

WHO'S WHO IN THE LAKE WINNIPEG ZOO?

Highlights of the Winter 2018/2019
Lake Winnipeg South Basin Creel Survey



BY DR. BRIAN R. PARKER, HEAD SCIENTIST, MANITOBA WILDLIFE AND FISHERIES BRANCH

The management of the Lake Winnipeg fishery requires fishery managers have a good understanding of the number of walleye and other fish species being caught and harvested by anglers. Three creel censuses involving the Lake Winnipeg fishery have been conducted in the past decade that support such an understanding.

These include a joint federal/provincial recall survey in 2010, part of a large national survey, then a Manitoba-led on-lake creel census in winter 2017/2018 and an angler-funded recall survey of catch in 2017.

Recreational harvests were estimated at 198,520 fish, of which 123,170 were walleye, 136,380 fish, of which 130,830 were walleye, and 135,800 kgs of walleye (including the Red River below Lockport) in these surveys, respectively.

An additional Manitoba-led Lake Winnipeg lakeside creel survey was conducted

In the winter of 2018/2019, an estimated 70,000 angler days of fishing effort occurred on the south basin of Lake Winnipeg.

in the winter of 2018/2019. This survey included the placement of vehicle counters at major lake access points including Belair, Road 103N, Balsam Harbour, Beaconia, Pruden Creek, Chalet Beach Road, Warner Road, Ralph Road (Matlock) and two access points at Riverton. The vehicle counter data was paired with angler interviews undertaken at Belair, Balsam Harbour, Pruden Creek, Warner Road and Riverton access points. During interviews of more than 6,300 anglers, both anglers and vehicles were enumerated and anglers were asked, at the end of their fishing day, to provide their total and retained catch, by species, their home community and the number of hours they had fished.

PARTIAL SUMMARY OF SURVEYS

The following is a partial summary of the collected data.

In the winter of 2018/2019, an estimated 70,000 angler days of fishing effort occurred on the south basin of Lake Winnipeg.

American anglers came to fish Lake Winnipeg from 12 US states with 90% originating from Minnesota, North Dakota and South Dakota.

Anglers from across much of southern

and central Manitoba fished Lake Winnipeg, but few anglers originated from communities west of Lake Manitoba, north and west of Lake Winnipegosis or north of Gypsumville.

A very few Alberta, Saskatchewan and Ontario residents fished Lake Winnipeg as well. Most Manitoba anglers drove to the lake from communities 50 to 200 km distant, including many from Winnipeg. Anglers from at least 97 Manitoba communities accessed Lake Winnipeg via Warner Road, with fewer communities being represented at access locations that were on average more distant from angler points of origin, including Riverton (28 communities) and Belair (23 communities).

Anglers caught an estimated 143,000 fish of all species combined, 95% of which were walleye, 2.6% Sauger and 1.4% Northern Pike. An estimated 81,500 fish were retained. Factoring in 10% catch and release related mortality for released fish, which is biased high considering the cold winter water temperatures and shallow depths at which Lake Winnipeg fish were caught, the total estimated kill of fish was 87,500, or about 87,500 kgs assuming a one kg average weight.



WINTER NUMBERS DOWN LAST YEAR

The estimated retention is the lowest observed among recent creel censuses. This may have been in part the result of more difficult lake access in 2018/2019. While the south basin was accessible to even small 2WD vehicles for much of winter 2017/2018, more challenging snow and pressure ridge conditions resulted in periods of no or limited access in winter 2018/2019.

Warner Road/Chalet Beach Road/Ralph Road was the most heavily used assemblage of access points with 10,630 vehicle

counts, followed by Beaconsia/Balsam Harbour/Road 103N as an assemblage (5,490 counts) and Pruden Creek (3,060 counts).

Fewer anglers attended via Riverton (2,470 counts) and Belair (1,410 counts), which also featured a higher proportion of local origin anglers. The majority of American anglers accessed the lake via Pruden Creek and Warner Road, among the closest road accessible points to a number of commonly used accommodations. Not surprisingly, more trips were made, regardless of access point, on weekends, notably Saturdays (28% of trips) and Sundays (17% of

Perhaps some of the more interesting insights obtained from the creel census are related to differences between American and Manitoban anglers.

trips). The fewest trips onto to lake were made on Tuesdays and Wednesdays (9.5% of trips each).

CATCH RATE FOR ANGLERS

Angler catch per unit effort (CUE) increased each month from January through March. Combined with the milder weather of late winter, these are clear proximate causes of what is locally known as “March Madness”. Anglers from all points of origin made more fishing trips to Lake Winnipeg beginning in mid-February and running through to the end of the fishing season. The Louis Riel Day long weekend, which is also the winter family fishing weekend when angling licences are not required, is clearly evident in the vehicle counter data as three consecutive days of high vehicle counts and served as the kick-off point for the increased fishing intensity of late winter weekends.

INSIGHT FROM SURVEYS

Perhaps some of the more interesting insights obtained from the creel census are related to differences between American and Manitoban anglers. These comparisons are made using data from Balsam Harbour, Pruden Creek, Warner Road and Riverton access points. The timing of angler traffic on and off the lake varied by access point, in apparent relation to the proportion of American anglers using the access.

Where the number of Americans was a larger proportion of the total number of anglers, more vehicles accessed the lake earlier in the morning, during nautical and civil twilight, than in areas with predominantly Manitoban anglers. A comparison of Pruden Creek vehicle counts, which access point had the highest proportion of American anglers, to those of Riverton, which had among the lowest, shows this difference.

LARGE GROUPS OF AMERICAN ANGLERS

Americans fished in the largest groups, with an average group size of just over three persons, followed by anglers from communities more than 20 km distant from the lake at just under 2.5 persons per group and then local anglers, for which average group size was less than two persons.

The possibility of catching a trophy walleye in Lake Winnipeg draws many anglers to the lake, but it took considerable effort, on average between 490 (Americans) and 730 hours (Winnipeggers) of fishing to catch a Master Angler walleye in winter 2018/2019.



Increasing group size negatively affected individual CUE, for both American and Manitoba anglers. This is likely caused by several factors including group self-entertainment (actively socializing anglers concentrate less on their fishing) and group inertia (more work is required to move a large group to a new location if fishing is slow).

As days lengthened through the winter, the length of fishing days more closely tracked day length for American than Manitoban anglers, with the length of the fishing day extending by 3.1 hours and 1.2 hours respectively between mid-January and mid-March as day length increased by 3.3 hours. The length of fishing days for mid January and mid-March were 6.1 and 7.3 hours for Manitoban and 7.3 and 10.4 hours for American anglers.

Americans caught more fish per unit effort than Manitobans, regardless of which access point they used, which month they fished or the size of their fishing group. As would be expected with the combination of higher CUE and fishing more hours per day, Americans had more successful fishing trips than Manitobans.

More than 90% of Americans caught at least one fish during a day of fishing. In contrast, as many as two thirds of Manitobans failed to catch a single fish in a day's fishing at some locations. Although Americans caught more fish per person, they retained a smaller proportion of caught fish than Manitobans, releasing more than 76% of their catch, whereas Manitobans released just over 42% of their catch.

CATCHING TROPHY WALLEYE TOUGH WORK

The possibility of catching a trophy walleye in Lake Winnipeg draws many anglers to the lake, but it took considerable effort, on average between 490 (Americans) and 730 hours (Winnipeggers) of fishing to catch a Master Angler walleye in winter 2018/2019, during which an estimated 880 Master Angler walleye were caught (qualifying total length 71 cm or 28 in). In comparison, 349 Master Angler walleye were registered in that program for Lake Winnipeg between December 1, 2018 and March 31, 2019, about 40% of the estimated trophy walleye catch. It is noted that many Manitobans are not strongly focused on catching a trophy walleye and may target more abundant smaller fish for personal consumption.

It is likely that the effort required by dedicated Manitoban trophy seekers to take a trophy fish was lower than estimated for Winnipeggers as a group.

MOTIVATION

Many of the differences between American and Manitoba anglers likely can be attributed to differences in motivation between the groups of anglers. Americans have limited opportunity to fish Lake Winnipeg compared to Manitobans and chose to maximize their opportunity by arriving on the lake earlier in the day and fishing more hours per day.

The opposite can be observed for anglers from lake-side communities, who presumably enjoyed the greatest opportunity, and

fished just over five hours per day. American anglers likely also included among them a higher proportion of highly skilled trophy walleye hunters, folks who are willing to drive the long distance to Lake Winnipeg and secure local accommodation to take part in the fishery. This might have accounted for the higher CUE for Americans.

MOBILITY HELPS SUCCESS

Americans also had somewhat of a mobility advantage: they were more likely to be equipped with a tracked vehicle, which afforded better access to locations off the well-beaten truck tracks used by most Manitobans, especially during a winter with challenging snow and ice conditions.

FURTHER SURVEYS

There are likely to be further surveys to assess angler use of and fish harvest on Lake Winnipeg. The surveys provide important information to fishery managers, fishers, and the tourism sector. When anglers are approached to participate in a survey, whether in-person, through submitting a creel card into a lakeside drop-off box or through a web-based application, please participate and ensure the highest quality information on angling is available to support the management of the fishery.

Kevin Casper, Regional Fisheries Manager, Darcy Pisiak, Regional Fisheries Biologist and term staff Crystal Collins and Jacey Grimolfson planned and implemented the creel survey. ■