

2024 Fall/Winter



The MONITOR

The Newsletter of the Newfound Lake Region Association



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Breaking Ground at Grey Rocks

Newfound's First LakeSmart Awards

Measuring Mercury Pollution

And More!

OUR MISSION

The Newfound Lake Region Association's mission is to protect Newfound Lake and its watershed. The Association – through education, programs, and collaboration – promotes conservation and preservation of the region's natural, social, and economic resources.

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FROM THE EXECUTIVE DIRECTOR



Our property along the Cockermouth River in Hebron has seen a lot of change in the past century—from a summer camp called Camp Grey Rocks to the Newfound Marina and now as Grey Rocks Conservation Area. Since 2011, the property has been under the care and management of NLRA. We've worked to restore its ecological function and develop public access for the benefit of area residents and visitors. Now with walking trails, a nonmotorized boat launch, and native plants and trees that support abundant wildlife, Grey Rocks is a valuable community asset.

The property is currently undergoing another transformation—we've begun construction on the Grey Rocks Conservation Center. From education programs and community events to water quality improvement projects and invasive species protection, this new community space will enhance and grow every aspect of NLRA's work. I am excited to welcome our community to the Grey Rocks Conservation Center this coming spring.

The timing is key. Just as Grey Rocks has experienced changes over the years, so has the broader Newfound Watershed. As we face new conservation challenges from climate change, invasive species, and harmful algal blooms, the conservation center will build our resilience to the changes coming in the future.

NLRA is a community-supported organization. Our efforts on every front are only possible because the Newfound community believes in the importance of protecting our land and water. Thank you for standing with us as we begin an exciting new chapter with the opening of the Grey Rocks Conservation Center and supporting our conservation work for over fifty years.

Rebecca Hanson

Executive Director

Rebecca@NewfoundLake.org



Exploring Conserved Lands

The steep forested hills and mountains above Newfound Lake are a defining characteristic of the Newfound Watershed. These views are evidence of why the lake is healthy. Protecting land and keeping the forested hillsides intact remains the best way to ensure the lake's water quality.

Conserved areas also add to our experiences in the watershed in ways that allow us to connect more deeply with the natural world. Summiting Cardigan, paddling the Cockermouth River from Grey Rocks, and birdwatching at the Hebron Town Forest are all experiences made possible by protecting land.

NLRA has been a leader in land conservation in the Newfound Watershed since the creation of the Newfound Land Conservation Partnership in 2009. With grassroots effort and community participation, along with the meaningful work of our land conservation partners (Lakes Region Conservation Trust, Society for the Protection of New Hampshire Forests, and The Nature Conservancy), the partnership has made land conservation a priority in the watershed with over 25% of the watershed currently under permanent protection.

Everyone benefits from conserved land. From breathing fresh air, swimming in clean water, or taking a moment to get outside, conserved land offers something for the entire community. To help people experience these benefits and think about their own connections to conserved land, NLRA organizes hikes to conserved areas in and around the Newfound Watershed. From family farms to state parks to protected forests, these hikes showcase the range of conserved lands around Newfound and give participants new perspectives on protecting the watershed. In 2024, hikers explored the Hazelton Farm & Forest, Little Sugarloaf, the Cockermouth Forest, Bear Mountain, Plymouth Mountain, and Mt. Cardigan.

To learn more about the benefits of land conservation, including how you can conserve your lands as a landowner, visit: NewfoundLake.org/landconservation.



Connecting the community with the owners of conservation land highlights the different ways land can be conserved and how conserved lands are utilized and enjoyed. This year Paul Hazelton led hikers through his family property, which has been conserved for agriculture, forestry, and public use.



LakeSmart Comes to Newfound

How we live and manage our land can have a big impact on water quality, even when we live miles from the nearest lake or river. In a field or forest, rainwater and snowmelt is naturally filtered into the ground. In our neighborhoods, precipitation hits roofs, roads, and lawns that don't soak up the rain and snowmelt. Instead of infiltrating into the ground, the water travels across the landscape, picking up contaminants like sediment, fertilizer, and pet waste before entering waterways. This contaminated water, known as stormwater pollution, is the biggest threat to Newfound Lake's water quality.

Get LakeSmart!

All watershed residents can do their part to protect our healthy lake. Here's how:

1. Complete the LakeSmart survey.
2. Make lake-friendly updates to your property.
3. Request a site visit.
4. Show off your LakeSmart award!

Get started today at:
[NHLAKES.org/LakeSmart](https://nhlakes.org/LakeSmart)



Homeowners have the power to stop stormwater pollution on their property. NLRA offers resources and assistance to help implement stormwater projects that protect Newfound's waterways—from rain gardens to drip line trenches and more.

This year we are excited to expand our resources for homeowners by partnering with NH LAKES to bring the LakeSmart program to the Newfound Watershed. This program recognizes homeowners who have taken steps to stop stormwater pollution and protect Newfound Lake. It is a free, non-regulatory, and voluntary program that connects people to the information they need to make informed property maintenance and lifestyle decisions to protect water quality. Once a property meets LakeSmart standards, homeowners are recognized with the LakeSmart award.

Joining the LakeSmart program starts with a brief online self-assessment that generates a personalized report with tips to make your property lake-friendly. LakeSmart surveys also connect homeowners with NLRA staff who are available to help apply recommendations. Once any needed updates are complete, a LakeSmart evaluator will certify your property as LakeSmart and you receive the LakeSmart award!

Whether your home is high in the hills or right on the lake, you can protect Newfound's waterways by joining the LakeSmart program. Take the LakeSmart self-assessment survey to see how lake-friendly your property is, and visit our online stormwater resource library for management tips at: [Newfoundlake.org/small-scale-stormwater](https://newfoundlake.org/small-scale-stormwater).

Newfound's First LakeSmart Homes

We're excited to announce the first LakeSmart properties on Newfound! These homeowners have committed to protecting Newfound Lake by implementing stormwater management practices and a lake-friendly lifestyle.

Gregg and Heidi Jeffrey (Bristol)

When big storms washed out their driveway, the Jeffreys realized the damage that stormwater from their hilltop home could do both on their property and to the environment downstream. They contacted NLRA to help them take a broader look at managing stormwater when traditional landscaping approaches failed to solve the issues they were seeing. Today, their LakeSmart home incorporates a pervious front walkway, infiltration gardens, native wildflower plantings, and opportunities for roof and road runoff to soak into the ground without doing damage.



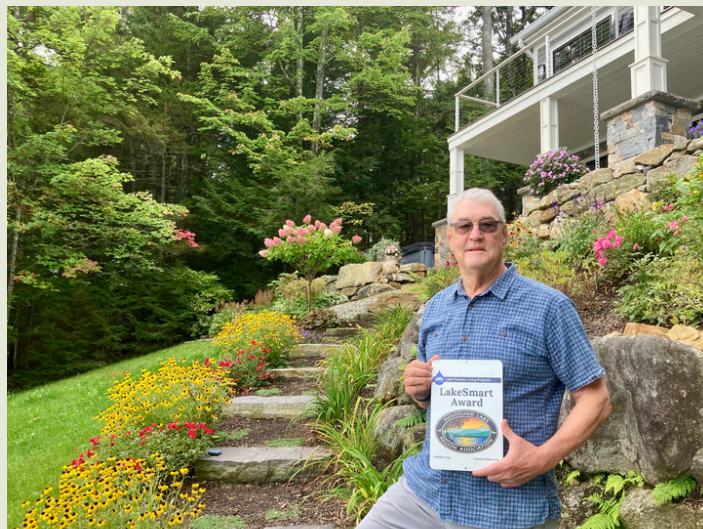
The Smith Family Cottage (Bridgewater)

When a faulty foundation forced a major project that would tear up the yard of their lakeside cottage, the family used the opportunity to rethink the landscaping and make sure their beloved generational cottage has a minimal impact on the lake. They paired new stormwater management efforts addressing roof and driveway drainage with mature landscaping, a low-mow lawn, and a buffer of natural vegetation at the shoreline. The family reports that their LakeSmart journey is worth the effort because they want to protect the lake they love for the next generation.



Chris Laux and Tracy Tilson (Hebron)

Chris and Tracy's newly constructed lakefront home makes use of natural and built terraces to help slow the flow of stormwater, create room for wildlife-friendly gardens, and increase the usability of the steep site. Their home also responsibly deals with roof drainage and has a modern septic system that takes extra steps to remove water-degrading pollutants. When asked why they pursued LakeSmart certification, Chris and Tracy said "We feel good knowing that we've personally done what we can to protect Newfound and the community that is so important to us."



BREAKING GROUND AND BUILDING FOR THE FUTURE

A HOME FOR CONSERVATION

Since Grey Rocks Conservation Area was donated to NLRA in 2011, we have envisioned creating a space that serves the growing conservation needs of the Newfound community. This fall we broke ground on a once-in-a-generation project that will unify the Newfound community behind our vision of a healthy watershed. The Grey Rocks Conservation Center will serve the growing needs of the watershed, the community, and NLRA. It will promote environmental awareness and stewardship, enhance conservation work, and ultimately secure a brighter future for Newfound.



BUILDING TIMELINE

Construction of the Grey Rocks Conservation Center is underway!

1. Design and planning (Complete!)

The conservation center is designed for energy efficiency and models sustainable building practices and development.

2. Building Envelope (Happening Now!)

The building envelope makes use of panelized construction to minimize waste and maximize energy efficiency. It is designed to meet Passive House standards.

3. Interior Finishes and Landscaping (Winter 2024/Spring 2025)

The interior of the conservation center will include a great room for educational programs and exhibits and work space for staff and volunteers. Landscaping will manage stormwater and promote ecological function.

4. Grand Opening (Spring 2025)

We look forward to welcoming everyone to the Grey Rocks Conservation Center, a space dedicated to connecting the community to the Newfound Watershed and NLRA.

RE: GREY ROCKS CONSERVATION CENTER UPDATE



PROJECT FEATURES

- Water Quality Lab
- Stormwater Landscaping
- Pollinator Gardens
- Enhanced Site Accessibility
- Exploratory Activities and Interactive Exhibits
- Energy-Efficient Building and Solar Array

A COMMUNITY INVESTED IN CONSERVATION

NLRA is incredibly grateful to the donors and volunteers that have come together to stand with NLRA and make this once-in-a-generation project possible. Thank you Newfound! We welcome everyone to be a part of this transformative project. Learn more about how you can be involved and make your donation at: NewfoundLake.org/building-for-the-future.

New Hampshire Businesses – Get Your Tax Credit!

Part of NLRA's fundraising success includes a CDFA tax credit award through the NH Community Development Finance Authority (CDFA). New Hampshire businesses can support the Grey Rocks Conservation Center by purchasing tax credits through the CDFA's Tax Credit Program. Participating businesses receive a New Hampshire state tax credit for that contribution that can be applied to the Business Profits Tax, Business Enterprise Tax, and Insurance Premium Tax.

By participating in the Tax Credit Program, businesses can invest their dollars directly into the Newfound community. Contact Rebecca@NewfoundLake.org or visit NewfoundLake.org/CDFA to learn more.

Detecting Mercury Pollution with Dragonfly Nymphs

In partnership with the Merrimack Dragonfly Mercury Project, NLRA is examining mercury levels in the Newfound Watershed. Taking a closer look at mercury pollution, which can have serious consequences for the environment and human health, complements our existing, long-term water quality monitoring initiatives.

Mercury in New Hampshire lakes primarily comes from burning waste and fossil fuels. It falls to the ground in rain and snow and collects in our streams, rivers, and lakes. Once it's in our waterways, it is converted by algae and bacteria into the harmful neurotoxin methylmercury. Aquatic organisms become contaminated with methylmercury when they feed on that algae and bacteria and mercury continues to move up the food chain, becoming more concentrated in larger organisms. In humans, mercury exposure can lead to health problems and learning disorders. It also affects apex predators that consume fish like loons and eagles.

The Merrimack Dragonfly Mercury Project measures mercury levels in dragonfly nymphs (the aquatic larvae of dragonflies) to assess mercury pollution across the Merrimack Watershed, including the Newfound Watershed. Dragonfly nymphs are a great way to monitor mercury levels because they spend their entire larval stage in the water, don't travel big distances, and, as predators, bioaccumulate mercury from their prey.

In September NLRA staff and volunteers headed to Newfound's largest tributaries, the Cockermouth and Fowler Rivers, to collect dragonfly nymphs that will give us a clearer picture of Newfound's mercury levels. Mercury in the collected nymphs will be measured at Dartmouth College, along with samples from other locations in the Merrimack River Watershed, to get a sense of mercury levels in aquatic ecosystems. This effort is part of a larger, nation-wide project to monitor mercury levels and protect human health and the environment.

Photo: Volunteer Tom McShane collects dragonfly nymphs at the mouth of the Cockermouth River so that they can be tested for mercury, giving us a sense of contamination levels in the Newfound Watershed.

This dragonfly nymph is one of 40 from the Newfound Watershed that will go to Dartmouth College to be measured for mercury, part of a regional study and nationwide effort to monitor mercury levels in the environment.

Sample: 2014CE001
24AN15224
Park: Gray's Brook
Site: Cockermouth
Date: 9/13
Length: 22 mm

Dragonfly family:
☐ Libellulidae
☐ Cordulidae
☐ Gomphidae
☒ Aeshnidae
☐ Macromiidae
☐ Cordulegasteridae
☐ Unknown

Ruler: No. 2 118



Serving Up Science at Newfound Science Pub

From stopping pollution on private property to keeping invasive species out of Newfound Lake, conservation requires a community with the knowledge, skills, and motivation to do their part and protect our environment. This concept, known as environmental literacy, is the driving force behind NLRA's education programs. We introduce school groups to the wonders of aquatic invertebrates, lead hikes through conserved land, and train community members on how to spot aquatic invasives. Our goal is to build awareness, understanding, and participation in the work that keeps the Newfound Watershed healthy. This year, NLRA started a new program series, Newfound Science Pub, that builds environmental literacy by connecting Newfound residents and visitors with experts in the fields of conservation, science, and ecology.

Science needs to be accessible to be understood. Newfound Science Pub is more like a conversation and less like a traditional lecture. Everyone can ask questions, offer perspectives, and think about how larger environmental issues play out within the watershed and how the community can respond. This year's science pubs covered a range of conservation-related topics:

Climate Change: Global Issue, Local Impacts

From mud to floods and longer springs, how is Newfound affected by a changing climate? Dr. Alix Contosta, research assistant professor at University of New Hampshire, outlined the changes in the winter-to-spring period she has observed in her research and what that may mean for the local ecosystem.

Stream Restoration

Healthy streams are an important part of a healthy watershed. Plymouth State University Professors Dr. Brigid O'Donnell and Dr. Amy Villamagna discussed their work to monitor brook trout after habitat restoration as part of the Beebe River Restoration Project.

Lake Invaders

Aquatic invasive species threaten lakes across New Hampshire. Amy Smagula, limnologist at NH Department of Environmental Services, and Cole Beale, director of conservation at the Squam Lakes Association, shared the environmental impacts of aquatic invasives and how they are managing them at the state and local level.

Birds of Newfound

Chris Martin and John Cooley, senior biologists at NH Audubon and the Loon Preservation Committee respectively, discussed efforts to monitor and protect birds in the Newfound Watershed and how bird conservation can help the entire ecosystem.

As attendees ask questions about stormwater movement in the watershed, hear about the steps needed to address invasive aquatic species, and share their stories about changing spring weather, science pub participants get closer to the challenges facing Newfound Lake. They also discover the role they play and how they can make a difference.

Join us for a future Newfound Science Pub to learn more about environmental issues and how they impact Newfound Lake, and how you can take action for conservation. Find our upcoming events calendar, including Science Pubs and other programs, at: NewfoundLake.org/events.

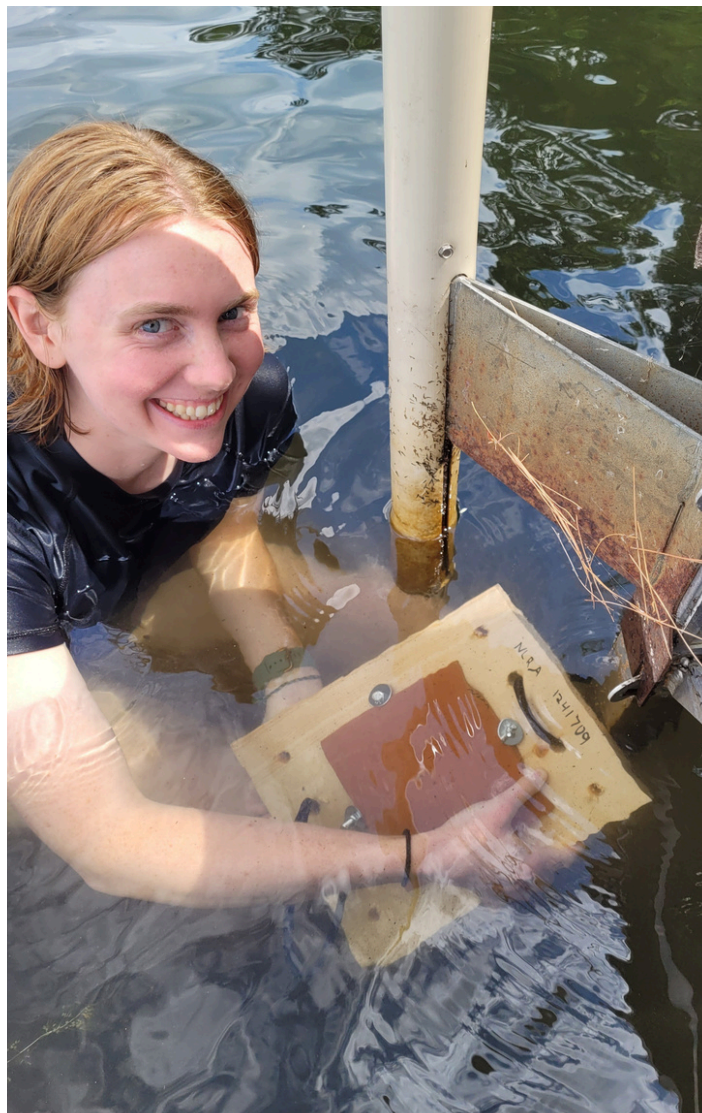
Science pub has helped us gain an understanding of how quickly invasive species can spread and water quality can be decreased. It has helped us understand how we all have a responsibility in protecting the lake that we love. Being proactive is far better than being reactive in defending against the threats to the lake.

Blake and Michelle Robbins,
Science Pub Attendees

Examining Water Quality Near the Shoreline

Since first established in 1986, NLRA's water quality monitoring program has grown to include weekly volunteer-based monitoring of lake water quality and monthly monitoring of 35 of Newfound's tributaries. Data from these efforts support our current understanding of lake health, document how Newfound has changed over time, and guide our conservation efforts that help protect Newfound's water quality into the future.

Water quality monitoring at the lake's deepest areas gives us the best overall picture of lake health and captures trends in several distinct regions and bays. While the most recent water quality analysis underscores just how exceptional Newfound's water quality is, shallower areas near shore may be facing unique water quality challenges that are not captured in the data from our deeper sites.



Above: AmeriCorps Watershed Steward Shannon McCord installs a nearshore monitoring tile on a dock in Hebron. Fifteen clay tiles spent July and August submerged at different locations around Newfound Lake to measure for algae and bacteria growth.

The nearshore area of a lake, known as the littoral zone, extends from the shoreline to the depth where aquatic vegetation can no longer grow. These areas provide crucial habitat for a wide variety of wildlife and protect against shorefront erosion. They are also where direct influences from the land, like stormwater pollution, may be more visible and have a greater impact.

NLRA has partnered with the Squam Lakes Association to begin a nearshore monitoring program that uses algae and bacteria growth to determine potential pollution issues. Aquatic algae and bacteria are often the first group of organisms to respond to increased pollution from sediment entering the lake.

To better understand water quality close to shore, we mounted clay tiles underwater to dock posts and moorings where they sat throughout the summer. In September, we removed the tiles and measured how much algae had grown on them over the course of the season. Through these observations, we can learn how algae growth changes over time and from location to location, as well as identify potential hotspots of pollution.

This year we completed a preliminary study that included 15 sites around the lake. We will have initial results available later this winter.

If you have a dock or shallow mooring that we could include in this program in 2025, contact Conservation Program Manager Paul Pellissier: Paul@NewfoundLake.org. For more information on Newfound's water quality visit: NewfoundLake.org/water-quality.

Below: In September, algae samples were collected from the nearshore monitoring tiles to be weighed and studied. Differences in color and volume hint at varying water quality conditions in different areas of Newfound Lake.



Your Impact is CLEAR

Newfound Lake is worth protecting. Your donation supports the conservation work that keeps Newfound Lake clean and clear—today and into the future.

Ways to make a difference:

- Cash Gifts
- Donations of Stock & Appreciated Assets
- Donations of Cryptocurrency
- Qualified Charitable Distributions
- Grants from Donor-Advised Funds
- Bequests & Estate Gifts
- In Memory and In Honor of

Explore more ways to make an impact and give today at: NewfoundLake.org.



The Newfound Lake Region Association is a registered 501(c)(3) non-profit organization, tax ID # 02-0398396.



Newfound Lake Region Association
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NewfoundLake.org



Supporter Story: Karen Byrne

Karen Byrne is part of the Shore to Shore Society, NLRA's members who have prioritized Newfound Lake in their annual giving for 15 years or more. She also contributes as a volunteer, and joined the ranks of our volunteer water quality monitors this summer.

Our daughter attended camp in Wolfeboro and my husband mentioned to an acquaintance that we were thinking of looking for property on Lake Winnepesaukee. They suggested that we be sure to look at Newfound Lake before we made any decisions! That was 35 years ago and we have never looked back.

I first volunteered with NLRA when the office consisted of a single desk and file cabinet, housed in a space that Basic Ingredients was kind enough to provide. Look how far we have come! My motivation for becoming a volunteer lake monitor this year was to introduce my grandchildren to the importance of maintaining the exceptional quality of Newfound Lake and to know what it takes to maintain that quality. We love our pristine lake and the serenity that we experience here.

Karen Byrne, NLRA Member and Volunteer