



Yes, you are in the right place!

This training webinar will begin soon.



# **PRESENTATION TO MLA – WQ Seminar May 18, 2023**

**MLA 2022 WATER QUALITY PROGRAM RESULTS**



## 2022 WQ PROGRAM OVERVIEW

### Testing locations

- 180 sites / 55 Areas
- Muskoka, Rosseau, Joseph
- 10 smaller affiliate lakes
- Deep Water & Near Shore

### Tests Done

- Water clarity, Bacteria, Total Phosphorus
- May, June, July, August

### Citizen Scientists

- **THANK YOU !!!**
- Over 100 volunteers

### Challenges

- On-line training
- Staff changes at office



## MONITORING ACTIVITY/STUDY DESIGN

### TOTAL PHOSPHORUS

- Spring turnover
- Seasonal Averages
- Over 500 Tests

### BACTERIA

- Total Coliform
- E.Coli
- Over 200 tests

### CLARITY (SECCHI DEPTHS)

- At deep water site

### TEMPERATURE

- With every sample



## SITE LOCATIONS

Lake Joseph 26

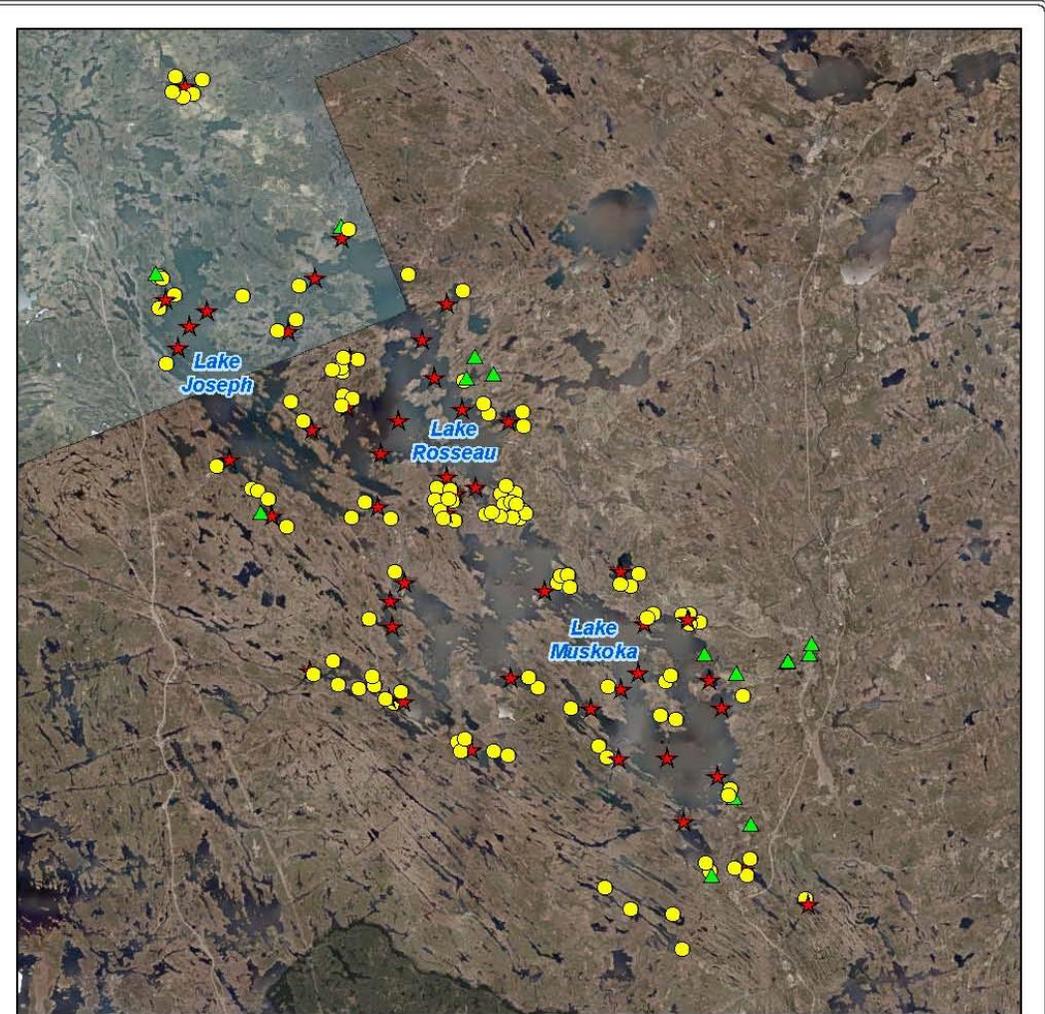
Lake Rosseau 35

Lake Muskoka 54

Rivers 25

Small Lakes 47

[Brandy, Bruce, Clear,  
Gull, Gullwing, Leonard  
Silver (GH), Silver (TML),  
Star, Skeleton]





## WHY DO WE MONITOR?

- Monitoring phosphorous concentrations at deep water sites for long terms trends, and near shore sites to identify sources of phosphorous.
- Monitoring of water clarity (Secchi depth) and water temperature to help explain unexpected results and determine trends.
- Targeted monitoring of bacteria concentrations (Total Coliform and E. coli) in high-use recreation areas to identify chronically elevated areas.
- Identification of Algae Blooms [MECP Spills Action Hotline & Simcoe-Muskoka Health Unit]



## MLA SPOTLIGHT SYSTEM

### Total Phosphorous:

MLA **Green** Light < 20 ; **Yellow** >20 (3yr avg) OR increasing trend (3yr); **Red** > 20 (5 yr avg) OR increasing trend (5yr)

Mirror DMM criteria

### Bacteria:

MLA resample at 50

MLA **Green** Light < 30 ; **Yellow** >31 but <199 ; **Red** > 200 [geometric mean, 5 samples]

Simcoe Muskoka Dept of Health - >200 geometric mean on 5 samples per month OR >500 on individual test

### Algae :

MLA **Green** Light – no algae; **Yellow** – Bloom 1 to 3 years ago OR current year with low level toxicity [microcystins]; **Red** – current year Bloom & high toxicity or no data



## SITES WITH HIGH STOPLIGHT [2022]:

- Total Phosphorus – Willow Beach [red] 5 year trend
- E Coli >30 yellow– Bruce Lake, Beaumaris, Indian River, Minett, Muskoka River, Willow Beach
- Algae Blooms confirmed [non toxic] yellow – Boyd Bay (Muskoka 2018), Brandy Lake (2019, 2020), Bruce Lake (2020), Leonard Lake (2020, 2021, 2022) & Weismiller Bay (Muskoka 2020)
- Chloride yellow – Muskoka Bay



## OVERALL RESULTS

- Overall Water Quality is GOOD
- Few Preliminary [Yellow] concerns from TP & E Coli tests
- The Program is working to preserve Recreational Water Quality



## WQI PROGRAM CHANGES FOR 2023

1. Same lab as 2022 [ALS – Toronto] = brown bottles for phosphorus samples [not test tubes]  
Remember no rinsing [TP] bottles (as they contain a preservative)
2. Continuous sampling of water column to Secchi Depth at Deep Water sites [match DMM]
3. Algae – visual presence of blooms [for ad hoc fluorometer tests]
4. Completion of GPS coordinates for all site locations plus photo updates

# **Q&A on 2022 Water Quality Results**

**Water Quality Training Video**

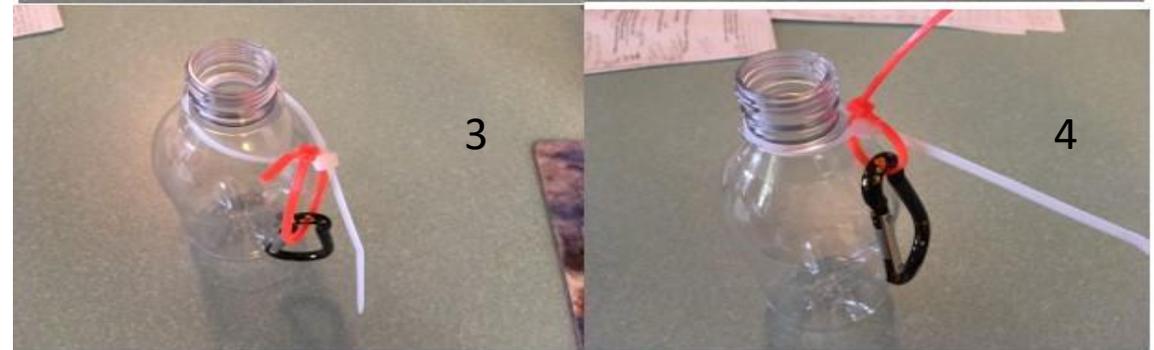
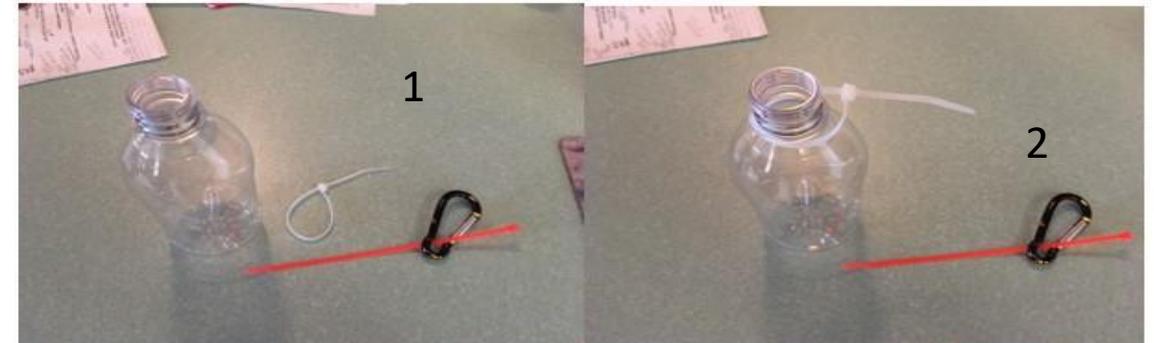


Your deep water collection bottle should have a carabiner clip attached to its neck. The carabiner attaches the bottle to the top of the Secchi Disc.

If your bottle is not assembled, you should have two zip ties and a carabiner in your kit.

1. make a loop with the white zip tie and place loosely over neck of collection bottle.
2. Thread the orange zip tie through the white loop and through the carabiner before closing this tie.
3. Tighten the white tie under the neck ridge on bottle
4. Tighten the orange tie, but leave a little play so carabiner can move
5. Trim ends off zip ties.

**Ready to use.**





## MEMBERSHIP MATTERS

Your kit contains materials to explain to friends, neighbors and curious onlookers what the MLA does and why becoming an MLA member helps preserve Muskoka. You are encouraged to read the material and, if interested in becoming more active, visit MLA's website area our Ambassador Program at

<https://muskokalakes.wildapricot.org/Ambassador>



## BIG THANK YOU

- First of all to all our citizen scientists for supporting this program
- To Environment Committee [particularly Jan, Sam & Eleanor] for our new training materials and video
- To our staff - Karianna & Chelsea for putting kits together and running this online meeting.



## **WATER TESTING DATES**

May 19-22 Sample Week One

June 23-26 Sample Week Two

July 21-24 Sample Week Three

August 18-21 Sample Week Four



## 2023 MLA WQI – SUPPORT CONTACT

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## **THANK YOU FOR ATTENDING!**

This training webinar has been recorded and a copy of it will be available on the MLA website. You will receive an email with the below link.

<https://www.mla.on.ca/Water%20Quality%20Training%20Zoom>