

St. Marys River AOC BPAC Meeting Minutes

Place: Webex Meeting
Sault Ste. Marie, Ontario & Michigan

When: Thursday August 6, 2020
11:30 am – 1:30 pm

Call to order/introductions

- Members:** Mike Ripley, Aubrey Maccoux-LeDuc, Klaas Oswald, Brian Wesolek, Chris Graham, Peter Greve, Ron Prickett
- Agency Reps:** Mike Park (APH), Mark Chambers (ECCC), Ted Briggs (MECP), Heather Williams (EPA), John Riley (EGLE), Gurpreet Mangat (ECCC), Lisa Derickx (AU)
- Guests:** Fred Post (Algoma Steel Inc.)

Presentations

- LEAP Overview and Update for BPAC – Fred Post (Algoma Steel Inc.)
 - A risk-based environmental management agreement between Algoma Steel and the Ministry of Environment, Conservation and Parks
 - Objectives of LEAP include: identifying, assessing, managing, and mitigating off-site adverse environmental effects caused by Legacy Environmental Contamination
 - Targeted annual investment - \$3.8 million; totaling \$79.8 million over 21 years
 - Projects in 2019 included a Site wide baseline investigation, PCB disposal, Dredge Boat Slip, Legacy Tar spill clean-up, Legacy Coke Oven Gas main cleaning, Legacy Tire Disposal, Secondary Containment Waste Oil Tanks, Secondary Containment Raw Liquor Tanks, Engineering for re-routing blast furnace.

- Delisting Criteria for the Degradation of Benthos BUI: Proposed Updates for BPAC – Mark Chambers (ECCC), Ted Briggs (MECP), & Lisa Derickx (Algoma U)
 - The objective is to propose updated delisting criteria for the *Degradation of Benthos* BUI for the Canadian side of the St. Marys River AOC that reflects current science, local environmental initiatives, and creates parallels to the Canada-Ontario Decision Making Framework for Assessment of Great Lakes Contaminated Sediment.
 - Delisting criteria are measurable targets for restoring beneficial uses and establish a benchmark for when a beneficial use can be deemed no longer impaired under the Remedial Action Plan (RAP).
 - All of the delisting criteria for the St. Marys River AOC have been updated except for the *Degradation of Benthos* BUI
 - Proposed overarching delisting criteria: The *Degradation of Benthos* BUI will no longer be impaired when assessments of St. Marys River sediment using multiple lines of evidence (sediment chemistry, benthic community alteration, toxicity, and biomagnification potential) conclude negligible environmental risk requiring no further management action, as demonstrated under the *Canada-Ontario Decision Making Framework for Assessment of Great Lakes Contaminated Sediment*.
 - Proposed site-specific delisting criteria:

- The contaminated sediment in the Algoma Boat Slip is: i) assessed, ii) removed through dredging (down to native material/point of refusal), and iii) reported upon post-cleanup. This shall be done in a manner consistent with the Legacy Environmental Action Plan (LEAP) agreement between Algoma Steel and the Province of Ontario, which requires source track-down investigations and a recourse should contaminants redeposit at elevated concentrations;
- Assessments using multiple lines of evidence (sediment chemistry, benthic community alteration, toxicity, and biomagnification potential) on the area east of Bellevue Marine Park and the “Transport Canada Water Lot” conclude negligible environmental risk requiring no further management action, as demonstrated under the Canada-Ontario Decision Making Framework for Assessment of Great Lakes Contaminated Sediment. If there is environmental risk requiring management actions, evidence of successful implementation of management action – as indicated by improving trends over three monitoring cycles and as determined through expert technical review – will be required for BUI re-designation
 - The RAP Team is requesting BPAC input and review on proposed updated delisting criteria by mid-September.
 - Questions and comments received by BPAC has been appended to these minutes.

Agency Updates

Environment and Climate Change Canada (ECCC):

- A contribution agreement is now in place between ECCC and Algoma University to provide continued funding for RAP Coordination.
- Draft design plans and concept drawings have been developed for the Whitefish Island Habitat project. ECCC is currently negotiating a funding agreement with Batchewana First Nation who will be involved in project management.

Ontario Ministry of the Environment, Conservation and Parks (MECP):

- Funding from the Canada-Ontario Agreement for RAP Coordination is going through internal approvals and should be available in the upcoming months.

United States Environmental Protection Agency (USEPA):

- No updates at this time.

Michigan Department of Environment, Great Lakes, and Energy (EGLE):

- The State of Michigan intends to collect fish in late summer or early fall to re-evaluate the *Restrictions on Fish Consumption BUI*.

Statewide Public Advisory Council (SPAC)

- A summary was provided for the State of the Lakes report at the SPAC meeting which took place last week.

New Business

- No new business discussed

Memberships

- No new membership applications
- For new members, applications must be received & prospective members present for confirmation – standard procedure.

BPAC Executive Elections

- Call for nominations for a Canadian Chair, American Vice-Chair, and Canadian Second Vice-Chair
 - Canadian Chair: Peter Greve
 - US Vice Chair: Aubrey Maccoux-LeDuc
 - Canadian Second Vice Chair: Ron Prickett

Public Comments

- No public comments

Next Meeting

- Next meeting to be scheduled in October 2020

Binational Public Advisory Council (BPAC)

Feedback for RAP Team

Re: Updated Delisting Criteria for the *Degradation of Benthos* Beneficial Use Impairment (BUI)

Comments and Questions

From Peter Greve:

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The term “negligible” is defined within the Canada Ontario Framework, but not well defined in the discussion document for our AOC. Quantitative measures should be included where appropriate.

One major difference between American and Canadian delisting criteria are the number of monitoring cycles required (2 vs. 3). Having three consecutive monitoring cycles irrespective of political boundaries makes the most sense to me.

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Why are we multiple frameworks for the same river? Are there best practices that can be carried over from both frameworks to create a consistent model? Specific frameworks for US and CA waters and then again for the sites identified like East of Bellevue Marina Park or the Algoma Slip.

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Reference Areas; (Section 3.5 of Canada Ontario Sediment Framework)

What is a suitable location to compare to and how many sites will be used as controls? Can these sites be measured at depth as well (>10cm)

Site specific considerations; (Section 3.1 of Canada Ontario Sediment Framework)

There are many factors that support poor sediment stability in our waterway:

- It is a dynamic waterway with industry and recreational boaters frequenting identified contaminated sites (ie sailboats at Topsail Island Harbour, freighters with drafts that exceed the average depth of the river and Algoma Steel input/output.

- It is a high energy system. As per the US Army Corp of Engineers, 1557426 L flow through the rapids every second in periods of low flow (winter) and this is only a small fraction of the total flow in the river. The river has massive erosive power.
- Water levels frequently fluctuate. The waterway's boundaries change as the water level changes. This means that the river current can affect different areas (and their associated sediments) at different water levels. We should consider the river's characteristics (such as flow and water level) at the time a study is completed.

- **Page 7 of Canada Ontario Decision Making Framework**

“the status of deeper level sediment should be considered as data become available”

In the St. Marys River, deeper level sediment should be a focus for all benthic BUI assessments because of the poor sediment stability and the associated risk of considerably toxic sediments being exposed.

From Mike Ripley:

Comments from BPAC on the conceptual site model were critical of limiting delisting criteria based on only the uppermost 10 cm of sediments despite assurances of sediment stability due to "natural" processes like ice scouring or usual flow velocities. The concern being that extreme flow conditions, fluctuating water levels (extreme low lake levels as experienced in the late 2000's) and human disturbances to the sediments (scouring by vessels, routine dredging) can easily lead to exposures of possibly toxic sediments that exist below the top 10 cm.

From Ron Prickett:

The lines of evidence that have been given to us are Sediment Chemistry, Benthic Community Alteration, Toxicity, and Biomagnification potential.

Sediment Chemistry: How is Sediment Chemistry different from Toxicity? What is the chemistry we are looking at and why, if it is not for Toxicity? What are the parameters for deciding that the Sediment Chemistry is detrimental and therefore not evidence for delisting? What is the measurable threshold to determine delisting in this category? What are the SQGs for the chemicals in the sediment that you are using to determine toxicological effects.

Toxicity: I think I understand that if you kill a number of benthic creatures with the sediment it is not a good thing. I believe the cut off for not delisting is greater deaths than 20% from your reference location? Is that correct? If not, what is the measure of toxicity for delisting?

Benthic Community Alteration: I believe this is just a comparison of the species from the sample site to the reference site. Choosing the reference site that matches your sample site would be imperative for this test to

have any validity. What is the measurable difference in community alteration in the comparison that would be evidence for not delisting?

Biomagnification Potential: I believe to determine biomagnification you need to measure biomagnification tracer chemicals such as Methyl Hg;PCBs; DDTetc Are these chemicals being measured in the sediment assessment? What is the criteria to determine the level for potential detrimental biomagnification that would lead to delisting?

So in conclusion, we would expect no adverse effects from the chemistry, low to nil toxicity, very little community alteration and low biomagnification potential to delist, is that correct?

I would suggest this needs to be spelled out in clear concise language with measurable targets listed.

I would suggest staying clear of words like negligible, slightly, mostly, low level, somewhat adverse, possibly toxic, low dose tolerant, somewhat higher death rate, statistically acceptable adverse effects.

Also mentioned was the fact that sediments can be redistributed or changed physically. Doesn't this have to be included in the discussion of delisting criteria?

From Al Wright:

1. The Area of Concern has been shrunk from the original designated size. Lake George and Little Lake George (components of the Lower St. Marys River) are not included. And yet these areas were found to have contaminants buried at depth at the time of Phase One. I suspect that these areas have been removed in order to expedite the urgency by government officials to “Delist” the St. Marys River.
2. I am not a fan of the Canada-Ontario Decision Making Framework for Assessment of Great Lakes Contaminated Sediment. The principle reason is due to the focus on only testing the surficial upper 0-5 cm or 0-10cm surface sediments which are subject to annual deposition of “clean” sediments thus masking the more toxic contaminants buried at greater depth. These deeper sediments can be re-suspended in the water column due to dredging, lowering water levels as a result of climate change, or other man or natural disruptors of the status quo.
3. The flow chart presented in the Delisting Criteria again is focussed on the surficial sediments. It is not until Step 7 and Decision 6 that there is consideration given to the status of the deeper sediments and whether they are a potential risk. I think the upper sediments will tend to be “Clean” but the sediments at depth are the major concern on the St. Marys River.