

NOVEMBER 2023 |



# THE NOR'EASTER

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*A Newsletter from the Northeast Aquatic Plant Management Society*



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The purpose of the Society shall be to promote appropriate management of aquatic vegetation, to provide for the scientific and educational advancement of members, to encourage scientific research in all facets of aquatic plant and algae management, to promote an exchange of information among members, and to extend and develop public interest in the discipline.

*Mission Statement, adopted January 9, 2019.*



## 2023 Directors



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## 2023 Plant Camp CT



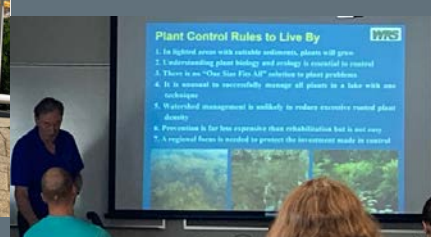
Barre Hellquist reaches for an aquatic plant from plant camp participant. Left to right: Barre Hellquist and plant camper.



2023 Plant Camp quiz winners (left to right) Lindsay Charlop, Kim Jensen, Vincent Long, and Scott Kishbaugh.



Plant Camp participants attempt to identify aquatic plant samples collected from the lake.



Ken Wagner provides presentation on aquatic plant management.





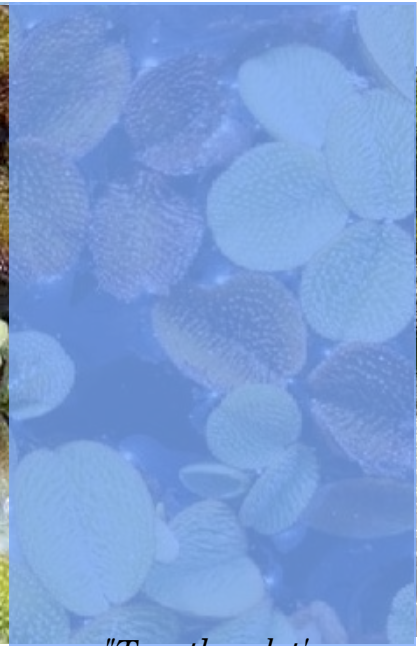
## The President's Message

Dear NEAPMS Members,

Greetings from your current President of NEAPMS! I would love to get people excited about our upcoming 25th annual NEAPMS Conference planned for January 9th – 11th, 2024, at the Wentworth by the Sea, located in New Castle, New Hampshire. For me, it is an honor to gather with so many dedicated individuals who share our mission of safeguarding our aquatic environment for future generations. As we commemorate this remarkable milestone, we must reflect on our collective achievements and look toward the future with a renewed sense of purpose.

While celebrating our progress, we must also acknowledge the challenges ahead. Preserving our water demands a concerted effort, and this can only be achieved with the active participation of every one of you. We must amplify our impact by encouraging more individuals to engage and volunteer for this society. Every additional hand, every fresh perspective, and every new idea can contribute to our shared vision of a sustainable and thriving aquatic environment.

Through volunteering, each of us has the power to make a tangible difference in our communities and beyond. Whether participating in local clean-up initiatives, aquatic vegetation monitoring, advocating for policy change, or spreading awareness through education and outreach, every action counts. Our collective efforts today will shape the world we leave for future generations tomorrow.



*"Together, let's pledge to continue our unwavering commitment to aquatic environmental stewardship, ensuring that our efforts today pave the way for a greener, cleaner, and more sustainable tomorrow."*



2023 President Bo Burns



# The President's Message (CON'T)

Let us embrace the spirit of collaboration and solidarity as we embark on this journey together. Let us inspire one another to take meaningful action and ignite a ripple effect of positive change. Together, let's pledge to continue our unwavering commitment to aquatic environmental stewardship, ensuring that our efforts today pave the way for a greener, cleaner, and more sustainable tomorrow.

Please start planning to attend our special 25th anniversary meeting. Know early registration is open, begin gathering items for our silent auction to benefit our scholarship fund, and also consider purchasing a commemorative Hoodie Sweatshirt before you check out of registration. Thank you for being part of our NEAPMS family, and let's strive to make this 25th year a milestone of renewed commitment and expanded impact.

Thank you,  
Bo Burns



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Emily Mayer  
"A fall day at Lake Erie"



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*"[...] attend our special 25th anniversary meeting. Know early registration is open, begin gathering items for our silent auction to benefit our scholarship fund, and also consider purchasing a commemorative Hoodie Sweatshirt [...]"*



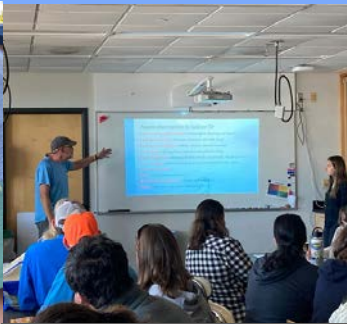
# 2023 Plant Camp CT

## PAST NEAPMS PRESIDENTS

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- GERALD SMITH (2001)
- GERALD ADRIAN (2002)
- JIM SUTHERLAND (2003)
- BO BURNS (2004)
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- LARRY EICHLER (2006)
- GLENN SULLIVAN (2007)
- MARC BELLAUD (2008)
- BOB JOHNSON (2009)
- ANN BOVE (2010)
- JOHN MCPHEDRAN (2011)
- JOHN MCPHEDRAN (2012)
- PAUL LORD (2013)
- JOANN DUNLAP (2014)
- CHARLES BOYLEN (2015)
- CHRIS DOYLE (2016)
- MARK HEILMAN (2017)
- MEG MODLEY (2018)
- WILL STEVENSON (2019)
- BIN ZHU (2020)
- GREG BUGBEE (2021)
- CATHY MCGLYNN (2022)



Summer Stebbins and Greg Bugbee examining an aquatic plant.



Scott Kishbaugh presents to plant camp attendees.



Barre Hellquist identifies an aquatic plant.



Live aquatic macrophyte samples on display.



Scott Kishbaugh teaching plant camp participants.



Participants practice using their identification skills in the field.



# THE PLANT CAMP EXPERIENCE: 2023 EDITION

BY: MELISSA MAZZARO, ASSISTANT WATERSHED PROTECTION SPECIALIST, NJWSA

Earlier this year, I joined the New Jersey Water Supply Authority as their new Assistant Watershed Protection Specialist. With this new role, I was introduced to the wonderful world of aquatic plants and heard about the upcoming 2023 NEAPMS Plant Camp. I spent part of Summer 2023 learning the common aquatic plants that inhabit the Authority's reservoirs. However, I knew Plant Camp was the place to go if I would catch up with my coworkers, who had already attended Plant Camp in 2022 and had years of aquatic plant identification experience under their belts.

This year, Plant Camp was hosted in Groton, Connecticut, at the Project Oceanology building on the University of Connecticut's campus. With the University located right on Connecticut's coast, the calm atmosphere and beautiful ocean views set the tone quite nicely. The Project Oceanology building functioned as a hostel that offered lodging, a cafeteria, and classrooms where students of all ages could learn about marine ecosystems and the local wildlife. Upon arriving, we were given swag that included a Connecticut National Estuarine Research Reserve canvas bag, a couple of Connecticut-based aquatic plant and aquatic invasive species guides, a loupe, a miniature Rite in the Rain notebook, and, of course, the Plant Camp bucket hat. These were all essential materials that would be utilized over the next three days. An introduction to the workshop ensued, along with presentations regarding methods for aquatic plant sampling, data collection, and reporting. Putting what we learned into practice, we headed to a nearby pond for rake tosses and observed other monitoring methods.

Despite being hit with heavy rain on the morning of the second day, everyone was still in good spirits as we visited various stations by the Connecticut River. These stations focused on Hydrilla growing in the Connecticut River. The instructors discussed Hydrilla identification (and its look-alikes), Hydrilla management, Clean-Drain-Dry procedures, and even a boat ride on the river to observe the Hydrilla infestation. Fortunately, the rain let up when we arrived at Camp Hazen in the afternoon. Camp Hazen is home to Cedar Lake, where we kayaked searching for aquatic plants to identify. Much of the afternoon was spent with tables covered in collected plants and attendees huddled around them, trying to identify and understand Cedar Lake's diverse aquatic plant community. We learned that Cedar Lake has over 30 species of aquatic plants and noticed parts of the lake had dense patches of the invasive Carolina Fanwort and Variable-leaved Watermilfoil.

Plant Quiz!

Test your identification skills,  
answer on top of page 33



*“The instructors discussed Hydrilla identification (and its look-alikes), Hydrilla management, Clean-Drain-Dry procedures, and even a boat ride on the river to observe the Hydrilla infestation.”*

Throughout the workshop, the breaks and the downtime after dinner allowed us to explore the University's campus and mingle with other attendees. This workshop brought in recent graduates and working professionals across the northeast from sectors such as consulting, academia, government, and watershed associations. Everyone was so welcoming and kind, and we all enjoyed having time at the end of the day to unwind and socialize. Networking was another significant component of this workshop, as we all varied in our experiences with aquatic plants.

The last day entailed presentations on pondweed species, aquatic plant management, and further information on plant identification. This last presentation was necessary, as our last activity was a plant quiz! It was optional, but it was a fun way to test our knowledge after spending three days learning about aquatic plants.



As someone still new to the aquatic plant world, I highly recommend NEAPMS Plant Camp. It provides identification tools, hands-on experiences, and presentations that are valuable for beginners and more experienced individuals. This workshop is also an excellent opportunity to connect and network with other aquatic professionals in the northeast. My aquatic plant identification skills and understanding of aquatic plant management have improved after attending Plant Camp. Thank you to NEAPMS, the Connecticut National Estuarine Research Reserve, Project Oceanology, and all the presenters for hosting and organizing a great, informative workshop. NEAPMS Plant Camp 2024 will be hosted in the beautiful Stokes State Forest of New Jersey; some of the state's aquatic plant experts are currently preparing a fun and educational training. I know it will be a fantastic workshop, and I look forward to attending it!

*“It provides identification tools, hands-on experiences, and presentations that are valuable for beginners and more experienced individuals.”*





## NEW YORK STATE UPDATE

By: Cathy McGlynn, NYSDEC

### Prevention/Education and Outreach:

- This season, the watercraft inspection steward program performed more than 218,735 inspections with 11,637 detections of AIS. Once again, Eurasian watermilfoil, curly leaf pondweed, and zebra mussels were the most frequently found species. We participated in the Great Lakes and Northeast AIS Landing Blitz from June 30th to July 9th.

### Monitoring and Detections:

- The 2023 aquatic plant survey of the Croton River was completed. Three hydrilla plants (*Hydrilla verticillata*) were found (two from tubers and one from a fragment) and removed. A new native mudwort was also discovered.
- During interagency surveys of Cayuga Lake, hydrilla was found in two new locations: -Additional hydrilla was found north and south of the treatment area in the portion of Cayuga Lake near Aurora, Union Springs, Dean's Cove, Taughannock Falls State Park, and Cayuga Lake State Park.
- In addition, Finger Lakes Partnership for Regional Invasive Species Management found small patches of hydrilla at Myer's Park Marina and Finger Lake Marine Service, Lansing (previously treated) along the eastern shore of Cayuga Lake.
- A 100 sq foot patch of hydrilla was found near the mouth of the Owego Creek (Upper Susquehanna River) and was removed by hand. Follow-up treatment will occur next season.
- European frogbit (*Hydrocharis morsus-ranae*) was found in Summit Lake in Otsego and Clark Creek near Otsego Lake.
- Brittle naiad (*Najas minor*) was found in Summit Lake in Schoharie.
- Variable leaf milfoil (*Myriophyllum heterophyllum*) has been found in Floodwood Pond, in wetlands adjacent to Lake Flower, Tupper Lake, and Rock Pond. (Adirondack Park)
- Water chestnut was found in the Great Chazy River and Dead Creek (Plattsburgh), a tributary to Lake Champlain along the western shore. (Adirondack Park).

*“[...] plant survey of the Croton River was completed. Three hydrilla plants (*Hydrilla verticillata*) were found (two from tubers and one from a fragment) and removed.”*



- Eurasian watermilfoil (*Myriophyllum spicatum*) has been found in the Saranac River at Caddyville and two wetlands near Lake Flower (Adirondack Park).
- Curly leaf pondweed (*Potamogeton crispus*) was found in Patterson Reservoir (Adirondack Park).

**Control and Management:**

- Hydrilla control projects continued at Spencer Pond, Little Nanticoke Creek, and Kuhlman Pond in Tioga County, Niagara River, Erie Canal/Tonawanda Creek in Erie/Niagara Counties, and at multiple locations in Cayuga Lake in Cayuga, Seneca, and Tompkins Counties. The first management season on Lake Sebago in Rockland County will be completed by the end of October with considerable success.
- The second treatment of water primrose (*Ludwigia peploides*) and European frogbit (*Hydrocharis morsus-ranae*) in the Peconic River (Suffolk County) using a combination floryprauxifen-benzyl and imazamox occurred on July 11, 2023. The Team also conducted pre- and post-treatment macroinvertebrate surveys and aquatic plants surveys and installed loggers at a select patch of Ludwigia to track dissolved oxygen before, during, and after treatment.
- 1,300 tons of water chestnut (*Trapa natans*) were removed from the Oswegatchie River near Heuvelton (St. Lawrence County).
- More than 65.05 tons of water chestnut were removed from the Mohawk River near Colonie (Albany County).

**Research:**

- Write-up of field results for the comparison of plant communities in waterbodies with and without a history of copper-based herbicide use is in progress.
- Comparison of plant communities at waterbodies with and without public access will continue.
- The Team is currently analyzing the long-term data from Croton River and Hudson River aquatic plant surveys to assess changes in native plant communities.



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*“1,300 tons of water chestnut (*Trapa natans*) were removed from the Oswegatchie River near Heuvelton (St. Lawrence County).”*





**Restoration:**

- Pilot efforts to restore *Vallisneria americana* in the Erie Canal and mouth of Croton River met with mixed results but provided much information for next season.
- Restoration (planting of riparian and emergent plants) of multiple sites with common reed (*Phragmites australis*) and yellow iris (*Iris pseudacorus*) in the St. Lawrence-Eastern Lake Ontario PRISM continues.



*“Pilot efforts to restore Vallisneria americana in the Erie Canal and mouth of Croton River met with mixed results but provided much information for next season.”*

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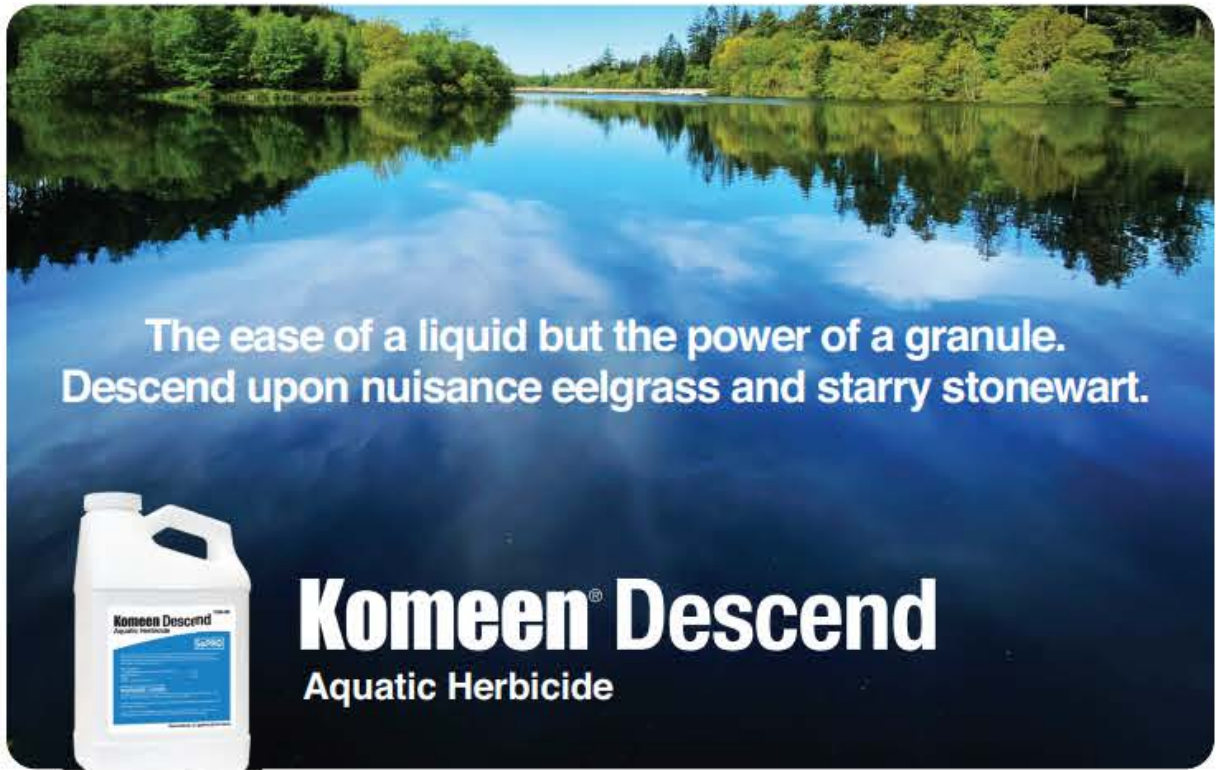
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## MASSACHUSETTS STATE UPDATE

By: Kara Sliwoski, MA DCR

The Department of Conservation and Recreation (DCR) Lakes & Ponds Program was busy (and dodging the rain) during the summer of 2023, and the agency has continued to receive substantial funding for aquatic invasive species work.

DCR proceeded with aquatic plant management work using both chemical and mechanical approaches as appropriate. Water chestnut management was ongoing in the Charles, Mystic, and Nashua Rivers, with the Charles in its second season of using only hand-pulling (after ~20 years of mechanical harvesting). DCR has also continued to collaborate and partner with other groups through its matching fund program, including assisting with water chestnut challenges on the Connecticut River. DCR has also been involved in the CT River hydrilla assessment work, as the northernmost infestation is in Agawam, MA. Unfortunately, a genetically confirmed CT River hydrilla has recently been found in Congamond Lake in Southwick (thanks to the great Connecticut Ag. Experiment Station staff).

Though the rainy weather kept many cyanobacteria blooms at bay, their prevalence increased as the season progressed, and staff coordinated with state partners on observations, sampling, and advisory notices. DCR continued a two-part eDNA project on zebra mussels and hydrilla in select, high-risk waterbodies statewide. Staff also continued to use traditional survey methods to locate zebra mussels in the Berkshires and Western MA, which are the most high-risk areas due to the water chemistry of the waterbodies and proximity to infestations in nearby states. Fortunately, to date, there have been no new detections beyond the initial detection in Laurel Lake in Lee and Lenox in 2009. This summer, there was another snakehead fish caught by a local fisherman in a greater Boston area waterbody. DCR staff are working with MassWildlife to alert and educate the public about this invasive species.

DCR has been working with Dr. Ken Wagner to update and revise the [Practical Guide to Lake Management in Massachusetts](#), collaborating with other state agencies. The current version of the Practical Guide was published in 2004, and the new version is anticipated within the following year.

Also, in 2021, staff implemented the use of iPads by Boat Ramp Monitors (BRMs) at priority lakes in the state parks system. Each summer, the BRMs inspect vessels entering or exiting a waterbody to ensure no AIS is being transported.

*“DCR continued a two-part eDNA project on zebra mussels and hydrilla in select, high-risk waterbodies statewide.”*



Utilizing the iPads and Survey123, species presence/absence, the last waterbody entered, photographs, and other qualitative data were recorded in real-time, which allowed for monitoring and rapid response if an organism was identified. All data are displayed live on a dashboard for staff to analyze and export as needed.

This year, the City of Pittsfield was able to utilize the survey for its boat ramp monitoring program at two large lakes and contribute data to DCR's dataset.

In addition to other forms of education and outreach, staff continued to offer its Weed Watchers training to interested public groups. Staff collect live plant specimens and bring them to the training at a location of the group's choosing. Attendees are trained in plant identification through a question/answer session and general aquatic invasive species 101 discussion.

Through its Chemical Application License Program, the Department of Environmental Protection (DEP) issued 472 individual, annual permits to treat algae and/or invasive/nuisance plants in lakes, rivers, and wetlands throughout the state as of mid-October.

*“[...] other forms of education and outreach, staff continued to offer its Weed Watchers training to interested public groups.”*





## PENNSYLVANIA STATE UPDATE

By: Nick Decker, PA DCNR

- On January 1st, 2024, Pennsylvania will have revised regulatory language go into effect related to the propagation and introduction of aquatic organisms into waters of the Commonwealth. 58 Pa. Code Chapter 71a will replace 58 Pa. Code Chapters 71 and 73 and includes new or revised language relating to a notice of stocking, prohibitions on the release of live bait fish, fish health requirements, and watercraft decontamination requirements. The new watercraft decontamination requirements require draining of a watercraft and removal of any aquatic vegetation and prohibited aquatic invasive species prior to transport. Additional information will be available on the Pennsylvania Fish and Boat Commission website, the Pennsylvania Fishing Summary Book, and the Pennsylvania Boating Handbook.

*"[...] require draining of a watercraft and removal of any aquatic vegetation and prohibited aquatic invasive species prior to transport."*

## CONNECTICUT STATE UPDATE

By: Greg Bugbee, Summer Stebbins, Riley Doherty, CAES

Connecticut River hydrilla dominated Connecticut's aquatic plant management concerns in 2023. The unique strain called Clade C, infests the river from Agawam, MA southward to within a few miles of Long Island Sound. Led by the United States Army Corps of Engineers (USACE), studies began on documenting the hydrilla's phenology and the presence of state-listed species at several sites where herbicide tests may be performed in 2024. In addition, rhodamine dye tests were performed at the sites to document water movement and retention time. A second diquat treatment of the Clade C hydrilla in Wethersfield Cove occurred in July with apparent success.

Unfortunately, Clade C hydrilla was documented by The Connecticut Agricultural Experiment Station (CAES) Office of Aquatic Invasive Species (OAIS) in four lakes, with an additional lake waiting on genetic confirmation. This confirms fears that non-riverine aquatic ecosystems are in peril. Many of these populations were adjacent to public boat ramps. The East Twin Lake site received a high-dose ProcellaCOR treatment, and its efficacy is being evaluated. Collaborative management research between CAES OAIS, USACE, and others in waterbodies outside the Connecticut River watershed is being discussed.



Rhodamine dye being applied to Keeney Cove, East Hartford, CT.



Connecticut lakes with Clade C Hydrilla.

Grass carp have been introduced into several larger Connecticut lakes to control nuisance vegetation. These lakes have exhibited depletion of nearly all aquatic vegetation after five to seven years. In the case of Candlewood Lake, Connecticut's largest lake, the vegetation loss was extremely rapid and occurred over the 2021/2022 winter. To reduce grass carp overgrazing, The Connecticut Department of Energy and Environmental Protection (CT DEEP) began removing some of the grass carp and now allows angling by permit.

CAES OAIS has confirmed that inflated bladderwort (*Utricularia inflata*) is now in many lakes and is replacing native bladderworts. The plant has not yet become a major nuisance but monitoring its expansion throughout the state is needed.

CT DEEP is expected to be issuing requests for proposals for the fourth round of grant funding through the Aquatic Invasive Species Grant Program this fall. Future funding for the grants may be altered as mandatory payment through boat registrations is no longer allowed. CT DEEP/UCONN is expected to be hiring an Invasive Aquatic Plant Coordinator by Spring.

CAES OAIS has completed staff hiring. Riley Doherty was brought on as a research technician and Dr. Jeremiah Foley was hired as an assistant scientist. They joined Summer Stebbins and Greg Bugbee earlier this year.

*“CAES OAIS has confirmed inflated bladderwort (*Utricularia inflata*) is now in many lakes and is replacing native bladderworts.”*

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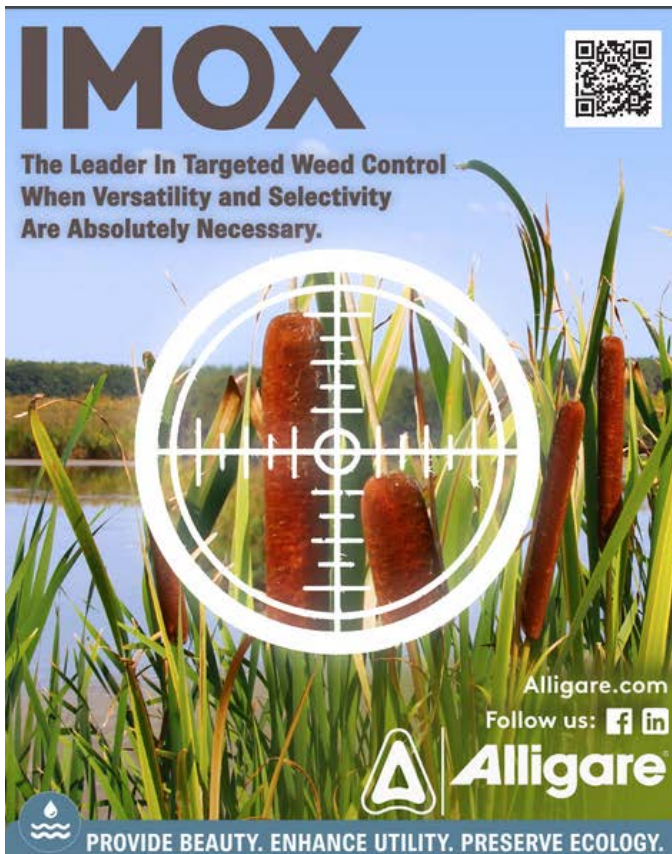


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# VERMONT STATE UPDATE

By: Kimberly Jensen,  
Vermont Department of Environmental Conservation (VTDEC)

The Aquatic Invasive Species (AIS) Program had another exciting field season, with thousands of water chestnuts harvested, miles of river searched for Hydrilla, and two new AIS introductions. With the team growing to two full-time staff members, welcoming Olin Reed, and with this position, the AIS Program's responsibility for the Aquatic Nuisance Control (ANC) Permitting, the season was busy with many moving parts. With the integration of permitting, the AIS team hopes to continue to build on current management strategies and further prevent future invasions. During the season, three technicians, an ECO-AmeriCorps service member, and a UVM intern joined the team, and all completed various tasks enthusiastically!

- **Water Chestnut Update:** The 2023 season for handpulling Water chestnut (*Trapa natans*) began July 3rd and continued through September 22nd, an entire month longer than the 2022 season. The season was lengthened to make up for time lost from the flooding event. It was likely due to the nutrient inputs from the flood waters; a significant increase and proliferation of plants throughout the sites made it challenging to maintain the harvesting schedule. With a two-week pause after the July flooding, the team assisted with the natural disaster efforts while waiting out the unsafe water conditions. Hand-pulling crews logged over 2,565 hours in Lake Champlain, compared to 2,627 total hours in 2022 and 1,808 total hours in 2021. While data is still being compiled, the number of rosettes (seed-producing plants) harvested this season was 134,354 rosettes, an increase from the 120,457 rosettes pulled in the 2022 season! Unfortunately, with an increase found in almost every site, a few southern locations were unharvested due to the extreme volume and inability to harvest the plants before seeds dropped. We anticipate that this will cause a population increase in next year's season.
- **ANC Permitting:** A steady number of applications were reviewed and approved in 2023 using a new tool, the ANC Internal Review Procedure. Signed by the Commissioners of DEC, VT Fish and Wildlife Department (FWD), and VT Department of Health (VDH), the procedure developed an internal strategy within the agency and departmental partners to provide input on ANC Permit applications. This procedure will likely improve the communication and technical expertise for the conditions approved for ANC Permits.

*“Hand-pulling crews logged over 2,565 hours in Lake Champlain, compared to 2,627 total hours in 2022 and 1,808 total hours in 2021.”*

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- **House 31 Act 57 Study Committee:** House 31: An act relating to aquatic nuisance control was introduced to establish a one-year moratorium on the issuance of pesticide/herbicide ANC permits and to establish a study committee to assess the environmental and public health effects of the use of these chemicals as well as their efficacy in controlling aquatic nuisances, was passed only to include the study committee.
- The study committee is charged with assessing the environmental and public health effects of using pesticides, chemicals other than pesticides, biological controls, and other controls to control aquatic nuisances in Vermont. The committee is comprised of members of DEC, FWD, VDH, University of Vermont, Vermont Senate, and Vermont House of Representatives. The committee held their first meeting on September 18th and will submit a final report to the legislature on December 15th. If you'd like to join the meetings or submit comments, please visit the [Act 57 Study Committee webpage](#) for more information.
- **Annual Monitoring Surveys:** The AIS section continues to monitor for new invasions and respond to reports of potential new introductions. In 2023, two new introductions were confirmed. The survey found Brittle naiad (*Najas minor*) and Curly-leaf pondweed (*Potamogeton crispus*) in Sunrise Lake. With Sunset Lake hydrologically connected and containing both species, it was an unfortunate expectation. Annual surveys of Starry Stonewort (*Nitellopsis obtusa*) in Lake Derby yielded similar results from last year with a potential decrease in the population, unlike the American lotus (*Nelumbo lutea*) survey that based on the initial observations, seemed to increase. Early detection Hydrilla (*Hydrilla verticillata*) surveys were conducted from Vernon to Thetford in the Connecticut River with no new findings.
- **Greeter Data and Maps:** The AIS Program continues to improve the Survey123 program used to collect the Public Access Greeter Program data and will implement some improvements based on feedback to track data better and reduce the work required by Greeters. From the data, we continue to build our Geographical Information System (GIS) files to develop maps for the public on the Agency of Natural Resources Atlas. We hope the data and maps will provide better public opportunities to monitor and track AIS throughout the state.
- **Position Updates:** Thanks to the efforts of many, the new full-time position that became available within the state's budget for the AIS Program is in the works.

*“[...] establish a study committee to assess the environmental and public health effects of the use of these chemicals as well as their efficacy in controlling aquatic nuisances [...]”*



Water chestnut handpullers with support from the AIS Program motorboat and staff, line up to survey the mouth of the LaChute River in Lake Champlain.  
Photo credit: K.Jensen

With a review of candidates, the position will assist with grants, education outreach, and inland lake cyanobacteria monitoring.

In addition, the AIS Program received Lake Champlain Basin Program NEIWPC funds to hire a limited-service position to work on AIS initiatives within the Lake Champlain Basin. We plan to begin recruiting for this position in the coming months.

Overall, the AIS Program was incredibly busy this season. We were challenged by an overabundance of water chestnut, flooding impacts (loss of our equipment building, too!), and many rainy field days. However, the crew also found healthy populations of state-listed rare, threatened, and endangered species that included aquatic plants and native mussels and clams in an abundance we had never seen.

*"At current rates of population growth and climate change eutrophication in lakes will increase by 25 to 200 percent by 2050 and double or quadruple by 2100."*




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# NEW HAMPSHIRE STATE UPDATE

By: Amy Smagula,  
NH Department of Environmental Services

## Infestations in New Hampshire

New Hampshire currently has 97 infested waterbodies (11 river systems and 86 lakes and ponds). We also have 129 infestations (some of those infested waterbodies have more than one invasive, with a few having as many as six different invasives). It is becoming more common to see waterbodies with at least two different types of invasives these days. Variable milfoil still reigns supreme as the most common invasive across waterbodies (Figure 1)

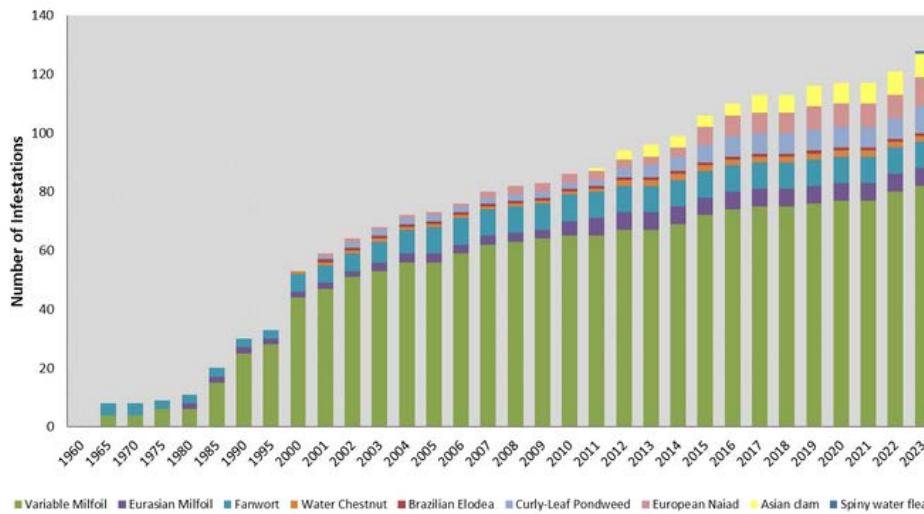


Figure 1- Trends in Aquatic Invasive Species Infestations in New Hampshire

During the summer of 2023, we added three new waterbodies to the infested list, with a new variable milfoil infestation, brittle naiad infestation, and one curly-leaf pondweed infestation. In general, Brittle Naiad (Figure 2) has been on the move in recent years, popping up in at least one or two new waterbodies each season, spreading more quickly than other aquatic invasive plants in the state.

We also confirmed Spiny Water Flea (Figure 3) in Lake Winnepesaukee, after eight years of monitoring for it (Winnepesaukee previously only had variable milfoil in it for invasives). It was found in several locations in the lake, with evidence of both asexual and sexual reproduction occurring. Population densities were still low in September 2023, and continued monitoring will be conducted to document population growth, expansion, and impacts on the lake food web.

*"[...] a new variable milfoil infestation, brittle naiad infestation, and one curly-leaf pondweed infestation"*



Figure 2 - Brittle Naiad (*Najas minor*)



**Management:**

Aquatic invasive plant management activities generally include a mix of herbicide and non-chemical means of control, including diving and diver-assisted suction harvesting (DASH). Management is integrated and adaptive based on site-specific characteristics.

In 2023, 21 herbicide treatments were performed (primarily for variable milfoil control but also for fanwort, brittle naiad, curly-leaf pondweed, and Eurasian water milfoil). Simple diving and hand harvesting was performed on four waterbodies, and DASH was conducted on 39 waterbodies (Figure 4).

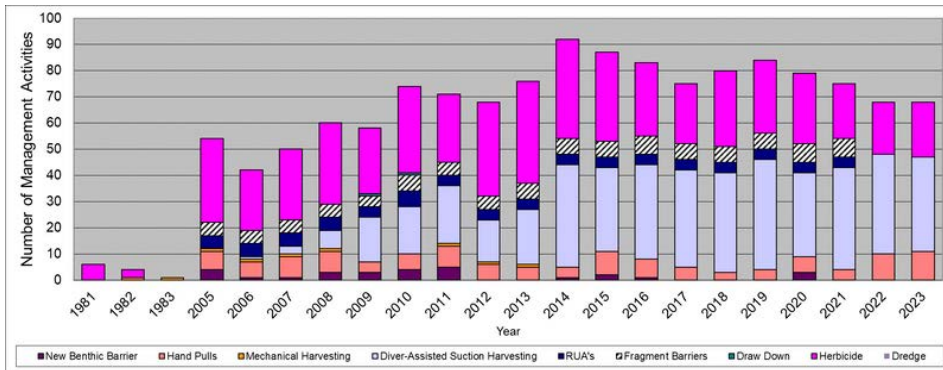


Figure 4- Trends in aquatic plant management in New Hampshire over time

**Legislative Updates**

Funding for the New Hampshire Exotic Species Program is in jeopardy because of how fees are collected in the state. Program revenues are derived from a fee associated with boat registrations, which has been determined to be an illegal collection of fees under federal regulations (even though these fees have been in place for 30+ years). A federal audit was conducted that identified the infraction, so alternative funding mechanisms are going to be sought in this upcoming legislative session. Funding collected as part of boat registration fees can only be used for purposes of supporting a boat registration program, not other programs.

Luckily, existing program funding mechanisms will remain until new legislation is enacted. Pending outcomes of the legislative fix, the program could continue as it has been, or it (grants, monitoring, staffing, and all other program elements) could be eliminated due to lack of program funding. Several partners are working to maintain the funding and identify other sources of funding for the program.

**Other Thoughts**

With significant time and effort put into prevention and early detection efforts for the last decade, we saw a reduction in the rate of spread of aquatic invasive species in New Hampshire for many years.

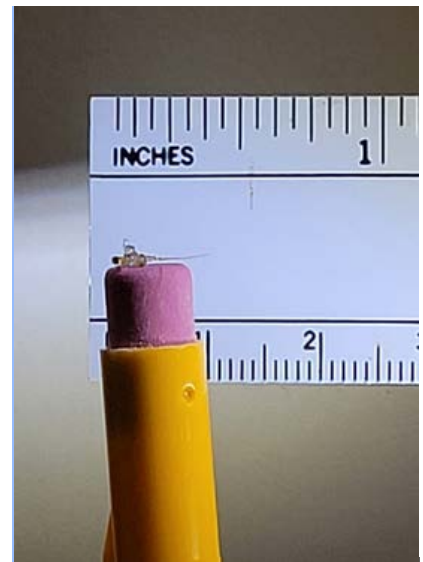


Figure 3- Spiny water flea collected from Lake Winnepesaukee, New Hampshire. Water flea on top of pencil eraser, with ruler for additional scale.

*“[...] a mix of herbicide and non-chemical means of control, including diving and diver-assisted suction harvesting (DASH).”*

While infestations still did happen, there were fewer new ones each year, and those that did occur were found quickly by vigilant monitors when plants were still sparse and low density, for the most part.

Unfortunately, in the last couple of years, the infestation rate has picked up again, and the infestations, when first found, are larger and more expansive, as though they were missed for a few years by residents and volunteers.

I am not sure if this is reflective of a changing of the guard when it comes to local volunteers keeping an eye on waterbodies, a general increase in boating from the pandemic years, spreading infestations more quickly, or a mix of the two (or something else entirely). Even waterbodies that have a two-tiered structure of protection (Lake Hosts at public access educating boaters) and Weed Watchers (monitoring for new infestations in waterbodies) have seen problematic infestations occur.

We will continue to increase outreach and education activities to target more transient boater groups and volunteer monitoring groups, but the trend is discouraging and needs to be turned around!



The advertisement for Earthtec QZ features a background image of clams. On the left, the text "STOP THE SPREAD BEFORE IT STOPS YOU" is written in large, bold, white capital letters. On the right, the text "Powerful Molluscicide for Aquatic Invasive Species" is written in white. Below this, there are three bullet points: "Effective &amp; Affordable", "EPA Registered", and "Site-specific consultations". To the right of these bullet points is a blue circular logo with "NSF" in white, and below it, a small white box with "Certified to NSF/ANSI/SCAR-03" in black. At the bottom, the "EARTHTEC QZ" logo is displayed in white, followed by the phone number "800.257.9283" and the website "earthtecqz.com".

*“With significant time and effort put into prevention and early detection efforts for the last decade, we saw a reduction in the rate of spread of aquatic invasive species in New Hampshire for many years.”*

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# NEW JERSEY STATE UPDATE

By: Heather Desko, NJWSA

New Jersey looks forward to hosting the 2024 NEAPMS Plant Camp at the New Jersey School of Conservation, Sandyston, NJ, September 10-12, 2024.

In 2023, the NJ Department of Environmental Protection Division of Science and Research, New Jersey Fish and Wildlife, New Jersey Water Supply Authority, and consultant Little Bear Environmental have been preparing the New Jersey Aquatic Invasive Species Management Plan (NJ AISMP) with the assistance of a working group of experts from around the state. The New Jersey Department of Environmental Protection was awarded \$20,000 from the Mid-Atlantic Panel on Aquatic Invasive Species to develop a state aquatic invasive species management plan. The plan will create the framework for statewide coordination of AIS management, prevention, monitoring, education, and outreach. The core team anticipates the draft plan will be posted for public comment in late 2023/early 2024.

*“The New Jersey Department of Environmental Protection was awarded \$20,000 from the Mid-Atlantic Panel on Aquatic Invasive Species to develop a state aquatic invasive species management plan.”*



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Legislation to establish a New Jersey Invasive Species Council and prohibiting the purchase, sale, distribution, import, export, or propagation of certain invasive species without a permit from the Department of Agriculture or Department of Environmental Protection (A3677/ S2186) passed in the State Assembly but stalled in the Senate in June 2023.

### Management and Monitoring:

- The Delaware & Raritan Canal aquatic plant management (New Jersey Water Supply Authority): After six years (2017-2022) of low-dosage continuous herbicide treatments, no herbicide was applied in 2023 as no hydrilla plants nor tubers have been found since 2020. This year, the actions shifted to intensive vegetation monitoring without herbicide application. Intensive monitoring continued throughout the growing season to inform rapid response efforts if hydrilla or other aquatic invasive plant species threaten to impact Canal operations. No hydrilla or tubers were found in 2023, and native plant populations have begun to return to the Canal.
- Manasquan Reservoir (New Jersey Water Supply Authority): The pilot hydrilla management program has continued at the Manasquan Reservoir, successfully reducing tuber production, even in a small area. The boat launch area has been treated with herbicides (fluridone) since 2018, and tubers have not been found in the past several years at that location; however, hydrilla growth was still observed through 2022. In 2023, after the reservoir level was lowered due to the drought in 2022, hydrilla was found in trace amounts in the boat launch, significantly less than in previous years.
- Round Valley Reservoir / South Branch Raritan River (New Jersey Water Supply Authority / State Park Service): NJWSA staff continued hand pulling efforts to remove water chestnut from the intake pond to Round Valley Reservoir. State Park Service staff and volunteers initiated hand pulling in the swim impoundment at Round Valley this year.
- New aquatic invasive plant infestations have been documented at Round Valley Reservoir (*Glossostigma cleistanthum*); Chapin Pond (*Ludwigia peploides*); Lake Etra (*Trapa natans*); Eagle Lake (*Ludwigia peploides*); Spruce Run Reservoir (*Glossostigma cleistanthum*); Duhernal Lake (*Myriophyllum aquaticum*, *Cabomba caroliniana*, *Trapa natans*).

*“[...] prohibiting the purchase, sale, distribution, import, export, or propagation of certain invasive species without a permit from the Department of Agriculture or Department of Environmental Protection (A3677/ S2186) passed in the State Assembly but stalled in the Senate in June 2023.”*



Left to right: Kyle Clonan, Melissa Mazzaro, Angela Mostwill from NJWSA hand pull water chestnut from the intake pond to Round Valley Reservoir.



- eDNA monitoring for the Silty Pond Mussel (*Sinanodonta woodiana*) continued in 2023 in Hunterdon County. No detections were found outside of the former aquaculture ponds. The New Jersey Conservation Foundation (NJCF) is planning on a molluscicide treatment in 2024 to eradicate the population, as this is the only known population in North America. The monitoring has been a collaborative effort between NJCF, Rutgers University Lockwood Lab, New Jersey Fish and Wildlife, United State Fish and Wildlife Partners Program, and New Jersey Water Supply Authority.

### Education/Outreach:

- The New Jersey Department of Environmental Protection held the fourth annual Harmful Algal Bloom (HAB) summit in March 2023 to share information, updates, and progress related to HAB science, monitoring, response, management, treatment, and communication. Summit materials are available here: <https://www.nj.gov/dep/hab/summit.html>
- The Boat Steward Program (New Jersey Water Supply Authority) entered its fifth year at Manasquan Reservoir (partner: Monmouth County Park Commission), the third year at Spruce Run Reservoir (partner: New Jersey State Park Service) and kicked off its first year at Round Valley Reservoir (partner: New Jersey Fish and Wildlife). A total of 2,910 surveys were completed across the three launches. Highlights of the program include water chestnut being intercepted on a boat about to launch at the Manasquan Reservoir, and the Spruce Run steward finding a dumped aquarium on the shoreline and clearing the debris, which included several florets of the invasive plant water lettuce (*Pistia stratiotes*).
- The New Jersey Water Supply Authority was awarded a Lakes Stormwater Management Grant from NJDEP, two solar, waterless boat cleaning stations were delivered in mid-July, one each for the Manasquan Reservoir and Spruce Run Reservoir boat launches. The two stations' tools have been used nearly 800 times since their installation.
- The New Jersey Water Monitoring Council (NJWMC) hosted an Aquatic Invasive Species Workshop on October 4, 2023. The workshop had 25 in-person participants and 20 additional virtual participants for the classroom portion. Topics included the NJ AIS Management Plan, reporting AIS, aquatic invasive plants, fish, crustaceans, invertebrates, and decontamination recommendations.



Emily Mayer presents on invasive aquatic plants and their impacts to water resources to the NJWMC.



Various live aquatic plant samples are pictured from the NJWMC Aquatic Invasive Species Workshop.



Kyle Clonan presents a demonstration of a waterless boat cleaning system utilizing one of Fish & Wildlife's boats.

The field portion included rake tosses to identify plants at Assunpink Wildlife Management area and a hands-on demonstration of a waterless boat cleaning system utilizing one of Fish & Wildlife's boats. The NJWMC Decontamination Protocols are expected to be finalized and posted on the council's website (<https://www.nj.gov/dep/wms/wmcchome.html>) by the end of 2023.

## RHODE ISLAND STATE UPDATE

By: Katie DeGoosh-DiMarzio,  
RI Department of Environmental Management

### **Monitoring Results: On to the next one: Hydrilla takes root in RI:**

RIDEM staff monitored for invasive plants at 30 unique locations (lakes/ponds/rivers) via canoe or kayak during the 2023 summer field season. In addition, staff received over 60 calls from the public concerned about their lake. The combination of these efforts resulted in 1 new lake added to the list of lakes, ponds, and rivers in RI with an aquatic invasive plant population, bringing the new state total to 112 lakes documented with one (or more) invasive plant and an additional 29 river segments.

Most notably, was the discovery of *Hydrilla verticillata* in Indian Lake in South Kingstown, RI, on August 9, the first observance of the invasive species in Rhode Island. Volunteer efforts to map the extent of the plant showed that it is widespread throughout the shallow, 268-acre reservoir that is popular for bass fishing tournaments. Subsequently, another population was reported to the state in October from a lake management consultant when he did a follow-up visit to Lake Mishnock after a recent herbicide treatment at that location. The new hydrilla detection was highly covered in local news publications following a press release and has garnered significant public attention in local communities.

One more location with water chestnuts has been documented in a small fishing pond in Foster, RI, as the plant continues to spread across the state. The location was recorded very late in the season after seeds had already set, and the population was expansive over the small pond. This latest record brings the state total to 23 locations with a documented water chestnut population (table below), making it the 3rd most common invasive in RI.

*“[...] the discovery of Hydrilla verticillata in Indian Lake in South Kingstown, RI, on August 9, the first observance of the invasive species in Rhode Island.”*



Number of Locations In Rhode Island with Invasive Plants			
Common Name	Lakes	Rivers	Total Locations
American lotus	2		2
Brazilian elodea	5		5
curly-leaf pondweed	14	7	21
Eurasian milfoil	11	2	13
fanwort	64	16	80
hydrilla	2		2
inflated bladderwort	10		10
mudmat	13		13
parrot feather	1		1
sacred lotus	2		2
spiny naiad	11		11
variable milfoil	73	19	92
water chestnut	19	4	23
water hyacinth	4	1	5
yellow floating heart	3		3

Table 1. Number of Locations in Rhode Island with Invasive Plants

For the most recent AIS distribution map and list of 142 lakes or river segments (with one or more invasive plant) including which invasive plants are present at each locale, see: <http://www.dem.ri.gov/programs/benviron/water/wetlands/pdfs/invasive.pdf>).

RIDEM (AIS) monitoring activities are supported in part with federal funding provided by the US Environmental Protection Agency under Section 106 of the Clean Water Act and in coordination with the Rhode Island Coastal Resources Management Council provided by the US Fish and Wildlife Service as authorized under Section 1204 of the Aquatic Nuisance Species Prevention and Control Act.

**Management Efforts**

This year RIDEM partnered with the New England Interstate Water Pollution Control Commission (NEIWPCC) to provide technical assistance on a project to guide local water chestnut management efforts in 5 locations under a grant funded by EPA’s Southern New England Program (SNEP, administered by Restore America’s Estuaries). Ten volunteer hand-pulling events were held at four different locations in Rhode Island and Massachusetts by local project partners (lake associations, municipalities or watershed councils).

*“[...] RIDEM partnered with the New England Interstate Water Pollution Control Commission (NEIWPCC) to provide technical assistance on a project to guide local water chestnut management efforts in 5 locations under a grant funded by EPA’s Southern New England Program [...]”*



RIDEM recruited 40 volunteers to help the Ten Mile River Watershed Council pull water chestnut from the Turner Reservoir (East Providence), and also supported another volunteer event on the Blackstone River (Cumberland/Central Falls) run by the Blackstone River Watershed Council/Friends of the Blackstone in coordination with the Blackstone Valley Tourism Council. In total, the volunteer hand pulling efforts logged a total of 466 volunteer hours, and removed over 46 cubic yards of water chestnut plants. Additionally, the SNEP grant funded 2 large-scale herbicide treatments in Central and Dodgeville Ponds to begin to thin out large source populations of water chestnut in the area (30-60 acres covered).

Separately, RIDEM staff was able to hand pull water chestnut at 7 other locations this summer. In total, 19 days were spent culling plants, reducing the amount of time available for monitoring other lakes. Although monitoring efforts are funded by federal sources, there continues to be no state resources dedicated to control or prevention activities, as in many New England states, however, progress has been made by the creation of a state-funded lake management position that was filled as of February 2023.



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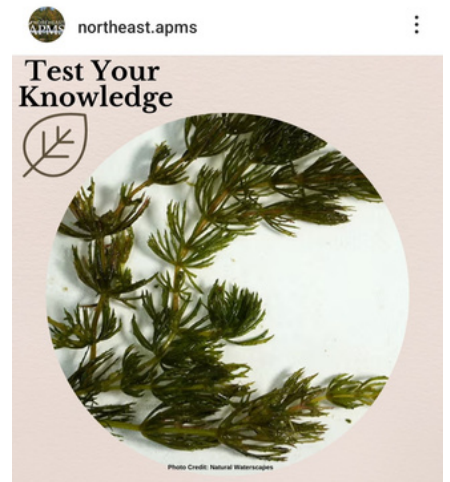
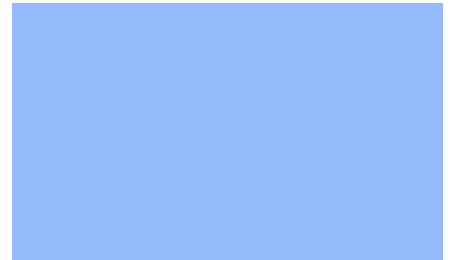
*The 25th-anniversary meeting at the Wentworth by the Sea in New Castle, NH, in January 2024.*

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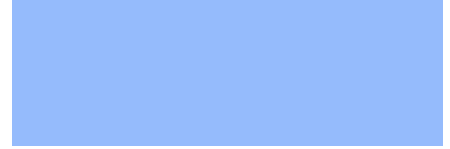
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northeast.apms Those creepy little leaves silently planning something sinister, like world domination. You never know when an invasive might jump out and scare you. It's a terrifying world out there, biologists. Happy Halloween!  
Photo Credit: Unknown.



5 likes  
northeast.apms Bring it on! I'm ready to dive into another plant quiz and expand my knowledge even after the surveying season ends. Let's keep the learning and excitement going! How many times have you seen this species?



# MAINE STATE UPDATE

By: John McPhedran, Maine Department of Environmental Protection (DEP)

## Program Staff

With two new staff additions since spring 2022, Maine DEP's Aquatic Invasive Species Unit now has four full-time positions focusing on the prevention, detection and management of aquatic invasive plants and other organisms. The Unit works closely with colleagues at Maine Department of Inland Fisheries and Wildlife (DIFW) which recently hired their first position dedicated to aquatic invasive animals. The interagency collaboration offers new opportunities to promote consistent statewide messaging to address all aquatic invasive species, including the zebra mussel (*Dreissena polymorpha*) threat from Lac Témiscouata, Quebec, just 20 miles from the northern tip of Maine.

## Grants in 2023:

As noted in our May summary, twenty Maine lake associations received funds for invasive aquatic plant removal in 2023, totaling \$522,406 in grant funding. Sixty-one groups received funds for prevention – Maine's Courtesy Boat Inspection Program (CBI) – in 2023. The total amount granted for boat inspection grants is \$334,190. A separate grant to Lake Stewards of Maine promoted early detection training and plant surveys monitoring in 2023. Finally, a grant to Lakes Environmental Association administered portions of the CBI program and arranged the Maine Summit on Aquatic Invasive Species in April.

## Courtesy Boat Inspection (CBI) Program

Preliminary data for the 2023 boating season show 102 saves out of 2,277 plants found in almost 78,000 inspections. A save is when inspectors find and remove invasive aquatic plants from boats before or after launching. Maine DEP awarded \$334,190 in grants in 2023 to local and regional lake associations to organize and conduct inspections of boats entering and leaving lakes and rivers.

*"[...] specific high-priority invaders already present in an area can become a hype that ultimately dampens other public messaging related to emerging threats."*



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### **Clean Drain Dry**

After several unsuccessful bills to require draining watercraft before and after use, the Maine Legislature adopted a draining bill that became law in June 2023. Maine DIFW used their extensive email list, social media platforms and website to inform boaters of the new requirement (see [□ HYPERLINK "https://www.maine.gov/ifw/fish-wildlife/fisheries/aquatic-invasive-species.html"](https://www.maine.gov/ifw/fish-wildlife/fisheries/aquatic-invasive-species.html)

[□https://www.maine.gov/ifw/fish-wildlife/fisheries/aquatic-invasive-species.html](https://www.maine.gov/ifw/fish-wildlife/fisheries/aquatic-invasive-species.html)). DIFW and the Department of Agriculture, Conservation and Forestry continued installation of new CDD signs at their respective boat access facilities. Maine DEP is developing a request for proposals to assess the State's Clean Drain Dry outreach and develop approaches to promote adoption of CDD measures by the boating public. See this link for the approved law: <http://www.mainelegislature.org/legis/bills/getPDF>

### **Sleuthing Milfoil**

Maine's fall 2022 update noted the genetic analysis by Luc Bernacki at St Joseph's College (Standish, ME) of milfoil species in Alamoosook Lake (Orland). Dr. Bernacki's lab confirmed variable leaf water-milfoil (*Myriophyllum heterophyllum*) in the lake, but morphologically the plant appeared to be the native alternate-flowered water-milfoil (*M. alterniflorum*). The lake association and DEP collected samples of this milfoil in 2023 from multiple locations on Alamoosook. These samples were subsequently forwarded to St. Joseph's for additional genetic work by Dr. Bernacki. The genetic results from this 2023 work shows that there is no indication of the presence of invasive milfoil in the samples analyzed and all but one result were consistent with *Myriophyllum alterniflorum*; one sample was a match to *M. humile*. This means DEP will likely remove the lake from Maine's list of plant-infested waters.

### **New Infestations in 2023**

Swollen bladderwort (*Utricularia inflata*) was added by Maine's Legislature to the State's list of aquatic invasive species in 2023. This statutory change immediately added two previously-confirmed infestations to Maine's list of infested waters: Lake Arrowhead in southern Maine and Horseshoe Pond in central Maine. The Arrowhead infestation was confirmed by volunteer surveyors in 2021 while it appears the has been in Horseshoe for two decades.

During the 2023 field season, swollen bladderwort was discovered in three additional lakes, one of which (Little Ossipee Lake) is immediately upstream of Arrowhead. The two other new infestations (Mousam in Shapleigh and Tilton in Fayette) are within 10 miles of existing infestations.

*"[...] specific high-priority invaders already present in an area can become a hype that ultimately dampens other public messaging related to emerging threats."*







Three of the five infestations are established while the L. Ossipee and Mousam infestations appear to be new infestations on the increase. DEP will develop initial response plans over the winter and will inquire of colleagues across the region and country regarding impacts of swollen bladderwort and potential management techniques.

No other new infestations have been confirmed in 2023 but, then again, the ice hasn't formed yet!

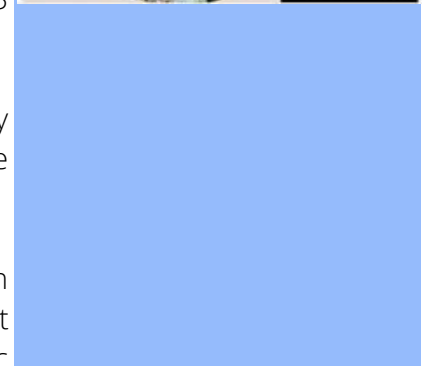
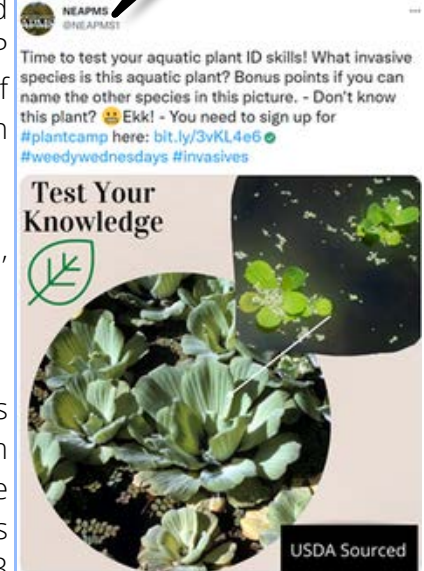
### Management of Existing Infestations

Most established infestations in Maine are managed by lake associations using manual techniques (Diver Assisted Suction Harvest and bottom barriers). DEP grants support these efforts but lake groups contribute significantly more in monetary and in-kind match. Lake groups conducting removal record their progress using the ESRI Survey123 product hosted by Maine DEP.

Per Maine Statute, only Maine DEP may obtain a permit to apply herbicide in state waters. Following are brief summaries of DEP herbicide applications in late 2022 and 2023.

Late 2022 herbicide treatments of two small private sites (one with Eurasian water-milfoil (*Myriophyllum spicatum*) and one with parrot feather (*Myriophyllum aquaticum*) appeared to be successful. No aquatic invasive plants were seen in either pond during 2023. The treatments were planned by DEP and executed by SOLitude Lake Management in consultation with SePRO. The parrot feather infestation, discovered by the property owner who reported it to the DEP, is the only known infestation of the plant in Maine. We will continue to monitor these sites in future years for potential regrowth.

The effort to eradicate Eurasian water-milfoil from Cobbossee Lake suffered a blow as surveys by Friends of the Cobbossee Watershed (FOCW) found the plant in new areas of the lake, including one area of dense growth at the lake outlet. FOCW surveyors subsequently found the plant downstream of the lake dam in Cobbossee Stream, a productive stream/impoundment system that includes two ponds and drains to the Kennebec River.



While FOCW staff surveyed for new locations and removed plants found, DEP hired SOLitude Lake Management to apply herbicide (ProcellaCOR) in the dense areas near the outlet. The management plan for this system will be expanded to include Cobbossee Stream and associated downstream ponds. Collaboration between the state and FOCW, Cobbossee Lake Association and Cobbossee Watershed District continues to be integral to management.

The DEP organized four other herbicide treatments in 2023. An established hybrid milfoil (*M. heterophyllum x laxum*) infestation in Collins Pond (Windham) was treated (ProcellaCOR) to knock-back the dense infestation to allow for a sustainable annual manual removal program. Collins is one of only two lakes in Maine with this hybrid.

A portion of Big Lake in Washington County (near the New Brunswick border) was treated (ProcellaCOR) to limit the spread of variable-leaf water-milfoil (*M. heterophyllum*) within this large Downeast lake and to other areas in this lake-rich part of Maine. Approximately 90 acres of the 17,000-acre system were treated. Staff of the Passamaquoddy Tribe conducts manual removal of lower density areas of this system. DEP staff trained military veterans, and other local volunteers interested in diving, to remove invasive plants.

Finally, two herbicide treatments were done on Lake Arrowhead (Limerick and Waterboro): 1. rapid response to brittle naiad (*Najas minor* with AquaStrike) early season before seed set; this plant is a threat to lakes throughout Maine due to the popularity of Arrowhead and 2. treatment to target variable-leaf water-milfoil (ProcellaCOR) to reduce the dense growth in the portion of the lake near the boat access site. Boat inspections at Lake Arrowhead produce by far the greatest number of plants found annually. The objective of this latter treatment is to reduce the number of plants found during boat inspections and, in turn, reduce spread from Lake Arrowhead.

For more information, please check DEP's website:  
<http://www.maine.gov/dep/water/invasives/> or email [milfoil@maine.gov](mailto:milfoil@maine.gov).



**Plant Quiz Answer:  
Brazilian Elodea  
(*Egeria densa*)**

*“An established hybrid milfoil (*M. heterophyllum x laxum*) infestation in Collins Pond (Windham) was treated (ProcellaCOR) to knock-back the dense infestation to allow for a sustainable annual manual removal program.”*



# 2024 NEAPMS Conference Agenda

## Tuesday, January 9, 2024

1:00-6:00 PM	REGISTRATION OPEN	NEAPMS BOD	
2:00-2:30 PM	Mandatory Continuing Education Units Registration	CT Agricultural Field Station	

### Aquatic Equipment Workshop (Moderator: Jon Gosselin, SEPRO Corporation)

2:00-2:30 PM	Incorporating eDNA into routine AIS monitoring: Hudson Valley Collaborative eDNA Early Detection Program.	Ashley Morris <sup>1</sup> , New York State Department of Environmental Conservation	Page 6
2:30-3:00 PM	Techniques in Resin Casting	Maggie Carroll <sup>1</sup> , SUNY School of Environmental Science and Forestry	Page 7

3:00-3:30 PM	BREAK		
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### Aquatic Equipment Workshop (Moderator: Jon Gosselin, SEPRO Corporation)

3:30-4:45 PM	Sampling and Data Collection in Aquatics – Tools of the Trade- Presentations	Various Presenters	Page 8
4:45-6:00 PM	Sampling and Data Collection in Aquatics – Tools of the Trade- Demonstration Stations Open	Various Presenters	
6:00-6:30 PM	Mandatory Continuing Education Units Registration	CT Agricultural Experiment Station	

6:00-9:00 PM	DINNER ON YOUR OWN		
7:00-9:00 PM	25 <sup>th</sup> ANNIVERSARY RECEPTION	NEAPMS BOD	

## Wednesday, January 10, 2024

7:30 AM-6:00 PM	REGISTRATION OPEN	NEAPMS BOD	
7:00-8:15 AM	BREAKFAST		
7:30-8:15 AM	Mandatory Continuing Education Units Registration	CT Agricultural Experiment Station	

### Opening Session/Harmful Algal Blooms (Moderator: Emily Mayer, NJDEP)

8:15-8:30 AM	WELCOME AND OPENING REMARKS	Bo Burns, NEAPMS President	
8:30-9:00 AM	Preventative and Early Intervention Management Programs for Harmful Algal Blooms	West Bishop, Ph.D., SEPRO Corporation	Page 10
9:00-9:30 AM	New Jersey Harmful Algal Bloom Science and Response	Robert Newby, Ph.D., NJDEP	Page 11

9:30-10:00 AM	Impacts of large-scale Aeration on Lake Hydrodynamics and Biogeochemistry as Gleaned from Lake Carmi, Vermont	Andrew Schroth, Ph.D., University of Vermont	Page 12
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10:00-10:30 AM	BREAK/NETWORKING		
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### Aquatic Plant Mapping Methods (Moderator: Rob Richardson, North Carolina State University)

10:30-11:00 AM	Comparison of Probabilistic and Systematic Aquatic Plant Surveillance Methods in the Niagara River	Lindsay Yoder, NYSDEC Region 9 AIS Coordinator	Page 13
11:00-11:30 AM	Utilization of Remote Sensing Technologies in the Management of <i>Trapa natans</i>	William Henley, South Central CT Regional Water Authority	Page 14

11:30-12:30 PM	LUNCH AND NETWORKING		
11:30-1:00 PM	STUDENT LUNCH AND PRESENTATION AND NOMINATION	Ashley Morris, NYSDEC	

### Industry Updates (Moderator: Glenn Sullivan, Ready Scout, LLC)

12:30-1:30 PM	Twelve 5-MINUTE INDUSTRY UPDATES	Various	
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### Connecticut River Hydrilla (Moderator: Summer Stebbins, CT Agricultural Experiment Station)

1:30-2:00 PM	The Spread and Establishment of Connecticut River Hydrilla Outside of the Connecticut River	Jeremiah Foley, CT Ag Exp Station	Page 15
2:00-2:30 PM	Herbicide Screening Trial to Compare Efficacy of Chemical Control on Three <i>Hydrilla verticillata</i> Biotypes	Kara Foley, North Carolina State University	Page 16

2:30-3:00 PM	BREAK/NETWORKING		
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**Management/Restoration Plans (Moderator: Erin Vennie-Vollrath, NYSDEC)**

3:00-3:30 PM	Implementing a Regional Restoration Initiative to Protect Our Waters	Brittany Rogers, The Nature Conservancy	Page 17
3:30-4:00 PM	What Works Revisited: Experience Creating a Practical Guide to Lake Management in Massachusetts	Ken Wagner, Ph.D., Water Resources Services	Page 18
4:00-4:30 PM	<b>APMS AND AERF UPDATES</b>	Michael Greer, ACOE (APMS) and Carlton Layne, AERF	
4:30-5:00 PM	<b>NEAPMS BUSINESS MEETING</b>	Bo Burns, NEAPMS President	

**Poster Session (Moderator: Erika Haug, NCDNR)**

5:00-5:30 PM	<b>SCIENTIFIC POSTER SLAM SESSION</b>	Move to Grand Ballroom	
5:30-6:30 PM	<b>SCIENTIFIC POSTER VIEWING SESSION</b>	Move to Grand Ballroom	
<b>6:30-7:00 PM</b>	<b>Mandatory Continuing Education Units Registration</b>	<b>CT Agricultural Experiment Station</b>	

7:30-8:45 PM	<b>25<sup>th</sup> ANNIVERSARY BANQUET</b>		
8:45-9:00 PM	<b>NEAPMS AQUATIC PLANT CAMP PRESENTATION</b>	Cathy McGlynn, Jon Gosselin, Meg Modley, Scott Kishbaugh	
9:00-9:15 PM	<b>AWARDS CEREMONY</b>		
9:15-9:30 PM	<b>RAFFLE</b>		

**Thursday, January 11, 2024**

7:45 AM-1:00 PM	<b>REGISTRATION OPEN</b>	<b>NEAPMS BOD</b>	
7:00-8:15 AM	<b>BREAKFAST</b>		
<b>7:45-8:15 AM</b>	<b>Mandatory Continuing Education Units Registration</b>	<b>CT Agricultural Experiment Station</b>	

**Aquatic Plant Genetics (Jon Gosselin, SePRO Corporation)**

8:15-8:30 AM	<b>OPENING REMARKS</b>	Jon Gosselin, SEPRO, Incoming NEAPMS President	
8:30-9:00 AM	Investigating the potential for hybridization of water chestnut introduced in the US	Lynde Dodd, US Army Engineer Research and Development Center	Page 19
9:00-9:30 AM	Environmental DNA Detection Range for Hydrilla verticillata, a Prolific Invasive Plant	Steve Pearson, Ph.D., NYSDEC	Page 20
9:30-10:00 AM	Vallisneria (Hydrocharitaceae): Species Diversity and Restoration Practices	Alex Martin, The Nature Conservancy	Page 21
10:00-10:30 AM	<b>BREAK-SILENT AUCTION ENDS</b>		

**Aquatic Plant Control (Mike Greer: ACOE)**

10:30-11:00 AM	Selective Management of Invasive SAV with a Focus on Rare Species Protection	Jon Gosselin, SEPRO Corporation	Page 22
11:00-11:30 AM	Management of <i>Myriophyllum spicatum</i> at Saratoga Lake New York 1983-2023.	Dean Long, Consultant	Page 23
11:30-12:00 PM	Peconic River Aquatic Plant Control Project: When Mechanical Options Just Aren't Enough	Cathy McGlynn, NYSDEC	Page 24
12:00-12:30 PM	Changes in Plant Communities from Analyzing Long-term Data Sets of Croton and the Hudson River	Cassandra Mendez <sup>1</sup> , State University of New York at Albany	Page 25
<b>12:30-1:00 PM</b>	<b>Mandatory Continuing Education Units Registration</b>	<b>CT Agricultural Experiment Station</b>	

<b>12:30-1:30 PM</b>	<b>LUNCH AND SILENT AUCTION WINNERS ANNOUNCED</b>	<b>MEETING ADJOURNED</b>	
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# STUDENT SCHOLARSHIP ANNOUNCEMENTS



## **Travel Award:**

- Up to 3 students - graduate or undergraduate  
\$250 each – to be used for lodging, travel, meals, or other related costs for the meeting.
- Checks made out to the awardees will be presented at the meeting.
- Applications are submitted via an online form on our website.

**Application deadline extended: November 20, 2023**

More details are available at:

**<https://www.neapms.org/student-travel-scholarship>**

## **Graduate Student Scholarship:**

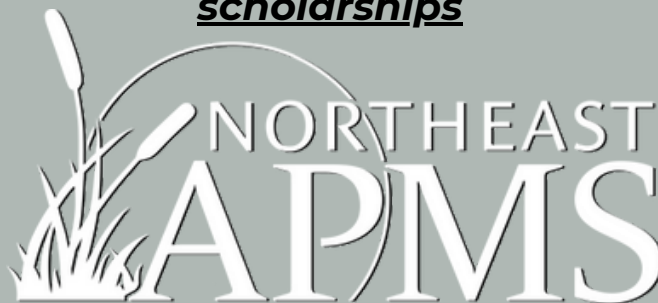
**\$10,000 this year!**

**This award may be used to defray the cost of research supplies or as a stipend.**

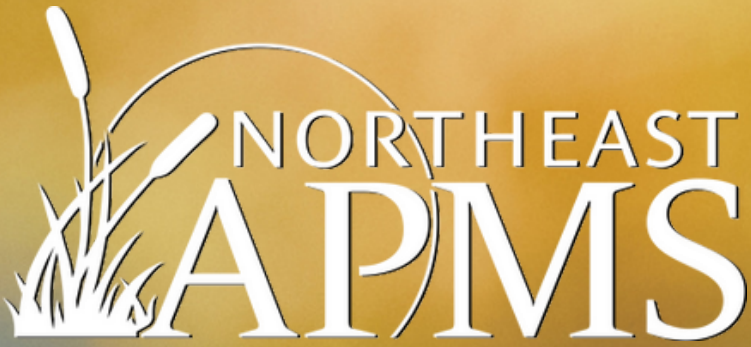
- Applications are submitted via email as a pdf, including the completed proposal, academic transcripts, cover letter, and faculty letter(s) of support to: **[Erika.haug@deq.nc.gov](mailto:Erika.haug@deq.nc.gov)** and **[neapmseditor@gmail.com](mailto:neapmseditor@gmail.com)**

**Application deadline: extended: November 30, 2023**

More details are available at: **<https://www.neapms.org/graduate-scholarships>**







*#GivingTuesday*



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