



LakeWatchers

A new lake monitoring program in the Halifax Region

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A new lake monitoring program in the Halifax Region

- Municipal Lake Monitoring Program
- 76 Lakes Across HRM
 - 3 Reference Lakes
 - 25 Highly Vulnerable
 - 48 Moderately Vulnerable
- Baseline monitoring program



Why Monitor?

- To inform decision making
- Establish baseline conditions
- Answer questions
- Address key concerns
- Meet other legislated requirements



Background

- AECOM report finalized in 2020
 - Stakeholder consultation
 - Other municipal case studies
 - Developed 3 frameworks + recommendations for municipal led program
- Council Approval in 2021



Other lake monitoring in HRM

- Municipal-led program 2006-2011
 - Small study from 2015-17
- DFO/Dal Lake synoptic study
 - Every 10 years
- Academic research
- Community concern of overall lake health



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- Hybrid approach
- Meets HRM's data needs
- Engages active network of community groups
- Provides room to grow

CONTRIBUTORS OPINION

Community science is vital to ensuring Canada has a safe water supply

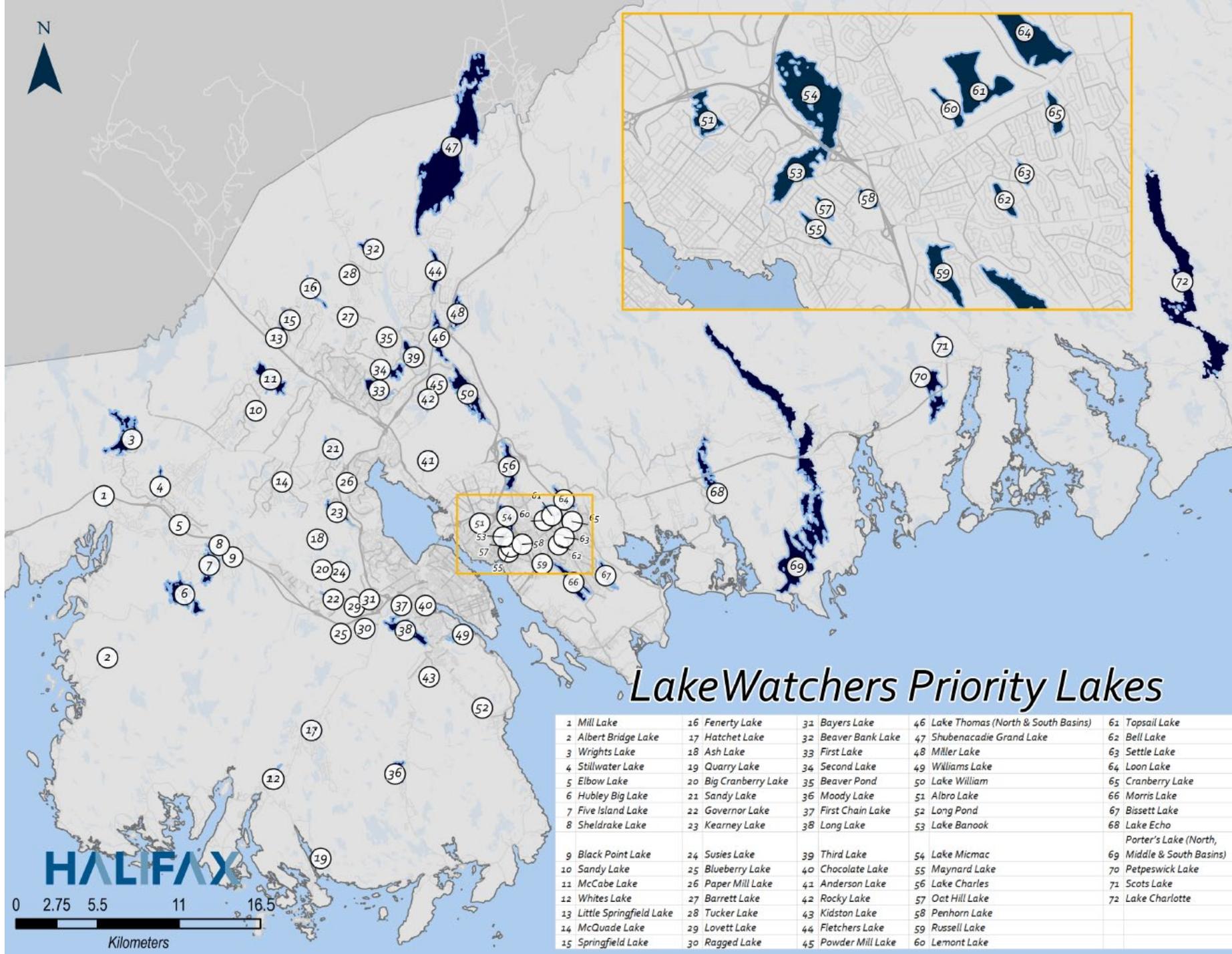
By **Geoffrey Gunn** Contributor
Wed., May 19, 2021 | 2 min. read



<https://www.thestar.com/opinion/contributors/2021/05/19/community-science-is-vital-to-ensuring-canada-has-a-safe-water-supply.html>

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Map



76 Lakes included in the Water Quality Monitoring Program

Class A Lakes: High Vulnerability & Reference Lakes (28 Lakes)

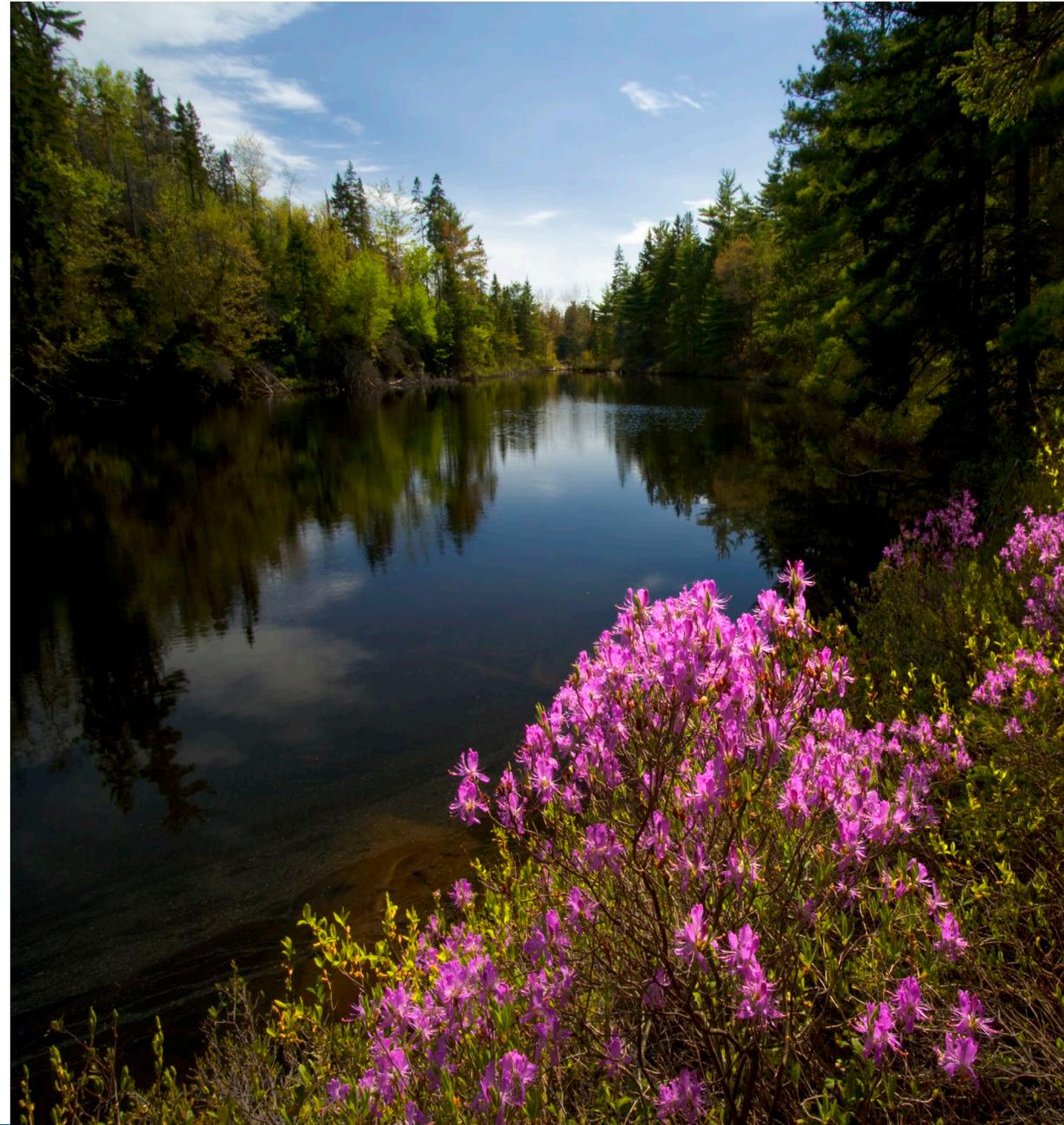
Albro	Kidston	Penhorn
Banook	Long Pond	Russell
Bell	Loon	Sandy (Bedford)
Charles	Maynard	Settle
Chocolate	McQuade	Springfield
Cranberry	MicMac	Williams (Spryfield)
Five Island	Morris	Big Cranberry (Reference)
Fletchers	Oathill	Pine (Reference)
Governors	Paper Mill	Topsail (Reference)
Kearney		

Class B Lakes: Moderate Vulnerability (48 Lakes)

Albert Bridge	Hubley Big	Ragged
Anderson	Kinsac	Rocky (North East Basin)
Barrett	Lamont	Sandy (Glen Arbour)
Bayers	Little Springfield Lake	Scots
Beaver Bank	Long	Second
Beaver Pond	Lovett Lake	Sheldrake
Bissett	McCabe	Shubenacadie Grand
Black Point	Mill	Stillwater
Blueberry	Miller	Susies (Birch Cove)
Charlotte	Moody	Third
Echo	Petpeswick	Thomas (North Basin)
Elbow	Porters (North)	Thomas (South Basin)
Fenerty	Porters (Middle)	Tucker
First	Porters (South)	Whites
First Chain	Powder Mill	William
Hatchet	Quarry (Birch Cove)	Wrights

What will be monitored?

- Spring & Summer sampling
 - Outlet (grab sample + sonde)
 - Surface (grab sample)
 - Deepwater (grab sample)
- Secchi depth
- Field measurements (0.5m sonde measurements)
 - Temperature
 - pH
 - Dissolved oxygen
 - Specific conductivity
- Laboratory Analysis (Grab samples)
 - Total Phosphorus
 - Chloride
 - Chlorophyll α
 - *E. coli*
 - Metal suite



2022 Summary

- Spring Sampling
 - Performed by GHD
 - April 25th– May 25th
 - Some hiccups
 - Equipment order
 - Lake access
 - Lab timings
- Summer:
 - 4 Community groups sampled 6 lakes
 - 9 Lakes sampled with volunteers & GHD
 - 15 Lakes total with community and volunteers
 - Remaining 61 lakes sampled by GHD between August 12th –September 1st



76 Lakes included in the Water Quality Monitoring Program

Class A Lakes: High Vulnerability & Reference Lakes (28 Lakes)

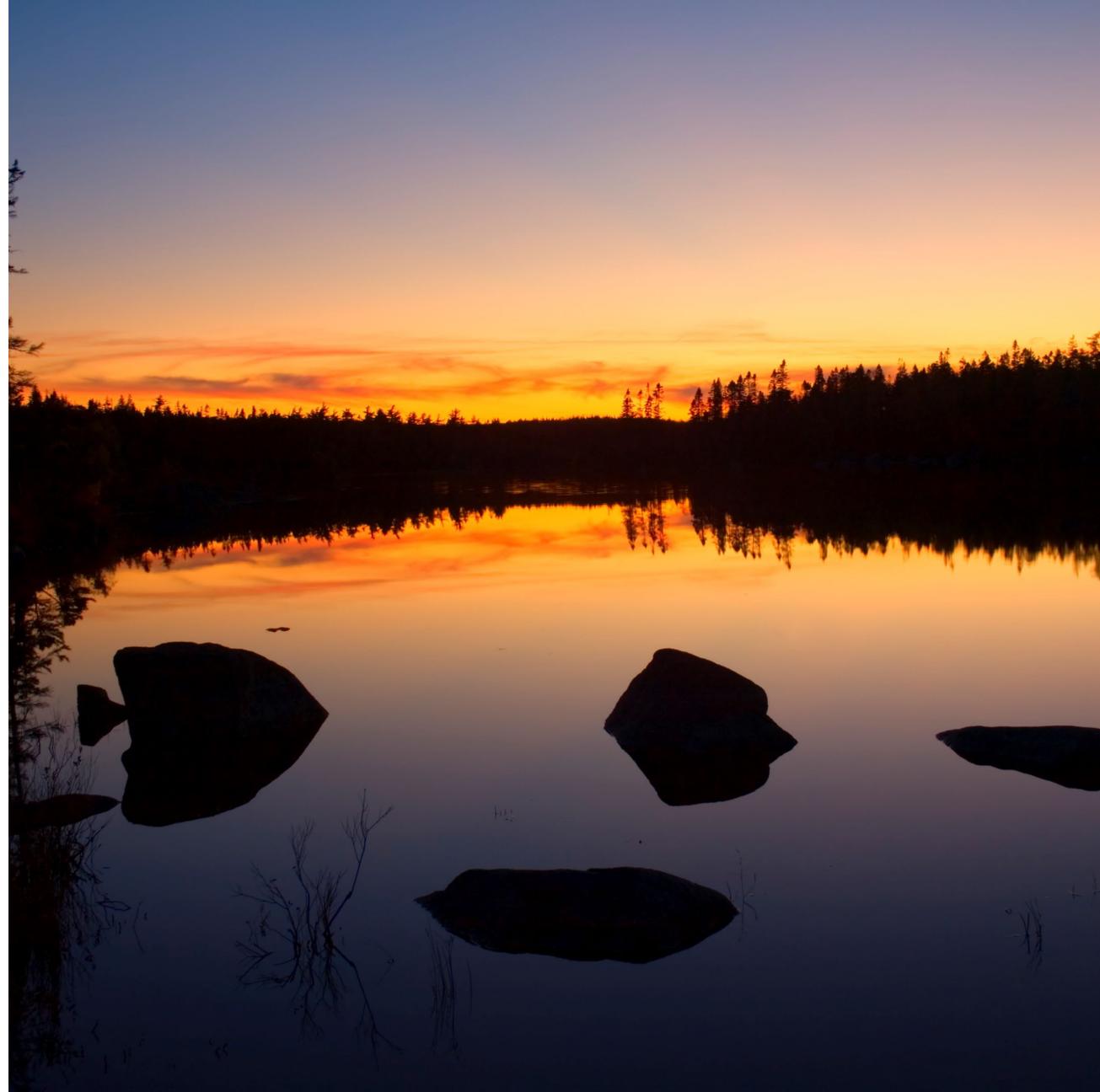
Albro		Kidston	Penhorn ★
Banook ★		Long Pond	Russell ★
Bell		Loon	Sandy (Bedford) ★
Charles		Maynard ★	Settle
Chocolate ★		McQuade	Springfield
Cranberry		MicMac	Williams (Spryfield)
Five Island		Morris ★	Big Cranberry (Reference)
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First Chain		Powder Mill	William
Hatchet ★		Quarry (Birch Cove)	Wrights

Next Steps

- 2022-2023 Winter:
 - Data management & initial analysis
 - Prep for 2023 & lessons learned
 - Training for volunteers
- 2023 – onward
 - Sampling Year 2
 - Spring & Summer
 - Program report
 - Water Quality Report Card
 - Monitoring program framework review
 - Identify opportunities for next steps



What will this mean for HRM?

- Robust baseline dataset of vulnerable lakes
- Covers broad geographic area
- Active participation from community





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water@halifax.ca

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