

SEPTEMBER 2025

RESTORING THE RIVER

Official Newsletter of The St. Marys River Remedial Action Plan

Part 1: Restrictions on Fish Consumption BUI

What is a Fish Consumption BUI?

A Beneficial Use Impairment (BUI) occurs when human activities have degraded the natural ability of a waterbody to support its intended uses. In the case of the St. Marys River Area of Concern (AOC), one such impairment involves restrictions on eating locally caught fish due to the presence of contaminants like mercury, PCBs, and dioxins/furans. This newsletter explores an overview into the 2020 Fish Consumption BUI Assessment (Gandhi et al. 2020), and whether the delisting criteria have been met in order to re-designate the BUI to “not impaired” status.

The delisting criteria for the Fish Consumption BUI in the St. Marys River require that fish consumption advisories in the Area of Concern are no more restrictive than those in comparable reference areas.



This Issue:

What is a fish consumption BUI?

PAGE 01



Overview of The St. Marys River AOC

PAGE 02



Findings from the 2020 Fish Consumption BUI Assessment

PAGE 02



Upcoming Projects

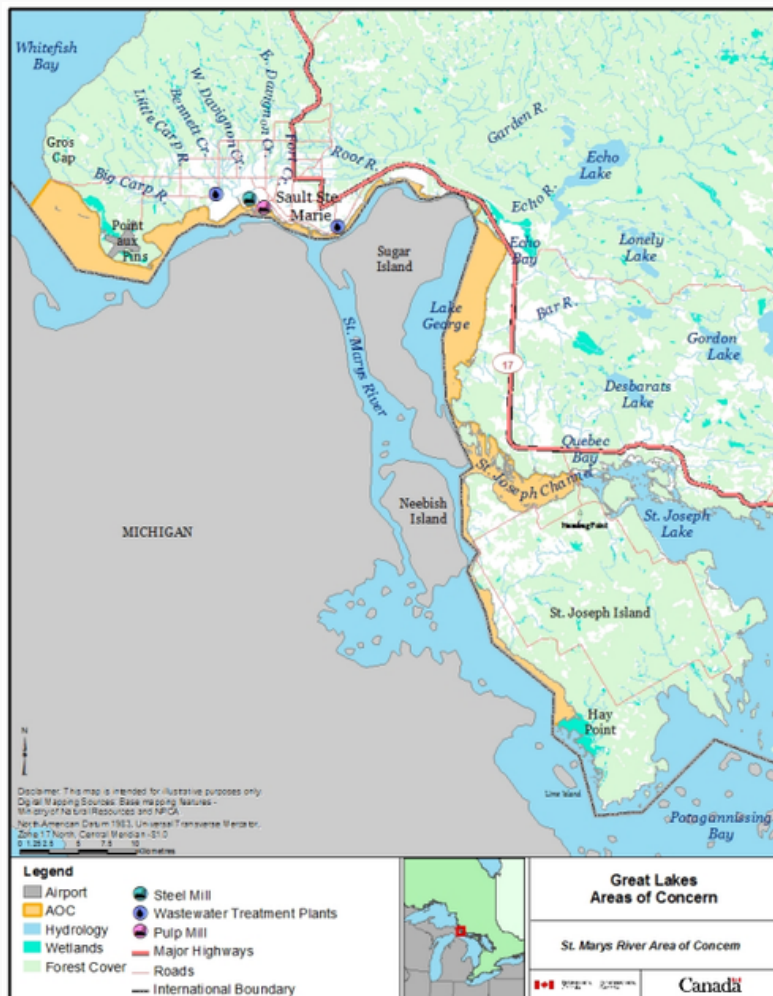
PAGE 04



What is an AOC?

The St. Marys River is an important channel connecting Lake Superior and Lake Huron, flowing between Sault Ste. Marie, Ontario and Sault Ste. Marie, Michigan. In 1987 this area was designated as an Area of Concern (AOC) under the Great Lakes Water Quality Agreement.

Due to several environmental challenges from decades of industrial activity, municipal wastewater discharge, and other human caused issues, these impacts resulted in a number of Beneficial Use Impairments (BUIs), including restrictions on fish consumption which we are discussing in today's newsletter.



What The Science Says

RE: ASSESSMENT OF FISH CONSUMPTION BUI (GANDHI ET AL., 2020)

In 2020, researchers Gandhi, Jackson, and Bhavsar published a comprehensive study assessing the Fish Consumption Beneficial Use Impairment (BUI) in the St. Marys River Area of Concern (AOC). Their objective was to determine whether conditions in the river had improved enough to consider removing this BUI, which was originally put in place due to high levels of harmful contaminants in fish.

Since its designation, considerable progress has been made to improve conditions in the river through regulatory action, infrastructure upgrades, and habitat restoration. The St. Marys River AOC is now in the process of evaluating remaining BUIs, including an assessment on the *Restrictions on Fish Consumption BUI*.

What Are PCBs?

PCBs are Polychlorinated biphenyls, which are a group of human-made chemicals. They were often used in electrical equipment, paints, along with industrial processes due to their insulating and non-flammable properties. Although their production was banned in the late 1970s, PCBs persist in the environment and can accumulate within fish and wildlife.

Exposure to PCBs has been associated with significant health risks, and because these chemicals degrade very slowly, they continue to pose environmental concerns in waterways like the St. Marys River, where they are a key factor in fish consumption advisories.



The researchers applied a three-tier framework which initially involved looking at the current fish consumption advisories issued by the Province of Ontario. These advisories that are in place offer guidance on how people can safely eat a variety of fish species based on size and contamination levels. Moving on to the second tier, the research team compared advisories present within the St Mary's River to those in non-AOC areas around Lakes Superior and Lake Huron to assess if local conditions were worse. The final tier analyzed was the long-term trends of key contaminant levels in fish, particularly the main three contaminants that have been shown to have adverse effects on human health mentioned above; mercury, polychlorinated biphenyls (PCBs), and dioxins/furans.

This study's findings appear hopeful. The fish advisories in the St. Marys River is mostly non-restrictive, and similar to those in surrounding, non-impacted areas. It is advised that for the general population most fish species can safely be consumed for at least eight meals per month, which the study suggests is considered "non-restrictive." This reflects a strong indicator that environmental conditions in this AOC have improved over time.



This study highlights a clear downward trend in contaminant levels over the past 30+ years! This is largely due to a combination of regulatory improvements, industrial cleanup efforts, and better wastewater management. One example of these improvements comes from examining mercury and PCB concentrations in fish populations, which includes Walleye and White Sucker, have dropped by more than 50% since the 1970s. These findings suggest the pollution that once made local fish unsafe to consume is no longer a major barrier to the river's health.

Based on the evidence, researchers concluded that the Fish Consumption BUI in the St. Marys River may be eligible for re-designation as "not impaired." However, they emphasized the importance of ongoing monitoring and future surveys to gain a deeper understanding of how local communities interact with and consume fish from the river.

“It is our
collective and
individual
responsibility to
preserve and
tend to the world
in which we all
live.”

DALAI LAMA



What Comes Next?

Looking ahead, we're excited to launch a series of monthly newsletters over the summer to keep you informed about progress on the St. Marys River Remedial Action Plan (RAP). Each edition will highlight key updates, ongoing projects, and ways you can get involved.

We're also planning some in-person events and outreach opportunities in the coming months to engage with local communities and share the work being done to support the river's recovery. Stay tuned, we're just getting started!



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