



Memphremagog
Conservation

Coventry's American landfill: a legacy to future generations at Lake Memphremagog?

Memorandum concerning NEWSVT request for major amendment to pretreatment discharge permit no 3-1406

Presented to:

Vermont Agency of Natural Resources,
Department of Environmental Conservation,
Watershed Management Division

Presented by:

Memphremagog Conservation (MCI)

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Introduction

MCI's team is once again mobilized to emphasize the problem that the landfill site in Coventry, Vermont at the head of Lake Memphremagog, a drinking water source for 175,000 Canadians represents.

This position paper deals with the main issue in this file, that is the final destination of the leachate, treated or not, at the expiry of the permit that is the subject of the current public consultation. This permit, which situates the pretreatment facility at the landfill site in Coventry, opens the door to the eventual return of leachate being discharged into Lake Memphremagog and facilitates the potential for further enlargement of the landfill site.

MCI is worried: Vermont is opening a door that may never be closed in the future.

What fate awaits this Canadian drinking water source menaced by polluted American water coming from the Coventry landfill at the end of the moratorium and the various permits currently in force?

MCI is taking this opportunity to make you aware of its legitimate concerns regarding the issuing of a pre-treatment permit for the leachate emanating from the Coventry landfill site.

This pre-treatment plant should not be sited within the Lake Memphremagog watershed. This geographical location makes it even more likely that the Coventry landfill site will be expanded in the future given the presence of a nearby pretreatment plant. What is even more worrying is that this new pretreatment plant increases the likelihood of the pre-treated leachate, still toxic, finding its way in Lake Memphremagog. It is also

likely that leachate from other landfill sites could be treated here and end up in Lake Memphremagog.

We will demonstrate, both legally and scientifically, that the Lake Memphremagog watershed should never again receive the polluted partially treated effluent generated by the Coventry or any other landfill site.

Who is Memphremagog Conservation?

Memphremagog Conservation (MCI) is a not-for-profit organization based in Magog, Quebec, that has been working since 1967 to protect the health of the waters and watershed of Lake Memphremagog, a reservoir of drinking water for more than 175,000 Canadians. MCI has been closely following the Coventry landfill site developments for decades and has expressed on several occasions their strong opposition to the expansion of NEWSVT's solid waste disposal plant and to the disposal of landfill leachate at the Newport wastewater treatment facility (WWTF) or anywhere within the Memphremagog Watershed. We invite you to refer to **Appendix A**, where you will find our 2021 document on that matter.

MCI's message to future generations: working upstream!

55 years ago, three visionary environmentalists had the idea of joining their efforts together to improve the quality of Lake Memphremagog's water and founded MCI. The years passed, and their preoccupation with this heritage that is Lake Memphremagog for future generations remains. Working upstream is more important than ever: our aim is to identify the issues facing the watershed and develop durable solutions.

The fact of the presence of an American landfill site at the edge Lake Memphremagog is hard to fathom, given that it is a Canadian drinking water source.

The final destination of the leachate from the landfill site is of crucial importance: it should never end up in the Lake Memphremagog watershed. MCI is hoping that a permanent moratorium be decreed. The following legal and scientific arguments justify our position.

Laws to protect us.

All citizens must be protected by their own country, and that is why we, as Canadians, will try to place ourselves in the American context to find a solution.

Environmental justice: an American notion and a Vermont law

The United States were the instigators of this environmental justice, which is being accepted more and more around the world, as regards pollution unfairly burdening certain parts of the population. The 'Love Canal' affair which made headlines in the 80s is a perfect example, according to numerous sources¹.

In fact, in 2022, the state of Vermont adopted No. 154. An act relating to environmental justice in Vermont (S148). Here is an extract on the environmental burden that must be equitably distributed:

¹ Center for Health, Environment and Justice (CHEJ). *Love Canal: The Start of an Environmental Justice Movement* <https://chej.org/wp-content/uploads/Love-Canal-PDF-v1.pdf>

(3) **“Environmental justice”** means all individuals are afforded equitable access to and distribution of environmental benefits; **equitable distribution of environmental burdens**; and fair and equitable treatment and meaningful participation in decision-making processes, including the development, implementation, and enforcement of environmental laws, regulations, and policies.

From this perspective, we refer you to **annexes B1 and B2** to visualize the case for environmental justice (or rather injustice) that the Coventry landfill site represents for the American and Canadian population residing within the Lake Memphremagog watershed. These appendices show that we, residents of the Lake Memphremagog Basin, find ourselves with an excess of leachate which comes from waste from other basins in Vermont.

Canada-US boundary water treaty act : an avant-gardist treaty signed 115 years ago?

On January 11, 1909, some 115 years ago, our two countries signed a treaty regarding the issues related to our boundary waters. Unusually for the times article IV states: “It is further agreed that the waters herein defined as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other.”²

What about the leachate generated by the Coventry landfill site? It represents a menace for the international waters of Lake Memphremagog. This leachate, treated or not, ends up in the environment. The treated leachate, still containing pollutants, could flow again from the United States to Canada at the end of the moratorium. How is this situation in regard to the treaty?

Should the International Joint Commission (IJC) be involved?

On their web site, concerning Article IV of the Treaty, it is written: “This short but powerful statement requires that Canada and the United States ensure that neither country will pollute water that flows across their common boundary to an extent that would cause harm to health or property in the other country. This clause and subsequent direction from the two governments has served as the impetus for the International Joint Commission’s work on water quality since its inception.

If the governments have questions or differences concerning water quality along the border, they may ask the IJC to study these issues and assist them with meeting their treaty commitments. To that end, the governments can ask the IJC to investigate or monitor water quality, or to alert them to any water quality concerns the IJC finds in the course of fulfilling its duties.”³

MCI has questioned the International Joint Commission numerous times in recent years on this subject. We have brought the Coventry landfill site up twice at Québec-Vermont meetings in 2023.

Motion at Québec’s National Assembly

From a Canadian and Québec point of view, allow us to share our very clear position on this issue.

² [International Boundary Waters Treaty Act \(justice.gc.ca\)](https://www.justice.gc.ca)

³ [Water Quality | International Joint Commission \(ijc.org\)](https://www.ijc.org)

In June of 2021, the 125 members of Québec's National Assembly, representing 5 separate political parties, unanimously voted a motion insisting of the State of Vermont on a permanent ban on the outflow of treated leachate into the Lake Memphremagog watershed (annex F). This is a powerful and concrete action, as the members represent the government of Québec in its defense of the 175,000 Quebecers who drink the lake's water.

The science can guide us.

Over and above the various laws which justify the obtention of a permanent moratorium on the final destination of the leachate ensuring that it is outside the Lake Memphremagog watershed, MCI would like to add the scientific arguments to the equation. These arguments are presented in Annexes B1 to D2.

These elements clearly show that Lake Memphremagog should never again suffer the impacts of American garbage in Coventry. As mentioned before, the appendices B1 and B2 show that residents of the Lake Memphremagog Basin find themselves with an excess of leachate which comes from waste from other basins in Vermont. Furthermore, should Lake Memphremagog see its fish even more contaminated by significant inputs of PFAS from leachate generated by waste coming from municipalities in Vermont outside our lake basin and even states such as New York, Massachusetts, New Hampshire, Rhode Island and Connecticut? Waste from these states also represents more tonnage than that from Vermont residents of the Lake Memphremagog basin. This generates foreign leachate which pollutes Lake Memphremagog if dumped in the Newport WWTF. Is this acceptable (appendices C1 and C2)? What about the precaution principle, recognized in international environmental law?

At this time, MCI knows very well that polluted water from the United States is entering Canada via Lake Champlain. As well, MCI knows that the company managing the landfill site has agreements with seven wastewater treatment plants⁴. Of the seven plants, only one is in a watershed wherein the water flows into the United States and not Canada. Currently, we realize that the only wastewater treatment plant in Vermont able to receive the leachate from the Coventry landfill site is in Montpelier, within the Lake Champlain watershed. In appendices D1 and D2, MCI presents arguments which show that the Lake Champlain watershed is a more appropriate destination for final disposition of the Coventry leachate than the Lake Memphremagog watershed.

What about the pre-treatment technology?

MCI is not against the treatment of the leachate, in fact just the opposite. The issue that concerns us is the final destination of the leachate, treated or not.

As well, as regards the treatment technology in the permit, we question its efficacy. Our arguments are presented in Annex E.

Upon reviewing the documentation regarding the proposed treatment, the following elements should be highlighted. The company that developed the technology being used within the permit has issued the following reservations from the principal scientist, Mr. David Burns. En effect, David Burns is the lead scientist on the EPOCEnviro team, the

⁴ Solid Waste Management Facility NEWSVT, Inc: Phase VI Application - Fact Sheet Date: May 31. 2018 p16

creators of the SAFF leachate treatment technology chosen by NEWSVT. In the research article *Commercial-scale remediation of per- and polyfluoroalkyl substances from a landfill leachate catchment using Surface-Active Foam Fractionation (SAFF®)*, Burns reveals that while there is promise in this technology, there are also reasons why the SAFF process is insufficient in filtering PFAS effectively on its own: David Burns writes, "Of course, there is **no suggestion that the treated landfill leachate should be used directly as potable water or allowed to discharge or otherwise migrate into receiving waters reserved for drinking water.**"⁵ In light of these revelations, how can Vermont justify the approval of this type of treatment?

As well, we have learned that NEWSVT plans to combine this highly toxic hyper concentrate with cement and return it to the landfill. Concrete is porous and both absorbs PFAS and releases them, allowing it to further concentrate in landfill leachate. This study of air base fire-fighting foam sites proves that "The maximum concentrations of PFAS in runoff water of five rainfall simulations were similar, suggesting recurring release of PFAS from AFFF impacted concrete, which could be sustained by upward transport of PFAS in the concrete subsurface layers through a potential "wicking" effect."⁶

How can Vermont justify the logic of returning the PFAS extracted from the leachate in the form of porous concrete to the same landfill from which it percolated? Vermont's environmental justice law should lead to a clear choice in this regard. Should NEWSVT be granted the authorization to use concrete to encapsulate the PFAS concentrates generated by the pretreatment, this should only be done under certain circumstances as indicated in appendix E.

Conclusion

MCI reiterates its concerns regarding the protection of Lake Memphremagog's drinking water, which is menaced by the eventual return of leachate, treated or not, into the Lake Memphremagog watershed. By locating the pretreatment plant at the Coventry landfill site, it opens a door that we may not be able to ever close.

American laws such as environmental justice, our bilateral treaty, the Québec government's stance, the presence of cancerous fish in the lake, the inability of Lake Memphremagog to handle the leachate volumes, are all arguments that logically lead to a permanent moratorium to ensure that the leachate's final destination is outside the Lake Memphremagog watershed. The precaution principle must be applied and lead to a permanent moratorium.

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⁵ <https://onlinelibrary.wiley.com/doi/10.1002/rem.21720?af=R>

⁶

<https://www.sciencedirect.com/science/article/pii/S266691102200003X#:~:text=The%20estimated%20mass%20of%20PFAS,PFAS%20in%20runoff%20water%20events.>

Appendices

- [Appendix A - Memorandum concerning the Draft Pretreatment Discharge Permit No 3-1406 - November 24th, 2021](#)

Lake Memphremagog Leachate Overdose and Environmental Justice

- [Appendix B1 - Summary](#)
- [Appendix B2 - Slideshow 19p](#)

Lake Memphremagog Fish Contamination and Environmental Justice

- [Appendix C1 - Summary](#)
- [Appendix C2 - Slideshow 20p](#)

Capacity of Lake Champlain to better accept leachate from the Coventry site than Lake Memphremagog

- [Appendix D1 - Summary](#)
- [Appendix D2 - Slideshow 44p](#)

Technical comments on PFAS treatment and pretreatment at Coventry and leachate disposal

- [Appendix E](#)

Motion de l'Assemblée nationale du Québec (In French only)

- [Appendix F](#)