



Responding to Water Soldier in Lake Simcoe

December 5, 2025

Invasive Species Centre and Ontario Federation of Anglers
and Hunters Foundation on behalf of the Lake Simcoe Water
Soldier Working Group

Water Soldier Detection in Lake Simcoe

- Water soldier is an aquatic invasive species native to Europe and Northwest Asia
- First detected in North America in the Trent-Severn Waterway in Trent Hills (2008)
- In 2024, ~40 floating plants were detected in outside Young's Harbour
- Initial shoreline surveying in 2024 determined:
 - Large well-established infestation
 - Spatially limited to Cook's Bay between Holland River and Keswick (6 kms)



Lake Simcoe Water Soldier Working Group

Purpose: a collaborative effort to support water soldier surveillance, monitoring and response in Lake Simcoe, and explore options to reduce impacts of this new plant.

Focuses:

- Communications and outreach
- Monitoring plan development & implementation
- Control plan development & partnership identification

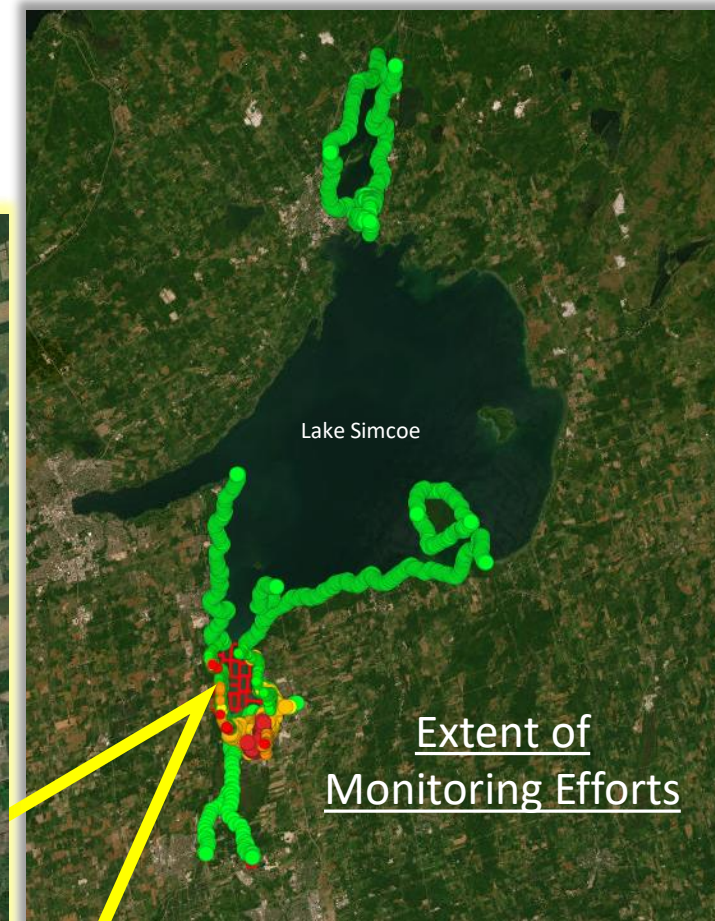
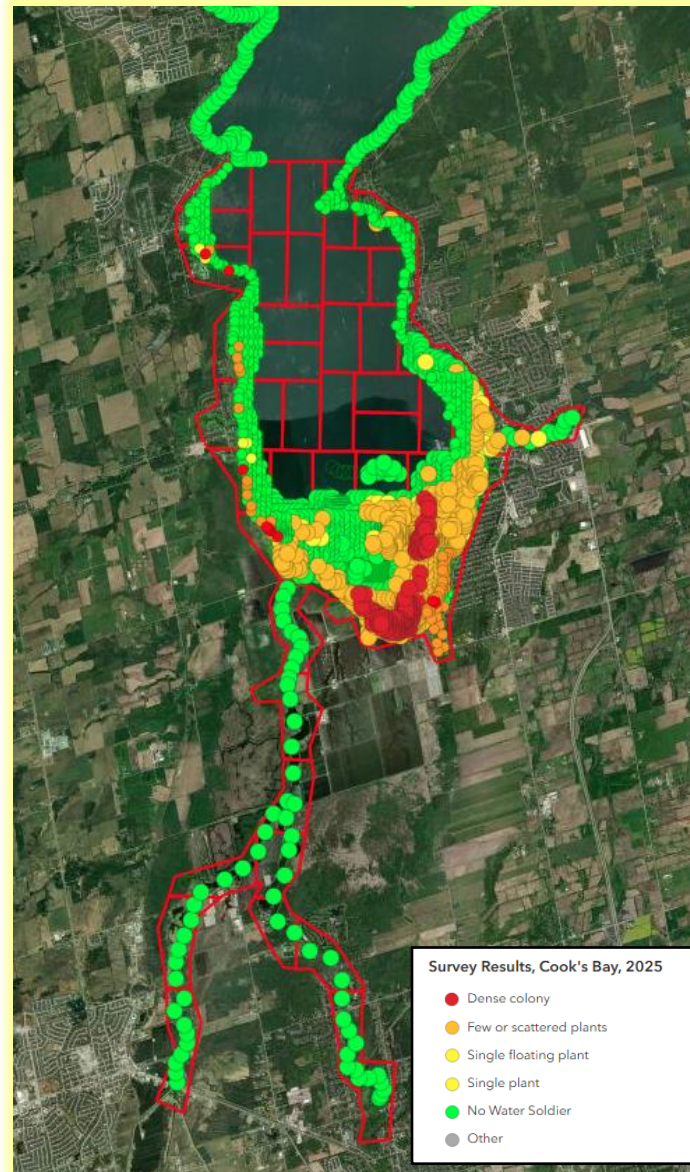
Working group membership:

- New members welcome! Please email Kchurch@invasivespeciescentre.ca



Monitoring 2025 Findings

- Inter-agency monitoring team made up of various organizations:
 - Chippewas of Rama First Nation
 - Chippewas of Georgina Island First Nation
 - OFAH Foundation
- Monitored over 5,000 ha of Lake Simcoe
- Completed over 3,000-point intercepts
- No plants found in the Holland River
- **~450 ha** of water soldier was found in Cook's Bay



Water Soldier Lake Simcoe Photos



Dense Water soldier colony emergent and submergent form Lake Simcoe, 2025



Dense Water soldier colony emergent and submergent form drone photo Ducks Unlimited Lake Simcoe, 2025

Water Soldier Impacts to Lake Simcoe



Impacts to Lake Simcoe's Health

Disrupting progress that has been done to improve the lake health

Increase stagnant water which lead to algae blooms

Decrease native plant biodiversity



Impacts to Lake Simcoe's Recreation

Dense mats inhibits recreational activities such as

- Swimming
- Boating
- Angling
- Water skiing
- Waterfowl hunting

Sharp serrated leaves make it hard to handle WS plants



Impacts to local landowners and users of the lake

Local farmers irrigation (Holland Marsh Famers)

Township water intakes

Waterfront properties access

Recreational access

We are at a critical juncture ...

- Plants are contained to Cook's Bay (2025) for now, but spread risk is increasing
- Action is essential to prevent further expansion
- No single agency can manage this alone – cross agency coordination is required
- The working group's combined expertise and shared response capacity are key to success



Key Needs for Water Soldier in 2026

Developing an Integrated Management Plan that includes the following:

Prevention

- Communication, Outreach, and Education
- Public and stakeholder engagement

Detection/Monitoring

- Increased surveillance and monitoring

Management Options

- Collective agency support

Funding

- Securing consistent funding
- Establishing clear timelines, defined goals and milestones



Lake Simcoe Region Conservation Authority Collaboration – Water Soldier Working Group

Coordination

- Identifying strategic partners
- Providing a forum for communications with municipalities

Communications

- Notifications to local landowners, agricultural communities, etc.
- Outreach opportunities

GIS Expertise

- Centralized data to support rapid response
- Potential treatment polygons

Integrate Existing Monitoring

- Information sharing
- Identification and sampling training for water soldier
- Explore opportunities to integrate water soldier monitoring in existing programs

Future Direction

Fall 2025/Winter 2026

- Continue Lake Simcoe Water Soldier Working Group - recruit new members
- Continue communication and outreach with the public and key stakeholders

Winter/Spring 2026

- Integrated Management Plan is a work in progress: collecting data, reviewing current knowledge
- Establish management options – what is feasible and practical
- Evaluate risks and benefits – ecological, operational, and social considerations
- Seeking feedback – from working group members, stakeholders, and experts
- Establish coordinated action for the coming years

Questions for Discussion

Roles:

- Are there existing programs of LSRCA or your municipality that could support monitoring, response or outreach?
- What role do you see LSRCA or your municipality playing in water soldier prevention and management?

Resources and Contributors:

- What resources (staff, equipment, funding) could you contribute?
- Are there opportunities to leverage municipal partnerships or networks?

Communication and Outreach:

- How can municipalities help engage local residents, property owners or recreational users

Questions for Discussion Continued

Coordination and Collaboration:

- What mechanisms could help coordinate efforts between your municipality and other agencies?
- Are there lessons learned from other invasive species/ environmental issues that could be applied here?

Barriers and Support Needs:

- What challenges do you foresee?
- What support would help your participation?



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