

Eurasian Watermilfoil in the Jemseg Grand Lake Watershed
Results to Date and Future plans, prepared and presented

by

Juan Sanchez and John Welsman

at the Zoom webinar entitled “Eurasian Watermilfoil in the Grand Lake” held on
February 13, 2025

Jemseg Grand Lake Watershed Association Report 25-01



www.jemseggrandlakewatershed.ca



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Eurasian Watermilfoil in the Grand Lake

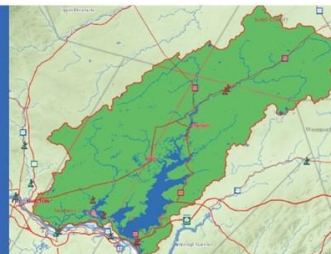
What do we know and what comes next?

Presented by Juan Sanchez, Meghann Bruce and
Sarah Cusack

via a Zoom webinar on February 13, 2025

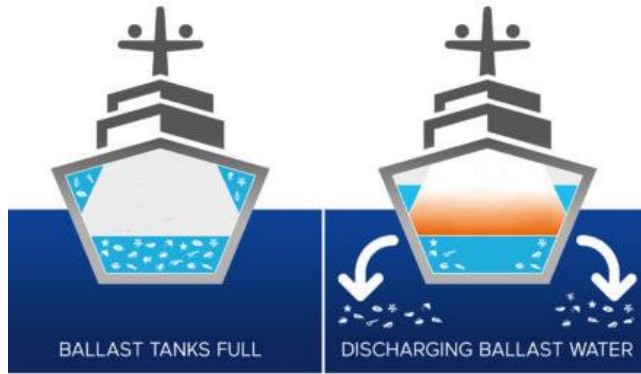
***Sustaining Our Watershed,
Securing Our Future***

Jemseg
Grand Lake
Watershed
Association



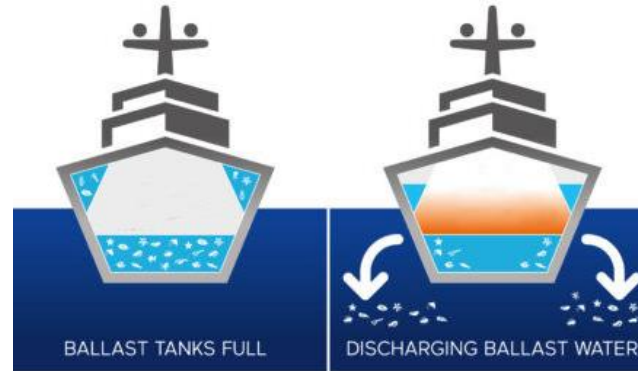
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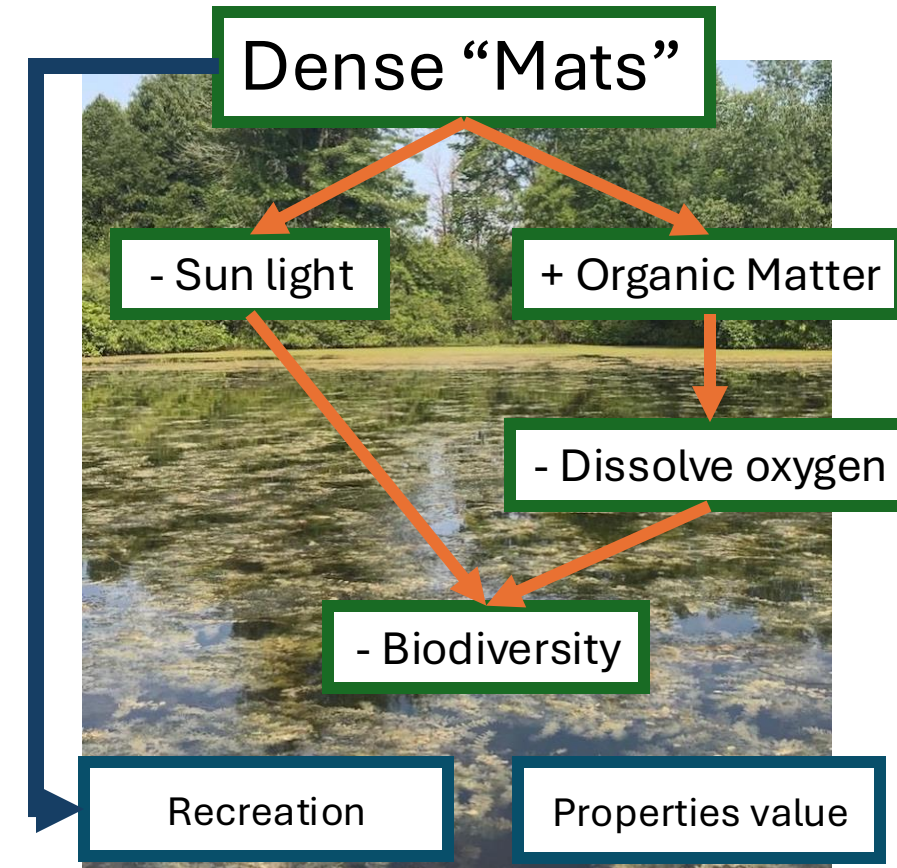




1. Rapid growth rate than native species
2. Vegetative reproduction
3. High tolerance
4. Lack of natural predators
5. Competitive strategy

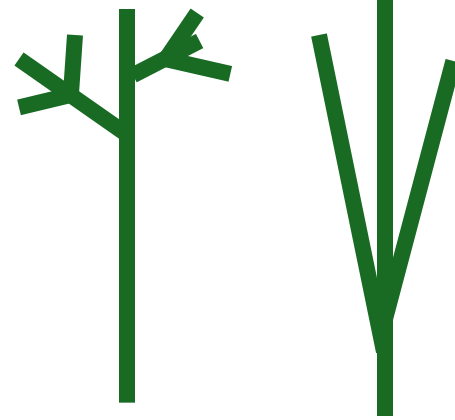


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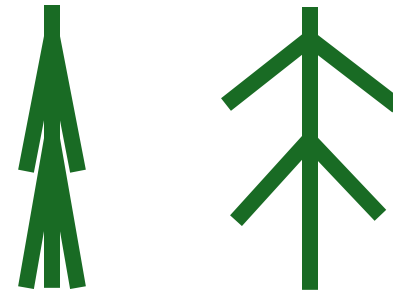




1. Top vs Bottom branching



2. Relax vs Rigid leaves



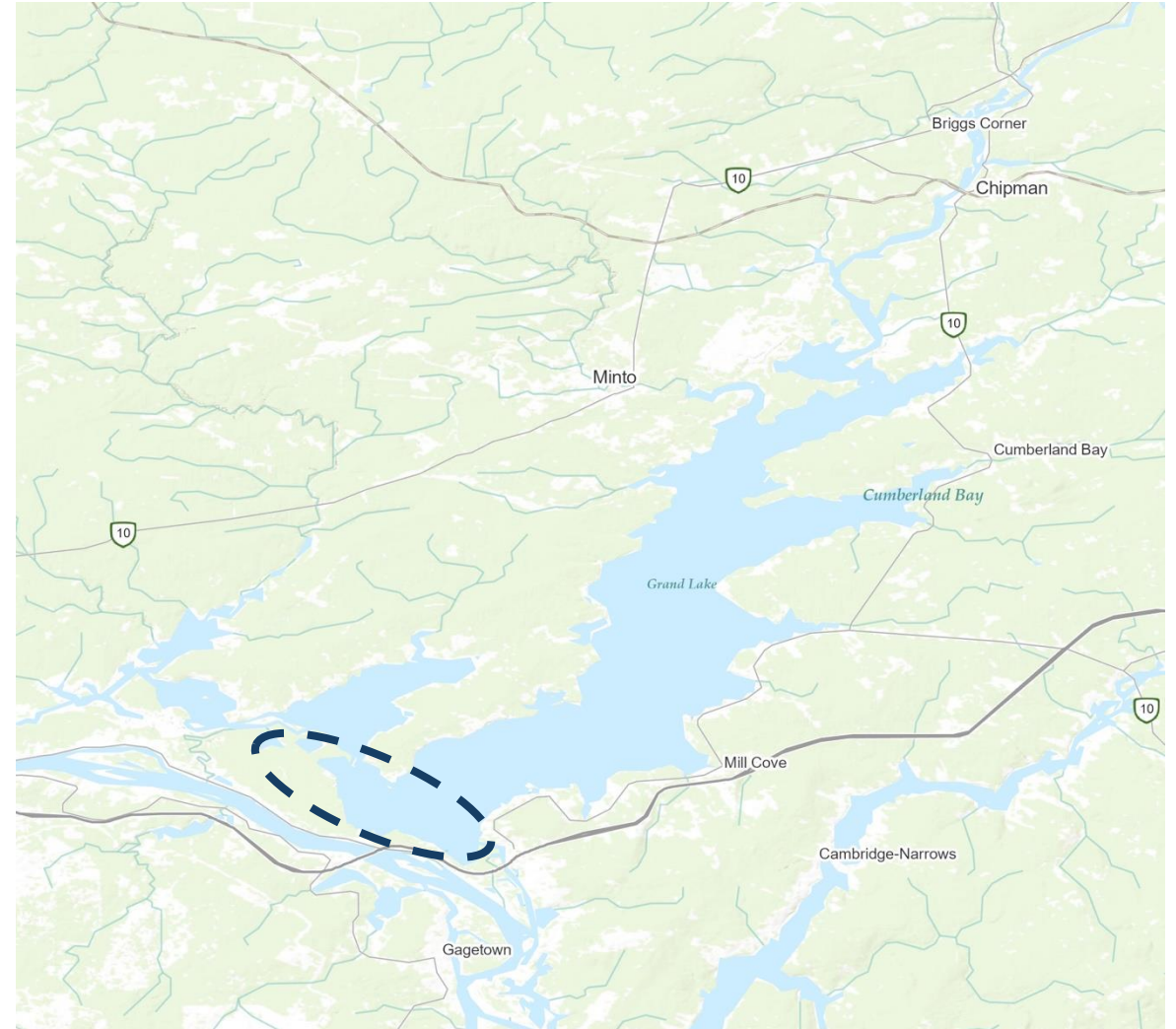
3. Leaves shape and leaflet number

EWM > 15 leaflets



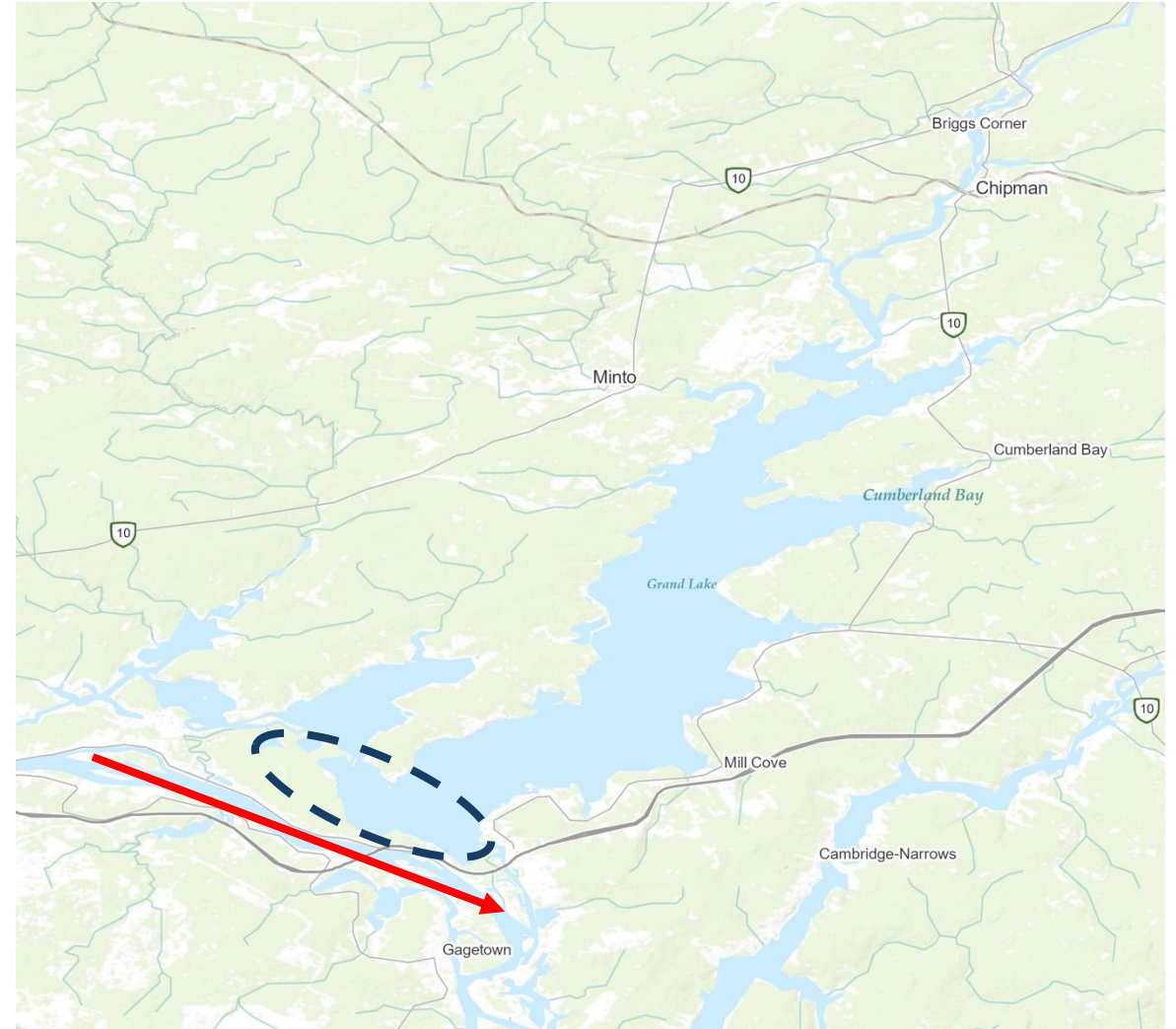
EWM in the Grand Lake

- Latest no detection record -> 2013 Bioblitz at Grand Lake Meadows by NB Museum's Centre for Biodiversity Research.
- 2016 - First detection in the Saint John River by Dr. Meghan Bruce (not first intro).
- 2018 - Detection in more tributaries including the Jemseg River.
- 2022 - John Welsman, JGLWA member, recorded a EWM infestation at Dykeman Cove.
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 - Removal pilot
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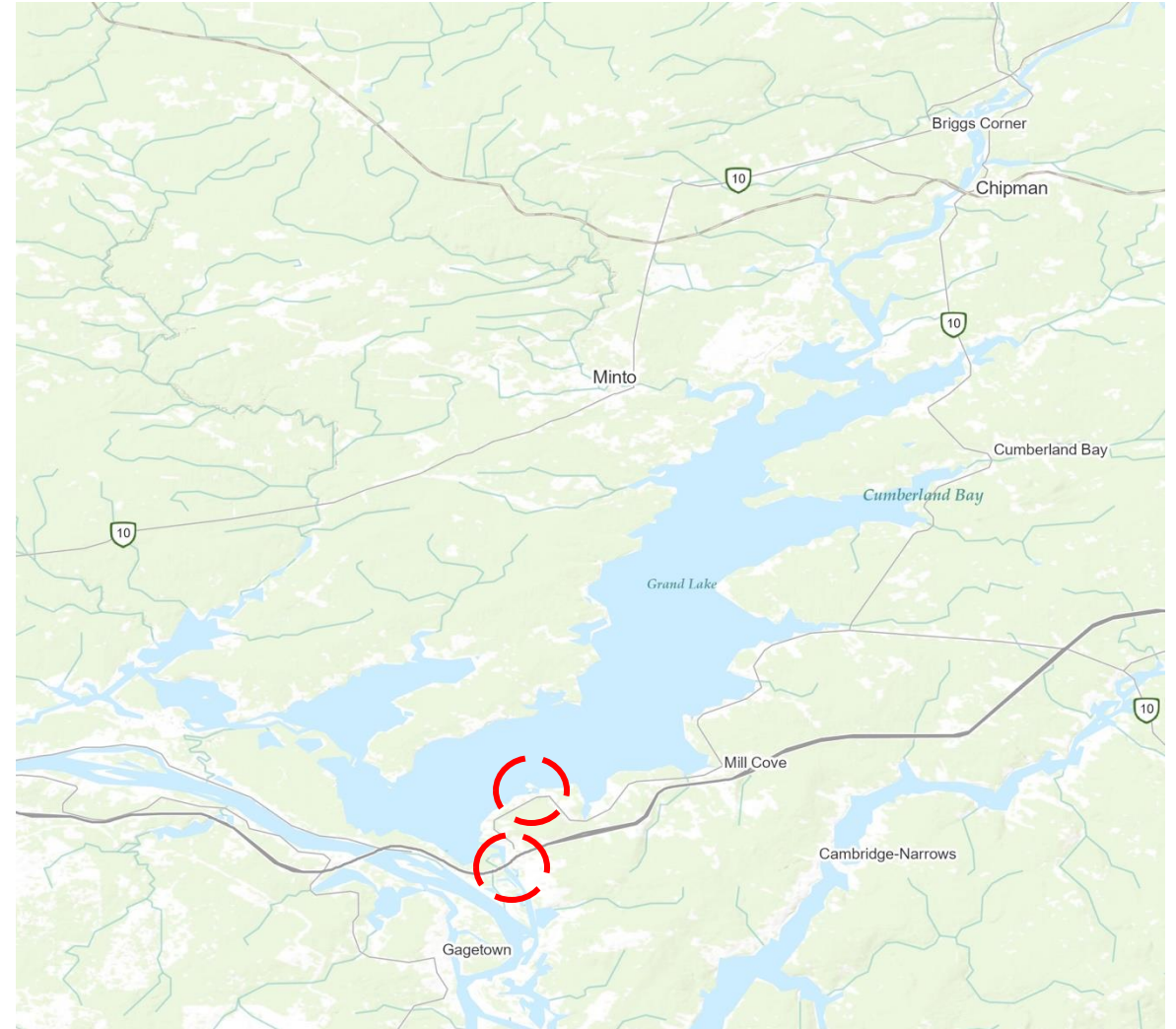
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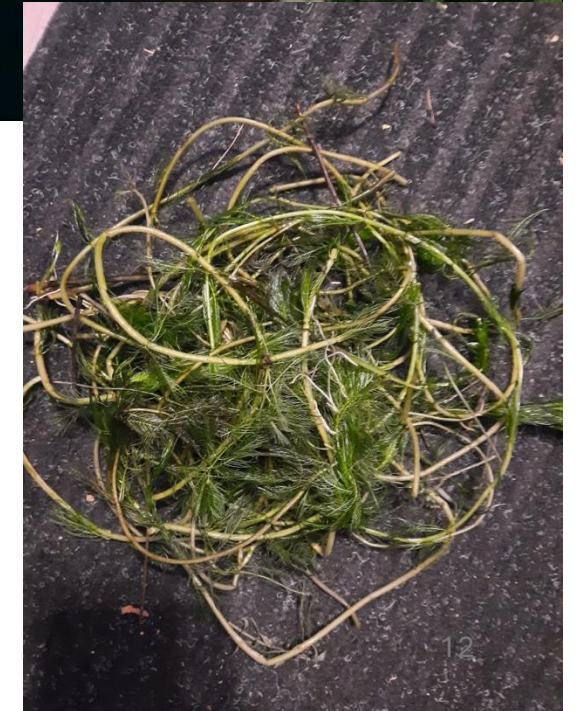
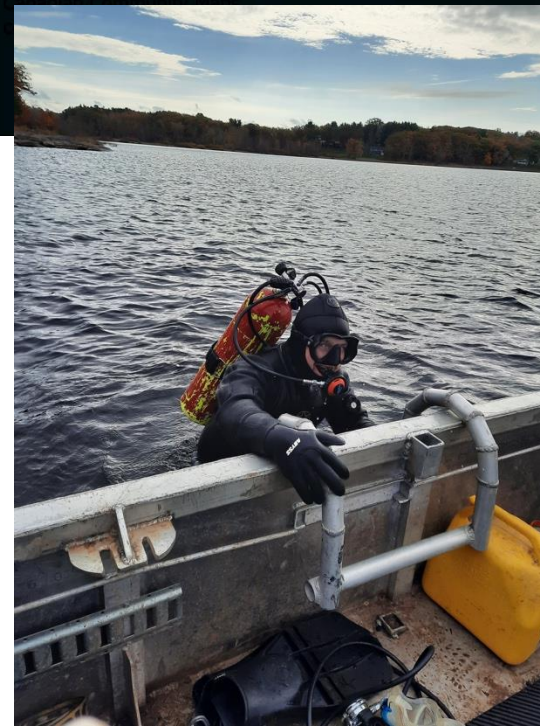
Removal Pilot

- Tested two removal techniques from a management approach (no scientific)
- Three plots were set up using cork-screws stakes with 20 m of rope between anchors
 - Stem clipping
 - Root removal
 - Control (No disturbance)



Removal Pilot

- Test of removal techniques from a management approach (no scientific)
- Three plots were set up using cork-screws stakes with 20 m of rope between anchors
 - Stem clipping
 - Root removal
 - Control (No disturbance)
- Divers from Mako Diving in Fredericton were hired to remove all plants resembling EWM from the removal plots.
- Removed individuals and those within the control plot were counted.



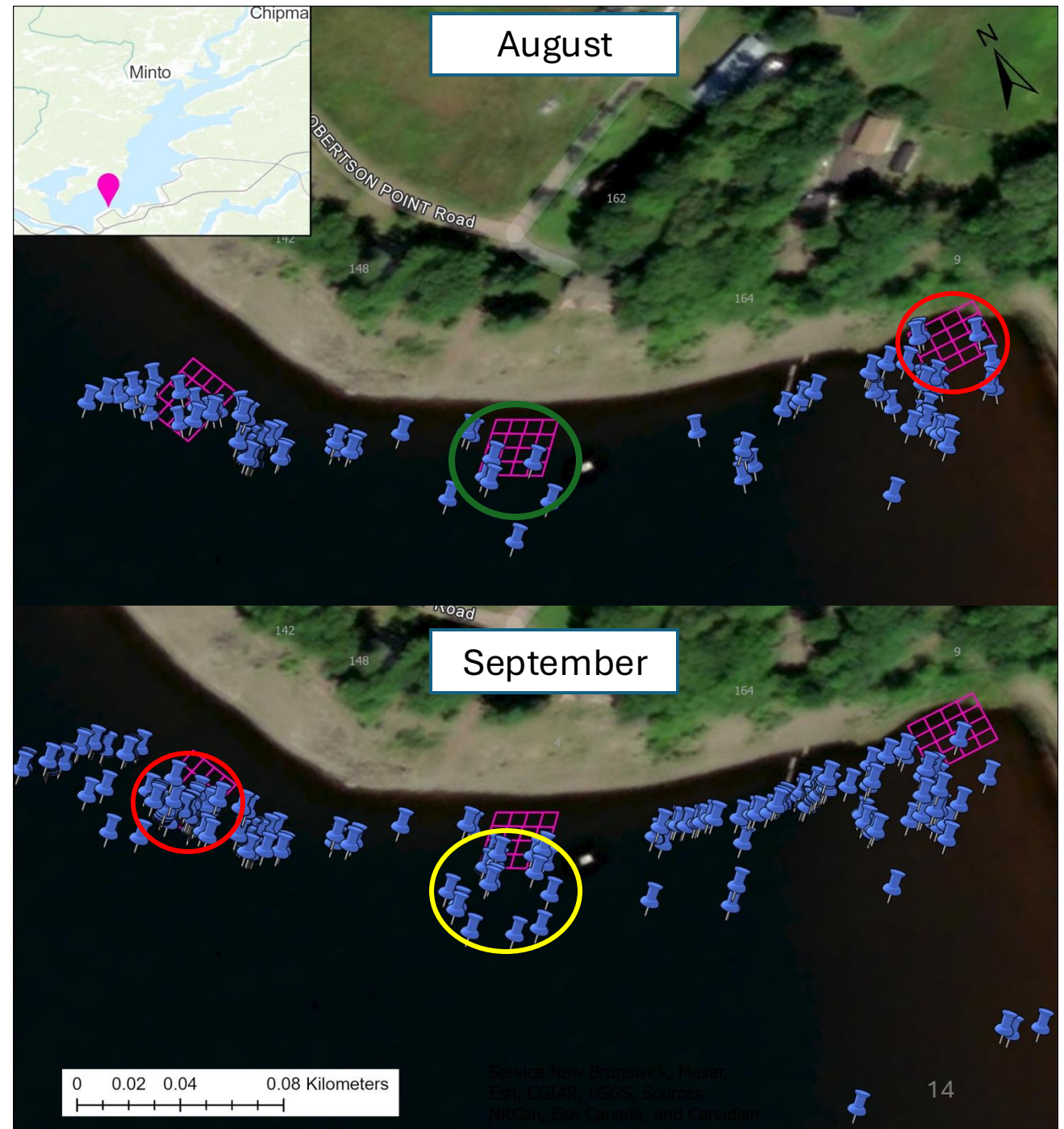
2024 Visits

- Evident impacts of Grand Lake dynamic nature.
 - Lost plots markings -> Clipping & HR
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- Surveys within the plots
 - EWM was absence on half of the plots likely due to water levels.
 - As expected, hand removal plot had less and sparse EWM individuals.
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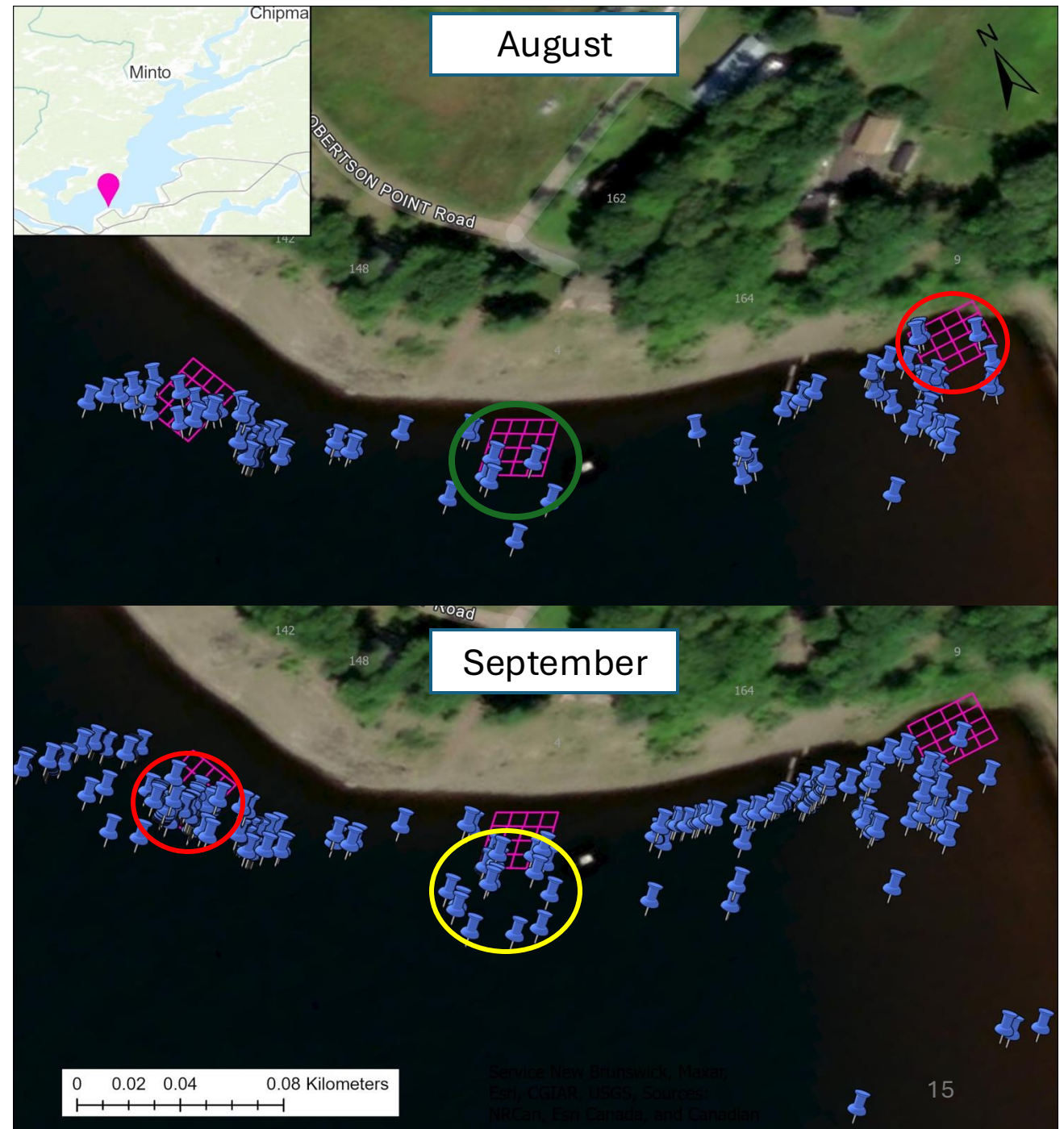
August

September

0 0.02 0.04 0.08 Kilometers

2024 Visits

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- Surveys within the plots
 - EWM was absence on half of the plots likely due to water levels.
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 - Small patches present in the clipping plot.
- Takeaways
 - Lake dynamics affect removal outcomes.
 - Stem Clipping did not have an evident impact on EWM growth.





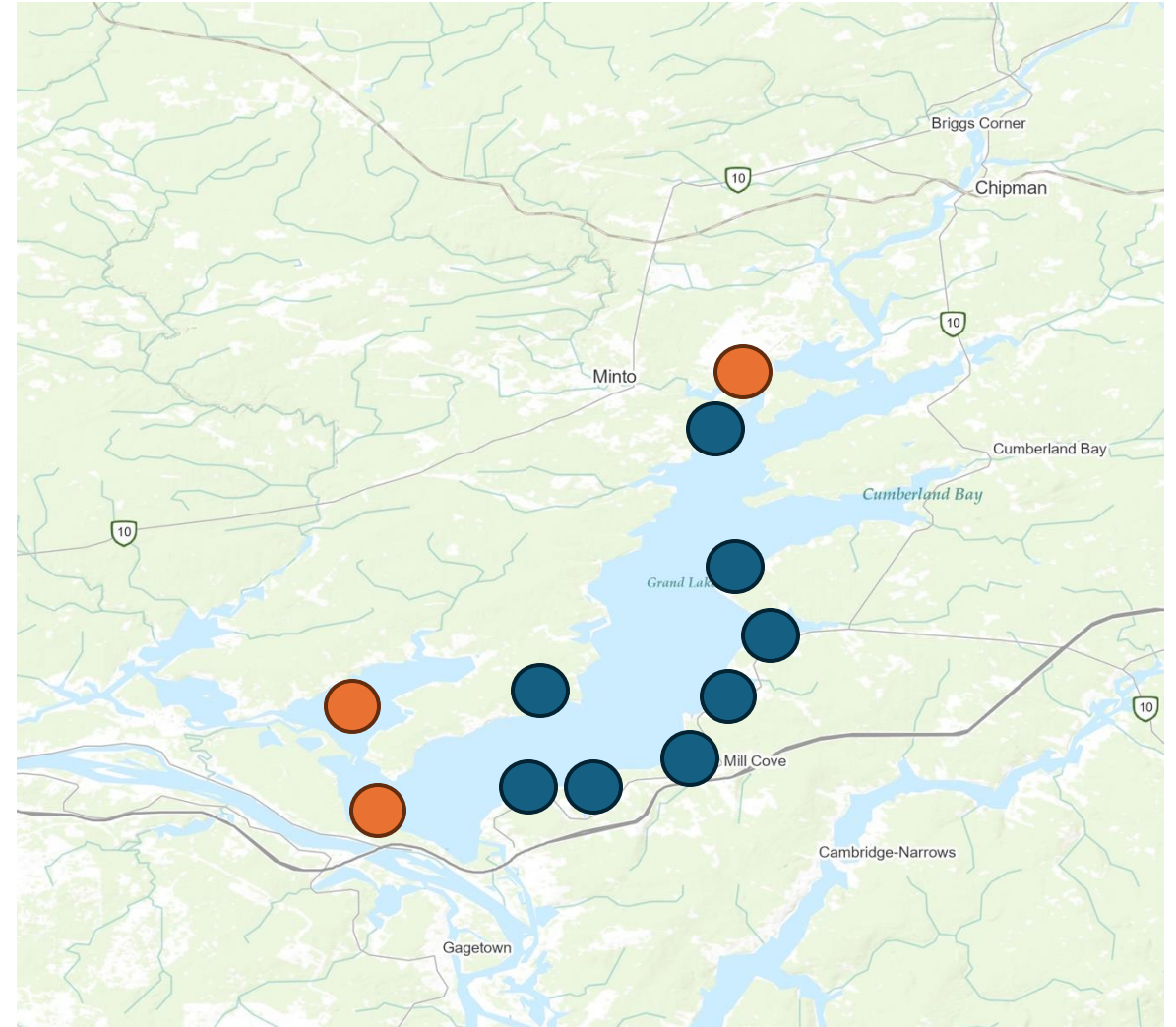
EWM monitoring at the Grand Lake: Where?

- Where did we start?
 - Preferred habitats -> Optimum depth of 3m, soft substrate, mix of sand and rocks.
 - Potentially, all coves and shores
 - Locations that act as source points -> Wharfs and boat launch ramps.



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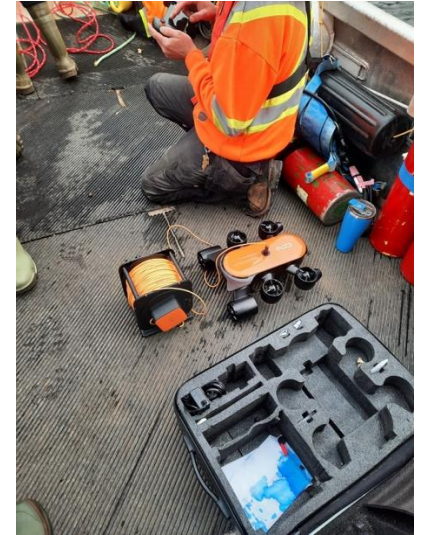
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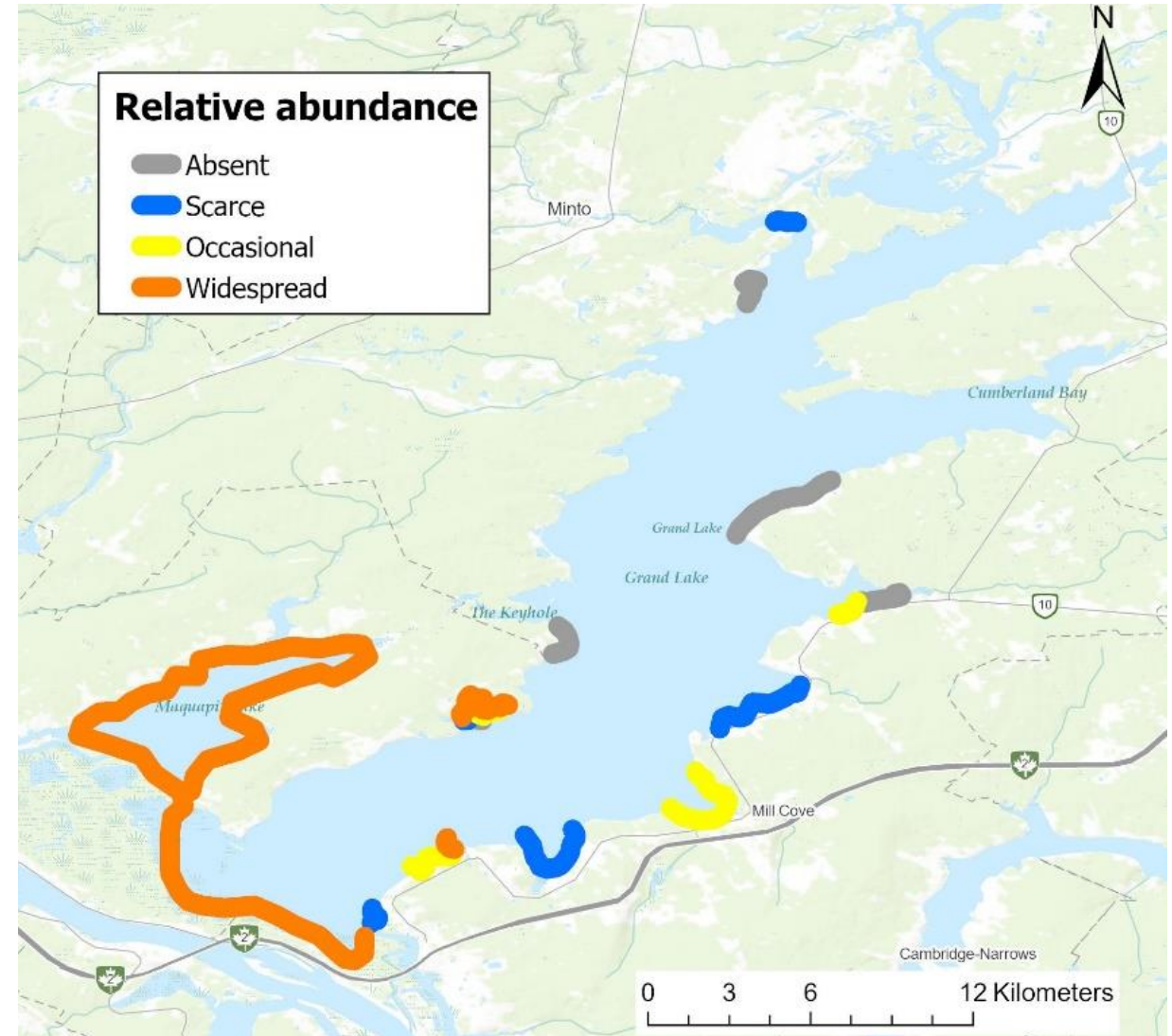
2024

- What did we do?
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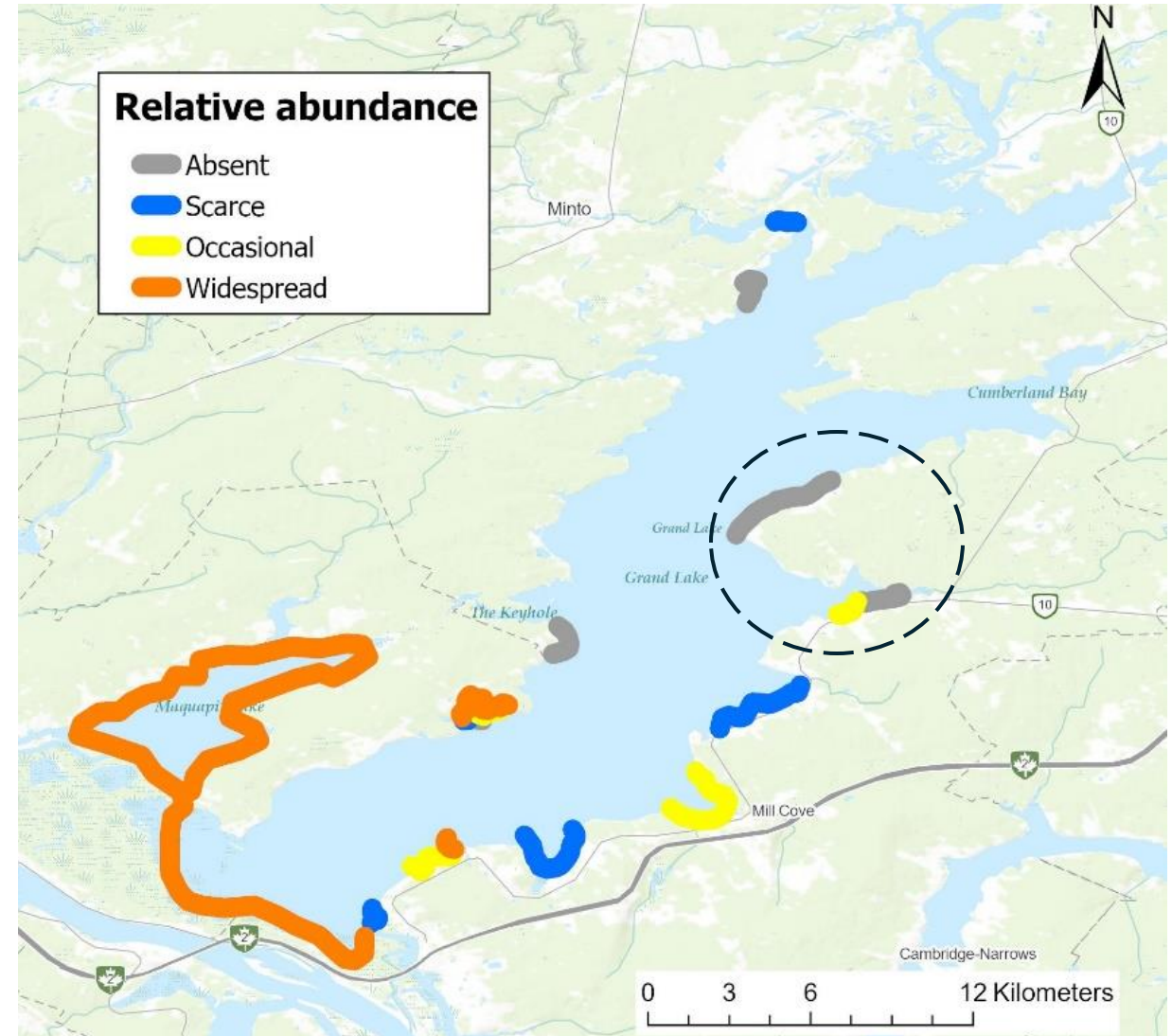
What we know now?

- Confirmation of EWM widespread presence on Maquapit Lake and Grand Lake Meadows.
- Evidence on newly established population
 - Wiggins cove -> Increased from 2023
 - Youngs cove -> First records
- Evidence of infestation increases
 - Douglas Harbour -> Spaced patches in 2023 to a continuum in 2024 -> Mats
- Invasion in Northern coves -> Requires further exploration.
 - One available record of EWM at New Castle Creek
 - Discontinued invasion pattern on the east coves

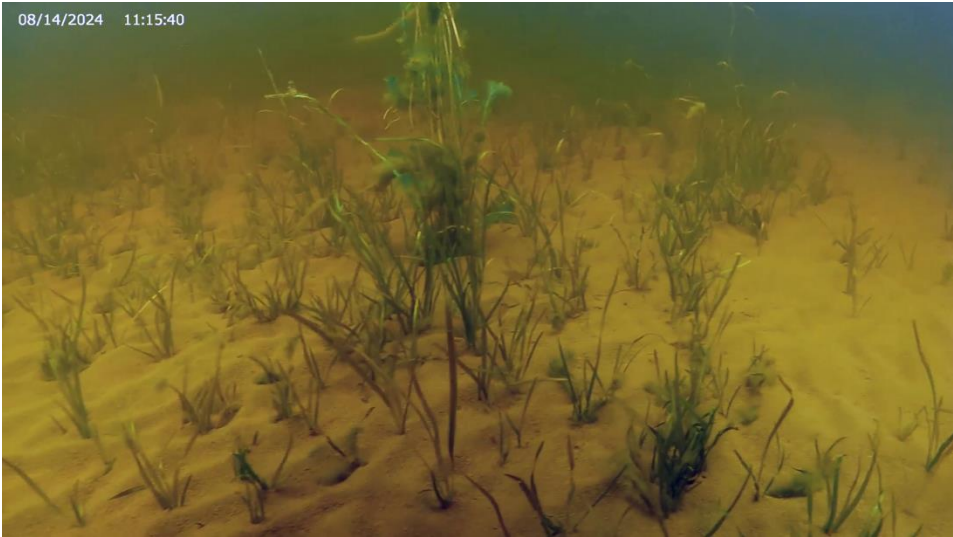


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Substrate influence



What comes next?

Removal efforts

- Need to re-adjust Dykeman coves removal efforts.

What comes next?

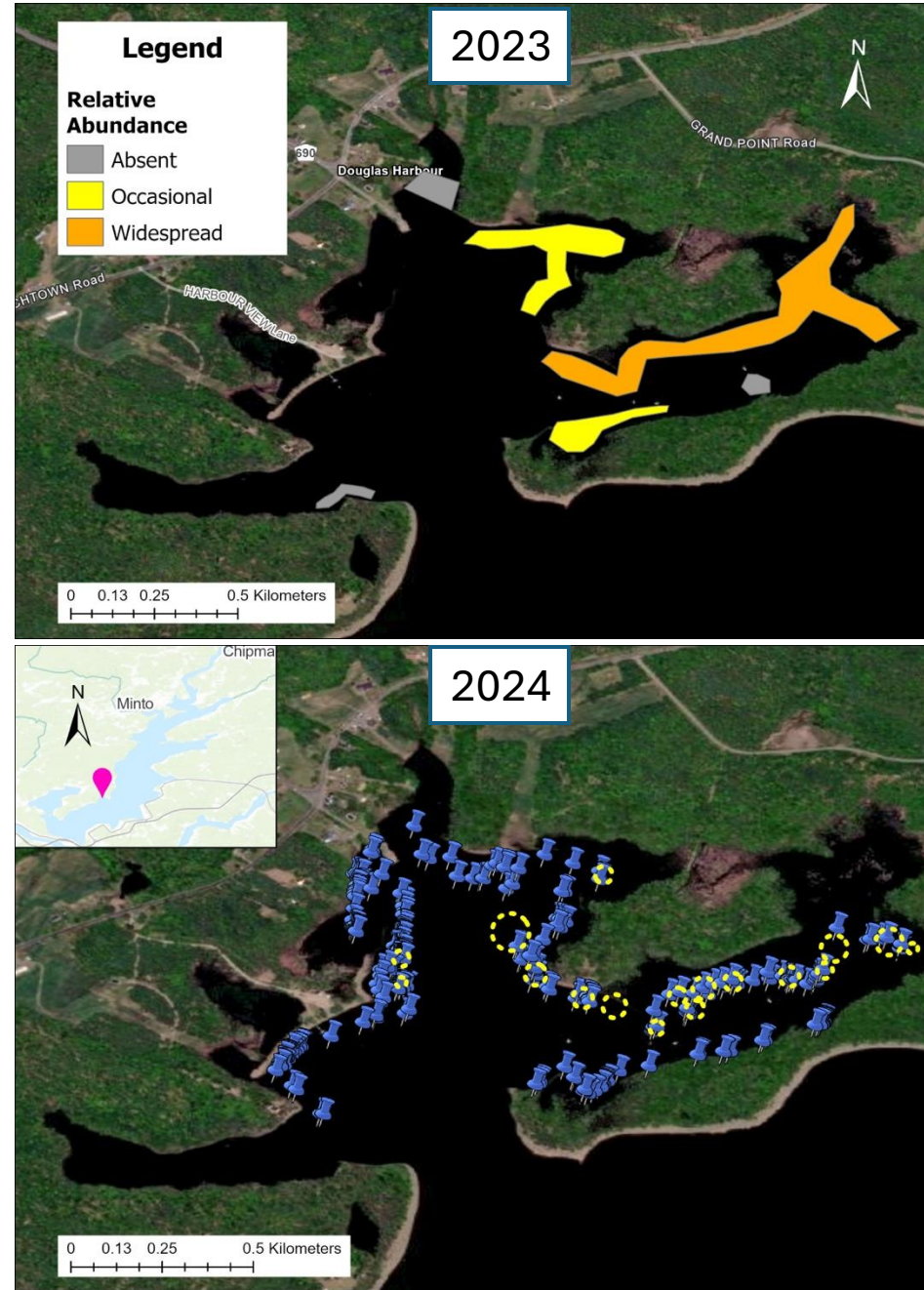
Removal efforts

- Need to re-adjust Dykeman coves removal efforts.
- Potential removal efforts at Douglas Harbour.
 - Strong EWM infestation
 - Area protected from wind and ice movement.

What comes next?

Removal efforts

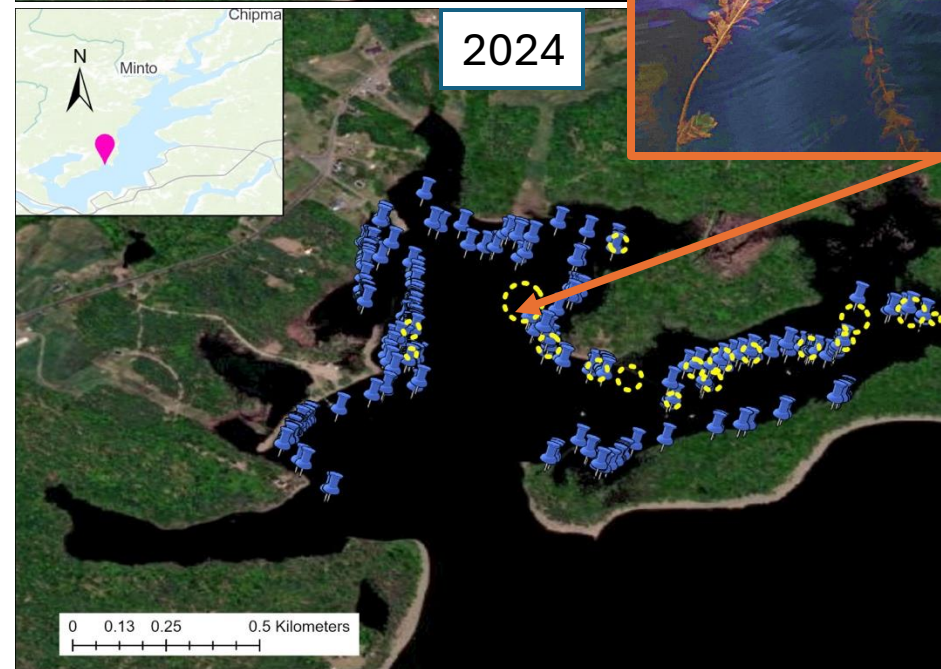
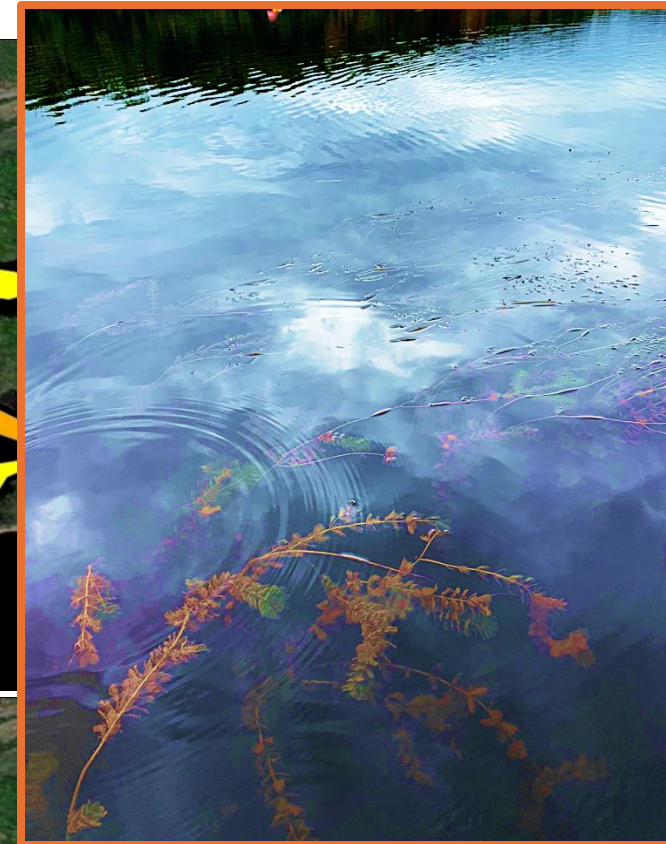
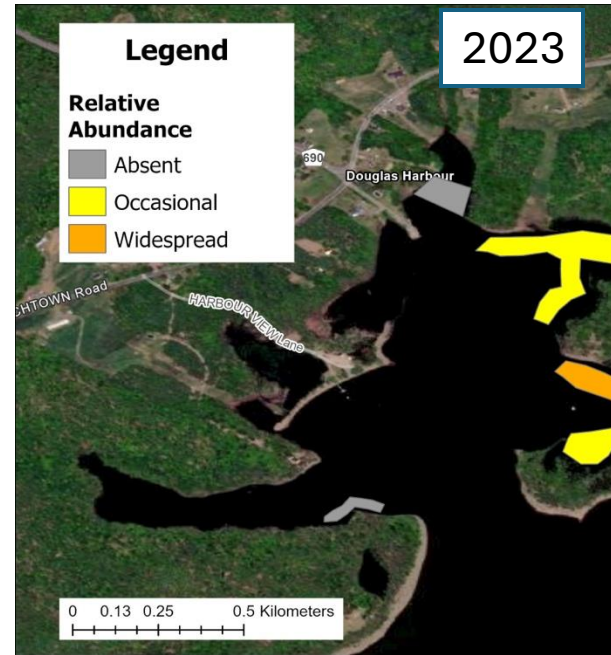
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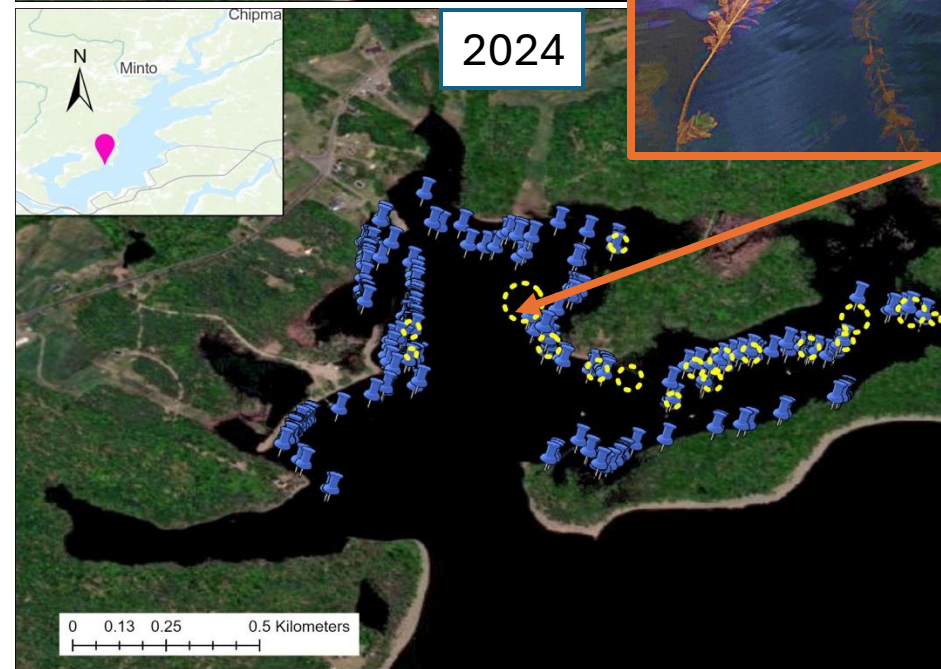
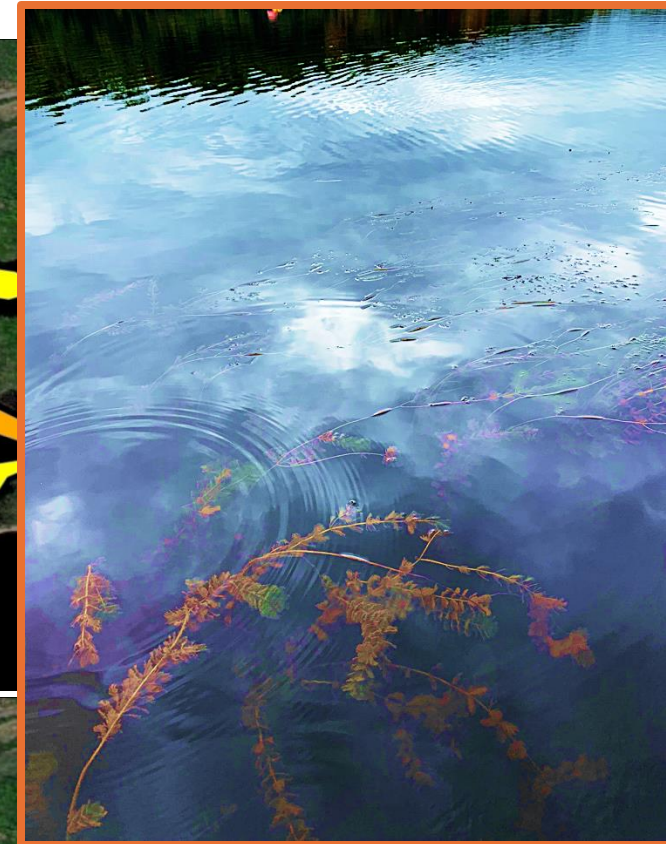
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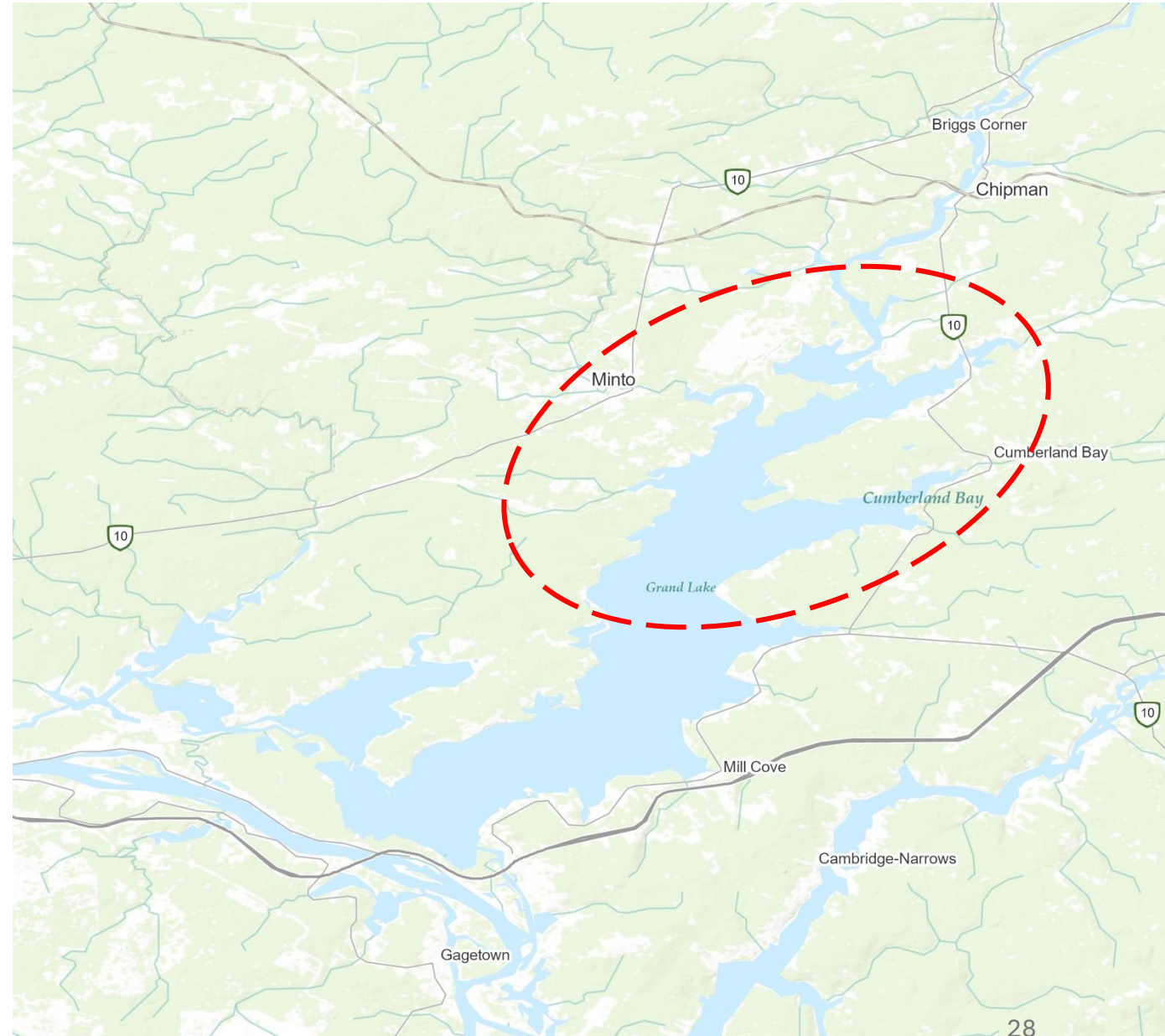
- Need to re-adjust Dykeman coves removal efforts.
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 - Area protected from wind and ice movement.
- Removal on areas where early invasions are observed.



What comes next?

More EWM Patrols

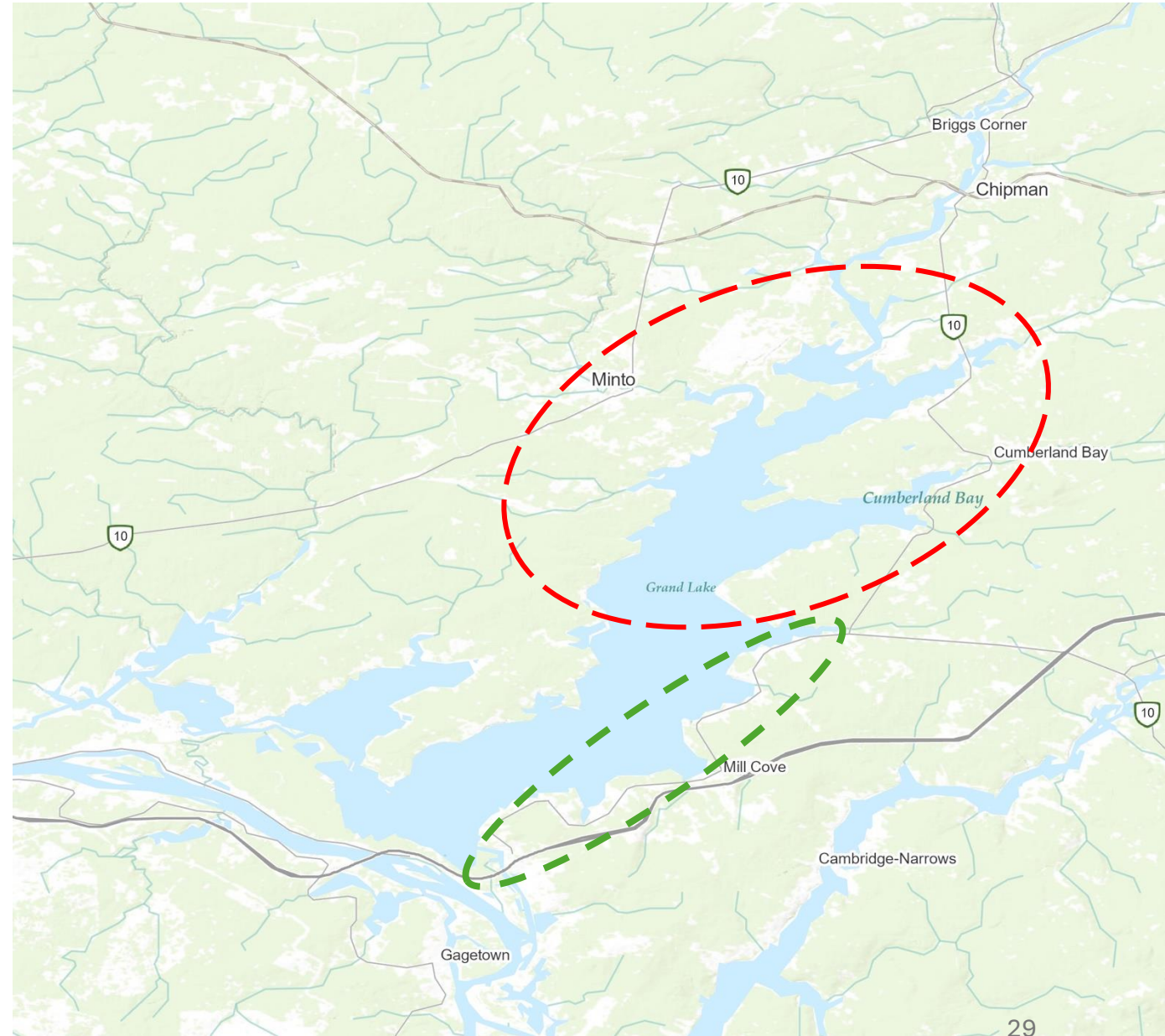
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More EWM Patrols

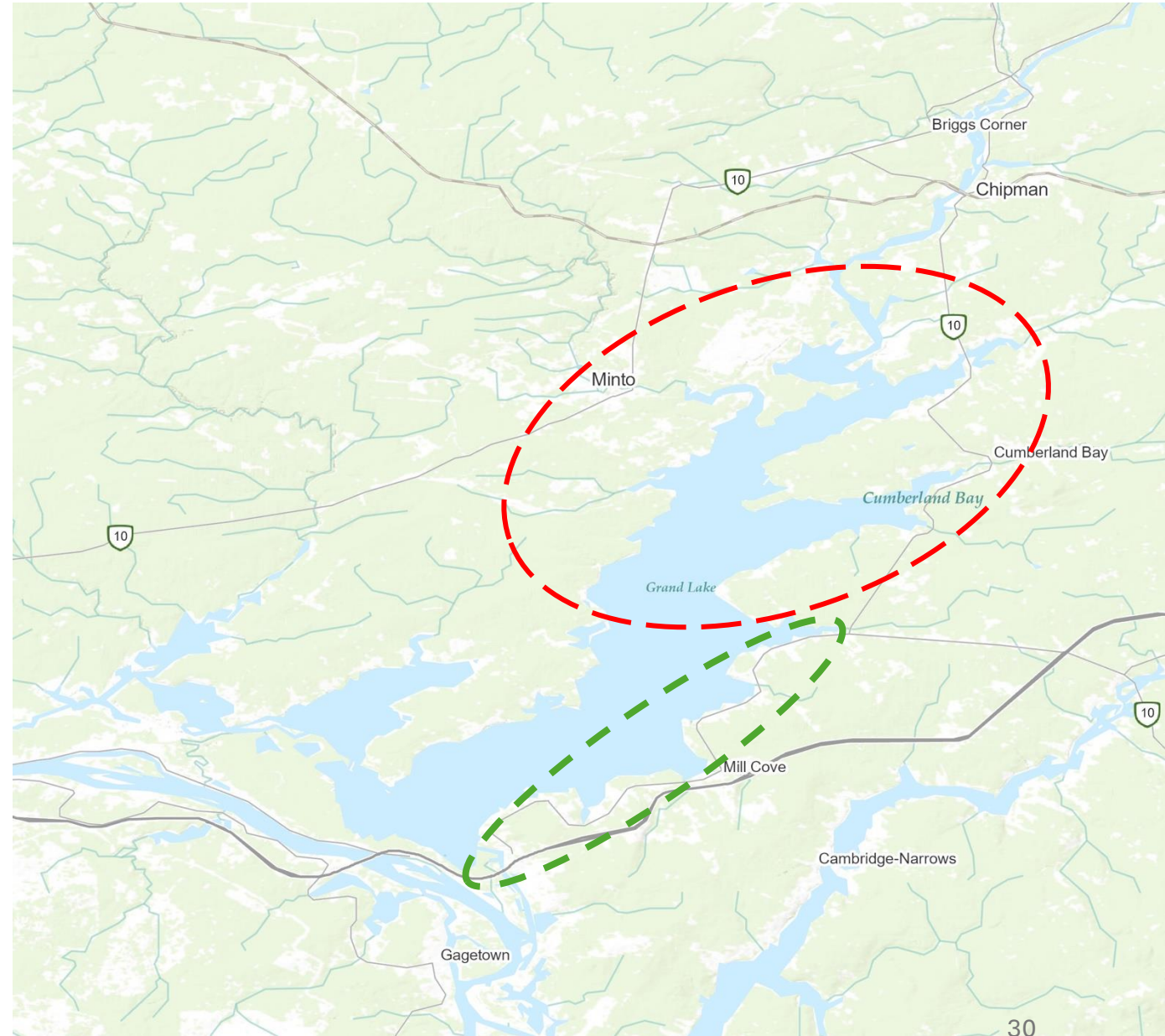
- Unsampled coves.
- Monitoring of coves with scarce EWM occurrence (Potential removal spots).
- Monitoring of biodiversity changes in vulnerable coves.



What comes next?

More EWM Patrols

- Unsampled coves.
- Monitoring of coves with scarce EWM occurrence (Potential removal spots).
- Monitoring of biodiversity changes in vulnerable coves.
- Promotion of BMP -> **Clean, Drain and Dry**



What comes next? – Help needed!!

Do You Enjoy Kayaking in the Grand Lake?

Join us in the effort to combat invasive Eurasian Water Milfoil. Paddle your way to a healthier lake ecosystem!

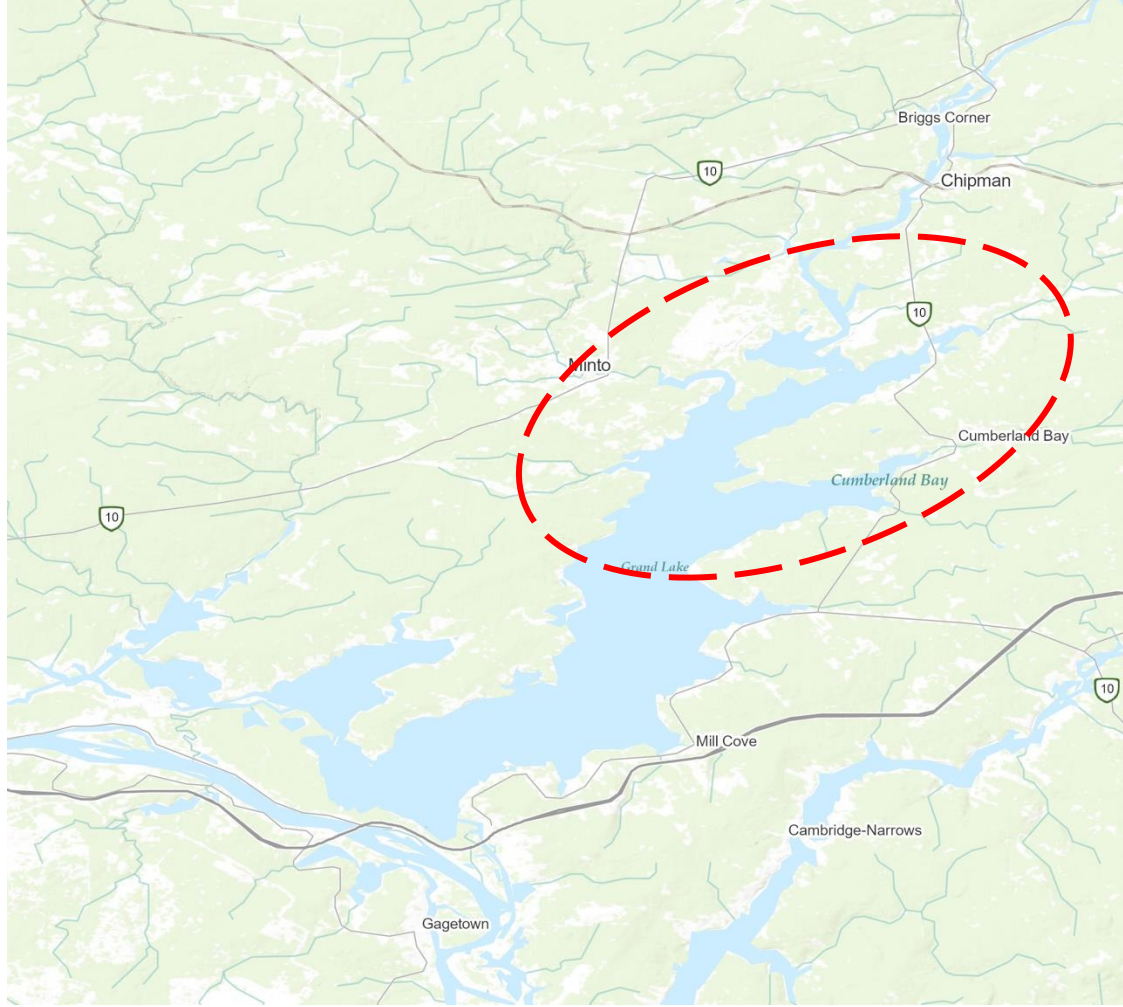


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Acknowledgements

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