

Lake Breezes



June 2021

Hooray for 2021 and the prospect of all pandemic restrictions being lifted in the very near future!

It has been a long, trying year for so many, and we gratefully welcome the opportunities to socialize again. Our big news this spring is the completion of our very own DASH Boat!



We are optimistic that this new piece of equipment will greatly increase our capacity to remove milfoil, and with some luck, we may finally be on the way to beating this scourge!

READ ON!

High Hopes for a Better Milfoil Season in 2021

Since 2014, one of the major efforts of the Lake Rescue Association (LRA) has been fighting the presence of Eurasian milfoil in Lake Rescue and Lake Pauline. Eurasian Milfoil is an aquatic invasive species that, left unchecked, can grow into thick surface mats that interfere with swimming and boating activities and crowd out native fish and plant species.

Starting in July, The LRA will deploy a newly built Diver Assisted Suction Harvesting (DASH) boat. We have been issued a permit from the Vermont Department of Environmental Conservation to operate this boat to aid in the mitigation effort against invasive aquatic plant species. The DASH boat harvesting will be in addition to our long-term hand harvesting program.

The DASH boat is a specially modified 21-foot pontoon workboat with a powerful suction pump and straining system to remove Eurasian Milfoil plants from the lake bottom. The boat is equipped with air compressors, diving regulators, and other safety equipment and gear. On deck is a stainless-steel straining table that separates the plant material for disposal off-site, while the strained water is returned to the lake.

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Con't from p.1

High Hopes... 2021

Our milfoil divers, Cat and Shane Yoder will operate the DASH boat. Cat will be in scuba gear using a 5-inch vacuum hose to remove the milfoil plants from the lake. This new resource will allow us to remove several hundred gallons of milfoil plants each day.

The DASH boat, constructed by C & C diving of Tinmouth, Vermont, was paid for by Lake Rescue Association Members' donations to the "Rescue Our Lakes" fundraising campaign.

In addition to operating the suction harvesting boat, the LRA will also deploy 48 previously purchased bottom barriers. These vinyl blankets measure 50' x 10' and are weighed down with iron rebar. The bottom barriers eradicate the milfoil plants by blocking sunlight and preventing new growth. Later in the summer, we plan to adjust the location of the bottom barriers to strategically fight milfoil growth in a different area

Our lake participates in the Vermont Department of Conservation Public Access Greeter Program. A trained greeter is in place at the Fishing Access boat ramp on Round Pond to log and inspect watercraft on weekends and major summer holidays to ensure invasive plants are not introduced into our lakes. The greeter also examines watercraft as they are removed from the lake to safeguard against milfoil plants from Lake Rescue being transported to other water bodies.

The Milfoil Budget and Fundraising Report

After the 2020 season milfoil expenditure of \$40,000 it became clear that more funds were needed to continue our battle against this invasive weed. This came as we were also looking at a dredging project in Round Pond which will cost an estimated \$125,000.

The 'Rescue Our Lakes' Committee was formed and has been hard at work not only to raise funds but also to increase our membership and reach out to the greater Ludlow community. A goal of \$250,000 was set which would cover the dredging project, DASH boat and increased labor costs to operate the boat.

To date we have received an astounding \$297,000 in donations and pledges. It is a measure of how much we all value our beautiful lakes and want to protect this irreplaceable resource. But the challenges we face are great. Our 2021 budget for milfoil mitigation is nearly \$70,000. This includes a one-time capital expenditure of \$25,000 for the DASH boat. The State ATNR (Agency for Natural Resources) will contribute \$14,438 toward the milfoil problem in 2021. We hope to contain the growth of milfoil, but only time will tell how successful we will be.

We will be announcing some community based initiatives to raise our profile in the near future. And we will be looking for volunteer patrollers and fragment skimmers to augment the divers' work. (See p. 4)

Sedimentation and Dredging

LRA continues to monitor the build-up of sediment in the river channel in Round Pond. Although the river channel continues to close there has been adequate clearance for most boats using the lake. The dredging project has been pushed back to 2022. By pushing back the project LRA is effectively extending the useful life of the project. The LRA permit to dredge the river channel in Round Pond, expires on August 7, 2025.

The December 2019 Better Roads Grant application for culvert and stream bed improvements under East Lake Road and Archibald Lane was denied by Vermont in fall of 2020. This application should be resubmitted by the Town of Ludlow in the fall of 2021.

A draft of the Stormwater Master Plan (SWMP) prepared by consultants for Mount Ascutney Regional Commission (MARC) was made available to LRA Board in May 2021. LRA Board Members previously met with the consultants regarding several areas of concern about sediment entering Lake Rescue. Six areas identified by LRA were included in the SWMP, 2 of these projects were selected as high priorities. The location of the first project is along Scott's Landing and Tepper Drive and the second project is between Red Bridge and Lake Shore Drive. These 2 projects were further studied in a 30% Conceptual Design. The preliminary cost estimates for these projects were \$33,000 and \$23,000, respectively.

Although the other sites identified by LRA around Lake Rescue were not recognized as high priority in the SWMP, the draft report mentions that the Town of Ludlow has noted these sites as suitable for Better Road Grants. LRA will follow up with the Town of Ludlow on these sites.

In February 2010, LRA Board members made a presentation to the Town of Ludlow Select Board about the projects and initiatives

that the LRA were pursuing. At this meeting, the Ludlow Select Board asked if paving East Lake Road would help to mitigate sediment running into the lake and asked LRA to survey its members about members' support to pave East Lake Road. LRA surveyed its members via e-mail in April 2021. There were 108 responses with 68% in favor of paving the road. Also, 41 respondents expressed concerns about safety, speeding, enforcement and loss of the rural nature of the road. The survey results and the comments in their entirety were provided to the Ludlow Select Board.

Other News

- July 4th Picnic: This popular event will not be held in 2021 because youngsters under 12 will not yet be vaccinated this summer.
- Save the Date: The LRA Annual Meeting will be on August 7, 9AM, at the Ludlow Community Center
- Emerald Ash Borer: Consider having an inventory of Ash trees on your property, in preparation for our area becoming infested with this insect. Early intervention may save your trees and avoid costly removal later. For more information, Visit this [website](#).
- Renew your LRA Membership online: Membership is just \$50 per household. Renew [here](#) or Join for the first time [here](#). Select 'My Membership' to update your information and add/edit household members.

Mary Rita Batesole Scholarship Awarded

A committee of the LRA board has selected Rosalee Saccardo to receive the 2021 Mary Rita Batesole Scholarship of \$1000.

Rosalee lives in Ludlow and attends Green Mountain Union High School. She will graduate in June and will attend Roger Williams University in Bristol, RI starting in September.



Rosie will be studying Environmental Science. She has been active in the Environmental Club at GMUHS for four years, the last year as president of the club. During this time, she designed a composting system for the school and created a website to educate others about environmental issues. In addition, Rosie has had lead roles in the school's theater productions and played clarinet in the band.

As Rosalee says, "Throughout my high school career, I have consistently been motivated, passionate, and involved in my community. I am grateful that I have found a field that I am immensely passionate about, environmental science... I have applied my environmental awareness to all aspects of my life: my home life, school, clubs, and at work. I know that because I truly believe in my major and what I stand for, I will be successful in this field."

Congratulations, Rosie!

Lake Amherst Woes

An inspection in March of this year by the state Dam Safety Program personnel found the dam in 'Poor'* condition and posing 'Significant'*** hazard potential. These findings have prompted the state to prohibit reinstalling the flashboards after the winter draw-down. This is done to reduce the 'load' on the dam as a risk reduction measure. The resulting lake level is 23 inches lower than it was last summer.

This dam has been classified as 'Poor' since 2005 but has not been repaired or upgraded. The continuing deterioration has resulted in the current dilemma. The Lake Amherst dam is privately owned and any repairs, remediation or removal are the responsibility of the owners of the dam. Without repairs the dam may need to be removed, resulting in the water level dropping by 6' to 8'. Because of the contours of the shoreline, the north end of the lake would be most affected. They would lose their boat access as the water would be far from the end of the boat ramp. The dam owners have received a grant from Vermont Watershed Grants to perform an engineering study to provide details about the design and costs of the dam rehabilitation, replacement or removal.

The community around the lake is rallying and has launched a FaceBook page, Amherst Lake Friends. They plan to establish a lake association like ours and address this crisis at their lake.

Learn more here:

<https://dec.vermont.gov/water-investment/dam-safety/amherst-lake-risk-reduction-measures>

 *'Poor' = Significant structural +/- operation and maintenance deficiencies.

**'Significant' = Dams where failure results in no loss of human life, but can cause economic loss, environmental damage or impact other concerns.

Volunteers Needed

Our DASH boat will be 'at work' two days a week starting on July 1st. We are looking for volunteers with kayaks to scoop milfoil fragments that are released while the divers are at work underwater. We can provide a kayak if you don't have one. The days and times will be coordinated with the divers' schedule.

Anyone with a kayak can 'patrol' the shallower areas of the lake and mark milfoil locations or scoop floating fragments. Buoy markers and skimmers will be provided.

We will also provide guidance to identify and remove milfoil plants in shallow water.

Please respond to lakerescueassn@gmail.com. Let us know your availability and location on the lake.

THANKS!

Climate Change in Vermont Historical Trends

Average annual temperature in Vermont has increased by 1.3 deg. F since 1960. Nearly half of this increase has been since 1990. The winters are warming faster than summers and the winter seasons are shorter. Over the past 40 years, the freezing period (first-fall freeze to last-spring freeze) has shortened by 4 days every decade and the growing season has lengthened by 3.7 days per decade.

Precipitation has and will continue to increase, particularly in winter months. Since 1960, average annual precipitation has increased 5.9 inches. Again, almost half of this increase has been since 1990, with the greatest increases in the mountainous areas of the state. Heavy rain/snow events are becoming more common, posing threats in valleys and floodplains and contributing to heavy sediment and nutrient runoff into rivers and lakes.

Projected Trends

Vermont's temperatures are projected to rise by another 2-3.6 deg. F by 2050 and 5-5.4 deg. F by 2100, according to computer simulations. Precipitation will continue to increase over the next century, with the largest increases in mountainous areas. In the near term much of this increase will fall as snow, but 50+ years out it will shift to rain as

Loons on the Lake

On June 4th, Lake Recue was visited by Eric Hansen, a Loon Biologist with the Vermont Center for Ecostudies. Earlier in the week, Eric observed two "courting loons." LRA co-president Bruce Zanca and Eric Hansen assembled a timber and chicken wire raft at the Lake Rescue boat ramp and then deployed the raft to the marshlands on the western shore of Round Pond. The 6' x 6' square raft is covered with vegetation and plant material, making it an ideal habitat for the loons to nest and raise chicks. The idea is to create a safe location for the waterfowl away from boat traffic and people. Boats, fishermen, and people should avoid the nest. Amy Newell and Michele Zanca have volunteered to observe and report if the loon pair "takes" to the raft.



Loon Nesting Raft in Round Pond

Climate Change, con't

temperatures continue to rise.

The chances of record high temperature extremes will increase with higher nighttime temperatures becoming more common.

The loss of Arctic Sea ice is changing the seasonal jet stream patterns. Recent quasi-stationary patterns have led to prolonged periods of intense rain, dry spells or intense cold.

Source: <http://vtclimate.org/>

Responding to Climate Change in Vermont

The conversation on climate change has evolved over recent years and has recently taken on increased urgency both nationally and in Vermont. States across the country are planning for reducing emissions across all sectors of energy use. Our state has always been environmentally proactive and has been addressing climate change for many years.

In 2020 the Vermont Legislature passed a bill Global Warming Solutions Act (GWSA) which will spend \$200 million over three years to reduce emissions in the state. The goals are to reduce emissions to 26% below 2005 levels by 2025, 40% below 1990 levels by 2030 and 80% below 1990 levels by 2050. If the state fails to meet these goals, it could face lawsuits.

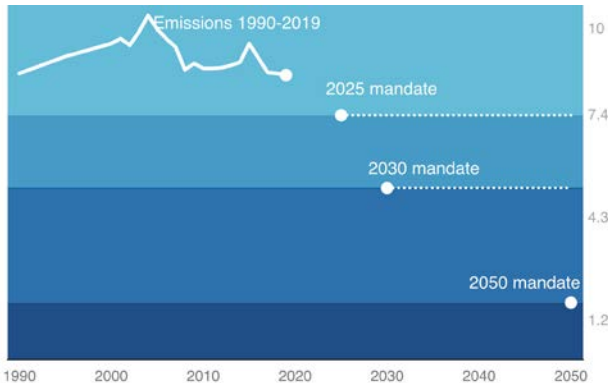


Chart: Erin Petenko · Source: VT Greenhouse Gas Emissions Inventory Update · Created with Datawrapper

Vermont’s greenhouse gas emissions (GHG) declined by an estimated 5.6% from 2016 to 2019. But much of this improvement can be attributed to the electricity sector. Vermont’s electric generation relies heavily on solar power and Canadian hydropower. In 2017 electric generation accounted for only 6% of GHG emissions, while nationally that proportion is 28%.

LEARN MORE about the changing climate in VT:

<https://climatechange.vermont.gov/>

Here are the recent data:

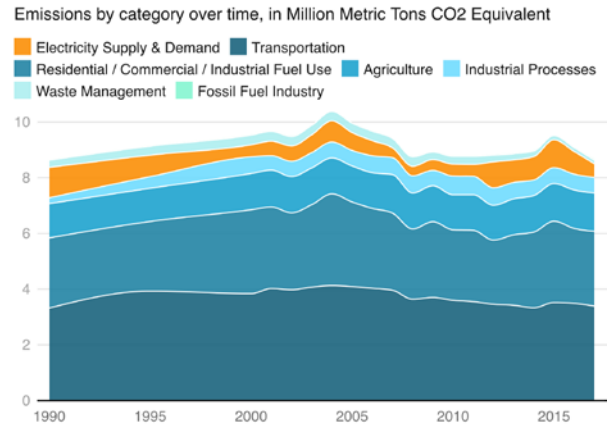


Chart: Erin Petenko · Source: VT Greenhouse Gas Emissions Inventory Update · Get the data · Created with Datawrapper

The bulk of GHG emissions come from the transportation and heating sectors, but declines in these sectors has been slow. This year’s transportation bill includes plans to electrify public buses and incentives for the use of electric vehicles and e-bikes. As a rural state, Vermont records more annual vehicle miles per capita than any state in New England.

In order to achieve the 2025 goals another 14% reduction (from 2019 levels) is needed. This could be achieved by an increase in electric cars on the roads from 4000 to 47,000, and weatherizing an additional 50,000 homes. There are currently 300 electric vehicle charging stations in the state and that number will need to be greatly increased. Other necessary changes include greater fuel efficiency in vehicles, increase in rideshare use and a greater reliance on telecommuting. Additional incentives for telecommuting will come with a \$150M investment in broadband expansion.

Source: VTDigger.org

May 11, ‘Vermont can and must act on our changing climate’

May 16, ‘New data shows Vermont’s GHG emissions declining – slowly’

May 25, ‘How VT could meet its climate goals’



**Promoting Water Safety,
Environmental Education &
Improved Water Quality**

www.LakeRescue.org

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'Lake Restoration and Preservation Fund' are
tax deductible**