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**Welcome to the December 2022 edition of *Under the Surface*,
the newsletter from Friends of the Muskoka Watershed.**

We would like to thank all the volunteers, donors and supporters who have helped make this an extra special year for Friends of the Muskoka Watershed. A highlight was earning our charitable status, enabling us to be even stronger in the future.

We hope you have time for some relaxation with family, friends and, of course, in our great natural environment during this festive season.

In the new year, we are offering webinars for our members via zoom.

The topics are of interest to us all

- road salt and its impact on our lakes

and

-what is causing the return of algal blooms?

Until then, Happy Holidays!



If you would like a note and information to go along with your gift membership,
contact sandy@fotmw.org

And remember, we are now a charity so you receive a receipt for tax purposes with your donation or membership purchase.

[visit fotmw.org/donate](http://fotmw.org/donate)

Road salt is threatening our water quality!

Algal blooms have returned

Sign up for our zoom webinars for members to learn more about these FOTMW concerns



ROAD SALT IS THREATENING OUR WATER QUALITY

Learn more on Tuesday, January 24 at 6 p.m. via zoom

Did you know that road salt is producing the second worst water quality threat in Muskoka lakes, and that using the Federal government water quality guidelines for chloride in our lakes will pretty well guarantee ecological damage?

We invite you to a talk from two FOTMW directors, Norman Yan and Neil Hutchinson, who will prove that the road salt problem in Muskoka lakes is widespread and will likely worsen in the future with development pressures and climate change. We will introduce you to the FOTMW's road salt work, and hopefully encourage you to think a bit more about how much salt you might use as a deicer on your own driveway and sidewalk.

FOTMW isn't just about fireplace ash. Do attend and learn about the road salt issue in Muskoka lakes.

Email sandy@fotmw.org to register for the workshop. A meeting ID will be sent out closer to the event date.

This is for members of FOTMW.org



WHY ARE WE GETTING MORE ALGAL BLOOMS?

Learn more on Thursday, February 9 at 6:30 p.m. via zoom

The classic management approach to cyanobacterial blooms in fresh water was based on reducing surplus phosphorus loading from human activities to maintain total phosphorus concentrations below levels that increase the probability of blooms.

This approach has been challenged recently by the increasing number of these blooms in lakes with **low phosphorus levels and lakes with no human phosphorus sources**.

While we must still avoid extra phosphorus loading from external sources, warmer waters and increasing thermal stability of lakes in response to climate change favour cyanobacterial habitat and ecology.

A warmer climate increases the potential for the deep waters in a lake to lose their oxygen content and become sources of internal loading of phosphorus. More severe storms mobilize more phosphorus from the watershed, where tree health has been

Other stressors such as warmer temperature, chloride from road salt, low calcium and invasive predators may interact to reduce the health of zooplankton that graze algae. While we need to investigate these causative factors we need not wait for the answers before we do something to reduce our carbon dioxide emissions as our climate is warming.

Email sandy@fotmw.org to register for the workshop. A meeting ID and link will be sent out closer to the event date.

This is for members of FOTMW.org

[Sign me up for algal bloom webinar](#)



Friends of the Muskoka Watershed

ASHMUSKOKA



THANK YOU VOLUNTEERS

We depend on our volunteers

FOTMW Volunteer

Jim Martin is a dedicated volunteer for Friends of the Muskoka Watershed.

It all started when Jim's wife Sandy joined FOTMW as a member and they started donating ash.

"I volunteered to help spread ash at Camp Big Canoe and ever since I've come to the ash drives," says Jim. To research the impact of ash on Muskoka forests, volunteers helped FOTMW spread tons of ash on test plots at the property just outside of Bracebridge.

"I like to do something interesting," he says explaining, he is retired and has time to help out. "I'm getting back out with people and I'm giving back."

Jim regularly volunteers at the monthly ash drives. "I even come on the cold days," he says laughing. Jim moved to Muskoka in 1981 and enjoys the outdoors and natural environment the area offers.



"I'm getting back out with people and giving back"

SAVE THE DATE

Our next ash drive is Saturday, January 21 from 9:30 a.m. to 1 p.m.

The following drive will be Saturday, February 18 from 9:30 a.m. to 1 p.m.

Save the Date

Ash Drive

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

Saturday, January 21 from 9:30 a.m. to 1 p.m.

Save the Date

February 2023 Ash Drive

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4
5	6	7	8	9	10
12	13	14	15	16	17
19	20	21	22	23	24
26	27	28			

Saturday, February 18 from 9:30 a.m. to 1 p.m.

ENVIRONMENTAL MATTERS

Algal blooms need more research

Algal abundance is controlled by the essential nutrient in lowest supply, the so-called limiting nutrient. In our lakes, that nutrient is phosphorus and we had too much of it in the past. The good news is that enlightened management has led to stable or even declining levels of phosphorus in most Muskoka lakes. But surprisingly, algal blooms are now occurring in nutrient poor lakes. While there are many possible causes, what climate change has done to lake temperatures and lake mixing seems the most likely one. Once support is secured, FOTMW plans to identify what specific lake changes lead to these blooms. It's the first step in preventing them from occurring.

The environment matters, and with your help, we can protect it.

Contact us to learn more.



Friends of the
Muskoka
Watershed

Give a gift of membership and help protect Muskoka watersheds

Friends of the Muskoka Watershed

Simple and thoughtful Christmas gift



Friends of the Muskoka Watershed
Citizen Science



MEET OUR CITIZEN SCIENTISTS

We regularly feature those who are helping with this important program

Citizen Scientist

Len Dvorkin is a citizen scientist with two sets of test trees on his Bala area property.

He and his wife Susanna purchased their Lake Muskoka cottage in 2019 and they haven't looked back. "We visit year-round," he says. "I spend as much time here as I can, especially since I can work from the cottage."

To get familiar with the community, Len subscribed to several Muskoka newsletters and magazines. In one of them, he saw an article about Friends of the Muskoka Watershed Citizen Science and looked into it.

FOTMW's Citizen Science program assists in research about adding ash to help repair the calcium depletion in our forests, a lingering impact of acid rain. "I was really happy to be associated with Citizen Science," says Len.

"It's a worthwhile contribution and a little bit of fun," he says. "It's good for the science results, the environment, and my trees – a win, win, win!"

Len used Eastern white cedar and red pine pairs as his trees, identifying them using the tree chart included in the Citizen Science package. "It was a great chart," he adds.

"I love the fact that we can be involved in something here," he says. "And even though I've only been in Muskoka for a few years, it makes me feel like part of the community."



"It's good for the science results, the environment and my trees - a win, win, win!"

Season's greetings

Holiday closure

OUR OFFICE WILL BE CLOSED FROM
DECEMBER 24 TO JANUARY 2
INCLUSIVE.

WE LOOK FORWARD TO WELCOMING
YOU BACK ON **JANUARY 3.**



Friends *of the*
Muskoka
Watershed



Friends *of the*
Muskoka
Watershed

You can support our work

Friends of the Muskoka Watershed is working to protect our Muskoka Watersheds forever.

Interested in supporting us? We welcome new members, donors, volunteers and supporters. A membership is just \$50 per person, \$90 per family and \$250 for a business.

Be the change you want to see in the world.

Help us to make a difference.

Contact sandy@fotmw.org if you want to know more



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***Turning science into community-wide action
to protect your Muskoka watershed.***

***Proactively identifying environmental threats and proposing solutions so your piece
of paradise is preserved for future generations.***

Our mailing address is:

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