



Beneficial Use Impairment Edition

St. Marys River Remedial Action Plan NEWSLETTER



Beneficial Use Impairments

What are they?

A beneficial use impairment (BUI) is a detrimental change in the chemical, physical or biological integrity in the Great Lakes system. BUIs are used as a framework for directing remediation and monitoring efforts in Areas of Concern (AOC).

Did you know ???

In the 1987 Protocol to the Canada-U.S. Great Lakes Water Quality Agreement, the two nations recognized 43 Areas of Concern (AOC) in the Great Lakes Basin; including the St. Marys River. The agreement was renewed in 2012. As part of this agreement, Remedial Action Plans are developed to identify and restore environmental impairments in these areas. An Area of Concern, or AOC, is the term used to identify hotspots on the Great Lakes where the environment has been harmed to the point that it affects the use and enjoyment of that area or the overall health of the lake or river.

The Stage 1 Remedial Action Plan report for the St. Marys River was completed in 1992, and shows a summary of environmental conditions and impairments that existed in early years. The report showed sources of contaminants and activities that had caused the impairment of beneficial uses. Of the 14 possible BUIs identified under the *Canada- U.S. Great Lakes Water Quality Agreement*, nine were originally deemed impaired for the St. Marys River AOC, and one required further assessment. As of December 2019, six were found to be *impaired*. Whereas, the one *requiring further assessment* was found to be not impaired.



Beneficial Use Impairment Status Update

Currently, the St. Marys River AOC has 6 impaired beneficial uses (see Table 1), while 4 BUIs have been re-designated to a “not impaired” status!

Bird and Animal Deformities or Reproductive problems (not impaired): This BUI was never deemed “impaired” for the AOC, but rather required further assessment. In 2014, an assessment concluded that there is no evidence of impairment in colonial waterbirds attributable to local contamination effects within the AOC, and the reproductive success for birds studied within the AOC is similar to that from outside the AOC.

Eutrophication or Undesirable Algae (not impaired) and Degradation of Aesthetics (not Impaired): The official re-designation to “not impaired” is based on a three-year water quality monitoring study by Algoma University. Analysis of the monitoring data concluded conditions that originally led to the beneficial use being designated as “impaired” no longer exist and the delisting criteria was met.

Beach Closings (not impaired): was identified “impaired” because *E. coli* bacterial densities were reported to be in excess of the Provincial Water Quality Objective. The official re-designation to “not impaired” is based on the completion of remedial actions focused on including stormwater management, East End WasteWater Treatment Plan upgrades, and confirmation that the floating masses observed in the vicinity of Bellevue Marine Park were not a significant source of *E. coli* bacteria.



Table 1: Summary of BUI Status

Beneficial Use Impairment (BUI)	Status
1. Restrictions on Fish and Wildlife Consumption	I
2. Tainting of Fish and Wildlife Flavour	NI
3. Degradation of Fish and Wildlife Populations	I
4. Fish Tumours and Other Deformities	I
5. Bird and Animal Deformities or Reproductive Problems	NI
6. Degradation of Benthos	I
7. Restrictions on Dredging Activities (*change to NI recommended)	I*
8. Eutrophication and Undesirable Algae	NI
9. Restrictions on Drinking Water Consumption	NI
10. Beach Closings	NI
11. Degradation of Aesthetics	NI
12. Added Cost to Agriculture and Industry	NI
13. Degradation of Phytoplankton and Zooplankton	NI
14. Loss of Fish and Wildlife Habitat	I
I = Impaired; RFA = Requires Further Assessment; NI = Not Impaired	

Contact Information >>>

For more information about the initiatives being undertaken to restore the St. Marys River, visit our website at bpac.algomau.ca or search for our Facebook page (St. Marys River Remedial Action Plan)!

