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New presidency at MCI

A message from the president

Dear readers,

It's with great respect and admiration for my predecessors that I write to you today as the 'new' president of MCI. I have been involved with this avant-garde organization in one capacity or another for 15 years.

MCI's reputation is well established. Our tenacity, even pugnacity have allowed us to shed light on many environmental issues since 1967. Our mission, to this day, remains the preservation of Lake Memphremagog and its watershed for current and future generations.

Like you, I feel challenged by the impacts of climate change, the loss of natural landscapes and biodiversity, cyanobacteria and the quality of our water. Unfortunately, Lake Memphremagog and its watershed are not immune to these realities. But we can make a difference at the local level. It is exactly this logic that has driven MCI since 1967!

It is thanks to our acquisition of knowledge, our projects to conserve natural landscapes and rehabilitate degraded areas, that MCI, supported by your generous donations, continues its mission. The subjects discussed in this newsletter are evidence of that.

When I accepted the presidency of MCI, I committed myself to be vigilant, undertake concrete actions, and be hopeful. I hope to shine a light on the colossal amount of work carried out by the entire team, as you will see in these pages. MCI is proud to have an exceptional General Manager, designated personality of the year for 2022 by our local newspaper. Congratulations Ariane! You will also learn more about our employees and volunteers.



MCI's board members

In conclusion, you will not be surprised that our outgoing president, Mr. Robert Benoit, will receive the prestigious Gordon Kohl prize at our 2023 annual meeting. His modesty is as large as his accomplishments, I don't need his permission to brag about his qualities. See you on June 3rd, 2023!

Thank you for your support and enjoy the newsletter!

Johanne Lavoie, Volunteer President



The MCI would like to thank all of the photographers who shared with us beautiful photos of Lake Memphremagog and its watershed this spring. The cover photo of the Bunker wetland in Fitch Bay was sent to us by Mr. Louis Gagné. Thanks to all of you!

Ariane Orjikh, our general manager, honoured in the Reflet du lac!



MCI is very proud of our general manager, one of the Reflet du Lac's personalities of the year for 2022.

A lot of miles under her belt for Ariane Orjikh over the past ten years, from young patroller to general manager of Memphremagog Conservation Inc. (MCI). Biologist by training, she has faced every issue head on, on both sides of the border, to protect this Lake Memphremagog that she loves (...)

She is there in the fight against the zebra mussel, but also all the other invasive and harmful species, already here or soon to arrive. She monitors cyanobacteria blooms, phosphorus loading and the effects of climate change. She and her team instruct residents on best practices to protect their shoreline.

She supervises many studies, ranging from the impacts of sport fishing to the number of boats on the lake. (...)

She has performed over a hundred scuba dives in 2022 in the fight against the zebra mussel in Lakes Memphremagog and Massawippi. The recommendations forwarded to municipal authorities come from her underwater observations. Ariane Orjikh was in her element and the year flew by. (...)

This work and these challenges are just a normal part of life, in her view. 'I always dreamed of working for a non-profit organization (...)

**Congratulations, Ariane
for your hard work!**

Our 2023 patrol team!

Again this year, MCI's patrol team will be on the lake over the summer. Scientific studies, water sampling, awareness campaigns, monitoring of riparian protected areas, all mean a busy summer for our biologists and University students!

This year, the patrol is made up of two biology project managers, a holder of a bachelor's degree in ecology and two students in the University of Sherbrooke's bachelor's program in environmental studies.



Chanel Racine-Mineault

Chanel holds a bachelor's degree in ecology from the university of Sherbrooke. It was her interest in the conservation of our aquatic environments that led her to join the team this winter as a project manager. It's her first year on the patrol, and she will coordinate the patrol activities with Fanny!

Fanny De Blois

Fanny holds a bachelor's degree in ecology from the University of Sherbrooke and is passionate about the conservation of our natural landscapes. She has been a project manager with us since the winter of 2022. A patroller over the past two summers, this year she will coordinate the patrol's activities.



Chanel Racine-Mineault, Fanny De Blois, Marguerite Duchesne, Olivier Gagnon and Nicolas Boucher

Marguerite Duchesne

Having recently completed her bachelor's in ecology at the university of Sherbrooke, Marguerite is back with us! She has experience in the field, having been a patroller in 2020, and has a good understanding of the issues facing the lake. Welcome back Marguerite!

Olivier Gagnon

A student in the environmental studies program at the university of Sherbrooke, Olivier joins us as a field agent for the summer of 2023. Having a great interest in our aquatic environments, he is happy to have the chance to practice what he is learning with a conservation organization. Welcome to the team Olivier!

Nicolas Boucher

A student in environmental studies at the university of Sherbrooke, Nicolas hopes to be a part of protecting Lake Memphremagog and its watershed. He is back with us as a field agent for the 2023 season. Welcome back Nicolas!

The biodiversity of the Lake Memphremagog watershed: a richness to be protected

Last December, the 15th United Nations Conference (COP15) on biodiversity took place in Montreal. Governments from around the world agreed to begin to halt the decline in biodiversity by protecting 30% of land and oceans by 2030. MCI was present to support the efforts put in place by numerous partners to accelerate conservation in southern Québec.

Highlights of six threatened species in Lake Memphremagog and its watershed



Alain Audet

American bald eagle *Haliaeetus leucocephalus*

	Vulnerable
	Not threatened

Large bird of prey recognizable by its brilliant white head, neck and tail. After suffering a serious decline in eastern North America, the population in the region is now increasing as a result of the banning of certain pesticides. It can be observed gliding over Lake Memphremagog, hunting for large fish or perched atop large conifers.



Isabelle Picard

Northern dusky salamander *Desmognathus fuscus*

	Likely to be designated threatened or vulnerable
	Endangered

This amphibian, up to 14 cm long, has a variable coloration, generally gray, yellowish brown or dark brown. Like other aquatic salamanders, it has no lungs: oxygen is rather absorbed by the skin and the mouth and neck's mucous membranes. The drying up of waterways, installation of infrastructure along rivers and pollution are the main threats to its survival. The presence of this species in your waterways indicates high quality water and land. In the Lake Memphremagog watershed, it can be found in intermittent waterways, particularly in forest streams.



Ariane Orjikh

Ring-necked snake *Diadophis punctatus*

	Likely to be designated threatened or vulnerable
	Not threatened

This grayish or bluish snake is up to 40 cm long. It is easily identified by its yellow or orange ring just behind its head. As well, its belly is the same colour as its ring. In the Lake Memphremagog watershed, it is found in forests, particularly on rocky hills and clearings.

Why is biodiversity so important?

Biodiversity encompasses the totality of ecosystems and lifeforms on earth (plants, animals, fungi, bacteria, etc.) and constitutes a complex network of interdependent relationships within which each member plays an important role. This biological diversity is essential in the maintenance of life on earth. It participates in the nutrient and water cycles and in the production of oxygen by plants. It is also indispensable for the well being and health of humanity, as it offers many services, such as providing drinking water, food and medications.

Worldwide biodiversity is in crisis, and our region is not immune

It is estimated that about one million animal and plant species are at risk of extinction within the next couple of decades. This rapid decline in worldwide biodiversity is due mainly to threats such as the loss and degradation of habitat linked to urbanization, urban sprawl, climate change, pollution, invasive species, disease and the overexploitation of species. In Québec, biodiversity is richer in the south, given the more clement climate. It is also the most populous region, putting important pressure on this biological diversity.



Isabelle Picard



The Lake Memphremagog watershed has not escaped this problem. Did you know that there are about twenty species at risk here?

Bridle shiner

Notropis bifrenatus



Vulnerable



Of concern

This small silvery fish is up to 6 cm long. It can be distinguished from other similar species by its lateral black stripe running the length of its body, from its mouth to its tail. Its decline is the result of factors such as the degradation in water quality and a reduction in the availability of weed beds. Inventories carried out by the wildlife ministry and MCI have confirmed its presence in numerous lake Memphremagog weed beds.

American ginseng

Panax quinquefolius



Threatened



Endangered

This small plant measures between 20 and 50 cm in height. It can be recognized by its bright red fruit and its four leaves, each composed of five leaflets. It is found in the shade of mature stands of maple trees, in rich and humid soil. Its decline is due, among other reasons, to its commercial harvesting for its numerous therapeutic properties, and to loss of habitat.

Butternut

Juglans cinerea



Likely to be designated threatened or vulnerable



Endangered

This shade intolerant tree can reach up to 25 m in height. It is easily identified by its compound leaves, each containing 11 to 17 leaflets, and its light gray bark furrowed by broad, criss-crossing ridges. For the past decades, it has been the victim of a deadly fungus, the butternut canker, which explains its status. Butternut fruit is edible and the bark is used as a natural remedy for toothache.

Chanel Racine-Mineault,
Biologist, Project Manager



According to the Québec law
on threatened and vulnerable species



According to the Canadian law on species at risk

References:

Government of Canada, *Species at risk public registry*, 2023.

Government of Québec, MELCCFP, *Liste des espèces fauniques menacées ou vulnérables*, 2023.

Government of Québec, MELCCFP, *Liste des espèces floristiques désignées menacées ou vulnérables ou susceptibles de l'être*, 2023.

Wetlands: precious ecosystems

Wetland conservation is of capital importance, as wetlands are renowned for their great biodiversity and their numerous ecosystem services. They retain sediments, limit siltation of bays and filter pollutants. As well, they mitigate damage by slowing flooding. They are also considered carbon sinks as they capture and stock the carbon of greenhouse gases present in the atmosphere. Other than their ecosystem services, they are magnificent sites. On the Canadian side of Lake Memphremagog, there are 5,907 ha (59.1 km²) of wetlands, covering 11.5 % of the territory.

In 2017, the Québec government gave the responsibility of preparing a regional plan for wetlands and waterways (PRMHH) to the MRCs, so as to integrate these regions into their overall land use plan. MCI was involved in the preparation of this plan, being a member of the working group collecting the information and attending all of the public meetings. In the PRMHH presented by the Memphremagog MRC, 63.5% of the MRC's wetlands were targeted for protection and 26.5% for sustainable usage, thus leaving 10% of wetlands with no protection. Although all wetlands should be protected, given their ecological services, MCI congratulates the MRC for their work which will limit losses of area and ecological services in 90% of the wetlands in the MRC.

One of the largest wetlands in Lake Memphremagog's watershed is the Cherry River wetland.

On the right, two researchers from the École Polytechnique de Montréal explain how the Cherry River marsh helps Lake Memphremagog by filtering nitrogen and phosphorus entering the lake.

Chanel Racine-Mineault
Biologist, Project Manager

Ariane Orjikh
Biologiste, directrice générale

IMPORTANCE of the Cherry River Marsh for water quality management

A collaboration with:

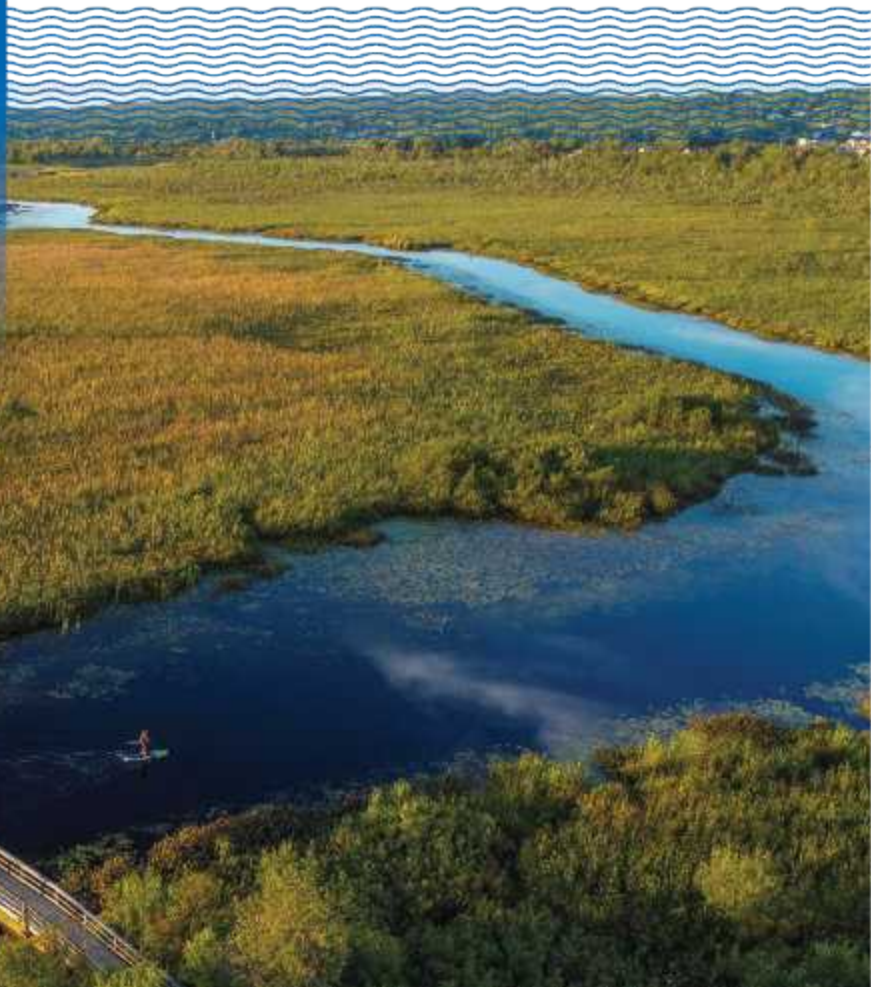
Hashem Asgharnejad, MSc

PhD student in Water Engineering, Department of Civil, Geological, and Mining engineering, Polytechnique Montréal, Montréal, QC, Canada

Elmira Hassanzadeh, ing., PhD

Associate Professor, Department of Civil, Geological, and Mining engineering, Polytechnique Montréal, Montréal, QC, Canada

Freshwater resources face severe threats due to the increase of nutrients such as Phosphorus and Nitrogen. Wetlands provide numerous ecological and hydrologic services and can potentially reduce nutrient delivery to downstream water bodies. Despite these benefits, wetlands' behavior in altering water quality conditions is not well understood. Indeed, it is not clear how and why a wetland acts as a sink or source of nutrient. An improved understanding of wetlands' functionality is therefore needed to conserve and promote them as water quality management solutions.



As the first phase of a large research program, Elmira Hassanzadeh, Associate Professor at Polytechnique Montréal and her research team aim to understand how the Cherry River Marsh is changing the quality of water reaching Lake Memphremagog. For this purpose, in collaboration with L'Association du Marais-de-la-Rivière-aux-Cerises (LAMRAC), her team collected 1700 water samples from 20 locations upstream, within, and downstream of the Cherry River marsh as well as in Lake Memphremagog from June 6th to August 30th 2022, see Figure 1a. Hashem Asgharnejad, PhD student of Dr. Hassanzadeh, measured the Total Nitrogen (TN) and Total Phosphorus (TP) in the samples using the instruments in the Hydraulic and CREDEAU laboratories at Polytechnique Montréal.

Figure 1a: Water sampling points in the Cherry River Marsh and Lake Memphremagog



The preliminary analyses show that the Cherry River Marsh acts as a filter of nutrients on most days and its behavior in terms of handling TN and TP is not necessarily similar. As an example, comparisons between the amounts of TN upstream and downstream of the marsh reveal that the marsh acts as a nitrogen sink in about 90% of the days, see Figure 1b. On some days, the marsh can remove 95% of TN that otherwise would have ended up in the lake. This shows the important role of the Cherry River Marsh in managing nutrients towards Lake Memphremagog. Figure 1c shows the TP entering and leaving the marsh during the summer of 2022. As can be seen, the marsh can effectively (by up to 80%) reduce the TP from the beginning of June to mid-August. However, as continuous, and significant amounts of TP enter the marsh system in the last two weeks of August, the marsh's capacity for handling the excessive TP decreases.

Dr. Hassanzadeh's team is now looking into better understanding the functionality of the marsh over this period considering the collected water temperature and level data from the marsh as well as climate data provided by Professor Nazemi at Concordia University. Moreover, the team aims at validating the analyses presented by continuing to take water quality samples from the marsh and analyzing them in the years to come.

Figure 1b: Total Nitrogen entering and leaving the Cherry River Marsh during summer 2022.

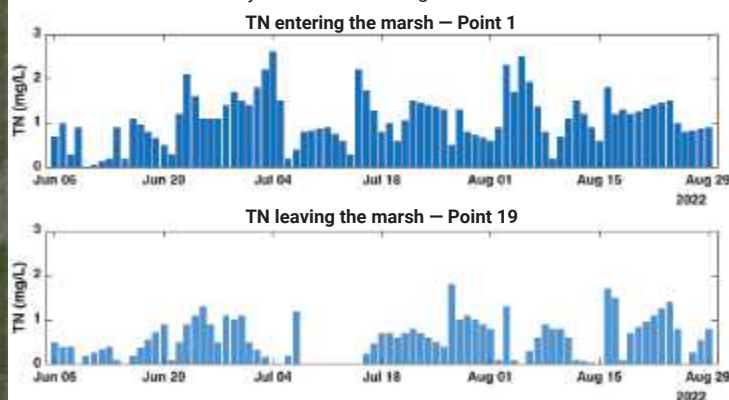
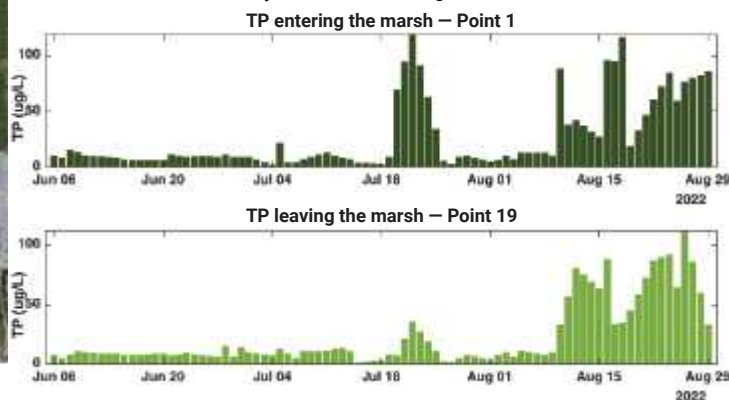


Figure 1c: Total Phosphorus entering and leaving the Cherry River Marsh during summer 2022.



15.8 hectares of land protected in perpetuity near Cummins Bay in Magog

The Memphrémagog Wetlands Foundation (MWF) and MCI are pleased to announce that 15.8 hectares (39 acres) of land have been protected near Cummins Bay on Lake Memphremagog. This is an ecological donation to the Foundation from Mrs. Joan Fraser Ivory, a longtime resident of the area. This will be the third Nature Reserve for the Foundation and will be named in honour of her late husband, Neil B. Ivory once it is recognized by the Ministère de l'Environnement, de la Lutte contre les changements climatiques, de la Faune et des Parcs (MELCCFP).

Following the characterization of Cummins Bay area in 2016, MCI contacted Mrs Ivory to inform her about the ecological importance of its natural lands and the conservation options. In 2020, Mrs. Ivory indicated to MCI her desire to donate a piece of land to be protected in perpetuity as a natural habitat for the animals and birds. Steps were then taken by MCI and MWF with the MELCCFP and Environment and Climate Change Canada (ECCC) under their respective Ecological Gifts programs.

The Foundation and MCI are delighted to be partners in the preservation of the biodiversity of the watershed and the water quality of Lake Memphremagog. On a local and regional scale, the protection of the Ivory property is a key step in the establishment of a protected natural area that includes wetlands, forest and

two brooks in the Cummins Bay area. The property has also been identified in the City of Magog's 2014 Conservation Plan as an area of high ecological value and interest requiring special attention. The wetlands of the property are also identified as wetlands to be protected in the 2023 Plan régional des milieux humides et hydriques of the Memphrémagog MRC.

The Foundation and MCI thank Mrs. Ivory for her generous donation and her leadership that may also encourage other property owners in the area to conserve natural areas on their property.

The Foundation and MCI would also like to thank the City of Magog for their financial contribution from the Water Quality Improvement Grant Program, funds from private donors as well as MELCCFP and ECCC for their support.

The Memphrémagog Wetlands Foundation, established in 1991 by the late Stewart Hopps, CM, is a conservation organization dedicated to the protection of natural environments and habitats, particularly the wetlands and forests of Lake Memphrémagog's watershed and the Tomifobia River valley in the Eastern Townships. For information about the Foundation, contact judy.hopps@sympatico.ca.

Judy Hopps, President
Memphrémagog Wetlands Foundation

MCI is here to help!

Since 2009, MCI informs and supports owners to protect their natural environments in the Lake Memphremagog Watershed. If you value the natural landscapes on your property and would like to preserve them, several options are available to you to ensure their protection, such as a private nature reserve or an ecological donation. MCI's conservation experts are here to answer your questions. Our goal is to help you to achieve your conservation and financial objectives by developing a plan that meets your specific needs. If you choose to go ahead, MCI will guide you through the conservation process, step by step, in a totally confidential manner.

For more information on conservation options as well as the financial and fiscal benefits offered, visit our web site at <https://www.memphremagog.org/en/conservation-by-private-property-owners>. For all questions related to conservation on your property, you can contact us at conservation@memphremagog.org.

Protecting Lake Memphremagog from PFAS



In 2020, traces of polyfluoroalkyl substances (PFAS), toxic chemicals, were found in Lake Memphremagog. In 2021, PFAS were found in the lake water intakes of the cities of Mago and Sherbrooke. Even though the concentrations were minimal, the simple presence of these chemicals is concerning. Here is why!

What are PFAS?

PFAS (perfluoroalkyls and polyfluoroalkyls) are a family of chemicals with properties that repel water and oil. They are present in numerous consumer products, such as non-stick surfaces of pots and pans, waterproofing for clothing and sports equipment, food packaging, etc. They are forever chemicals as they do not degrade in the environment and can persist for decades, even centuries.

As well, these forever pollutants can accumulate in living organisms, causing damage to both human and animal health. Studies show that they increase the risk of cancer, heart disease, diabetes, and growth and reproductive problems.

What is the source of PFAS in the lake?

A likely source of contamination is Vermont's only landfill site, situated in Coventry, close to Lake Memphremagog. In fact, leachate (garbage juice) from landfill sites is reputed to contain numerous toxic pollutants, including PFAS. Alas, the Coventry site discharged part of its leachate into the lake up until a 2019 moratorium. Since then, this polluted water has been sent to a municipal waste treatment facility elsewhere which is not designed to treat most of the contaminants contained in the leachate.

That said, the owner of the landfill site received the necessary permits to build an on-site plant to treat the leachate, which will then be discharged into Lake Memphremagog. Even with such a plant, the treated water will still contain PFAS. To date, no known treatment can eliminate all the PFAS, as well as several other contaminants. This is why, under the precaution principle, this treated effluent must not be discharged into Lake Memphremagog, given its toxicity, its forever characteristics, and its ability to accumulate in living organisms, it is a question of public health. As a result, it is necessary to take all appropriate measures to prevent PFAS and other contaminants from polluting the lake and the environment. Remember that the lake is a drinking water source for more than 175,000 residents of the region.

What MCI is doing

For decades, MCI has been involved in the Coventry landfill site issue and is a participant in the oversight committee, as well as in various debates and public consultations. In 2019, the American group DUMP (Don't Undermine Memphremagog's Purity), in collaboration with MCI, obtained a temporary moratorium on the discharging of leachate into the Lake Memphremagog watershed. Given that the moratorium ends in 2026, MCI is working to obtain a permanent moratorium.

MCI's team contributed to the monitoring of PFAS in Lake Memphremagog and participated in the sampling done by the Conseil de gouvernance de l'eau des bassins versants de la rivière Saint-François (COGESAF) in 2021.

What MCI is demanding

MCI is demanding that the precaution principle be applied in this issue to protect the lake, the environment and human health. MCI wants the governments of Québec and Canada to intervene with the government of Vermont to ensure that leachate, treated or not, no longer be discharged into the Lake Memphremagog watershed. MCI is worried and demands leadership on the part of our elected officials. They are accountable to present and future generations.

Marie-Josée Huot
Board Observer

MCI at the forefront of the fight against aquatic exotic invasive species

Results of the 2022 studies

In the summer of 2022, MCI's team carried out three projects tracking the evolution of aquatic exotic invasive species (AEIS) present in Lake Memphremagog: Eurasian watermilfoil, (*Myriophyllum spicatum*), zebra mussel (*Dreissena polymorpha*), banded mystery snail (*Viviparus georgianus*) and Chinese mystery snail (*Cipangopaludina chinensis*). The results of these studies are available on MCI's web site.

In addition, MCI attends various municipal events to raise awareness of AEIS and offers training on AEIS to municipal employees and lakeside residents' associations.

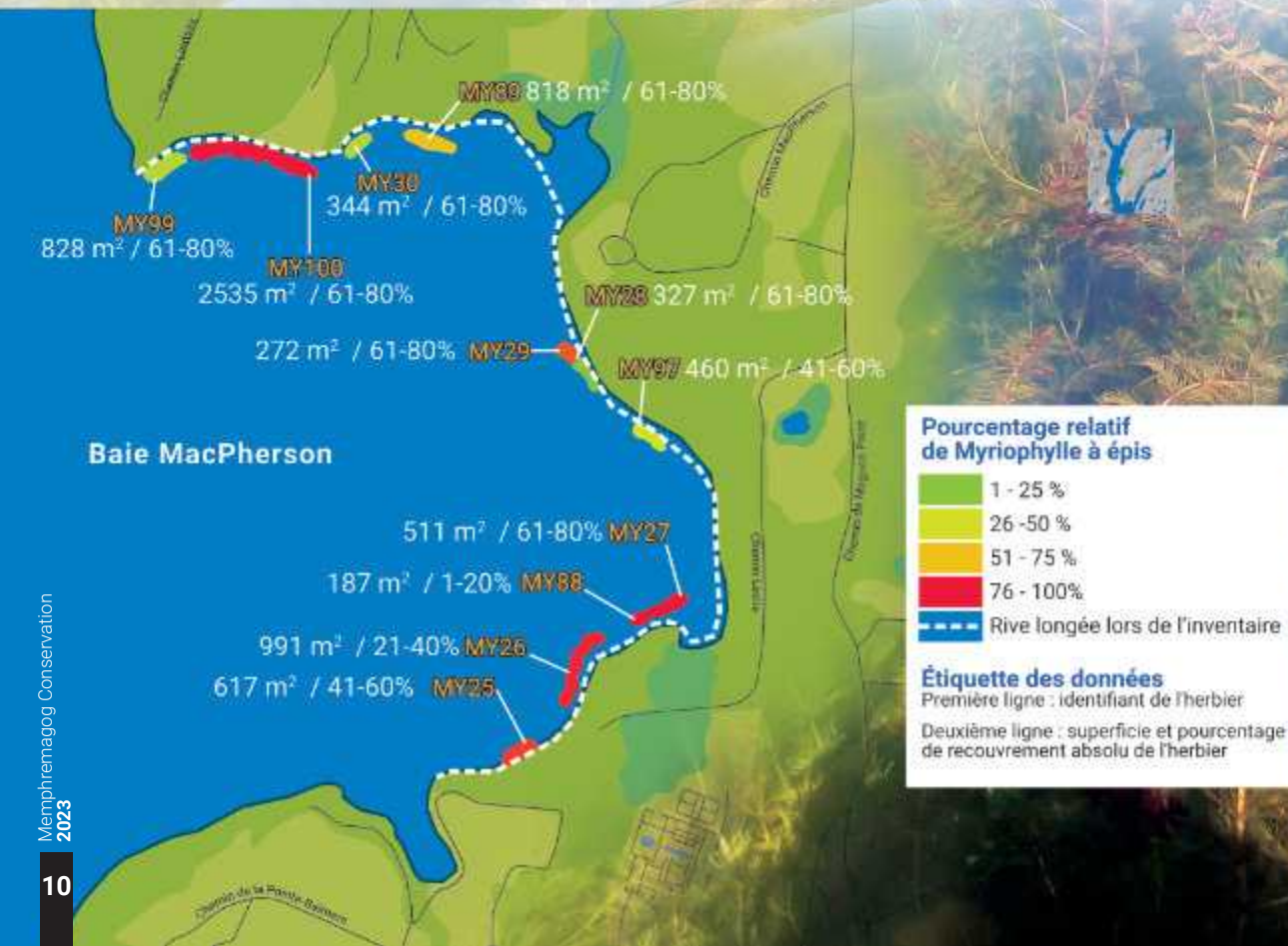
Eurasian watermilfoil

Eurasian watermilfoil, an aquatic plant, has been present in Lake Memphremagog since at least the 1980s. Until recently, however, its distribution in the lake was not well known. For this reason, last summer MCI's team carried out an inventory of Eurasian watermilfoil along the shorelines of Austin, Magog and Stanstead Township. This project was able to demarcate more than one hundred weed beds. They concluded that although Eurasian watermilfoil is well established in the three municipalities, in most cases, it covers less than 75% of the weed beds where it is present. This project was carried out thanks to the financial contributions of the municipalities of Austin and Stanstead Township and the City of Magog.

Zebra mussels

Present in Lake Memphremagog since 2017, the zebra mussel is an exotic invasive species now well known in the region. MCI has been following its progression and carrying out control activities since 2018, allowing us to remove hundreds of thousands of zebra mussels from the lake. In the fall of 2021, a massive wave of reproduction was observed by MCI's General Manager, Ariane Orjikh and Denis Mongeau of Plongée Magog. Thus, it is not surprising that zebra mussels have carpeted the lake bottom in several locations in 2022. A density of more than 6,700 mussels/m² was noted around the three sisters islands, where the previous year only 30 mussels/m² had been observed. The monitoring has shown a progression of the zebra mussels towards the south and into the bays.

Portrait of Eurasian watermilfoil in MacPherson bay. More than one hundred weed beds were demarcated and characterized by MCI in 2022. The results of this study are available on our web site.





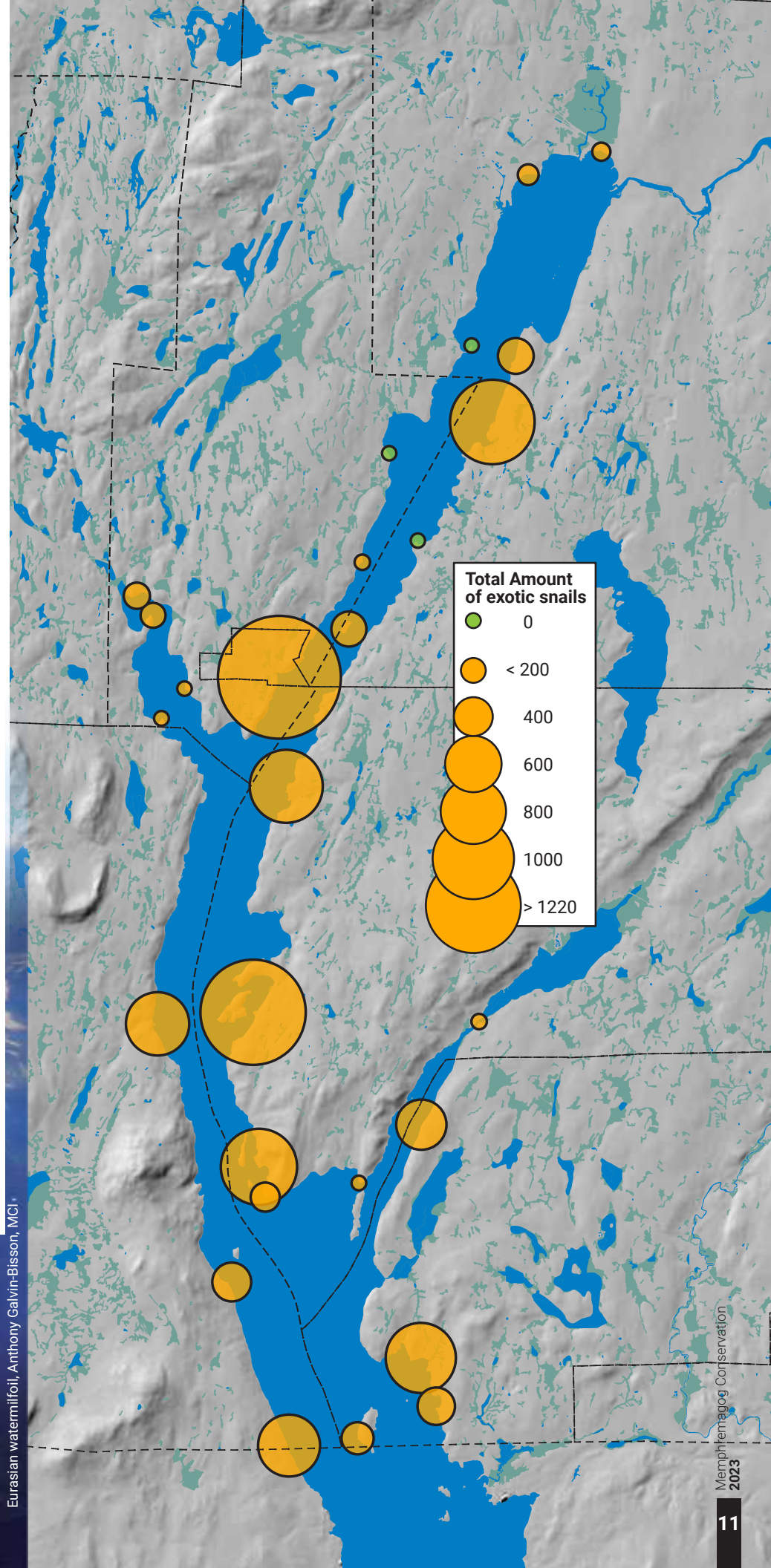
Unfortunately, the zebra mussel is now well established, in large quantities, in Lake Memphremagog. For the second consecutive year, the MCI patrol has also carried out a sampling of veligers (zebra mussel larvae). We note that these larvae are present in the water column from May to October and their concentration is increasing year by year. MCI reminds the public of the importance of proper washing of boats and equipment during the entire boating season!

Exotic snails

Present in Lake Memphremagog since at least 2018, the banded and Chinese mystery snails are two species of aquatic snails. MCI has become aware of them due to their increase in certain sectors of the lake. In the summer of 2022, the team studied their distribution in the lake by scuba diving and snorkeling. The banded mystery snail is found everywhere in the lake, and the Chinese mystery snail has only been observed at two areas. In total, 660 Chinese mystery snails and 7,369 banded mystery snails were removed from the lake!

Fanny De Blois
Project Manager

Eurasian watermilfoil, Anthony Galvin-Bisson, MCI



All this sampling and analysis allows us to create a portrait of the state of the lake.

- Memphremagog MRC sampling program stations sampled in 2022
- MELCCFP sampling stations
- Station sampled 10 times between May and October

What can I do to help ensure the health of the lake?

- Protect natural landscapes of ecological interest on your property (such as forested areas, wetlands, threatened species habitat, streams, bodies of water and shorelines);
- Maintain forest cover and plant trees and shrubs on your property. Every year, MCI gives out trees to residents of the watershed for free;
- Preserve or renaturalize the first 10 to 15 metres of shoreline with a mix of trees, shrubs and grasses (see insert);
- Opt for an ecological lawn and stop using fertilizers and pesticides in the shoreline buffer zone;
- Maintain your septic system and use only biodegradable, phosphate free cleaning products;
- Use best maintenance practices on your private roads, thus limiting erosion;
- Identify and control any exotic invasive plants on your property. Should you observe exotic invasive species on your property, contact your municipality for further information (warning, do not handle giant hogweed without proper protective gear).

What are the best boating practices to ensure a healthy lake?

- Wash your boat, motorized or not, when you change locations to limit the spread of aquatic exotic invasive species;
- Avoid boating in or near fragile zones, such as weed beds;
- Go slowly when near the shore to limit the impact of your wake on the shoreline (the limit is 10 km/hr within 100 metres of the shore);
- Practice watersports that create oversized waves at least 250 m from shore in water at least 5 m deep to avoid stirring up bottom sediments;
- Do not feed wildlife (including ducks);
- Use a quiet motor;
- Limit music volume to a level where only the occupants of the boat can hear it;
- Empty your septic system at designated stations;
- Don't throw garbage in the water;
- Consult MCI's interactive navigation chart to better know your lake!



Calling all shoreline residents:

MCI can help with the renaturalization of your shoreline!



MCI is pleased to announce a new project to revegetate the shoreline buffer zones of residences around Lake Memphremagog!

Shoreline buffer zones play a capital role in the maintenance of the quality of Lake Memphremagog's water. They stabilize shorelines and prevent silting problems by protecting the shoreline from erosion, their roots filter out nutrients, limiting cyanobacteria blooms, they maintain cooler water temperatures and create habitat for wildlife. Unfortunately, many shoreline zones are not carrying out their proper ecological role in the protection of water quality and biodiversity.

This project is aimed at shoreline property owners who would like to create or enlarge their shoreline buffer zone. They must have at least 10 metres of shoreline to qualify. MCI will help with the whole process, and 80% of the cost is covered by subsidies. Contact us at shoreline@memphremagog.org or 819-620-3939 for more information!

This project was made possible thanks to a contribution from the Programme de soutien régional aux enjeux de l'eau (PSREE) as well as a collaboration with COGESAF and Lake Memphremagog's shoreline municipalities.



Québec 

Cyanobacteria :

MCI presents its new interactive map!

Well known as blue-green algae, cyanobacteria are naturally present in all our waterways. However, certain factors such as elevated phosphorus levels and warmer than usual temperatures can cause an excessive proliferation of these microorganisms and create cyanobacteria blooms.

MCI's team has been documenting this phenomenon for several years and has created various projects aiming to limit cyanobacteria blooms in Lake Memphremagog. Every summer, our team collects data on the blooms observed. Many of you have helped us document this

problem by advising us of any blooms you see. This winter, MCI decided to gather all this data together and create a new tool: an interactive map. Now available on our web site, it contains all the cyanobacteria blooms observed since 2006. The information includes the location, the date and a photograph of the bloom. Use the QR code below to view the map.



It is important to remember that certain species of cyanobacteria can release toxins that are harmful to human health. For this reason, it is important to avoid all contact with the blooms.



To report a cyanobacteria bloom, call us at 819-620-3939 or send us an email at patrol@memphremagog.org.

Fanny De Blois
Biologist, Project leader

Contact numbers

to report problems encountered on the lake

Problem	Location	Contact	Telephone number
In case of a spill or other environmental situation requiring immediate action	Canadian portion of Lake Memphremagog	Urgence-Environnement	1 866-694-5454
In case of problems relating to dangerous behaviour on the lake, alcohol consumption and noise	Magog and Austin	Régie de police de Memphremagog	819-843-3334
	Ogden, Stanstead and Pottton townships	Sûreté du Québec	819-564-1212
Problems regarding infringement of boating regulations	Canadian portion of Lake Memphremagog	Memphremagog MRC patrol	819-821-0435 819-620-7669
For all other questions regarding long term boat mooring and launching	Canadian portion of Lake Memphremagog	Direction de la gestion du domaine hydrique	https://www.quebec.ca/agriculture-environnement-et-ressources-naturelles/eau/gestion-domaine-hydrique-etat/octroi-droit-occupation/permis-occupation
For all questions regarding non-standard buoys	Canadian portion of Lake Memphremagog	Transport Canada, Navigation protection program	877-646-6420 PPNQUE-NPPQUE@tc.gc.ca
In case of illegal work (ex. on the shoreline)	Pottton Township	Municipal Inspector	environnement@pottton.ca
	Austin	Project manager and environmental inspector	819-843-2388, poste 229 environnement@municipalite.austin.qc.ca
	Magog	Municipal Inspector	819 843-3333 https://www.ville.magog.qc.ca/informations-services/service-go/
	Stanstead Township	Environmental inspector	819-876-2948, poste 227 inspecteur2@cantonstanstead.ca
	Ogden	Building and environmental inspector	819-876-7117 urbanisme@munogden.ca
If you see an activity that appears illegal	Canadian portion of Lake Memphremagog	Québec environmental control	Lodge an environmental complaint via the MELCCFP's online form https://www.environnement.gouv.qc.ca/formulaires/Plainte/form.asp
To report a cyanobacteria bloom, exotic invasive species or any other environmental questions	Canadian portion of Lake Memphremagog	Memphremagog Conservation (MCI follows up with the Québec government and takes water samples within the Witness lakes project)	819-620-3939 patrol@memphremagog.org



Promotional articles are back on the shelves.

To see what's available, go to <https://www.memphremagog.org/en/promotional-articles!>

To place an order, contact us at patrol@memphremagog.org or at 819-620-3939.

Annual general meeting

This year's annual general meeting will take place in the Association des propriétaires de Southière-sur-le-lac's chapel, at 313 avenue de la Chapelle in Magog, on Saturday, June 3rd from 9:30 AM to 11:30 AM. On the program: a look back on 2022, the 2023 patrol, as well as a special presentation in collaboration with the Nature Conservancy, Appalachian Corridor and the Fondation Marécages Memphremagog. Join us and register at admin@memphremagog.org!

2023 Calendar

May 8: Patrol begin their activities

May 19 from 1 PM to 3 PM: Free tree distribution at Ogden town hall

May 19 at 2 PM: Conference on exotic invasive species in Ogden

May 20 from 9 AM to 11 AM: Free tree distribution at the Austin Depanneur and at Parc Forand in Stanstead Township

May 28 from 10 AM to 3 PM: Free tree distribution at LAMRAC in Magog

June 3: MCI's annual general meeting at the Association des propriétaires de Southière-sur-le-lac's chapel in Magog

June 16: Conference on exotic invasive species in Ogden

July 1: MCI Kiosk at Georgeville's Canada day celebration

Early July: Phragmite control activity in Fitch Bay

July-August: Snorkel training on exotic invasive aquatic species

Early September: End of the patrol season

October: End of activities on the lake

Contact us for more information on upcoming activities this summer at info@memphremagog.org or at 819-620-3939

 **memphremagogconservation**

 **memphremagog.conservation**

 **www.memphremagog.org**

HERITAGE CIRCLE MEMBERS

Abbott, William

Association des mouillages de Knowlton Landing

Bang Marketing Inc, A/S M. Eric Bissonnette

Bannerman Foundation, A/S Mr. Paul Bannerman

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Caron, Trevor H.

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Talon, Jean-Denis

Thorburn, Cynthia Caron

Vouloumanos, Nicholas & Vickie

Wilson, Janet

Yates, Henry B. & Melodie

In addition to those mentioned, certain donations were made anonymously.

In Memoriam

Bishop, Donald

Delange, D.J.

Woods, Carol Sylvia

THANK YOU TO OUR MAIN PARTNERS!

Conseil de gouvernance de l'eau des bassins versants de la rivière Saint-François (COGESAF)

Conseil régional de l'environnement de l'Estrie (CREE)

Conservation de la nature Canada (CNC)

Corridor appalachien (ACA)

DUMP (Don't Undermine Memphremagog's Purity)

Fondation Marécages Memphremagog (FMM)

Memphremagog Watershed Association (MWA)

Regroupement des associations pour la protection de l'environnement des lacs et des bassins versants (RAPPEL)

Réseau des milieux naturels protégés (RMN)

The towns of Austin, Pottton township, Stanstead Township and Ogden and the cities of Magog and Sherbrooke

The Memphremagog MRC

The Government of Québec

The Government of Canada

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