



Conceptual Site Model Edition

St. Marys River Remedial Action Plan NEWSLETTER

Contaminated Sediment Management

What is the Conceptual Site Model (CSM)?

The Conceptual Site Model (CSM) represents the current state of understanding of the sources, extent, fate and transport of contaminants within the sediments of the St. Marys River Area of Concern (AOC). It provides an organized framework for understanding and communicating current conditions of the river bottom and how it effects humans and the environment. The information gathered within the CSM is essential to aid in effective remediation decision-making.

The Conceptual Site Model is a living document that is intended to help Environment and Climate Change Canada (ECCC), the Ontario Ministry of the Environment, Conservation and Parks (MECP), Algoma University, the Binational Public Advisory Council (BPAC), and other stakeholders address contaminated sediments in the St. Mary's River AOC.



CSM Objectives >>>

Specific objectives of this CSM are to:

- ✓ *Characterize contaminant sources, migration pathways, human and ecological receptors, exposure pathways, and the linkages among these components;*
- ✓ *Provide an information framework to support development of a contaminated sediment management strategy for the river;*
- ✓ *Identify key issues and knowledge gaps*
- ✓ *Offer recommendations that will assist stakeholders in formulating the contaminated sediment management strategy for the AOC.*

Conceptual Site Model Recommendations

Updates to the CSM began in 2019. In order to assist with the development of a contaminated sediment management strategy for the river, the goal of updating the CSM was to reach one of the following three possible conclusions:

1. Sufficient evidence exists to conclude that current conditions in the AOC do not pose a significant risk to the environment and therefore risk management actions are not warranted; OR
2. Insufficient evidence exists to draw conclusions regarding risks to the environment under current conditions and further investigation and/or monitoring is warranted; OR
3. Sufficient evidence exists to conclude that current conditions pose significant risks to the environment and therefore risk management actions are warranted in specific locations.

Of these three alternative conclusions, the first best describes the conclusions of the CSM.

Sufficient evidence exists to conclude that current conditions in the AOC do not pose a significant risk to the environment and therefore risk management actions are not warranted



Natural Recovery

The benthic invertebrate community of the St. Mary's River has largely recovered over the past three decades. Trends in sediment quality over time, suggest that substantial natural recovery of AOC sediments has occurred since the 1980s. This natural recovery likely reflects significant decrease in sources, biodegradation, and burial of contaminants. Based on the findings of the CSM, there is low potential for adverse effects in benthic invertebrates, fish, wildlife and humans that are exposed to contaminants of concern in the AOC. Risk management actions are not warranted.

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)!

