Eurasian Water Milfoil – The Challenge

What We're Up Against, and We're Not Alone

Eurasian Water Milfoil (EWM) is a submerged aquatic perennial plant. It thrives in freshwater environments and is known for its rapid growth and ability to colonize a variety of aquatic habitats. EWM grows entirely underwater, except for flowering spikes that rise above the water surface. Stems can grow up to 7 meters long, forming dense mats just below or at the water surface.

Many lakes in Canada and the U.S., including Moira Lake, already showing signs of significant impact, if left unchecked, the consequences could be long-lasting.

In lakes across Ontario, Québec, and the northern U.S., EWM has resulted in:

- The loss of native species diversity
- Increased algal blooms and murky water
- Declines in recreational use and tourism
- Tens or hundreds of thousands of dollars annually in control and cleanup costs

For help in identifying EWM see this video. Bing Videos

EWM is highly efficient at colonizing new habitats due to its ability to spread through small plant fragments. Fragments hitch rides on boats, trailers, and fishing gear, and currents and waterfowl carry plant pieces to new areas, where they root and establish. The more you cut EWM the more it will spread and grow. Recently a 3-day cleanup of Cobourg Harbour resulted in 20 metric tons of aquatic plants being removed.

The Zombie Plant

Eurasian water milfoil, sometimes called the 'Zombie Plant' for its persistence, is notoriously difficult to eliminate. In fact, about the only condition it can't survive is lack of water.

EWM is native to Europe, Asia, and northern Africa. It was introduced to North America in the late 19th century and was first sighted in Canada in 1961. EWM is present in many lakes, not just Moira Lake.

Once it creates its dense mats, it is not pleasant to swim in. When you cast your line, it gets all tangled. Boat motors have a difficult time getting through and when they do, they chop the weeds up, which causes it to spread more.

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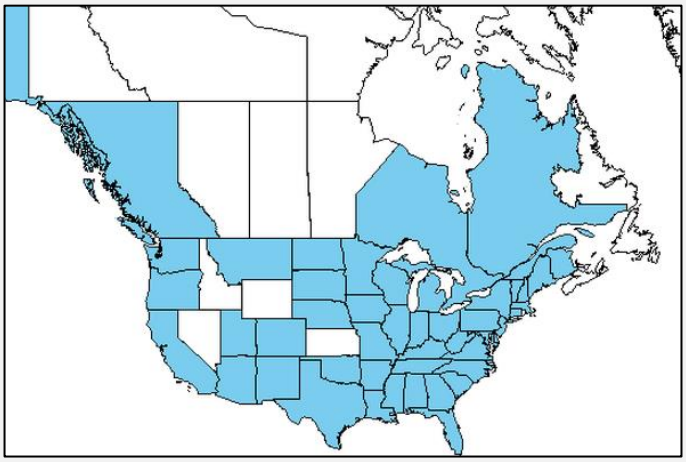
Why It's a Problem

EWM alters aquatic ecosystems, displacing native species and disrupting ecological balance.

- Forms thick mats near the surface, choking out native aquatic vegetation.
- Reduces oxygen levels and alters fish and invertebrate habitat.
- Degrades water quality by increasing sediment retention and nutrient cycling.
- Interferes with recreation: boating, fishing, paddling, and swimming all become difficult or unpleasant.
- Increases shoreline maintenance costs for residents.
- Slows water flow, altering sediment deposition patterns.

In Moira Lake, milfoil can now be found along much of the shoreline —particularly where water is shallow, nutrient-rich, and warm.



Eurasian Water Milfoil Distribution. Source: Lake Scientist

Economic Impacts

EWM infestation significantly impacts the economy of communities surrounding impacted waterbodies. Its presence reduces property values, increases management costs, and decreases tourism revenue.

- According to scientific studies (Horsch, E. J., & Lewis, D. J. (2009). "The Effects of Aquatic Invasive Species on Property Values: Evidence from a Hedonic Pricing Model" in Land Economics.) Waterfront property values in affected areas decline by an estimation of up to 16%. With approximately 300 waterfront properties around Moira Lake contributing 33% of property taxes in Centre Hastings, even a modest decline will impact the tax base.
- A recent Canadian study (Gagné, V., & Lavoie, C. (2023). "Efficient and rapid control of Eurasian watermilfoil (Myriophyllum spicatum) by combining benthic mats and hand pulling" in Invasive Plant Science and Management) measured the cost of managing EWM through physical and mechanical methods, with annual expenses ranging from $20,000 to $185,000 per hectare. Moira Lake is 827 hectares.

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Economic Impacts (cont.)

- Focusing on just 10 hectares of high-use shoreline could cost ~$150,000 in the first year, with annual maintenance in the $20,000–$40,000 range. However, proactive investment is far more affordable than waiting until EWM dominates the lake.
- Tourism Revenue: Recreational activities like boating, swimming, and fishing are critical to Moira Lake's tourism sector. Reduced accessibility to recreational areas due to dense EWM mats deters visitors, leading to lower spending at local businesses, and a decline in associated employment opportunities.

Property values and tourism revenue are closely tied to the health of the lake. By investing in evidence-based management, we can help preserve Moira Lake's economic and recreational value.

Eurasian Water Milfoil forms dense mats. Source: Outdoor Canada

What Can We Do About It?

While the scale of the Eurasian Water Milfoil problem may seem overwhelming, the good news is that we're not the first lake to face it — and we're not alone. Across North America, lake communities like ours have pushed back against EWM using a variety of tools: from diver-assisted hand removal and benthic barriers to biocontrol, chemicals and long-term community monitoring.

With the right tools and a coordinated effort, we can protect the lake we love.

The next bulletin in this series explores the tools, costs, and proven approaches being used in similar lakes — and how Moira Lake can apply those lessons to build a sustainable, community-driven response.