

December 20, 2018

By E-Mail

Mr. Eugene Reid,
Chairman A/S Mrs Kirsten Sultan,
Coordinator District #7 Environmental Commission
374 Emerson Falls Road, Suite #4
St. Johnsbury, Vt. 05829

RE: Canadian Non-Government Persons and Entities Response to the Solid Waste Management Facility Certification OL510 SJ91-0001

Dear Mr. Reid,

This letter is being written on behalf of Memphremagog Conservation Inc. (MCI), an environmental organization working to protect Lake Memphremagog and its watershed for over 51 years. In addition, this letter has the endorsement of nine additional organizations in the watershed area, as well as more than forty individual Canadian citizens in our region who had previously written their concerns to the ACT 250 Commission.

In response to the Commission's Memorandum of Decision dated November 20, 2018, Canadian Non-Government Persons and Entities are submitting a pre-filed testimony with supporting evidence for the reconvened hearing for Application 7R0841-13. This testimony is to rebut and respond to the Solid Waste Management Facility Certification OL510 SJ91-0001 being issued to New England Waste Services of Vermont Inc. (NEWSVT).

Before granting a permit, the District Commission shall find that the project will not result in undue water pollution and must not cause unreasonable burdens on an existing water supply. The waste services company must present enough evidence to prove these threats are non-existent. Therefore, we have summarized the following arguments demonstrating the current lack of evidence to ensure the precautionary protection of Lake Memphremagog.

I. The impact of leachate on Lake Memphremagog's water quality and human health is unknown

The Environmental Protection Agency (EPA) has inventoried 85,000 toxic chemicals that are manufactured or processed for use in industry, commerce and households, which the majority will eventually end up in landfills¹. Municipal and commercial solid waste, sewage sludge, asbestos, contaminated soil and other items are known to be found in the NEWSVT site. At the current time, the monitoring of some chemicals of emerging concern, such as per- and

¹ EPA Toxic Substance Control Act, <https://www.epa.gov/tsca-inventory/about-tsca-chemical-substance-inventory> (accessed December 9, 2018).

polyfluoroalkyl substances (PFAS), a pollutant with significant health consequences, in the leachate at the landfill site under the current waste permit OL510 SJ91-0001, is only semiannual from a combined storage tank in order to determine trends². However, the leachate should be monitored more regularly to determine trends within the year since leachate is treated and discarded daily.

A part of the leachate, 15,000 gallons per day, is treated at the Newport Wastewater Treatment Plant (WWTP) since 2009. This WWTP is not equipped to treat leachate containing elevated levels of several contaminants, such as PFAS³. The current treatment system does not assess and monitor the majority of chemicals of emerging concern with intention to treat them effectively⁴. The current discharge permit for Class B waters require effluent limits for biological oxygen demand (BOD), total suspended solids, phosphorus, nitrogen, settleable solids, pH and E.Coli, and not for hundreds of chemicals found in leachate, like PFAS⁵. While disposal through Newport WWTP currently disperses hundreds of chemicals of emerging concern, many known to have adverse effects on human health, into Lake Memphremagog, a drinking water source for more than 175,000 Canadians. Furthermore, several basic tests have not been conducted since 2008 in the Newport WWTP. Whole Effluent Toxicity (WET) Tests were not completed between 2008 and 2018, when in fact leachate has been treated at the plant since 2009⁶. Only as recently as August 2018 has one WET Test been performed⁷. The WET test is used in Vermont and Quebec wastewater treatment facilities to determine whether a wastewater discharge will have toxic effects on the organisms in the receiving water. Also, heavy metals have not been tested since 2008⁸.

NEWSVT leachate, Newport WWTP influent and effluent have all reported elevated levels of PFAS, including the 5 hazardous PFAS, which were reported above the reporting limit⁹. In fact, the differences between the influent and effluent at Newport WWTP were significant compared to other treatment facilities in Vermont (between 18 - 75 ng/L or 18 - 75 ppt) and “may require further analysis”¹⁰. PFAS contamination is a recent concern with regulatory monitoring practices currently in the process of being developed by the Vermont Department of Environmental

² ANRVT OL510 Responsivess Summary: Solid Waste Management Facility, NEWSVT, Inc.: Phase VI Application (October 12, 2018).

³ Report from Steven Shaw and Steven LaRose to John Schmeltzer Re Wastewater Treatment and Landfill Leachate PFAS Sampling (May 3, 2018).

⁴ Gresser, Joseph. “A tour of the dog food eating wastewater plant”. The Chronicle, Barton, VT November 7, 2018.

⁵ VT ANR NPDES permit 3-1241 to discharge to waters of the United States. Newport Wastewater Treatment Facility (October 2004).

⁶ Lowry, A., from ANR per communication at the Landfill Oversight Committee Meeting (September 11, 2018).

⁷ EnviroSystems (2018). *Toxicological evaluation of a treated municipal effluent biomonitoring support for a NPDES Permit: August 2018*. Newport waste water treatment plant. 11 pp.

⁸ Lowry, A., from ANR per communication at the Landfill Oversight Committee Meeting (September 11, 2018).

⁹ Ibid. as reference 4

¹⁰ Ibid. as reference 4

Conservation (VTDEC)¹¹. As an initial precautionary regulatory measure, as recent as July 10, 2018, the Vermont Department of Health issued an emergency Health Advisory that requires the sum of 5 hazardous PFAS not to exceed 20 ppt in drinking water^{12,13}. A confident understanding of data produced from an accurate representation of the leachate volume generated over time is important in order to be able to closely monitor the variance in the toxic composition of byproducts from the site. The fate of hundreds of contaminants throughout the wastewater treatment process, the impact on human exposure and the cumulative effects on Lake Memphremagog, are unknown. We are of the opinion that new studies are needed to offer documented evidence to support or refute the impact of landfill leachate treatment within the Lake Memphremagog watershed on the lake's water quality.

Besides our current concerns about the impact of the leachate on human health, the expansion of the site would add an additional 7 million gallons of leachate to treat annually to the actual 9.5 million gallons¹⁴. The City of Newport may be willing to treat more leachate at their municipal treatment plant as a result of corporate incentives and discharge the ineffectively treated leachate into the lake.

II. Risk of contaminant migration from both the lined and unlined portions of the landfill is unknown

Concentrations of PFAS have been identified in the groundwater, downstream of the section of the landfill that has a liner¹⁵. These highly toxic products seem to come from the site, and the leachate produced at the landfill site is known to have the highest levels of PFAS compared to other active landfills in the state, despite conflicting public statements^{16,17}. Although information is lacking with respect to the origin of these PFAS at the NEWSVT site, we can surmise that the membrane does leak despite what the waste services company previously stated¹⁸. Expansion of the lined portion of the site would increase the risk of contaminant leakage and thus pollution of the lake water. Recent results from a downgradient groundwater monitoring well (i.e. MW-E1) of the lined portion of the site also proved to exceed groundwater enforcement standards for other

¹¹ ANRVT OL510 Responsiveness Summary: Solid Waste Management Facility, NEWSVT, Inc.: Phase VI Application (October 12, 2018).

¹² ANR Adopting Emergency PFAS Rules (July 16, 2018) <https://dec.vermont.gov/news/PFAS-emergency-rule> (accessed December 12, 2018)

¹³ Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS) In Drinking Water, <http://www.healthvermont.gov/environment/drinking-water/perfluoroalkyl-and-polyfluoroalkyl-substances-pfas-drinking-water> (accessed Dec. 9, 2018).

¹⁴ Certification Application, *supra* note 5, C-2.5B Leachate Storage Evaluation, Attachment C Leachate Generation Summary, 1234.

¹⁵ NEWSVT Groundwater Compliance Boundaries for Water Quality Monitoring Program, ANR edited to add PFAS results (Sept. 10, 2018).

¹⁶ Report from Steven Shaw and Steven LaRose to John Schmeltzer Re Wastewater Treatment and Landfill Leachate PFAS Sampling (May 3, 2018). ; VT DEC Perfluoroalkyl Substances (PFAS) Contamination Status Report (July 2018).

¹⁷ Gay, J. from NEWSVT. *Select board meeting, Town of Coventry*. November 5th, 2018. Published meeting notes.

¹⁸ *Idib.* as reference 17

pollutants than PFAS¹⁹. It is important to note that elevated levels of contaminants, including arsenic, iron and manganese, are already found in the downgradient groundwater monitoring wells from the unlined portion of the landfill and that little is known about the potential migration of these contaminants to Lake Memphremagog²⁰.

III. Impact on biodiversity and bioaccumulation of contaminants in wildlife is unknown

There is a lack of information regarding the landfill's impact on the biodiversity of Black River and Lake Memphremagog. Comprehensive research has not been conducted to assess the change in aquatic species composition and bioaccumulation in the Black River. Once a year, an ecologist and representatives from the Landfill Oversight Committee canoe the Black River to evaluate the impacts on the river²¹; however, these reports do not include bioaccumulation studies, inventories or monitoring studies of the flora and fauna²². We know that more than 25% of South Bay Brown Bullheads have melanoma and that toxic chemicals have been found in these fish²³. Although it is highly probable that the source of this disease is from the former Canadian Pacific waterfront site in South Bay, more research is needed to verify the source of this contamination. We are of the opinion that new studies are needed to offer documented evidence to support or refute the risk of contaminant migration reaching underground water, the wetland complex, the Black River, South Bay and the Lake; resulting in detrimental water and ecosystem contamination.

IV. The precautionary principle to prevent degradation of Lake Memphremagog must be applied

Lake Memphremagog is a reservoir of drinking water for more than 175,000 Canadians. Currently little information exists on the presence of contaminants in Lake Memphremagog and those emerging in Sherbrooke's and Magog's drinking water²⁴. The precautionary principle is defined as, "**where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation**"²⁵. Given the importance of Lake Memphremagog as a drinking water reserve, we believe that the precautionary principle must be applied.

¹⁹ Memorandum from Waite-Heindel Environmental Management to Kasey Kathan, DEC, and Joe Gay, NEWSVT (Mar. 28, 2018).

²⁰ Waite-Heindel Environment Management May 218 Water Quality Sampling, and Analysis of Trends and Standards Exceedances NEWSVT Landfills report (July 16, 2018).

²¹ ANRVT OL510 Responsivess Summary: Solid Waste Management Facility, NEWSVT, Inc.: Phase VI Application (October 12, 2018).

²² Gay, John from NEWSVT per communication at the Landfill Oversight Committee Meeting (September 11, 2018).

²³ Emerson, Peter from ANR, Fish and Wildlife Conservation Department per communication at the Quebec-Vermont Technical Meeting (October 25, 2018)

²⁴ Corriveau, Annie from ICI Estrie. *Des pesticides et des produits pharmaceutiques dans votre eau potable* (March 21, 2017).

²⁵ USLegal. *Precautionary Principle Law and Legal Definition*. Website available at : <https://definitions.uslegal.com/p/precautionary-principle/>

We are concerned that the state of Vermont is not looking for alternatives to bury its waste and the Coventry Landfill is still the only site targeted by the state of Vermont. Moreover, experts in the field of landfill liners research have expressed their concerns for inadequate consideration of post closure issues, toxins in waste materials accepted at NEWSVT, and landfill liners which are ineffective in preventing ground water pollution and pose a threat to the water quality of Lake Memphremagog²⁶. A catastrophic event on site as a result of environmental or operational circumstances would have a grave impact on Lake Memphremagog's ecosystem. Climate change is expected to continue to alter precipitation patterns in the region. An increase in the frequency and intensity of storm events in Vermont and Quebec have already been observed²⁷, and environmental accidents are occurring more frequently.

V. Conclusion

The current expansion project of NEWSVT's landfill is similar to the case of the last landfill to be located on the Canadian portion of the Lake Memphremagog watershed, near Lake Lovering, which was owned by the company Intersan in Magog. In 2002, Intersan proposed a project to expand the landfill using the most advanced existing technology to increase the quantity of waste buried annually from 150 000 to 300 000 tons²⁸. Because the fish population of Lake Lovering was contaminated by polychlorinated biphenyls (PCBs), dioxins and furans, even if the relative contribution of contamination from the Intersan landfill could not be proven, the local citizens were concerned about the impact of the landfill on Lake Lovering and Lake Memphremagog²⁹. In 2007, during the public consultation held on the expansion project, the general public and policy makers, including the MRC Memphremagog and the City of Magog, expressed their opposition to the project, despite the fact that the project was following all regulations and was proposing the best existing technology: no technology is guaranteed safe and the chosen site was completely inappropriate³⁰. After the public consultation, the Ministry of the Environment of Quebec concluded that with the current knowledge, the expansion project would not cause major impacts on the environment, however, that it was unacceptable to continue if the MRC Memphremagog and the City of Magog were unsupportive of the project³¹.

Let it be known that we understand the actuality of the landfill in Vermont, currently positioned in close vicinity to Lake Memphremagog lacked environmental foresight at its inception. Presently, the issues addressed in this letter aim to mitigate further risk to the watershed

²⁶ G. Fred Lee & Associates. Evaluation of the Potential Impacts of the Proposed Expansion of the Casella Waste Management Landfill in Coventry, Vermont (April 6, 2004).

²⁷ U.S. Environmental Protection Agency. (2016). *Climate change indicators in the United States, 2016*. 4th Edition. Retrieved from <https://www.epa.gov/climate-indicators>

²⁸ D. DUFRESNE. « Intersan veut avoir le meilleur lieu d'enfouissement au pays », La Tribune (Sherbrooke), 8 juin 2002, p A1

²⁹ Bureau d'audiences publiques sur l'environnement (BAPE) (2007). *Projet d'agrandissement du lieu d'enfouissement à Magog par Waste Management Inc.* pp. 89.

<http://www.bape.gouv.qc.ca/sections/rapports/publications/bape247.pdf>

³⁰ Idem

³¹ Idem

through more extensive research, by refusing treated landfill leachate in the lake and by preventing the expansion of the landfill. We hope you will consider other alternatives to protect these waters as previously demonstrated in Canada. Continued collaboration and support to maintain Lake Memphremagog as a potable drinking water source, rich in biodiversity, and as a place for inhabitants and visitors alike to safely use, is in the best interest of the entire region. We appreciate your time to review our request to reject the expansion of NEWSVT's landfill in Coventry, Vermont.

Sincerely,

Robert Benoit, Volunteer President, MCI

Ariane Orjikh, Biologist, General Manager, MCI

Canadian Non-Government Entities supporting this letter:

Canadian Non-Government Persons supporting this letter:

Catherine Beaudoin : cbeaudoin@sqi.gouv.qc.ca
Nicole Beaulac : nicole.a.beaulac@gmail.com
Jacques Béliveau : j.beliveau@symatico.ca
Robert Benoit : robertbenoit1944@gmail.com
Yves Bergevin: yves.bergevin@mcgill.ca
Anne-Marie Bourcier: abourcier@hotmail.com
Michel Charpentier : michel3393@videotron.ca
Christine Crowe : crowec67@gmail.com
Murielle Depault : mudepault@gmail.com
Carole Descoteaux : descoc@hotmail.com
Lévis Doucet : levisdoucet@me.com
Jean-Claude Duff : jc.duff@municipalite.austin.qc.ca
Jacques Duquette : jacquesduquette@hotmail.com
Leslie Farfan: sparble@videotron.ca
Francine Gaudette: Francine.gaudette@gmail.com
Jean-Louis Gauvin : jgauvin@sympatico.ca
Linda Ghanimé: linda.ghanime@gmail.com
Gilbert Gosselin : g.gosselin@videotron.ca
Aurelie Hawes : aureliehawes93@gmail.com
Terence Hawes Jr.: cplterencehawes@gmail.com
Terence Hawes Sr.: info@terencehawesfinancial.ca
Gisèle Lacasse : giselelacasse@axion.ca
Pierre Legault : legault.pierre@gmail.com
Peter Lepine : info@memphremagog.org
Anita MacKay: mac1459@msn.com
Sandra Marshall: info@memphremagog.org
Sylvie Matteau: smatteau1@gmail.com
Lucille Moisan Gauvin: jgauvin@sympatico.ca
James Murray: ipam2012@gmail.com
Karina Palmorino : karina.palmorino@sympatico.ca
Tony Palmorino: tony.palmorino@bell.net
Blanche Paquette : blanche.paquette@municipalite.austin.qc.ca
Annika Parance : annikaparance@apediteur.com
Sylvain Poudrette : sypoudrette@gmail.com
Johanne Ross : jrossfontaine@gmail.com
Gaétan Rouleau : gaetroul@icloud.com
Catherine Roy: info@memphremagog.org
Jean-Guy Saint-Martin : jgsaintmartin@hotmail.com
Robert Setlakwe : roberts@saint-hilaire-inc.com
Allan Smith: allan.smith@umontreal.ca
Scott Sulli : intheuae@gmail.com
Richard Tarte: richard.tarte@gmail.com
Eric Vallières: evallieres@me.com
Kate Williams: kate.williams@mcgill.ca
Roger Williams: kate.williams@mcgill.ca

CERTIFICATE OF SERVICE

I hereby certify that I, Ariane Orjikh, General Manager, Memphremagog Conservation inc. (MCI), sent a copy of the foregoing document, *Canadian Non-Government Persons and Entities Response to the Solid Waste Management Facility Certification OL510 SJ91-0001*, by U.S. Mail, postage prepaid to the following individuals without e-mail addresses and by e-mail to the individuals with e-mail addresses listed, on this 20th day of December, 2018.

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Jacinthe Caron
Conseil régional de l'Estrie
j.caron@environnementestrie.ca

Jean-Claude Thibault
RAPPEL
jc.fondurang@gmail.com

Stéphanie Martel
COGESAF
cogesaf@cogesaf.qc.ca