

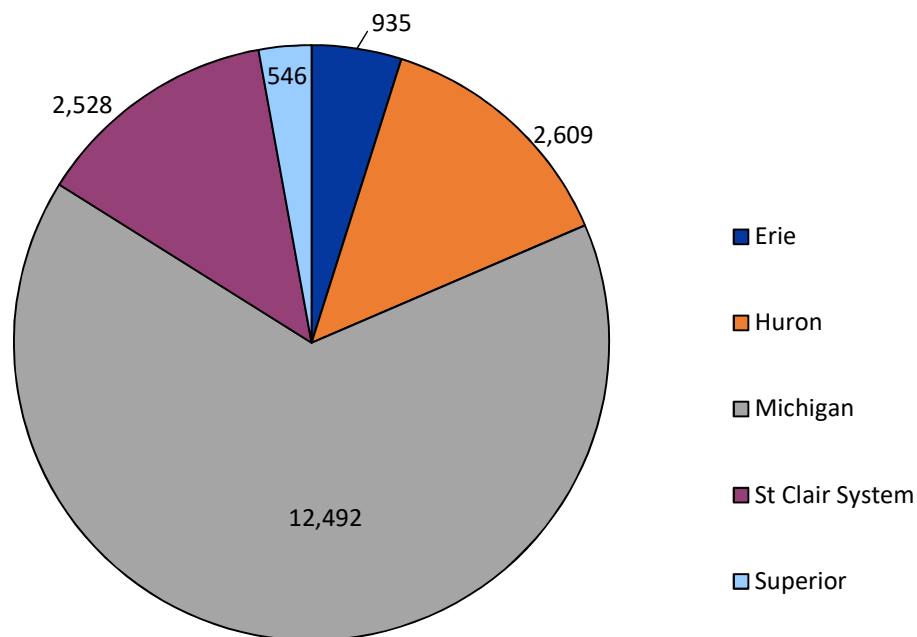
Charter Boat Catch and Effort from the Michigan Waters of the Great Lakes, 2019

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and

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2019 Charter Excursions by Lake - Total 19,110



Michigan Department of Natural Resources

Fisheries Division

Charlevoix Fisheries Research Station

September 2020

SURVEY PERFORMANCE REPORT

State: Michigan

Project No: F-61-R-4

Survey No: 230462

Title: Charter Boat catch and effort from the Michigan waters of the Great Lakes.

Period Covered: October 1, 2019– September 30, 2020

Survey Objective: Obtain a continuous annual record of the charter fishing catch, effort, and catch rate of the major sport fish in the Michigan waters of the Great Lakes.

Summary: A worldwide pandemic caused by Novel Coronavirus (COVID-19) occurred in the start of year 2020 and is still ongoing as of September 30, 2020. In mid-March 2020 Michigan Department of Natural Resources (MDNR) personnel were instructed to work from home as Michigan was under a “Stay at Home” order. While the Stay at Home order has since been lifted, any work DNR staff can do via teleworking is still required as of September 30, 2020. Normally Charlevoix Fisheries Research Station (CFRS) staff mail charter fishing annual reporting packets in April; due to the Stay at Home order, this action was delayed until mid-June 2020. In June CFRS staff sent the annual reporting packet to all known charter fishing operators who possessed a license to fish the Michigan waters of the Great Lakes and their major tributaries. Charter operators who had previously used the charter fishing online reporting system were sent reporting information via email in lieu of mailed reporting packets. The charter fishing reporting mailing packets included Charter Boat Daily Catch Report forms, instructions on how to complete and mail the forms, self-addressed return envelopes, grid maps of the Great Lakes, and a notice that the online system is operational as an option for reporting. State of Michigan Public Act 451 (Part 445) of 1994 requires all charter operators to record their daily fishing effort and catch and report their charter fishing activity to the DNR on a monthly basis. During the 2019 and 2020 data collection seasons, CFRS staff sent post card or certified mail notification to delinquent charter operators. By the end of the 2019 season, inclusive of assistance from MDNR Law Enforcement Division (LED) compliance-related activities through January 2020, 99% of all charter operators complied with state-mandated reporting requirements and data from 2019 is summarized in this report. Survey results were disseminated via written report, as mandated by Public Act 451, with data summarized by Great Lake for fishing effort, catch, and harvest. Lake and port-specific results were posted on the DNR Charter Fishing Reporting Program website. Detailed catch results were provided to DNR staff and external organizations for use in fisheries management and presentations. Due to Covid-19, citizen advisory groups, Lake Committees, and other public and agency meetings became virtual starting late March 2020 and will continue virtual at least through the end of year 2020. Similar data were collected during the 2020 season and will be summarized in the report for FY2021; with the following exception, due to the “Stay at Home” Covid-19 order, charter operators were not permitted to operate during the month of April through May 6th 2020.

Findings: Approach 1 was scheduled for fiscal year 2020, and progress is reported below.

Approach 1. Obtain a continuous annual record of the charter fishing catch, effort, and catch rate of the major sport fish in the Michigan waters of the Great Lakes.

Job 1. Survey design and coordination.—Sport catch and fishing effort by the charter fishing industry is key fisheries information used directly in management decisions; reporting of this information is required under State of Michigan Public Act 451 (Part 445) of 1994. The survey design involves a census of charter operators identified from: (1) a list of operators who submitted catch reports the previous year; (2) review of the DNR LED list of individuals who applied for and/or received a

certificate of inspection for a fishing vessel; and (3) individuals who applied for and/or received a Sport Trolling License. Charter reporting results in a continuous annual record of (1) charter fishing effort, and (2) number, type, and location of fish caught and harvested by charter anglers.

Modifications to the information collected and the online data collection system have been ongoing throughout the years of the study and have been described in previous performance reports. Charter reporting is one module of a three-component reporting system called FACTS (Fishing Activity and Catch Tracking System) developed for MDNR Fisheries by Electric Edge, an information technology contractor hired by the State of Michigan; the other two modules are commercial fisheries reporting and wholesale fisheries reporting. Initial public rollout of the new FACTS system occurred in early 2019, with full mobile application implemented in June 2019. Charter Program staff continue working with Electric Edge to “fine tune” the system and complete development of additional sub-modules within the program. FACTS enhancements in 2020 included updates to the management interface, new reporting features for management including current status of operators monthly reporting and if the operation or specific boats are active or inactive, and continued efforts to make the system more user friendly for the operator (charter captain).

CFRS personnel emphasized the importance of accurate reporting throughout the entire season via telephone conversations and written correspondence with charter operators. In addition, between October 1, 2019 and September 30, 2020, program personnel made presentations at Michigan Sea Grant workshops, Michigan Charter Boat Association meetings, fisheries workshops, citizen advisory meetings, and other public and agency meetings; some of these were virtual meetings. These workshops and meetings provided an opportunity to: (1) share local and lake-wide fishing data; (2) educate charter operators about the importance of accurate and timely data reporting; (3) explain how to interpret results and how the data are used to address fisheries management concerns; (4) address questions and get feedback about the program; (5) promote and provide updates on the online reporting system; and (6) promote positive and trusting relationships between the public and the DNR.

Job 2. Conduct surveys and process samples.—In mid-June 2020, CFRS personnel sent, by mail or email, annual reporting instructions to 570 charter operators who report on 650 charter boats. Included within the postal mailings were Charter Boat Daily Catch Report forms, instructions on how to complete and mail the forms, self-addressed return envelopes, grid maps of the Great Lakes, and a notice that the online system is operational as an option for reporting. With these mailings, operators were reminded (1) they are required by law to complete and submit monthly reports to the DNR by the tenth day of the month following the month of fishing, and (2) of penalties for non-reporting. Completed catch and activity forms received by the CFRS were logged and entered into an electronic database.

The online reporting system is another method available for charter captains to submit monthly reports. Those captains using the system at the end of the 2019 fishing season received an online instructional email in June 2020 in lieu of the above-described mailing. As of the end of FY2020, 383 charter operators, reporting for 444 boats and representing approximately 66% of total operators and boats, had established an online reporting account.

Job 3. Manage data, maintain databases.—Data entry was completed by staff at the CFRS and online by charter operators. As charter report forms and online data arrived at the CFRS, personnel checked the forms and data for completeness. If incomplete, the forms were returned to charter operators with an explanation and request for the form to be corrected or completed. Errors from online reporting were reviewed and corrected using email or telephone. In some cases, CFRS staff did not receive reports by the due date; therefore, delinquent notices were sent via postcard to charter operators who had not filed a report for a particular month (March through October). These notices were sent at least 30 days after an operator was delinquent with data for a given month.

CFRS staff sent a final notice letter to delinquent operators in December. Those operators with one delinquent report were sent a letter via first class mail and those with two or more delinquent reports were sent letters via certified mail. The letter notified the operator that if they did not respond in writing within 15 days, his or her name may be submitted to the DNR LED with a recommendation that they not be issued an inspection certificate for the following season.

Postcard notices did not always elicit a response from operators. CFRS staff continued close coordination with LED to identify reasons for noncompliance. These actions enabled CFRS staff to identify those operators who failed to submit reports for acceptable reasons (e.g. stopped fishing during the middle of the season or were out of business), thereby reducing the percentage of noncompliant operators. Furthermore, the coordination effort enabled staff to identify and add operators who were absent from the database, improving the accuracy of effort and catch totals for the following year. The increased coordination between CFRS staff and LED, initiated in 2016, works very well and was continued in 2020. Each month of July through September 2020, CFRS staff provided a current listing of charter operators who were delinquent on reports to LED; monthly lists will be provided as needed through the end of the year. LED district conservation officers and support staff contacted the charter operators in person or via phone and requested the operator submit monthly reports. The interaction between LED and charter operators is crucial to achieving monthly reporting compliance from some operators. The implementation of the FACTS reporting system in 2019 did cause some delays in reporting abilities, management abilities, and enforcement actions; this resulted in an increase in delinquency at the time of sending final notification letters for one or more delinquent reports in December 2019, 80% of the operators/boats were in compliance (in comparison to 96% in 2018). By end of January 2020, LED enforcement actions had increased compliance to 99% for the 2019 season.

Job 4. Analyze data, modeling.—Data analyses and summaries included operator reporting compliance; fishing effort, harvest, catch, harvest rate, and catch rate by lake, statistical district, and port; and rates of Sea Lamprey *Petromyzon marinus* incidence on charter-caught fish. Data were incorporated into and complemented analyses by other Fisheries Division staff, university collaborators, and multi-agency working groups.

In 2019, a total of 75,871 charter anglers participated in 19,110 excursions on the Michigan waters of lakes Michigan, Huron, Erie, Superior, and the St. Clair system (including the major tributaries) totaling 413,232 hours fishing (Tables 1 – 7). When compared to 2018 the charter effort excursions decreased 3%, anglers decreased 4%, and angler hours decreased 5%.

Charter operators reported 184,527 fish harvested from the Michigan waters of the Great Lakes and select tributaries in 2019. The most numerous species in the 2019 harvest was Walleye *Sander vitreus* (71,195), followed by Lake Trout *Salvelinus namaycush* (65,429), Chinook Salmon *Oncorhynchus tshawytscha* (21,430), Coho Salmon *Oncorhynchus kisutch* (8,972), Yellow Perch *Perca flavescens* (8,605), Rainbow Trout *Oncorhynchus mykiss* (6,065), Smallmouth Bass *Micropterus dolomieu* (1,068), and Brown Trout *Salmo trutta* (246). Relative to 2018 species harvest numbers, there was a decrease in harvest of all species except for walleye which increased by 5%. 2019 Yellow Perch harvest decreased by 68%, Brown Trout harvest decreased 51%, Coho Salmon harvest decreased 41%, Chinook Salmon harvest decreased 15%, Smallmouth Bass harvest decreased by 13%, Rainbow Trout harvest decreased 11%, and Lake Trout harvest decreased by 10%.

In 2019, Sea Lamprey incidence on Chinook Salmon increased for Lake Michigan but decreased for Lakes Huron and Superior compared to that observed in 2018. Sea Lamprey occurrence on Lake Trout increased in Lake Michigan, decreased in Lake Huron, and was unchanged for Lake Superior (compared to 2018).

Job 5. Write reports.-This annual progress report was prepared. Additional data along with summary tables for individual ports are available on the DNR Fisheries Division web site at https://www.michigan.gov/dnr/0,4570,7-350-79136_79236_80538_80540---,00.html.

Prepared by: Donna Wesander
Date: September 30, 2020

Table 1.—Targeted harvest & catch rates per hour, per excursion, and number of fish harvested or released by species for charter boats fishing Michigan waters of Lake Michigan and select tributaries, 2019. Targeted harvest & catch of any salmon or trout is based on total salmonine effort; other species are trip target specific. Catch Rates = harvested (kept) fish + released fish. Bottom lines show total fishing effort (angler hours, anglers, and charter excursions).

Targeted Harvest/hr Catch/hr	Targeted Harvest/excur Catch/excur	SPECIES Harvest= Line 1 Released = Line 2	Month												TARGETED	TOTAL
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Harvest/year released/year	(target+non-target) Harvest/year released/year
0.032	0.737	Coho salmon	0	0	39	835	896	2,697	934	2,266	849	22	1	13	8,552	8,553
0.032	0.743	<i>released</i>	0	0	0	1	26	3	5	16	17	0	1	0	69	70
0.079	1.801	Chinook salmon	0	0	0	89	4,281	3,885	3,000	8,138	1,333	156	1	6	20,889	20,899
0.081	1.843	<i>released</i>	0	0	0	4	54	97	59	104	21	126	5	15	485	485
0.020	0.462	Rainbow trout	21	147	498	160	237	412	613	1,559	499	226	509	474	5,355	5,416
0.023	0.516	<i>released</i>	22	28	87	25	8	16	7	20	2	69	187	161	632	633
0.001	0.014	Brown trout	0	0	7	32	32	15	21	37	12	1	0	1	158	161
0.001	0.020	<i>released</i>	0	0	3	1	1	19	1	15	2	27	8	2	79	80
0.201	4.591	Lake trout	0	1	15	654	5,885	7,651	18,722	15,645	4,490	152	0	27	53,242	53,287
0.208	4.750	<i>released</i>	0	0	0	38	198	364	664	459	106	8	1	2	1,840	1,912
0.611	50.591	Yellow perch	0	0	0	0	0	69	650	1,357	150	0	0	0	2,226	2,407
0.663	54.886	<i>released</i>	0	0	0	0	0	0	131	56	2	0	0	0	189	377
0.170	2.869	Walleye	14	22	54	32	90	156	145	269	75	73	147	65	1,142	1,191
0.432	7.299	<i>released</i>	49	10	29	9	85	460	327	370	97	55	143	129	1,763	1,798
0.002	0.032	Smallmouth Bass	0	0	0	0	0	0	11	0	0	0	0	0	11	53
1.524	20.052	<i>released</i>	0	0	0	0	772	1,669	1,765	1,375	705	621	0	0	6,907	7,279
0.000	0.000	Musky	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.100	1.000	<i>released</i>	0	0	0	0	0	1	1	0	0	0	0	0	2	2
		Other <i>released</i>														1,146 1,453
		Total angler hours	352	1,006	3,245	3,922	28,106	42,115	69,027	95,890	25,396	4,304	4,734	3,579		281,674
		Total anglers	53	143	473	693	5,026	7,707	13,159	17,666	4,867	673	685	521		51,666
		Total excursions	19	50	168	186	1,183	1,851	3,000	4,111	1,242	250	251	181		12,492

Table 2.—Targeted harvest & catch rates per hour, per excursion, and number of fish harvested or released by species for charter boats fishing Michigan waters of Lake Huron and select tributaries, 2019. Targeted harvest & catch of any salmon or trout is based on total salmonine effort; other species are trip target specific. Catch Rates = harvested (kept) fish + released fish. Bottom lines show total fishing effort (angler hours, anglers, and charter excursions).

Targeted Harvest/hr Catch/hr	Targeted Harvest/excur Catch/excur	SPECIES Harvest= Line 1 Released = Line 2	Month												TARGETED	TOTAL
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Harvest/year released/year	(target+non-target) Harvest/year released/year
0.004	0.073	Coho salmon	0	0	0	0	2	33	40	15	7	0	0	0	97	100
0.004	0.075	released	0	0	0	0	0	0	0	0	1	0	1	0	2	2
0.019	0.360	Chinook salmon	0	0	0	0	24	86	164	178	20	5	0	0	477	478
0.019	0.365	released	0	0	0	0	0	0	6	0	0	1	0	0	7	7
0.022	0.427	Rainbow trout	0	0	38	56	18	88	178	90	61	3	34	0	566	577
0.025	0.474	released	0	0	5	0	0	36	0	14	0	4	3	0	62	63
0.000	0.008	Brown trout	0	0	0	0	2	6	0	2	0	1	0	0	11	13
0.001	0.014	released	0	0	0	0	5	0	1	0	0	2	0	0	8	10
0.304	5.858	Lake trout	0	0	21	72	875	2,080	2,071	1,745	903	0	1	0	7,768	7,850
0.325	6.261	released	0	0	0	0	22	112	134	187	64	15	0	0	534	553
2.546	37.613	Yellow perch	0	0	0	0	100	0	9	125	357	575	0	0	1,166	1,536
3.415	50.452	released	0	0	0	0	40	0	0	0	62	296	0	0	398	464
1.009	19.672	Walleye	0	0	0	151	2,939	9,760	7,974	2,560	391	90	139	55	24,059	24,931
1.164	22.701	released	0	0	0	14	408	1,720	1,085	189	40	9	126	113	3,704	3,736
0.360	6.200	Smallmouth Bass	0	0	0	0	2	56	0	0	0	4	0	0	62	126
1.349	23.200	released	0	0	0	0	82	45	20	2	0	21	0	0	170	281
0.000	0.000	Musky	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0.333	4.000	released	0	0	0	0	0	0	0	0	0	4	0	0	4	9
		Other released														1,410 1,610
		Total angler hours	0	0	119	580	5,630	15,507	15,072	9,453	3,092	550	346	51		50,399
		Total anglers	0	0	21	100	1,002	2,900	2,827	1,817	572	101	54	10		9,404
		Total excursions	0	0	10	36	277	776	774	498	168	42	24	4		2,609

Table 3.—Targeted harvest & catch rates per hour, per excursion, and number of fish harvested or released by species for charter boats fishing Michigan waters of Lake Superior and select tributaries, 2019. Targeted harvest & catch of any salmon or trout is based on total salmonine effort; other species are trip target specific. Catch Rates = harvested (kept) fish + released fish. Bottom lines show total fishing effort (angler hours, anglers, and charter excursions).

Targeted Harvest/hr Catch/hr	Targeted Harvest/excur Catch/excur	SPECIES Harvest= Line 1 Released = Line 2	Month												TARGETED	TOTAL
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Harvest/year released/year	(target+non-target) Harvest/year released/year
0.025	0.601	Coho salmon	0	0	0	0	41	38	104	91	35	3	0	0	312	312
0.027	0.634	<i>released</i>	0	0	0	0	0	0	8	8	0	0	1	0	17	17
0.004	0.100	Chinook salmon	0	0	0	0	10	9	24	8	1	0	0	0	52	52
0.004	0.100	<i>released</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.006	0.133	Rainbow trout	0	0	0	0	16	8	17	11	13	4	0	0	69	69
0.008	0.195	<i>released</i>	0	0	0	0	3	4	20	5	0	0	0	0	32	32
0.006	0.139	Brown trout	0	0	0	0	18	19	20	10	5	0	0	0	72	72
0.007	0.168	<i>released</i>	0	0	0	0	8	1	4	0	1	1	0	0	15	15
0.347	8.270	Lake trout	0	0	0	0	95	816	1,784	1,300	246	51	0	0	4,292	4,292
0.436	10.372	<i>released</i>	0	0	0	0	81	219	375	353	58	5	0	0	1,091	1,091
		Yellow perch	0	0	0	0	0	0	0	0	0	0	0	0	0	21
		<i>released</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	37
0.280	4.682	Walleye	0	0	0	0	26	18	37	15	7	0	0	0	103	107
0.448	7.500	<i>released</i>	0	0	0	0	5	6	24	9	1	17	0	0	62	69
0.000	0.000	Smallmouth Bass	0	0	0	0	0	0	0	0	0	0	0	0	0	4
0.508	10.000	<i>released</i>	0	0	0	0	0	14	0	0	0	16	0	0	30	65
		Musky	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>released</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Other														42
		<i>released</i>														138
Total angler hours			0	0	0	0	597	2,406	5,087	3,596	846	271	13	0		12,814
Total anglers			0	0	0	0	107	378	834	590	162	49	4	0		2,124
Total excursions			0	0	0	0	32	95	207	149	47	14	2	0		546

Table 4.—Targeted harvest & catch rates per hour, per excursion, and number of fish harvested or released by species for charter boats fishing Michigan waters of Lake Erie, 2019. Targeted harvest & catch are trip target specific. Catch Rates = harvested (kept) fish + released fish. Bottom lines show total fishing effort (angler hours, anglers, and charter excursions). Lake Sturgeon and White Bass is partial data, only that reported by online reporters.

Targeted Harvest/hr Catch/hr	Targeted Harvest/excur Catch/excur	SPECIES Harvest= Line 1 Released = Line 2	Month												TARGETED	TOTAL		
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Harvest/year released/year	(target+non-target) Harvest/year released/year		
		Lake Sturgeon <i>released</i>	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
		White Bass <i>released</i>	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 252	45 252
1.857 2.223	42.539 50.934	Yellow perch <i>released</i>	0 0	0 0	0 0	0 0	0 0	0 0	4 0	801 109	2,013 449	415 80	0 0	0 0	3,233 638	3,411 652		
1.213 1.424	23.008 27.007	Walleye <i>released</i>	10 2	0 0	18 11	456 132	3,670 528	8,482 1,145	5,667 1,240	914 202	232 143	10 5	0 0	190 7	19,649 3,415	19,706 3,824		
0.000 1.014	0.000 18.750	Smallmouth Bass <i>released</i>	0 0	0 0	0 0	0 35	0 1	0 0	0 0	0 0	0 0	0 39	0 0	0 0	0 75	1 84		
		Musky <i>released</i>	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
		Other Species <i>Other released</i>															194 1,151	
		Total angler hours	8	0	68	628	2,885	6,465	4,550	1,611	1,394	196	12	215			18,023	
		Total anglers	2	0	8	108	681	1,534	1,052	323	253	35	3	43			4,042	
		Total excursions	1	0	2	28	156	345	241	81	59	10	1	11			935	

Table 5.—Targeted harvest & catch rates per hour, per excursion, and number of fish harvested or released by species for charter boats fishing Michigan waters of Lake St. Clair, 2019. Targeted harvest & catch are trip target specific. Catch Rates = harvested (kept) fish + released fish. Bottom lines show total fishing effort (angler hours, anglers, and charter excursions). Lake Sturgeon and White Bass is partial data, only that reported by online reporters.

Targeted Harvest/hr Catch/hr	Targeted Harvest/excur Catch/excur	SPECIES Harvest= Line 1 Released = Line 2	Month												TARGETED	TOTAL	
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Harvest/year released/year	(target+non-target) Harvest/year released/year	
0.000	0.000	Lake Sturgeon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.205	2.968	<i>released</i>	0	0	0	0	0	0	0	1	29	78	72	0	7	187	188
		White Bass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
		<i>released</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	73
1.380	31.929	Yellow perch	0	0	0	0	0	0	52	55	343	444	0	0	894	1,198	
2.366	54.750	<i>released</i>	0	0	0	0	0	0	44	39	188	368	0	0	639	811	
0.789	14.770	Walleye	0	0	0	36	791	1,476	646	167	23	7	0	0	3,146	3,299	
0.862	16.141	<i>released</i>	0	0	0	0	166	63	16	31	0	16	0	0	292	337	
0.058	1.153	Smallmouth Bass	0	0	0	0	0	75	106	348	73	0	0	0	602	859	
1.337	26.360	<i>released</i>	0	0	0	1053	3505	3925	1,651	1,982	662	380	0	0	13,158	13,919	
0.000	0.000	Musky	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
0.082	2.074	<i>released</i>	0	0	0	0	0	126	80	129	71	71	39	19	535	576	
		Other Species														61	
		<i>Other released</i>														929	
		Total angler hours	0	0	0	1,120	3,030	5,502	3,382	4,198	2,387	2,046	1,076	585		22,775	
		Total anglers	0	0	0	76	458	847	538	637	367	310	115	65		3,413	
		Total excursions	0	0	0	30	155	256	180	202	124	102	41	24		1,114	

Table 6.—Targeted harvest & catch rates per hour, per excursion, and number of fish harvested or released by species for charter boats fishing Michigan waters of Detroit River, 2019. Targeted harvest & catch are trip target specific. Catch Rates = harvested (kept) fish + released fish. Bottom lines show total fishing effort (angler hours, anglers, and charter excursions). Lake Sturgeon and White Bass is partial data, only that reported by online reporters.

Targeted Harvest/hr Catch/hr	Targeted Harvest/excur Catch/excur	SPECIES Harvest= Line 1 Released = Line 2	Month												TARGETED Harvest/year released/year	TOTAL (target+non-target) Harvest/year released/year	
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec			
0.000	0.000	Lake Sturgeon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.000	0.000	<i>released</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
1.307	18.571	White Bass	0	0	0	0	235	25	0	0	0	0	0	0	0	260	282
10.101	143.571	<i>released</i>	0	0	0	0	1,640	110	0	0	0	0	0	0	0	1,750	1,842
		Yellow perch	0	0	0	0	0	0	0	0	0	0	0	0	0	0	32
		<i>released</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29
0.844	16.815	Walleye	0	0	89	10,646	6,817	620	43	10	8	42	87	0	18,362	18,402	
1.012	20.156	<i>released</i>	0	0	11	2,063	1,342	151	60	0	0	6	15	0	3,648	3,658	
0.000	0.000	Smallmouth Bass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
1.034	22.750	<i>released</i>	0	0	0	0	0	0	78	64	20	20	0	0	182	299	
0.000	0.000	Musky	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0.083	2.190	<i>released</i>	0	0	0	0	3	37	0	0	0	6	0	0	46	62	
		Other Species															574
		<i>Other released</i>															1,915
		Total angler hours	0	0	144	12,914	8,202	1,004	122	75	66	348	110	0			22,984
		Total anglers	0	0	22	2,478	1,624	180	18	12	12	40	21	0			4,407
		Total excursions	0	0	7	637	417	57	6	4	4	14	7	0			1,153

Table 7.—Targeted harvest & catch rates per hour, per excursion, and number of fish harvested or released by species for charter boats fishing Michigan waters of St. Clair River, 2019. Targeted harvest & catch are trip target specific. Catch Rates = harvested (kept) fish + released fish. Bottom lines show total fishing effort (angler hours, anglers, and charter excursions). Lake Sturgeon and White Bass is partial data, only that reported by online reporters.

Targeted Harvest/hr Catch/hr	Targeted Harvest/excur Catch/excur	SPECIES Harvest= Line 1 <i>Released</i> = Line 2	Month												TARGETED	TOTAL	
			Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Harvest/year <i>released/year</i>	(target+non-target) Harvest/year <i>released/year</i>	
0.000	0.000	Lake Sturgeon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.202	2.813	<i>released</i>	0	0	0	0	0	0	0	4	12	22	7	0	0	45	46
		White Bass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>released</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		Yellow perch	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		<i>released</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.881	15.705	Walleye	0	0	0	200	1,649	1,283	222	97	48	19	0	0	3,518	3,559	
1.201	21.415	<i>released</i>	0	0	0	72	514	585	100	3	4	1	0	0	1,279	1,288	
0.080	1.500	Smallmouth Bass	0	0	0	0	18	0	0	0	0	0	0	0	18	18	
1.098	20.500	<i>released</i>	0	0	0	0	18	65	56	74	15	0	0	0	228	462	
0.000	0.000	Musky	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0.122	1.571	<i>released</i>	0	0	0	0	0	2	3	2	2	0	2	0	11	16	
		Other Species														12	
		<i>Other released</i>														189	
		Total angler hours	0	0	0	190	1,939	1,456	336	306	205	109	24	0		4,564	
		Total anglers	0	0	0	36	362	265	55	46	31	17	3	0		815	
		Total excursions	0	0	0	13	106	77	22	20	15	7	1	0		261	