



Degradation of Benthos Edition

St. Marys River Remedial Action Plan NEWSLETTER

Did you know ???

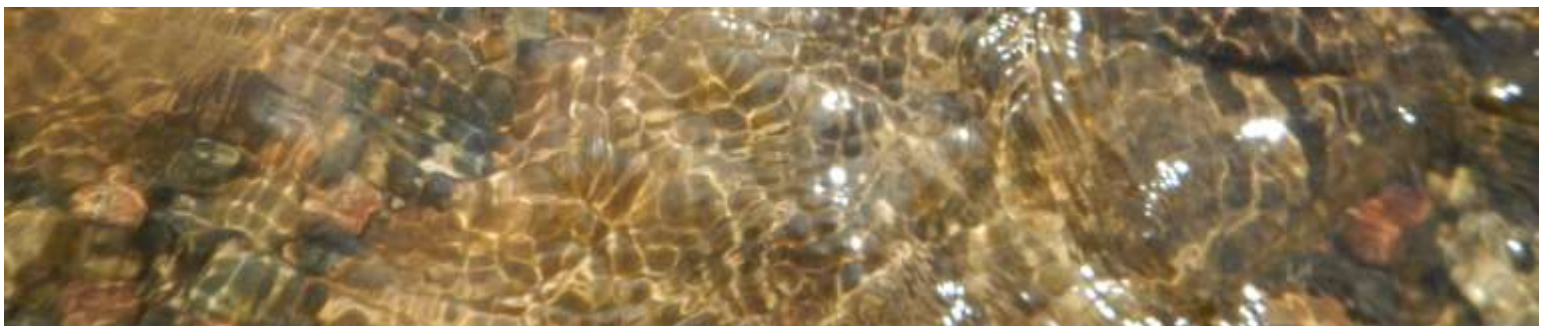
Initial delisting criteria were developed for the St. Marys River Area of Concern (AOC) in 2002, and were all updated in 2015. This was accomplished with the support and participation of the Binational Public Advisory Council (BPAC). In an effort to define meaningful targets, the delisting criteria were updated to follow the SMART test, meaning that they are Specific, Measurable, Achievable, Relevant, and Time-oriented. All Beneficial Use Impairments (BUIs) for the St. Marys River AOC received updated delisting criteria with the exception of the Degradation of Benthos BUI. Delisting criteria for this BUI are currently undergoing revision.

Degradation of Benthos

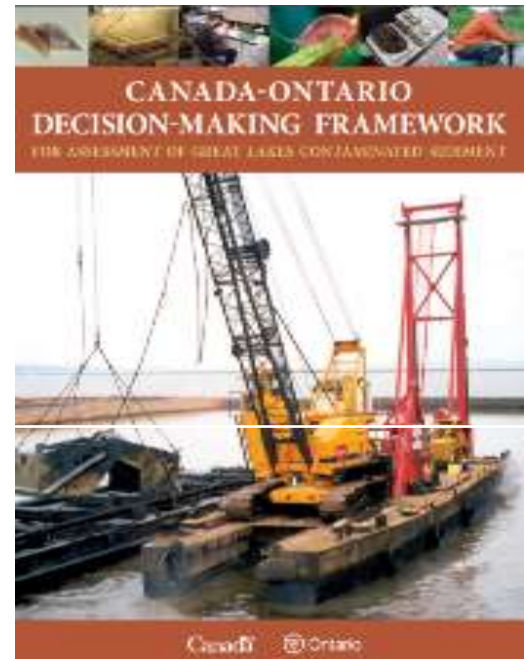
Background on Beneficial Use Impairment

Benthos are a group of organisms that live on, in or near the river bottom which is also known as the benthic zone. Benthos can include microorganisms such as bacteria or fungi and macroorganisms such as larger invertebrates. Because these organisms live on/in the riverbottom they are the most effected by contaminants within the sediments.

The *Degradation of Benthos* Beneficial Use Impairment was originally deemed impaired due to high levels of polycyclic aromatic hydrocarbons (PAHs) and heavy metals in several locations in the St. Marys River. Environment and Climate Change Canada (ECCC) and the Ministry of Environment, Conservation and Parks (MECP) have been carrying out studies on the chemical, biological and physical conditions of the river sediment and the animals living within it (benthos), which will contribute to an informed decision on appropriate sediment management for the AOC.



Canada-Ontario Decision Making Framework for Assessment of Great Lakes Contaminated Sediment



The Canada-Ontario Decision Making Framework for Assessment of Great Lakes Sediment was developed in 2008 on behalf of ECCC and MECP as a consistent, scientifically defensible, and publically accepted framework for assessing and managing contaminated sediment within Areas of Concern. It is being applied to the St. Marys River AOC.

Sediments in the St. Marys River Area of Concern are being evaluated through the use of multiple lines of evidence as prescribed under the *Canada-Ontario Decision Making Framework for Assessment of Great Lakes Contaminated Sediment*. This Framework ensures the use of an ecosystem approach to sediment assessment, and considers potential effects on sediment-dwelling and aquatic organisms, as well as potential for contamination to accumulate in the food chain. The Framework is intended to standardize the decision-making process for contaminated sediment management in Great Lakes Areas of Concern while also being flexible enough to account for site-specific considerations.



Degradation of Benthos BUI Delisting Criteria Updates

The benthic invertebrate community within the St. Marys River has largely recovered over the last 30 years. There is, however, some evidence of benthic toxicity in localized areas east of Bellevue Marine Park, within the Algoma Boat Slip, and the Transport Canada water lot. Each site has its own unique characteristics, contaminants of concern and ownership. Thus, the proposed delisting criteria will be specific to these three primary locations.

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)!

