**QUÉBEC/VERMONT MEMPHREMAGOG STEERING COMMITTEE**

**HYBRID MEETING (IN PRESENCE AND VIRTUAL)**

**NOVEMBER 18TH 2021**

**SHERBROOKE UNIVERSITY AND TEAMS**

**Attendants :**

Robert Benoit, MCI

Tom Berry, Office of US Senator Leahy

Chloé Boucher-Ravenhorst, MAPAQ

Sébastien Bourget, MELCC

Douglas Casson Coutts, MWA and MCI

Ben Copans, VT DEC

Sarah Damsell, NACD | USDA-NRCS

Pete Emerson, VT FWD

Jean-Pierre Fortier, Ville de Sherbrooke

Steve Garceau, MFFP

Mary Pat Golding, MWA

Julie Grenier, COGESAF

Céline Guéguen, Université de Sherbrooke

Patrick Hurley, Winden Water LLC

Josiane K. Pouliot, Ville de Magog

Pete Laflamme, VT DEC

Kendall Lambert, VHCB

David Largy-Nadeau, MRC Memphrémagog

Rick Levey, VT DEC

Lisette Maillé, Mairesse Austin

Jean-Sébastien Messier, MFFP

Sophie Moffatt-Bergeron, MELCC

Ariane Orjikh, MCI

Guy Parenteau, MELCC

Nathalie Pelletier, Mairesse Ville de Magog

Haley Pero, Office of US Senator Sanders

Isabelle Piché, MELCC

Oliver Pierson, VT DEC

Nathalie Provost, MELCC

Silas Rainville, Vt DOA

Alexandra Roy, bur. Député Gilles Bélanger

Frédérique Thibault-Lessard, MCI

Beth Torpey, MWA

Daniel Tremblay, MELCC

1. **Introduction**

Nathalie Provost, co-president, greeted participants.

1. **Agenda adoption**

The agenda for the meeting was adopted

1. **Adoption of last meeting’s minutes**

The minutes from last meeting were adopted.

1. **Round table**

Participants were invited to present their organizations developments and actions since last meeting.

1. **Update on Coventry landfill pretreatment permit review process – Pete Laflamme, Vt DEC**

* There’s been 2 public meetings concerning Casella’s permit application and the related review process
* Comments concerning the permit application will be accepted until November 24th.
* The moratorium on the leachate treatment by the Newport wastewater treatment facility was extended until 2026.
* A draft permit is coming with several conditions such as a pilot project for PFAS removal from leachate and frequent leachate analysis after treatment.
* With the moratorium in place, leachate must continue to be treated at the Montpellier or Plattsburgh wastewater treatment facility. No leachate can be treated at the Newport facility.
* The comments sent will be analyzed and responses will be formulated and available in the beginning of 2022.

1. **Update on Surface Water / Fish Tissue PFAS Testing in in Lake Memphremagog and Tributaries – Rick Levey, VT DEC, and Julie Grenier COGESAF**

* Analysis for PFAS were made during summer and fall of 2021 (3 sampling dates 07-20, 08-20 and 10-19).
* Efforts coordinated between Vermont and Quebec to make sure results are comparable.
* For Vermont, 6 sites in the tributaries and 3 in the lake.
* On Quebec side, 4 sites in the tributaries and 3 in the lake.
* Sites were identified according to their probabilities of PFAS presence.
* In Vermont in October, fish tissue was sampled and analyzed for PFAS on 4 sites and for 3 fish species (largemouth bass, yellow perch, and brown bullhead).
* Results for Vermont: On the 30 samples analyzed, 2 samples showed presence of 1 compound (pfba)in a level above detection limits.
* Results for Quebec: On the 16 samples analyzed, 2 samples showed presence of 2 compounds (1 for pfba and 1 for pfoa) above detection limits.
* Conclusions: Very low incidence of PFAS detection in the lake and tributaries. In the cases where there were detections, levels were just above detection limits but way under criteria established for drinking water quality in VT.
* For fish tissue, the 30 samples analyzed showed 3 samples with PFAS presence above detection limits. In all 3 samples, levels detected were well under criteria established for human consumption.
* Based on the results founded for 2021, the relevance of pursuing analysis for coming years will be evaluated in the coming months.

1. **VT Basin 17 Tactical Basin Planning Process – Ben Copans, Vt DEC**

* Vermont is in the process of updating its tactical basin 17 plan that is due for the end of 2022.
* A report will also be published with concerning what has been done regarding the existing plan, containing, amongst other subjects, information about phosphorus reduction efforts.

1. **Update on Phosphorus, Aquatic Invasive Species and Cyanobacterial blooms Monitoring- Ariane Orjikh, MCI and Oliver Pierson, Vt DEC**

Ariane Orjick

* In 2021, 20 sites were inventoried for zebra mussels, 125 sites since 2018.
* 4 sites were inventoried for veligers.
* Diverse control activities were organized implicating citizens and volunteers.
* Zebra mussels were also inventoried at the Magog city and Sherbrooke city water intakes.
* Banded mystery snails were also found during inventories.
* Zebra mussel presence is now confirmed just north of the Canada – USA border
* Cyanobacteria blooms observations have increased significantly this year.
* There are now 5203 boats on the lake compared to 4137 in 2009-2010

Oliver Pierson

* Despite efforts made toward phosphorus reduction in the lake, data shows phosphorus levels are stable but not decreasing.
* Phosphorus values are above the limits established in the Memphremagog TMDL of 14 ug/l.
* Chlorophyl levels are also relatively stable since data has been collected
* Cyanobacterial blooms observations in 2021 were the highest ever registered.
* Agriculture upstream of the lake and adjacent to its tributaries is suspected to be a source of the phosphorus presence in the lake.
* Efforts toward reduction of phosphorus levels in the lake will be maintained.
* Collaboration with Quebec regarding initiatives like the observatory will continue.
* Highest phosphorus levels are found in the lake after intensive rainfall and at snowmelt.
* Monitoring of invasive species like zebra mussels will be conducted in the US part of the lake
* Mystery banded snails were also found in the southern part of the lake.

1. **VT Clean Water Service Provider Start-Up Process – Kendall Lambert VHCB**

* In 2019, the Vermont State Legislature passed Act 76, the Clean Water Service Delivery Act. This Act mandates funding for non-regulatory clean water projects, establishes phosphorus reductions goals for basins, and creates regional organizations called Clean Water Service Providers (CWSP).
* The CWSP is charged with overseeing the identification, implementation, and operation of non-regulatory clean water projects in line with the phosphorus reduction goals.
* The Vermont Housing & Conservation Board (VHCB) has been selected as the Clean Water Service Provider (CWSP) for the Memphremagog Basin.
* VHCB is a statewide funder with the dual goals of creating affordable housing for Vermonters, and conserving and protecting Vermont’s agricultural land, forestland, historic properties, important natural areas, surface waters and recreational lands.
* A council, composed of 9 different government and organization representatives, is responsible for voting and selecting projects to advance them to the funding stage.
* First projects funding should be made by the middle of 2022.
* In the Memphremagog Basin, the pollutant of concern has been determined to be phosphorus and estimates are that over $550,000 will be available in the Memphremagog Basin each year for water quality restoration projects through this program.

1. **Memphremagog permanent observatory – Céline Guéguen, UdeS.**

* This initiative consists of real time monitoring for different water quality parameters, even during winter.
* The project, put in place by a multidisciplinary team from Sherbrooke University, is to have Buoys equipped with probes and samplers at different place in the lake. Those buoys will allow users to have access in real time to water quality data.
* Real time parameters monitored are:
  + Temperature
  + Conductivity
  + Dissolved oxygen
  + Chlorophyl
  + Turbidity
  + Nitrates
  + Fluorescence
* The sampler will allow to take samples that can be further analyzed for different parameters such as PFAS, Calcium, metals, and others as well.
* The first buoy was installed in august 2021. It is hoped to install a total of 6 around the lake.
* The first data extracted, are in line with different external manifestation observed such as temperature or heavy rainfall.
* Efforts to identify additional sources of funding, to establish additional buoys, are still ongoing.
* Collaboration with municipalities and the government is essential to the project.

1. **Bi-national Missisquoi bay phosphorus reduction task force – Nathalie Provost, MELCC**

* The International Joint Commission (IJC) is an established structure and has already contributed to or published studies on phosphorus in Lake Memphremagog and Champlain.
* Models for phosphorus calculation in the lake are different on both sides of the border.
* Currently, Quebec and Vermont are collaborating to find an equivalence to compare the 2 models currently used.
* IJC report conclusions created great expectations, but it’s important to remind that neither of governments (Qc and Vt) were mandated so far to implement the actions identified in the reports.
* Since the structure established for Lake Champlain and the current state of knowledge, and that the measures and conclusions are applicable to Memphremagog, it is suggested that the protocols established for Champlain are replicated for Memphremagog.
* There is incomprehension among the participants on the phosphorus modelling progress. Some work was done on that topic in the past. It is reminded that so far, the problem is one of model and data interpretation. Quebec and Vermont are collaborating to find answers to this situation.

1. **Miscellaneous**

Discharge notification

* Media reported in October 2020 that an effluent discharge was made in the Memphremagog in US waters. To make sure that the authorities on both sides of the border are informed properly, a protocol is now in place between Quebec and Vermont. If a discharge event happens, an information chain is triggered so concerned persons on both side of the borders are informed correctly.

Technical Committee meeting

* A meeting of the technical committee will be proposed for the beginning of 2022. Subjects and persons that should be invited to this meeting can be submitted to Daniel Tremblay.

**13. Adjournment and next meeting planning**

* The next meeting should be held in Vermont on May 5, 2022. Additional details will be provided closer to the event.

**Annexes**

* Rapport Ville de Magog
* Presentation PFAS
* Presentation EEEA – cyanobacteria
* Presentation Lake data
* Presentation observatory

D.T.

MELCC

2021-11-30