

2018 Hamilton Harbour RAP Fact Sheet

BUI 1a Restrictions on Fish Consumption

IMPAIRED

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Delisting Criteria: There is no significant difference in the fish consumption advisories for Hamilton Harbour compared to reference location(s) and the contaminants of concern are declining in Hamilton Harbour fish.

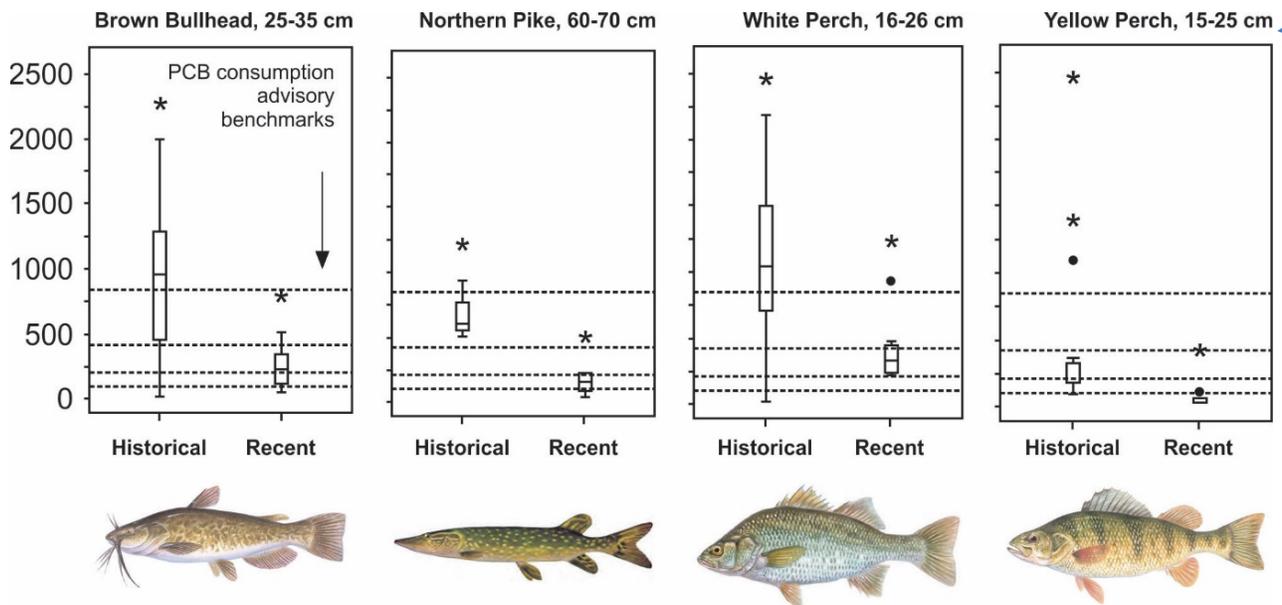


Note: for all AOCs, a criteria change to “consumption advisories for fish of interest in the AOC are non-restrictive or no more restrictive than the advisories for suitable reference site(s) due to contaminants from locally-controllable sources” has been recommended (Bhavsar et al. 2018). This change will be proposed for Hamilton Harbour in 2019.

Did you know?

PCBs or polychlorinated biphenyls are the driver of the fish consumption advisories in Hamilton Harbour.

PCB levels in four fish species were significantly lower from 2005-2013 than previous years. However, concentrations are elevated compared to both nearby Lake Ontario reference areas and other AOCs, and are greater than consumption advisory benchmarks. While conditions are improving, remediation is still ongoing (Neff et al. 2016, Illustration credit: MOECC).



A survey of fish consumption from 1995-1997 found that only 20% of Hamilton Harbour respondents ate their catch in comparison to a 38% average of five AOCs sites. In response to, “Why don’t you eat your catch?”: 70% reported polluted water and 32% reported dirty/contaminated fish as the reason (Scott 1998). As fishing and eating patterns in the Harbour may have changed in the last 20 years a new fish consumption survey is being planned for 2019.

What Was the Original Problem?

PCBs, mercury, Mirex, and pesticides were listed as the causes of impairment in fish. The latter three were never specific Hamilton Harbour issues, but were included in historical RAP documents as these were general issues in Lake Ontario fish. In 1992 it was recognized that some species on the advisory list (e.g., prey fish such as Smelt, Alewife, and Gizzard Shad) accumulate contaminants lake-wide due to migration into Lake Ontario and move contaminants into the Hamilton Harbour food chain.

Other AOC Comparisons

Most AOCs have similar delisting criteria, but Niagara River and Toronto and Region AOCs are specific in that there must be no restrictions attributable to locally controllable contaminant sources. The Niagara River AOC has a qualifier that if conditions can't be met, then a risk-based Contaminated Sediment Management Strategy must be in place with appropriate monitoring and mitigation measures and/or administrative controls.

How are Improvements Being Made?

1. Windermere Basin PCBs have been dredged/capped.
2. Abatement actions to control the source of Strathearne Slip PCBs are progressing through the Ministry of the Environment, Conservation and Parks.
3. ArcelorMittal Dofasco is obtaining provincial approval to manage PCB, PAH, and metal contaminated sediment at the head of the Kenilworth Boat Slip.
4. The Municipal/Industrial Strategy for Abatement reduced chemical inputs into the Harbour by industry and municipal WWTPs through optimization, upgrades, and implementation of sewer use control programs.
5. Installation of a leachate collection system in the 1990s at the historical Rennie and Brampton Street landfills prevented materials (including PCBs) from entering the Red Hill Creek and Harbour.
6. Natural sediment deposition will continually cap and bury PCB contaminated sediments over time.



Windermere Basin has been remediated and made into a wetland

What Still Needs to Happen?

- An online survey of public and Indigenous anglers, plus shoreline surveys in 2019.
- Remediation of Kenilworth and Strathearne Boat Slips.
- Periodic sampling of fish in Hamilton Harbour to update fish consumption advisories.
- A status assessment of the beneficial use impairment will be undertaken.



Where Can I Learn More?

Bhavsar et al. 2018. Assessing fish consumption Beneficial Use Impairment (BUI) at Great Lakes Areas of Concern: Toronto case study. *Aquatic Ecosystem Health and Management* 21(3):318-330.

MOECC. 2017. 2017-2018 Guide to Eating Ontario Fish: ontario.ca/page/eating-ontario-fish-2017-18

BARC. 2017. Toward Safe Harbour Report Card: hamiltonharbour.ca/reportcard

Neff et al. 2016. Improvements in fish polychlorinated biphenyl and other contaminant levels in response to remedial actions in Hamilton Harbour, Ontario, Canada. *Aquatic Ecosystem Health and Management* 19(2): 161-170.

Labencki. 2011. 2008 Field Season in the Hamilton Harbour Area of Concern. Hamilton Harbour PCB Assessment.

Scott. 1998. Down by the Bay: a profile of shoreline fishing and fish consumption in the Hamilton Harbour area

Most references can be provided as a PDF upon request. Visit hamiltonharbour.ca