



# Muskoka Watershed Report Card 2023



## About The Muskoka Report Card

The Muskoka Watershed Report Card, produced every five years by the Muskoka Watershed Council, scientifically assesses Muskoka's watershed health. It educates residents and decision-makers about water and land conditions, enabling sustainable practices to bolster the strength of our remarkable natural environment. This is essential for our way of life and economy.

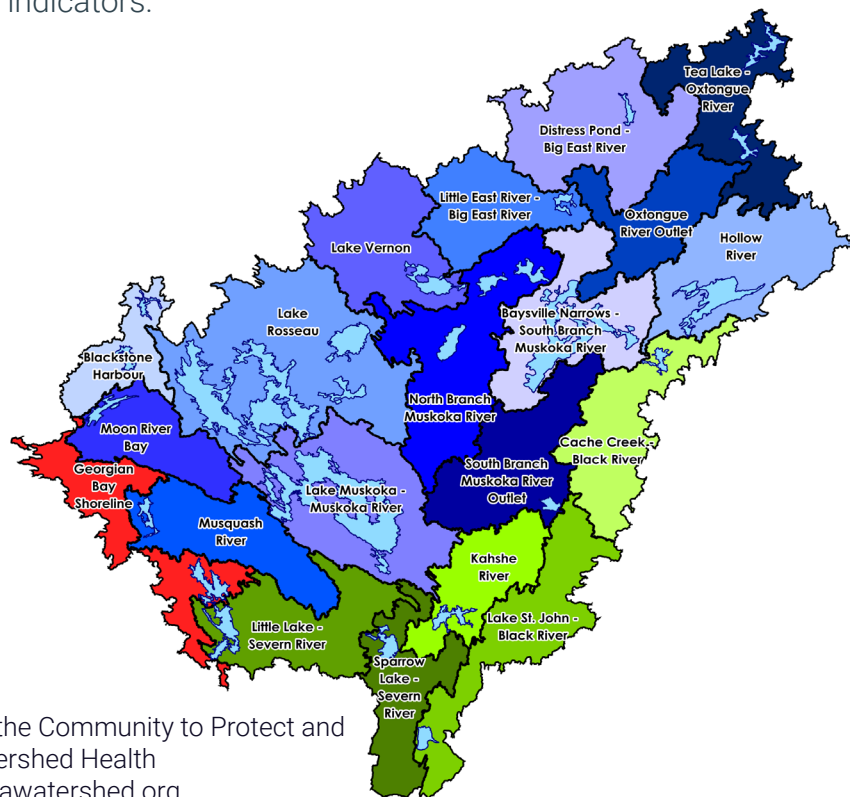
This summary captures key highlights. Read the full report for in-depth insights.

## Muskoka's Watersheds

This Report Card covers the entire Muskoka River Watershed, as well as a small portion of the South Georgian Bay Shoreline and parts of the Severn River-Lake Simcoe Watersheds that intersect with the District of Muskoka. This vast 7,000 km<sup>2</sup> area spans over 210 km from the Algonquin Highlands to Georgian Bay, including approximately 2,000 lakes amid extensive forests.

## What Is Watershed Health?

A watershed is a living and intricate ecosystem capable of maintaining its structure and functions unless faced with excessive stresses. Its health, or ecological integrity, signifies how effectively it preserves its typical structure and functions. Similar to how medical experts gauge human health, we measure watershed health by analyzing diverse indicators.



To Empower the Community to Protect and Enhance Watershed Health  
[www.muskokawatershed.org](http://www.muskokawatershed.org)





# So, What's Happening In Our Watersheds?

Muskoka's watersheds stand at a crucial turning point. While currently healthy, they are gradually degrading in several ways, and our existing management systems seem incapable of halting or reversing this negative trend. We need an integrated, watershed-scale management system capable of dealing with the multiple stresses our iconic environment now faces.

## Why Integrated Watershed Management (IWM)?

IWM is an inclusive approach that examines the entire watershed as a connected system that fosters collaboration among people, organizations, and governments, promoting comprehensive planning that transcends jurisdictional boundaries. It considers environmental, social, and economic aspects to improve watershed health, support sustainable economies, and enhance community well-being while enhancing resilience against climate change and other stressors.

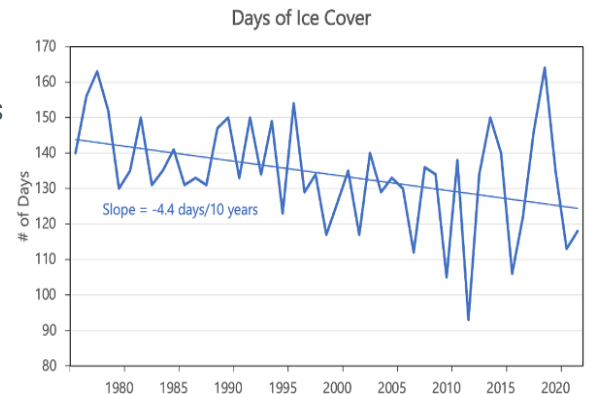
## As Our Climate Changes, We're Witnessing Its Effects Firsthand

Significant impacts involve increasing temperatures, increasing road salt in our lakes, and extreme weather events causing flooding and strain on ecosystems, all affecting our biodiversity, economy, and way of life.

### In our watershed we have witnessed

**The number of severe storms has doubled, going from 3 storms in the 30-year period of 1970-2000 to 6 storms in the 20-year period of 2000-2020.** Factors include snow, rapid snowmelt, heavy rain during melting, and significant rainfall within a week.

**20 fewer days of ice coverage since 1975** has affected winter activities, tourism, construction, and lake dynamics due to biological shifts, evaporation, and warming.





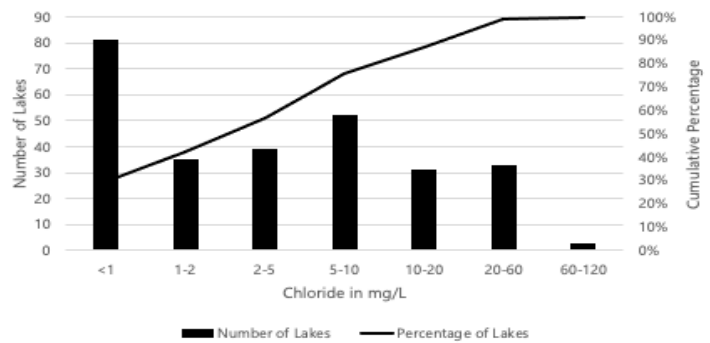
## Our Lakes Are Getting Saltier

Each year, we add tonnes of salt to our lakes.

- 70% now saltier than their natural state.
- 24% have enough chloride to threaten aquatic life.
- 29% have increased since 2018.



Chloride Distribution in 274 Muskoka Lakes 2018-2022



## Our Watersheds Have An Abundance Of Interior Forests – But Protection Is Necessary

Muskoka's forests are largely healthy and intact, supporting diverse wildlife and vital services except in well developed areas. To prevent further loss of biodiversity and essential CO<sub>2</sub> storage for climate change mitigation, we must limit fragmentation, particularly in developed areas.



## Benthic Macroinvertebrates (Benthos) Impacted By Shoreline Development And Chloride

About 32% of our lakes include sites that raise potential concerns with the quantity of sensitive benthos (such as mayflies, dragonflies, damselflies, and caddisflies). This may signal issues with shoreline development, siltation, or pollution (nutrients, chloride, and chemicals are all forms of pollution).



## Iconic Cold-Water Fish Risk Significant Decline. Intervention Is Needed

Ontario's Ministry of Natural Resources and Forestry is updating 2005 fishing regulations to safeguard fish populations. Iconic cold-water species such as Lake Trout, Brook Trout, and Lake Whitefish are struggling with fishing pressures and environmental shifts, leading to a decline in their numbers.

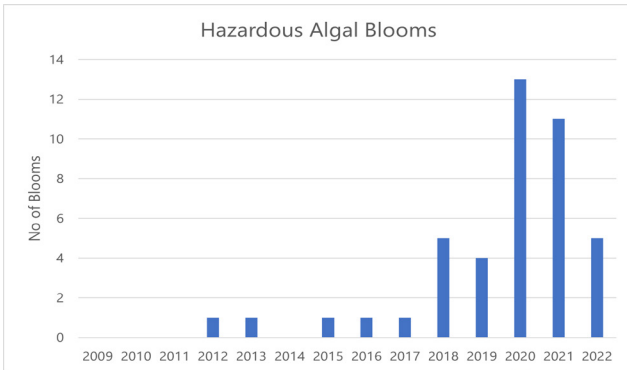




## Biodiversity Is Declining Worldwide. We Are Not Immune

- Endangered and invasive species are biodiversity indicators, but data are scarce. Citizen reports of sightings are vital to bridge this gap.
- Current understanding in our watershed lists 48 at-risk species (20 endangered), nine major invasive species and a rising spread of disease-causing microorganisms like Lyme disease and Beech Bark Disease (BBD).

## Harmful Algal Blooms Are Becoming More Common Despite Low Phosphorus Levels. Scientists Don't Know Why



Algal blooms, including potentially toxic blue-green varieties, are increasingly common in our watersheds. They affect the scenic beauty of the cottage country experience and could impact our economy. While the health risk is low, it remains a concern. The factors causing these blooms are still under intense research.

## Preserving This Beautiful Environment For The Future Demands Immediate Action. Step Up and Make a Difference Now – Your Efforts Matter!

- Advocate for Integrated Watershed Management (IWM) for healthier watersheds.
- Combat climate change, reduce emissions, and champion sustainability.
- Speak out: Encourage leaders to make tough choices for a healthier environment. Local actions alone can't solve complex issues.
- Engage: Volunteer or support local environmental groups.
- Minimize salt use to protect water.
- Clean boats, remove invasive plants, inspect equipment, and avoid bait dumping.
- Report invasive species, erosion, and algae blooms to authorities.
- Protect shorelines with native plants and use phosphate-free cleaners; avoid fertilizers.
- Log bird sightings on eBird.
- Enroll in the forest tax incentive program for land stewardship.
- Join the Biological Monitoring Program as a Citizen Scientist.
- Support calcium restoration through the Ash Muskoka Program.
- Find more ideas in the "Living in Cottage Country" handbook by Muskoka Watershed Council. Visit [www.muskokawatershed.org/resources/handbook](http://www.muskokawatershed.org/resources/handbook) for resources to support your actions.

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