

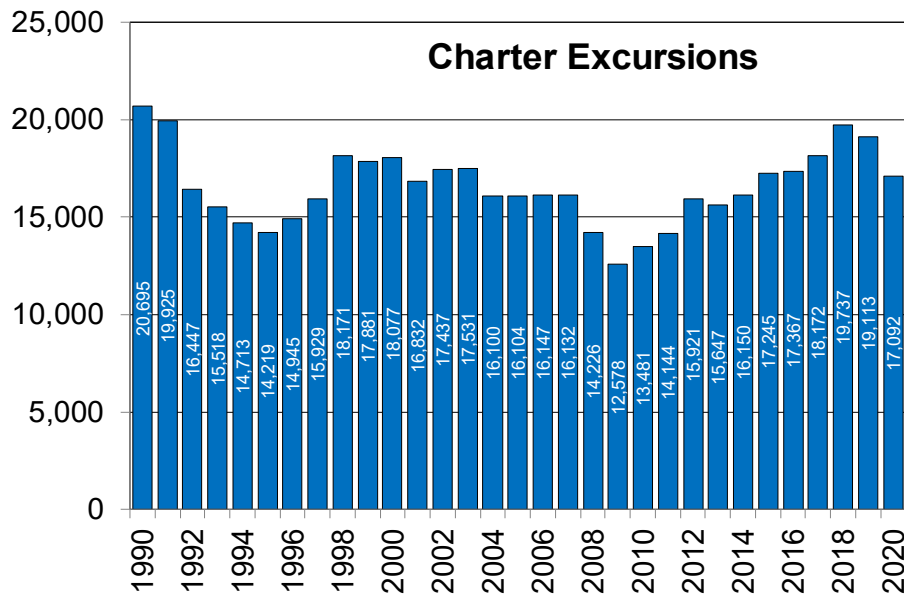
Charter Boat Catch and Effort from the Michigan Waters of the Great Lakes, 2017-2021

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and

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Total Number of Charter Fishing Excursions (in Michigan Great Lakes & select connected waters)



Michigan Department of Natural Resources

Fisheries Division – Charlevoix Fisheries Research Station

September 2021

SURVEY FINAL REPORT

State: Michigan

Project No: F-61-R-5

Survey No: 230462

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

Period Covered: October 1, 2016– September 30, 2021

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: In April of 2017-2019, June of 2020, and April 2021, Charlevoix Fisheries Research Station (CFRS) staff sent an 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 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 Michigan Department of Natural Resources (DNR) on a monthly basis. During October 2016 - September 2021, CFRS staff sent post card, first class mail letters, or certified mail notification to delinquent charter operators. By the January following each of the reporting years, with assistance from DNR Law Enforcement Division (LED) for compliance-related activities, 99%-100% of all charter operators complied with state-mandated reporting requirements for the prior years of 2017-2020.

Annual survey results for years 2017-2019 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. Data from 2020 is summarized in this report for major water bodies, 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. Data collected during the 2021 season will be summarized in the report for FY2022.

Detailed catch and effort results were presented at either in person or via online meetings of charter organizations, citizen advisory groups, and other public and agency meetings. In 2020 changes to Department web content policy is attempting to streamline web access within the department which resulted in the removal of individual port tables; the annual reports remain available online. Detailed charter fishing data results were provided to DNR staff and external organizations for use in fisheries management and presentations.

Findings: Approach 1 was scheduled for fiscal years 2017-2021, 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 and 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 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.

CFRS personnel emphasized the importance of accurate reporting throughout 2016-2021 via telephone conversations and written correspondence with charter operators. In addition, between October 1, 2016 and September 30, 2021, 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. Each year the number of charter operations and the number of boats in the charter fishing industry fluctuates as new operators enter the sector and others depart. From 2017-2021 the five-year average of charter operators was 570 and they reported on operations for 655 charter boats. Each spring CFRS personnel sent, by mail or email, annual reporting instructions to known charter operators. 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.

Those captains using the online charter reporting system at the end of the prior fishing season received an online instructional email in spring the following year in lieu of the above-described paper mailing. At the end of FY2017, 274 charter operations had online accounts for reporting on 311 boats which represented approximately 50% of total operators and boats for that year (total operations of 548, total 627 boats). By the end of FY2021 the percent of charter operations using online reporting had increased to 69% (420 operators reporting on 488 boats; total of 606 charter operations and 712 boats).

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. For years 2017-2019 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. In mid-March 2020, DNR personnel were instructed to work from home as Michigan was under a "Stay at Home" order due to the worldwide pandemic caused by COVID-19. While the "Stay at Home" order has since been lifted, workplace constraints due to COVID-19 in year 2020 would have made collection of returned certified mailing materials at the office difficult; therefore, all final delinquent letters were sent via first class mail in December 2020. There was no apparent change due to letters not being sent certified, so delinquent letters will be sent via first class mail in December 2021. 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 are not 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 2017-2021. CFRS staff provided current listings of charter operators who were delinquent on monthly reports to LED as needed during each 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; in 2020, COVID-19 added to these constraints. These changes resulted in an increase in delinquency at the time of sending final notification letters for one or more delinquent reports; in December of 2019 and 2020, 75-80% of the operators/boats were in compliance (in comparison to 96% in 2018). By January of each year 2017-2020, LED enforcement actions had increased compliance to 99-100% for each prior 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. These data were compiled and provided in annual reports for years 2017-2020 (2016-2019 data); lakewide data for 2020 are contained within this report.

In 2020, a total of 65,745 charter anglers participated in 17,092 excursions on the Michigan waters of lakes Michigan, Huron, Erie, Superior, and the St. Clair system (including the major tributaries) totaling 366,975 hours fishing (Tables 1 – 7). 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, and this significantly impacted the charter operations in the Detroit River, Lake Erie, and some areas of Lakes Michigan and Huron. While some operations ran reduced excursions or chose not to operate at all in 2020, other operators ran increased excursions in the summer and early fall as the public was seeking to expand their outdoor activities in 2020. When compared to 2019, the charter effort excursions decreased 11%, anglers decreased 13%, and angler hours decreased 11%.

Charter operators reported 155,840 fish harvested from the Michigan waters of the Great Lakes and select tributaries in 2020. The most numerous species in the 2020 harvest was Lake Trout *Salvelinus namaycush* (64,247), followed by Walleye *Sander vitreus* (39,298), Yellow Perch *Perca flavescens* (19,244), Chinook Salmon *Oncorhynchus tshawytscha* (15,490), Coho Salmon *Oncorhynchus kisutch* (6,139), Rainbow Trout *Oncorhynchus mykiss* (5,450), Smallmouth Bass *Micropterus dolomieu* (1,137), and Brown Trout *Salmo trutta* (137). The 4,698 fish defined as “other” is the combined total of any other species harvest. Relative to 2019 species harvest numbers, there was a decrease in harvest of all species except for Yellow Perch (which increased by 124%) and Smallmouth Bass (increased 6%). In 2020, harvests decreased by 45% for Walleye, 44% for Brown Trout, 32% for Coho Salmon, 28% for Chinook Salmon, 10% for Rainbow Trout, and 2% for Lake Trout.

Job 5. Write reports.– This five year final report was prepared inclusive of lakewide information for 2020. 2016-2019 annual reports 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.

Job 6. Evaluate surveys.– In 2015-2016 Fisheries Division completed a Lean Process review of the charter fishing, commercial fishing, and wholesale fish sales reporting; that review included evaluating whether charter reporting could be accomplished from collection by the creel census clerks rather than

the charter operators reporting. Daily or weekly reporting options were also explored at that time. Neither options were deemed to be an improvement to the current collection system. However, as a result of the Lean Process, most work in 2017-2019 focused on development and deployment of a new online 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. Charter reporting is one module of the three-component FACTS reporting system, the other two modules are commercial fisheries reporting and wholesale fisheries reporting.

Modifications to the information collected and the online data collection system have been ongoing throughout the years of this study. CFRS personnel coordinated with Michigan Department of Technology, Management, and Budget (DTMB) in 2017 and 2018 to resolve issues related to the online charter reporting system including: 1) the reporting system was not working correctly with the newly released Windows Edge internet browser, 2) the system did not always work correctly when a reporter changed a waterbody within a reporting month, and 3) for some operators with an inactive boat, the inactive boat was showing as the boat for the monthly submitted report instead of the operator's active boat.

Initial public rollout of the new FACTS system Charter Reporting module for use with a computer occurred in Spring 2019; the ability to report using a mobile device accessed via separate system link was added in June 2019. Along with the FACTS reporting system came the implementation of providing the charter operators the ability to report data for a greater number of fish species, recording more than one fish target per trip, and recording more than one grid or fishing location per trip. Prior to FACTS, the online reporting system and the paper reporting form allowed for recording of harvest or release of 9 specific fish species with all other species recorded in a 10th category called other; the selection of one of six main fish species or group targets per trip; and one fished grid or fishing location per trip. With the FACTS reporting system, charter operators can now record their harvest or release of an additional 22 fish species for a total of 32 species, can select from 22 target species, and can record more than one fished grid or fishing location per trip (Table 8). 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, a Forgot Password feature for charter operators to retrieve their password, and continued efforts to make the system more user friendly for the operator (charter captain). FACTS enhancements in 2021 included requiring the reporter to define a primary target species and primary fishing location or grid per trip if they opt to record more than one of the data fields; and a Carry Forward Mode feature which allows the reporter to carry forward month, target species, and fishing trip location details which can increase reporter speed and efficiency of entering trips for a specific month. Charter Program staff continue working with Electric Edge to "fine tune" the system and complete development of additional sub-modules within the program.

Prepared by: Donna Wesander

Date: September 30, 2021

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, 2020. 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
0.024	0.534	Coho salmon	0	0	23	0	660	851	668	2,947	530	21	10	0	5,710	5,712
0.024	0.540	<i>released</i>	4	0	0	3	4	7	1	38	8	0	0	0	65	65
0.064	1.426	Chinook salmon	0	0	1	0	2,503	1,182	2,354	8,088	1,066	65	0	0	15,259	15,265
0.066	1.461	<i>released</i>	0	0	0	0	37	27	56	92	47	113	0	0	372	379
0.020	0.433	Rainbow trout	175	378	371	0	163	528	962	1,140	138	236	338	206	4,635	4,667
0.021	0.474	<i>released</i>	63	115	98	0	4	17	6	6	0	55	56	18	438	439
0.000	0.008	Brown trout	0	2	1	1	19	13	19	22	10	0	0	0	87	87
0.000	0.011	<i>released</i>	0	1	0	0	9	15	0	2	0	2	1	1	31	31
0.218	4.828	Lake trout	0	0	1	1	3,644	10,222	17,870	14,630	5,003	266	14	0	51,651	51,683
0.224	4.973	<i>released</i>	0	0	0	1	193	413	498	347	97	5	1	0	1,555	1,556
1.646	50.750	Yellow perch	0	0	0	0	0	82	274	1,015	24	729	721	200	3,045	3,178
1.808	55.733	<i>released</i>	0	0	0	0	0	0	15	53	12	92	64	63	299	383
0.171	2.835	Walleye	10	23	7	0	51	143	92	168	137	84	162	138	1,015	1,064
0.392	6.494	<i>released</i>	34	44	66	0	39	320	267	197	79	34	162	68	1,310	1,373
0.002	0.021	Smallmouth Bass	0	0	0	0	0	0	5	0	0	1	0	0	6	34
1.647	20.117	<i>released</i>	0	0	0	0	505	1,496	1,626	1,078	618	328	16	0	5,667	5,884
		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	3
0.563	6.171	Other	0	0	0	0	85	22	0	3	13	93	0	0	216	1,217
0.801	8.771	<i>released</i>	0	0	0	0	1	10	41	23	16	0	0	0	91	725
Total angler hours			1,039	1,786	2,275	8	15,180	34,517	64,104	92,903	25,226	5,215	4,027	2,804	249,082	
Total anglers			156	260	338	2	2,623	6,342	12,222	17,118	4,842	838	607	416	45,764	
Total excursions			53	93	118	1	647	1,541	2,935	4,130	1,256	303	214	142	11,433	

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, 2020. 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
0.005	0.110	Coho salmon	0	0	0	0	18	36	20	30	17	1	0	0	122	125
0.006	0.114	released	0	0	0	0	0	3	0	0	0	2	0	0	5	6
0.007	0.148	Chinook salmon	0	0	0	0	4	13	35	76	37	0	0	0	165	165
0.007	0.151	released	0	0	0	0	0	0	0	1	2	0	0	0	3	3
0.032	0.656	Rainbow trout	0	0	0	0	8	84	203	298	118	20	0	0	731	737
0.035	0.718	released	0	0	0	0	1	43	21	0	1	3	0	0	69	73
0.002	0.034	Brown trout	0	0	0	0	0	20	10	5	3	0	0	0	38	40
0.002	0.037	released	0	0	0	0	0	0	0	0	0	3	0	0	3	3
0.329	6.746	Lake trout	0	0	0	0	381	1,582	2,482	1,914	1,119	37	0	0	7,515	7,530
0.348	7.147	released	0	0	0	0	24	83	126	87	116	11	0	0	447	447
1.638	27.590	Yellow perch	0	0	0	0	0	0	0	302	1,034	816	0	0	2,152	2,398
2.829	47.654	released	0	0	0	0	0	0	0	358	589	618	0	0	1,565	1,651
0.761	16.061	Walleye	8	162	456	0	619	7,404	5,221	908	172	56	20	232	15,258	15,727
0.898	18.969	released	0	100	165	0	45	1,592	755	88	16	2	0	0	2,763	2,776
0.038	0.462	Smallmouth Bass	0	0	0	0	0	6	0	0	0	0	0	0	6	88
1.372	16.462	released	0	0	0	0	0	87	0	73	38	10	0	0	208	350
		Musky	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		released	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0.519	8.107	Other	0	0	0	0	0	120	26	24	0	57	0	0	227	2,877
0.792	12.357	released	0	0	0	0	0	0	3	6	0	106	4	0	119	2,077
Total angler hours			10	110	442	0	1,826	12,730	15,338	8,699	4,462	963	43	209	44,831	
Total anglers			2	24	74	0	319	2,308	2,772	1,643	841	173	8	38	8,202	
Total excursions			1	6	17	0	96	601	714	450	225	60	3	10	2,183	

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, 2020. 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
0.020	0.456	Coho salmon	0	0	0	0	7	16	102	157	19	0	0	0	301	301
0.020	0.468	<i>released</i>	0	0	0	0	3	1	0	2	2	0	0	0	8	9
0.004	0.091	Chinook salmon	0	0	0	0	0	12	31	11	6	0	0	0	60	60
0.004	0.092	<i>released</i>	0	0	0	0	0	0	0	0	1	0	0	0	1	1
0.003	0.065	Rainbow trout	0	0	0	0	4	13	18	6	2	0	0	0	43	43
0.004	0.088	<i>released</i>	0	0	0	0	2	3	3	5	2	0	0	0	15	15
0.001	0.014	Brown trout	0	0	0	0	0	2	3	2	2	0	0	0	9	10
0.002	0.035	<i>released</i>	0	0	0	0	5	1	2	6	0	0	0	0	14	14
0.332	7.627	Lake trout	0	0	0	0	195	865	1,792	1,504	678	0	0	0	5,034	5,034
0.407	9.350	<i>released</i>	0	0	0	0	200	190	256	349	142	0	0	0	1,137	1,151
0.000	0.000	Yellow perch	0	0	0	0	0	0	0	0	0	0	0	0	0	8
2.000	20.000	<i>released</i>	0	0	0	0	0	0	0	20	0	0	0	0	20	28
0.100	1.514	Walleye	0	0	0	0	0	4	28	21	0	0	0	0	53	53
0.242	3.657	<i>released</i>	0	0	0	0	53	7	3	3	2	7	0	0	75	115
0.000	0.000	Smallmouth Bass	0	0	0	0	0	0	0	0	0	0	0	0	0	6
0.400	5.000	<i>released</i>	0	0	0	0	0	0	0	0	2	8	0	0	10	53
		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
0.000	0.000	Other	0	0	0	0	0	0	0	0	0	0	0	0	0	132
0.396	7.000	<i>released</i>	0	0	0	0	0	0	0	0	5	16	0	0	21	261
Total angler hours			0	0	0	0	795	2,666	5,196	4,984	1,906	219	0	0		15,764
Total anglers			0	0	0	0	103	411	910	836	338	41	0	0		2,639
Total excursions			0	0	0	0	28	105	244	212	96	16	0	0		701

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, 2020. 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	Targeted Harvest/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
		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	0 167
4.060	87.356	Yellow perch	0	0	0	0	0	0	0	2,155	6,828	2,810	0	0	11,793	11,946
4.607	99.119	<i>released</i>	0 0	0 0	0 0	0 0	0 0	0 0	0 0	311 925	925 352	352 0	0 0	0 0	1,588	1,618
1.107	21.526	Walleye	0	0	82	36	1,282	6,443	3,862	253	30	10	26	138	12,162	12,177
1.364	26.529	<i>released</i>	0 0	0 0	33 33	52 52	357 357	1,266 1,266	1,039 1,039	50 50	3 3	3 3	3 3	21 21	2,827	2,974
0.000	0.000	Smallmouth Bass	0	0	0	0	0	0	0	0	0	0	0	0	0	33
0.962	18.750	<i>released</i>	0 0	0 0	0 0	0 0	0 0	0 0	0 0	18 18	0 0	57 57	0 0	0 0	75	89
		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 2
		Other <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	0 837
Total angler hours			0	0	101	42	1,232	5,242	3,783	1,049	1,718	616	49	138		13,969
Total anglers			0	0	17	7	248	1,138	763	204	311	106	8	29		2,831
Total excursions			0	0	6	3	62	263	193	58	77	29	3	10		704

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, 2020. 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; catch of these species are included in “Other” for paper reporters.

Targeted Harvest/hr	Targeted Harvest/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
0.169	2.400	<i>released</i>	0	0	0	0	0	0	0	14	21	104	73	16	0	228	234
		White Bass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
		<i>released</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
2.043	40.724	Yellow perch	0	0	0	0	0	0	0	105	725	275	76	0	1,181	1,713	
3.247	64.724	<i>released</i>	0	0	0	0	0	0	0	48	372	206	70	0	696	1,144	
0.628	11.866	Walleye	0	0	0	0	345	1,112	519	310	27	119	300	92	2,824	3,086	
0.646	12.202	<i>released</i>	0	0	0	0	4	23	17	12	0	5	17	2	80	137	
0.064	1.310	Smallmouth Bass	0	0	0	0	0	32	152	424	242	0	0	0	850	973	
1.051	21.525	<i>released</i>	0	0	0	0	1289	4725	2,601	2,505	1,428	562	6	4	13,120	13,608	
0.000	0.000	Musky	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0.064	1.692	<i>released</i>	0	0	0	0	0	98	202	219	99	112	72	71	873	923	
0.000	0.000	Other	0	0	0	0	0	0	0	0	0	0	0	0	0	59	
0.233	4.667	<i>released</i>	0	0	0	0	0	0	0	0	0	28	0	0	28	1,241	
Total angler hours			0	0	0	0	1,296	5,661	6,403	6,612	5,826	4,581	1,960	1,136		33,474	
Total anglers			0	0	0	0	188	817	861	935	831	594	241	133		4,600	
Total excursions			0	0	0	0	67	269	279	301	277	208	86	46		1,533	

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 the St. Clair River, 2020. 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; catch of these species are included in “Other” for paper 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
0.127	2.560	<i>released</i>	0	0	0	0	0	0	0	7	24	20	10	3	0	64	67
		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	1
		<i>released</i>	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0.858	14.020	Walleye	0	0	0	0	1,325	564	74	43	31	50	30	0	2,117	2,158	
0.935	15.265	<i>released</i>	0	0	0	0	61	115	6	0	4	2	0	0	188	202	
0.000	0.000	Smallmouth Bass	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1.165	20.458	<i>released</i>	0	0	0	0	100	0	132	198	54	7	0	0	491	620	
0.000	0.000	Musky	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0.175	3.143	<i>released</i>	0	0	0	0	0	0	7	5	5	0	5	0	22	30	
0.000	0.000	Other	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
8.333	100.000	<i>released</i>	0	0	0	0	0	100	0	0	0	0	0	0	100	120	
		Total angler hours	0	0	0	0	1,468	794	247	473	280	186	83	0		3,530	
		Total anglers	0	0	0	0	269	146	39	65	44	29	13	0		605	
		Total excursions	0	0	0	0	84	52	16	24	14	12	6	0		208	

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 the Detroit River, 2020. 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; catch of these species are included in “Other” for paper 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			
		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 2
0.100 6.460	1.667 107.667	White Bass <i>released</i>	0 0	0 0	0 0	0 0	5 300	0 18	0 0	0 0	0 0	0 0	0 0	0 0	0 0	5 318	60 335
		Yellow perch <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
0.817 0.975	15.709 18.756	Walleye <i>released</i>	0 0	0 0	53 0	0 0	3,826 789	1,035 154	19 13	0 0	3 0	44 5	47 14	0 0	5,027 975	5,033 975	
		Smallmouth 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	1 74
0.000 0.140	0.000 2.333	Musky <i>released</i>	0 0	0 0	0 0	0 0	0 7	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 7	0 12	
0.519 5.167	7.000 69.750	Other <i>released</i>	0 0	0 0	0 0	0 0	28 251	0 0	0 0	0 0	0 0	0 0	0 0	0 0	28 251	189 466	
		Total angler hours	0	0	76	0	4,571	1,390	52	0	18	91	112	0		6,310	
		Total anglers	0	0	14	0	802	231	13	0	4	19	17	0		1,100	
		Total excursions	0	0	5	0	241	69	3	0	2	5	5	0		330	

Table 8. Fish species and excursion targets for Charter Boat Reporting program.

Fish Species Collected Prior to FACTS implementation (2010-2018)		
Coho Salmon	Chinook Salmon	Rainbow Trout
Brown Trout	Lake Trout	Yellow Perch
Walleye	Smallmouth Bass	Muskellunge
Other		

Additional Fish Species Collected with FACTS implementation (2019 to current)		
Atlantic Salmon	Flathead Catfish	Pink Salmon
Bowfin	Freshwater Drum-Sheepshead	Round Whitefish - Menominee
Brook Trout	Lake Herring (Cisco)	Splake
Buffalo	Lake Sturgeon	Sucker (common or Longnose)
Bullhead	Lake Trout (Siscowet/Fats)	White Bass
Burbot	Lake Whitefish	White Perch
Carp	Largemouth Bass	
Channel Catfish	Northern Pike	

Target Species for Charter Excursion Prior to FACTS implementation (2010-2018)		
Salmon and Trout - Group	Walleye	Smallmouth Bass
Yellow Perch	Muskellunge	Other = Any Other Species

Additional Target Species for Charter Excursion with FACTS implementation (2019 to current)		
Bowfin	Flathead Catfish	Northern Pike
Buffalo	Freshwater Drum-Sheepshead	Round Whitefish - Menominee
Bullhead	Lake Herring (Cisco)	Sucker (common or Longnose)
Burbot	Lake Sturgeon	White Bass
Carp	Lake Whitefish	White Perch
Channel Catfish	Largemouth Bass	