

# Exploring a Silver Lake Association

6 PM May 21, 2026  
at Open Sky Co-op

Hosted by EOS Eco-Energy





*EOS would like to respectfully acknowledge that our work is done on the traditional, unceded lands and waters of the Mi'kmaq. EOS na geto genoaateget taan tesig otlogeoagen pemaatotitj na oesgeoitatjig elnoeegati taan migemeoag teleiaoltitjig.*



## About Us

*EOS (Greek for “new beginnings”) serves the Tantramar-Strait Shores-Memramcook region of New Brunswick.*

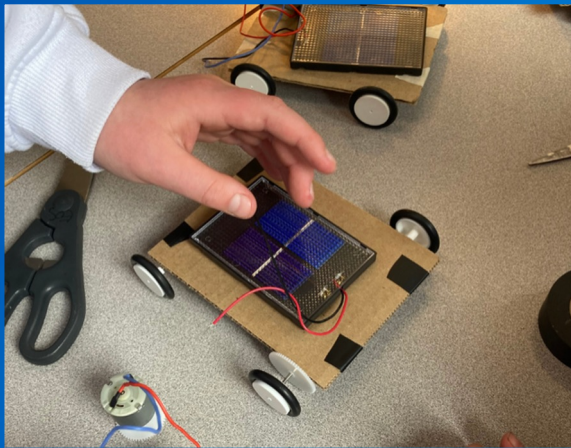
EOS is committed to community-based solutions to reducing and adapting to climate change including energy sustainability, renewable energy technologies, sustainable community planning, local watershed issues, and climate adaptation.

# Current Projects



- Renewable Energy Promotion
- Energy Efficiency Education
- Climate Change Adaptation Planning
- Home Flood Protection Assessments
- Green Spaces Design & Planting
- Community Food Security
- Community Emergency Preparedness
- Watershed Monitoring
- Watershed Stewardship & Education
- Watershed Restoration

# Renewable Energy



Lesson planning and school visits



Solar schools project - solar array installations



Community outreach



**FOOD FOREST**  
Marshview Middle School

Wynasp	Red Currant
Burkwood Berry	Strawberry
Cedar	Haskap
Chokeberry	Blackberry
Schubert	Blackberry
Bloch	Sweet Grass
Pine	Cherry
Pear	Catnip
Steden	Rhubarb
Walking Onion	Apple
Bayberry	Grape
Marshmallow	Silphium
Cassberry	Winter Savory
Rose	Red-Osier Dogwood
Kiwi Vine	Black-Eyed Susan
Silver Belle Choccolate	

**A**



# Chignecto Watersheds Monitoring





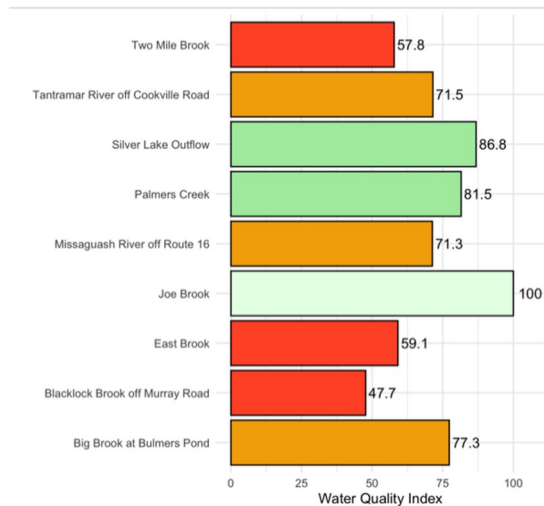
### Monitoring Sites

EOS has a longterm monitoring program focusing on 12 sites across Chignecto watersheds. Fieldwork is done May to September.

### WQI RESULTS

The WQI was calculated for 9 sites using: pH, dissolved oxygen, chloride, turbidity, total phosphorous, nitrate, iron, zinc and arsenic (parameters chosen based on NB DELG guidelines).

- 95-100** Absence of threat  
Almost pristine
- 80-94** Minor degree of threat  
Usually desirable levels
- 65-79** Occasional threat  
Sometimes desirable
- 45-64** Frequent threat  
Often not desirable
- 0-44** Almost constant threat  
Usually not desirable



### Data Analysis

Following the field season, data analysis is completed to provide a snapshot of the health of these sites for the protection of aquatic life.



### Integrated Watershed Management Plan

Every year EOS reflects on the Chignecto Watersheds Integrated Watershed Management Plan for progress, and receives guidance from our Chignecto Watersheds Committee

# The Canada Water Agency EcoAction Funding (2025-28)

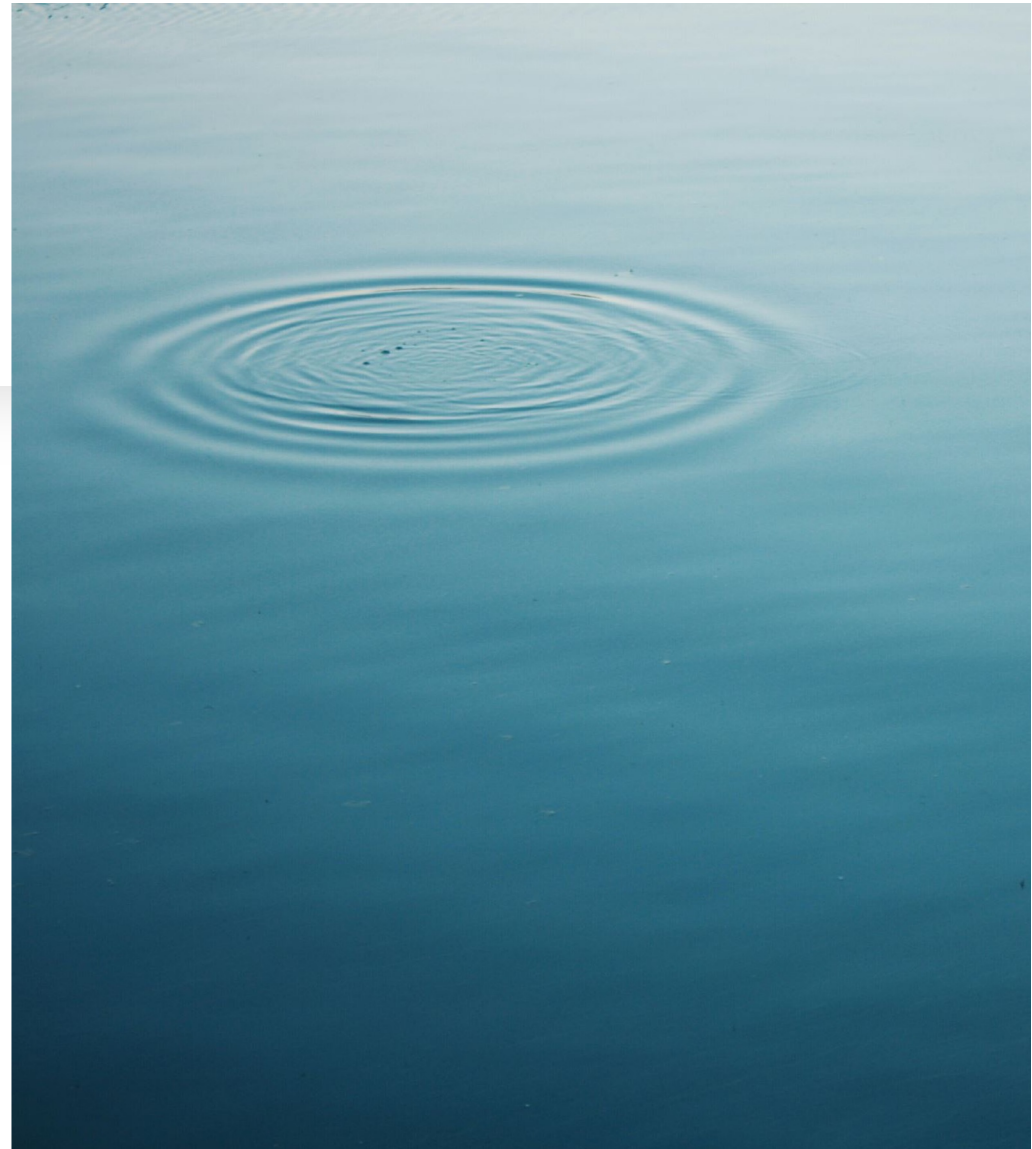
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- Project titled: *“Protection and Restoration of Freshwater Ecosystems Through Community Action in Tantramar”*
- Support freshwater shoreline remediation work and educational workshops on watershed best management practices
- ***Support the development of a community-led Silver Lake Association***



# What is a Lake Association and what does it do?

- A group of individuals invested in the **health of the lake**, with the primary concern being the water.
- **Not** a policing or enforcement agency.
- Focus is on **education** to promote environmental stewardship and best management practices.
- Protect the lake by conducting **environmental monitoring** and making science-based recommendations to government agencies.





# Invasive Species Patrol Programs

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New Brunswick Invasive Species Council



Photo: Randy Westbrooks, Bugwood.org

## Zebra and Quagga Mussels

*(Dreissena polymorpha, Dreissena bugensis)*

French common name: la moule zébrée et la moule quagga



## Eurasian Water-milfoil

*(Myriophyllum spicatum)*

**French common name:** Myriophille en épi



Rob Routledge, Sault College, Bugwood.org

# Cyanobacteria (Blue-Green Algae)

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- a natural part of our environment
- found in many ponds, lakes, rivers and wetlands in New Brunswick
- Province of NB is interested in Cyanobacteria because blooms have the potential to create toxins that can harm fish, pets and people



Surface Bloom (GNB, 2026)

# Learning About Cyanobacteria

- Government of New Brunswick Website
- EOS Eco Energy website

The screenshot shows a web browser window with the URL [gnb.ca/en/topic/laws-safety/health-environment-advisories/cyanobacteria.html](http://gnb.ca/en/topic/laws-safety/health-environment-advisories/cyanobacteria.html). The page header features the New Brunswick logo, a search bar, and a menu. The main content area has a dark green background with the title "Cyanobacteria (blue-green algae)" and a sub-header "Find out how to report a bloom and protect you and your family from cyanobacteria." Below this, there is a table of contents under the heading "On this page" and an "Overview" section.

**On this page**

- [Overview](#)
- [Current advisories](#)
- [Types of blooms](#)
- [Report a bloom](#)
- [Staying safe](#)
- [Cyanobacteria in New Brunswick](#)
- [Protecting pets](#)

**Overview**

Cyanobacteria is the proper name for blue-green algae, sometimes referred to as pond scum. It is a natural part of our environment and can be found in many ponds, lakes, rivers and wetlands in New Brunswick.

Although this bacterium is not normally visible, under certain conditions it can grow quickly and clump together, forming blooms. These conditions include slow moving, shallow water, plenty of sunlight and lots of nutrients.

Blooms occur when temperatures rise, typically in late spring and early summer, often appearing quickly. Some types of cyanobacteria produce toxins that are harmful to humans and animals. Because of this, public health advisories may be issued.

# Reporting Cyanobacteria Blooms

- name and location of the affected body of water
- photos, especially of the bloom's colour
- if the bloom is on the surface or seems distributed lower in the water
- if the bloom is mainly along the shoreline
- the length of time the issue has been occurring

Location	Phone	Email	Address
Bathurst	<a href="tel:506-547-2092">506-547-2092</a>	<a href="mailto:elg.egl-region1@gnb.ca">elg.egl-region1@gnb.ca</a>	159 Main Street Bathurst, NB E2A 1A6
Fredericton	<a href="tel:506-444-5149">506-444-5149</a>	<a href="mailto:elg.egl-region5@gnb.ca">elg.egl-region5@gnb.ca</a>	Marysville Place 20 McGloin Street Fredericton, NB E3A 5T8
Grand Falls	<a href="tel:506-473-7744">506-473-7744</a>	<a href="mailto:elg.egl-region6@gnb.ca">elg.egl-region6@gnb.ca</a>	65 Broadway Boulevard Grand Falls, NB E3Z 2J6
Miramichi	<a href="tel:506-778-6032">506-778-6032</a>	<a href="mailto:elg.egl-region2@gnb.ca">elg.egl-region2@gnb.ca</a>	316 Dalton Avenue Miramichi, NB E1V 3N9
Moncton	<a href="tel:506-856-2374">506-856-2374</a>	<a href="mailto:elg.egl-region3@gnb.ca">elg.egl-region3@gnb.ca</a>	355 Dieppe Blvd. Moncton, NB E1A 8L5
Saint John	<a href="tel:506-658-2558">506-658-2558</a>	<a href="mailto:elg.egl-region4@gnb.ca">elg.egl-region4@gnb.ca</a>	110 Charlotte Street Floor: 3rd Saint John, NB E2L 2J3

# ATTENTION

Invasive species impact our waters  
Les espèces envahissantes ont des répercussions sur nos plans d'eau



Once you leave the water... | Une fois sorti de l'eau...

## CLEAN

plants, animals and mud from boat and gear

## NETTOYEZ

lavez votre bateau et votre équipement de façon à enlever toute la boue, les plantes et les animaux

## DRAIN

all water from your boat and gear onto land

## VIDEZ

videz sur la terre ferme toute l'eau de votre bateau et de votre équipement

## DRY

all parts of your boat and gear completely

## SÉCHEZ

séchez complètement toutes les parties de votre bateau et de votre équipement

CLEAN  
DRAIN  
DRY



NETTOYEZ  
VIDEZ  
SÉCHEZ

For more information:  
[CleanDrainDry.ca](http://CleanDrainDry.ca)

Pour plus de renseignements:  
[NettoyezVidezSéchez.ca](http://NettoyezVidezSéchez.ca)



Conseil canadien des espèces envahissantes



Fisheries and Oceans Canada



NB ISC  
CEE NB

Help us protect our aquatic ecosystems

# DON'T LET IT LOOSE!



Releasing aquarium pets and plants like goldfish, snails, and turtles can harm our lakes and rivers. It is also illegal.

Remember to always research a new pet or plant before purchasing to learn about its needs, life expectancy, etc.



### Goldfish

Native to Asia, Goldfish can carry diseases such as koi herpesvirus that can harm local fish populations and can lay a few hundred to a few thousand eggs at once.

### Marbled Crayfish

All Marbled Crayfish are female and clone themselves to produce hundreds of genetically identical offspring each year, meaning that one individual can create an entire population that outcompetes native species.



### Aquarium Plants

Aquatic aquarium plants, such as Parrot Feather, can clog local waterbodies, outcompete native vegetation, and impact recreational activities.



### Red-eared Slider

Red-eared Sliders compete with native turtles for food, habitat, and basking sites, and can spread diseases and parasites to native turtle populations.



Learn more at [www.nbinvasives.ca](http://www.nbinvasives.ca)



It is illegal to introduce non-native aquatic species without approval.



Conseil canadien des espèces envahissantes



Thank you to our funders



Province of New Brunswick



Fisheries and Oceans Canada



Fisheries and Oceans Canada

# *Why should we form a Lake Association?*

- Water quality and quantity face many threats
  - Extreme weather and rain events due to climate change
  - Algal growth and/or cyanobacteria blooms
  - Nutrient loading
  - Invasive species
  - Development pressures
  - Wildlife concerns (i.e. waterfowl, beavers)
- Provincial Government oversight limited
- To provide the lake with a united, informed voice to communicate issues with government agencies

# Who has jurisdiction over Silver Lake?

## **Province of New Brunswick**

- a) freshwater fish populations (Department of Natural Resources)
- b) water (Department of Environment and Local Government)

## **Department of Fisheries and Oceans Canada**

- freshwater fish habitat

## **Transport Canada**

- vessels

# Getting Started

Motion to form an Association and to elect an **Interim Working Group**.

1. Develop group framework
  - Look to regional examples of established groups
  - Define structure of Board of Directors & Committees
2. Method of operation
  - Investigate Not-for-Profit group application process
3. Name of Association
4. Financing and Budgetary Requirements
5. Define Vision and Mission of group

# ***Lake George Habitat Preservation Inc. (2008)***

***This association is concerned with:***

- water quality
- water level monitoring
- stewardship and best practices for property owners
- promotion of the Lake George community
- emphasizing the history of the area
- water safety
- forest management practices
- fish and wildlife habitat
- education

# ***SWEPS Shubenacadie Watershed Environmental Protection Society (1993)***

## **Our Vision & Mission**

- SWEPS envisions a healthy and resilient Shubenacadie Watershed, where clean water, restored habitats, and sustainable trails support both wildlife and the community. Our mission is to protect and enhance our watershed through habitat restoration, water quality monitoring, and sustainable trail building, ensuring long-term environmental health and accessibility for future generations.

## *Oathill Lake Conservation Society (2010)*

- A community-based group dedicated to restoring and maintaining the ecological health and biological diversity of Oathill Lake.
- Entire membership is comprised of volunteers – all working to improve the health of this small lake and parkland as a resource for walking, swimming, boating, skating, skiing and fishing.
- Education is the key to getting people involved and invested in our cause. We also conduct environmental monitoring and make scientifically-based recommendations to government agencies.

# How can EOS help?

- 
- Coordinate initial meetings of the Interim Working Group
  - Provide resources/contacts from our environmental networks
  - Free website space
  - Water quality monitoring support (i.e. training, equipment loans etc.)



# Member Expectations

## **Interim Working Group**

- Meet once every 2 to 4 weeks to kick-start group administration
- Relay information to general membership via monthly newsletters/email

## **General Membership**

- Volunteer to help with monthly water quality monitoring
- Share knowledge and expertise with the Interim Working Group
- Attendance at Annual General Meetings

# Thank you to our funders for their ongoing support of our Chignecto Watersheds Projects

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This project was undertaken with the financial support of  
Ce projet a été réalisé avec l'appui financier de



Canada  
Water Agency

Agence de l'eau  
du Canada



# Questions or Comments?

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## Contact us!

**Miranda Corkum**

Watershed Data Coordinator

[water@eosecoenergy.com](mailto:water@eosecoenergy.com)

Office: 506-536-4487



# Resources

- **New Brunswick Invasive Species Council (NBISC)**  
<https://www.nbinvasives.ca/our-work>
- **Lake George Habitat Preservation New Brunswick**  
<https://www.lakegeorgehpi.ca/home>
- **Oathill Lake Conservation Society**  
<http://www.oathilllake.ca>
- **The Davidson Lake Association**  
<https://davidsonlake.ca>
- **Harvey Lake Association**  
<https://www.facebook.com/HarveyLakeAssociation>
- **SWEPS Shubenacadie Watershed Environmental Protection Society**  
<https://www.sweps.org>
- **Atlantic DataStream**  
<https://atlanticdatastream.ca>
- **Water Rangers**  
<https://waterrangers.com>
- **Government of New Brunswick, Cyanobacteria**  
<https://www.gnb.ca/en/topic/laws-safety/health-environment-advisories/cyanobacteria.html#4>

VISUALIZATION

STATISTICS

EXPLAINER

MAP

Chart Type

Scatter

Media

Surface Water

Characteristics (Y-Axis)

Temperature, water (°C) (field)

Percentiles

SELECT

Guidelines ⓘ

SELECT

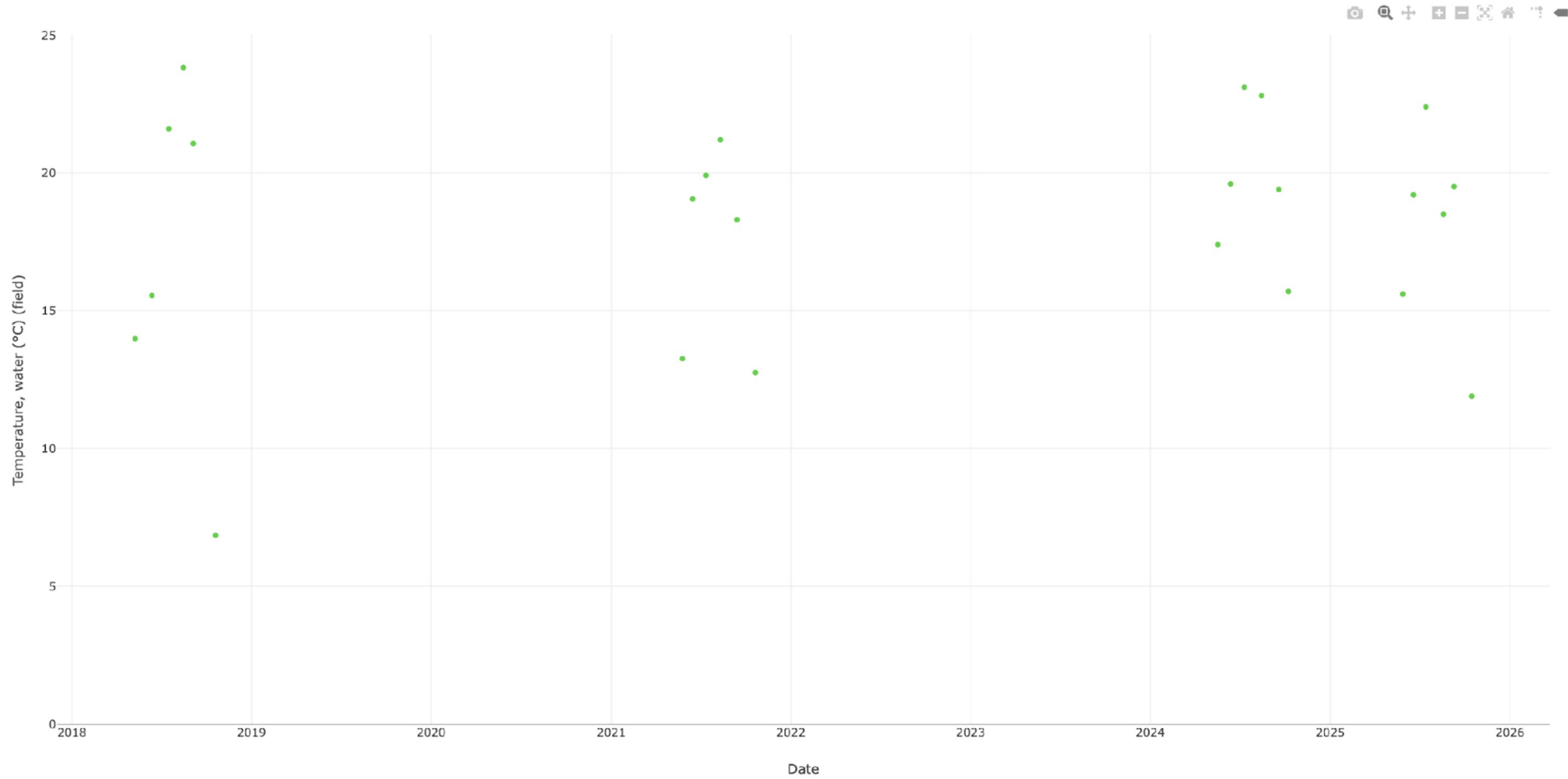


Chart Type

Scatter

Media

Surface Water

Characteristics (Y-Axis)

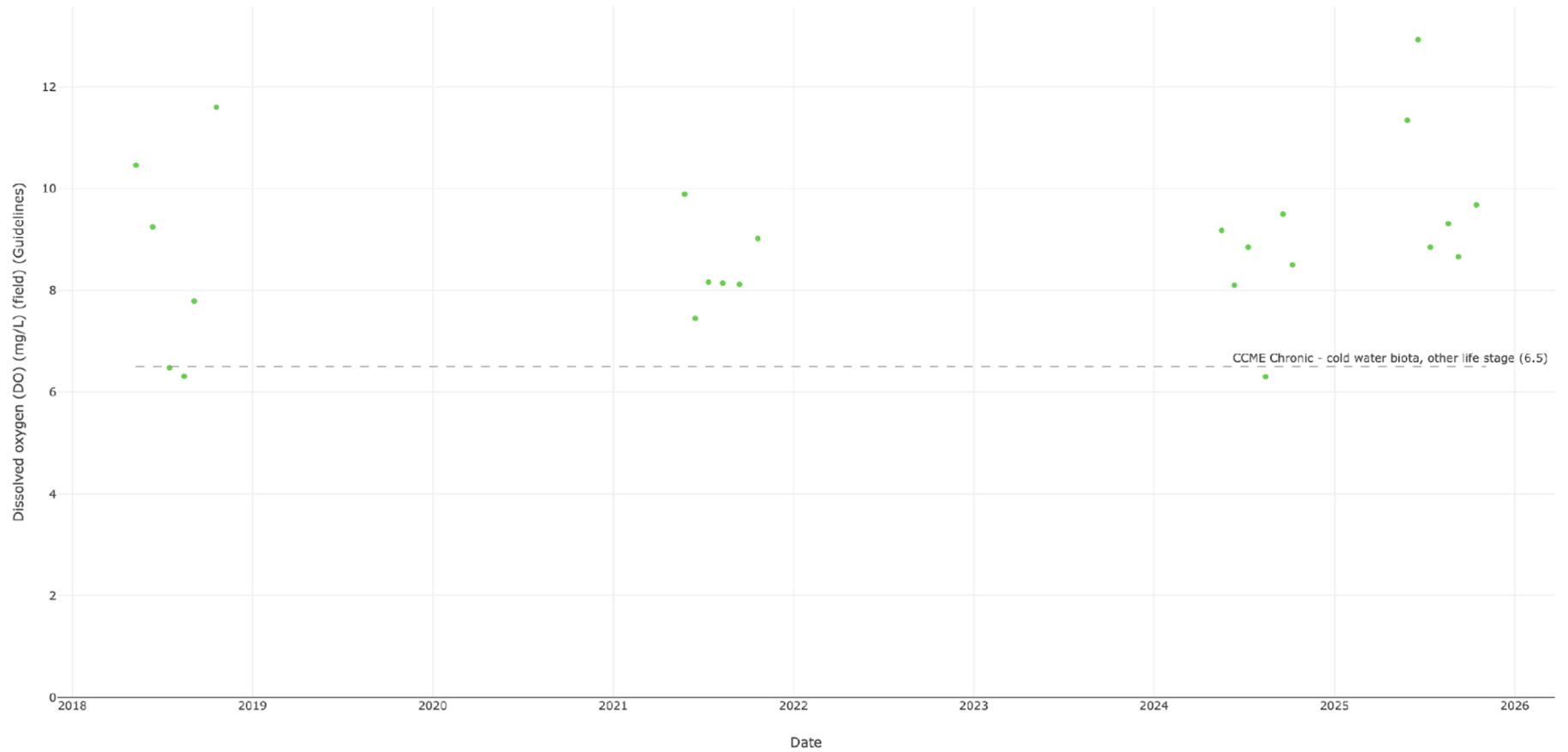
Dissolved oxygen (DO) (mg/L) (field) (Guidelines)

Percentiles

SELECT

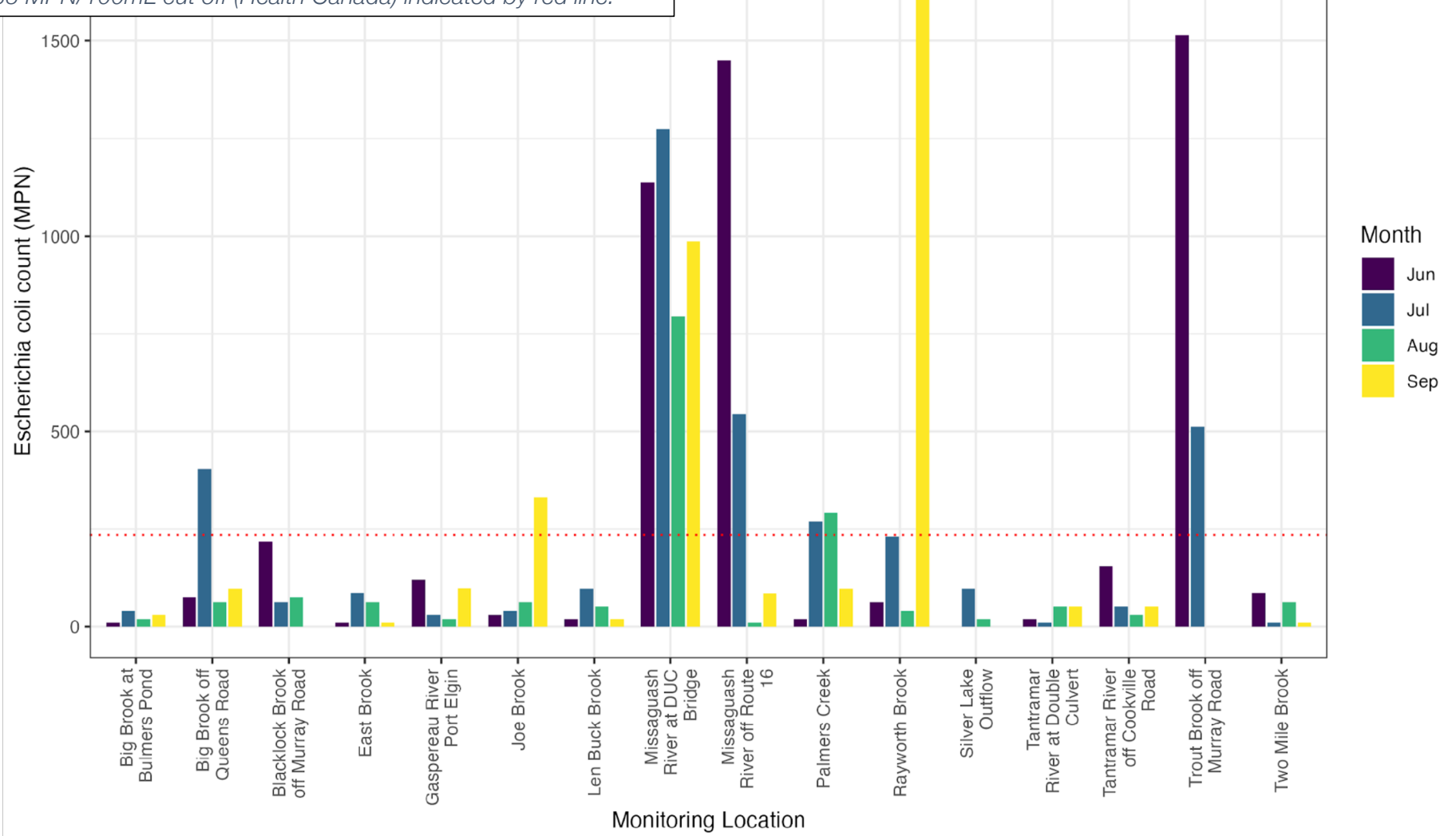
Guidelines ⓘ

CCME FRESHWATER CH...



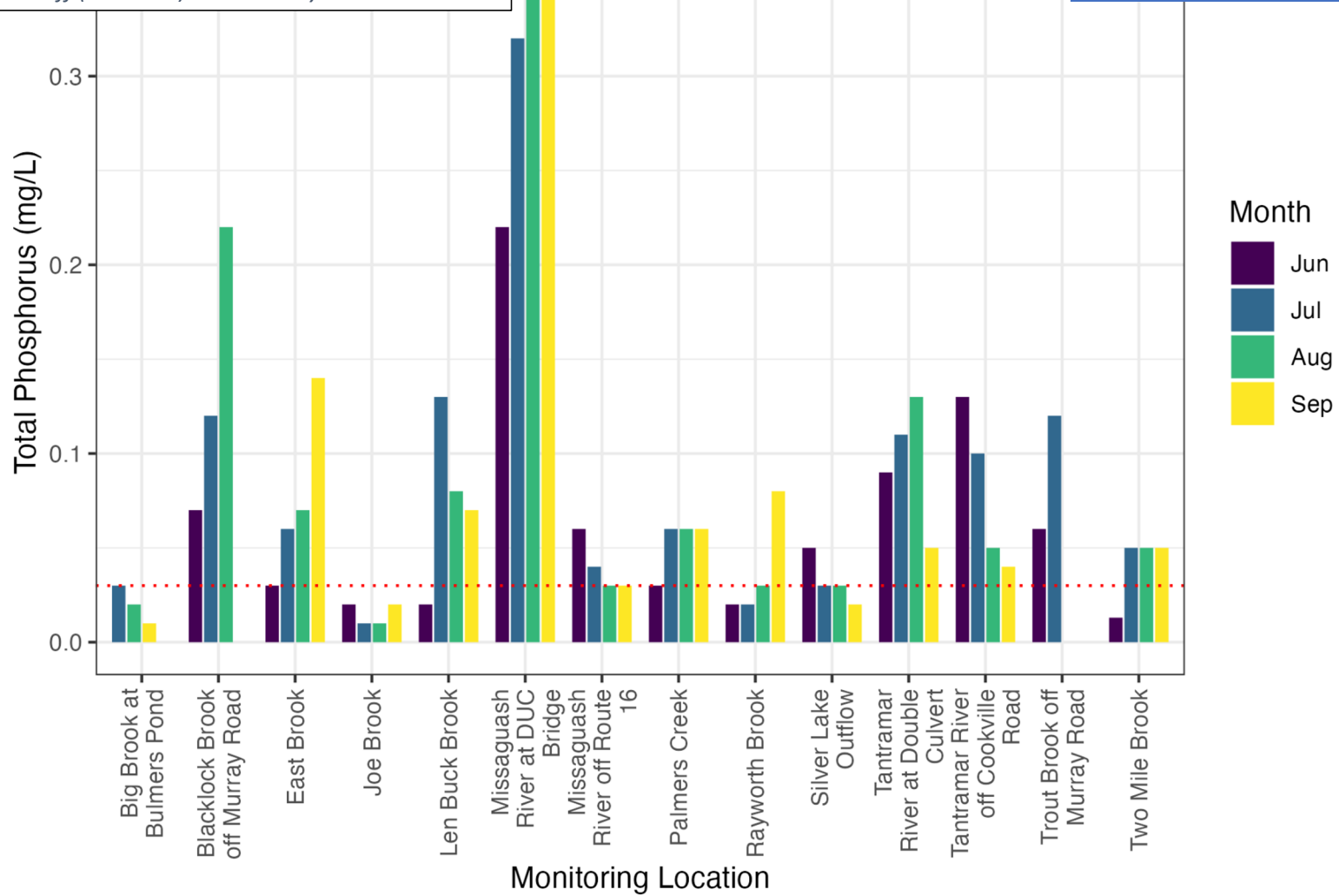
Monthly *Escherichia coli* bacteria counts for 2025 field season with 235 MPN/100mL cut off (Health Canada) indicated by red line.

## Escherichia coli count 2025



Monthly Total Phosphorous amounts for 2025 field season with 0.03 mg/L cut off (NB DELG) indicated by red line.

## Total Phosphorus 2025

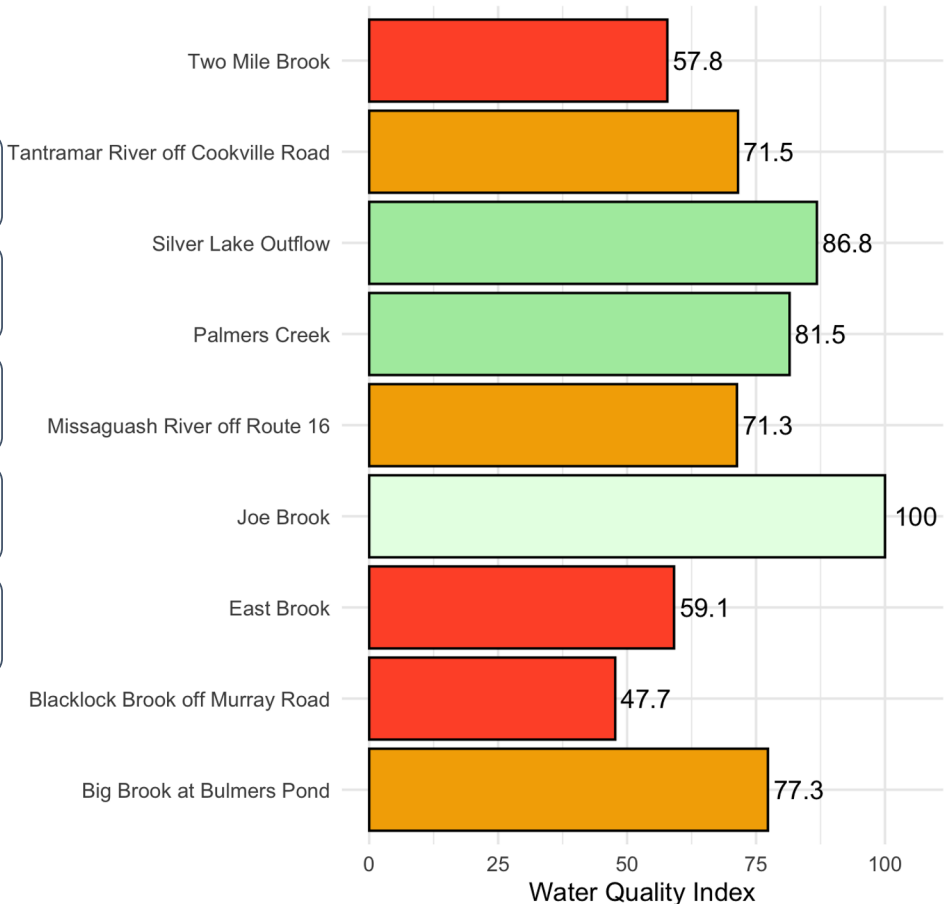
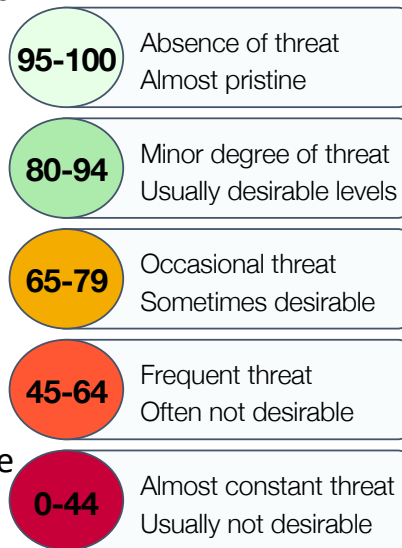


# Water Quality Index 2025

Using the Canadian Council of Ministers of the Environment water quality guidelines, the Water Quality Index (WQI) combines multiple parameters into a single value that summarizes water quality at a site. It is calculated based on:

- the number of parameters that exceed guidelines,
- the number of times guidelines are exceeded,
- and the amount by which they are exceeded.

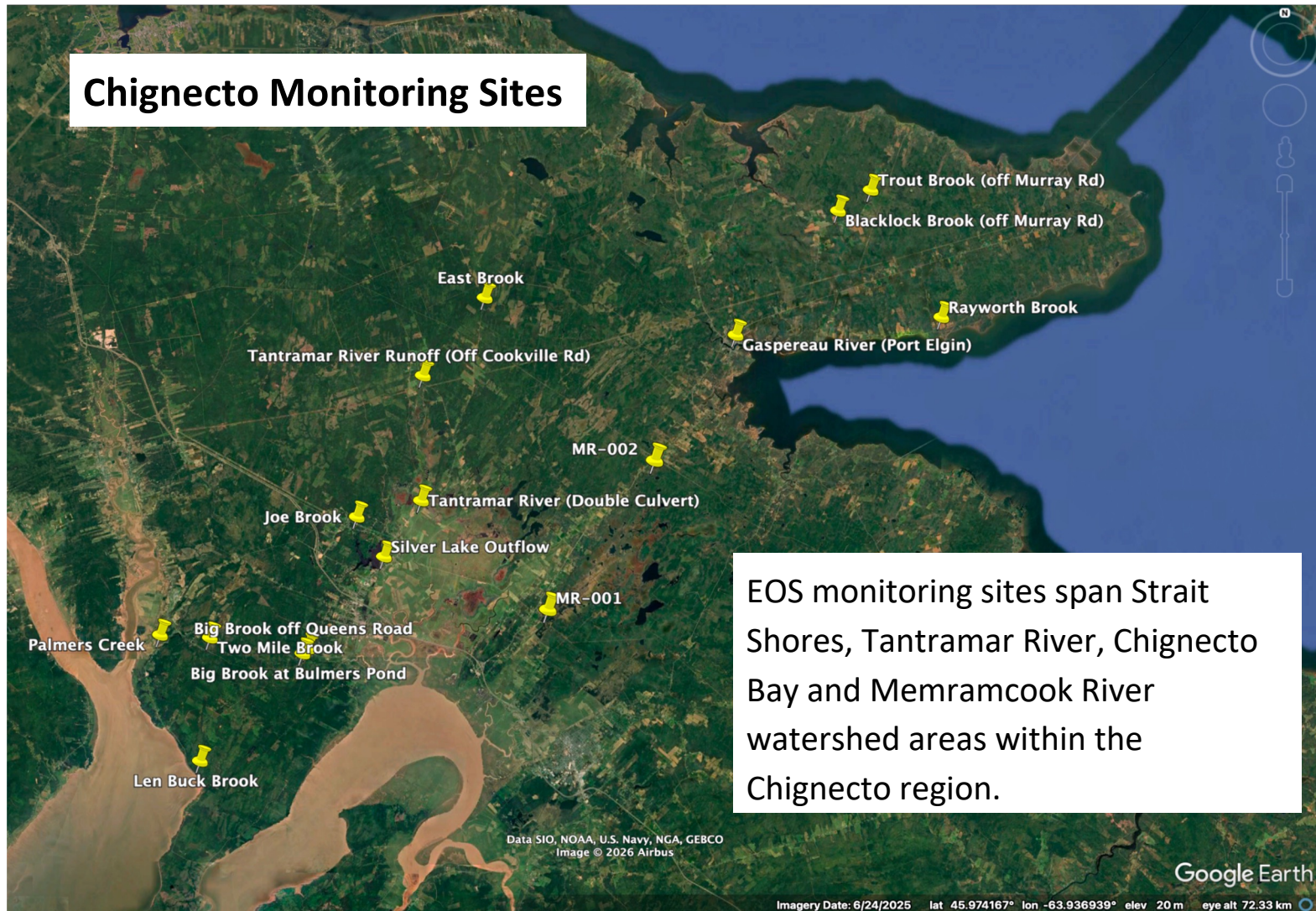
For an accurate WQI, a site is required to have 4 samples per year with at least 4 variables measured.



Mean Monthly Temperatures (°C) and Total Monthly Precipitation from May to October for years 2023-25 (Source: ECCC “MONCTON/GREATER MONCTON ROMEO LEBLANC INTL A, NB”, station ID 71705)

Month	"Mean daily temp" monthly AVG 2025 (degC)	"Mean daily temp" monthly AVG 2024 (degC)	"Mean daily temp" monthly AVG 2023 (degC)	Total Monthly Precipitation 2025 (mm)	Total Monthly Precipitation 2024 (mm)	Total Monthly Precipitation 2023 (mm)
May	10.6	11.2	9.7	88.2	45.9	42.9
June	16.8	17.0	15.1	69.3	95.6	146.7
July	20.4	21.2	22.4	53.0	49.3	135.3
August	19.3	19.9	18.1	22.0	41.6	133.7
September	15.5	15.7	16.3	36.3	85.9	48.0
October	10.2	9.6	10.8	130.1	68.5	112.5
	<b>AVG Seasonal</b>	AVG Seasonal	AVG Seasonal	<b>Total Seasonal</b>	Total Seasonal	Total Seasonal
	15.5	15.8	15.4	398.9	386.8	619.1

## Chignecto Monitoring Sites



EOS monitoring sites span Strait Shores, Tantramar River, Chignecto Bay and Memramcook River watershed areas within the Chignecto region.

# History

Zebra mussels (*Dreissena polymorpha*) are a small invasive freshwater mussel from southwestern Europe (specifically the Black and Caspian Seas) that first arrived in the Great Lakes in the 1980s through infested ballast water that was discharged from ships. Since then, they have been spreading through eastern Canada and the United States impacting ecosystems, recreational activities, and infrastructure.

# Identification



Photo: Dave Britton, US Fish & Wildlife Service

**Size:** very small; range in size from a few millimeters to 4cm. Much smaller than native mussel



Photo: Amy Benson, U.S. Geological Services, Bugwood.org

**Shell:** both species are triangular in shape. Colour ranges from white to dark brown, with zebra mussels having a zig-zag pattern.

**Life cycle:** mussels produce free-floating veligers (larvae) that float in the water column before attaching to available surfaces.

**Habitat:** freshwater environments, including lakes, rivers, and human-made waterbodies. Will colonize surfaces including rocks, boats, docks, other aquatic plant & animal species, and infrastructure such as water intake pipes.