

Potential source for revenues:

Other states help fund control of Aquatic Invasive Species using revenue from mandatory boat stickers						
State	Year passed	In-state Motorized Sticker Price	Out-of-state Motorized Sticker Price	In-state Non-Motorized	Out-of-state Non-Motorized	Approximate Annual revenues
ME	2008	\$10	\$20	N/A	N/A	\$1,030,000
OR	2009	\$5	\$20	\$7	\$7	\$1,000,000
ID	2009	\$10	\$22	\$7	\$7	\$850,000
WY	2010	\$10	\$30	\$5	\$15	\$500,000
NV	2013	\$10	\$20	\$5	\$10	Unknown
MN	2015	TBD	TBD	N/A	N/A	TBD
VT	No law	None	None	None	None	\$0

From ANR DEC:

- 27 public access greeter programs were active in 2015.
- Over 21,000 watercraft were inspected in 2015, which is a new record for the program.
- Of all watercraft inspected, **659 were found to either have plant or animal material in/on the vessel, and Eurasian watermilfoil was the culprit in a majority of those instances.**
- Staff also provided sample identification support to the Lake Champlain Boat Launch Steward Program, confirming identifications of over a dozen samples retrieved from recreational equipment by Stewards at Lake Champlain accesses.

Please share the summary with others who may be interested in these efforts.

<http://dec.vermont.gov/sites/dec/files/wsm/lakes/ans/docs/2015.pdf>



Mature Zebra Mussel development



Zebra Mussel encrustation



Spiny water fleas on Lake George
photo courtesy Emily DeBolt
9/16/12

Spiny Water Flea



Hydrilla infestation



Swimming through Milfoil

Christine Cano S.75 4/4/17

Milfoil Committee, Our Objective

One of the principal missions of the Shadow Lake Association is to preserve and protect the healthy ecology of the lake by preventing the introduction of non-native aquatic invasive species, especially Eurasian water milfoil, and if introduced, seeking their eradication. To achieve this objective, the Association has established the Milfoil Committee, whose motto is;

'Prevent, Protect, Preserve'



Milfoil Committee Mission Statement

The Milfoil Committee is a coalition of volunteers dedicated to preventing the degradation of Shadow Lake water quality and protecting the shoreline habitat from infestations of Eurasian water milfoil and other aquatic invasive species.

Our Approach

Our purpose is solely to protect the health of Shadow Lake. We seek to contain and control the spread of milfoil by implementing best management practices with the intent of achieving complete control. In full compliance with Vermont state regulatory requirements, we employ an objective management approach in evaluating how best to control each milfoil site discovered, with the least interference with lake activities.

In choosing what actions should be taken at a given site, we assess:

- location, vigor, size and number of plants,
- current and potential range of infestation,
- lake depth, water current,
- type of substrate condition,
- sunlight penetration level,
- recreation accessibility,
- how brittle the plants are and likelihood of milfoil dispersal

Christine Cano S. 75 4-4-17

The assembly of our popular boat wash station upcycles an old horse trailer rebuilt to house our hot water tank. The trailer also serves as a cozy shelter for our Greeter's while on duty, complete with a desk top, chairs, data collection materials and educational literature for lake-users on the importance of AIS spread prevention to help protect this lake and all other waterbodies.



The Shadow Lake Milfoil Committee

What We Do

- Collaborate with the Shadow Lake Association's Board of Directors, the Town of Glover, the Vermont Agency of Natural Resources, and the Department of Environmental Conservation, to maintain an effective lake management plan;
- Support the summer Boat Wash Program, the Vermont Department of Environmental Conservation's Public Access Greeter Program and the Vermont Invasive Patroller Program;
- Provide educational outreach to Association members and lake boaters on the dangers to Shadow Lake posed by non-native aquatic invasive species;
- Monitor the entire shoreline throughout the summer season for early detection of invasive species by employing a professional SCUBA diver and trained snorkel volunteers to locate and hand pull plants before they can spread;
- Provide surface support (boat escort and personnel) to watch over and ensure the safety of our team of divers/snorkelers;
- Mobilize a rapid response team to identify and contain any invasive species infestation, marking the underwater site with survey tape and placing orange buoys at the lake surface for lake users to avoid recreation near that site in order to minimize water disturbance and prevent further plant spread;
- Inform lakeshore property owners of the presence of invasive species and the Committee's control measures;
- Create and annually update an easily understood lake map to include the historical and current sites on aquatic invasive species infestation;
- Encourage shoreline property owners to regularly monitor their waterfronts for unusual underwater plant growth and immediately report any suspicious growth;
- Network with knowledgeable experts for technical advice to help us prevent and defend against the introduction of aquatic invasive species or other emerging environmental issues;
- Apply for grants for State and Town funding, and for any necessary State environmental permits to strengthen our control program;
- Purchase and maintain all equipment necessary to operate the control program;
- Survey the lake to identify and document the native aquatic plant species and assess the areas where significant native plant growth indicates external phosphorous presence;
- Attend relevant seminars and workshops;
- Network with other organizations in Vermont to exchange information regarding control programs for aquatic invasive species;
- Provide updates to the Shadow Lake Association website; design and provide informational signs; procure and distribute educational materials; and circulate flyers when necessary to share information on topics related to aquatic invasive species.

~ In this way, the Milfoil Committee strives to preserve the natural beauty of Shadow Lake, maintain its recreational enjoyment, and enhance the property value of the adjoining land.

<http://shadowlakeassociation.org/water-quality/>



Shadow Lake Glover, VT Eurasian Watermilfoil Locations

Vermont Agency of Natural Resources

vermont.gov



LEGEND

Confirmed EWM locations:

- = 2011
- = 2012
- = 2013
- = 2014
- = 2015
- = 2016, new site
- = no EWM since 2014
- = 2016



WGS_1984_Web_Mercator_Auxiliary_Sphere
 © Vermont Agency of Natural Resources. April 14, 2016

DISCLAIMER: This map is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. ANR and the State of Vermont make no representations of any kind, including but not limited to, the warranties of merchantability, or fitness for a particular use, nor are any such warranties to be implied with respect to the data on this map.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

1: 6,319

1in = 527 ft
 1cm = 63 meters

NOTES

Map created using ANR's Natural Resources Atlas by A. Bove, VTDEC Lakes Program



September, 2015: Shadow Lake removal of benthic mat for storage



2016: Shadow Lake Association hosting VTDEC greeter training work-shop, Josh Mulhollem demonstrating portable hot-water power washer for vessel and vehicle decontamination

The Trouble with Milfoil Fragment Spread

- Milfoil stems automatically separate from the parent plant and disperse into the water.
- The abscising stem fragments often develop roots at the nodes before separation and can form a completely new plant.
- The fragments break off, sink and root into the bottom or can remain buoyant and drift in the current transported over long distances to eventually settle and establish new colonies.
- Fragments not only survive but increase in length and biomass while suspended in the water column for long periods of time.
- The fragments facilitate stored carbohydrates as a reserve for over wintering (can even survive under the ice) or regrowth after dormant periods or plant damage.
- As Milfoil stems elongate toward the surface, they twist, become weakened and brittle and are easily subject to breakage resulting in more fragments.
- Fragments are also produced by water turbulence from wind and wave action as well as boating disturbance and other human recreational activities.
- Science has shown if you can reduce the number of fragments being produced by reducing the biomass than you can reduce and even stop the spread of Milfoil.



Eurasian watermilfoil's aggressive growth of dense weed beds is a significant threat to all our lakes and ponds. A well-established Milfoil infestation will seriously alter a lake's natural environment;

- Milfoil degrades lake water quality;
 - It reduces biodiversity by displacing desirable native species;
 - Reduces aquatic invertebrate community which effects the entire food chain;
 - Chokes-out to eliminate the beneficial native plants and fish spawning beds are lost;
 - Reduces the fisheries population;
- Accelerates oxygen loss in the water;
 - Decreases the PH level;
 - Decomposing plant mass adds to the nutrient phosphorous load;
 - Greatly impedes recreational use;
 - Reduces aesthetic values;
 - Soon real estate values decline.

Due to the insidious nature of this highly invasive and aggressive species, just one small piece of Milfoil can start a new population in a different body of water. Therefore, Milfoil can be so easily transported from lake to lake when attached on a boat, trailer or fishing gear.