

**St. Clair River Canadian Remedial Action Plan (RAP) Implementation Committee (CRIC)**  
**Meeting Minutes - FINAL**

**Thursday, June 20, 2019**  
**Sarnia-Lambton Environmental Association (SLEA)**  
**1489 London Road, Sarnia, Ontario**

**Participants:**

Trevor Robak	Courtney Jackson	Terry Burrell
Kris Lee	Clint Jacobs	Sandra Kok
April White	Kelly Johnson	Ted Briggs
Annette Verhagen	Vince Gagner	

**Regrets:**

Donna Blue	Naomi Williams
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**Guests:**

Mike Moroney	Sara Varty	Darrell Randell
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**ITEMS:**

**Welcome and Introduction:**

Ted Briggs chaired the meeting and welcomed committee members.

Ted welcomed Darrell Randell to the meeting. Ted and April White spoke about Darrell's contributions to the Area of Concern (AOC) program and thanked him for his years serving on the CRIC and Binational Public Advisory Council (BPAC). Darrell will be retiring from his role with Ducks Unlimited in July 2019 and no longer sits on the St. Clair Township Council, and therefore will no longer be a member of the CRIC or BPAC.

**Review and Acceptance of the Agenda and Previous Minutes:**

The draft agenda and minutes from the November 22, 2018 meeting were accepted.

**Actions from the Meeting of November 22, 2018:**

Action items from the previous meeting were discussed:

1. **Action:** Kelly Johnson will distribute an up-to-date BUI status chart to CRIC members.  
**Completed**
2. **Action:** Kelly Johnson will be exploring options for a re-designation celebration in early 2019.  
**In progress**
  - Taking into account possible funding shortfalls for the current year (2019/2020) Kelly will explore low-cost options for a re-designation celebration and begin planning an event.
3. **Action:** CRIC members are to review the Accomplishments Report and submit comments to Kelly Johnson by December 15, 2018.  
**Complete**
4. **Action:** Include the Work Plan as an agenda item for the next CRIC meeting.  
**Complete**

### **St. Clair River Contaminated Sediment Project – Mike Moroney**

Mike Moroney, Project Manager with the St. Clair Region Conservation Authority attended the meeting to speak about the Engineering and Design Plan for Management of Contaminated Sediment in the St. Clair River AOC.

Various data has been collected from the AOC over the years to determine the work that needs to be completed to remediate contaminated sediment in three priority areas. A mercury level in fish of 0.2 mg/kg has been determined to be a protective concentration (i.e. safe for fish). Based on analysis completed, an average mercury concentration in sediment of 3 mg/kg will result in an average concentration in fish of 0.1-0.2 mg/kg. In order to achieve this concentration, all sediment contaminated at 10 mg/kg or higher will be removed and replaced with clean backfill. This will achieve an average concentration in the three priority areas of 3 mg/kg.

Contaminated sediment will be removed via hydraulic dredging wherever possible, or mechanical dredging in targeted areas. Capping may be used in areas inaccessible for dredging. Details will be refined based on additional data collected during the Detailed Engineering and Design phase of the project.

It was announced in December 2018 that the St. Clair Region Conservation Authority had been granted funding from Environment and Climate Change Canada (ECCC), the Ontario Ministry of the Environment, Conservation and Parks (MECP) and Dow Canada for the Detailed Engineering and Design Project. This project will further refine an implementation plan, and costs for remediation of the three contaminated sediment sites. It is proposed the work will be complete by spring 2021. It is hoped that a qualified consultant will be hired in summer 2019 to begin the technical work required for the project.

### **Current BUI Status – Ted Briggs**

Ted Briggs provided an update on the Beneficial Use Impairments (BUIs). Currently four BUIs remain Impaired while two are classified as Requiring Further Assessment (RFA).

Impaired BUIs:

1. Restrictions on Fish and Wildlife Consumption
  - All the wildlife data has been collected for this BUI. Additional muskrat sampling was completed and contaminant analysis completed by GLIER and results available and will be shared.
2. Degradation of Benthos
  - This BUI is tied to the completion of the contaminated sediment project.
3. Restrictions on Drinking Water Consumption or Taste and Odour Problems
  - The delisting criteria has been achieved. Ted Briggs has started drafting the Status Assessment Report and this BUI will come to the CRIC later this year or in early 2020 for re-designation approval.
4. Loss of Fish and Wildlife Habitat
  - The Fish and Wildlife Habitat and Populations Subcommittee met in early May. The subcommittee reviewed the criteria and there were some comments/questions on some of the criteria but the committee is comfortable the criteria has been achieved, aside from the criteria addressing connectivity which DFO suggested could include connectivity to the river in addition to wetland/terrestrial habitats. (“Habitat connectivity between the St. Clair River and Sydenham River and between Walpole Island First Nation, Bickford Oak Woods and the Aamjiwnaang First Nation has been improved.”).
  - April White will start compiling data soon for the Status Assessment Report and may present the findings to the CRIC at the next meeting.

RFA BUIs:

1. Degraded Fish and Wildlife Populations
  - The Status Assessment Report for Degraded Fish and Wildlife Populations BUI has been drafted and a final draft will be released in the coming weeks.
2. Fish Tumours or Other Deformities
  - Draft status report complete

**ACTION:** Kelly Johnson will circulate an updated BUI status chart from Ted.

**ACTION:** A short summary/communication piece regarding BUI progress will be developed by Ted, April White and Kelly.

### **Fish Tumours or Other Deformities BUI Update – April White**

April White provided the CRIC with an update on the Fish Tumours or Other Deformities BUI.

Studies have linked the development of cancerous liver tumours among sediment dwelling fish to high concentrations of polynuclear aromatic hydrocarbons (PAHs). The liver is a frequent site of tumours in fish as it is the main organ responsible for detoxification. Recognizing that tumours and deformity rates could be influenced by sediment contamination, Fish Tumours or Other Deformities became one of the 14 BUIs for Areas of Concern. This BUI would be deemed Impaired in an AOC if the prevalence of fish liver tumours was similar to background levels or an un-impacted, reference site. After a sampling of brown bullheads in the lower Great Lakes two percent became the accepted background liver tumour rate for brown bullheads in the lower Great Lakes. If the tumour rate in an AOC was two percent or less, the BUI would be Not Impaired. In the St. Clair River there was little data related to this BUI other than one study, so the Stage 1 Report recommended additional studies be completed and the BUI was designated as Requires Further Assessment (RFA).

The brown bullhead is ideal for assessing biological impacts of local contamination for a number of reasons:

1. They generally reside in a specific area and do not migrate far.
2. They are benthic (bottom-dwelling) fish, exposed to contaminants in sediment and consume insects in the sediment.
3. A large database on liver tumour prevalence allows for spatial comparisons.

However, for the St. Clair River AOC collection of brown bullheads was challenging as the area is at the limit of the species' range. The shorthead redhorse sucker was deemed to be an acceptable alternative and locally abundant in the St. Clair River.

Between 2002 and 2006 livers from 126 shorthead redhorse suckers were analyzed from the River, downstream of the industrial complex, with zero liver tumours found. 100 livers analyzed (with one neoplasm found) from fish caught in Lake Huron, upstream of the industrial complex served as the reference. While these results were positive, the St. Clair River was the only AOC that used shorthead redhorse sucker, limiting the ability to spatially compare tumour rates to the commonly used brown bullhead.

At this point Walpole Island First Nation (WIFN) advised Environment and Climate Change Canada (ECCC) that there were ample brown bullheads in the Walpole Island delta and invited ECCC to conduct a study there. There was also local concern that contaminants were settling into channels and bays around the community. ECCC worked with WIFN to develop a study proposal and project plan. The plan included sampling 100 fish larger than 25 cm. Between 2013 and 2014 local fisherman from WIFN set trap nets and caught 60 brown bullheads. The fish were processed in an on-site field lab. During processing the length, weight, liver weight and sex of fish were documented. Inspections for external lesions and liver lesions were also conducted. Analysis of fish livers for tumours was conducted by British Columbia's Ministry of Agriculture. Zero liver tumours were found. These findings have led to

the recommendation that the BUI be re-designated to Not Impaired status. The BUI Status Assessment Approach asked two main questions and the two studies referenced above provided the following conclusions:

1. Did the incidence rate of fish tumours in the AOC exceed the rates at the un-impacted reference site?
  - Incidence of fish tumours in the AOC was zero compared to one in the Lake Huron reference site.
2. Did studies find neoplastic (cancerous liver tumours in bullhead or suckers)?
  - Incidence of fish tumours in the AOC was zero compared to one in the Lake Huron reference site.

While there was concern in the St. Clair River AOC regarding external lesions on fish, during the brown bullhead study it was found that external skin lesions were caused by viruses. The viruses are commonly seen during spawning season when fish are in close proximity, facilitating the spread of the virus.

One question arose from the CRIC after April's presentation. Kris Lee asked:

*Were tumours classified into different types?*

April provided the following answer:

*There was no evidence of tumours of any kind, although 'tumours' referenced in this BUI and subsequent reports refers only to cancerous (neoplastic) tumours.*

In correspondence after the meeting, Clint Jacobs, expressed that the Fish Tumours or Other Deformities Status Assessment should explicitly indicate that the BUI is about internal fish tumours. Clint also recommends that post monitoring be conducted related to this BUI, after re-designation.

**ACTION:** Kelly Johnson, along with April, will work to develop a fact sheet to address some of the concerns and questions surrounding this BUI (e.g. internal vs. external lesions).

**Moved by Terry Burrell and seconded by Annette Verhagen that the Fish Tumours or Other Deformities Status Assessment Report be accepted and a Not Impaired status be recommended for this BUI by the CRIC.**

#### **Accomplishments Report & Work Plan Updates – Ted Briggs, April White, Kelly Johnson**

Kelly Johnson informed the CRIC that the 2012 – 2017 Accomplishments Report is now complete and hard copies are currently being printed.

**ACTION:** Kelly will develop an addendum to the Accomplishments Report stating current BUI status and noting work referenced in the report is only for a time period up to March 31, 2017.

**ACTION:** Kelly will begin preparing a new work plan based on the Accomplishments Report.

#### **Updates:**

##### **Friends of the St. Clair River (FOSCR) – Terry Burrell:**

- Craig Griffiths was elected president of the FOSCR at their Annual General Meeting in December 2018.
- The group is currently waiting to hear about COA funding.
- Work on the new FOSCR website is continuing. The website should be publically available by the end of summer.

Rural Lambton Stewardship Network (RLSN) – Jake Lozon:

- Jake Lozon was unable to attend the meeting. No report was available.

Binational Public Advisory Council (BPAC) – Kris Lee:

- The last BPAC meeting was held on April 4, 2019 in East China, Michigan at the DTE Energy facility.
  - DTE Energy provided a presentation related to their environmental initiatives and safety protocols.

**ACTION:** Kris Lee will request at the next BPAC meeting that a letter be sent to the Michigan Department of Environment, Great Lakes, and Energy and the Ontario Ministry of the Environment, Conservation and Parks to ask that each agency keeps the other aware of activities surrounding decommissioning of the DTE Energy plant and provide contact information within each agency should an issue arise.
  - BPAC also heard a presentation about the Huron Erie Corridor Drinking Water Monitoring program.
- The next BPAC meeting is tonight, Thursday, June 20, 2019 at the Enbridge office in Sarnia, Ontario.

St. Clair Region Conservation Authority (SCRCA) – Kelly Johnson:

- Kelly Johnson reported on behalf of the Conservation Authority as Donna Blue was unable to attend the meeting.
- Field season is underway at the Conservation Authority although the tree planting program has experienced significant delays due to weather.
- Staff continue to work on the Sydenham River Phosphorus Management Plan.

**ACTION:** Ted Briggs suggested having the Conservation Authority deliver a presentation regarding the Plan at the next CRIC meeting.

Aamjiwnaang First Nation – Courtney Jackson:

- Courtney informed the CRIC that work is continuing on the shoreline project.
  - Tree planting will be taking place on the site.
  - AFN would like to install under water cameras to monitor fish activity.
  - Courtney and Kelly Johnson will work together to develop AOC-related signage to be placed along the walking path.
- AFN will be working with the Conservation Authority to plan a community meeting related to the Sediment Management Project.

Walpole Island First Nation – Clint Jacobs:

- Clint Jacobs reported that WIFN will also be working with the Conservation Authority to plan a community meeting related to the Sediment Management Project.

Environment and Climate Change Canada (ECCC) – April White:

- April White informed the CRIC that ECCC is undergoing some staff changes.
  - Sandra Kok is acting for Jon Gee until September. Sara Varty will be acting for Sandra during that time.
- Science and monitoring conducted by ECCC in the AOC is winding down. The Canadian Wildlife Service and Fisheries and Oceans Canada are completing work in the restored coastal wetlands related to aquatic vegetation and fish habitat.
- 2019-2020 is the final year of Great Lakes Protection Initiative (GLPI) funding for RAP Coordination. A call for proposals will go out in December or early January and a 5-year application to continue coordination may be submitted.
- WIFN submitted a successful application and will be receiving GLPI funding for their Bush Marsh wetland restoration project.

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

- Ted Briggs informed the CRIC that the provincial government has not provided direction regarding Canada-Ontario Agreement (COA) funding which has supported St. Clair River Remedial Action Plan coordination, outreach and education in the past.
- A new Minister was announced earlier in the day for the Ministry – Jeff Yurek will take over for Rod Phillips.

Sarnia-Lambton Environmental Association (SLEA) – Vince Gagner:

- Vince reported that the offices of SLEA, the Sarnia-Lambton Industrial Educational Cooperative (IEC), and Community Awareness and Emergency Response (CAER) will be moving to the research park on Modeland Road by the end of the year.

Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) – Trevor Robak:

- Trevor reported on the situation currently facing farmers in Ontario. The planting season has been significantly delayed due to wet weather. While crop insurance has revised the planting deadlines for soybeans and corn, many farmers will not be able to meet those timelines. Approximately 20 million acres remain unseeded east of the Mississippi. Some farmers may end up planting cover crops on fallow land. Many acres of winter wheat planted during the wet fall of 2018 saw poor emergence this spring, resulting in farmers spraying down the crop with hopes of planting corn. However, the wet spring has delayed that planting and acres now remain unseeded. An early frost in the fall may further impact the cropping season.

Ontario Ministry of Natural Resources and Forestry (OMNRF) – Stephen Marklevitz:

- Stephen Marklevitz was unable to attend the meeting. No report was available.

Lambton Public Health – Theresa Warren:

- Theresa Warren was unable to attend the meeting. No report was available.

City of Sarnia – Terry Burrell:

- Terry reported that there have been a number of changes at the City recently including a mostly new city council and a new city manager.

**Next Meeting and Adjournment:**

The next CRIC meeting will be at the call of the chairs.