A Thousand Lakes
April 2, 2025

The Honourable Timothy Halman
Minister of Environment and Climate Change
Department of Environment and Climate Change
P.O. Box 442
Halifax, NS B3J-2P8
Via email

Dear Minister Halman,

I am writing to:

- discuss best practices in stormwater management for preserving the quality of our freshwater resources; and
- discuss a very significant barrier to freshwater pollution prevention in Nova Scotia; and;
- suggest a possible way forward.

Best Practices for Stormwater Management

There are three main issues with stormwater: volume, velocity and quality:

- The *volume* of stormwater that comes off the hard surfaces of a developed area is much greater than the natural runoff from a forested area.
- The network of underground pipes concentrates this volume into a single, high *velocity* stormwater surge. The natural streams are too small to carry this extra load. This results in erosion of stream beds and banks, bringing large volumes of silt and sand into the lakes and wetlands.
- The *quality* of stormwater entering freshwater bodies is a critically important issue. That water carries with it numerous pollutants, including (but not limited to) nutrients like nitrogen and phosphorus, road salt, and microbes.

Considering these issues, best practice is to engineer stormwater systems in new developments and to re-engineer the stormwater systems in established neighbourhoods to minimize volume and velocity, and to maximize the quality of the stormwater entering our freshwater bodies.

The consequences of poorly engineered stormwater systems can be very serious. An example is what has happened to the Dartmouth lakes. For example, the weeds in Lake Banook are native to the lake and were initially very small. As a result of nutrient pollution,

they have now taken over the lake, to the extent that they need to be mowed so that they do not interfere with paddling practice or international events. There are also increasingly frequent beach closures at several lakes, including Lake Banook. Beach closures are necessary to prevent serious illness (both to humans and pets) due to potential exposure to toxic algae and microbial pollution.

Well established lake science tells us that the damage to lakes is proportional to the amount of pollutants in the lake, and that it will become more serious over time as pollutants accumulate in the lake ecosystem. The problems in the Dartmouth lakes are already severe and will get worse over time unless action is taken to address the core issues of increasing nutrient and microbial pollution.

Established lake science also tells us that, with ever-increasing inputs of nutrients, lake ecosystems can cross ecological tipping points, after which the lake will become slimy, smelly, and unusable for recreation. There is no way to tell how near or far we may be from such a tipping point. However, it would be foolish to assume that the Dartmouth lakes or other Nova Scotia lakes are immune to these well-known consequences of ever-increasing nutrient pollution.

A Significant Barrier to Action

In the course of our work over the past several years, both as members of the former Regional Watersheds Advisory Board (RWAB) and of A Thousand Lakes (see below for a description), the most significant barrier to responsible stormwater practices we have encountered is that Halifax Water is said to be either unable or unwilling to implement engineering solutions to address the volume, velocity and quality of stormwater entering our waterways because it is either:

- not in their mandate;
- not required by provincial regulation;
- the rate-setting authority would not approve capital expenditures in respect of it; or
- some combination of the above.

We are not in a position to gauge whether or not this is true. However, we have heard it repeated many times over many years by highly credible sources including city councillors and staff and at RWAB and council meetings.

A Possible Way Forward

No one we have talked to denies the importance of engineering our stormwater systems to protect our freshwater resources. In theory, this issue could be resolved by strong provincial regulations on stormwater management. More fundamentally, the issue comes down to who will pay for the necessary engineering solutions, and how those costs will be passed on to citizens (i.e., via (in no particular order) higher water rates, general municipal

or provincial revenues, special assessments, development charges, federal grants or some combination of these).

As a province and as a society, we must find a way out of this logjam. If this barrier to action is not removed, all efforts at protecting our freshwater and of halting and reversing previous damage will be stymied.

Having primary jurisdiction over freshwater protection within the province under Canada's constitution, the Province of Nova Scotia has the primary responsibility in this matter.

Accordingly, we would like to respectfully suggest that you consider convening a task team led by yourself and including the mayor of Halifax, the head of the rate-setting Board and the Chief Executive of Halifax Water, to find and implement solutions to this problem.

Yours Sincerely,

ORIGINAL SIGNED BY:

Céo Gaudet
On behalf of A Thousand Lakes
[redacted]

cc: (via email)

Mayor Andy Fillmore
Deputy Mayor Tony Mancini, Chair, Environment and Sustainability Standing Committee
Kenda MacKenzie, General Manager and Chief Executive Officer, Halifax Water
Stephen McGrath, Chair, Nova Scotia Utility and Review Board
Shannon Miedema, Director, Environment and Climate Change, Halifax Regional Municipality
Councillor Sam Austin, Dartmouth District 5
Claudia Chender, MLA Dartmouth South

A Thousand Lakes

Named after the approximately one thousand lakes in the Halifax Regional Municipality (HRM), **A Thousand Lakes** is an independent successor to the Regional Watersheds Advisory Board (RWAB). The RWAB was a municipally supported group of freshwater experts and citizen representatives that was intended to provide advice to HRM environment staff and the Environment and Sustainability Standing Committee (ESSC) on freshwater issues.

Composed entirely of volunteer natural science and policy professionals, **A Thousand Lakes** provides non-partisan, science-based policy advice on freshwater management to decision makers at the municipal, provincial and federal levels of government.

Our membership includes:

Dr. Linda Campbell is professor of limnology at Saint Mary's University. Dr. Campbell once served as Chair of the RWAB.

Bob Rutherford is an aquatic habitat biologist who has been very involved in the rehabilitation of Oathill Lake and other community-based watershed and watercourse restoration projects throughout the province.

Dr. Martin Willison is an ecologist who is very involved in lake issues in his community of Spryfield. Dr. Willison served on the RWAB and is a founding member of A Thousand Lakes.

Céo Gaudet is an environmental economist and policy analyst formerly with Environment and Climate Change Canada. From 2012 to 2017 he served as Canada's representative to the OECD Working Party on Biodiversity, Water and Ecosystems. He served on the RWAB and is a founding member of A Thousand Lakes.

NOVA SCOTIA

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April 30, 2025

Céo Gaudet
[redacted]

Dear Céo Gaudet:

Thank you for your April 2, 2025, email regarding the effective management of stormwater and its role in supporting the protection of surface water quality in Nova Scotia. We appreciate your commitment to protecting our freshwater resources and your helpful suggestions.

Our government knows that stormwater is an important issue, especially with more severe storms due to climate change. We are working to improve stormwater infrastructure consistent with goals in our climate plan *"Our Climate, Our Future Nova Scotia's Climate Change Plan for Clean Growth."* To achieve our goals, we've hired a new stormwater engineer who is working on collaborating with other departments and municipalities to understand stormwater needs. We have also published guidance for industry on developing erosion and sediment control plans to help prevent erosion and sediment releases into our lakes and rivers. If you have further questions you can follow up with Jillanna Brown, our stormwater engineer at [redacted]

We value your input in finding effective solutions for our community. Together, we can keep our lakes healthy for everyone in Nova Scotia.

Sincerely,

[redacted]

Honourable Timothy Halman, MLA
Minister of Environment and Climate Change

c: Jillanna Brown