

Lake Memphremagog Angler Creel Survey 2018-2020

Vermont Fish and Wildlife Department Annual Report

State: Vermont

Project No.: F-36-R-23

Grant Title: Inland Waters Fisheries and Habitat Management

Study No.: V

Study Title: Creel/Angler Surveys

Period Covered: July 1, 2020 to June 30, 2021 **Dept. Filename:** F36R23Study05-53

Summary

Vermont Fish and Wildlife Department (VFWD) staff conducted an open water and ice angling survey on Lake Memphremagog to investigate angler effort, catch and harvest, and angler preferences in Vermont and Quebec. This two-year angler (“creel”) survey was conducted on both the Vermont and Quebec portions of the Lake. The funding source for the Quebec portion of the survey was the international Great Lakes Fishery Commission (GLFC). GLFC funding was used to finance all Quebec operations, including both equipment acquisition and maintenance and staff salaries. GLFC also funded Vermont operations, including equipment acquisition and maintenance and salaries for creel clerk staff and VFWD Biologist and Specialist when they were conducting surveys or when maintaining the equipment. Federal Dingle-Johnson dollars were used to pay partial salary for one employee (Peter Emerson, Fish Biologist with Vermont Fish and Wildlife Department) to conduct project oversight, project coordination, data analysis, public presentations and report writing.

Date Range	12/14/2018 – 5/2/2020
Days Surveyed	539
Anglers Interviewed	5,960

Introduction

The objectives of this study were:

- To establish baseline data for the entirety of the Lake Memphremagog fishery.
- To assess angler satisfaction to regulations on Lake Memphremagog
- To monitor angler effort, catch rate and harvest rate data for comparison to previous angler surveys on Lake Memphremagog and for comparison to other lake fisheries in the region.

Methods

A roving creel survey was conducted on Lake Memphremagog in Quebec and Vermont beginning during the 2018 ice fishing season (December 2018) and continuing through the 2020 open water fishing season (September 2020). The creel survey consisted of instantaneous angler counts, angler interviews, and examination of harvested fish. In Quebec, the survey area was divided into northern and southern survey sections, and further divided into instantaneous count zones which were small enough to conduct angler counts and interviews by either boat or snowmobile in 2-hour periods. In Vermont, the survey was divided into three instantaneous count zones which were small enough to conduct angler counts and interviews within 2-hour periods, including travel time required to switch boats and trailer snowmobiles to South Bay. A map of the survey area including instantaneous count zones is shown in Figure 1.

Instantaneous counts occurred at randomly selected intervals (am or pm) and were stratified into weekend or weekday groupings. There were four counts per week: Saturday and Sunday, and two randomly selected weekdays. Count times were assigned randomly, and angler interviews typically occurred between count times. Holidays were included as weekend days, and during those weeks with weekday holidays, the survey was adjusted to include only one weekday.

The start and end dates of the survey in Quebec were determined by the opening and closing dates of the seasons, which was from December 20 to March 31 for the ice season and from the 4th Saturday in April to October 31st for the open water season. Vermont survey dates were determined by the presence of safe ice during the ice season, which was generally mid-December through early April, and when weather conditions were safe during the open water season, which was generally mid-April through October. Survey summary including season, location and days conducted is shown in Table 1.

Surveys were conducted in a randomly-selected direction (counterclockwise or clockwise) beginning at the designated access area during ice surveys and beginning at the boat mooring location during open water surveys.

Effort was estimated from instantaneous counts as follows:

E = effort (angler-hours)

c_1 = mean # of anglers counted during instantaneous weekend counts

c_2 = mean # of anglers counted during instantaneous weekday counts

$var()$ = variance

h_1 = hours in the day

d_1 = # of weekend days in survey period

d_2 = # of weekdays in survey period

$$E = c_1 \cdot h_1 \cdot d_1 + c_2 \cdot h_1 \cdot d_2$$

$$var(E) = var(c_1) \cdot h_1^2 \cdot d_1^2 + var(c_2) \cdot h_1^2 \cdot d_2^2$$

Catch and harvest rates were estimated by averaging the catch and harvest rate of each angler party (Pollock et al. 1994). The equations used are as follows:

n = # of party interviews

r_j = catch or harvest rate (fish per angler-hour), party interview j

R = average catch or harvest rate (fish per angler-hour), all interviews

H = total catch or harvest

$\text{var}(\)$ = variance

$$R = \frac{\sum_{j=1}^n r_j}{n}$$

$$\text{var}(R) = \frac{\sum_{j=1}^n (r_j - \bar{r})^2}{(n - 1)}$$

$$H = ER$$

$$\text{var}(H) = E^2 \text{var}(R) + R^2 \text{var}(E) - \text{var}(R) \text{var}(E)$$

Data sheets used for angler interviews can be found in Appendix II.

Results

Surveys were conducted on 539 days during the 2-year period, with the number of days in each season staying approximately consistent between years. Quebec surveys accounted for 61% of the survey days conducted. (Table 1).

Angler preference

Figures 2 through 9 are results of interviews of ice anglers and open season anglers, divided by Quebec and Vermont anglers. Quebec regulations currently allow a total of 30 salmonids to be harvested daily (Table 2), compared to only 2 salmonids in Vermont. While Vermont surveys indicate that current Vermont creel limits match angler preferences, Quebec survey results indicate that of current Quebec regulations, only the Rainbow Trout creel limit does not match angler preferences.

Species preference

Regarding species preference, Quebec anglers favor salmonid species during open water seasons and perch species during ice seasons, whereas Vermont anglers favor salmonid species during ice season and bass species during open water seasons (Figures 8, 9). Anglers' reasons to fish on Lake Memphremagog include proximity to home and scenery (Table 3). Fisheries management considerations include providing quality salmonid, perch, and bass fisheries, as well

as diversity of species available to anglers, and quantity of trophy size fish. Some of the concerns that prevented anglers from fishing Lake Memphremagog included pressure, quantity of fish, for Quebec anglers and small number of Vermont anglers cited distance and weather conditions (Table 4). Management considerations include the increasing pressure on the lake (too many anglers/boaters) and “no concerns” with most Vermont anglers.

Catch and Harvest Rates

Tables 5 through 20 summarize the catch and harvest rates of common species in Lake Memphremagog, both Vermont and Quebec main lake and Vermont South Bay. Of note is the high harvest rate of Lake Trout, landlocked Atlantic Salmon, Rainbow Trout, Yellow Perch, and White Perch. Management considerations include the high catch rate of salmon in Quebec, the Vermont harvest of Lake Trout in open water and ice seasons (totaling 1,634 trout over all four seasons) versus Quebec harvest of Lake Trout in open water only seasons (2,722 trout over two open water seasons), the harvest of landlocked Atlantic Salmon in Vermont (totaling 149 salmon) versus the harvest in Quebec (totaling 2,828 salmon), Vermont Rainbow Trout harvest (554) versus the Quebec Rainbow Trout harvest (1,671), and Yellow Perch harvest in Vermont (123,094 perch) versus Quebec Yellow Perch Harvest (110,173 perch).

Fish measurement and summaries

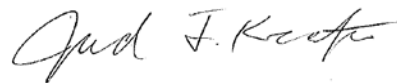
Tables 21 through 23 summarize average lengths of common species measured by creel clerks during the survey. Figures 10 through 14 are length frequency plots of common species measured by creel clerks during the survey.

Appendices 2 through 17 are tables of all species catch and harvest rate estimates during the survey.



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Date: July 14, 2021

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Literature Cited

Pollack, K.H., C.M. Jones, and T.L. Brown. 1994. Anglers survey methods and their applications in fisheries management. American Fisheries Society Special Publication 25.

Vermont's Lake Trout Management Plan for Inland Waters. 1990. Vermont Fish and Wildlife Department.

Wightman, P.H., and L. J. Gerardi. 1991. Memphremagog Basin Fisheries Investigations. Federal Aid Job Performance Report F-12-R-24, Job I-3. Vermont Fish and Wildlife Department, Waterbury, VT. 50p.

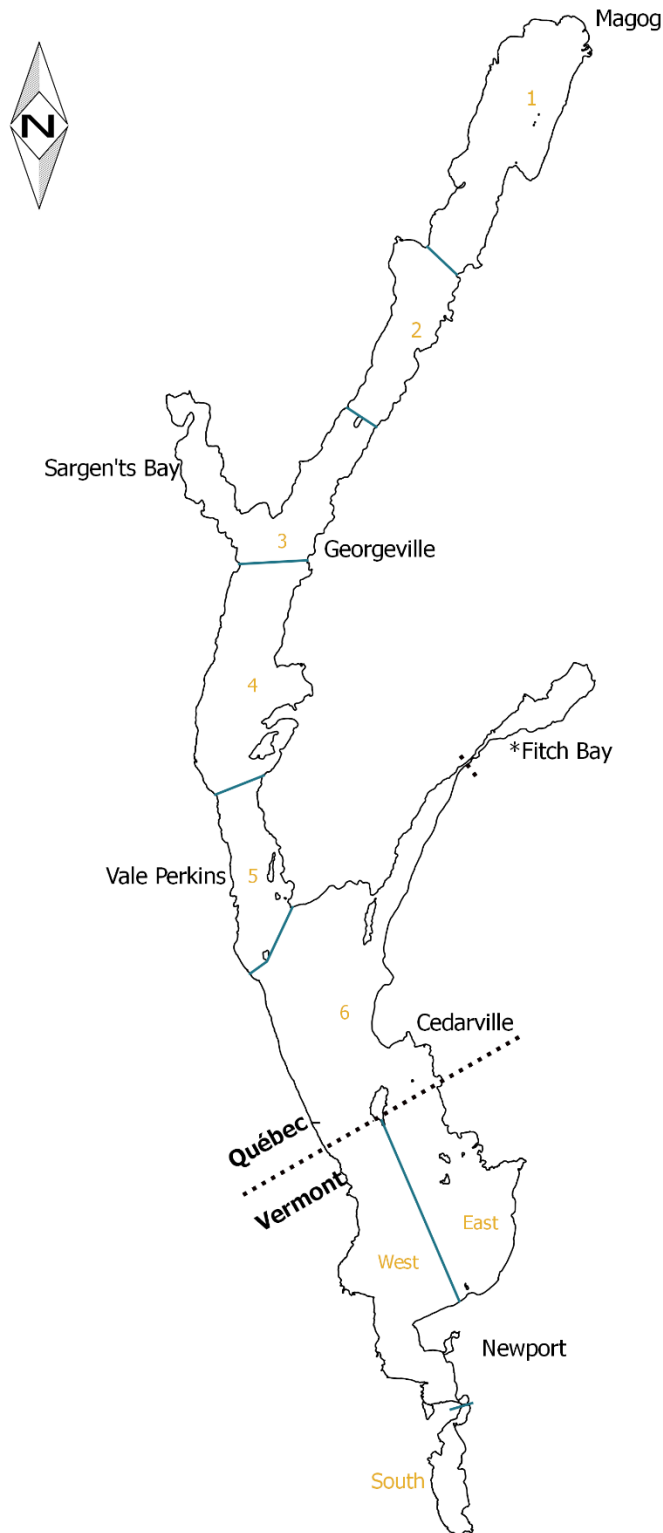


Figure 1. Map of angler survey sites on Lake Memphremagog. Dotted line indicates Vermont/Quebec international border.

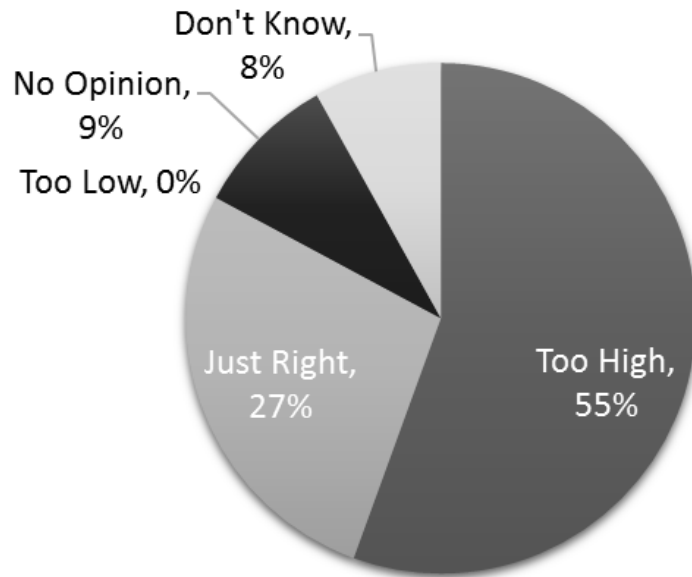
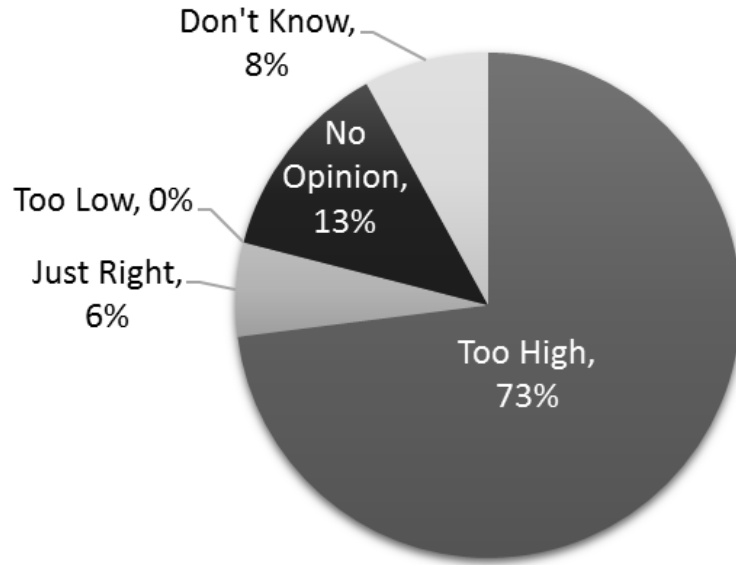


Figure 2. Open Water Season angler preference in Quebec (top) and Vermont (bottom) when asked their opinion about a 10 Rainbow Trout daily harvest limit. Options for answers were: Too High, Too Low, Just Right, Don't Know or No Opinion.

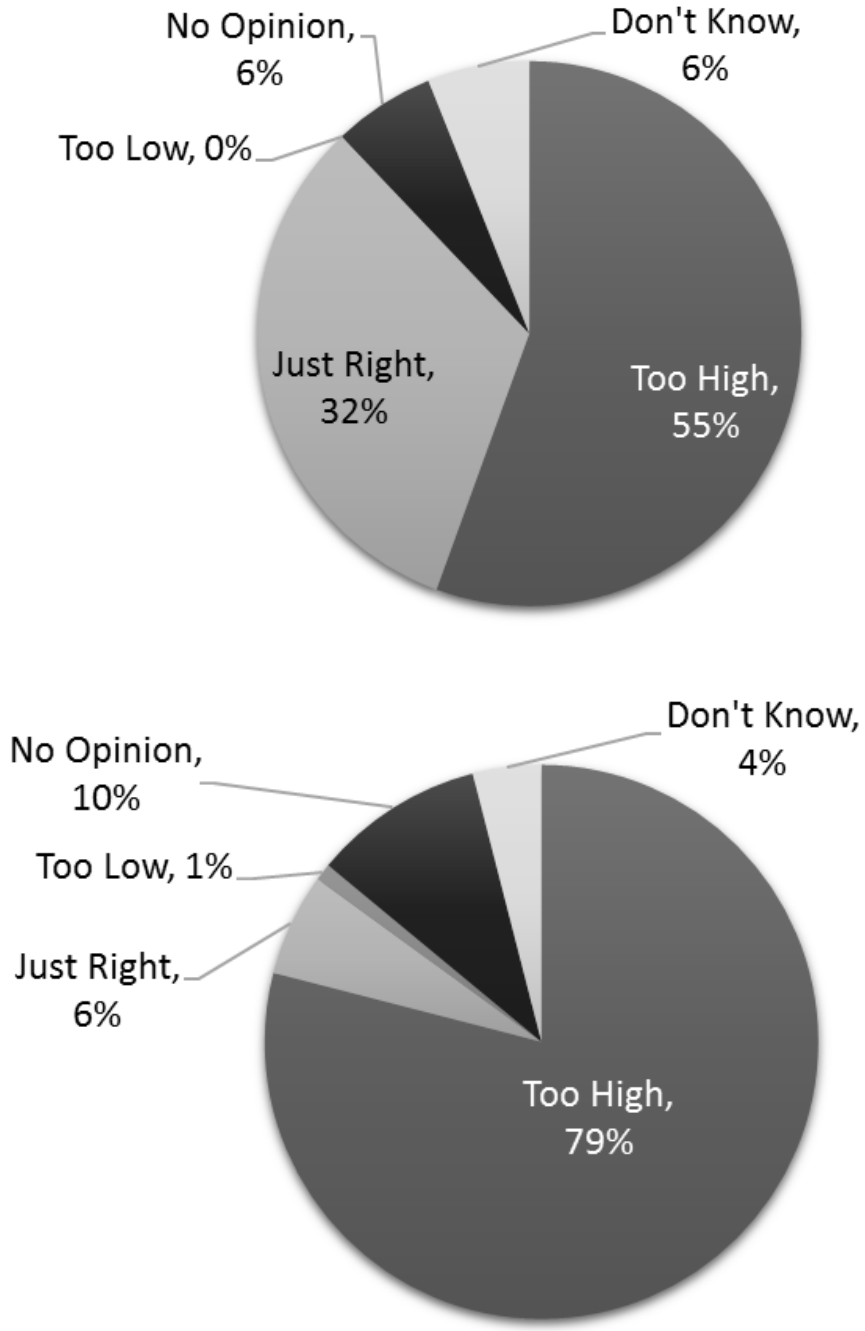


Figure 3. Ice Season angler preference in Quebec (top) and Vermont (bottom) when asked their opinion about a 10 Rainbow Trout daily harvest limit. Options for answers were: Too High, Too Low, Just Right, Don't Know or No Opinion.

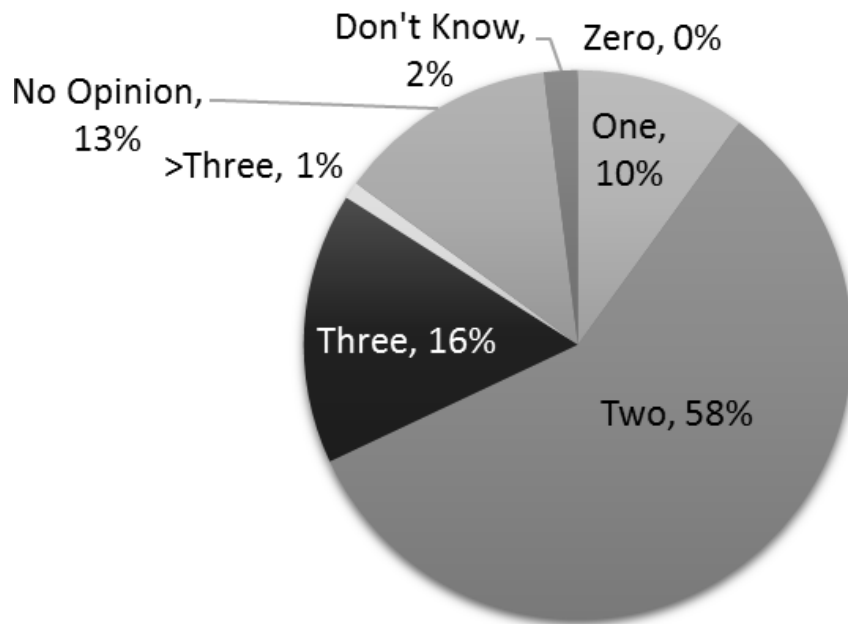
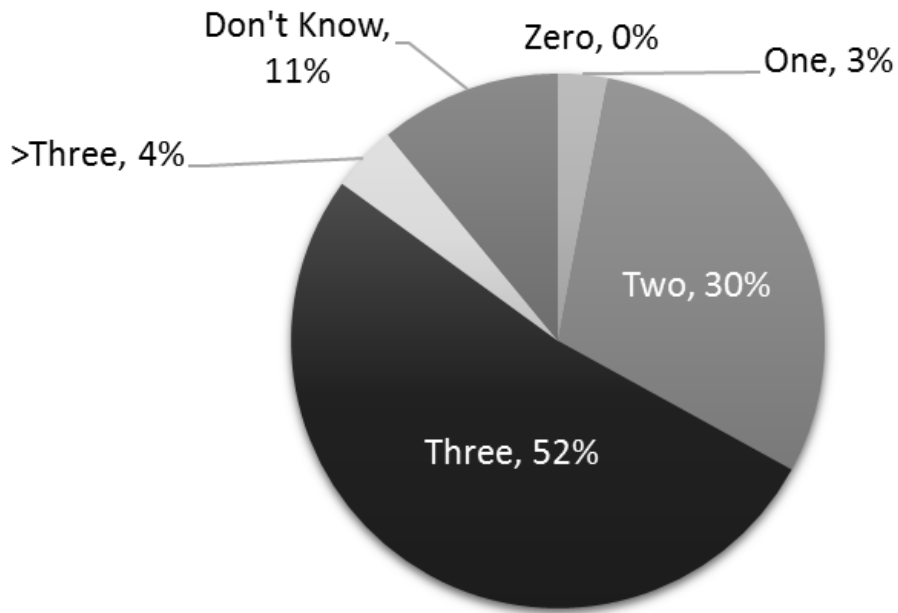


Figure 4. Open Water Season angler preference in Quebec (top) and Vermont (bottom) when asked their preference for number of Landlocked Atlantic Salmon daily harvest limit. Options for answers were: Zero, One, Two, Three, >Three or No Opinion.

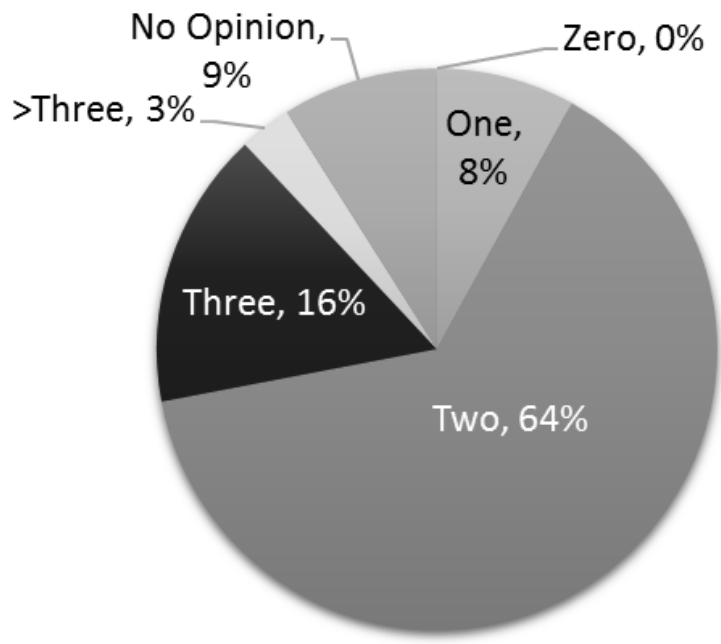
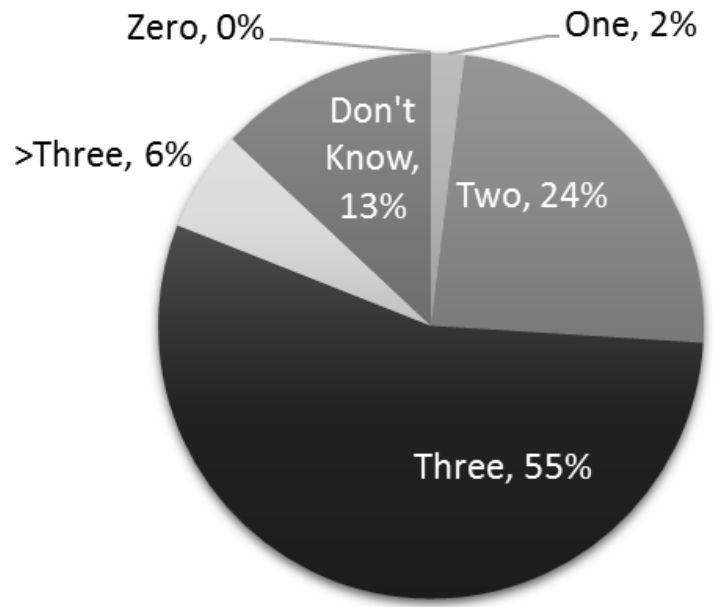


Figure 5. Ice Season angler preference in Quebec (top) and Vermont (bottom) when asked their preference for number of Landlocked Atlantic Salmon daily harvest limit. Options for answers were: Zero, 1, 2, 3, >3 or No Opinion.

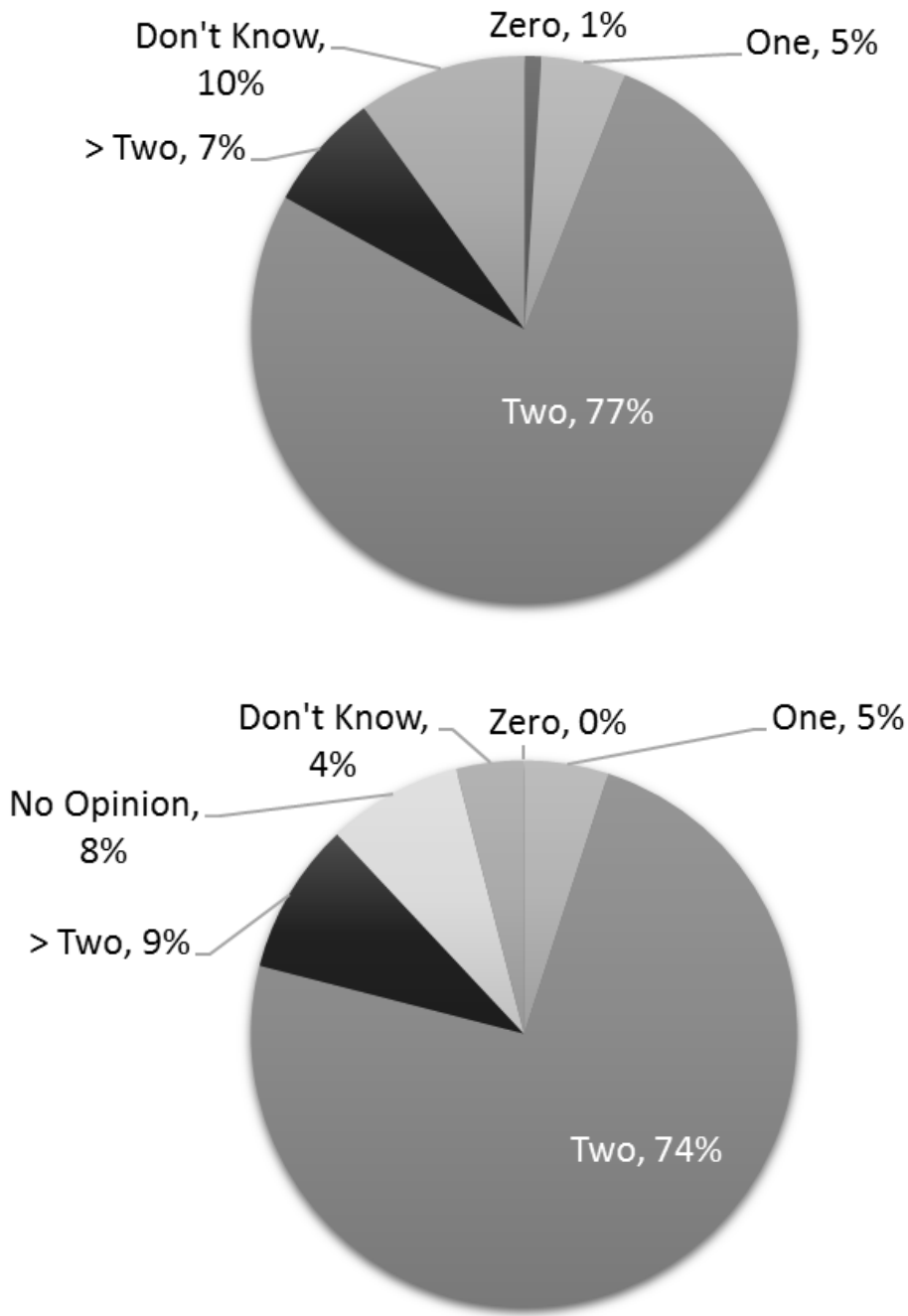


Figure 6. Open Water Season angler preference in Quebec (top) and Vermont (bottom) when asked their preference for number of Lake Trout daily harvest limit. Options for answers were: Zero, 1, 2, >2 or No Opinion.

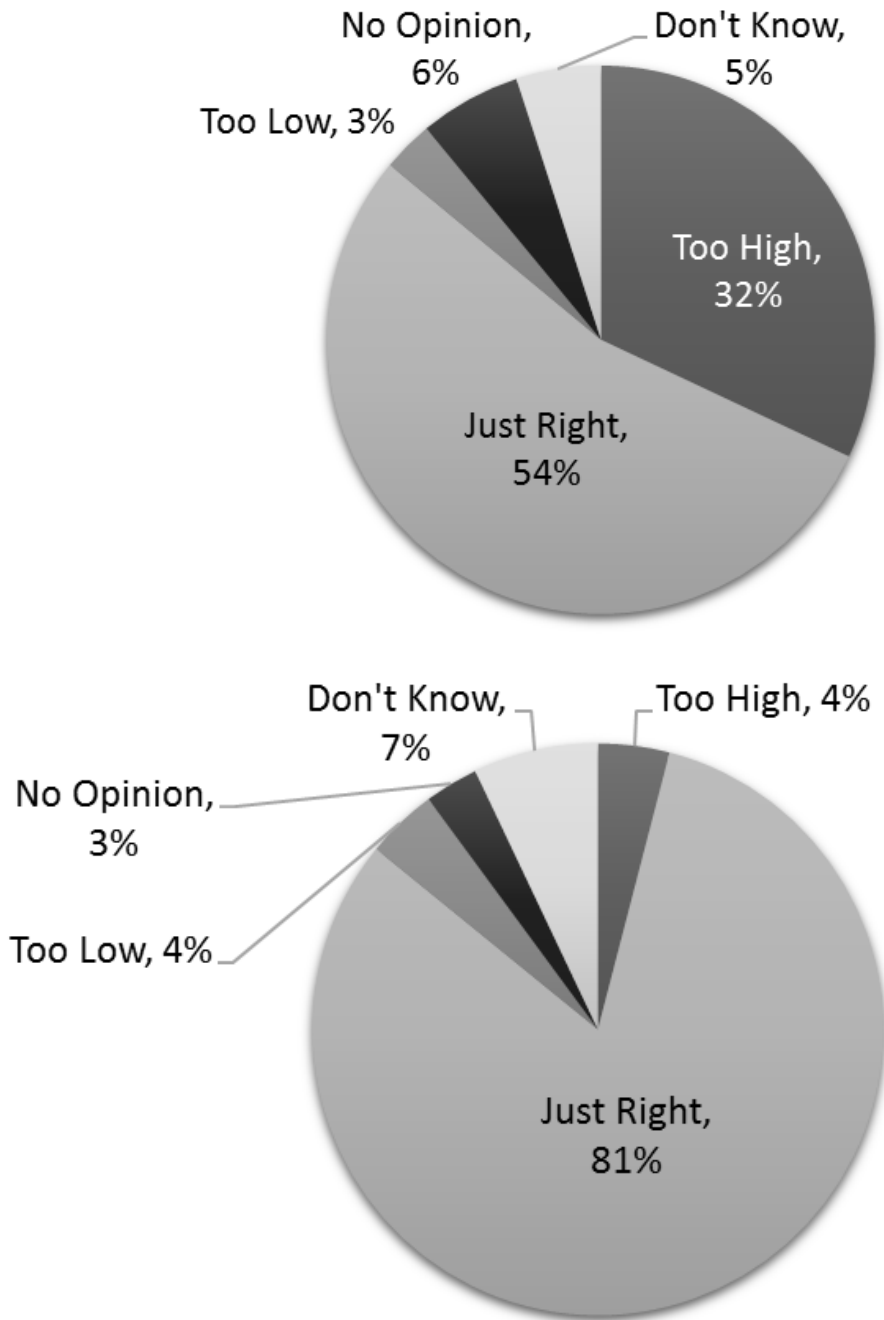


Figure 7. Ice Season angler preference in Quebec (top) and Vermont (bottom) when asked their preference for number of Lake Trout daily harvest limit. Options for answers were: Too High, Too Low, Just Right, Don't Know or No Opinion.

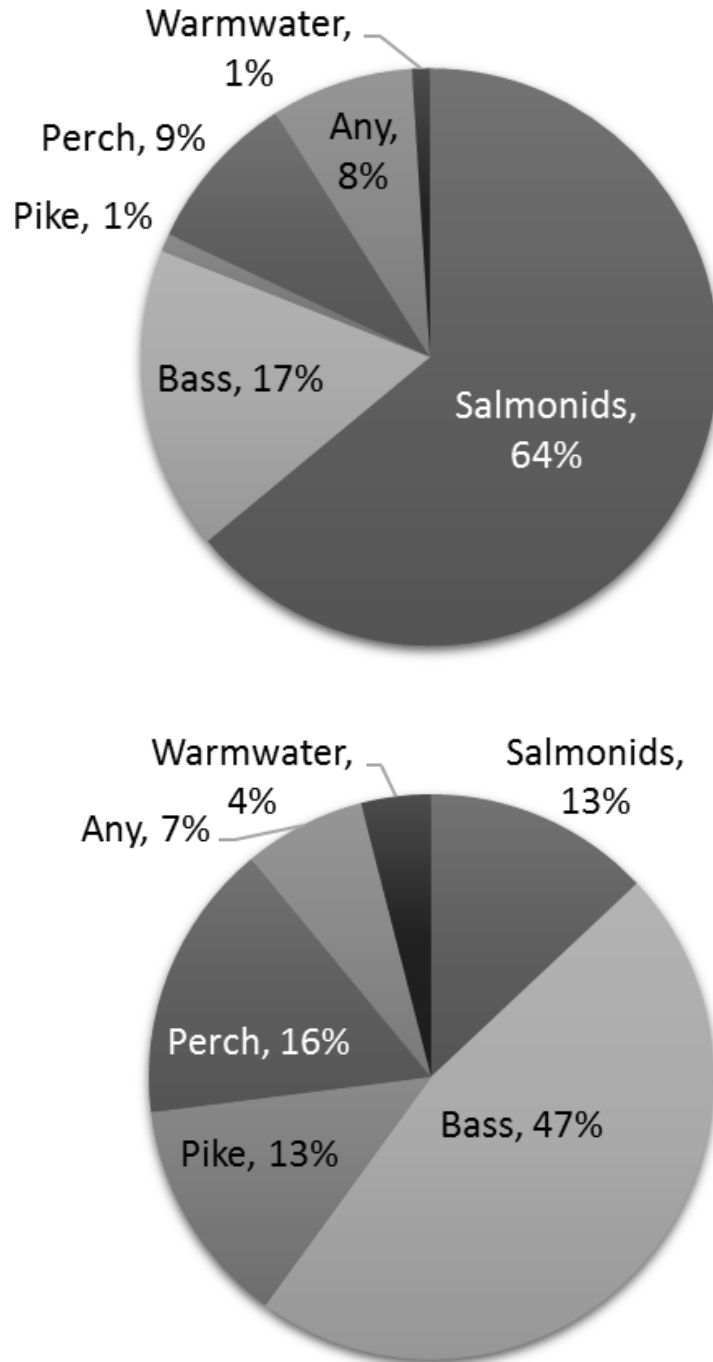


Figure 8. Open Water Season angler species target preference in Quebec (top) and Vermont (bottom). Species are Salmonids, Warmwater species, Bass, Pike, Yellow Perch (YLP), White Perch (WTP), Lake Trout (LKT), Rainbow Trout (RBT), Brown Trout (BNT), Landlocked Atlantic Salmon (LLS) and Any.

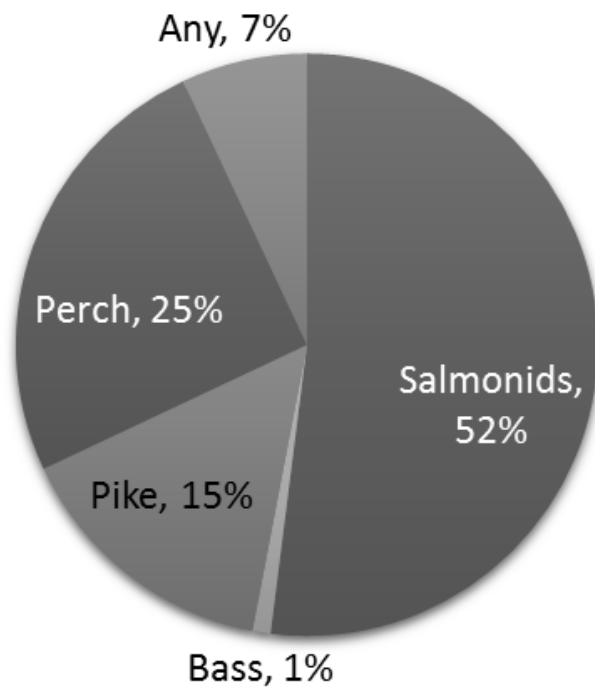
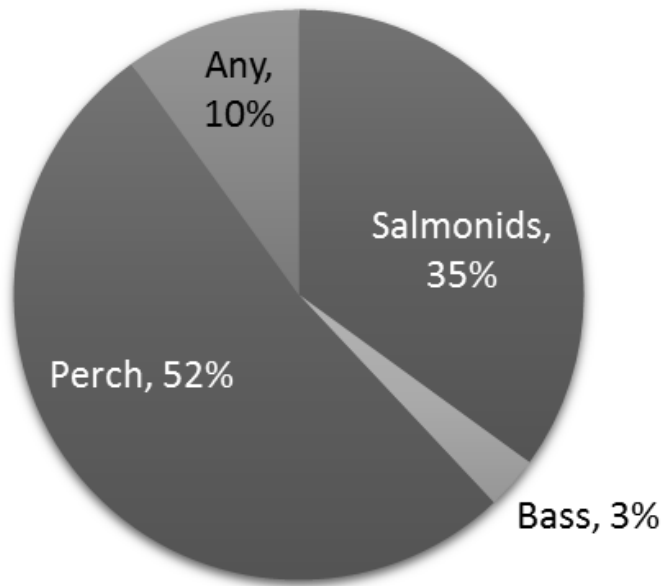


Figure 9. Ice Season angler species target preference in Quebec (top) and Vermont (bottom) Species are Salmonids, Bass, Pike, Yellow Perch (YLP), White Perch (WTP), Lake Trout (LKT), Rainbow Trout (RBT), Landlocked Atlantic Salmon (LLS) and Any.

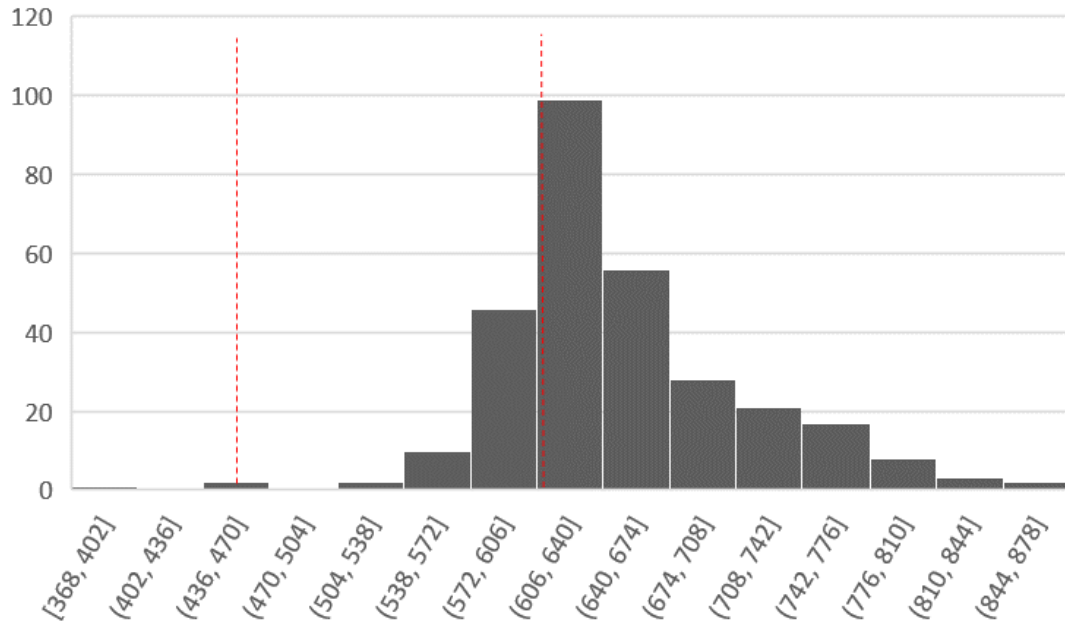


Figure 10. Length frequency of Lake Trout captured during all seasons in all areas of Lake Memphremagog International survey, December 2018 through November 2020. X-axis is the bin length in millimeters, Y-axis is the number of fish as measured by clerk in each bin size. Dotted red lines are the legal harvest length limit, 460 mm (18”) in Vermont and 600 mm (24”) in Quebec. Sample size is 295 Lake Trout.

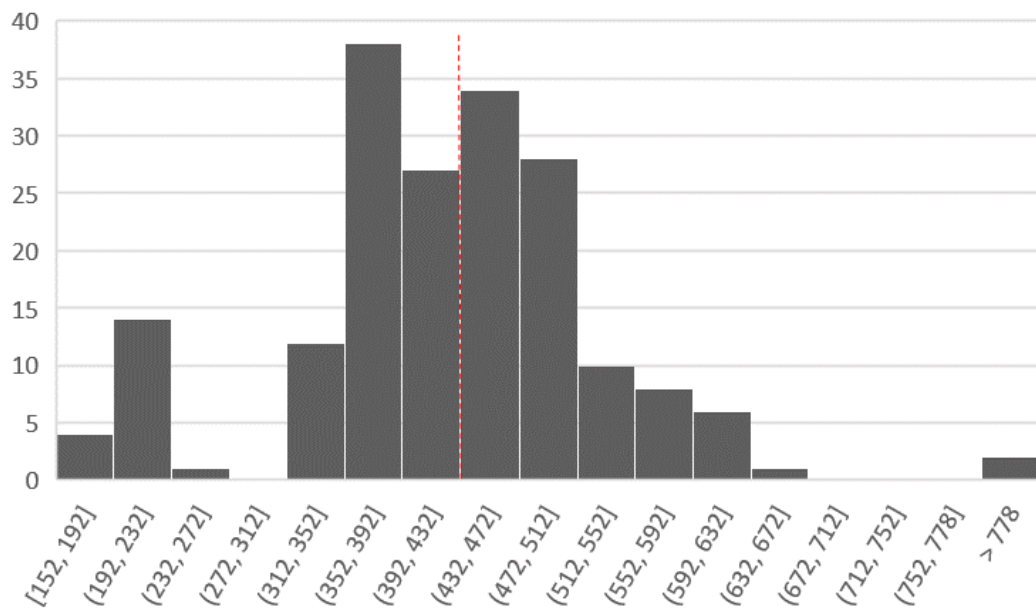


Figure 11. Length frequency of Landlocked Atlantic Salmon captured during all seasons in all areas of Lake Memphremagog International survey, December 2018 through November 2020. X-axis is the bin length in millimeters, Y-axis is the number of fish as measured by clerk in each bin size. Dotted red line is the legal harvest length limit, 420 mm (~17”). Sample size is 185 salmon.

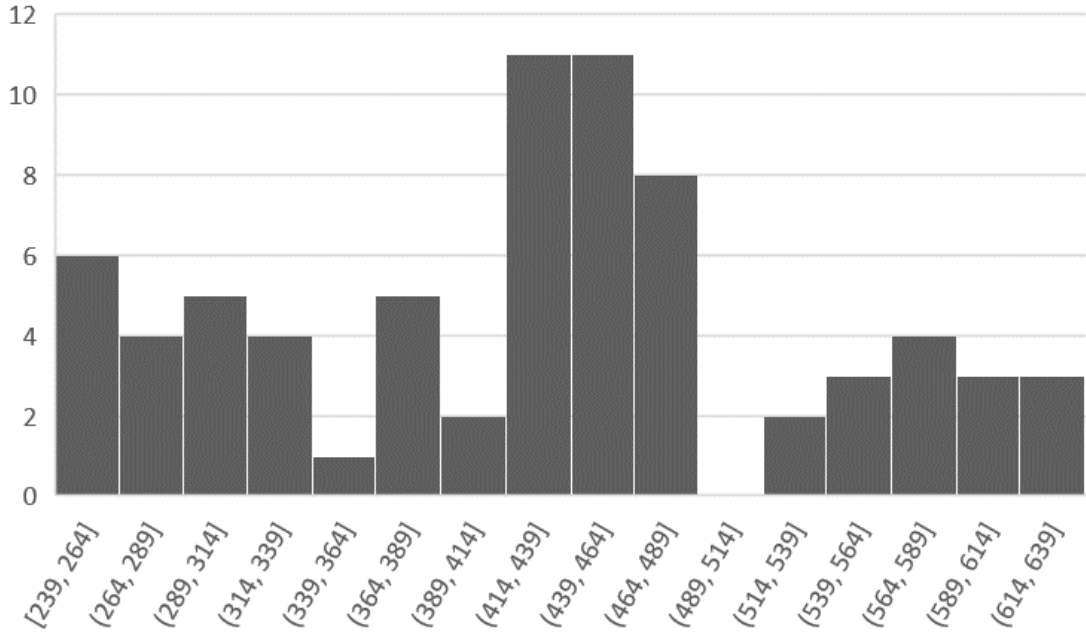


Figure 12. Length frequency of Rainbow Trout captured during all seasons in all areas of Lake Memphremagog International survey, December 2018 through November 2020. X-axis is the bin length in millimeters, Y-axis is the number of fish as measured by clerk in each bin size. Sample size is 72 Rainbow Trout.

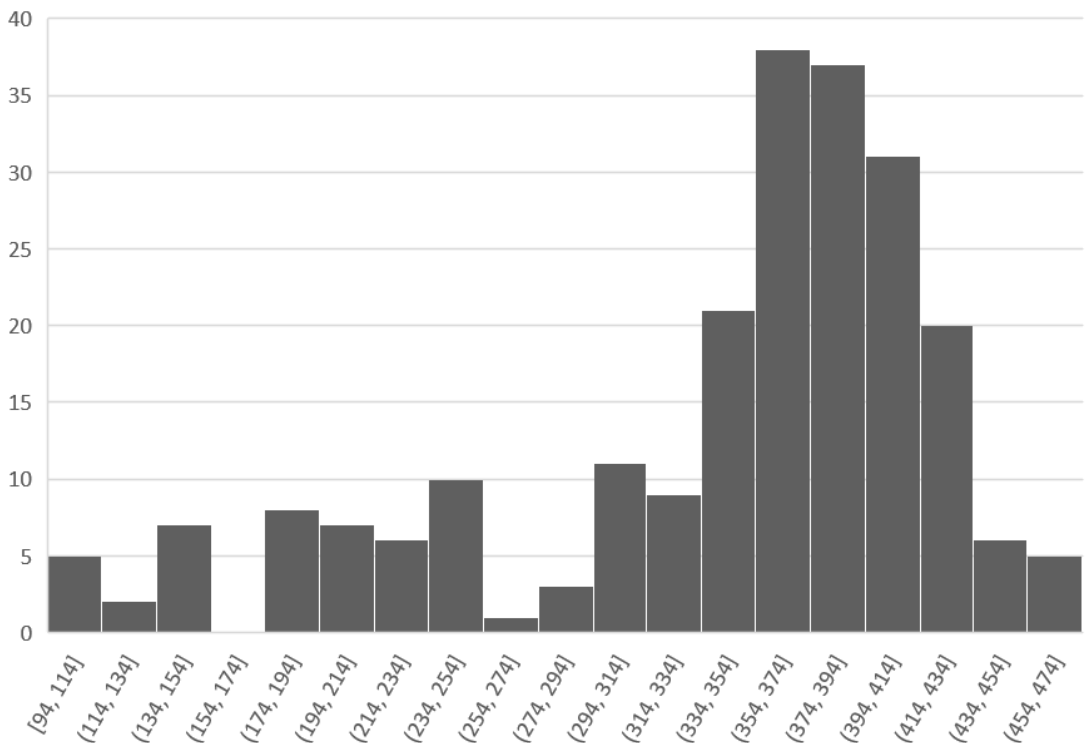


Figure 13. Length frequency of Smallmouth Bass captured during all seasons in all areas of Lake Memphremagog International survey, December 2018 through November 2020. X-axis is the bin length in millimeters, Y-axis is the number of fish as measured by clerk in each bin size. Sample size is 222 Smallmouth Bass.

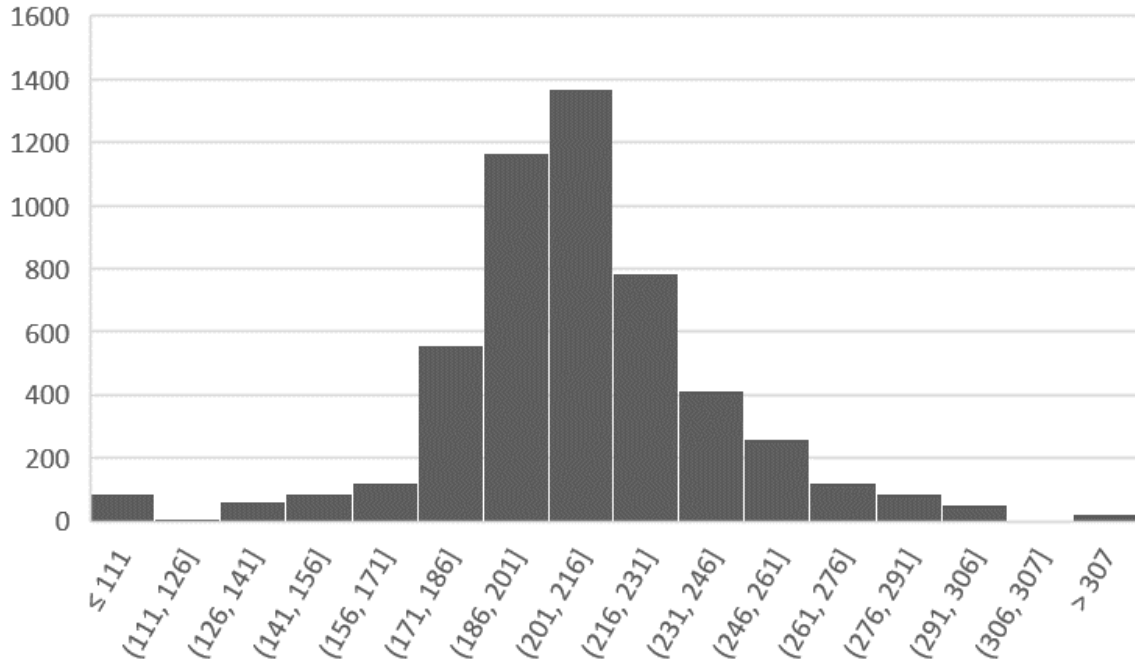


Figure 14. Length frequency of Yellow Perch captured during all seasons in all areas of Lake Memphremagog International survey, December 2018 through November 2020. X-axis is the bin length in millimeters, Y-axis is the number of fish as measured by clerk in each bin size. Sample size is 5,192 Yellow Perch

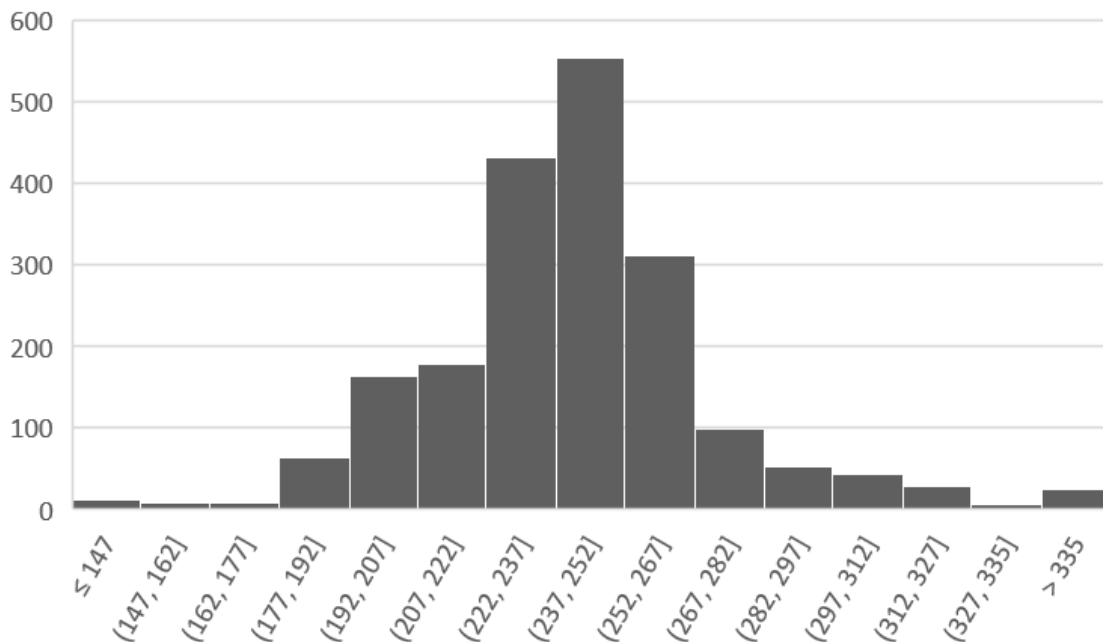


Figure 15 Length frequency of White Perch captured during all seasons in all areas of Lake Memphremagog International survey, December 2018 through November 2020. X-axis is the bin length in millimeters, Y-axis is the number of fish as measured by clerk in each bin size. Sample size is 1,982 White Perch.

Table 1. Summary of angler survey dates and number of days conducted.

Location	Season	Start Date	End Date	Weekend Days Surveyed	Weekday Days Surveyed	Angler Interviews
Quebec	Ice 2018-19	12/20/2018	3/31/2019	30	25	910
Vermont	Ice 2018-19	12/14/2018	4/6/2019	28	22	332
Quebec	Open 2019	4/27/2019	10/31/2019	57	53	1524
Vermont	Open 2019	4/15/2019	10/28/2019	29	28	173
Quebec	Ice 2019-20	12/20/2019	3/31/2020	29	31	799
Vermont	Ice 2019-20	12/8/2019	3/12/2020	27	20	214
Quebec	Open 2020	5/2/2020	10/31/2020	57	47	1814
Vermont	Open 2020	4/25/20	9/30/2020	31	25	194

Table 2. Summary of Quebec and Vermont harvest regulations for salmonid species during the survey period. LKT = Lake Trout, LLS = Landlocked Atlantic Salmon, RBT = Rainbow Trout, BNT = Brown Trout, BKT = Brook Trout. Asterisk (*) indicates that Quebec does not allow harvest of LKT in ice season. Total column indicates that Vermont daily salmonid limit is restricted to 2 salmonids cumulative, which can be a combination of species or 2 of any one species, whereas Quebec daily salmonid limit is 30 total salmonids.

State or Province	Daily LKT (min length)	Daily LLS (min length)	Daily RBT (min length)	Daily BNT (min length)	Daily BKT (min length)	Total
Quebec	2 (>60 cm)*	3 (>42 cm)	10 (NL)	5 (NL)	10 (NL)	30
Vermont	2 (>46 cm)	2 (>42 cm)	2 (>25 cm)	2 (>25 cm)	2 (NL)	2

Table 3. Angler response to interview question: “What are the primary reasons you LIKE to fish Lake Memphremagog”. Reasons were (left to right): Close to home, Near Family or friends, Always have fished here, Quantity of fish, To Catch Trophy-size fish, Quantity of Species, Quality of Salmonid fishery, Quality of Perch fishery, Quality of Bass fishery, Scenery, For Food.

State or Prov.	Season	Close	Family	Always	Quantity	Trophy	Species	Quality Salm.	Quality Perch	Quality Bass	Scenery	Food
Quebec	Open	30%	3%	7%	8%	3%	9%	11%	1%	2%	23%	2%
Quebec	Ice	19%	6%	8%	10%	2%	21%	18%	12%	-	4%	-
Vermont	Open	26%	4%	6%	12%	6%	13%	3%	5%	13%	9%	3%
Vermont	Ice	28%	8%	2%	13%	16%	14%	7%	13%	-	-	-

Table 4. Angler response to interview question: “What are the primary reasons you DON’T LIKE to fish Lake Memphremagog”. Reasons were (left to right): Too Far from home, Too Much Pressure, Lacks Trophy fish, Uncertain Ice Conditions, Uncertain Weather Conditions, Too Few Fish, Costs too much to access, Lacks Public Access.

State or Prov.	Season	Too Far	Pressure	Lack Trophy	Ice Cond.	Weather Cond.	Few Fish	Cost	Access	None
Quebec	Open	4%	39%	11%	-	1%	10%	30%	5%	
Quebec	Ice	36%	25%	0%	11%	11%	18%	-	-	
Vermont	Open	9%	8%	-	-	14%	9%	-	3%	59%
Vermont	Ice	18%	6%	1%	5%	10%	7%	-	2%	51%

Table 5. Catch and harvest estimates for Vermont Lake Memphremagog in the 2018-2019 ice season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead						
Brown Trout	10	17	170.0	10	17	170.0
Chain Pickerel	46	65	141.3	0		
Lake Trout	1437	858	59.7	548	305	55.7
Landlocked Atlantic Salmon	49	62	126.5	6	8	133.3
Largemouth Bass	0			0		
Northern Pike	150	235	156.7	31	27	87.1
Pumpkinseed	0			0		
Rainbow Trout	15	20	133.3	15	20	133.3
Rock Bass	0			0		
Rainbow Smelt	12,346	7237	58.6	10590	6674	63.0
Smallmouth Bass	66	62	93.9	19	23	121.1
White Perch	4102	2189	53.4	3797	2157	56.8
Yellow Perch	116,288	26,044	22.4	67382	15929	23.6

Table 6. Catch and harvest estimates for Vermont South Bay in the 2018-2019 ice season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead						
Brown Trout	28	41	146.429	28	41	146.4286
Chain Pickerel	269	282	104.833	0		
Lake Trout	0			0		
Landlocked Atlantic Salmon	0			0		
Largemouth Bass	0			0		
Northern Pike	1859	851	45.7773	206	128	62.13592
Pumpkinseed	0			0		
Rainbow Trout	0			0		
Rock Bass	0			0		
Rainbow Smelt	0			0		
Smallmouth Bass	0			0		
White Perch	0			0		
Yellow Perch	10,416	4874	46.7934	5883	2875	48.86962

Table 7. Catch and harvest estimates for Vermont Lake Memphremagog in the 2019 open water season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	181	356	196.7	0		
Brown Trout	0			0		
Chain Pickerel	366	366	100.0	9	18	200.0
Lake Trout	38	61	160.5	4	7	182.5
Landlocked Atlantic Salmon	500	545	109.0	0		
Largemouth Bass	1001	572	57.1	110	146	132.7
Northern Pike	520	410	78.8	128	191	148.8
Pumpkinseed	561	593.2	105.7	40	79	197.8
Rainbow Trout	72	117.6	163.3	43	63	146.5
Rock Bass	47	55.1	117.2	0		
Rainbow Smelt	0			0		
Smallmouth Bass	5081	1831.2	36.0	309	309	100.0
White Perch	6613	4615.2	69.8	4022	3212	79.9
Yellow Perch	13,001	6,356	48.9	5878	4034	68.6

Table 8. Catch and harvest estimates for Vermont South Bay in the 2019 open water season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	108	150.1	139.0	0		
Brown Trout	0			0		
Chain Pickerel	1129	998.3	88.4	75	105	139.7
Lake Trout	0			0		
Landlocked Atlantic Salmon	0			0		
Largemouth Bass	665	663.5	99.8	62	122	196.5
Northern Pike	3602	2074.8	57.6	59	82	138.5
Pumpkinseed	0			0		
Rainbow Trout	0			0		
Rock Bass	0			0		
Rainbow Smelt	0			0		
Smallmouth Bass	237	331.8	140.0	31	61	196.5
White Perch	1255	1932.3	154.0	31	61	196.5
Yellow Perch	9,902	6,184	62.5	1639	1912	116.6

Table 9. Catch and harvest estimates for Vermont Lake Memphremagog in the 2019-2020 ice season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	0			0		
Brown Trout	34	40	117.6	18	25	138.9
Chain Pickerel	35	56	160.0	28	55	196.4
Lake Trout	1513	687	45.4	1082	614	56.7
Landlocked Atlantic Salmon	174	165	94.8	87	122	140.2
Largemouth Bass	40	79	197.5	40	79	197.5
Northern Pike	239	198	82.8	192	188	97.9
Pumpkinseed	0			0		
Rainbow Trout	9	17	188.9	9	17	188.9
Rock Bass	0			0		
Rainbow Smelt	7,542	4322	57.3	6181	3167	51.2
Smallmouth Bass	0			0		
White Perch	4001	3545	88.6	3984	3545	89.0
Yellow Perch	123,834	28,896	23.3	82763	21058	25.4

Table 10. Catch and harvest estimates for Vermont South Bay in the 2019-2020 ice season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	0			0		
Brown Trout	0			0		
Chain Pickerel	75	111	148.0	18	26	144.4
Lake Trout	0			0		
Landlocked Atlantic Salmon	0			0		
Largemouth Bass	0			0		
Northern Pike	2607	1092	41.9	431	304	70.5
Pumpkinseed	0			0		
Rainbow Trout	0			0		
Rock Bass	0			0		
Rainbow Smelt	0			0		
Smallmouth Bass	0			0		
White Perch	0			0		
Yellow Perch	7,402	6,350	85.8	4787	3986	83.3

Table 11. Catch and harvest estimates for Vermont Lake Memphremagog in the 2020 open water season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	10	19.2	192.0	0		
Brown Trout	0			0		
Chain Pickerel	489	346.6	70.9	85	142	167.5
Lake Trout	27.1	36.7	135.4	0		
Landlocked Atlantic Salmon	312	261.7	83.9	0		
Largemouth Bass	665.1	509.3	76.6	0		
Northern Pike	552.8	378.3	68.4	185	260	140.8
Pumpkinseed	0			0		
Rainbow Trout	307.8	216.6	70.4	487	502	103.1
Rock Bass	64	107.4	169.1	0		
Rainbow Smelt	0			0		
Smallmouth Bass	5135.5	1800.3	35.1	342	331	96.8
White Perch	2985.8	1852	62.0	1514	1068	70.6
Yellow Perch	12,569	5,701	45.4	4783	2153	45.0

Table 12. Catch and harvest estimates for Vermont South Bay in the 2020 open water season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	0			0		
Brown Trout	0			0		
Chain Pickerel	389.2	322	82.7	27	54	196.4
Lake Trout	0			0		
Landlocked Atlantic Salmon	56	109.7	195.9	56	110	195.9
Largemouth Bass	1158.6	1948.3	168.2	141	276	196.2
Northern Pike	3945.1	3118.4	79.0	561	605	107.8
Pumpkinseed	0			0		
Rainbow Trout	0			0		
Rock Bass	63	123.6	196.2	0		
Rainbow Smelt	0			0		
Smallmouth Bass	1448	1583.5	109.4	0		
White Perch	1242.2	1637.5	131.8	927	1438	155.1
Yellow Perch	2,251	2,106	93.6	1432	1741	121.6

Table 13. Catch and harvest estimates for Quebec North section in the 2018-2019 ice season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	0			0		
Brown Trout	9.7	10.3	106.2	9.7	10.3	106.2
Chain Pickerel	23.9	35.0	146.4	1.6	3.1	193.8
Lake Trout	340.7	127.0	37.3			
Landlocked Atlantic Salmon	243.9	91.0	37.3	28.7	17.1	59.6
Largemouth Bass	113.2	99.0	87.5	90.4	91.0	100.7
Northern Pike	4.5	9.0	200.0	0.0		
Pumpkinseed	0.0			0.0		
Rainbow Trout	242.5	96.0	39.6	221.1	94.0	42.5
Rock Bass	69.6	55.0	79.0	25.6	32.2	125.8
Rainbow Smelt	0.0			0.0		
Smallmouth Bass	304.6	188.0	61.7	259.5	161.2	62.1
White Perch	1468.3	1202.0	81.9	1457.5	1200.8	82.4
Yellow Perch	22351.1	4359.0	19.5	14898.0	3063.1	20.6

Table 14. Catch and harvest estimates for Quebec South section in the 2018-2019 ice season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	0			0		
Brown Trout	1.8	2	111.1	0		
Chain Pickerel	0			0		
Lake Trout	336.9	135	40.1	0		
Landlocked Atlantic Salmon	14	10	71.4	4.5	4.4	97.8
Largemouth Bass	0			0		
Northern Pike	0			0		
Pumpkinseed	0			0		
Rainbow Trout	31.1	19	61.1	27.2	18.1	66.5
Rock Bass	24.4	23	94.3	19.7	22.2	112.7
Rainbow Smelt	0			0		
Smallmouth Bass	293	160	54.6	186.4	109.1	58.5
White Perch	20,050.80	3678	18.3	17,565.10	3348	19.1
Yellow Perch	38,201.60	5381	14.1	27,341.00	4171.9	15.3

Table 15. Catch and harvest estimates for Quebec North section in the 2019 open water season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	0			0		
Brown Trout	51.2	57	111.3	48	57.1	119.0
Chain Pickerel	74.4	73	98.1	0		
Lake Trout	1201.3	600	49.9	362.4	146.3	40.4
Landlocked Atlantic Salmon	790.6	464	58.7	31.2	29.3	93.9
Largemouth Bass	532.9	355	66.6	503	352.1	70.0
Northern Pike	762.8	440	57.7	52.1	24.1	46.3
Pumpkinseed	762.8	440	57.7	52.1	54.1	103.8
Rainbow Trout	502.8	251	49.9	471.3	247.8	52.6
Rock Bass	761.6	556	73.0	18.3	28	153.0
Rainbow Smelt	0			0		
Smallmouth Bass	3030.3	799	26.4	436.9	198	45.3
White Perch	972.4	594	61.1	773.6	550	71.1
Yellow Perch	4045.7	1845	45.6	1914.5	1053.1	55.0

Table 16. Catch and harvest estimates for Quebec South section in the 2019 open water season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	27	53	196.3	0		
Brown Trout	128.3	117	91.2	71.2	122.5	172.1
Chain Pickerel	38.4	52	135.4	0		
Lake Trout	2746	524	19.1	881.3	209	23.7
Landlocked Atlantic Salmon	3339.6	722	21.6	542.8	237.2	43.7
Largemouth Bass	234.2	168	71.7	221.7	166.3	75.0
Northern Pike	350.6	557	158.9	0		
Pumpkinseed	350.6	557	158.9	0		
Rainbow Trout	676.6	226	33.4	488.3	204.3	41.8
Rock Bass	129.3	124	95.9	37.6	73.5	195.5
Rainbow Smelt	231.7	282	121.7	171.6	271.7	158.3
Smallmouth Bass	3788.4	1040	27.5	341.5	155.2	45.4
White Perch	5302.9	2387	45.0	3391	2095.4	61.8
Yellow Perch	13,313.00	3611	27.1	7518.9	2032.8	27.0

Table 17. Catch and harvest estimates for Quebec North section in the 2019-2020 ice season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	0			0		
Brown Trout	8.8	10	113.6	6.6	9.7	147.0
Chain Pickerel	1.9	4	210.5	0		
Lake Trout	183.8	83	45.2	0		
Landlocked Atlantic Salmon	2199.7	893	40.6	64.3	34.3	53.3
Largemouth Bass	76.5	115	150.3	74.6	115.1	154.3
Northern Pike	0			0		
Pumpkinseed	154	141	91.6	0		
Rainbow Trout	304.6	208	68.3	218.2	194.4	89.1
Rock Bass	50.9	45	88.4	25.2	32.4	128.6
Rainbow Smelt	136	177	130.1	136	177.4	130.4
Smallmouth Bass	1412.8	1172	83.0	25.7	27.2	105.8
White Perch	714.5	638	89.3	678.3	635.5	93.7
Yellow Perch	8611.8	1833	21.3	9354.1	2292.8	24.5

Table 18. Catch and harvest estimates for Quebec South section in the 2019-2020 ice season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	0			0		
Brown Trout	2.8	6	214.286	2.8	5.5	196.4286
Chain Pickerel	7	14	200	0		
Lake Trout	107.4	55	51.2104	0		
Landlocked Atlantic Salmon	512.3	383	74.7609	1734	18.8	1.084198
Largemouth Bass	0			0		
Northern Pike	3.7	7	189.189	0		
Pumpkinseed	198.9	224	112.619	26.3	45.3	172.2433
Rainbow Trout	191.4	184	96.1338	181	181	100
Rock Bass	19.3	38	196.891	0		
Rainbow Smelt	686.3	395	57.555	586	360.5	61.51877
Smallmouth Bass	7094	4085	57.5839	125.3	169.7	135.435
White Perch	16,700.60	5516	33.0288	13,335.50	4904.9	36.78077
Yellow Perch	23,731.80	3855	16.244	25,660.10	4761.1	18.55449

Table 19. Catch and harvest estimates for Quebec North section in the 2020 open water season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	10.1	22	217.8	10.1	21.5	212.9
Brown Trout	84.1	148	176.0	15.3	20.1	131.4
Chain Pickerel	40.3	47	116.6	10.1	21.5	212.9
Lake Trout	1112.6	399	35.9	493.1	267.4	54.2
Landlocked Atlantic Salmon	368.7	160	43.4	93.9	68.4	72.8
Largemouth Bass	300	309	103.0	55.3	64.7	117.0
Northern Pike	9.8	14	142.9	0		
Pumpkinseed	839	367	43.7	93.7	110.7	118.1
Rainbow Trout	57.7	40	69.3	41.3	33.5	81.1
Rock Bass	441.1	315	71.4	10.1	21.5	212.9
Rainbow Smelt	3.6	8	222.2	3.6	7.8	216.7
Smallmouth Bass	4143.5	1034	25.0	833.9	328	39.3
White Perch	3275.3	2656	81.1	1707.8	1034.1	60.6
Yellow Perch	11,100.00	6275	56.5	4258	2685.9	63.1

Table 20. Catch and harvest estimates for Quebec North section in the 2020 open water season angler survey. CI = 95% confidence interval. Percent CI = 95% CI as percent of number.

Species	Catch			Harvest		
	Numbers	CI	% CI	Numbers	CI	% CI
Brown Bullhead	0			0		
Brown Trout	141.8	117	82.5	36	29.8	82.8
Chain Pickerel	63.9	67	104.9	0		
Lake Trout	2453.2	579	23.6	986.5	413.3	41.9
Landlocked Atlantic Salmon	1836.8	416	22.6	327.5	205.7	62.8
Largemouth Bass	92.3	70	75.8	34.4	45.9	133.4
Northern Pike	180	356	197.8	1.2	2.6	216.7
Pumpkinseed	187.5	177	94.4	5.1	10.7	209.8
Rainbow Trout	398.5	196	49.2	251.7	170.3	67.7
Rock Bass	48.1	71	147.6	0		
Rainbow Smelt	30.1	51	169.4	23.6	49.8	211.0
Smallmouth Bass	2309.7	603	26.1	310.9	165	53.1
White Perch	11,883.70	3651	30.7	6432.1	2177.8	33.9
Yellow Perch	15,961.70	3678	23.0	8960.5	2772.3	30.9

Table 21. Average lengths of common species by area for the 2018-2019 ice season angler survey on Lake Memphremagog.

Area	Avg. L (mm)	Std. Dev. (mm)	Min L (mm)	Max L (mm)	No. Measured
Brown Trout					
Quebec	456	75.3	389	564	4
Vermont	-	-	-	-	-
Lake Trout					
Quebec					
Vermont	627	47.1	457.2	752	89
Landlocked Atlantic Salmon					
Quebec	477	65.7	355	615	23
Vermont	558	10.2	545	570	4
Largemouth Bass					
Quebec	367	57.2	283	456	12
Vermont	432	20.7	406	457	4
Northern Pike					
Quebec	-	-	-	-	-
Vermont	554	152.7	254	910	113
Rainbow Trout					
Quebec	377	66.5	268	584	89
Vermont	593	43.8	562	624	2
Rainbow Smelt					
Quebec	116	13.4	59	160	97
Vermont	121	20.3	76	154	17
Smallmouth Bass					
Quebec	378	37.5	216	465	106
Vermont	415	56.4	335	465	4
White Perch					
Quebec	241	27.8	139	375	1079
Vermont	248	40.0	76	378	80
Yellow Perch					
Quebec	207	25.7	113	315	1906
Vermont	202	47.7	50.8	346	868

Table 22. Average lengths of common species by area for the 2019-2020 ice season angler survey on Lake Memphremagog.

Area	Avg. L (mm)	Std. Dev. (mm)	Min L (mm)	Max L (mm)	No. Measured
Brown Trout					
Quebec	461	179.0	197	583	4
Vermont	-	-	-	-	-
Lake Trout					
Quebec	-	-	-	-	-
Vermont	652	68.4	457	812	57
Landlocked Atlantic Salmon					
Quebec	411	67.7	330	635	55
Vermont	495	71.6	381	610	7
Largemouth Bass					
Quebec	388	33.1	362	445	5
Vermont	381	42.9	305	432	10
Northern Pike					
Quebec	-	-	-	-	-
Vermont	687	140.2	458	1022	31
Rainbow Trout					
Quebec	363	62.1	254	500	59
Vermont	538		538	538	1
Rainbow Smelt					
Quebec	128	16.0	101	167	44
Vermont	145	33.7	72	212	15
Smallmouth Bass					
Quebec	380	28.7	320	438	16
Vermont	-	-	-	-	-
White Perch					
Quebec	239	31.8	144	364	621
Vermont	257	26.7	203	318	13
Yellow Perch					
Quebec	211	25.1	146	323	1434
Vermont	220	30.2	76	335	545

Table 22. Average lengths of common species by area for the 2019 open water season angler survey on Lake Memphremagog.

Area	Avg. L (mm)	Std. Dev. (mm)	Min L (mm)	Max L (mm)	No. Measured
Brown Trout					
Quebec	508	62.3	435	633	12
Vermont	-	-	-	-	-
Lake Trout					
Quebec	658	61.0	544	872	99
Vermont	629	27.2	610	648	2
Landlocked Atlantic Salmon					
Quebec	466	53.5	390	600	33
Vermont	264	124.8	152	610	20
Largemouth Bass					
Quebec	298	92.7	170	385	6
Vermont	381	42.9	305	432	10
Northern Pike					
Quebec	-	-	-	-	-
Vermont	702	108.6	584	940	8
Rainbow Trout					
Quebec	408	113	239	744	42
Vermont	492	81.9	434	586	3
Rainbow Smelt					
Quebec	-	-	-	-	-
Vermont	276	-	276	276	1
Smallmouth Bass					
Quebec	273	116.1	94	464	24
Vermont	367	46.4	296	421	7
White Perch					
Quebec	261	31.5	199	348	91
Vermont	260	28.9	197	334	41
Yellow Perch					
Quebec	212	33.3	111	323	202
Vermont	215	31.3	146	306	124

Table 23. Average lengths of common species by area for the 2020 open water season angler survey on Lake Memphremagog.

Area	Avg. L (mm)	Std. Dev. (mm)	Min L (mm)	Max L (mm)	No. Measured
Brown Trout					
Quebec	291	235.8	11	535	4
Vermont	-	-	-	-	-
Lake Trout					
Quebec	667	63.2	585	838	39
Vermont	635	35.4	610	660	2
Landlocked Atlantic Salmon					
Quebec	452	56.3	385	613	26
Vermont	345	111.2	178	533	15
Largemouth Bass					
Quebec	-	-	-	-	-
Vermont	353	36.8	305	406	10
Northern Pike					
Quebec	-	-	-	-	-
Vermont	630	171.2	254	940	29
Rainbow Trout					
Quebec	490	74.0	412	617	11
Vermont	412	116.7	254	635	14
Rainbow Smelt					
Quebec	-	-	-	-	-
Vermont	145	33.7	72	212	15
Smallmouth Bass					
Quebec	398	47.9	355	454	4
Vermont	281	96.1	102	457	66
White Perch					
Quebec	-	-	-	-	-
Vermont	223	50.4	102	356	61
Yellow Perch					
Quebec	-	-	-	-	-
Vermont	184	57.8	76	381	113

APPENDIX I

Legend to Appendix 1b

Section – name of section surveyed, Quebec North, Quebec South, Vermont Lake, South Bay

Anglers in this party – number of anglers interviewed

Rods trolling – number of fishing lines used by trolling

Rods casting – number of fishing lines used by casting

SPP sought – species sought; salmonids (Brown Trout, Lake Trout, Rainbow Trout, Salmon), sunfish (Pumpkinseed, Rock Bass), Rainbow Smelt, White Perch, Yellow Perch, Bass (Largemouth, Smallmouth), Northern Pike/Pickerel, or No Preference

Residence – hometown of angler

Start Time – angler fishing start time

Interview Time – time that clerk interviewed angler

Breaks – time that angler took off from fishing between Start Time and Interview Time

Done – Yes/No whether angler has finished fishing

N – fish data; number of fish of each species caught

Kept? – number of fish angler harvested

Fin Clips – clerk records any fin clips identifying strain or stocking year of species caught

Stomach – clerk records any stomach contents inside of harvested fish

Appendix 1a

2019 Memphremagog OpenWater Fishing Opinion Survey

Number of anglers: _____

- 1) Have you completed this survey before?
a. Yes No With Fishing Guide?
b. If yes, please stop here.
- 2) Approximately how many days do you fish Lake Memphremagog in a typical open water season? _____
- 3) What species do you most prefer to fish for on Lake Memphremagog in a typical open water season?
 Salmonids lake trout rainbow trout salmon Brown trout sunfish bass pike w perch
 y perch smelt Warm water no preference _____
- 4) Quebec anglers can harvest 10 rainbow trout of any length, Vermont anglers can harvest 2 rainbow trout great than 10" (25 cm). Do you believe a 10 rainbow trout harvest limit per day is:
 Just right Too low Too high Don't know No opinion
- 5) Quebec anglers can harvest 3 landlocked salmon 42 cm (16.5") or more in length, VT anglers can harvest 2 salmon greater than 17" (43 cm). How many salmon per day do you think should be legal to harvest?
 more than 3 3 2 1 0 No opinion
- 6) Quebec anglers can harvest 2 lake trout 60 cm (24") or more in length, Vermont anglers can harvest 2 lake trout 18" (46 cm) or more in length. How many lake trout do you think should be legal to harvest per day?
 more than 2 2 1 0 Don't know No opinion
- 7) What are the primary reason(s) you like to fish Lake Memphremagog (during the open water season)?
 Close to home Family & friends Always have Usually catch a lot of fish Trophy fish
 Lots of fish species Quality trout and salmon Lots of fish Quality perch fishing
 Quality of the meat Scenery Quality bass Other _____
- 8) What are the primary reason(s) you don't like to fish Lake Memphremagog (during the open water season)?
 Too far from home Too much fishing pressure Too many people Lack of trophy-sized fish
 Uncertain weather conditions Not enough fish Too expensive Not enough access
 Other _____
- 9) Which other waterbodies have you fished this season? _____
How many times have you fished there? _____
- 10) Comments:

Appendix 1b

2019-20 Memphremagog Open Water Angler Survey

Clerks: _____ Date: _____

Section: North QC South QC South Bay North VT

of anglers in this party: _____ # of rods trolling: _____ # of rods casting: _____

SPP sought: Salmonid (LKT/LLS/RBT/BNT) Sunfish Smelt W Perch Y Perch Bass Pike/Pickrel
Warmwater No Pref

Residence (town): _____

Start time: _____ Interview time: _____ Breaks(min): _____ Done?: Y; N

SPP	n	Length (mm)	Weight (lb)	Kept?	Fin clips	Stomach	Notes* (brb lesion, HI, HD)

Legend to Appendices 2 through 17

Species sought:

“All” = includes all angler reports from survey area during survey period

“Any” = reports from anglers with no preference to species targeted

“Perch/Warm” = reports from anglers seeking warmwater species including Perch

“Pike/Pick.” = reports from anglers seeking Pike or Pickerel

“Salmonids” = reports from anglers seeking Trout species and Salmon

“Warm” = reports from anglers seeking any warmwater species

Species caught:

BRB = Brown Bullhead

BNT = Brown Trout

CHP = Chain Pickerel

LKT = Lake Trout

LKT >600mm = Quebec legal length Lake Trout

LLS = Landlocked Atlantic Salmon

LLS >420mm = Quebec legal length Landlocked Salmon

LMB = Largemouth Bass

NRP = Northern Pike

PMS = Pumpkinseed

RBT = Rainbow Trout

RKB = Rock Bass

RSM = Rainbow Smelt

SMB = Smallmouth Bass

SUN = Sunfish species; Rock Bass and Pumpkinseed combined

WTP = White Perch

YLP = Yellow Perch

Column Headers:

Ang. Rec. = number of anglers interviewed for the Species Sought category

Counts = number of survey days in the survey period

Effort = number of hours of angling for the survey period (differs when legal harvest season is in effect)

Catch Rate = number of fish caught per angler hour

Catch = extrapolated number of fish estimated by multiplying Catch Rate by the Effort

Catch Rate Leg. Len. = number of legal length fish caught per angler hour (only species with regulated harvest length included)

Harvest Rate = number of fish harvested per angler hour

Appendix 2a 2018-2019 Lake Memphremagog Vermont Main Lake Ice Season Angling Table

Species Sought	Species Caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch fish	Catch Variance	Catch 95% CI	Catch Rate leg. len./ang-hr	Catch Rate Variance	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI
All	BNT	230	32	25,451	1,821,382	0.000373274	2.61946E-05	10	17,015	17						0.000373274	2.6E-05	10	17,015	17
All	CHP	230	50	34,252	1,932,217	0.001354955	0.000213814	46	251,258	65						0	0	0	0	0
All	LKT	230	32	25,451	1,821,382	0.056480473	0.067882707	1,437	44,100,211	858	0.056480473	0.067883	1,437	44,100,211	858	0.021532707	0.00856	548	5,559,762	305
All	LLS	230	32	25,451	1,821,382	0.001920731	0.000359991	49	233,845	62	0.001920731	0.00036	49	233,845	62	0.000236334	5.7E-06	6	3,672	8
All	LMB	230	32	25,451	1,821,382	0	0	0	0	0						0	0	0	0	0
All	NRP	230	50	34,252	1,932,217	0.004373594	0.002813209	150	3,305,867	235	0.000895333	3.69E-05	31	43,311	27	0.000895333	3.7E-05	31	43,311	27
All	RBT	230	32	25,451	1,821,382	0.000580751	3.68681E-05	15	23,949	20						0.000580751	3.7E-05	15	23,949	20
All	RSM	230	50	34,252	1,932,217	0.36045372	2.668206768	12,346	3,135,687,358	7,237						0.309168967	2.26932	10,590	2,666,887,787	6,674
All	SMB	230	32	25,451	1,821,382	0.002580816	0.000356264	66	231,430	62						0.000730079	5E-05	19	32,399	23
All	WTP	230	50	34,252	1,932,217	0.119747259	0.24407424	4,102	286,841,774	2,189						0.110852051	0.23707	3,797	278,609,325	2,157
All	YLP	230	50	34,252	1,932,217	3.395094516	34.53994157	116,288	40,610,500,896	26,044						1.967256547	12.9211	67,382	15,191,219,603	15,929
Any	BNT	36	32	7,092	507,517	0	0	0	0	0						0	0	0	0	0
Any	CHP	36	50	9,544	538,400	0	0	0	0	0						0	0	0	0	0
Any	LKT	36	32	7,092	507,517	0.0283475	0.005180028	201	263,554	168	0.0283475	0.00518	201	263,554	168	0.019323349	0.00298	137	151,530	127
Any	LLS	36	32	7,092	507,517	0.000587889	9.33158E-06	4	474	7	0.000587889	9.33E-06	4	474	7	0.000587889	9.3E-06	4	474	7
Any	LMB	36	32	7,092	507,517	0	0	0	0	0						0	0	0	0	0
Any	NRP	36	50	9,544	538,400	0.002767505	0.000129125	26	11,835	36	0.002767505	0.000129	26	11,835	36	0.002767505	0.00013	26	11,835	36
Any	RBT	36	32	7,092	507,517	0.001194743	3.85401E-05	8	1,959	14						0.001194743	3.9E-05	8	1,959	14
Any	RSM	36	50	9,544	538,400	0.013334657	0.00313402	127	287,256	175						0	0	0	0	0
Any	SMB	36	32	7,092	507,517	0.002614379	0.000184544	19	9,378	32						0.002614379	0.00018	19	9,378	32
Any	WTP	36	50	9,544	538,400	0.059234882	0.038875069	565	3,563,883	617						0.048290867	0.03173	461	2,908,449	557
Any	YLP	36	50	9,544	538,400	0.89432076	1.167981	8,535	107,448,861	3,386						0.355396222	0.4991	3,392	45,798,809	2,211
Perch/Warm	BNT	95	32	5,495	393,237	0	0	0	0	0						0	0	0	0	0
Perch/Warm	CHP	95	50	7,395	417,166	0	0	0	0	0						0	0	0	0	0
Perch/Warm	LKT	95	32	5,495	393,237	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perch/Warm	LLS	95	32	5,495	393,237	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perch/Warm	LMB	95	32	5,495	393,237	0	0	0	0	0						0	0	0	0	0
Perch/Warm	NRP	95	50	7,395	417,166	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Perch/Warm	RBT	95	32	5,495	393,237	0	0	0	0	0						0	0	0	0	0
Perch/Warm	RSM	95	50	7,395	417,166	0.192319321	1.10482483	1,422	60,893,924	1,569						0.081028774	0.08678	599	4,784,285	440
Perch/Warm	SMB	95	32	5,495	393,237	0.003367003	0.000748223	19	22,890	30						0	0	0	0	0
Perch/Warm	WTP	95	50	7,395	417,166	0.196296273	0.510383617	1,452	28,139,434	1,067						0.184100973	0.49765	1,361	27,435,779	1,053
Perch/Warm	YLP	95	50	7,395	417,166	6.899717273	60.55733509	51,023	3,356,713,849	11,651						4.005656074	23.0095	29,622	1,274,572,076	7,179
Pike/Pick.	BNT	10	32	704	50,397	0	0	0	0	0						0	0	0	0	0
Pike/Pick.	CHP	10	50	948	53,464	0.028265413	0.004506229	27	4,331	41						0	0	0	0	0
Pike/Pick.	LKT	10	32	704	50,397	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pike/Pick.	LLS	10	32	704	50,397	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pike/Pick.	LMB	10	32	704	50,397	0	0	0	0	0						0	0	0	0	0
Pike/Pick.	NRP	10	50	948	53,464	0.08	0.064	76	61,248	153	0	0	0	0	0	0	0	0	0	0
Pike/Pick.	RBT	10	32	704	50,397	0	0	0	0	0						0	0	0	0	0
Pike/Pick.	RSM	10	50	948	53,464	0	0	0	0	0						0	0	0	0	0
Pike/Pick.	SMB	10	32	704	50,397	0	0	0	0	0						0	0	0	0	0
Pike/Pick.	WTP	10	50	948	53,464	0	0	0	0	0						0	0	0	0	0
Pike/Pick.	YLP	10	50	948	53,464	0.947689174	4.886081035	898	4,697,862	1,343						0.537577129	2.12069	509	2,033,605	884

Appendix 2b.
2018-2019 Lake Memphremagog Vermont Main Lake Ice Season Angling Table (cont.)

Salmonids	BNT	84	32	11,793	843,969	0.000835422	5.86261E-05	10	8,204	19						0.000835422	5.9E-05	10	8,204	19
Salmonids	CHP	84	32	11,793	843,969	0.000345066	1.00019E-05	4	1,400	8						0	0	0	0	0
Salmonids	LKT	84	32	11,793	843,969	0.117296982	0.144357784	1,383	20,210,289	961	0.117296982	0.144358	1,383	20,210,289	961	0.041981172	0.01749	495	2,449,106	335
Salmonids	LLS	84	32	11,793	843,969	0.004109815	0.000799291	48	111,852	72	0.004109815	0.000799	48	111,852	72	0.000339974	9.7E-06	4	1,359	8
Salmonids	LMB	84	32	11,793	843,969	0	0	0	0	0						0	0	0	0	0
Salmonids	NRP	84	32	11,793	843,969	0.001265434	4.45153E-05	15	6,230	17	0.001265434	4.45E-05	15	6,230	17	0.001265434	4.5E-05	15	6,230	17
Salmonids	RBT	84	32	11,793	843,969	0.000915751	7.04424E-05	11	9,857	21						0.000915751	7E-05	11	9,857	21
Salmonids	RSM	84	32	11,793	843,969	0.437823065	1.445052265	5,163	202,354,854	3,042						0.428979689	1.4463	5,059	202,522,897	3,043
Salmonids	SMB	84	32	11,793	843,969	0.002290272	0.000157441	27	22,034	32						0.000793651	5.3E-05	9	7,404	18
Salmonids	WTP	84	32	11,793	843,969	0.080491284	0.066545501	949	9,316,577	653						0.074617954	0.06572	880	9,200,306	649
Salmonids	YLP	84	32	11,793	843,969	0.988803476	1.694082034	11,661	237,862,730	3,298						0.636051312	1.00939	7,501	141,576,717	2,545
Smelt	BNT	5	32	367	26,263	0	0	0	0	0						0	0	0	0	0
Smelt	CHP	5	50	494	27,861	0	0	0	0	0						0	0	0	0	0
Smelt	LKT	5	32	367	26,263	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smelt	LLS	5	32	367	26,263	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smelt	LMB	5	32	367	26,263	0	0	0	0	0						0	0	0	0	0
Smelt	NRP	5	50	494	27,861	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Smelt	RBT	5	32	367	26,263	0	0	0	0	0						0	0	0	0	0
Smelt	RSM	5	50	494	27,861	5.475366989	61.86993332	2,704	17,650,587	3,683						5.475366989	61.8699	2,704	17,650,587	3,683
Smelt	SMB	5	32	367	26,263	0	0	0	0	0						0	0	0	0	0
Smelt	WTP	5	50	494	27,861	0	0	0	0	0						0	0	0	0	0
Smelt	YLP	5	50	494	27,861	0.133333333	0.088888889	66	24,654	138						0.066666667	0.02222	33	6,163	69

Appendix 3. 2018-2019 Lake Memphremagog Vermont South Bay Ice Season Angling Table

All	BNT	102	32	5,079	78,323	0.005502568	0.001756139	28	45,439	41							0.005502568	0.00176	28	45,439	41
All	CHP	102	50	10,336	144,554	0.026068509	0.019738078	269	2,111,528	282							0	0	0	0	0
All	LMB	102	32	5,079	78,323	0	0	0	0	0							0	0	0	0	0
All	NRP	102	50	10,336	144,554	0.179908517	0.179908517	1,859	19,249,930	851	0.068457677	0.022206	708	2,376,094	299	0.019966117	0.00406	206	434,027	128	
All	RSM	102	50	10,336	144,554	0	0	0	0	0							0	0	0	0	0
All	SMB	102	32	5,079	78,323	0	0	0	0	0							0	0	0	0	0
All	WTP	102	50	10,336	144,554	0	0	0	0	0							0	0	0	0	0
All	YLP	102	50	10,336	144,554	1.007771888	5.894151946	10,416	630,658,562	4,874							0.569158245	2.0508	5,883	219,426,061	2,875
Any	BNT	11	32	527	8,130	0	0	0	0	0							0	0	0	0	0
Any	CHP	11	50	1,073	15,005	0.014187328	0.001001962	15	1,171	20							0	0	0	0	0
Any	LMB	11	32	527	8,130	0	0	0	0	0							0	0	0	0	0
Any	NRP	11	50	1,073	15,005	0.128305785	0.096086119	138	112,291	198	0.048760331	0.022517	52	26,292	96	0.003305785	0.00012	4	140	7	
Any	RSM	11	50	1,073	15,005	0	0	0	0	0							0	0	0	0	0
Any	SMB	11	32	527	8,130	0	0	0	0	0							0	0	0	0	0
Any	WTP	11	50	1,073	15,005	0	0	0	0	0							0	0	0	0	0
Any	YLP	11	50	1,073	15,005	1.862802546	19.59323867	1,999	22,899,251	2,828							1.152634771	8.82262	1,237	10,307,774	1,897
Perch/Warm	BNT	23	32	882	13,604	0.02901354	0.00925964	26	7,343	35							0.02901354	0.00926	26	7,343	35
Perch/Warm	CHP	23	50	1,795	25,107	0	0	0	0	0							0	0	0	0	0
Perch/Warm	LMB	23	32	882	13,604	0	0	0	0	0							0	0	0	0	0
Perch/Warm	NRP	23	50	1,795	25,107	0.007154359	0.00044299	13	1,444	16	0.007154359	0.000444	13	1,444	16	0.004048769	0.00025	7	808	12	
Perch/Warm	RSM	23	50	1,795	25,107	0	0	0	0	0							0	0	0	0	0
Perch/Warm	SMB	23	32	882	13,604	0	0	0	0	0							0	0	0	0	0
Perch/Warm	WTP	23	50	1,795	25,107	0	0	0	0	0							0	0	0	0	0
Perch/Warm	YLP	23	50	1,795	25,107	2.860124625	11.14943261	5,135	36,417,627	2,466							1.496160178	3.03411	2,686	9,910,677	1,287
Pike/Pick.	BNT	68	32	3,670	56,589	0	0	0	0	0							0	0	0	0	0
Pike/Pick.	CHP	68	50	7,468	104,441	0.036807755	0.029231357	275	1,633,311	304							0	0	0	0	0
Pike/Pick.	LMB	68	32	3,670	56,589	0	0	0	0	0							0	0	0	0	0
Pike/Pick.	NRP	68	50	7,468	104,441	0.246687571	0.153055236	1,842	8,557,621	695	0.092378958	0.028033	690	1,567,127	298	0.019966117	0.00406	149	226,699	113	
Pike/Pick.	RSM	68	50	7,468	104,441	0	0	0	0	0							0	0	0	0	0
Pike/Pick.	SMB	68	32	3,670	56,589	0	0	0	0	0							0	0	0	0	0
Pike/Pick.	WTP	68	50	7,468	104,441	0	0	0	0	0							0	0	0	0	0
Pike/Pick.	YLP	68	50	7,468	104,441	0.242927032	0.408217687	1,814	22,813,469	1,135							0.569158245	2.0508	4,250	114,613,043	2,545

Appendix 4a 2019 Lake Memphremagog Vermont Main Lake Open Water Season Angling Table

Species Sought	Species Caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate	Catch Rate	Catch fish	Catch Variance	Catch 95% CI	Catch Rate leg.	Catch Rate	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI
All	BRB	121	57	14640.17	106935.9	0.012397	0.018595	181	3987562.8	355.8092						0	0	0	0	0
All	CHP	121	57	14640.17	106935.9	0.02499	0.019653	366	4214512.1	365.7944						0.000631	4.81584E-05	9	10327.2	18.10734
All	LKT	121	57	14640.17	106935.9	0.002574	0.000546	38	117009.64	60.95007	0.00232	0.000523	34	112213.2	59.68777	0.000254	7.81E-06	4	1674.433	7.291172
All	LLS	121	57	14640.17	106935.9	0.034183	0.043668	500	9364453.4	545.2612	0.005099	0.001633	75	350278.9	105.4558	0	0	0	0	0
All	LMB	121	57	14640.17	106935.9	0.068398	0.048081	1001	10310962	572.154						0.00753	0.0031288	110	670950.3	145.9515
All	NRP	121	57	14640.17	106935.9	0.035551	0.024702	520	5297339.4	410.1024						0.008763	0.005332693	128	1143558	190.5428
All	SUN	121	57	14640.17	106935.9	0.038321	0.051681	561	11082625	593.1776						0.002755	0.000918274	40	196916.7	79.06871
All	RBT	121	57	14640.17	106935.9	0.004917	0.00203	72	435231.28	117.5502						0.002918	0.00058207	43	124820.7	62.9516
All	RKB	121	57	14640.17	106935.9	0.003237	0.000446	47	95570.603	55.08401						0	0	0	0	0
All	SMB	121	57	14640.17	106935.9	0.347061	0.492493	5081	105623735	1831.235						0.021122	0.014011495	309	3004692	308.8612
All	WHP	121	57	14640.17	106935.9	0.451733	3.128403	6613	670880941	4615.153						0.274733	1.515437747	4022	3.25E+08	3212.123
All	YLP	121	57	14640.17	106935.9	0.888055	5.933813	13001	1.273E+09	6356.221						0.401475	2.389920833	5878	5.13E+08	4033.822
Any	BRB	24	57	2857.909	20874.98	0	0	0	0	0						0	0	0	0	0
Any	CHP	24	57	2857.909	20874.98	0.060128	0.077698	172	636303.14	319.1409						0.003181	0.000242799	9	1988.373	17.84018
Any	LKT	24	57	2857.909	20874.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Any	LLS	24	57	2857.909	20874.98	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Any	LMB	24	57	2857.909	20874.98	0.058493	0.053431	167	437591.07	264.6578						0.023585	0.013349947	67	109327.9	132.2866
Any	NRP	24	57	2857.909	20874.98	0.053921	0.027977	154	229150.6	191.5186						0.04418	0.026189993	126	214498.1	185.2943
Any	SUN	24	57	2857.909	20874.98	0.052083	0.065104	149	533163.46	292.133						0	0	0	0	0
Any	RBT	24	57	2857.909	20874.98	0	0	0	0	0						0	0	0	0	0
Any	RKB	24	57	2857.909	20874.98	0	0	0	0	0						0	0	0	0	0
Any	SMB	24	57	2857.909	20874.98	0.148564	0.098704	425	808703.3	359.7867						0.058599	0.041050068	167	336211	231.9831
Any	WHP	24	57	2857.909	20874.98	0.41133	0.984355	1176	8063941.3	1136.12						0.150042	0.215608251	429	1765983	531.6718
Any	YLP	24	57	2857.909	20874.98	0.68933	1.20322	1970	9862514.1	1256.447						0.07232	0.061751267	207	505760.7	284.5267
Bass	BRB	45	57	5232.64	38220.68	0	0	0	0	0						0	0	0	0	0
Bass	CHP	45	57	5232.64	38220.68	0.033572	0.011466	176	314434.79	163.8382						0	0	0	0	0
Bass	LKT	45	57	5232.64	38220.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bass	LLS	45	57	5232.64	38220.68	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bass	LMB	45	57	5232.64	38220.68	0.134218	0.086498	702	2372360.3	450.0286						0.003072	0.000424728	16	11645.86	31.53084
Bass	NRP	45	57	5232.64	38220.68	0.064898	0.050155	340	1375354.4	342.655						0	0	0	0	0
Bass	SUN	45	57	5232.64	38220.68	0	0	0	0	0						0	0	0	0	0
Bass	RBT	45	57	5232.64	38220.68	0	0	0	0	0						0	0	0	0	0
Bass	RKB	45	57	5232.64	38220.68	0.006016	0.000875	31	23984.077	45.24924						0	0	0	0	0
Bass	SMB	45	57	5232.64	38220.68	0.756289	0.933726	3957	25623460	1479.002						0.020945	0.014687561	110	402731.3	185.4204
Bass	WHP	45	57	5232.64	38220.68	0.053157	0.05085	278	1394344.8	345.0126						0	0	0	0	0
Bass	YLP	45	57	5232.64	38220.68	0.066291	0.030368	347	832830.83	266.6418						0	0	0	0	0

Appendix 4b.
2019 Lake Memphremagog Vermont Main Lake Open Water Season Angling Table (cont.)

Species Sought	Species Caught	# Rec.	Ang. # Counts	Effort ang-hr	Effort Variance	Catch Rate	Catch Rate	Catch fish	Catch Variance	Catch 95% CI	Catch Rate leg.	Catch Rate	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI
Salmonids	BRB	20	57	3150.149	23009.57	0	0	0	0	0						0	0	0	0	0
Salmonids	CHP	20	57	3150.149	23009.57	0	0	0	0	0						0	0	0	0	0
Salmonids	LKT	20	57	3150.149	23009.57	0.015574	0.003233	49	32163.166	78.59962	0.014037	0.003132	44	31154.78	77.35767	0.001537	4.72403E-05	5	469.9277	9.500722
Salmonids	LLS	20	57	3150.149	23009.57	0.206804	0.238223	651	2370457.7	674.7722	0.030847	0.00948	97	94318.04	134.598	0	0	0	0	0
Salmonids	LMB	20	57	3150.149	23009.57	0	0	0	0	0						0	0	0	0	0
Salmonids	NRP	20	57	3150.149	23009.57	0.00436	0.00038	14	3782.8039	26.95554						0	0	0	0	0
Salmonids	SUN	20	57	3150.149	23009.57	0	0	0	0	0						0	0	0	0	0
Salmonids	RBT	20	57	3150.149	23009.57	0.029749	0.012041	94	119784.28	151.6844						0.017652	0.00340244	56	33849.36	80.63365
Salmonids	RKB	20	57	3150.149	23009.57	0	0	0	0	0						0	0	0	0	0
Salmonids	SMB	20	57	3150.149	23009.57	0.003571	0.000255	11	2537.6524	22.07787						0	0	0	0	0
Salmonids	WHP	20	57	3150.149	23009.57	0.013127	0.001074	41	10684.023	45.30107						0	0	0	0	0
Salmonids	YLP	20	57	3150.149	23009.57	0.073817	0.046484	233	462473.01	298.0467						0	0	0	0	0
Warm	BRB	32	57	3399.17	24828.49	0.046875	0.070313	159	814215.86	312.6445						0	0	0	0	0
Warm	CHP	32	57	3399.17	24828.49	0.002185	0.000153	7	1769.6402	14.5755						0	0	0	0	0
Warm	LKT	32	57	3399.17	24828.49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warm	LLS	32	57	3399.17	24828.49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warm	LMB	32	57	3399.17	24828.49	0.026018	0.012467	88	144380.02	131.6542						0.006466	0.001337693	22	15490.43	43.12339
Warm	NRP	32	57	3399.17	24828.49	0	0	0	0	0						0	0	0	0	0
Warm	SUN	32	57	3399.17	24828.49	0.105839	0.14382	360	1665591.2	447.1624						0.010417	0.003472222	35	40208.19	69.47657
Warm	RBT	32	57	3399.17	24828.49	0	0	0	0	0						0	0	0	0	0
Warm	RKB	32	57	3399.17	24828.49	0.00378	0.000457	13	5295.3685	25.21327						0	0	0	0	0
Warm	SMB	32	57	3399.17	24828.49	0.13514	0.111666	459	1293454.8	394.0549						0.006466	0.001337693	22	15490.43	43.12339
Warm	WHP	32	57	3399.17	24828.49	1.31666	10.17857	4476	117902619	3762.208						0.926304	5.097705229	3149	59048566	2662.476
Warm	YLP	32	57	3399.17	24828.49	2.701601	17.17167	9183	199015152	4887.921						1.463836	7.61863154	4976	88270732	3255.288

Appendix 5.
2019 Lake Memphremagog Vermont South Bay Open Water Season Angling Table

Species Sought	Species Caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate	Catch Rate	Catch fish	Catch Variance	Catch 95% CI	Catch Rate leg.	Catch Rate	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI
All	BRB	52	57	12920.94	93288.34	0.008369	0.001827	108	305112.3	150.1358						0	0	0	0	0
All	CHP	52	57	12920.94	93288.34	0.087359	0.080752	1129	13489783	998.2904						0.005818	0.000889737	75	148628.3	104.7865
All	LMB	52	57	12920.94	93288.34	0.050671	0.032519	655	5432367.6	633.5034						0.004808	0.001201923	62	200776.1	121.7897
All	NRP	52	57	12920.94	93288.34	0.27874	0.348801	3602	58272390	2074.846						0.004602	0.000540885	59	90353.47	81.70089
All	SUN	52	57	12920.94	93288.34	0.121453	0.160018	1569	26731453	1405.289						0	0	0	0	0
All	SMB	52	57	12920.94	93288.34	0.018359	0.00892	237	1490128.1	331.7922						0.002404	0.000300481	31	50194.03	60.89483
All	WHP	52	57	12920.94	93288.34	0.097099	0.302569	1255	50543144	1932.349						0.002404	0.000300481	31	50194.03	60.89483
All	YLP	52	57	12920.94	93288.34	0.766374	3.098523	9902	517644289	6184.009						0.126866	0.296129303	1639	49468103	1911.688
Any	BRB	13	57	4255.793	30726.55	0	0	0	0	0						0	0	0	0	0
Any	CHP	13	57	4255.793	30726.55	0	0	0	0	0						0	0	0	0	0
Any	LMB	13	57	4255.793	30726.55	0.015138	0.001375	64	24947.756	85.86183						0	0	0	0	0
Any	NRP	13	57	4255.793	30726.55	0.101134	0.057846	430	1049786	556.9738						0.008791	0.00100471	37	18230.32	73.39754
Any	SUN	13	57	4255.793	30726.55	0.225524	0.388469	960	7049370.6	1443.31						0	0	0	0	0
Any	SMB	13	57	4255.793	30726.55	0	0	0	0	0						0	0	0	0	0
Any	WHP	13	57	4255.793	30726.55	0	0	0	0	0						0	0	0	0	0
Any	YLP	13	57	4255.793	30726.55	0.582844	1.469238	2480	26666086	2807.14						0	0	0	0	0
Bass	BRB	5	57	825.1232	5957.336	0	0	0	0	0						0	0	0	0	0
Bass	CHP	5	57	825.1232	5957.336	0.41523	0.577999	343	397988.75	552.9762						0	0	0	0	0
Bass	LMB	5	57	825.1232	5957.336	0.2	0.2	165	137595.4	325.142						0	0	0	0	0
Bass	NRP	5	57	825.1232	5957.336	0.350365	0.613778	289	422265.19	569.5918						0	0	0	0	0
Bass	SUN	5	57	825.1232	5957.336	0	0	0	0	0						0	0	0	0	0
Bass	SMB	5	57	825.1232	5957.336	0	0	0	0	0						0	0	0	0	0
Bass	WHP	5	57	825.1232	5957.336	0	0	0	0	0						0	0	0	0	0
Bass	YLP	5	57	825.1232	5957.336	0.097297	0.047334	80	32564.581	158.1772						0	0	0	0	0
Pike	BRB	11	57	3041.64	21960.45			0	0	0								0	0	0
Pike	CHP	11	57	3041.64	21960.45	0.074675	0.032769	227	304007.12	325.8379						0	0	0	0	0
Pike	LMB	11	57	3041.64	21960.45			0	0	0								0	0	0
Pike	NRP	11	57	3041.64	21960.45	0.516643	1.003366	1571	9310615	1803.221						0	0	0	0	0
Pike	SUN	11	57	3041.64	21960.45			0	0	0								0	0	0
Pike	SMB	11	57	3041.64	21960.45			0	0	0								0	0	0
Pike	WHP	11	57	3041.64	21960.45			0	0	0								0	0	0
Pike	YLP	11	57	3041.64	21960.45	0.252548	0.352307	768	3268530.4	1068.405						0.084639	0.078802292	257	730933.2	505.241
Warm	BRB	23	57	4798.031	34641.48	0.018921	0.004025	91	92821.592	124.5136						0	0	0	0	0
Warm	CHP	23	57	4798.031	34641.48	0.071525	0.037927	343	874621.77	382.2102						0.013153	0.001961708	63	45234.63	86.9216
Warm	LMB	23	57	4798.031	34641.48	0.062527	0.031027	300	715486.88	345.6949						0.01087	0.002717391	52	62655.57	102.2991
Warm	NRP	23	57	4798.031	34641.48	0.249775	0.160379	1198	3699827.7	786.1092						0.005435	0.000679348	26	15663.89	51.14957
Warm	SUN	23	57	4798.031	34641.48	0.14712	0.141242	706	3257195.4	737.5884						0	0	0	0	0
Warm	SMB	23	57	4798.031	34641.48	0.041508	0.019675	199	453670.85	275.2724						0.005435	0.000679348	26	15663.89	51.14957
Warm	WHP	23	57	4798.031	34641.48	0.219529	0.673311	1053	15525350	1610.322						0.005435	0.000679348	26	15663.89	51.14957
Warm	YLP	23	57	4798.031	34641.48	1.261303	5.70305	6052	131543159	4687.338						0.246349	0.621677127	1182	14335331	1547.377

Appendix 6a.
2019-2020 Lake Memphremagog Vermont Main Lake Ice Season Angling Table

Species Sought	Species Caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch fish	Catch Variance	Catch 95% CI	Catch Rate leg. len./ang-hr	Catch Rate Variance	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI	% Harvest
All	BNT	152	32	29175	1933324	0.001156688	7.2491E-05	34	61845.77	40						0.000615952	2.87175E-05	18	24500.0943	25	53.3
All	CHP	152	47	33828	2013829	0.001027961	0.00010888	35	124813.4	56						0.000822368	0.000102796	28	117838.0706	55	80.0
All	LKT	152	32	29175	1933324	0.051850716	0.021880375	1513	18671687	687	0.051850716	0.021880375	1513	18671687	687	0.037083801	0.017497394	1082	14929958.16	614	71.5
All	LLS	152	32	29175	1933324	0.005959531	0.001257171	174	1072581	165	0.004889784	0.001093759	143	933149.3	154	0.002986588	0.000692999	87	591225.2013	122	50.1
All	LMB	152	32	29175	1933324	0.001385042	0.000291588	40	248761.7	79						0.001385042	0.000291588	40	248761.721	79	100.0
All	NRP	152	47	33828	2013829	0.007065115	0.001354962	239	1553314	198						0.00568196	0.001224271	192	1403465.842	188	80.4
All	RBT	152	32	29175	1933324	0.000292398	1.29955E-05	9	11086.79	17						0.00029240	0.00001300	9	11086.78781	17	100.0
All	RSM	152	47	33828	2013829	0.222948385	0.644817683	7542	7.39E+08	4322						0.18271278	0.346135697	6181	396847944.9	3167	82.0
All	SMB	152	32	29175	1933324	0	0	0	0	0						0	0	0	0	0	0.0
All	WTP	152	47	33828	2013829	0.118283972	0.433815732	4001	4.97E+08	3545						0.117782719	0.433742627	3984	497233834.5	3545	99.6
All	YLP	152	47	33828	2013829	3.66075674	28.79666323	123834	3.3E+10	28896						2.446603745	15.29574094	82763	17545799468	21058	66.8
Any	BNT	22	32	5128	339805	0	0	0	0	0						0	0	0	0	0	0.0
Any	CHP	22	47	5946	353954			0	0	0						0	0	0	0	0	0.0
Any	LKT	22	32	5128	339805	0.062717837	0.02163046	322	577458	318	0.06271784	0.02163046	322	577458	318	0.030047819	0.008296133	154	225803.0803	199	47.9
Any	LLS	22	32	5128	339805	0	0	0	0	0						0	0	0	0	0	0.0
Any	LMB	22	32	5128	339805	0	0	0	0	0						0	0	0	0	0	0.0
Any	NRP	22	47	5946	353954	0.029294569	0.006980539	174	249536.8	209						0.02929457	0.00698054	174	249536.8219	209	100.0
Any	RBT	22	32	5128	339805	0	0	0	0	0						0	0	0	0	0	0.0
Any	RSM	22	47	5946	353954	0.281990507	0.997010879	1677	35625409	2494						0.24158647	0.66173607	1436	23647273.99	2032	85.7
Any	SMB	22	32	5128	339805	0	0	0	0	0						0	0	0	0	0	0.0
Any	WTP	22	47	5946	353954	0.011605416	0.002963085	69	105841.6	136						0.011605416	0.002963085	69	105841.617	136	100.0
Any	YLP	22	47	5946	353954	2.983152831	20.29768048	17737	7.28E+08	11274						1.579153504	3.513464109	9389	126327341.3	4697	52.9
Perch/Warm	BNT	56	32	7760	514250	0	0	0	0	0						0	0	0	0	0	0.0
Perch/Warm	CHP	56	47	8998	535664			0	0	0						0	0	0	0	0	0.0
Perch/Warm	LKT	56	32	7760	514250	0.02196096	0.02339411	170	1421142	312	0.021960958	0.023394109	170	1421142	312	0.02196096	0.02339411	170	1421142.199	312	100.0
Perch/Warm	LLS	56	32	7760	514250	0	0	0	0	0						0	0	0	0	0	0.0
Perch/Warm	LMB	56	32	7760	514250	0.00375940	0.000791452	29	48077.92	57						0.00375940	0.000791452	29	48077.91632	57	100.0
Perch/Warm	NRP	56	47	8998	535664	0.00382232	0.000409221	34	33358.3	48						0.002168884	0.000263427	20	21471.18082	38	56.7
Perch/Warm	RBT	56	32	7760	514250	0	0	0	0	0						0	0	0	0	0	0.0
Perch/Warm	RSM	56	47	8998	535664	0.168880315	0.762212296	1520	62133688	2065						0.07822097	0.056780656	704	4630760.011	564	46.3
Perch/Warm	SMB	56	32	7760	514250	0	0	0	0	0						0	0	0	0	0	0.0
Perch/Warm	WTP	56	47	8998	535664	0.180278994	0.945257901	1622	77053582	2299						0.180278994	0.945257901	1622	77053582.25	2299	100.0
Perch/Warm	YLP	56	47	8998	535664	6.20861732	48.44284217	55864	3.97E+09	16500						4.67649415	28.09462229	42079	2301356744	12565	75.3

Appendix 6b.
2019-2020 Lake Memphremagog Vermont Main Lake Ice Season Angling Table (cont.)

Species Sought	Species Caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch fish	Catch Variance	Catch 95% CI	Catch Rate leg. len./ang-hr	Catch Rate Variance	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI	% Harvest
Pike/Pick.	BNT	5	32	546	36187	0	0	0	0	0					0	0	0	0	0	0	0.0
Pike/Pick.	CHP	5	47	633	37693	0.008047376	0.001668893	5	734.3883	24					0.00194569	9.18422E-05	1	40.42309394	6	24.2	24.2
Pike/Pick.	LKT	5	32	546	36187	0	0	0	0	0					0	0	0	0	0	0	0.0
Pike/Pick.	LLS	5	32	546	36187	0	0	0	0	0					0	0	0	0	0	0	0.0
Pike/Pick.	LMB	5	32	546	36187	0	0	0	0	0					0	0	0	0	0	0	0.0
Pike/Pick.	NRP	5	47	633	37693	0.02941176	0.00346021	19	1550.193	35					0	0	0	0	0	0	0.0
Pike/Pick.	RBT	5	32	546	36187	0	0	0	0	0					0	0	0	0	0	0	0.0
Pike/Pick.	RSM	5	47	633	37693	0	0	0	0	0					0	0	0	0	0	0	0.0
Pike/Pick.	SMB	5	32	546	36187	0	0	0	0	0					0	0	0	0	0	0	0.0
Pike/Pick.	WTP	5	47	633	37693	0	0	0	0	0					0	0	0	0	0	0	0.0
Pike/Pick.	YLP	5	47	633	37693	0.05882353	0.013840830	37	6200.773	69					0	0	0	0	0	0	0.0
Salmonids	BNT	66	32	15075	998962	0.002663887	0.000164325	40	37514.79	47					0.001418557	6.55569E-05	21	14965.55969	30	53.3	53.3
Salmonids	CHP	66	47	15075	998962	0	0	0	0	0					0	0	0	0	0	0	0.0
Salmonids	LKT	66	32	15075	998962	0.079874284	0.022108516	1204	5052702	542	0.056755637	0.017396506	856	3974017	481	0.079874284	0.022108516	1204	5052701.89	542	100.0
Salmonids	LLS	66	32	15075	998962	0.013724981	0.002812284	207	642099.7	193	0.006878204	0.00158271	104	361305.1	145	0.01126132	0.002468031	170	563461.4439	181	82.0
Salmonids	LMB	66	32	15075	998962	0	0	0	0	0					0	0	0	0	0	0	0.0
Salmonids	NRP	66	47	15075	998962	0.001480604	0.000144684	22	33026.8	44					0	0	22	33026.80487	44	100.0	100.0
Salmonids	RBT	66	32	15075	998962	0.000673401	2.99289E-05	10	6831.81	20					0.000673401	2.99289E-05	10	6831.809782	20	100.0	100.0
Salmonids	RSM	66	47	15075	998962	0.226833411	0.448178145	3419	1.02E+08	2441					0	0	3385	102507006.2	2443	99.0	99.0
Salmonids	SMB	66	32	15075	998962	0	0	0	0	0					0	0	0	0	0	0	0.0
Salmonids	WTP	66	47	15075	998962	0.11557910	0.19810397	1742	45231113	1623					0.114424703	0.197927036	1725	45190461.5	1622	99.0	99.0
Salmonids	YLP	66	47	15075	998962	2.13390603	9.790136478	32169	2.24E+09	11416					1.126647269	3.636563901	16984	831323576.6	6956	52.8	52.8
Smelt	BNT	4	32	666	44121	0	0	0	0	0					0	0	0	0	0	0	0.0
Smelt	CHP	4	47	772	45958	0	0	0	0	0					0	0	0	0	0	0	0.0
Smelt	LKT	4	32	666	44121	0	0	0	0	0					0	0	0	0	0	0	0.0
Smelt	LLS	4	32	666	44121	0	0	0	0	0					0	0	0	0	0	0	0.0
Smelt	LMB	4	32	666	44121	0	0	0	0	0					0	0	0	0	0	0	0.0
Smelt	NRP	4	47	772	45958	0	0	0	0	0					0	0	0	0	0	0	0.0
Smelt	RBT	4	32	666	44121	0	0	0	0	0					0	0	0	0	0	0	0.0
Smelt	RSM	4	47	772	45958	0.2268334	0.44817815	175	290057.9	528					0.224560684	0.44887367	173	290457.2258	528	99.0	99.0
Smelt	SMB	4	32	666	44121	0	0	0	0	0					0	0	0	0	0	0	0.0
Smelt	WTP	4	47	772	45958	0	0	0	0	0					0	0	0	0	0	0	0.0
Smelt	YLP	4	47	772	45958	2.133906033	9.790136478	1647	6493728	2497					1.126647269	3.636563901	870	2392708.503	1516	52.8	52.8

Appendix 7 2019-2020 Lake Memphremagog Vermont South Bay Ice Season Angling Table

Species Sought	Species Caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch fish	Catch Variance	Catch 95% CI	Catch Rate leg. len./ang-hr	Catch Rate Variance	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI	% Harvest
All	CHP	62	47	12640	551169	0.005970634	0.001243753	75	199404.2	111						0.001443577	6.84892E-05	18	10980.56737	26	24.2
All	NRP	62	47	12640	551169	0.206263708	0.119955031	2607	19253296	1092						0.034089445	0.00928024	431	1488344.596	304	16.5
All	YLP	62	47	12640	551169	0.585658946	4.058151979	7402	6.51E+08	6350						0.378753301	1.598847471	4787	256388377.3	3986	64.7
Any	CHP	4	47	813	35455	0	0	0	0	0						0	0	0	0	0	0.0
Any	NRP	4	47	813	35455	0.136363636	0.074380165	111	52465.82	224						0	0	0	0	0	0.0
Any	YLP	4	47	813	35455	0	0	0	0	0						0	0	0	0	0	0.0
Perch/Warm	CHP	12	47	538	23471	0	0	0	0	0						0	0	0	0	0	0.0
Perch/Warm	NRP	12	47	538	23471	0.049516908	0.013612814	27	4320.675	37						0.0277778	0.0092593	15	2917.833278	31	56.1
Perch/Warm	YLP	12	47	538	23471	2.349909929	16.70151829	1265	5360023	1310						1.437460416	5.857062096	774	1882754.177	776	61.2
Pike/Pick.	CHP	46	47	11288	492243	0.008047376	0.001668893	91	213510.8	134						0.00194569	9.18422E-05	22	11750.00092	31	24.2
Pike/Pick.	NRP	46	47	11288	492243	0.253232445	0.145078173	2859	18589460	1246						0.038700266	0.010180854	437	1303036.584	330	15.3
Pike/Pick.	YLP	46	47	11288	492243	0.176346424	0.38668701	1991	49478961	2033						0.135503906	0.363467446	1530	46502525.69	1971	76.8

Appendix 8a.
2020 Lake Memphremagog Vermont Main Lake Open Water Season Angling Table

Species Sought	Species Caught	# Ang.	# Count	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate	Catch fish	Catch Variance	Catch Rate leg. len./ang.	Catch Rate	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI
All	BRB	165	56	15694.9	137639.6529	0.000624805	6.44E-05	9.806248	15875.73					19.22564772	0	0	0	0	0
All	CHP	165	56	15694.9	137639.6529	0.031153627	0.020939	488.9531	5161028					346.642833	0.005411	0.003525	84.92911	868767	142.2217
All	LKT	165	56	15694.9	137639.6529	0.001729734	0.000235	27.14801	57957.23	0.001729734	0.000235	27.14801	57957.23	36.73397368	0	0	0	0	0
All	LLS	165	56	15694.9	137639.6529	0.019879457	0.011935	312.0061	2941559	0.005029799	0.001818	78.94219	447980.1	102.1276833	0	0	0	0	0
All	LMB	165	56	15694.9	137639.6529	0.042373688	0.045203	665.0508	11141352					509.3109849	0	0	0	0	0
All	NRP	165	56	15694.9	137639.6529	0.035222397	0.024943	552.812	6147777					378.3320763	0.011753	0.011765	184.47	2899731	259.8322
All	SUN	165	56	15694.9	137639.6529	0.061094673	0.08622	958.8748	21250826					703.3994298	0.031001	0.043872	486.552	10813273	501.7561
All	RBT	165	56	15694.9	137639.6529	0.019610494	0.008175	307.7847	2014836					216.5878057	0.00652	0.001755	102.3269	432485.9	100.346
All	RKB	165	56	15694.9	137639.6529	0.004047414	0.00201	63.52376	495522.8					107.4102976	0	0	0	0	0
All	SMB	165	56	15694.9	137639.6529	0.327205158	0.564767	5135.452	1.39E+08					1800.328243	0.021766	0.019036	341.6155	4691770	330.5084
All	WHP	165	56	15694.9	137639.6529	0.190242008	0.597712	2985.829	1.47E+08					1852.026854	0.096463	0.198839	1513.971	49008557	1068.194
All	YLP	165	56	15694.9	137639.6529	0.800829525	5.664292	12568.94	1.4E+09					5701.386677	0.304771	0.807557	4783.356	1.99E+08	2152.754
Any	BRB	22	56	1734.216	15208.55999	0	0	0	0					0	0	0	0	0	0
Any	CHP	22	56	1734.216	15208.55999	0.040584416	0.026032	70.38213	78712.3					117.237364	0.040584	0.026032	70.38213	78712.3	117.2374
Any	LKT	22	56	1734.216	15208.55999	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Any	LLS	22	56	1734.216	15208.55999	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Any	LMB	22	56	1734.216	15208.55999	0.006493506	0.000928	11.26114	2804.641					22.13010145	0	0	0	0	0
Any	NRP	22	56	1734.216	15208.55999	0.053409091	0.034184	92.62288	103372.5					134.3529876	0.017045	0.006392	29.56049	19325.73	58.09152
Any	SUN	22	56	1734.216	15208.55999	0.030987999	0.006905	53.73987	20886.79					60.39215958	0.019481	0.004462	33.78342	13491.68	48.53753
Any	RBT	22	56	1734.216	15208.55999	0	0	0	0					0	0	0	0	0	0
Any	RKB	22	56	1734.216	15208.55999	0	0	0	0					0	0	0	0	0	0
Any	SMB	22	56	1734.216	15208.55999	0.046442688	0.022608	80.54163	68369.04					109.2633432	0	0	0	0	0
Any	WHP	22	56	1734.216	15208.55999	0.222058245	0.555648	385.0969	1680313					541.6763208	0.015152	0.005051	26.27599	15269.71	51.6369
Any	YLP	22	56	1734.216	15208.55999	0.337569517	0.548048	585.4183	1658326					538.1206076	0.133087	0.140874	230.8014	426091	272.7696
Bass	BRB	61	56	5624.558	49325.71724	0	0	0	0					0	0	0	0	0	0
Bass	CHP	61	56	5624.558	49325.71724	0.021333175	0.007852	119.9897	248804.1					125.1756639	0	0	0	0	0
Bass	LKT	61	56	5624.558	49325.71724	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bass	LLS	61	56	5624.558	49325.71724	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bass	LMB	61	56	5624.558	49325.71724	0.107477351	0.114981	604.5126	3643746					479.0327334	0	0	0	0	0
Bass	NRP	61	56	5624.558	49325.71724	0.041542979	0.025486	233.6609	807615.8					225.5244081	0	0	0	0	0
Bass	SUN	61	56	5624.558	49325.71724	0.030409346	0.029249	171.0391	926808.3					241.5939781	0	0	0	0	0
Bass	RBT	61	56	5624.558	49325.71724	0	0	0	0					0	0	0	0	0	0
Bass	RKB	61	56	5624.558	49325.71724	0.010947924	0.005419	61.57723	171692.1					103.9839366	0	0	0	0	0
Bass	SMB	61	56	5624.558	49325.71724	0.771533496	1.143586	4339.535	36263845					1511.221345	0.031203	0.024819	175.5052	786430.3	222.5468
Bass	WHP	61	56	5624.558	49325.71724	0.030778179	0.026581	173.1137	842274.1					230.3126991	0.007046	0.00184	39.63191	58290.72	60.58859
Bass	YLP	61	56	5624.558	49325.71724	0.189073388	0.388306	1063.454	12305217					880.3103089	0.006601	0.002658	37.12988	84229.58	72.83221

Appendix 8b.
2020 Lake Memphremagog Vermont Main Lake Open Water Season Angling Table (cont.)

Species Sought	Species Caught	# Ang.	# Count	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate	Catch fish	Catch Variance	Catch 95% CI	Catch Rate leg. len./ang.	Catch Rate	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI
Pike	BRB	8	56	498.2955	4369.904972	0	0	0	0	0						0	0	0	0	0
Pike	CHP	8	56	498.2955	4369.904972	0.181463415	0.112909	90.42241	28672.45	117.3393052						0	0	0	0	0
Pike	LKT	8	56	498.2955	4369.904972	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pike	LLS	8	56	498.2955	4369.904972	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pike	LMB	8	56	498.2955	4369.904972	0	0	0	0	0						0	0	0	0	0
Pike	NRP	8	56	498.2955	4369.904972	0.182162534	0.21824	90.77077	55287.34	162.9385867						0.166667	0.222222	83.04925	56269.9	164.3801
Pike	SUN	8	56	498.2955	4369.904972	0	0	0	0	0						0	0	0	0	0
Pike	RBT	8	56	498.2955	4369.904972	0	0	0	0	0						0	0	0	0	0
Pike	RKB	8	56	498.2955	4369.904972	0	0	0	0	0						0	0	0	0	0
Pike	SMB	8	56	498.2955	4369.904972	0.015495868	0.001921	7.721521	486.4189	15.28327093						0	0	0	0	0
Pike	WHP	8	56	498.2955	4369.904972	0	0	0	0	0						0	0	0	0	0
Pike	YLP	8	56	498.2955	4369.904972	0	0	0	0	0						0	0	0	0	0
Salmonid	BRB	31	56	3872.471	33960.4307	0	0	0	0	0						0	0	0	0	0
Salmonid	CHP	31	56	3872.471	33960.4307	0	0	0	0	0						0	0	0	0	0
Salmonid	LKT	31	56	3872.471	33960.4307	0.00920665	0.001214	35.65249	18254.61	47.56215782	0.00920665	0.001214	35.65249	18254.61	47.56215782	0	0	0	0	0
Salmonid	LLS	31	56	3872.471	33960.4307	0.105810014	0.055847	409.7462	839766	322.5925708	0.026771511	0.009335	103.6719	140324.7	131.8688685	0	0	0	0	0
Salmonid	LMB	31	56	3872.471	33960.4307	0	0	0	0	0						0	0	0	0	0
Salmonid	NRP	31	56	3872.471	33960.4307	0.003584229	0.000398	13.87982	5986.096	27.23623484						0.001792	9.96E-05	6.939912	1496.524	13.61812
Salmonid	SUN	31	56	3872.471	33960.4307	0	0	0	0	0						0	0	0	0	0
Salmonid	RBT	31	56	3872.471	33960.4307	0.104378438	0.035545	404.2025	534613.5	257.3920767						0.034702	0.008582	134.3822	129026.2	126.4487
Salmonid	RKB	31	56	3872.471	33960.4307	0	0	0	0	0						0	0	0	0	0
Salmonid	SMB	31	56	3872.471	33960.4307	0.011730205	0.004266	45.42488	64115.54	89.13676858						0	0	0	0	0
Salmonid	WHP	31	56	3872.471	33960.4307	0.020895522	0.007565	80.9173	113719.1	118.7112707						0.020896	0.007565	80.9173	113719.1	118.7113
Salmonid	YLP	31	56	3872.471	33960.4307	0.03562502	0.011348	137.9569	170598.4	145.3994296						0	0	0	0	0
Warm	BRB	43	56	3965.339	34774.8556	0.002397507	0.000247	9.506926	3895.206	18.65464784						0	0	0	0	0
Warm	CHP	43	56	3965.339	34774.8556	0.03475489	0.033493	137.8149	527846.4	217.1578898						0	0	0	0	0
Warm	LKT	43	56	3965.339	34774.8556	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warm	LLS	43	56	3965.339	34774.8556	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warm	LMB	43	56	3965.339	34774.8556	0.00680658	0.001992	26.9904	31395.59	52.96100022						0	0	0	0	0
Warm	NRP	43	56	3965.339	34774.8556	0.012422383	0.001622	49.25896	25568.7	47.79430336						0.00408	0.000716	16.17845	11280.39	31.74563
Warm	SUN	43	56	3965.339	34774.8556	0.175439883	0.272735	695.6786	4299017	619.735578						0.108989	0.160496	432.179	2529621	475.3895
Warm	RBT	43	56	3965.339	34774.8556	0	0	0	0	0						0	0	0	0	0
Warm	RKB	43	56	3965.339	34774.8556	0	0	0	0	0						0	0	0	0	0
Warm	SMB	43	56	3965.339	34774.8556	0.125952683	0.095454	499.4451	1504778	366.655435						0.039256	0.037744	155.6615	594853.5	230.5297
Warm	WHP	43	56	3965.339	34774.8556	0.557660925	1.808988	2211.315	28518091	1596.180748						0.337335	0.685397	1337.648	10804917	982.5
Warm	YLP	43	56	3965.339	34774.8556	2.606336976	16.73308	10335.01	2.64E+08	4855.83943						1.092016	2.213759	4330.212	34927403	1766.465

Appendix 9a.
2020 Lake Memphremagog Vermont South Bay Open Water Season Angling Table

Species Sought	Species Caught	# Ang.	# Count	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate	Catch fish	Catch Variance	Catch 95% CI	Catch Rate leg. len./ang.	Catch Rate	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI
All	CHP	29	56	13255.4	138053.0611	0.029359315	0.004451	389.1696	782740.5	322.0074847						0.002069	0.000124	27.42497	21829.47	53.77479
All	LLS	29	56	13255.4	138053.0611	0.004222379	0.000517	55.96933	90918.26	109.7444671	0.004222379	0.000517	55.96933	90918.26	109.7444671	0.004222	0.000517	55.96933	90918.26	109.7445
All	LMB	29	56	13255.4	138053.0611	0.087406846	0.162951	1158.613	28654920	1948.303784						0.01061	0.003265	140.6409	574082.2	275.7681
All	NRP	29	56	13255.4	138053.0611	0.297619606	0.417403	3945.068	73409872	3118.417847						0.042341	0.01571	561.2437	2762751	604.9618
All	SUN	29	56	13255.4	138053.0611	0.030804598	0.023947	408.3274	4211123	746.8889392						0.01642	0.007819	217.6585	1374998	426.784
All	RKB	29	56	13255.4	138053.0611	0.004756243	0.000656	63.04592	115362.5	123.6202043						0	0	0	0	0
All	SMB	29	56	13255.4	138053.0611	0.112259194	0.107636	1488.041	18928801	1583.502045						0	0	0	0	0
All	WHP	29	56	13255.4	138053.0611	0.093715189	0.115099	1242.233	20240732	1637.458057						0.069918	0.088706	926.79	15599010	1437.493
All	YLP	29	56	13255.4	138053.0611	0.169780737	0.190428	2250.512	33489645	2106.261773						0.108008	0.13017	1431.691	22891115	1741.368
Any	CHP	6	56	2304.035	23996.17765	0	0	0	0	0						0	0	0	0	0
Any	LLS	6	56	2304.035	23996.17765	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Any	LMB	6	56	2304.035	23996.17765	0	0	0	0	0						0	0	0	0	0
Any	NRP	6	56	2304.035	23996.17765	0.018214936	0.001991	41.96784	10623.53	82.47358395						0	0	0	0	0
Any	SUN	6	56	2304.035	23996.17765	0	0	0	0	0						0	0	0	0	0
Any	RKB	6	56	2304.035	23996.17765	0	0	0	0	0						0	0	0	0	0
Any	SMB	6	56	2304.035	23996.17765	0.117647059	0.083045	271.0629	443175.4	532.6823245						0	0	0	0	0
Any	WHP	6	56	2304.035	23996.17765	0	0	0	0	0						0	0	0	0	0
Any	YLP	6	56	2304.035	23996.17765	0.140855017	0.02704	324.5348	144666.5	304.3437993						0.064103	0.024655	147.6945	131572.3	290.2436
Bass	CHP	5	56	2038.793	21233.73108	0.054545455	0.014876	111.2069	62213.94	218.6326025						0	0	0	0	0
Bass	LLS	5	56	2038.793	21233.73108	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bass	LMB	5	56	2038.793	21233.73108	0.430769231	0.927811	878.2495	3880252	1726.636963						0.061538	0.018935	125.4642	79188.82	246.6624
Bass	NRP	5	56	2038.793	21233.73108	0.81993007	1.685727	1671.668	7057096	2328.542104						0.075	0.028125	152.9095	117623.2	300.6198
Bass	SUN	5	56	2038.793	21233.73108	0	0	0	0	0						0	0	0	0	0
Bass	RKB	5	56	2038.793	21233.73108	0.027586207	0.003805	56.24258	15913.09	110.5728104						0	0	0	0	0
Bass	SMB	5	56	2038.793	21233.73108	0.206896552	0.214031	421.8193	895111.4	829.2960783						0	0	0	0	0
Bass	WHP	5	56	2038.793	21233.73108	0	0	0	0	0						0	0	0	0	0
Bass	YLP	5	56	2038.793	21233.73108	0	0	0	0	0						0	0	0	0	0

Appendix 9b.
2020 Lake Memphremagog Vermont South Bay Open Water Season Angling Table (cont.)

Species Sought	Species Caught	# Ang.	# Count	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate	Catch fish	Catch Variance	Catch 95% CI	Catch Rate leg. len./ang.	Catch Rate	Catch legal len.	Catch Variance	Catch 95% CI	Harvest Rate	Harvest Variance	Total Harvest	Harvest Variance	Harvest 95% CI
Pike	CHP	8	56	7088.905	73829.88912	0.072336607	0.004768	512.7873	240334.3	339.7182778						0.0075	0.00045	53.16679	22651.03	104.293
Pike	LLS	8	56	7088.905	73829.88912	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Pike	LMB	8	56	7088.905	73829.88912	0	0	0	0	0						0	0	0	0	0
Pike	NRP	8	56	7088.905	73829.88912	0.48888718	0.294824	3465.675	14855068	2670.843243						0.090821	0.038472	643.8195	1936746	964.3783
Pike	SUN	8	56	7088.905	73829.88912	0.0075	0.00045	53.16679	22651.03	104.2929818						0	0	0	0	0
Pike	RKB	8	56	7088.905	73829.88912	0	0	0	0	0						0	0	0	0	0
Pike	SMB	8	56	7088.905	73829.88912	0.022727273	0.004132	161.1115	207998.5	316.0393389						0	0	0	0	0
Pike	WHP	8	56	7088.905	73829.88912	0.116503274	0.025731	825.8806	1295958	788.8721429						0.06	0.0288	425.3343	1449666	834.3439
Pike	YLP	8	56	7088.905	73829.88912	0.256837717	0.18431	1820.698	9280518	2111.043574						0.15	0.18	1063.336	9060413	2085.86
Salmonid	CHP	2	56	1823.671	18993.26322	0	0	0	0	0						0	0	0	0	0
Salmonid	LLS	2	56	1823.671	18993.26322	0.06122449	0.007497	111.6533	25146.52	219.7758673	0.06122449	0.007497	111.6533	25146.52	219.7758673	0.061224	0.007497	111.6533	25146.52	219.7759
Salmonid	LMB	2	56	1823.671	18993.26322	0	0	0	0	0						0	0	0	0	0
Salmonid	NRP	2	56	1823.671	18993.26322	0	0	0	0	0						0	0	0	0	0
Salmonid	SUN	2	56	1823.671	18993.26322	0	0	0	0	0						0	0	0	0	0
Salmonid	RKB	2	56	1823.671	18993.26322	0	0	0	0	0						0	0	0	0	0
Salmonid	SMB	2	56	1823.671	18993.26322	0	0	0	0	0						0	0	0	0	0
Salmonid	WHP	2	56	1823.671	18993.26322	0	0	0	0	0						0	0	0	0	0
Salmonid	YLP	2	56	1823.671	18993.26322	0	0	0	0	0						0	0	0	0	0
Warm	CHP	8	56	2641.801	27513.96782	0	0	0	0	0						0	0	0	0	0
Warm	LLS	8	56	2641.801	27513.96782	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Warm	LMB	8	56	2641.801	27513.96782	0.047619048	0.018141	125.8001	127166.8	247.1142956						0	0	0	0	0
Warm	NRP	8	56	2641.801	27513.96782	0.063866397	0.01875	168.7223	131489.8	251.2795734						0.015789	0.001994	41.71265	13981.3	81.9379
Warm	SUN	8	56	2641.801	27513.96782	0.104166667	0.086806	275.1876	608512.8	540.5625217						0.059524	0.028345	157.2501	198698.1	308.8929
Warm	RKB	8	56	2641.801	27513.96782	0	0	0	0	0						0	0	0	0	0
Warm	SMB	8	56	2641.801	27513.96782	0.166666667	0.222222	440.3002	1557793	864.9000347						0	0	0	0	0
Warm	WHP	8	56	2641.801	27513.96782	0.223214286	0.398597	589.6878	2794191	1158.348261						0.193452	0.299391	511.0628	2098748	1003.902
Warm	YLP	8	56	2641.801	27513.96782	0.25297619	0.511976	668.3128	3588984	1312.794695						0.193452	0.299391	511.0628	2098748	1003.902

Appendix 10a. 2018-2019 Lake Memphremagog Quebec North Ice Season Angling Table

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
All	YLP	471	54.5	9183.23	153259.24	2.43390929	27.56270408	22351.14	2329540736.49	4,359	1.622300885	13.61116	14897.96	1150341514.16	3063.08
All	WTP	471	54.5	9183.23	153259.24	0.159887799	2.095236287	1468.29	177019787.50	1,202	0.158708276	2.092329	1457.45	176774146.26	1200.76
All	PMS	471	54.5	9183.23	153259.24	0.043135378	0.149170753	396.12	12602964.28	321	0.030551473	0.111365	280.56	9408766.96	277.02
All	NRP	471	54.5	9183.23	153259.24	0.000489956	0.000113067	4.50	9552.47	9	0	0	0.00	0.00	0.00
All	RSM	471	54.5	9183.23	153259.24	0.052291102	0.224562917	480.20	18972599.07	393	0.051994159	0.224552	477.47	18971699.95	393.37
All	SMB	471	54.5	9183.23	153259.24	0.033170635	0.051210966	304.61	4326723.01	188	0.028256754	0.037712	259.49	3186189.00	161.21
All	LLS	471	54.5	9183.23	153259.24	0.026557131	0.012092034	243.88	1021702.57	91	0.003126907	0.000477	28.72	40336.90	18.14
All	LLS > 420mm	471	54.5	9183.23	153259.24	0.003126907	0.000477427	28.72	40336.90	18	0.003126907	0.000477	28.72	40336.90	18.14
All	LKT	471	54.5	9183.23	153259.24	0.03710477	0.023405303	340.74	1977606.14	127	0	0	0.00	0.00	0.00
All	LKT > 600mm	471	54.5	9183.23	153259.24	0.007593457	0.001104194	69.73	93296.55	28	0	0	0.00	0.00	0.00
All	RBT	471	54.5	9183.23	153259.24	0.026401932	0.013485907	242.45	1139462.63	96	0.024077576	0.012828	221.11	1083852.70	94.02
All	BNT	471	54.5	9183.23	153259.24	0.001051747	0.000154891	9.66	13086.12	10	0.001051747	0.000155	9.66	13086.12	10.33
All	LMB	471	54.5	9183.23	153259.24	0.012329939	0.014166338	113.22	1196865.19	99	0.009845073	0.012005	90.41	1014249.61	90.95
All	BRB	471	54.5	9183.23	153259.24	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	CHP	471	54.5	9183.23	153259.24	0.002600804	0.001736382	23.88	146699.11	35	0.000173318	1.41E-05	1.59	1195.33	3.12
All	RKB	471	54.5	9183.23	153259.24	0.007582793	0.004449362	69.63	375912.81	55	0.002789078	0.001502	25.61	126873.89	32.17
Any	YLP	80	54.5	1482.88	24747.86	1.280064384	7.74932456	1898.18	17272602.16	911	0.861267533	4.199841	1277.16	9357477.45	670.33
Any	WTP	80	54.5	1482.88	24747.86	0.108808247	0.495256064	161.35	1101586.12	230	0.108808247	0.495256	161.35	1101586.12	230.00
Any	PMS	80	54.5	1482.88	24747.86	0.121066793	0.429730643	179.53	955948.01	214	0.111807534	0.424883	165.80	945114.11	213.04
Any	NRP	80	54.5	1482.88	24747.86	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	RSM	80	54.5	1482.88	24747.86	0.074448597	0.28821115	110.40	641027.77	175	0.072721928	0.288224	107.84	641049.90	175.45
Any	SMB	80	54.5	1482.88	24747.86	0.014950514	0.017340312	22.17	38564.91	43	0.010973937	0.009755	16.27	21694.15	32.28
Any	LLS	80	54.5	1482.88	24747.86	0.002211166	0.00039603	3.28	880.77	7	0	0	0.00	0.00	0.00
Any	LLS > 420mm	80	54.5	1482.88	24747.86	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LKT	80	54.5	1482.88	24747.86	0.023225141	0.008964278	34.44	19947.07	31	0	0	0.00	0.00	0.00
Any	LKT > 600mm	80	54.5	1482.88	24747.86	0.0017431	0.000171668	2.58	381.81	4	0	0	0.00	0.00	0.00
Any	RBT	80	54.5	1482.88	24747.86	0.017794927	0.006738467	26.39	14992.06	27	0.017794927	0.006738	26.39	14992.06	26.83
Any	BNT	80	54.5	1482.88	24747.86	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LMB	80	54.5	1482.88	24747.86	0.032109681	0.025644419	47.61	57050.61	52	0.017663818	0.01335	26.19	29693.39	37.76
Any	BRB	80	54.5	1482.88	24747.86	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	CHP	80	54.5	1482.88	24747.86	0.001646091	0.000219479	2.44	488.12	5	0	0	0.00	0.00	0.00
Any	RKB	80	54.5	1482.88	24747.86	0.005832604	0.002755561	8.65	6128.34	17	0	0	0.00	0.00	0.00
Bass	YLP	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	WTP	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	PMS	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	NRP	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RSM	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	SMB	2	54.5	12.76	212.95	1.714285714	5.87755102	21.87	2834.33	74	1.285714286	3.306122	16.41	1594.31	55.34
Bass	LLS	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LLS > 420mm	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT > 600mm	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RBT	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	BNT	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LMB	2	54.5	12.76	212.95	1	2	12.76	964.46	43	1	2	12.76	964.46	43.04
Bass	BRB	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	CHP	2	54.5	12.76	212.95	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RKB	2	54.5	12.76	212.95	0.321428571	0.206632653	4.10	99.64	14	0	0	0.00	0.00	0.00

Appendix 10b.
2018-2019 Lake Memphremagog Quebec North Ice Season Angling Table (cont.)

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
Perch	WTP	185	54.5	2388.24	39857.47	0.359200101	5.067124885	857.86	29108476.05	777	0.356197098	5.060898	850.69	29072625.31	776.98
Perch	PMS	185	54.5	2388.24	39857.47	0.034948156	0.102355536	83.46	587933.79	110	0.028828829	0.095783	68.85	550166.99	106.89
Perch	NRP	185	54.5	2388.24	39857.47	0.001247401	0.000287862	2.98	1653.41	6	0	0	0.00	0.00	0.00
Perch	RSM	185	54.5	2388.24	39857.47	0.023854908	0.042460828	56.97	243898.98	71	0.023854908	0.042461	56.97	243898.98	71.17
Perch	SMB	185	54.5	2388.24	39857.47	0.041518891	0.036570482	99.16	210113.45	66	0.035382717	0.033084	84.50	190070.79	62.82
Perch	LLS	185	54.5	2388.24	39857.47	0.007776197	0.009661257	18.57	55492.42	34	0	0	0.00	0.00	0.00
Perch	LLS > 420mm	185	54.5	2388.24	39857.47	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LKT	185	54.5	2388.24	39857.47	0.011422225	0.00248195	27.28	14260.42	17	0	0	0.00	0.00	0.00
Perch	LKT > 600mm	185	54.5	2388.24	39857.47	0.004696892	0.000851729	11.22	4892.84	10	0	0	0.00	0.00	0.00
Perch	RBT	185	54.5	2388.24	39857.47	0.005899963	0.004432663	14.09	25460.65	23	0.005899963	0.004433	14.09	25460.65	22.99
Perch	BNT	185	54.5	2388.24	39857.47	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LMB	185	54.5	2388.24	39857.47	0.003088803	0.00176503	7.38	10137.94	15	0.003088803	0.001765	7.38	10137.94	14.51
Perch	BRB	185	54.5	2388.24	39857.47	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	CHP	185	54.5	2388.24	39857.47	0.004769475	0.004208361	11.39	24171.88	22	0	0	0.00	0.00	0.00
Perch	RKB	185	54.5	2388.24	39857.47	0.01268794	0.00785612	30.30	45128.51	31	0.007100841	0.003805	16.96	21857.01	21.30
Salmonids	YLP	192	54.5	5031.60	83972.51	0.357196169	2.138738004	1797.27	54336656.36	1,043	0.166879484	0.685259	839.67	17408551.87	590.18
Salmonids	WTP	192	54.5	5031.60	83972.51	0.000217014	9.04225E-06	1.09	229.69	2	0.000217014	9.04E-06	1.09	229.69	2.14
Salmonids	PMS	192	54.5	5031.60	83972.51	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	NRP	192	54.5	5031.60	83972.51	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	RSM	192	54.5	5031.60	83972.51	0.073883411	0.389321794	371.75	9889595.48	445	0.073883411	0.389322	371.75	9889595.48	444.83
Salmonids	SMB	192	54.5	5031.60	83972.51	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	LLS	192	54.5	5031.60	83972.51	0.056722436	0.018726488	285.40	475940.46	98	0.007670694	0.00114	38.60	28956.53	24.07
Salmonids	LLS > 420mm	192	54.5	5031.60	83972.51	0.007670694	0.001139784	38.60	28956.53	24	0.007670694	0.00114	38.60	28956.53	24.07
Salmonids	LKT	192	54.5	5031.60	83972.51	0.061760133	0.040727118	310.75	1034827.13	144	0	0	0.00	0.00	0.00
Salmonids	LKT > 600mm	192	54.5	5031.60	83972.51	0.012498622	0.001641775	62.89	41715.73	29	0	0	0.00	0.00	0.00
Salmonids	RBT	192	54.5	5031.60	83972.51	0.051386892	0.024982262	258.56	634794.52	113	0.045684957	0.02363	229.87	600402.67	109.60
Salmonids	BNT	192	54.5	5031.60	83972.51	0.002580068	0.000377182	12.98	9581.32	14	0.002580068	0.000377	12.98	9581.32	13.85
Salmonids	LMB	192	54.5	5031.60	83972.51	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	BRB	192	54.5	5031.60	83972.51	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	CHP	192	54.5	5031.60	83972.51	0.001090064	0.000119019	5.48	3023.30	8	0.00042517	3.47E-05	2.14	881.62	4.20
Salmonids	RKB	192	54.5	5031.60	83972.51	0.000567336	3.37513E-05	2.85	857.34	4	0	0	0.00	0.00	0.00
Warmwater	YLP	11	54.5	251.28	4193.68	1.971338406	6.13194723	495.36	429204.65	387	1.421292268	4.30924	357.15	298643.08	322.95
Warmwater	WTP	11	54.5	251.28	4193.68	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	PMS	11	54.5	251.28	4193.68	0.367722165	1.487415501	92.40	100725.25	188	0	0	0.00	0.00	0.00
Warmwater	NRP	11	54.5	251.28	4193.68	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	RSM	11	54.5	251.28	4193.68	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	SMB	11	54.5	251.28	4193.68	0.300255568	0.338739674	75.45	23187.81	90	0.300255568	0.33874	75.45	23187.81	89.99
Warmwater	LLS	11	54.5	251.28	4193.68	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LLS > 420mm	11	54.5	251.28	4193.68	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LKT	11	54.5	251.28	4193.68	0.147641185	0.165629386	37.10	11244.41	63	0	0	0.00	0.00	0.00
Warmwater	LKT > 600mm	11	54.5	251.28	4193.68	0.015151515	0.002525253	3.81	171.01	8	0	0	0.00	0.00	0.00
Warmwater	RBT	11	54.5	251.28	4193.68	0.003285871	0.000118766	0.83	8.04	2	0.003285871	0.000119	0.83	8.04	1.68
Warmwater	BNT	11	54.5	251.28	4193.68	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LMB	11	54.5	251.28	4193.68	0.057711951	0.023154216	14.50	1573.10	23	0.057711951	0.023154	14.50	1573.10	23.44
Warmwater	BRB	11	54.5	251.28	4193.68	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	CHP	11	54.5	251.28	4193.68	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	RKB	11	54.5	251.28	4193.68	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00

Appendix 11a.
2018-2019 Lake Memphremagog Quebec South Ice Season Angling Table

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
All	YLP	439	54.5	8709.74	398931.85	4.386077614	43.28424163	38201.61	3308468987.32	5,381	3.139130131	26.02943	27341.02	1988898337.13	4171.86
All	WTP	439	54.5	8709.74	398931.85	2.30210869	20.24715223	20050.78	1546133141.21	3,678	2.01671858	16.77618	17565.10	1280950211.63	3348.03
All	PMS	439	54.5	8709.74	398931.85	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	NRP	439	54.5	8709.74	398931.85	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	RSM	439	54.5	8709.74	398931.85	0.135446751	0.907095448	1179.71	69181122.45	778	0.126501099	0.903119	1101.79	68876965.12	776.36
All	SMB	439	54.5	8709.74	398931.85	0.033642218	0.038356944	293.02	2925497.32	160	0.021406189	0.017835	186.44	1360249.04	109.10
All	LLS	439	54.5	8709.74	398931.85	0.001601945	0.000150571	13.95	11483.32	10	0.000516382	2.92E-05	4.50	2230.26	4.42
All	LLS > 420mm	439	54.5	8709.74	398931.85	0.000735061	5.00114E-05	6.40	3814.02	6	0.000516382	2.92E-05	4.50	2230.26	4.42
All	LKT	439	54.5	8709.74	398931.85	0.038684881	0.027148916	336.94	2070934.59	135	0	0	0.00	0.00	0.00
All	LKT > 600mm	439	54.5	8709.74	398931.85	0.006417462	0.007795562	55.89	594494.88	72	0	0	0.00	0.00	0.00
All	RBT	439	54.5	8709.74	398931.85	0.003573035	0.000554093	31.12	42259.43	19	0.00312444	0.000492	27.21	37528.90	18.12
All	BNT	439	54.5	8709.74	398931.85	0.000200508	8.86395E-06	1.75	675.97	2	0	0	0.00	0.00	0.00
All	LMB	439	54.5	8709.74	398931.85	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	BRB	439	54.5	8709.74	398931.85	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	CHP	439	54.5	8709.74	398931.85	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	RKB	439	54.5	8709.74	398931.85	0.002803362	0.000818875	24.42	62449.39	23	0.002261338	0.000737	19.70	56228.84	22.18
Any	YLP	46	54.5	864.58	39600.46	1.678981848	7.149912962	1451.62	5739366.35	692	1.502131416	6.954755	1298.72	5563477.87	681.63
Any	WTP	46	54.5	864.58	39600.46	1.089575169	3.751598987	942.03	2999915.59	501	0.925017701	3.320779	799.76	2647686.91	470.23
Any	PMS	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	NRP	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	RSM	46	54.5	864.58	39600.46	0.021663516	0.013518599	18.73	10659.14	30	0.010775047	0.005341	9.32	4208.27	18.75
Any	SMB	46	54.5	864.58	39600.46	0.115431027	0.113137417	99.80	89578.70	86	0.104132328	0.104586	90.03	82749.39	83.13
Any	LLS	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LLS > 420mm	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LKT	46	54.5	864.58	39600.46	0.010998195	0.001200809	9.51	949.95	9	0	0	0.00	0.00	0.00
Any	LKT > 600mm	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	RBT	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	BNT	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LMB	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	BRB	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	CHP	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	RKB	46	54.5	864.58	39600.46	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	YLP	2	54.5	29.89	1369.23	0.138461538	0.038343195	4.14	113.02	15	0	0	0.00	0.00	0.00
Bass	WTP	2	54.5	29.89	1369.23	4	32	119.58	94320.11	426	4	32	119.58	94320.11	425.64
Bass	PMS	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	NRP	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RSM	2	54.5	29.89	1369.23	1.333333333	3.555555556	39.86	10480.01	142	1.333333333	3.555556	39.86	10480.01	141.88
Bass	SMB	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LLS	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LLS > 420mm	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT	2	54.5	29.89	1369.23	0.046153846	0.004260355	1.38	12.56	5	0	0	0.00	0.00	0.00
Bass	LKT > 600mm	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RBT	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	BNT	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LMB	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	BRB	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	CHP	2	54.5	29.89	1369.23	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RKB	2	54.5	29.89	1369.23	0.092307692	0.01704142	2.76	50.23	10	0	0	0.00	0.00	0.00

Appendix 11b.
2018-2019 Lake Memphremagog Quebec South Ice Season Angling Table (cont.)

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
Perch	YLP	273	54.5	4621.45	211676.16	6.571790985	54.80491612	30371.23	1191257295.51	4,094	4.656664067	33.97678	21520.56	737452770.31	3221.38
Perch	WTP	273	54.5	4621.45	211676.16	3.343281259	28.20174719	15450.82	610663960.05	2,931	2.957287792	23.57561	13666.97	510365722.82	2679.88
Perch	PMS	273	54.5	4621.45	211676.16	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	NRP	273	54.5	4621.45	211676.16	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RSM	273	54.5	4621.45	211676.16	0.077276512	0.157591311	357.13	3400431.83	219	0.064901891	0.150593	299.94	3249118.44	213.82
Perch	SMB	273	54.5	4621.45	211676.16	0.021191085	0.032445324	97.93	699924.88	99	0.007762483	0.004763	35.87	102743.37	38.02
Perch	LLS	273	54.5	4621.45	211676.16	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LLS > 420mm	273	54.5	4621.45	211676.16	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LKT	273	54.5	4621.45	211676.16	0.013879092	0.011627509	64.14	250840.48	59	0	0	0.00	0.00	0.00
Perch	LKT > 600mm	273	54.5	4621.45	211676.16	0.00418629	0.004784331	19.35	103199.40	38	0	0	0.00	0.00	0.00
Perch	RBT	273	54.5	4621.45	211676.16	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	BNT	273	54.5	4621.45	211676.16	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LMB	273	54.5	4621.45	211676.16	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	BRB	273	54.5	4621.45	211676.16	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	CHP	273	54.5	4621.45	211676.16	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RKB	273	54.5	4621.45	211676.16	0.002637363	0.001051842	12.19	22689.20	18	0.002637363	0.001052	12.19	22689.20	17.87
Salmonids	YLP	105	54.5	2774.69	127088.96	0.20868057	0.467263199	579.02	3662333.83	366	0.141989448	0.295544	393.98	2315484.86	291.06
Salmonids	WTP	105	54.5	2774.69	127088.96	0.009948464	0.003432347	27.60	26874.11	31	0.009948464	0.003432	27.60	26874.11	31.36
Salmonids	PMS	105	54.5	2774.69	127088.96	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	NRP	105	54.5	2774.69	127088.96	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	RSM	105	54.5	2774.69	127088.96	0.330489975	3.285163519	917.01	25723554.09	970	0.330032833	3.285446	915.74	25725728.14	970.16
Salmonids	SMB	105	54.5	2774.69	127088.96	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	LLS	105	54.5	2774.69	127088.96	0.006697657	0.000599676	18.58	4698.76	13	0.002158968	0.00012	5.99	936.46	5.85
Salmonids	LLS > 420mm	105	54.5	2774.69	127088.96	0.003073254	0.00020337	8.53	1592.77	8	0.002158968	0.00012	5.99	936.46	5.85
Salmonids	LKT	105	54.5	2774.69	127088.96	0.119472369	0.07464892	331.50	586016.09	146	0	0	0.00	0.00	0.00
Salmonids	LKT > 600mm	105	54.5	2774.69	127088.96	0.015946748	0.02018954	44.25	158035.56	76	0	0	0.00	0.00	0.00
Salmonids	RBT	105	54.5	2774.69	127088.96	0.014938688	0.002162163	41.45	16949.44	25	0.013063136	0.001941	36.25	15214.43	23.59
Salmonids	BNT	105	54.5	2774.69	127088.96	0.000838315	3.6791E-05	2.33	288.02	3	0	0	0.00	0.00	0.00
Salmonids	LMB	105	54.5	2774.69	127088.96	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	BRB	105	54.5	2774.69	127088.96	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	CHP	105	54.5	2774.69	127088.96	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	RKB	105	54.5	2774.69	127088.96	0.000507937	2.70899E-05	1.41	212.04	3	0	0	0.00	0.00	0.00
Warmwater	YLP	13	54.5	419.12	19197.03	2.459045046	10.265341	1030.64	2116391.88	791	1.753992306	6.307646	735.14	1288170.45	616.98
Warmwater	WTP	13	54.5	419.12	19197.03	2.980375756	5.767373087	1249.14	1294353.41	618	2.03111435	2.212727	851.29	510368.90	388.35
Warmwater	PMS	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	NRP	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	RSM	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	SMB	13	54.5	419.12	19197.03	0.282610798	0.133923461	118.45	27629.64	90	0.191390142	0.084965	80.22	17259.55	71.42
Warmwater	LLS	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LLS > 420mm	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LKT	13	54.5	419.12	19197.03	0.003911343	0.000198882	1.64	39.05	3	0	0	0.00	0.00	0.00
Warmwater	LKT > 600mm	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	RBT	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	BNT	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LMB	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	BRB	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	CHP	13	54.5	419.12	19197.03	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	RKB	13	54.5	419.12	19197.03	0.020979021	0.002622378	8.79	519.45	12	0.020979021	0.002622	8.79	519.45	12.39

Appendix 12a.

2019 Lake Memphremagog Quebec North Open Water Season Angling Table

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
All	YLP	533	110	14054.87	80939.40	0.2878525	2.38960688	4045.73	472241226.44	1,845	0.136214997	0.778638	1914.48	153876007.63	1053.12
All	WTP	533	110	14054.87	80939.40	0.0691891	0.247506828	972.44	48912729.12	594	0.055037895	0.212405	773.55	41975778.61	550.04
All	PMS	533	110	14054.87	80939.40	0.054271	0.13580267	762.77	26837585.30	440	0.003706923	0.002055	52.10	406173.59	54.11
All	NRP	533	110	14054.87	80939.40	0.054271	0.13580267	762.77	26837585.30	440	0.003706923	0.002055	52.10	406173.59	54.11
All	RSM	533	110	14054.87	80939.40	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	SMB	533	110	14054.87	80939.40	0.215607	0.448634999	3030.33	88663087.80	799	0.031083072	0.027513	436.87	5437151.03	197.96
All	LLS	533	110	14054.87	80939.40	0.0562484	0.151439243	790.56	29927705.21	464	0.002216035	0.000602	31.15	118886.54	29.27
All	LLS > 420mm	533	110	14054.87	80939.40	0.002216	0.000601589	31.15	118886.54	29	0.002216035	0.000602	31.15	118886.54	29.27
All	LKT	533	110	14054.87	80939.40	0.0854732	0.253125214	1201.31	50023239.42	600	0.025781892	0.015019	362.36	2968192.98	146.26
All	LKT > 600mm	533	110	14054.87	80939.40	0.043515	0.177552649	611.60	35088138.06	503	0.025781892	0.015019	362.36	2968192.98	146.26
All	RBT	533	110	14054.87	80939.40	0.035772	0.044327486	502.77	8760108.98	251	0.03353245	0.043112	471.29	8519956.29	247.81
All	BNT	533	110	14054.87	80939.40	0.0036403	0.002312883	51.16	457073.39	57	0.003415178	0.002287	48.00	452038.65	57.08
All	LMB	533	110	14054.87	80939.40	0.0379124	0.088394663	532.85	17468684.83	355	0.035786091	0.087023	502.97	17197572.80	352.07
All	CHP	533	110	14054.87	80939.40	0.0052917	0.00378763	74.37	748514.29	73	0	0	0.00	0.00	0.00
All	RKB	533	110	14054.87	80939.40	0.0541876	0.21675059	761.60	42834526.29	556	0.001299168	0.000551	18.26	108806.28	28.00
Any	YLP	94	110	2223.77	12806.29	0.1834218	0.230311085	407.89	1142305.31	216	0.03001356	0.021277	66.74	105501.03	65.66
Any	WTP	94	110	2223.77	12806.29	0.0441981	0.048543984	98.29	240704.43	99	0.017089006	0.008209	38.00	40704.12	40.79
Any	PMS	94	110	2223.77	12806.29	0.1192106	0.18254969	265.10	905257.09	192	0.01839396	0.011188	40.90	55473.52	47.61
Any	NRP	94	110	2223.77	12806.29	0.1192106	0.18254969	265.10	905257.09	192	0.01839396	0.011188	40.90	55473.52	47.61
Any	RSM	94	110	2223.77	12806.29	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	SMB	94	110	2223.77	12806.29	0.3620622	0.549437805	805.14	2725772.56	334	0.093721757	0.091905	208.42	455774.19	136.48
Any	LLS	94	110	2223.77	12806.29	0.0026882	0.000672043	5.98	3332.06	12	0	0	0.00	0.00	0.00
Any	LLS > 420mm	94	110	2223.77	12806.29	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LKT	94	110	2223.77	12806.29	0.0091033	0.002637392	20.24	13077.16	23	0.003697353	0.00091	8.22	4513.08	13.58
Any	LKT > 600mm	94	110	2223.77	12806.29	0.0036974	0.000910234	8.22	4513.08	14	0.003697353	0.00091	8.22	4513.08	13.58
Any	RBT	94	110	2223.77	12806.29	0.0114656	0.002654313	25.50	13161.68	23	0.010441541	0.002578	23.22	12785.02	22.86
Any	BNT	94	110	2223.77	12806.29	0.012043	0.010879476	26.78	53941.93	47	0.010752688	0.010753	23.91	53312.94	46.68
Any	LMB	94	110	2223.77	12806.29	0.093196	0.178203502	207.25	883638.08	190	0.084593805	0.174532	188.12	865415.85	188.06
Any	CHP	94	110	2223.77	12806.29	0.0247312	0.019925199	55.00	98796.28	64	0	0	0.00	0.00	0.00
Any	RKB	94	110	2223.77	12806.29	0.1274036	0.450445796	283.32	2233502.68	302	0	0	0.00	0.00	0.00
Bass	YLP	54	110	1270.20	7314.88	0.1992087	0.369111039	253.04	598521.46	206	0	0	0.00	0.00	0.00
Bass	WTP	54	110	1270.20	7314.88	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	PMS	54	110	1270.20	7314.88	0.0400644	0.036489955	50.89	59152.29	65	0	0	0.00	0.00	0.00
Bass	NRP	54	110	1270.20	7314.88	0.0400644	0.036489955	50.89	59152.29	65	0	0	0.00	0.00	0.00
Bass	RSM	54	110	1270.20	7314.88	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	SMB	54	110	1270.20	7314.88	0.8622762	2.295681706	1095.27	3726130.42	515	0.062606979	0.049262	79.52	79868.83	75.38
Bass	LLS	54	110	1270.20	7314.88	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LLS > 420mm	54	110	1270.20	7314.88	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT	54	110	1270.20	7314.88	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT > 600mm	54	110	1270.20	7314.88	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RBT	54	110	1270.20	7314.88	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	BNT	54	110	1270.20	7314.88	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LMB	54	110	1270.20	7314.88	0.1704688	0.487977946	216.53	791095.50	237	0.164295957	0.483794	208.69	784299.44	236.21
Bass	CHP	54	110	1270.20	7314.88	0.005698	0.001753233	7.24	2841.76	14	0	0	0.00	0.00	0.00
Bass	RKB	54	110	1270.20	7314.88	0.1151169	0.530670087	146.22	860172.51	247	0	0	0.00	0.00	0.00

Appendix 12b. 2019 Lake Memphremagog Quebec North Open Water Season Angling Table (cont.)

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
Perch	YLP	33	110	659.04	3795.31	3.0615534	28.67156041	2017.69	12597523.18	1,211	1.889412287	9.359874	1245.20	4114415.83	692.08
Perch	WTP	33	110	659.04	3795.31	0.7363156	3.152814061	485.26	1383408.73	401	0.705219466	2.921609	464.77	1281940.00	386.31
Perch	PMS	33	110	659.04	3795.31	0.0945887	0.108928668	62.34	47759.17	75	0.002525253	0.00021	1.66	92.22	3.28
Perch	NRP	33	110	659.04	3795.31	0.0945887	0.108928668	62.34	47759.17	75	0.002525253	0.00021	1.66	92.22	3.28
Perch	RSM	33	110	659.04	3795.31	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	SMB	33	110	659.04	3795.31	0.1307623	0.106669164	86.18	46800.15	74	0.018982888	0.005751	12.51	2520.92	17.13
Perch	LLS	33	110	659.04	3795.31	0.0077042	0.001958685	5.08	858.39	10	0	0	0.00	0.00	0.00
Perch	LLS > 420mm	33	110	659.04	3795.31	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LKT	33	110	659.04	3795.31	0.0050505	0.000841751	3.33	368.90	7	0	0	0.00	0.00	0.00
Perch	LKT > 600mm	33	110	659.04	3795.31	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RBT	33	110	659.04	3795.31	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	BNT	33	110	659.04	3795.31	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LMB	33	110	659.04	3795.31	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	CHP	33	110	659.04	3795.31	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RKB	33	110	659.04	3795.31	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	YLP	224	110	5542.03	31915.53	0.0532571	0.036231026	295.15	1114049.85	138	0.02382403	0.017087	132.03	525386.94	94.92
Salmonids	WTP	224	110	5542.03	31915.53	0.0308195	0.043426682	170.80	1335227.32	151	0.013653096	0.013496	75.67	414967.79	84.36
Salmonids	PMS	224	110	5542.03	31915.53	0.0077194	0.006460957	42.78	198650.54	58	0	0	0.00	0.00	0.00
Salmonids	NRP	224	110	5542.03	31915.53	0.0077194	0.006460957	42.78	198650.54	58	0	0	0.00	0.00	0.00
Salmonids	RSM	224	110	5542.03	31915.53	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	SMB	224	110	5542.03	31915.53	0.0855933	0.075581196	474.36	2324053.70	200	0.002567694	0.000773	14.23	23779.88	20.19
Salmonids	LLS	224	110	5542.03	31915.53	0.13159	0.350879478	729.28	10788695.14	430	0.005272977	0.001419	29.22	43629.16	27.35
Salmonids	LLS > 420mm	224	110	5542.03	31915.53	0.005273	0.001418999	29.22	43629.16	27	0.005272977	0.001419	29.22	43629.16	27.35
Salmonids	LKT	224	110	5542.03	31915.53	0.0367339	0.02187355	203.58	672567.36	107	0.018898298	0.011302	104.73	34750.37	77.20
Salmonids	LKT > 600mm	224	110	5542.03	31915.53	0.0188983	0.011301922	104.73	347500.37	77	0.018898298	0.011302	104.73	34750.37	77.20
Salmonids	RBT	224	110	5542.03	31915.53	0.0803579	0.101172148	445.35	3110845.55	231	0.075454164	0.009871	418.17	3035132.05	228.15
Salmonids	BNT	224	110	5542.03	31915.53	0.003662	0.000987054	20.29	30348.40	23	0.003662008	0.000987	20.29	30348.40	22.81
Salmonids	LMB	224	110	5542.03	31915.53	0.0006378	9.11079E-05	3.53	2801.22	7	0.000637755	9.11E-05	3.53	2801.22	6.93
Salmonids	CHP	224	110	5542.03	31915.53	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	RKB	224	110	5542.03	31915.53	0.031015	0.164493426	171.89	5057546.54	295	0	0	0.00	0.00	0.00
Lake Trout	YLP	107	110	3857.43	22214.25	0.0083977	0.003238396	32.39	48260.15	42	0.005987495	0.002944	23.10	43870.19	39.69
Lake Trout	WTP	107	110	3857.43	22214.25	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	PMS	107	110	3857.43	22214.25	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	NRP	107	110	3857.43	22214.25	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	RSM	107	110	3857.43	22214.25	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	SMB	107	110	3857.43	22214.25	0.0103808	0.006939904	40.04	103420.85	61	0	0	0.00	0.00	0.00
Lake Trout	LLS	107	110	3857.43	22214.25	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	LLS > 420mm	107	110	3857.43	22214.25	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	LKT	107	110	3857.43	22214.25	0.3393975	1.139367391	1309.20	16981412.25	781	0.085651175	0.045984	330.39	685417.28	156.87
Lake Trout	LKT > 600mm	107	110	3857.43	22214.25	0.173985	0.84474486	671.14	12589060.72	672	0.085651175	0.045984	330.39	685417.28	156.87
Lake Trout	RBT	107	110	3857.43	22214.25	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	BNT	107	110	3857.43	22214.25	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	LMB	107	110	3857.43	22214.25	0.0159077	0.027076996	61.36	403507.03	120	0.015907735	0.027077	61.36	403507.03	120.36
Lake Trout	CHP	107	110	3857.43	22214.25	0.0019885	0.000423078	7.67	6304.80	15	0	0	0.00	0.00	0.00
Lake Trout	RKB	107	110	3857.43	22214.25	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	YLP	21	110	502.38	2893.14	0.5595457	1.348415156	281.11	345133.05	251	0.070642006	0.020165	35.49	5162.15	30.73
Warmwater	WTP	21	110	502.38	2893.14	0.0745421	0.039124965	37.45	10004.01	43	0.067399267	0.039065	33.86	9985.65	42.74
Warmwater	PMS	21	110	502.38	2893.14	0.5155138	2.143203819	258.99	547892.00	317	0.008658009	0.001574	4.35	402.08	8.58
Warmwater	NRP	21	110	502.38	2893.14	0.5155138	2.143203819	258.99	547892.00	317	0.008658009	0.001574	4.35	402.08	8.58
Warmwater	RSM	21	110	502.38	2893.14	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	SMB	21	110	502.38	2893.14	0.4802402	0.541326296	241.27	138858.56	159	0.155656115	0.10892	78.20	27875.43	71.41
Warmwater	LLS	21	110	502.38	2893.14	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LLS > 420mm	21	110	502.38	2893.14	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LKT	21	110	502.38	2893.14	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LKT > 600mm	21	110	502.38	2893.14	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	RBT	21	110	502.38	2893.14	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	BNT	21	110	502.38	2893.14	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LMB	21	110	502.38	2893.14	0.0233236	0.011423812	11.72	2917.88	23	0.023323615	0.011424	11.72	2917.88	23.10
Warmwater	CHP	21	110	502.38	2893.14	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	RKB	21	110	502.38	2893.14	0.1842744	0.373703853	92.58	95498.42	132	0.032974118	0.013549	16.57	3461.92	25.17

Appendix 13a.
2019 Lake Memphremagog Quebec South Open Water Season Angling Table

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
All	YLP	991	110	37133.10	1002937.01	0.358522	2.438030883	13313.03	3364295431.89	3,611	0.202349979	0.772525	7513.88	1066024827.35	2032.84
All	WTP	991	110	37133.10	1002937.01	0.142808	1.065527537	5302.90	1470310303.91	2,387	0.091321083	0.820838	3391.04	1132658823.35	2095.41
All	PMS	991	110	37133.10	1002937.01	0.0094421	0.058070417	350.62	80129735.19	557	0	0	0.00	0.00	0.00
All	NRP	991	110	37133.10	1002937.01	0.0094421	0.058070417	350.62	80129735.19	557	0	0	0.00	0.00	0.00
All	RSM	991	110	37133.10	1002937.01	0.00624	0.014910182	231.71	20574157.30	282	0.004620909	0.0138	171.59	19041842.37	271.69
All	SMB	991	110	37133.10	1002937.01	0.1020213	0.20215427	3788.37	278957121.59	1,040	0.009197765	0.004503	341.54	6213153.62	155.19
All	LLS	991	110	37133.10	1002937.01	0.0899355	0.097408337	3339.58	134418987.91	722	0.014616799	0.010518	542.77	14513988.05	237.20
All	LLS > 420mm	991	110	37133.10	1002937.01	0.015058	0.010610024	559.15	14640684.74	238	0.014616799	0.010518	542.77	14513988.05	237.20
All	LKT	991	110	37133.10	1002937.01	0.07395	0.051332144	2745.99	70837187.42	524	0.023732686	0.008168	881.27	11271671.31	209.03
All	LKT > 600mm	991	110	37133.10	1002937.01	0.027036	0.011507316	1003.93	15879337.54	248	0.023732686	0.008168	881.27	11271671.31	209.03
All	RBT	991	110	37133.10	1002937.01	0.018222	0.009527908	676.64	13147610.21	226	0.013150335	0.0078	488.31	10763124.56	204.26
All	BNT	991	110	37133.10	1002937.01	0.0034547	0.002537496	128.28	3501427.05	117	0.00191705	0.002807	71.19	3873392.66	122.54
All	LMB	991	110	37133.10	1002937.01	0.0063073	0.005278556	234.21	7283763.44	168	0.005970211	0.00517	221.69	7134293.88	166.30
All	BRB	991	110	37133.10	1002937.01	0.000728	0.000524166	27.03	723281.41	53	0	0	0.00	0.00	0.00
All	CHP	991	110	37133.10	1002937.01	0.0010328	0.000496419	38.35	684994.92	52	0	0	0.00	0.00	0.00
All	RKB	991	110	37133.10	1002937.01	0.0034816	0.00287499	129.28	3967125.40	124	0.001011122	0.001011	37.55	1395218.77	73.54
Any	YLP	73	110	2683.62	72482.65	0.3912322	1.332162688	1049.92	9701673.59	715	0.252763696	0.816414	678.32	5943489.22	559.26
Any	WTP	73	110	2683.62	72482.65	0.0939712	0.209994892	252.18	1528210.35	284	0.048898887	0.059072	131.23	429879.44	150.41
Any	PMS	73	110	2683.62	72482.65	0.0220838	0.015808192	59.26	115029.22	78	0	0	0.00	0.00	0.00
Any	NRP	73	110	2683.62	72482.65	0.0220838	0.015808192	59.26	115029.22	78	0	0	0.00	0.00	0.00
Any	RSM	73	110	2683.62	72482.65	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	SMB	73	110	2683.62	72482.65	0.1064886	0.079644564	285.78	580182.08	175	0.028534082	0.016525	76.57	120267.75	79.56
Any	LLS	73	110	2683.62	72482.65	0.0096909	0.001883614	26.01	13708.82	27	0.004675895	0.00119	12.55	8660.00	21.35
Any	LLS > 420mm	73	110	2683.62	72482.65	0.0046759	0.001190271	12.55	8660.00	21	0.004675895	0.00119	12.55	8660.00	21.35
Any	LKT	73	110	2683.62	72482.65	0.0387046	0.019097991	103.87	139033.50	86	0.023480211	0.008081	63.01	58824.56	55.64
Any	LKT > 600mm	73	110	2683.62	72482.65	0.0234802	0.008081111	63.01	58824.56	56	0.023480211	0.008081	63.01	58824.56	55.64
Any	RBT	73	110	2683.62	72482.65	0.0385078	0.0565731	103.34	411638.38	147	0.033102354	0.054774	88.83	398520.93	144.82
Any	BNT	73	110	2683.62	72482.65	0.0096525	0.004658139	25.90	33891.55	42	0.001930502	0.000276	5.18	2006.43	10.28
Any	LMB	73	110	2683.62	72482.65	0.0100942	0.002696799	27.09	19624.77	32	0.010094188	0.002697	27.09	19624.77	32.14
Any	BRB	73	110	2683.62	72482.65	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	CHP	73	110	2683.62	72482.65	0.001142	9.65059E-05	3.06	702.11	6	0	0	0.00	0.00	0.00
Any	RKB	73	110	2683.62	72482.65	0.0019305	0.000275786	5.18	2006.43	10	0	0	0.00	0.00	0.00
Bass	YLP	59	110	1703.43	46008.48	0.0883309	0.102039322	150.47	301140.07	140	0	0	0.00	0.00	0.00
Bass	WTP	59	110	1703.43	46008.48	0.058456	0.083249022	99.58	245550.19	126	0	0	0.00	0.00	0.00
Bass	PMS	59	110	1703.43	46008.48	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	NRP	59	110	1703.43	46008.48	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RSM	59	110	1703.43	46008.48	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	SMB	59	110	1703.43	46008.48	1.0726078	1.861095897	1827.12	5538880.67	601	0.075392657	0.035208	128.43	104043.39	82.31
Bass	LLS	59	110	1703.43	46008.48	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LLS > 420mm	59	110	1703.43	46008.48	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT	59	110	1703.43	46008.48	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT > 600mm	59	110	1703.43	46008.48	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RBT	59	110	1703.43	46008.48	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	BNT	59	110	1703.43	46008.48	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LMB	59	110	1703.43	46008.48	0.0706929	0.07710691	120.42	227517.81	122	0.070692947	0.077107	120.42	227517.81	121.71
Bass	CHP	59	110	1703.43	46008.48	0.002991	0.000527828	5.10	1556.29	10	0	0	0.00	0.00	0.00
Bass	RKB	59	110	1703.43	46008.48	0.011491	0.007790475	19.57	22970.04	39	0	0	0.00	0.00	0.00

Appendix 14a. 2019-2020 Lake Memphremagog Quebec North Ice Season Angling Table

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
All	YLP	406	59.5	5875.46	78460.36	1.4657184	10.25504391	8611.77	354988102.86	1,833	1.592055762	16.05157	9354.06	555575379.76	2292.79
All	WTP	406	59.5	5875.46	78460.36	0.1212619	1.241949892	712.47	42972017.45	638	0.115449003	1.233517	678.32	42680149.14	635.49
All	PMS	406	59.5	5875.46	78460.36	0.0262105	0.060579594	154.00	2096078.46	141	0	0	0.00	0.00	0.00
All	NRP	406	59.5	5875.46	78460.36	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	RSM	406	59.5	5875.46	78460.36	0.023152	0.096162011	136.03	3327201.00	177	0.023151976	0.096162	136.03	3327201.00	177.43
All	SMB	406	59.5	5875.46	78460.36	0.2404622	4.193969563	1412.83	145113848.88	1,172	0.004371376	0.002265	25.68	78375.89	27.23
All	LLS	406	59.5	5875.46	78460.36	0.374395	2.437194862	2199.74	84336757.72	893	0.010942985	0.003582	64.30	123954.12	34.25
All	LLS > 420mm	406	59.5	5875.46	78460.36	0.001323	0.000232174	7.77	8033.25	9	0.010942985	0.003582	64.30	123954.12	34.25
All	LKT	406	59.5	5875.46	78460.36	0.0312826	0.020859197	183.80	721794.88	83	0	0	0.00	0.00	0.00
All	LKT > 600mm	406	59.5	5875.46	78460.36	0.0013796	0.000343583	8.11	11887.95	11	0	0	0.00	0.00	0.00
All	RBT	406	59.5	5875.46	78460.36	0.0518403	0.132042617	304.59	4568821.33	208	0.037136749	0.115448	218.20	3994546.69	194.41
All	BNT	406	59.5	5875.46	78460.36	0.0015039	0.000315434	8.84	10914.03	10	0.00112276	0.000287	6.60	9919.53	9.69
All	LMB	406	59.5	5875.46	78460.36	0.0130174	0.040520657	76.48	1402008.38	115	0.012700253	0.040488	74.62	1400874.36	115.13
All	BRB	406	59.5	5875.46	78460.36	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	CHP	406	59.5	5875.46	78460.36	0.0003284	4.37876E-05	1.93	1515.04	4	0	0	0.00	0.00	0.00
All	RKB	406	59.5	5875.46	78460.36	0.0086692	0.006130985	50.94	212135.00	45	0.004285714	0.00321	25.18	111073.82	32.42
Any	YLP	27	59.5	444.96	5941.94	0.1134338	0.052171199	50.47	10715.75	39	0.255201572	0.511943	113.55	104787.76	122.10
Any	WTP	27	59.5	444.96	5941.94	0.062963	0.094729345	28.02	19341.75	52	0.062962963	0.094729	28.02	19341.75	52.46
Any	PMS	27	59.5	444.96	5941.94	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	NRP	27	59.5	444.96	5941.94	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	RSM	27	59.5	444.96	5941.94	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	SMB	27	59.5	444.96	5941.94	0.0111111	0.003333333	4.94	680.50	10	0	0	0.00	0.00	0.00
Any	LLS	27	59.5	444.96	5941.94	0.1451298	0.531079536	64.58	108428.43	124	0	0	0.00	0.00	0.00
Any	LLS > 420mm	27	59.5	444.96	5941.94	1.821E-05	8.95229E-09	0.01	0.00	0	0	0	0.00	0.00	0.00
Any	LKT	27	59.5	444.96	5941.94	0.0123457	0.004115226	5.49	840.13	11	0	0	0.00	0.00	0.00
Any	LKT > 600mm	27	59.5	444.96	5941.94	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	RBT	27	59.5	444.96	5941.94	0.0233918	0.014773777	10.41	3016.07	21	0.023391813	0.014774	10.41	3016.07	20.72
Any	BNT	27	59.5	444.96	5941.94	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LMB	27	59.5	444.96	5941.94	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	BRB	27	59.5	444.96	5941.94	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	CHP	27	59.5	444.96	5941.94	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	RKB	27	59.5	444.96	5941.94	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	YLP	4	59.5	53.11	709.17	0.200569	0.058493471	10.65	234.98	15	0.243243243	0.236669	12.92	877.26	29.03
Bass	WTP	4	59.5	53.11	709.17	0.0810811	0.026296567	4.31	97.47	10	0	0	0.00	0.00	0.00
Bass	PMS	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	NRP	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RSM	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	SMB	4	59.5	53.11	709.17	0.2368421	0.224376731	12.58	831.70	28	0	0	0.00	0.00	0.00
Bass	LLS	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LLS > 420mm	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT > 600mm	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RBT	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	BNT	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LMB	4	59.5	53.11	709.17	1	4	53.11	14826.76	119	1	4	53.11	14826.76	119.33
Bass	BRB	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	CHP	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RKB	4	59.5	53.11	709.17	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00

Appendix 14b.
2019-2020 Lake Memphremagog Quebec North Ice Season Angling Table (cont.)

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
Perch	YLP	145	59.5	1321.51	17647.27	3.6312887	20.77066736	4798.77	96872701.42	988	4.053763342	34.74462	5357.07	61590416.08	1277.30
Perch	WTP	145	59.5	1321.51	17647.27	0.3115819	3.410693633	411.76	6018265.95	399	0.297542519	3.392439	393.20	5985913.97	398.23
Perch	PMS	145	59.5	1321.51	17647.27	0.0543981	0.148824146	71.89	262581.90	83	0	0	0.00	0.00	0.00
Perch	NRP	145	59.5	1321.51	17647.27	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RSM	145	59.5	1321.51	17647.27	0.0166949	0.032998255	22.06	58214.70	39	0.016694935	0.032998	22.06	58214.70	39.27
Perch	SMB	145	59.5	1321.51	17647.27	0.2461486	2.145033009	325.29	3784963.51	317	0.012239854	0.006274	16.18	11069.90	17.13
Perch	LLS	145	59.5	1321.51	17647.27	0.5019272	4.511069194	663.30	7962089.83	459	0	0	0.00	0.00	0.00
Perch	LLS > 420mm	145	59.5	1321.51	17647.27	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LKT	145	59.5	1321.51	17647.27	0.0333616	0.04225113	44.09	74551.74	44	0	0	0.00	0.00	0.00
Perch	LKT > 600mm	145	59.5	1321.51	17647.27	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RBT	145	59.5	1321.51	17647.27	0.0354468	0.054825616	46.84	96735.99	51	0.012319555	0.017866	16.28	31518.89	28.90
Perch	BNT	145	59.5	1321.51	17647.27	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LMB	145	59.5	1321.51	17647.27	0.0079745	0.00315184	10.54	5561.05	12	0.0079745	0.003152	10.54	5561.05	12.14
Perch	BRB	145	59.5	1321.51	17647.27	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	CHP	145	59.5	1321.51	17647.27	0.0009195	0.000122605	1.22	216.29	2	0	0	0.00	0.00	0.00
Perch	RKB	145	59.5	1321.51	17647.27	0.0203744	0.015925879	26.92	28100.99	27	0.012	0.008936	15.86	15765.09	20.44
Salmonids	YLP	229	59.5	4053.63	54131.81	0.2780778	0.446417879	1127.22	7363856.69	351	0.221465238	0.51181	897.74	8440386.17	376.29
Salmonids	WTP	229	59.5	4053.63	54131.81	0.0088586	0.004603485	35.91	75897.56	36	0.008858646	0.004603	35.91	75897.56	35.68
Salmonids	PMS	229	59.5	4053.63	54131.81	0.0120251	0.012810464	48.75	211201.87	60	0	0	0.00	0.00	0.00
Salmonids	NRP	229	59.5	4053.63	54131.81	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	RSM	229	59.5	4053.63	54131.81	0.0304757	0.149817478	123.54	2469949.83	204	0.030475706	0.149817	123.54	2469949.83	203.56
Salmonids	SMB	229	59.5	4053.63	54131.81	0.2650163	6.084615099	1074.28	100315116.20	1,297	0	0	0.00	0.00	0.00
Salmonids	LLS	229	59.5	4053.63	54131.81	0.328849	1.397844076	1333.03	23050791.70	622	0.0194011	0.006198	78.64	102207.92	41.41
Salmonids	LLS > 420mm	229	59.5	4053.63	54131.81	0.0023434	0.000410015	9.50	6759.83	11	0.0194011	0.006198	78.64	102207.92	41.41
Salmonids	LKT	229	59.5	4053.63	54131.81	0.032882	0.009829072	133.29	162101.17	52	0	0	0.00	0.00	0.00
Salmonids	LKT > 600mm	229	59.5	4053.63	54131.81	0.0024459	0.000607692	9.91	10018.77	13	0	0	0.00	0.00	0.00
Salmonids	RBT	229	59.5	4053.63	54131.81	0.0667065	0.197690289	270.40	3259374.35	234	0.05528212	0.191328	224.09	3154413.43	230.04
Salmonids	BNT	229	59.5	4053.63	54131.81	0.0026664	0.000557197	10.81	9186.36	12	0.00199057	0.000508	8.07	8367.25	11.85
Salmonids	LMB	229	59.5	4053.63	54131.81	0.0005623	7.23928E-05	2.28	1193.49	4	0	0	0.00	0.00	0.00
Salmonids	BRB	229	59.5	4053.63	54131.81	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	CHP	229	59.5	4053.63	54131.81	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	RKB	229	59.5	4053.63	54131.81	0.002469	0.000695822	10.01	11471.69	14	0	0	0.00	0.00	0.00

Appendix 15a. 2019-2020 Lake Memphremagog Quebec South Ice Season Angling Table

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
All	YLP	393	59.5	8212.84	341812.10	2.8895988	22.38082852	23731.81	1520106982.54	3,855	3.124382358	34.15822	25660.05	2319008493.17	4761.14
All	WTP	393	59.5	8212.84	341812.10	2.0334745	45.88737946	16700.60	3112234820.33	5,516	1.623739691	36.2904	13335.51	2461119395.00	4904.85
All	PMS	393	59.5	8212.84	341812.10	0.0242159	0.075882937	198.88	5144496.51	224	0.003205911	0.0003098	26.33	210058.18	45.31
All	NRP	393	59.5	8212.84	341812.10	0.000449	7.92414E-05	3.69	5372.04	7	0	0	0.00	0.00	0.00
All	RSM	393	59.5	8212.84	341812.10	0.0835674	0.235662336	686.33	15978532.40	395	0.071345801	0.196069	585.95	13293732.92	360.48
All	SMB	393	59.5	8212.84	341812.10	0.863771	25.18267271	7094.01	1707452051.10	4,085	0.015251358	0.043433	125.26	2944544.24	169.66
All	LLS	393	59.5	8212.84	341812.10	0.062372	0.221590734	512.25	15023525.62	383	0.002115801	0.000533	17.38	36104.05	18.79
All	LLS > 420mm	393	59.5	8212.84	341812.10	0.0008509	0.000146668	6.99	9943.24	10	0.002115801	0.000533	17.38	36104.05	18.79
All	LKT	393	59.5	8212.84	341812.10	0.0130803	0.004643006	107.43	314819.58	55	0	0	0.00	0.00	0.00
All	LKT > 600mm	393	59.5	8212.84	341812.10	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	RBT	393	59.5	8212.84	341812.10	0.0233057	0.051064459	191.41	3461974.35	184	0.022033396	0.049209	180.96	3336170.02	180.59
All	BNT	393	59.5	8212.84	341812.10	0.0003431	4.62583E-05	2.82	3136.01	6	0.000343083	4.63E-05	2.82	3136.01	5.54
All	LMB	393	59.5	8212.84	341812.10	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	BRB	393	59.5	8212.84	341812.10	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	CHP	393	59.5	8212.84	341812.10	0.0008482	0.000282725	6.97	19166.92	14	0	0	0.00	0.00	0.00
All	RKB	393	59.5	8212.84	341812.10	0.0023488	0.00216812	19.29	146984.19	38	0	0	0.00	0.00	0.00
Any	YLP	24	59.5	456.78	19010.75	0.9684283	2.706441387	442.36	633969.34	319	0.952535676	5.812429	435.10	1340488.33	463.21
Any	WTP	24	59.5	456.78	19010.75	0.1896574	0.349328814	86.63	80210.93	113	0.113802691	0.220674	51.98	50484.25	89.89
Any	PMS	24	59.5	456.78	19010.75	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	NRP	24	59.5	456.78	19010.75	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	RSM	24	59.5	456.78	19010.75	0.079636	0.049362569	36.38	11358.29	43	0.079635989	0.049363	36.38	11358.29	42.64
Any	SMB	24	59.5	456.78	19010.75	3.0848207	64.67752656	1409.08	14905193.33	1,545	0	0	0.00	0.00	0.00
Any	LLS	24	59.5	456.78	19010.75	0.1666667	0.666666667	76.13	152299.34	156	0	0	0.00	0.00	0.00
Any	LLS > 420mm	24	59.5	456.78	19010.75	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LKT	24	59.5	456.78	19010.75	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LKT > 600mm	24	59.5	456.78	19010.75	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	RBT	24	59.5	456.78	19010.75	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	BNT	24	59.5	456.78	19010.75	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LMB	24	59.5	456.78	19010.75	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	BRB	24	59.5	456.78	19010.75	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	CHP	24	59.5	456.78	19010.75	0.0138889	0.00462963	6.34	1057.63	13	0	0	0.00	0.00	0.00
Any	RKB	24	59.5	456.78	19010.75	0.0384615	0.035502959	17.57	8110.62	36	0	0	0.00	0.00	0.00
Bass	YLP	3	59.5	36.89	1535.45	0.1960784	0.115340254	7.23	393.12	22	0.117647059	0.041522	4.34	141.52	13.46
Bass	WTP	3	59.5	36.89	1535.45	0.0784314	0.018454441	2.89	62.90	9	0.078431373	0.018454	2.89	62.90	8.97
Bass	PMS	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	NRP	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RSM	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	SMB	3	59.5	36.89	1535.45	1.372549	5.181084198	50.64	17899.73	151	1.37254902	5.181084	50.64	17899.73	151.40
Bass	LLS	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LLS > 420mm	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT > 600mm	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RBT	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	BNT	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LMB	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	BRB	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	CHP	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	RKB	3	59.5	36.89	1535.45	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00

Appendix 15b.
2019-2020 Lake Memphremagog Quebec South Ice Season Angling Table (cont.)

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
Perch	YLP	276	59.5	5567.05	231696.56	3.894745	27.32283061	21682.26	856636824.03	3,453	4.305926098	43.30041	23971.32	1356298747.58	4344.89
Perch	WTP	276	59.5	5567.05	231696.56	2.8537147	63.07394002	15886.78	1971294056.18	5,238	2.277689185	50.23193	12680.02	1569632997.04	4674.13
Perch	PMS	276	59.5	5567.05	231696.56	0.0296504	0.101658719	165.07	3174373.77	210	0.004564939	0.004411	25.41	137718.41	43.78
Perch	NRP	276	59.5	5567.05	231696.56	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RSM	276	59.5	5567.05	231696.56	0.1107699	0.32844284	616.66	10258071.80	378	0.09336749	0.272864	519.78	8521856.14	344.40
Perch	SMB	276	59.5	5567.05	231696.56	0.6402285	20.63307177	3564.19	644337583.70	2,995	0.006797596	0.003966	37.84	123854.43	41.52
Perch	LLS	276	59.5	5567.05	231696.56	0.0655391	0.255638619	364.86	7983000.69	333	0	0	0.00	0.00	0.00
Perch	LLS > 420mm	276	59.5	5567.05	231696.56	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LKT	276	59.5	5567.05	231696.56	0.0077156	0.001682442	42.95	52545.99	27	0	0	0.00	0.00	0.00
Perch	LKT > 600mm	276	59.5	5567.05	231696.56	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RBT	276	59.5	5567.05	231696.56	0.0161978	0.058723781	90.17	1833639.54	160	0.016197783	0.058724	90.17	1833639.54	159.76
Perch	BNT	276	59.5	5567.05	231696.56	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LMB	276	59.5	5567.05	231696.56	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	BRB	276	59.5	5567.05	231696.56	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	CHP	276	59.5	5567.05	231696.56	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RKB	276	59.5	5567.05	231696.56	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	YLP	87	59.5	2074.87	86354.50	0.4024733	2.946365542	835.08	12952771.63	756	0.170357489	0.480936	353.47	2114505.36	305.56
Salmonids	WTP	87	59.5	2074.87	86354.50	0.0775074	0.121487164	160.82	534022.19	154	0.074953155	0.121307	155.52	533196.95	153.44
Salmonids	PMS	87	59.5	2074.87	86354.50	0.0153257	0.020434227	31.80	89755.94	63	0	0	0.00	0.00	0.00
Salmonids	NRP	87	59.5	2074.87	86354.50	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	RSM	87	59.5	2074.87	86354.50	0.0041173	0.00147487	8.54	6478.26	17	0.004117344	0.001475	8.54	6478.26	16.91
Salmonids	SMB	87	59.5	2074.87	86354.50	0.9724784	29.80626942	2017.77	130974070.19	2,405	0	0	0.00	0.00	0.00
Salmonids	LLS	87	59.5	2074.87	86354.50	0.0278551	0.009753421	57.80	42898.55	44	0.009557582	0.002355	19.83	10351.74	21.38
Salmonids	LLS > 420mm	87	59.5	2074.87	86354.50	0.0038438	0.000656895	7.98	2885.99	11	0.009557582	0.002355	19.83	10351.74	21.38
Salmonids	LKT	87	59.5	2074.87	86354.50	0.0346099	0.015162605	71.81	66689.09	54	0	0	0.00	0.00	0.00
Salmonids	LKT > 600mm	87	59.5	2074.87	86354.50	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	RBT	87	59.5	2074.87	86354.50	0.0538912	0.04368143	111.82	192075.12	92	0.048144095	0.035554	99.89	156332.17	83.08
Salmonids	BNT	87	59.5	2074.87	86354.50	0.0015498	0.00020896	3.22	917.84	6	0.001549787	0.000209	3.22	917.84	6.37
Salmonids	LMB	87	59.5	2074.87	86354.50	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	BRB	87	59.5	2074.87	86354.50	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	CHP	87	59.5	2074.87	86354.50	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	RKB	87	59.5	2074.87	86354.50	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00

Appendix 16a. 2020 Lake Memphremagog Quebec North Open Water Season Angling Table

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
All	YLP	537	103	14992.65	94347.92	0.740334844	24.47309139	11099.58	5503413347.26	6,275	0.284003971	4.484248	4257.97	1008398247.37	2685.87
All	WTP	537	103	14992.65	94347.92	0.218460219	4.38511877	3275.30	986103644.25	2,656	0.113909407	0.664782	1707.80	149493493.72	1034.14
All	PMS	537	103	14992.65	94347.92	0.055957381	0.083815068	838.95	18848123.84	367	0.006247065	0.007622	93.66	1714088.03	110.74
All	NRP	537	103	14992.65	94347.92	0.000655594	0.000129266	9.83	29068.56	14	0	0	0.00	0.00	0.00
All	RSM	537	103	14992.65	94347.92	0.000242381	3.74816E-05	3.63	8428.65	8	0.000242381	3.75E-05	3.63	8428.65	7.77
All	SMB	537	103	14992.65	94347.92	0.276368979	0.663993701	4143.50	149322117.11	1,034	0.055620684	0.066864	833.90	15036266.20	327.97
All	LLS	537	103	14992.65	94347.92	0.024592145	0.015991956	368.70	3596232.00	160	0.006261242	0.002907	93.87	653813.59	68.39
All	LLS > 420mm	537	103	14992.65	94347.92	0.007012038	0.003077916	105.13	692147.78	70	0.006261242	0.002907	93.87	653813.59	68.39
All	LKT	537	103	14992.65	94347.92	0.074211074	0.099181794	1112.62	22303925.05	399	0.032888347	0.044434	493.08	9992119.64	267.36
All	LKT > 600mm	537	103	14992.65	94347.92	0.040076925	0.049022604	600.86	11024059.91	281	0.032888347	0.044434	493.08	9992119.64	267.36
All	RBT	537	103	14992.65	94347.92	0.00384923	0.00099857	57.71	224843.30	40	0.002753062	0.000698	41.28	157031.34	33.52
All	BNT	537	103	14992.65	94347.92	0.005610622	0.013669131	84.12	3073834.85	148	0.001023115	0.000252	15.34	56597.17	20.12
All	LMB	537	103	14992.65	94347.92	0.019992997	0.059438235	299.75	13366150.57	309	0.003686782	0.002605	55.27	585756.26	64.73
All	BRB	537	103	14992.65	94347.92	0.000671742	0.000287889	10.07	64738.89	22	0.000671742	0.000288	10.07	64738.89	21.52
All	CHP	537	103	14992.65	94347.92	0.002689749	0.001374099	40.33	308999.90	47	0.000671742	0.000288	10.07	64738.89	21.52
All	RKB	537	103	14992.65	94347.92	0.029420864	0.061735651	441.10	13882823.75	315	0.000671742	0.000288	10.07	64738.89	21.52
Any	YLP	107	103	3022.66	19021.44	0.973600295	4.828471424	2942.86	44225111.62	1,260	0.230839803	0.546581	697.75	5005237.00	423.91
Any	WTP	107	103	3022.66	19021.44	0.232270516	0.313107752	702.08	2867684.94	321	0.132051593	0.145017	399.15	1328032.90	218.36
Any	PMS	107	103	3022.66	19021.44	0.169658146	0.287815956	512.82	2635647.16	308	0.024829347	0.035078	75.05	321166.42	107.38
Any	NRP	107	103	3022.66	19021.44	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	RSM	107	103	3022.66	19021.44	0.001227295	0.000189788	3.71	1737.63	8	0.001227295	0.00019	3.71	1737.63	7.90
Any	SMB	107	103	3022.66	19021.44	0.318421357	0.426767647	962.48	3909200.80	375	0.041848453	0.021476	126.49	196661.27	84.03
Any	LLS	107	103	3022.66	19021.44	0.002096256	0.00028278	6.34	2589.07	10	0	0	0.00	0.00	0.00
Any	LLS > 420mm	107	103	3022.66	19021.44	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LKT	107	103	3022.66	19021.44	0.005627746	0.001301518	17.01	11916.65	21	0.001515694	0.000145	4.58	1328.53	6.91
Any	LKT > 600mm	107	103	3022.66	19021.44	0.001515694	0.000145102	4.58	1328.53	7	0.001515694	0.000145	4.58	1328.53	6.91
Any	RBT	107	103	3022.66	19021.44	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	BNT	107	103	3022.66	19021.44	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	LMB	107	103	3022.66	19021.44	0.00818261	0.002259392	24.73	20687.14	27	0	0	0.00	0.00	0.00
Any	BRB	107	103	3022.66	19021.44	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	CHP	107	103	3022.66	19021.44	0.010906792	0.006552184	32.97	59990.79	46	0	0	0.00	0.00	0.00
Any	RKB	107	103	3022.66	19021.44	0.084585	0.188395447	255.67	1724991.04	249	0	0	0.00	0.00	0.00
Bass	YLP	73	103	2021.52	12721.29	0.118356701	0.190954351	239.26	782947.45	203	0.022298173	0.022622	45.08	92739.29	69.86
Bass	WTP	73	103	2021.52	12721.29	0.037165613	0.023166486	75.13	94982.75	71	0.012532208	0.008117	25.33	33274.89	41.85
Bass	PMS	73	103	2021.52	12721.29	0.046230832	0.044337741	93.46	181778.59	98	0	0	0.00	0.00	0.00
Bass	NRP	73	103	2021.52	12721.29	0.0045464	0.000886977	9.19	3636.20	14	0	0	0.00	0.00	0.00
Bass	RSM	73	103	2021.52	12721.29	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	SMB	73	103	2021.52	12721.29	1.107349752	2.703581809	2238.53	11098251.53	764	0.278078014	0.353056	562.14	1448249.44	276.07
Bass	LLS	73	103	2021.52	12721.29	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LLS > 420mm	73	103	2021.52	12721.29	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT	73	103	2021.52	12721.29	0.003293808	0.000498623	6.66	2044.12	10	0	0	0.00	0.00	0.00
Bass	LKT > 600mm	73	103	2021.52	12721.29	0.003293808	0.000498623	6.66	2044.12	10	0	0	0.00	0.00	0.00
Bass	RBT	73	103	2021.52	12721.29	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	BNT	73	103	2021.52	12721.29	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LMB	73	103	2021.52	12721.29	0.104894386	0.397068639	212.05	1627822.80	293	0.024078051	0.017537	48.67	71894.50	61.51
Bass	BRB	73	103	2021.52	12721.29	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	CHP	73	103	2021.52	12721.29	0.001738976	0.000138125	3.52	566.25	5	0	0	0.00	0.00	0.00
Bass	RKB	73	103	2021.52	12721.29	0.072537877	0.158035178	146.64	647892.33	185	0	0	0.00	0.00	0.00

Appendix 16b.
2020 Lake Memphremagog Quebec North Open Water Season Angling Table (cont.)

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
Perch	YLP	32	103	645.44	4061.69	7.339216421	329.9778905	4736.99	139023619.48	4,085	3.328599542	60.22727	2148.40	25379537.02	1745.51
Perch	WTP	32	103	645.44	4061.69	2.269698444	65.27494991	1464.94	27478760.49	1,816	1.149794611	8.942099	742.12	3766853.71	672.47
Perch	PMS	32	103	645.44	4061.69	0.169682283	0.238262345	109.52	100341.74	110	0	0	0.00	0.00	0.00
Perch	NRP	32	103	645.44	4061.69	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RSM	32	103	645.44	4061.69	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	SMB	32	103	645.44	4061.69	0.351888647	0.257497756	227.12	108819.09	114	0.04452381	0.021053	28.74	8863.98	32.62
Perch	LLS	32	103	645.44	4061.69	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LLS > 420mm	32	103	645.44	4061.69	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LKT	32	103	645.44	4061.69	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LKT > 600mm	32	103	645.44	4061.69	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	RBT	32	103	645.44	4061.69	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	BNT	32	103	645.44	4061.69	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Perch	LMB	32	103	645.44	4061.69	0.020384615	0.005758003	13.16	2423.79	17	0	0	0.00	0.00	0.00
Perch	BRB	32	103	645.44	4061.69	0.010714286	0.004591837	6.92	1932.02	15	0.010714286	0.004592	6.92	1932.02	15.23
Perch	CHP	32	103	645.44	4061.69	0	0	0.00	0.00	0	0.010714286	0.004592	6.92	1932.02	15.23
Perch	RKB	32	103	645.44	4061.69	0.035982906	0.013073563	23.22	5504.64	26	0.010714286	0.004592	6.92	1932.02	15.23
Salmonids	YLP	205	103	5655.20	35587.83	0.018107407	0.006259069	102.40	200407.29	61	0.004348768	0.00176	24.59	56340.33	32.49
Salmonids	WTP	205	103	5655.20	35587.83	0.026382709	0.044962802	149.20	1439591.66	164	0.010351085	0.010343	58.54	331142.39	78.77
Salmonids	PMS	205	103	5655.20	35587.83	0.000757576	0.000137741	4.28	4410.05	9	0	0	0.00	0.00	0.00
Salmonids	NRP	205	103	5655.20	35587.83	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	RSM	205	103	5655.20	35587.83	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	SMB	205	103	5655.20	35587.83	0.041714241	0.066087231	235.90	2115966.29	199	0.003542446	0.001204	20.03	38549.07	26.88
Salmonids	LLS	205	103	5655.20	35587.83	0.062379645	0.039718205	352.77	1271789.92	154	0.016644469	0.007576	94.13	242556.60	67.42
Salmonids	LLS > 420mm	205	103	5655.20	35587.83	0.018640334	0.00798582	105.41	255693.09	69	0.016644469	0.007576	94.13	242556.60	67.42
Salmonids	LKT	205	103	5655.20	35587.83	0.108476625	0.191947436	613.46	6145969.32	339	0.049268964	0.091331	278.63	2924222.67	234.09
Salmonids	LKT > 600mm	205	103	5655.20	35587.83	0.053711326	0.092509622	303.75	2961968.53	236	0.049268964	0.091331	278.63	2924222.67	234.09
Salmonids	RBT	205	103	5655.20	35587.83	0.010232536	0.002599301	57.87	83225.13	39	0.007318557	0.001828	41.39	58516.53	33.11
Salmonids	BNT	205	103	5655.20	35587.83	0.014914902	0.036292597	84.35	1161982.23	148	0.00271978	0.000666	15.38	21328.96	19.99
Salmonids	LMB	205	103	5655.20	35587.83	0.002272727	0.001239669	12.85	39690.48	27	0	0	0.00	0.00	0.00
Salmonids	BRB	205	103	5655.20	35587.83	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Salmonids	CHP	205	103	5655.20	35587.83	0.000757576	0.000137741	4.28	4410.05	9	0	0	0.00	0.00	0.00
Salmonids	RKB	205	103	5655.20	35587.83	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	YLP	92	110	2829.22	17804.12	0.015731342	0.011034238	44.51	88524.29	61	0.010365336	0.008066	29.33	64706.25	51.98
Lake Trout	WTP	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	PMS	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	NRP	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	RSM	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	SMB	92	110	2829.22	17804.12	0.014779144	0.010258981	41.81	82304.43	59	0	0	0.00	0.00	0.00
Lake Trout	LLS	92	110	2829.22	17804.12	0.004248088	0.00102213	12.02	8200.15	19	0	0	0.00	0.00	0.00
Lake Trout	LLS > 420mm	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	LKT	92	110	2829.22	17804.12	0.189721018	0.131400675	536.76	1054775.45	210	0.083805949	0.054847	237.11	440123.48	135.57
Lake Trout	LKT > 600mm	92	110	2829.22	17804.12	0.113872451	0.075448988	322.17	605512.00	159	0.083805949	0.054847	237.11	440123.48	135.57
Lake Trout	RBT	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	BNT	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	LMB	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	BRB	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	CHP	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Lake Trout	RKB	92	110	2829.22	17804.12	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	YLP	28	103	818.62	5151.55	1.18707542	3.887824658	971.77	2632685.80	601	0.447288172	0.963885	366.16	651936.71	299.07
Warmwater	WTP	28	103	818.62	5151.55	0.290076072	0.316361595	237.46	214070.71	171	0.194142201	0.165718	158.93	112102.79	124.02
Warmwater	PMS	28	103	818.62	5151.55	0.093985947	0.024509975	76.94	16596.96	48	0.025973627	0.012366	21.26	8354.28	33.86
Warmwater	NRP	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	RSM	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	SMB	28	103	818.62	5151.55	0.262357821	0.379508256	214.77	256634.42	188	0.060568935	0.034577	49.58	23368.32	56.62
Warmwater	LLS	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LLS > 420mm	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LKT	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LKT > 600mm	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	RBT	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	BNT	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	LMB	28	103	818.62	5151.55	0.021618191	0.003958855	17.70	2675.80	19	0.0041511	0.000569	3.40	384.09	7.26
Warmwater	BRB	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	CHP	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Warmwater	RKB	28	103	818.62	5151.55	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00

Appendix 17a.
2020 Lake Memphremagog Quebec South Open Water Season Angling Table

Species sought	Species caught	# Ang. Rec.	# Counts	Effort ang-hr	Effort Variance	Catch Rate fish/ang-hr	Catch Rate Variance	Catch Fish	Catch Variance	Catch 95% CI	Harvest Rate Fish/ang-hr	Harvest Variance	Total harvest	Harvest Variance	Harvest 95% CI
All	YLP	1277	103	29184.11	586672.84	0.546932647	5.27715271	15961.74	4497887525.51	3,678	0.307031697	2.99755	8960.45	2554864508.62	2772.33
All	WTP	1277	103	29184.11	586672.84	0.407196432	5.198710795	11883.67	4430953340.84	3,651	0.220398135	1.84975	6432.12	1576568469.94	2177.80
All	PMS	1277	103	29184.11	586672.84	0.006425064	0.012173726	187.51	10375679.10	177	0.000172927	4.45E-05	5.05	37899.21	10.68
All	NRP	1277	103	29184.11	586672.84	0.006167929	0.049448648	180.01	42145056.34	356	4.24734E-05	2.68E-06	1.24	2286.32	2.62
All	RSM	1277	103	29184.11	586672.84	0.001031243	0.00101262	30.10	863055.48	51	0.000806994	0.000968	23.55	825360.55	49.83
All	SMB	1277	103	29184.11	586672.84	0.079143563	0.141966804	2309.73	121001840.97	603	0.010653573	0.010623	310.92	9053901.39	165.04
All	LLS	1277	103	29184.11	586672.84	0.062937192	0.067345065	1836.77	57400456.03	416	0.011220741	0.016499	327.47	14062309.25	205.68
All	LLS > 420mm	1277	103	29184.11	586672.84	0.016988756	0.023818549	495.80	20300695.25	247	0.011220741	0.016499	327.47	14062309.25	205.68
All	LKT	1277	103	29184.11	586672.84	0.084059101	0.130823214	2453.19	111504641.45	579	0.033803111	0.066617	986.51	56778190.09	413.29
All	LKT > 600mm	1277	103	29184.11	586672.84	0.050016408	0.086928903	1459.68	74090885.43	472	0.033803111	0.066617	986.51	56778190.09	413.29
All	RBT	1277	103	29184.11	586672.84	0.013655807	0.015038464	398.53	12817377.55	196	0.008625347	0.011305	251.72	9635189.61	170.25
All	BNT	1277	103	29184.11	586672.84	0.004860312	0.005364286	141.84	4571989.81	117	0.001232522	0.000347	35.97	295659.05	29.82
All	LMB	1277	103	29184.11	586672.84	0.00316271	0.001888907	92.30	1609919.30	70	0.001178196	0.000823	34.38	701217.45	45.93
All	BRB	1277	103	29184.11	586672.84	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
All	CHP	1277	103	29184.11	586672.84	0.002187804	0.001774343	63.85	1512273.49	67	0	0	0.00	0.00	0.00
All	RKB	1277	103	29184.11	586672.84	0.0016477	0.001983935	48.09	1690907.49	71	0	0	0.00	0.00	0.00
Any	YLP	127	103	2534.09	50941.50	0.320572704	1.967819099	812.36	12742060.20	621	0.118303451	0.154547	299.79	1001026.36	174.01
Any	WTP	127	103	2534.09	50941.50	0.155117671	0.740853017	393.08	4796440.55	381	0.019080431	0.009004	48.35	58299.07	41.99
Any	PMS	127	103	2534.09	50941.50	0.02325049	0.054663721	58.92	353841.70	103	0	0	0.00	0.00	0.00
Any	NRP	127	103	2534.09	50941.50	0.050276013	0.427136902	127.40	2764797.53	289	0	0	0.00	0.00	0.00
Any	RSM	127	103	2534.09	50941.50	0.006976744	0.008372093	17.68	54191.35	40	0.006976744	0.008372	17.68	54191.35	40.49
Any	SMB	127	103	2534.09	50941.50	0.188471774	0.323933929	477.60	2098490.97	252	0.025323029	0.022619	64.17	146435.96	66.55
Any	LLS	127	103	2534.09	50941.50	0.006246935	0.001570414	15.83	10166.59	18	0.002094274	0.000377	5.31	2441.04	8.59
Any	LLS > 420mm	127	103	2534.09	50941.50	0.002094274	0.000377102	5.31	2441.04	9	0.002094274	0.000377	5.31	2441.04	8.59
Any	LKT	127	103	2534.09	50941.50	0.029007412	0.073673677	73.51	476900.08	120	0.00274245	0.000473	6.95	3061.15	9.62
Any	LKT > 600mm	127	103	2534.09	50941.50	0.024292227	0.072512327	61.56	469370.37	119	0.00274245	0.000473	6.95	3061.15	9.62
Any	RBT	127	103	2534.09	50941.50	0.004824213	0.001288474	12.22	8340.91	16	0.000557248	5.34E-05	1.41	345.72	3.23
Any	BNT	127	103	2534.09	50941.50	0.016827265	0.034651388	42.64	224297.58	82	0.002873776	0.001244	7.28	8050.24	15.60
Any	LMB	127	103	2534.09	50941.50	0.009229726	0.007228141	23.39	46788.91	38	0.001237011	0.000263	3.13	1703.62	7.18
Any	BRB	127	103	2534.09	50941.50	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Any	CHP	127	103	2534.09	50941.50	0.001705656	0.0002418	4.32	1565.21	7	0	0	0.00	0.00	0.00
Any	RKB	127	103	2534.09	50941.50	0.013082154	0.016858059	33.15	109123.50	57	0	0	0.00	0.00	0.00
Bass	YLP	60	103	1134.72	22810.77	0.104288351	0.116273889	118.34	152614.56	99	0.013697422	0.007279	15.54	9542.77	24.72
Bass	WTP	60	103	1134.72	22810.77	0.084519819	0.119805367	95.91	157157.10	100	0.011611855	0.004092	13.18	5365.90	18.54
Bass	PMS	60	103	1134.72	22810.77	0.007287494	0.002588811	8.27	3393.62	15	0	0	0.00	0.00	0.00
Bass	NRP	60	103	1134.72	22810.77	0.002498241	0.00022706	2.83	291.98	4	0	0	0.00	0.00	0.00
Bass	RSM	60	103	1134.72	22810.77	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	SMB	60	103	1134.72	22810.77	0.711862531	1.156237844	807.77	1526704.96	313	0.105830194	0.113247	120.09	148655.10	97.56
Bass	LLS	60	103	1134.72	22810.77	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LLS > 420mm	60	103	1134.72	22810.77	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LKT	60	103	1134.72	22810.77	0.011428571	0.009142857	12.97	11983.87	28	0.011428571	0.009143	12.97	11983.87	27.70
Bass	LKT > 600mm	60	103	1134.72	22810.77	0.011428571	0.009142857	12.97	11983.87	28	0.011428571	0.009143	12.97	11983.87	27.70
Bass	RBT	60	103	1134.72	22810.77	0.005714286	0.002285714	6.48	2995.97	14	0.005714286	0.002286	6.48	2995.97	13.85
Bass	BNT	60	103	1134.72	22810.77	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	LMB	60	103	1134.72	22810.77	0.034103806	0.019465987	38.70	25534.96	40	0.021988731	0.016602	24.95	21766.39	37.33
Bass	BRB	60	103	1134.72	22810.77	0	0	0.00	0.00	0	0	0	0.00	0.00	0.00
Bass	CHP	60	103	1134.72	22810.77	0.00931677	0.006076154	10.57	7964.23	23	0	0	0.00	0.00	0.00
Bass	RKB	60	103	1134.72	22810.77	0.002857143	0.000571429	3.24	748.99	7	0	0	0.00	0.00	0.00

