	50	20,229
	0.0673	5,607	516	1,748	3,241	3,319	7,077	520	57	10,327
Pumpkinseed	0.0337	1,368	297	144	683	384	2,590	—	—	5,465
	0.0246	2,528	430	251	998	578	2,657	—	—	3,876
Rock bass	0.0061	15	74	43	439	—	289	—	125	985
	0.0060	30	111	59	835	—	437	—	129	960
Black crappie	0.0180	342	441	208	1,486	—	289	—	159	2,925
	0.0178	646	686	373	2,611	—	451	—	172	2,842
Rainbow trout	0.0295	845	32	69	214	—	39	1,926	1,666	4,791
	0.0109	489	63	127	264	—	78	1,306	603	1,551
Brown trout	0.0025	41	—	141	22	—	—	153	42	399
	0.0021	64	—	232	44	—	—	220	59	334
Channel catfish	0.0005	—	—	58	—	—	—	—	26	84
	0.0008	—	—	117	—	—	—	—	55	129
Chinook salmon	0.0203	—	—	—	—	107	2,208	988	—	3,304
	0.0086	—	—	—	—	86	1,093	630	—	1,264
Coho salmon	0.0038	—	—	—	—	—	183	122	312	617
	0.0025	—	—	—	—	—	196	174	292	392
TOTAL HARVEST	0.2677	6,568	1,807	3,316	8,114	4,859	12,968	3,464	2,381	43,477
	0.0868	6,296	1,230	1,846	4,633	3,394	7,684	1,566	710	11,812
RELEASED										
Walleye	0.0085	174	25	20	592	218	255	91	—	1,374
	0.0050	247	46	36	539	189	406	182	—	767
Northern pike	0.0554	476	1,000	1,349	3,843	1,027	848	419	41	9,003
	0.0204	707	986	916	2,208	704	615	598	48	2,902
Largemouth bass	0.0402	147	376	1,316	3,127	1,071	477	—	11	6,526
	0.0166	234	434	1,097	1,972	664	428	—	23	2,441
Smallmouth bass	0.0865	2,322	1,134	2,179	4,303	2,251	1,779	66	11	14,046
	0.0661	4,206	857	1,629	2,245	NAN	1,366	70	23	10,444
Yellow Perch	0.0421	491	977	404	1,414	1,202	2,226	130	—	6,843
	0.0236	653	1,410	497	1,506	1,038	2,684	260	—	3,644
Bluegill	0.0938	—	231	4,575	4,757	3,090	2,057	520	—	15,229
	0.0424	—	298	3,794	4,108	1,942	1,975	1,040	—	6,334
Pumpkinseed	0.0113	228	—	142	885	93	496	—	—	1,843
	0.0082	456	—	206	1,028	131	597	—	—	1,296
Rock bass	0.0785	4,166	1,080	2,374	4,351	289	452	19	14	12,744
	0.0494	6,813	1,015	1,760	2,899	245	512	38	29	7,699
Black crappie	0.0380	98	56	102	5,265	386	263	—	—	6,171
	0.0469	146	73	204	7,506	341	569	—	—	7,539
Rainbow trout	0.0635	834	1,907	1,620	1,662	23	342	2,076	1,854	10,318
	0.0519	610	NAN	2,216	1,528	47	419	1,110	679	8,225
Brown trout	0.1097	1,506	2,625	8,386	1,725	23	524	1,682	1,344	17,815
	0.0784	1,115	NAN	5,791	1,716	47	799	1,426	1,252	12,337
Common white sucker	0.0076	147	517	271	125	150	—	—	16	1,227
	0.0053	148	680	366	142	244	—	—	32	836
Lake trout	0.0001	—	—	—	—	—	—	9	—	9
	0.0001	—	—	—	—	—	—	18	—	18
Redhorse	0.0026	—	—	56	—	—	68	207	84	416
	0.0019	—	—	112	—	—	95	216	154	303
Channel catfish	0.0006	—	—	17	41	—	33	—	—	90
	0.0006	—	—	33	60	—	69	—	—	97
Carp	0.0002	—	—	—	—	—	—	31	—	31
	0.0004	—	—	—	—	—	—	63	—	63
Chinook salmon	0.0182	—	—	—	—	—	678	2,275	—	2,954
	0.0101	—	—	—	—	—	606	1,436	—	1,559
Coho salmon	0.0026	—	63	—	—	—	212	129	11	415
	0.0020	—	126	—	—	—	223	182	22	314
Freshwater drum	0.0018	—	—	—	226	—	69	—	—	295
	0.0015	—	—	—	204	—	127	—	—	241
*OTH1 released	0.0029	—	73	159	201	—	13	22	—	468
	0.0025	—	139	267	264	—	26	44	—	404

TOTAL RELEASED	0.6639	10,589	10,064	22,969	32,516	9,822	10,791	7,677	3,389	107,818
	0.3788	8,186	NAN	7,822	10,220	NAN	3,987	2,639	1,434	58,494
TOTAL CATCH	0.9316	17,157	11,871	26,285	40,630	14,680	23,760	11,141	5,770	151,294
	0.4027	10,327	NAN	8,037	11,221	NAN	8,657	3,068	1,601	59,675
ANGLER HOURS		15,740	5,650	9,716	15,365	16,089	41,512	37,318	21,006	162,397
		5,638	NAN	3,111	5,024	3,661	11,442	8,722	5,071	28,699
ANGLER TRIPS		3,226	1,265	2,302	3,829	3,452	7,983	6,323	3,738	32,118
		1,674	NAN	912	1,393	1,088	2,401	1,846	938	6,514

*OTH1 released= Goby, Sturgeon, Bowfin

Table 11.—Estimated harvest, catch per hour, and fishing pressure for the shore fishery all sites combined. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Walleye	0.0017	—	32	—	—	25	—	104	73	235
	0.0019	—	66	—	—	50	—	213	105	252
Yellow Perch	0.0029	—	—	—	—	—	53	—	341	394
	0.0052	—	—	—	—	—	103	—	682	690
Bluegill	0.0012	—	—	—	167	—	—	—	—	167
	0.0016	—	—	—	210	—	—	—	—	210
Pumpkinseed	0.0016	—	—	—	—	210	—	—	—	210
	0.0031	—	—	—	—	420	—	—	—	420
Rock bass	0.0076	—	448	312	259	—	—	—	—	1,019
	0.0082	—	636	692	548	—	—	—	—	1,088
Black crappie	0.0000	—	—	—	—	—	3	—	—	3
	0.0000	—	—	—	—	—	6	—	—	6
Rainbow trout	0.0379	1,844	461	632	287	—	215	1,129	531	5,099
	0.0358	1,037	322	697	245	—	328	NAN	445	4,734
Brown trout	0.0177	—	1,387	173	618	—	59	—	148	2,384
	0.0215	—	2,720	115	877	—	88	—	192	2,868
Common white sucker	0.0054	101	631	—	—	—	—	—	—	732
	0.0050	154	645	—	—	—	—	—	—	663
Lake trout	0.0003	—	—	—	—	—	—	—	37	37
	0.0005	—	—	—	—	—	—	—	74	74
Redhorse	0.0081	118	922	—	—	—	—	52	—	1,092
	0.0095	235	1,233	—	—	—	—	106	—	1,260
Channel catfish	0.0003	—	—	—	—	39	—	—	—	39
	0.0005	—	—	—	—	67	—	—	—	67
Carp	0.0004	—	48	—	—	—	—	—	—	48
	0.0007	—	96	—	—	—	—	—	—	96
Chinook salmon	0.0330	—	—	—	—	51	1,051	3,336	—	4,438
	0.0180	—	—	—	—	54	880	2,118	—	2,295
Coho salmon	0.0109	—	—	—	—	—	127	1,274	62	1,463
	0.0084	—	—	—	—	—	160	1,093	90	1,108
Goby	0.0003	—	—	—	—	39	—	—	—	39
	0.0005	—	—	—	—	68	—	—	—	68
Goby	0.0059	—	—	—	—	—	800	—	—	800
	0.0115	—	—	—	—	—	1,547	—	—	1,547
TOTAL HARVEST	0.1352	2,063	3,929	1,116	1,331	364	2,308	5,895	1,192	18,199
	0.1795	1,075	3,140	989	1,083	437	1,822	NAN	851	23,946
RELEASED										
Walleye	0.0029	187	64	—	—	—	—	104	41	396
	0.0027	239	132	—	—	—	—	210	82	354
Northern pike	0.0044	—	378	—	176	39	—	—	—	593
	0.0114	—	NAN	—	239	74	—	—	—	1,533
Largemouth bass	0.0011	—	—	—	41	105	—	—	—	146
	0.0017	—	—	—	72	210	—	—	—	222
Smallmouth bass	0.0076	—	287	—	227	249	263	—	—	1,027
	0.0046	—	305	—	340	227	300	—	—	592
Yellow Perch	0.0217	106	141	178	748	920	—	10	818	2,921
	0.0181	212	281	356	1,375	1,479	—	13	1,157	2,381
Bluegill	0.0186	—	—	642	1,213	644	—	—	—	2,500
	0.0159	—	—	797	1,831	649	—	—	—	2,099
Pumpkinseed	0.0047	35	—	178	84	338	—	—	—	635
	0.0046	71	—	356	153	466	—	—	—	609
Rock bass	0.0270	35	1,124	1,202	721	270	28	261	—	3,640
	0.0166	71	1,242	1,347	918	445	55	442	—	2,145
Black crappie	0.0017	—	47	—	108	78	—	—	—	233
	0.0022	—	94	—	231	157	—	—	—	295
Rainbow trout	0.0878	1,804	1,828	931	1,044	264	35	5,135	778	11,821
	0.1541	1,163	1,127	649	776	320	71	NAN	570	20,639
Brown trout	0.1583	1,685	5,053	2,757	1,484	1,940	714	3,507	4,165	21,306
	0.0531	1,425	3,636	1,569	1,091	2,121	723	2,624	2,533	6,101
Common white sucker	0.0041	73	354	29	—	64	—	—	25	545
	0.0027	90	319	58	—	88	—	—	50	351
Redhorse	0.0061	—	573	—	—	25	165	52	—	816
	0.0074	—	924	—	—	45	330	107	—	988
Brook trout	0.0004	52	—	—	—	—	—	—	—	52
	0.0008	104	—	—	—	—	—	—	—	104
Channel catfish	0.0026	—	—	187	—	—	160	—	—	347
	0.0037	—	—	374	—	—	320	—	—	492
Carp	0.0008	—	38	—	—	20	53	—	—	111
	0.0010	—	75	—	—	41	108	—	—	138
Chinook salmon	0.0099	—	—	—	—	—	230	1,038	62	1,329
	0.0079	—	—	—	—	—	223	1,009	88	1,037

Coho salmon	0.0061	16	430	43	-	-	-	154	178	820
	0.0062	31	757	66	-	-	-	185	246	821
Freshwater drum	0.0002	-	20	-	-	-	-	-	-	20
	0.0003	-	40	-	-	-	-	-	-	40
Goby	0.1591	-	396	385	18,281	2,220	81	50	-	21,412
	0.1985	-	791	487	26,341	2,177	130	100	-	26,447
Gizzard Shad	0.0005	71	-	-	-	-	-	-	-	71
	0.0011	141	-	-	-	-	-	-	-	141
TOTAL RELEASED	0.5256	4,064	10,733	6,531	24,127	7,177	1,729	10,311	6,068	70,740
	0.4946	1,880	NAN	2,443	26,495	3,536	954	NAN	2,856	65,400
TOTAL CATCH	0.6608	6,128	14,662	7,647	25,459	7,541	4,037	16,206	7,260	88,939
	0.5303	2,165	NAN	2,636	26,517	3,563	2,057	NAN	2,980	69,646
ANGLER HOURS		25,379	8,865	7,147	8,474	5,843	18,379	50,227	10,277	134,591
		7,444	3,611	1,956	2,604	1,424	7,693	20,061	3,631	23,577
ANGLER TRIPS		4,659	2,566	2,462	2,063	1,698	5,664	8,336	2,827	30,276
		1,514	1,238	1,308	1,004	745	2,556	3,635	1,082	5,293

Table 12.—Estimated harvest, catch per hour, and fishing pressure for The Manistee River fishery all sites and modes combined. Two standard errors are given below the estimates.

Species	C/H	April	May	June	July	August	September	October	November-December	Season
HARVEST										
Walleye	0.0018	—	32	40	127	148	24	104	73	548
	0.0012	—	66	82	152	145	44	213	105	337
Northern pike	0.0024	—	—	119	238	189	149	15	—	708
	0.0019	—	—	152	309	354	203	30	—	535
Largemouth bass	0.0017	—	—	100	299	47	69	—	—	515
	0.0012	—	—	154	263	99	137	—	—	349
Smallmouth bass	0.0015	—	—	30	289	28	102	—	—	449
	0.0011	—	—	42	264	56	151	—	—	312
Yellow Perch	0.0104	765	510	59	1,069	48	293	—	341	3,085
	0.0075	1,073	757	89	1,454	68	430	—	682	2,122
Bluegill	0.0687	3,192	453	2,303	3,417	3,933	6,788	260	50	20,397
	0.0379	5,607	516	1,748	3,248	3,319	7,077	520	57	10,329
Pumpkinseed	0.0191	1,368	297	144	683	594	2,590	—	—	5,675
	0.0138	2,528	430	251	998	715	2,657	—	—	3,899
Rock bass	0.0067	15	522	355	698	—	289	—	125	2,004
	0.0051	30	646	695	999	—	437	—	129	1,451
Black crappie	0.0099	342	441	208	1,486	—	291	—	159	2,927
	0.0098	646	686	373	2,611	—	451	—	172	2,842
Rainbow trout	0.0333	2,689	493	701	501	—	254	3,055	2,198	9,890
	0.0421	1,147	328	709	360	—	337	NAN	750	12,329
Brown trout	0.0094	41	1,387	314	640	—	59	153	190	2,784
	0.0099	64	2,720	259	878	—	88	220	201	2,888
Common white sucker	0.0025	101	631	—	—	—	—	—	—	732
	0.0023	154	645	—	—	—	—	—	—	663
Lake trout	0.0001	—	—	—	—	—	—	—	37	37
	0.0002	—	—	—	—	—	—	—	74	74
Redhorse	0.0037	118	922	—	—	—	—	52	—	1,092
	0.0043	235	1,233	—	—	—	—	106	—	1,260
Channel catfish	0.0004	—	—	58	—	39	—	—	26	123
	0.0005	—	—	117	—	67	—	—	55	145
Carp	0.0002	—	48	—	—	—	—	—	—	48
	0.0003	—	96	—	—	—	—	—	—	96
Chinook salmon	0.0261	—	—	—	—	158	3,260	4,324	—	7,742
	0.0105	—	—	—	—	102	1,403	2,210	—	2,620
Coho salmon	0.0070	—	—	—	—	—	310	1,396	374	2,080
	0.0042	—	—	—	—	—	253	1,106	305	1,175
Goby	0.0001	—	—	—	—	39	—	—	—	39
	0.0002	—	—	—	—	68	—	—	—	68
Goby	0.0027	—	—	—	—	—	800	—	—	800
	0.0052	—	—	—	—	—	1,547	—	—	1,547
TOTAL HARVEST	0.2077	8,632	5,736	4,432	9,445	5,222	15,277	9,359	3,573	61,676
	0.1404	6,387	3,372	2,095	4,758	3,422	7,897	NAN	1,109	39,445
RELEASED										
Walleye	0.0060	360	89	20	592	218	255	195	41	1,770
	0.0031	344	140	36	539	189	406	278	82	845
Northern pike	0.0323	476	1,378	1,349	4,019	1,066	848	419	41	9,595
	0.0219	707	NAN	916	2,220	708	615	598	48	6,156
Largemouth bass	0.0225	147	376	1,316	3,167	1,176	477	—	11	6,672
	0.0096	234	434	1,097	1,973	696	428	—	23	2,451
Smallmouth bass	0.0508	2,322	1,421	2,179	4,531	2,500	2,043	66	11	15,073
	0.0397	4,206	910	1,629	2,271	NAN	1,398	70	23	11,327
Yellow Perch	0.0329	597	1,117	582	2,162	2,122	2,226	140	818	9,764
	0.0163	687	1,438	611	2,039	1,807	2,684	260	1,157	4,353
Bluegill	0.0597	—	231	5,217	5,970	3,734	2,057	520	—	17,729
	0.0260	—	298	3,877	4,498	2,048	1,975	1,040	—	6,673
Pumpkinseed	0.0083	263	—	319	969	430	496	—	—	2,478
	0.0052	461	—	411	1,039	484	597	—	—	1,432
Rock bass	0.0552	4,201	2,204	3,576	5,072	558	479	280	14	16,384
	0.0295	6,813	1,604	2,217	3,041	508	515	444	29	7,992
Black crappie	0.0216	98	103	102	5,373	464	263	—	—	6,403
	0.0258	146	119	204	7,509	376	569	—	—	7,545
Rainbow trout	0.0745	2,639	3,735	2,551	2,706	288	377	7,211	2,632	22,139
	0.1111	1,313	NAN	2,309	1,714	323	425	NAN	887	32,652
Brown trout	0.1317	3,192	7,678	11,142	3,209	1,964	1,237	5,189	5,509	39,121
	0.1108	1,809	NAN	5,999	2,033	2,122	1,077	2,986	2,825	31,768
Common white sucker	0.0060	220	871	300	125	214	—	—	42	1,772
	0.0033	174	751	370	142	259	—	—	59	907
Lake trout	0.0000	—	—	—	—	—	—	9	—	9
	0.0001	—	—	—	—	—	—	18	—	18
Redhorse	0.0041	—	573	56	—	25	233	260	84	1,232
	0.0036	—	924	112	—	45	344	241	154	1,033

Brook trout	0.0002	52	-	-	-	-	-	-	-	52
	0.0004	104	-	-	-	-	-	-	-	104
Channel catfish	0.0015	-	-	204	41	-	193	-	-	437
	0.0017	-	-	375	60	-	327	-	-	502
Carp	0.0005	-	38	-	-	20	53	31	-	143
	0.0005	-	75	-	-	41	108	63	-	151
Chinook salmon	0.0144	-	-	-	-	-	908	3,313	62	4,283
	0.0071	-	-	-	-	-	646	1,755	88	1,872
Coho salmon	0.0042	16	493	43	-	-	212	284	189	1,236
	0.0031	31	767	66	-	-	223	259	247	879
Freshwater drum	0.0011	-	20	-	226	-	69	-	-	315
	0.0009	-	40	-	204	-	127	-	-	244
*OTH1 released	0.0737	-	469	543	18,482	2,220	94	72	-	21,879
	0.0905	-	804	556	26,342	2,177	132	109	-	26,450
Gizzard Shad	0.0002	71	-	-	-	-	-	-	-	71
	0.0005	141	-	-	-	-	-	-	-	141
TOTAL RELEASED	0.6012	14,653	20,797	29,500	56,643	16,999	12,520	17,989	9,457	178,558
	0.4668	8,399	NAN	8,195	28,397	NAN	4,100	NAN	3,196	133,011
TOTAL CATCH	0.8089	23,285	26,533	33,933	66,088	22,221	27,797	27,348	13,030	240,233
	0.4996	10,552	NAN	8,458	28,793	NAN	8,898	NAN	3,383	138,737
ANGLER HOURS		41,118	14,515	16,864	23,839	21,932	59,892	87,545	31,283	296,988
		9,338	NAN	3,674	5,659	3,929	13,787	21,875	6,237	65,013
ANGLER TRIPS		7,885	3,832	4,765	5,892	5,150	13,647	14,659	6,565	62,394
		2,257	NAN	1,595	1,716	1,319	3,507	4,077	1,432	16,680

*OTH1 released= Goby, Sturgeon, Bowfin