Commercial Fishing in Northern Lake Huron and Georgian Bay

Bill Steiss, Fisheries Committee Chair
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INTRODUCTION

Commercial fishing in Lake Huron and Georgian Bay plays a significant social and economic role locally, provincially and beyond. However, its importance is not well known by cottagers, residents, and tourists who tend to focus on the recreational side of fishing. While we often enjoy eating locally caught freshwater fish, most of us have little knowledge of the commercial fishing industry - how it works, how it benefits our lives, challenges the industry faces, and how to support it.

Although lake trout and lake whitefish stocks are nowhere near the numbers they once were, commercial fishing is still an important employer, maintains traditions passed on from generation to generation, and supports local and indigenous communities. Today, in the waters of Lake Huron, the North Channel and Georgian Bay, there are over sixty local commercial licensed fisheries, including five Aboriginal commercial fishing agreements.

Figure 1: Purvis Fisheries Headquarters

Since its formation in the early 1800's, Purvis Fisheries continues to fish with two 75-foot gill net tugs and two 45-foot trap net boats in the cool and pristine waters of the North Channel and northern Lake Huron.

Today, you can visit their modern plant and retail store on Burnt Island, located at the western end of Manitoulin Island. At their fish plant, local freshwater fish are processed the day they are caught into round, dressed and filleted fresh and frozen fish including specialty fish spreads and smoked filets. As well as being sold on site, products are shipped to wholesalers, distributors, retail outlets and restaurants and in the case of Purvis Fisheries, products are certified "Ocean Wise".

Starting in 1979, the Province has been monitoring commercial fish catches for Lake Huron, the North Channel and Georgian Bay referred to as the three basins. To manage this fishery, the Ministry of Natural Resources and Forestry's (MNRF's) Upper Great Lakes Management Unit, in co-operation with commercial fisheries and First Nations, has set up individual Quota Management Areas (QMA'S).

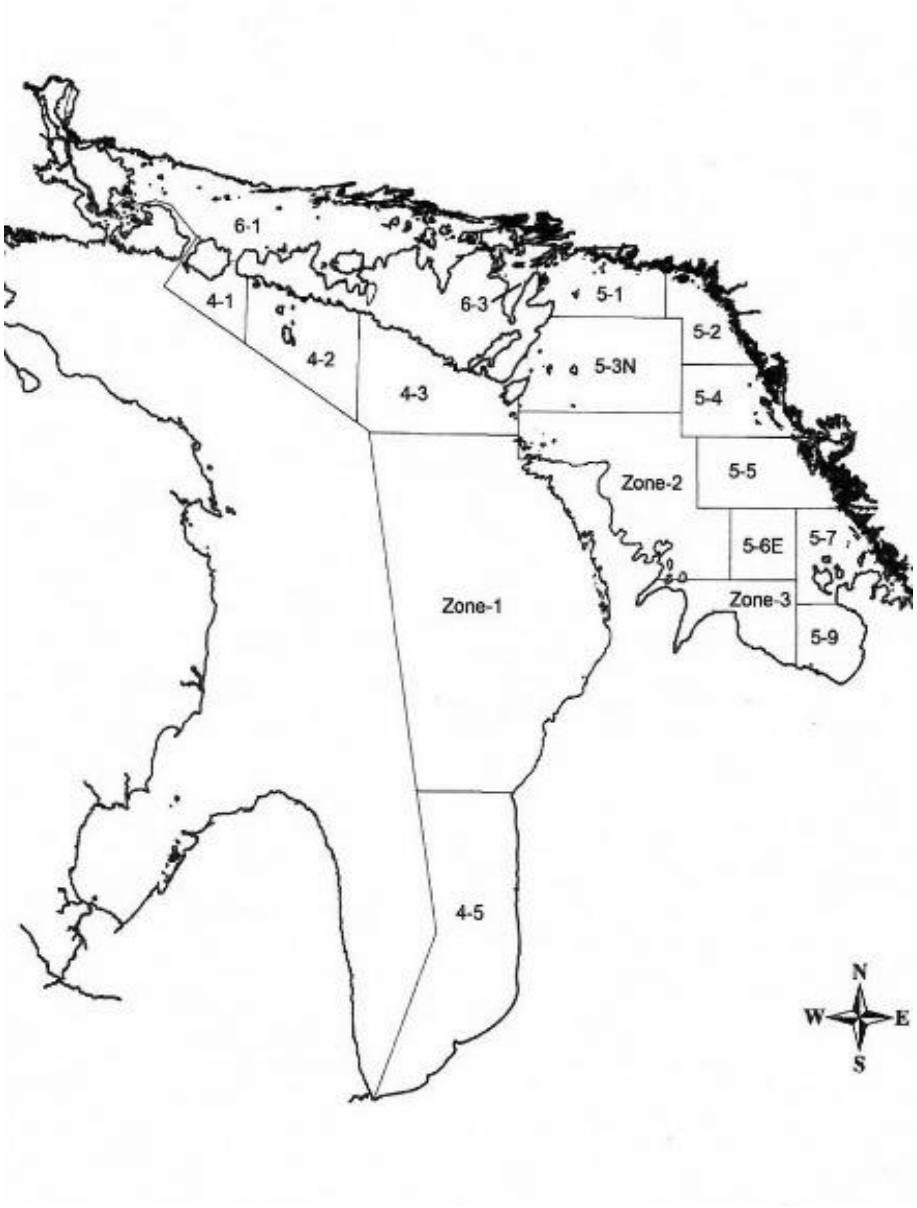

Figure 2: Quota Management Areas in Georgian Bay and Lake Huron

Within each of the three basins and for each of the QMA's, allowable commercial harvests are set by quotas by MNRF to ensure the long-time viability for each species of fish. Statistics on fish harvested and released, and, the average estimated value of each fish species sold at first point of sale are monitored for each of the QMA's.

Figure 3: Commercial Fishing in Lake

THE CATCH

For the last five years (2014-2018), annual commercial fish harvests in Lake Huron's three basins have averaged nearly three million lbs., representing about 14 percent of Ontario's Great Lakes' harvest.[1] Back in the mid and late 1990's, Lake Huron's fishery operators enjoyed harvests exceeding those of today, topping over six million lbs. annually. While lake whitefish was the predominant catch as it is today, their numbers are less than half of what they were in the 90's and into the early 2000's. However, on a positive note, lake trout, yellow perch and smelt are showing recent signs of recovery in some basins.

THE COMMERCIAL HARVEST VALUE

According to Ministry of Natural Resources and Forestry, the yearly average value of fishery harvests from the three basins of Lake Huron for 2014 to 2018, excluding open net aquaculture, produced a total estimated wholesale dollar value - fish sold at first point of sale - of nearly $5 million annually. By the time the product is processed, packed and shipped, the market (or in-store value) jumps to over $40 million.

Figure 4: Preparing fish for distribution

The **Lake Whitefish** harvest stems from mid and lower portions of Lake Huron with about a quarter caught in Georgian Bay and the North Channel. Highly regarded by commercial operators, average yearly harvests over the last five years have been over 2 million lbs.; producing annual dockside values in excess of $3.8 million ($1.87/lb.)[2]; and, reaching retail values of $26.2 million ($13.00/lb.)[3].

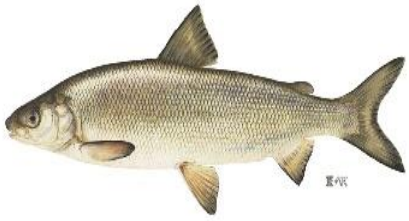

Figure 5: Lake Whitefish

[1] Ontario Commercial Fisheries Association

[2] Based on 2018 values in *Lake Huron Commercial Fishing Summary for 2018,* prepared by the Ontario Ministry of Natural Resources and Forestry.

[3] Based on an informal survey of retail outlets in Ontario and the U.S.

With lake whitefish having a high commercial value but with catch numbers declining, concerns have been raised by commercial operators as to how these declining numbers will affect their livelihood; although, recent signs of a recovery are evident in lake whitefish in Lake Huron's North Channel.

Historically, **lake trout** in Lake Huron and Georgian Bay reached all-time lows in the early 1960s due to sea lamprey predation, in combination with overfishing. But with aggressive sea lamprey controls initiated by the United States and Canada, lake trout harvests, while well below the harvest weights of the 1940's, have made incremental steps towards recovery. Starting in the mid 2000's, lake trout harvests have averaged over 432,000 lbs. annually producing a dockside value of $255,000 ($.59/lb.) with a market value reaching $5.6 million ($13.00/lb.).

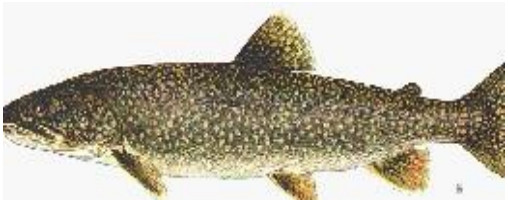

Figure 6: Lake Trout

Most of the **yellow perch** harvest is from the middle and southern portions of Lake Huron. With numbers dropping in the mid 2000's, they have since recovered and the last five years' annual average harvest average for yellow perch is 340,000 lbs. As a popular eating fish, yellow perch had an annual average five-year dockside value of $796,000 ($2.34/lb.) and a significant market price of over $7.8 million ($23.00/lb.)

Figure 7: Yellow Perch

The **walleye,** also known as pickerel, and caught in the lower portion of Lake Huron's main basin, while not evident in robust numbers in the North Channel and northern Georgian Bay, had an annual five-year average harvest of nearly 210,000 lbs. The harvest value at the dock over this five-year time period is $600,000 ($2.84/lb.) and, once reaching market, soars to over $ 5million ($25/lb.).

Figure 8: Walleye/Pickerel

Cisco, **northern pike** and **channel catfish** are also included in last year's harvest as well as non-targeted species including common carp, freshwater drum, round whitefish, white bass and white perch.

Figure 9: Northern Pike

ECONOMIC BENEFITS OF COMMERCIAL FISHING TO ONTARIO AND THE REGION

Commercial fishing is not easy – either as an owner or as an employee (particularly for those working on the boats). Fishing boats are on the waters daily from spring break-up until late in the season, often stretching into late autumn and early winter, with catches fluctuating from one year to the next. Along with stricter government regulations, shipping and exporting challenges, running and maintaining boats, crews and equipment such as gill nets and traps, the industry continues to face tighter profit margins.

Figure 10: Commercial Fishing in the North Channel

Given these challenges, in 2016 there were more than 500 active commercial fishing licenses in Ontario's portion of the Great lakes. Excluding jobs in open net aquaculture, nearly 900 people worked in the commercial fishing industry, including boat and tug crew members; and, over 900 were employed in packaging and processing fish - not including those driving trucks to market or employment in distribution facilities.

As cited in a recent report by the Ontario Commercial Fisheries Association (OCFA), the value of Ontario's commercial catch was $38.6 million in 2012 which translates into $5.3 million catch in the three basins of Lake Huron and Georgian Bay (based on 14% of Ontario's catch). [4] Walleye, yellow perch and lake whitefish accounted for the majority (84%) of the commercial catch for Ontario. Similarly, these three species accounted for over 60% of the 2018 harvest in the three basins of Lake Huron and Georgian Bay using data from MNRF.

Local fisheries throughout the Great Lakes supply fresh and smoked fish to local, regional and international markets. According to Fisheries Canada, approximately 60% of Ontario's commercial fishery is exported to wholesale markets throughout the United States and Europe. For example, in 2011, Ontario exported 14,682 tons of freshwater fish product yielding a total export value of $89 million.

[4] According to data from the Ontario Commercial Fisheries Association, Lake Erie accounts for 84% of harvested fish in Ontario.

THREATS TO COMMERCIAL FISHING

Commercial fishing harvests are far less than what they were a century ago. This downward spiral began with overfishing, urban growth and industrial pollution, and, most devastatingly, the invasion of the sea lamprey entering from the Atlantic Ocean. The invasion of sea lamprey nearly wiped out the fishing industry creating havoc in the south (Lake Ontario and Lake Erie). Its presence was not felt in the upper lakes until the late 1950's.

Later, when larger ocean-going ships came into the Great lakes, their ballast water brought, amongst other non-native species, changes to native food chains. Although these invaders - spiny water flea, round goby, zebra and quagga mussel - may be providing an alternative food source for lake trout and lake whitefish, these invasive species are competing with other smaller in-shore fish species for diminishing food options. Quagga and zebra mussels, while making the lakes clearer by filtering out nutrients, are inhibiting the growth of phytoplankton and zooplankton - important for juvenile lake whitefish; and, causing light-sensitive walleye to find new habitats and food in deeper waters.

Lake trout numbers, particularly in the upper regions of Lake Huron, are now showing signs of a strong recovery in part due to MNRF stocking of lake trout, but the recovery is also thought to be associated with greater reproductive success since the collapse of alewife in Lake Huron. However, with diminishing numbers of alewives and smelt and continuation of restrictive lake trout quotas, some operators believe lake trout may be foraging on juvenile whitefish, thereby reducing the supply and harvest of whitefish as well as the value of the overall catch (because of limited quotas for lake trout).

Since the 1980's Georgian Bay summer surface water temperature has increased 2.5 degrees Celsius and, according to commercial fishery operators, this warmer temperature may be pushing lake whitefish to go deeper, seeking cooler water and moving from their usual spawning and feeding grounds to different locales, thus making them more difficult to catch. More intense storms are predicted in the future which will likely wash more toxic pollutants into the Great Lakes resulting in blue-green algal blooms and associated fish kills while higher water levels and wave heights may also be damaging fish spawning grounds.

WHAT CAN WE DO TO PROTECT OUR LOCAL COMMERCIAL FISHERIES?

Despite the many challenges facing our local commercial fisheries, they continue to offer a healthy, fresh caught locally sourced product, and, if carefully managed and supported, they should remain viable for many years. The waters of Lake Huron and Georgian Bay compared to fifty years ago are in far better shape today thanks to internationally coordinated sea lamprey controls beginning in the 70's; the signing of the Great Lakes Water Quality Agreement between the United States and Canada; and the forming of the Great Lakes Fisheries Commission beginning in 1983 when harvests began to be closely monitored.

The Georgian Bay Association and its partners are working to protect fisheries through written submissions to Federal, Provincial and State governments regarding invasive species controls, live bait restrictions, recreational fishing regulations, water quality and protections for fish habitats as well as engaging with local organizations such as the Upper Great Lakes Management Unit and the Ontario Commercial Fisheries Association. All the above are important steps, but there are other actions that we can take to protect this resource and here are a few ideas:

1. Finding fresh locally caught fish year-round is not always easy for consumers. We can encourage our local eateries and food stores, if they are not already doing so, to include selections of wild and stocked Great Lakes fish and related products on their menus and shelves.

2. We can consume more fish as recommended in Canada's 2019 Food Guide – locally caught freshwater fish is "green" food as their harvest requires little fossil fuel. It's also good for you as lake whitefish and lake trout boasts a long list of health benefits, including being a low-cost protein option and source of beneficial omega-3 fatty acids, vitamins and minerals. Also, commercially caught freshwater fish often carries a food security label so you know what you are eating, while many imported fish are often wrongly labeled and require lengthy travel time and heavy use of fossil fuels.

3. Be knowledgeable about invasive species and report their presence when angling. Report illegal activities listed under Ontario's Fishing Regulations such as disturbing fish habitats, introducing invasive species by using non-native live baits, and, not following proper disposal of bucket contents and hull cleaning procedures.

4. Encourage local and national newspapers and other media to acknowledge the value of commercial fisheries as contributing to the local economy through purchasing supplies, boat parts and fuel; paying their share of federal, municipal or township taxes; employing local people; and, supplying a superlative product.

5. Urge your local MPP, MP and Town Councilors to be familiar with Canada's Fisheries Act and to support their local fisheries by promoting Lake Huron and Georgian Bay's historical ties to the commercial fishing industry as well as supporting government actions to retain a sustainable fishery by: controlling invasive species, reducing plastic pollution, and, promoting shoreline protection wherever possible.