

Lake Monitoring & Protection Network
March 25, 2025, Quarter 1 Regional Report



Lake Monitoring and Protection Network

Cooperative Agreement, 1st Quarter Report



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Citizen Science Center

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CONNECTING PEOPLE WITH NATURE

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Newsletter

1/2	Sent out AIS Newsletter to 99+ Subscribers
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Citizen Lake Monitoring Network

3/13	Met with 2 CLMN Monitors
Throughout Quarter	Communicated with CLMN volunteers on monitoring, equipment, sites, updates, etc.

Clean Boats, Clean Waters

Throughout Quarter	Started hiring and recruitment process for watercraft inspectors. Communicated and assisted Lake Groups that received CBCW grants.
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Lake Groups

1/6	Sent AIS Newsletter to LWIPA Newsletter
1/22	Meeting with LWIPA/Chippewa County Intern
1/22	Meeting with Lake Eau Galle – 2025 Planning
2/19	Created and Shared Zebra Mussel and Decontamination sheets with Eau Galle

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Outreach and Education

1/7	Invaders in 15: Flowering Rush
1/14	Invaders in 15: Red Swamp Crayfish
1/21	Invaders in 15: Starry Stonewort
2/4	Aquatic Invaders: Pathways and Mechanisms of Spread
2/26	Nature Trivia
3/11	Beetles & Biocontrol
3/13	Red Cedar Watershed Conference
3/20	Presentation to Eau Claire Rotary Club

Purple Loosestrife Biological Control

2/26	Purple Loosestrife Biocontrol Webinar
3/11	Beetles & Biocontrol – PLB Training

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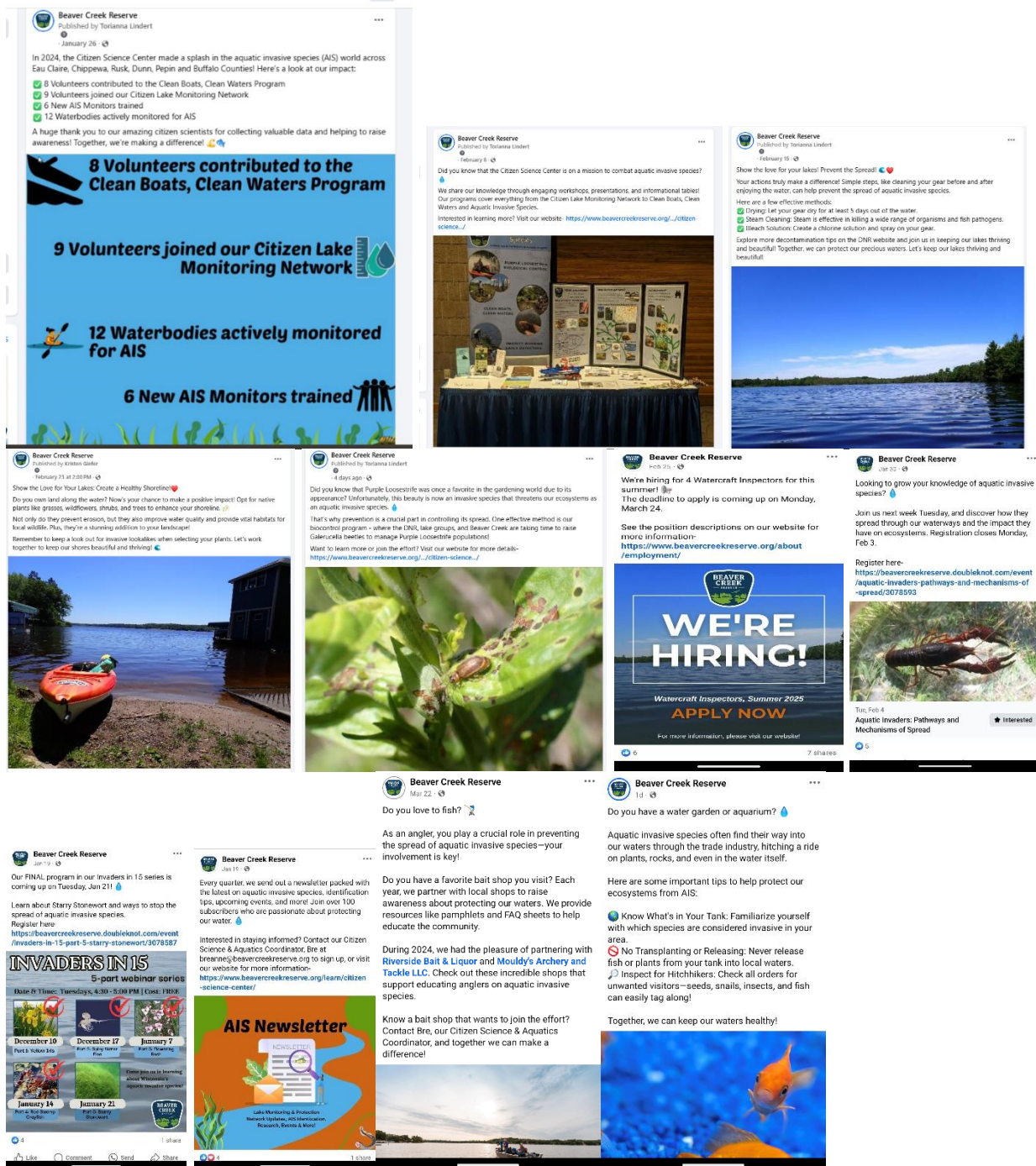
Travel and Meetings

1/7	Monthly Lakes & Rivers Meeting
1/7	Meeting with UWEC Professor – LMPN Programs in Summer
1/9	Eau Claire River Watershed Coalition Meeting
1/16	Lakes Monitoring Meeting: CLMN Updates
1/16	Webinar: Starry Stonewort science, prevention and management
1/22	Submitted all LMPN Reimbursement Paperwork and End of Year Reports
1/22	Meeting with LWIPA/Chippewa County Intern
2/4	Monthly Lakes & Rivers Meeting
2/14	Webinar: Biology and Identification of Wisconsin Crayfishes
2/18	Webinar: Great Lakes Freshwater Symposium
2/26	Webinar: PLB Winter Webinar
3/4	Monthly Lakes & Rivers Meeting
3/11	Met with volunteer for Citizen Science Opportunities with LMPN
3/13	Red Cedar Watershed Conference
3/26- 3/28	Wisconsin Lakes & Rivers Convention

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Social Media Posts



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GLOSSARY

AIS – Aquatic invasive species

ALPOA – Amacoy Lake Property Owners Association

BCR – Beaver Creek Reserve

CBCW – Clean Boats, Clean Waters

CLMN – Citizen Lake Monitoring Network

CSC – Citizen Science Center (Beaver Creek Reserve)

LCC – Land Conservation Committee (Eau Claire County)

LCFM – Land Conservation and Forest Management (Chippewa County)

LLLPRD – Lower Long Lake Protection and Restoration District

LMPN – Lake Monitoring and Protection Network

LWIPA – Lake Wissota Improvement and Protection Association

Secchi disk – instrument used to measure water clarity

Station – Specified location on a waterbody with historical and/or continuous associated fieldwork

SWIMS – Surface Water Integrated Monitoring System

WBIC – Waterbody identification code

WCI – Watercraft inspector

WDNR – Wisconsin Department of Natural Resources



Research & Articles

Invasive Mussels

All Too Clear: Beneath the Surface of the Great Lakes

[Full Series Link](#)

[Wisconsin Public Radio Interview](#)

Overview

All Too Clear: Beneath the Surface of the Great Lakes is a 3 part series focusing on using underwater drone technology to explore how invasive mussels are impacting life under the water.

Invasive Species Spread

An Updated Environmental Resistance Model for Predicting the Spread of Invasive Species

[Full Article Link](#)

Abstract

Predictive models on invasive species spread can assist in identifying large-scale invasion risk. Environmental resistance (ER) models, which predict spread based on ecological similarity to already-invaded communities, offer one approach. However, gaps remain in understanding how different ER measurements perform across different taxa and how they can be integrated with future global change. Here, we aim to discern the primary drivers of invasion spread by comparing different ER models and then use the best models to forecast future invasion dynamics.

Uncovering the hidden within shipping containers: molecular biosurveillance confirms a pathway for introducing multiple regulated and invasive species

[Full Article Link](#)

Abstract

The negative ramifications of invasive alien species (IAS) are considered the second-most cause of biodiversity extinction and endangerment after habitat modification. IAS movements are

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mainly anthropogenically driven (e.g., transport of shipping containers) and require fast detection to minimize damage and cost. The present study is the first to use molecular biosurveillance of international shipping containers to detect IAS and regulated species identification in Canada. Thirty-eight samples were collected from debris (soil, stems, seeds, individual specimens) found in containers arriving in Canada. A multi-marker approach using COI, ITS, ITS2, and 16S was used to identify four main taxonomic groups: arthropods, fungi, plants, and bacteria, respectively. Eleven IAS species were identified via metabarcoding based on environmental DNA samples, including two arthropods, six fungi, two plants, and one bacteria. The origin of the eDNA detected from each species was linked to their native distribution and country of origin, except for *Lymantria dispar*. Four physical specimens were also collected from shipping container debris and DNA barcoded, identifying three non-regulated species (two arthropods and one fungus). Altogether, these results demonstrate the importance of integrating molecular identification into current toolkits for the biosurveillance of invasive alien species and provide a set of validated protocols ready to be used in this context. Additionally, it reaffirms international shipping containers as a pathway for multiple invasive aliens and regulated species introduction in Canada. It also highlights the need to establish regular and effective molecular biosurveillance at the Canadian border to avoid new or recurrent invasions.