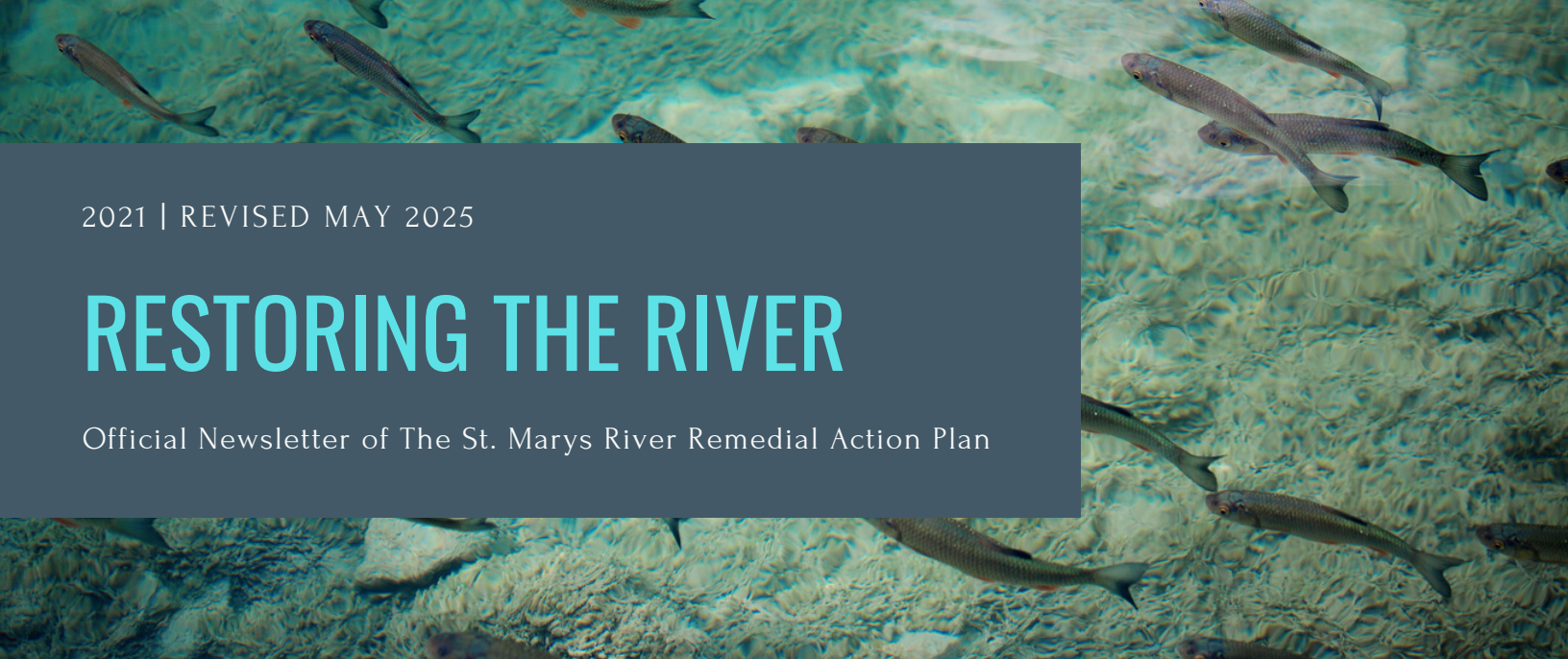




2021 | REVISED MAY 2025

RESTORING THE RIVER

Official Newsletter of The St. Marys River Remedial Action Plan

The St. Marys River Area of Concern

In 1987, the St. Marys River was designated as an Area of Concern (AOC) in the Great Lakes. Pollution from industrial sources, such as effluents from the pulp and paper mill and steel production, insufficiently treated municipal and private sewage, and contaminated stormwater runoff from the surrounding watershed are all factors that have contributed to the degradation of the St. Marys River. While inputs of pollution into the river are no longer as severe as they used to be, our legacy of environmentally harmful activities has left many negative effects on fish and their habitat, sediment composition, and the overall quality of the water.



Did You Know?

Beneficial Use Impairments (BUIs) are a set of 14 environmental challenges recognized under the Canada-US Great Lakes Water Quality Agreement that are indicators of an Area of Concern (AOC) in the Great Lakes. In the St. Marys River, 9 out of 14 BUIs were originally deemed impaired and 1 required further assessment.

Today, thanks to remedial action efforts, only 4 out of 14 BUIs remain impaired.

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Degradation of Fish and Wildlife Populations

As of January 2024, the Degradation of Fish and Wildlife Populations BUI has been officially redesignated to 'Not Impaired' for the Canadian side of the St. Marys River Area of Concern.

Degradation of Fish and Wildlife Populations was 1 of the 14 possible Beneficial Use Impairments (BUIs) recognized under the Canada-US Great Lakes Water Quality Agreement.

In the St. Marys River Stage 1 Remedial Action Plan report (1992), the Degradation of Fish and Wildlife Populations BUI was divided into 2 parts: (a) degradation of fish populations (b) degradation of wildlife populations. The fish component of the BUI was identified as impaired in the St. Marys River. The wildlife component was never deemed impaired, but instead was determined to “Require Further Assessment” due to a lack of assessment criteria at the time.

The fish component of the Degradation of Fish and Wildlife Populations BUI was identified as one of ten Beneficial Use Impairments in the St. Marys River because native fish populations were being affected by:

- Habitat alteration
- Overfishing
- Pollution
- Invasive species

How The BUI Was Redesignated

The "Degradation of Fish and Wildlife Populations" BUI was officially re-designated to “Not Impaired” in January 2024, after meeting all required delisting criteria through a series of scientific studies, monitoring programs, and targeted restoration actions.

Fish Component of this BUI

The delisting criterion for fish required that the overall fish community health in the AOC be comparable to a suitable reference site, as measured by an Index of Biotic Integrity (IBI) in two consecutive studies. Here is how this was achieved:

- 2009 & 2014 IBI Assessments by Fisheries and Oceans Canada (DFO)
 - Assessed fish species diversity, biomass, age classes, predator-prey balance, and community structure.

What Was The Delisting Criteria?

The delisting criteria for the fish component of the Degradation of Fish and Wildlife Populations BUI states that the BUI will no longer be impaired when:

“The overall fish community health within the AOC is comparable to that of a suitable reference site, as assessed using an index of biotic integrity through a minimum of two consecutive studies”.

Index of Biotic Integrity (IBI)

Scientific tool used to identify and classify faunal communities. Biotic integrity is based on the premise that the status of living systems provides the most direct and effective measure of the integrity of water.

Supporting Remedial Actions

Several additional cleanup and habitat protection activities helped achieve the removal of this BUI:

- Elimination of major point-source pollution (e.g., from wastewater plants and legacy industries)
- Habitat restoration (e.g., shoreline stabilization at Algoma Slag Dump)
- Continued support for invasive species control (e.g., Sea Lamprey)
- Fish harvest surveys and monitoring of habitat enhancement impacts

- Results showed that the fish community was diverse, dominated by native species, and comparable to healthy reference sites in Lake Huron.

- Additional Monitoring by St. Marys River Fisheries Task Group & MNRF/MDNR:

- Sport fish surveys confirmed stable or increasing managed populations.
- Angler surveys supported findings of healthy, accessible fish populations.

Wildlife Component of this BUI

Although the wildlife component was not originally deemed impaired, a thorough assessment was required to confirm its status. Here is what was completed:

- 2010–2014 Nesting Bird Surveys by Environment and Climate Change Canada (ECCC):
 - Studied Common Terns and Black Terns across multiple breeding seasons.
 - Based on nest count surveys from 2010 to 2013
- ECCC also completed a 3-year study on Common Terns and Herring Gulls:
 - Included lab testing on eggs and chicks
 - Tested for PCBs, dioxins, heavy metals, and other pollutants.
 - Contaminant levels were low, and comparable to non-AOC sites.
 - Found no evidence of deformities, reproductive issues, or elevated contamination.

These assessments came to the conclusion that wildlife populations in the AOC were healthy and not experiencing localized environmental stress. Additionally, the assessments regarding fish populations emphasized that the St. Marys River is home to a relatively healthy fish community that is complex, diverse and dominated by native species.



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