

THE FRIENDS OF LAKE WARNER AND THE MILL RIVER

2025 SPRING/SUMMER NEWSLETTER



Lake Warner Advances Restoration Plan to Combat Water Chestnut and Eutrophication

For over two decades, Lake Warner has faced persistent ecological challenges from invasive water chestnut (*Trapa natans*) and the broader impacts of eutrophication—a process driven by excess nutrients that leads to dense aquatic plant growth, oxygen depletion, and degraded habitat quality.

In 2023, the Friends of Lake Warner commissioned an aquatic plant assessment by SWCA Environmental Consultants. The SWCA study was funded by the Hadley Community Preservation Act (CPA) to support ecological restoration and enhance outdoor recreational opportunities at Lake Warner. The study confirmed that while the lake supports an unusually diverse array of native aquatic plants, the overall plant density is excessive, limiting open water, reducing habitat diversity, and impairing recreational use. The report also warned of seasonal oxygen depletion due to plant decomposition and poor water circulation, which can exacerbate nutrient cycling and water quality issues. A summary of the SWCA report and FOLW's plans are detailed on page 3 and 4.

A Multi-Pronged Restoration Plan Approved

In response to these findings, the Friends submitted an Ecological Restoration Project Notice of Intent to the Hadley Conservation Commission, which approved an Order of Conditions (OOC) in June 2025. The approved plan includes:

Continued hand-pulling of water chestnut by volunteers and partners like the Connecticut River Conservancy. Targeted herbicide treatment using Diquat on up to 10.75 acres where manual removal is insufficient. Phosphorus sequestration using a DEP-approved product to bind nutrients in the sediment and water column, reducing internal nutrient recycling.

Community Concerns and Adaptive Management

Although Diquat is approved by both the Massachusetts DEP and U.S. EPA for aquatic use with no post-treatment restrictions on recreation, several abutters expressed concerns about herbicide use. In response, the Friends met with concerned residents and proposed an alternative approach. At the upcoming July 8 Conservation Commission meeting, the Friends will request an amendment to the OOC to allow for mechanical weed cutting in addition to the herbicide application. Former FOLW board member Peter Maleady has volunteered his time and equipment to support this effort. He has implemented weed cutting solutions with two lake associations in the Berkshires.

Balancing Ecology, Community, and Capacity

While weed cutting offers a non-chemical alternative, it is significantly more labor-intensive and may not provide the same level of control. The Friends will evaluate the effectiveness of this method during the 2025 season before deciding whether to proceed with herbicide treatment in future years.

As always, the Friends remain committed to science-based, community-informed stewardship of Lake Warner and will continue to adapt their management strategies to balance ecological health, recreational access, and public input. If you would like to assist in these efforts please contact us at our email noted nearby.

IN THIS ISSUE

Restoration Plan Advances.....	1
New Boardwalks.....	2
Bird Walk with John Greene.....	2
SWCA Assessment Report.....	3
FOLW Choose Diquat	3-4
Water Chestnut Pulling Efforts..	4
Karrin Allyson Concert.....	5
Group Outings on the Lake.....	5
Sustainability Festival	5
State Leaders Visit Lake.....	5
Full Moon Fundraiser Paddle.....	6
Poem, Boating on the Lake	6
Calendar of Events	6
Membership/Donation Form	6



THE FRIENDS OF LAKE WARNER
P.O. Box 11 Hadley, MA 01035
friendsoflakewarner.org
friendsoflakewarner@gmail.com



Two completed boardwalks. Jacob Lindeman cutting supports for the boardwalk from downed tree on the peninsula.

New Boardwalks Improve Access and Enjoyment on the Peninsula Trail

Thanks to the hard work and ingenuity of volunteers Jacob Lindeman and Brian Pearson, visitors to the Lake Warner Peninsula Trail are now enjoying two newly renovated boardwalks. Built using hemlock planks and trees downed on the property, the boardwalks provide a more stable and accessible path through the trail's wetter areas.

These improvements not only make the trail easier to navigate but also help reduce erosion and protect the surrounding habitat. Since their installation, the boardwalks have encouraged more people to explore the peninsula, with a noticeable increase in fishing and nature observation along the trail.

The Friends of Lake Warner extend heartfelt thanks to Jacob and Brian for their craftsmanship and dedication to enhancing this special place.

Bird Walk with John Green

On April 19 John Green, a noted local naturalist and photographer, led a birding walk on the peninsula trail off of Stockbridge Street. Despite the 8 a.m. start, we had a good showing of birders, some coming from the eastern part of the state.

The group really profited from the trail improvements. We were able to traverse the whole peninsula without soaking our feet. The morning was foggy and quiet at first. When the sun came out and the spring avian chorus started up, we heard and observed sapsuckers, ospreys, red wing blackbirds, orioles, kingfishers, common mergansers, canada geese, among others.

One of the most exciting moments was encountering a rather large black racer snake near the new boardwalk; it remained still for a long time, seemingly quite intent on observing us. There were many signs



Naturalist John Green, seen on the right behind some of the birding group on the FOLW Peninsula Trail, pauses to admire one of the trail's two newly renovated boardwalks.

of fresh beaver activity but we did not see any beaver as the best time to observe them on the lake is at twilight.

Skunk cabbage flowers were emerging all over the peninsula. The leafy hood, (spathe) covers a flower (spadix) that has an otherworldly appearance that John likened to a knobby satellite. These flowers go through a female phase, with spiky stigma, followed by a male phase with visible yellow pollen. The flowers generate so much heat during respiration that the spathe's interior can be up to 95 degrees warmer than the outside air.

**Lake Warner
Assessment Report
by SWCA Environmental
Consultants, February 2024**

Lake Warner is home to an exceptionally diverse array of native aquatic plants—an ecological asset that’s rare in Massachusetts. However, this dense vegetation is also creating several challenges:

Key Issues Identified

- Overgrowth of aquatic plants is limiting open water areas, reducing habitat diversity for aquatic wildlife.
- Decomposition of dense vegetation may lead to low dissolved oxygen levels, especially late in the season, which can harm aquatic life.
- Poor water circulation due to thick plant growth may worsen nutrient buildup and water quality.
- Recreational access is diminished, impacting the lake’s value for paddling, fishing, and enjoyment.

Recommended Solutions

- Targeted thinning of submerged and floating vegetation to open up key areas.
- Manual removal of invasive species like water chestnut, lilies, and watershield—building on current volunteer efforts.
- Selective herbicide use, to manage invasive plants with minimal impact on native species.
- Hydroraking in deeper sections to create open water corridors.
- Alum dosing to bind nutrients in the water column and reduce internal nutrient recycling—paired with upstream nutrient reduction strategies.

READ THE FULL REPORT: <https://bit.ly/FOLWSWCA>

Managing Invasive Aquatic Plants: A Stepwise Approach

Friends of Lake Warner is committed to protecting Lake Warner’s ecological health using sustainable, community-supported methods. We are following a tiered strategy that prioritizes manual and mechanical control before considering chemical treatment.

MANUAL REMOVAL (HAND PULLING)

Our first approach is continued hand pulling, which has had some success in targeted areas. However, progress has been limited. This method depends on volunteer efforts and our partnership with the Connecticut River Conservancy (CRC).

MECHANICAL CUTTING

This summer, with Conservation Commission approval, FOLW will pilot mechanical cutting using an SAVCH (Shallow Aquatic Vegetation Combine Harvester). This low-cost, modular pontoon-based machine cuts, collects, and packages surface and shallow submerged vegetation without disturbing the lake bottom. It requires a two-person crew and support from an additional boat to transport harvested vegetation.

HERBICIDE AS A LAST RESORT

If manual and mechanical methods prove insufficient, we will consider a targeted application of diquat herbicide. Details about diquat are provided on the next page.

Friends of Lake Warner remains committed to transparency and ecological responsibility. Any herbicide decision will be based on clear evidence and made with community input.

Frequently Asked Questions Regarding Diquat

WHAT IS DIQUAT?

Diquat is a fast-acting, non-selective herbicide used to control a variety of aquatic weeds, including water chestnuts. It works by disrupting the cell membranes of plants and interfering with photosynthesis, leading to the rapid death of the target plants. Diquat is effective in controlling these plants, helping to restore a healthy habitat for fish and other aquatic life.

TOXICITY & ENVIRONMENTAL IMPACT OF DIQUAT

When used correctly by licensed applicators, Diquat is considered safe for humans and animals. There are no swimming restrictions after its application, but it is recommended to avoid the treated area for 48 hours as a precaution.

While concentrated forms can be harmful (like many chemicals), once diluted in lake water, it poses very little risk to fish, birds, or people. The EPA and MA DEP carefully review product labels to ensure safety.

Terms like LD50 (lethal dose) and LC50 (lethal concentration) refer to lab tests using concentrated amounts—not real-world lake treatments. According to the label, there are no restrictions on swimming, fishing, or boating after treatment.

IMPACT OF DIQUAT ON WILDLIFE AND THE FOOD CHAIN

When used correctly, Diquat has minimal impact on wildlife. It mainly affects plants at the application site and breaks down quickly in water, so it doesn't spread far. While some small aquatic invertebrates may be affected, studies show that this does not significantly disrupt the food chain. Larger animals like fish, birds, turtles, and amphibians are not harmed by the diluted product. In

fact, the EPA and Massachusetts DEP have reviewed and approved Diquat for use in lakes, confirming it's safe for people, pets, and wildlife when applied by certified professionals. There are no restrictions on swimming, fishing, or boating after treatment.

HOW LONG DOES IT TAKE FOR DIQUAT TO WORK?

Diquat typically shows visible effects on target plants within 7 to 9 days after application.

WHAT PRECAUTIONS ARE TAKEN TO ENSURE SAFETY?

Licensed applicators will follow all guidelines and regulations to ensure the safe and effective use of Diquat. The treatment will be conducted under conditions that minimize the risk to non-target species and the environment. The treatment has been approved by the Hadley Conservation Commission and Massachusetts Department of Environmental Protection.

TREATMENT MAP

The map submitted to the Hadley Conservation Commission shows large areas with Water Chestnut (in 10.75 acres of the 70-acre lake), but some spots are clear, we can spot-treat only where needed. Diquat doesn't drift far, so we can avoid native plants and focus just on the invasive ones.

DIQUAT'S NON-SELECTIVE NATURE

Diquat is a fast-acting herbicide that works on most underwater plants but doesn't harm floating-leaf species like waterlilies or pondweed. We apply it using a custom sprayer on an airboat, which helps us target only the areas we want. It breaks down quickly, so it doesn't spread far from where it's applied.

Water Chestnut Pulling Efforts Expand with Support of Connecticut River Conservancy

For the second year in a row, the Connecticut River Conservancy (CRC) is leading the charge against invasive water chestnut on Lake Warner—and their efforts are making waves. Thanks to CRC's leadership and outreach, the Friends of Lake Warner has seen a significant increase in volunteers joining the hand-pulling efforts.

This summer's scheduled pull dates are: June 21, June 28, July 5, July 12, July 26, and August 9. Volunteers meet at the boat ramp at 9:00 AM.

Participants are welcome to bring their own boats, but kayaks are available courtesy of CRC, and Adventure East is generously providing canoes for those who need them.

These community-powered efforts are vital to protecting the lake's ecosystem and ensuring a healthy, enjoyable space for all. Come lend a hand—and a paddle!



Early season WC pulling this past May by CRC AIS staff members Sopheakmonyratana Ouk and Mike Gula.
Photo: Becca Smith, CRC

We would like to send a special thanks to CRC Aquatic Invasive Species team members Kelly Beerman, Program Manager, and Becca Smith, Massachusetts Volunteer Coordinator, and Mike Gula and Sopheakmonyratana Ouk, Mass based CRC AIS staff.

Register here: <https://bit.ly/folwvc>





Our Banner Event, Karrin Allyson Concert

On May 18, 5 time Grammy nominee jazz vocalist and pianist Karrin Allyson performed at our annual fundraiser at the North Hadley Congregational Church. She was accompanied by Jason Ennis on guitar and Michael Zsoldos on saxophone. These

three musicians know each other from Brattleboro's Vermont Jazz Center and played together seamlessly. Thanks to the terrific musicians and to the volunteers who helped at the show: Ginger Goldsbury, Gail Garrabrants, Kevin Skelly, Andy Morris-Friedman, Ro Amembal, Linda Wallack and Krista Oesterling-Rising. The event raised \$2,000 for Friends of Lake Warner. We would like to send a heartfelt thanks to Karrin for her support of the Friends over the years.

Lake Warner Welcomes Wave of Group Outings

Beyond the many anglers and solo paddlers who enjoy Lake Warner each day, the lake has also seen a steady rise in group outings by canoe and kayak. These shared adventures highlight the growing appreciation for the lake's natural beauty and the sense of community it fosters on the water.

This season, Lake Warner has welcomed a variety of groups who took to the water for recreation, education, and connection with nature. Highlights include:

- Adventure East hosted two birding-by-canoe adventures led by naturalist Bill Randolph.
- The UMass UAW Graduate Student Union enjoyed a group canoe outing.
- UMass Recreation & Wellbeing offered a kayaking clinic for students.
- The Amherst College Outing Club held a kayaking skills session on the lake.
- Kestrel Land Trust organized an Ecology Paddle with naturalists Brad Timm and Bill Randolph.
- The Clinical Support Options Super Stars After School Program brought young paddlers out for a day of fun and learning.

State Leaders Visit Lake Warner to Explore Outdoor Recreation's Economic Impact

At the end of May, Lake Warner played host to a special visit from Secretary Lauren Jones of the Executive Office of Labor and Workforce Development, along with workforce development leaders from across Franklin and Hampshire Counties. The group embarked on a paddle tour of the lake, followed by a discussion on how outdoor recreation is driving economic growth and workforce development throughout Western Massachusetts.



This unique gathering was organized by the MassHire Franklin Hampshire Workforce Board with the help of Adventure East and brought together a dynamic mix of state officials, regional leaders, and outdoor recreation advocates, including:

Secretary Lauren Jones, Executive Office of Labor and Workforce Development

Sarah Wilson, MassHire Franklin Hampshire Workforce Board

Jessye Deane, Franklin County Chamber of Commerce & Regional Tourism Council

Vince Jackson, Greater Northampton Chamber of Commerce & Hampshire County Regional Tourism Council

Brian Pearson, Adventure East

Paul Jahnige, MA Office of Outdoor Recreation

Kristen Elechko, Director of Western MA for Governor Maura Healey

Elena Cohen, Office of Senator Jo Comerford

Karen Foster, All Out Adventures

Dr. Michelle Schutt, Kristin Cole, Alexandra Carley, and Bob Tremblay, Greenfield Community College

The visit underscored the growing recognition of Lake Warner and the surrounding region as a hub for outdoor activity, community engagement, and sustainable economic development.

Amherst Sustainability Festival

The Friends of Lake Warner tabled at the Amherst Sustainability Festival, which was originally scheduled for April 26 but was postponed to May 10 due to a forecast of severe storms. Ginger Goldsbury, Helen Amembal, Tim Nsubuga, Michele Morris-Friedman and Krista Oesterling-Rising all pitched in. Our booth was popular and we added quite a few water chestnut volunteers to our roster. Tim led a demonstration of water testing, explained which tributaries flow into the lake and discussed the tracking of nutrients and pollutants throughout the watershed. We also did some networking with the Hampshire Hamden Conservation District, who tabled next to us and with whom we've collaborated with in the past.



Michele Morris-Friedman and Tim Nsubuga at the Amherst Sustainability Festival

Full Moon Fundraiser Paddle - Sept 6, 7-9 PM

Join us for a magical evening on the water at our Full Moon Fundraiser Paddle, sponsored by Adventure East. This special event will take place on Friday, September 6, from 7:00 to 9:00 PM, and features a guided paddle in Adventure East's two 24-foot voyageur canoes. Enjoy the beauty of Lake Warner under the full moon while supporting the work of the Friends of Lake Warner.

Tickets start at \$50 and include:



- A two-hour moonlit paddle
 - Seat in one of the voyageur canoes, PFD & Paddle
 - A reception with the FOLW Board before launch
- Space is limited, so reserve your spot early and be part of this unforgettable evening on the lake!
 Registration: <https://bit.ly/FOLWFullMoon>

Boating on the Lake BY CLARENCE HAWKES (the blind poet of Hadley MA) 1895

The Stars were bright, the moon was high,
 And night winds whisper on the shore.
 Our little boat is slowly gliding over
 A lake as placid as the sky,
 Where moon and stars reflected lie.
 The liquid laughter of Lenore,
 The gentle dipping of her oar
 Awake a happy lullaby.
 "Ah, lady fair," I musing said
 "Life is but a boat like this,
 With you to row and me to kiss.
 What joy would be when we are wed!"
 "Ah no," she said--"Tis very clear
 That you will row and I will steer."



CALENDAR OF EVENTS

Water Chestnut Pulls with Connecticut River Conservancy
 9:00 am to noon on the following Saturdays:
 June 28 / July 5 / July 12 / July 26 / August 9
 Meet at the boat ramp.
 6 Mount Warner Road, Hadley

Hadley Conservation Commission Meeting
 July 8 at 6:30 pm
 Hadley Senior Center
 46 Middle Street, Hadley

Full Moon Fundraiser Paddle
 September 6, 7:00 to 9:00 pm
 Meet at the boat ramp.
 (see article to register)

Community Picnic
 October 5, 4:00-6:00 pm
 North Hadley Congregational Church
 243 River Dr, Hadley

HOW TO DONATE TO FRIENDS OF LAKE WARNER

Mail donations to:
 Friends of Lake Warner
 P.O. Box 11 Hadley
 MA 01035

Donate at our website:
friendsoflakewarner.org/give

Venmo donations using this QR code. →



Please Join The Friends of Lake Warner and The Mill River. The lake needs you!

We are a non-profit, citizen community organization. • Members receive a bi-annual newsletter. • Members are invited to participate in our activities, workdays and social events. • Your tax-deductible dues support our efforts to preserve, clean and maintain Lake Warner. • Your dues also support the printing cost of our brochures and newsletters.

I want to join ! Individual membership - \$25 Family membership - \$35 Sustaining membership - \$100

Name _____ Phone _____

Street Address _____ City _____

State _____ Zip _____ Email _____

Please make checks payable to: Friends of Lake Warner (FOLW) Checks should be mailed to: Friends of Lake Warner, PO Box 11, Hadley, MA 01035