the Beacon

Fall/Winter 2024 Lake Sunapee Protective Association

Saving Lake Sunapee's Iconic Lighthouses: Construction Has Begun

LSPA's long standing commitment to Lake Sunapee's lighthouses continues this fall with the start of construction to build new support structures for the Herrick Cove and Burkehaven Lighthouses. Work has begun on the Herrick Cove project, which is scheduled to be completed this year. Work on Burkehaven is scheduled for spring. Hansen Marine, a division of Hansen Bridge LLC, was selected to be the contractor for the project.

Drilling for the new support structure. Photo by Midge Eliassen.

Construction on Herrick Cove lighthouse began in October. Photo by Midge Eliassen.

The crew working on the Herrick Cove Lighthouse has begun drilling the steel pilings for the lighthouse's new support structure down into the bed of the lake. Two of the six piles (four vertical and two at an angle) are now in place. The concrete decking planks have been cast at a location offsite, to be moved into place when the platform is ready. The final steps will be to move the lighthouse off the rotting crib onto the new stable platform and to remove the old crib. The workers installed a turbidity curtain (see orange curtain in photo) to confine sediment during the drilling process and are working diligently to minimize impacts to the lake during construction and demolition of the old crib. The design of the new platforms is the most cost-effective and long-lasting (60+ years) answer to the perpetual cycle of replacement of the old wood and rock cribs every 15 - 20 years. This solution is also preferred by NH Department of Environmental Services since it allows the lake's waters to move without obstruction on the lake bottom.

We are grateful to each of the 282 donors who have already contributed to the Lighthouse Fund in support of this work. Sufficient funds have now been raised to complete the building of the new support structures for the Herrick Cove and Burkehaven lighthouses. (Loon Island Lighthouse stands on a natural rock island which remains a sound base.) Additional donations made to the Lighthouse Fund will support the long-term maintenance of all three of the lighthouses on Lake Sunapee, ensuring that these Lake Sunapee icons are cared for now and into the future. To learn more about the campaign to save Lake Sunapee's lighthouses, please go to lakesunapee.org/lighthouses.

LAKE SUNAPEE PROTECTIVE ASSOCIATION

LSPA

LSPA's Mission

LSPA, founded in 1898, is dedicated to preserving and enhancing the environmental integrity of the Lake Sunapee Region, especially its lakes and watersheds, through education, research, and collaborative action.

Board Officers

President - Karen Zurheide
1st V-President - Kirk Bishop
2nd V-President - Barbara Calhoun
Secretary - Laura Davis
Treasurer - Mike Jesanis

Directors:

Nick Baer, Lorraine Bolsinger, Larry Briggs, Betsy Cetron, Carrie Deegan, Susan Fine, Stu Greer, Neil Hause, Melody Johnson, Jack Kutner, Frank Lemay, Dave Macdonald, Nancy Marks, Robert Martin, Christina O'Halloran, Mike Morgan, Pam Olney, Jim Owers, Deb Putnam

Town Representatives:

Tom Cottrill, New London
David Rhodes, Newbury
Mike Thomas, Springfield
Becky Rylander, Sunapee
David Beardsley, Sunapee alternate

Staff:

Elizabeth Harper - Executive Director
Kathleen Stowell - Education Director
Geoff Lizotte - Watershed Director
Nancy Heckel - Environmental Educator
Teriko MacConnell - Water Quality Lab Manager
Susie Burbidge - Water Steward & Program Coordinator
Summer Sanderson - Communications & Development Coordinator
Becky Bense - Office Manager
Julia Danielsen

Lake Sunapee Protective Association
Center for Lake Studies
63 Main St., Sunapee Harbor
Mail: PO Box 683, Sunapee, NH 03782
Phone: 603-763-2210
Email: lspa@lakesunapee.org
Website: www.lakesunapee.org

Visit our website for more information about upcoming events and volunteer opportunities.

From the Center for Lake Studies

Elizabeth Harper
Executive Director

This fall has been an important time for reflection and for thinking deeply about our approaches to the challenges that lie ahead. As the oldest environmental organization in New Hampshire, LSPA has a long history of rising to meet myriad challenges proactively, collaboratively, and with future generations in mind. Now, with rising temperatures, more frequent and intense storm events, increased development, and an ever-increasing prevalence of cyanobacteria blooms across New Hampshire, we need to maintain our focus, hone our strategies, and continue to work together.

What gives me hope in these challenging times? Our staff, our board members and volunteers, the hundreds of LSPA members throughout the watershed and beyond, our partner organizations, our scientific collaborators, town staff and board members, our legislators, every person who attends our trainings, workshops, and presentations, our loon watchers, weed watchers, water samplers, Lake Hosts, interns, students coming to the center for field trips, grandparents bringing kids to Nature Exploration Story Time – in short, our community, made up of hundreds of people who love and value our lakes, ponds, and streams, and the incredible environment that surrounds us.

Our community collaborations have powered our momentum and allowed us to achieve the majority of our strategic goals in a short amount of time. We have already completed over 90% of the action items in our 2022 – 2027 Strategic Plan, including 92% of our 2020 – 2030 Watershed Management Plan action items. In September, the LSPA Board of Directors conducted a strategy session to guide the prioritization of our work in the months and years ahead, with a strong focus on implementing a reassessed version of our Watershed Management Plan. LSPA staff contributed to assessment and planning efforts during our November retreat, and board, staff and volunteers will work together in upcoming committee meetings to coordinate the many initiatives, projects and events that comprise our work. All hands are on deck as we plan for the future.

As an organization, we are well-poised to meet the challenges ahead with science-based strategies, a collaborative community approach, and with the positivity and joy that come from working together to do good things for our environment and our community.

Thank you for being an important part of our work,

Elizabeth Harper, PhD.
Executive Director

A Publication of **Lake Sunapee Protective Association** Founded 1898
All articles prepared by LSPA staff unless noted.

New Board Members

Mike Morgan

Following a professional career in both the federal government (CIA) and the private sector including Chemical Bank, Raytheon, and Pricewaterhouse Coopers. Mike and his wife Laurie moved full time to their New London home on Little Lake Sunapee in 2016. Mike's exposure to the area began during his time as a Dartmouth student and continued off and on for the many years he was overseas, and so it seemed inevitable that he would eventually be drawn back. Laurie agreed after just one October weekend visit.

In 2018, not feeling like full retirement was nigh, Mike and Laurie opened the Blue Loon Bakery in New London with the aim of helping to foster the sense of community that already existed, built around artisan bread and pastries. Laurie remains the mainstay behind the Bakery, and Mike continues to do consulting work in the geopolitical space, as well as serving on two advisory boards of overseas companies. Mike has been active in support of a variety of lake causes, including a number of years as a Weed Watcher on Little Lake Sunapee and Board member of the Little Lake Sunapee Protective Association where he worked to strengthen the collaboration with LSPA. Last Fall, he joined the LSPA Legislative Committee, as well as the Lake Sunapee Region Watershed Initiative. Mike also serves on LSPA's Watershed Committee.

Mike Thomas

Mike is a Registered Civil and Environmental Engineer with a 40-year career focusing on geotechnical engineering, water quality, solid waste management facility design and construction, and environmental remediation. During his career Mike has been a consultant, an owner's engineer and most recently a senior engineer for a large environmental remediation contractor. Mike was born and raised in Michigan, attending the University of Michigan and graduating with his BSE/MSE in 1983. Mike has lived and worked in San Francisco, California and Richmond, Virginia.

Mike met his wife, Kathy MacMillin Thomas in 1991 and was immediately introduced to the Sunapee Region where Kathy and her family had been summering since the early 1970's. In 2017 they decided the Sunapee Region was calling them and acquired property on Colby Hill in Springfield. In 2020 they began construction on their retirement home and have been full-time Springfield residents since the summer of 2021.

Mike and Kathy have three boys who reside in Virginia, Colorado and New Hampshire. Mike joined the LSPA Watershed Committee in 2022 and soon thereafter joined Save Lake Sunapee Watershed and the Lake Sunapee Region Watershed Initiative.

Mike and Kathy also lead the Little Lake Sunapee Water Quality Team

performing VLAP Sampling and are the point people for cyanobacteria issues on Little Lake Sunapee.

Mike and his wife enjoy a multitude of outdoor activities including skiing (downhill and cross country), snowshoeing, hiking, biking, swimming and golf.

Board Strategic Session

LSPA's Board conducted a strategic planning session in September focused on prioritizing our work. With the increasing challenges that lie ahead for our lakes ponds and streams, it is more important than ever that we are effective and efficient in our approaches

LSPA Board and staff remain dedicated to our approach integrating education, research, and collaborative action into all that we do.

Director Susan Fine and Board President Karen Zurheide engaging in one of the strategic planning exercises.

Next steps include a reassessment of the watershed management plan and strategy sessions around fundraising, as well as a reassessment of our education programs.

Three LSPA Past Presidents attended the strategic planning session. Past President Midge Eliassen is pictured here.

Water Quality Improvement Projects

LSPA works in collaboration with towns and landowners to address erosion and sedimentation issues that impact the water quality of the lakes and ponds in the Lake Sunapee Watershed. Forty-two sites were identified in the 2020 Lake Sunapee Watershed Management Plan which outlines strategies to meet our 10-year nutrient reduction goal to maintain the high-quality waters of our lakes and ponds. One of these sites in need of best management practice implementation was Bucklin Beach on Little Lake Sunapee in New London.

Volunteers from LLSPA adding native plants to the newly constructed vegetated swale.

The Town of New London Department of Public Works employees constructing one of the dripline infiltration trenches.

LSPA Watershed Director, Geoff Lizotte, and LLSPA Vice-President, Nancy Girald, discuss the vegetated swale.

Bucklin Beach Stormwater Improvement Project

LSPA partnered with the Little Lake Sunapee Protective Association (LLSPA) and the Town of New London Department of Public Works to complete the final phase of this project in early October. Stormwater best management practices (BMPs) implemented by the Town and community volunteers included the construction of dripline infiltration trenches, a vegetated swale and the addition of native plantings. These BMPs, along with a rain garden that was constructed in June, are designed to slow down runoff, drop out sediment and temporarily store stormwater. These measures will reduce beach channeling and prevent pollutants from reaching Little Lake Sunapee. Costs of this project were shared by LSPA, Little Lake Sunapee Protective Association and the Town of New London.

Thank you to the volunteers from LLSPA who added the native plants to the vegetated swale.

Professional Workshops Promoting Water Quality

This fall, LSPA collaborated with our partners at the Merrimack County Conservation District, Sullivan County Conservation District and the UNH Technology Transfer Center (UNH T2) to bring three different workshops to LSPA's Center for Lake Studies. The goal of the workshops was to provide professionals in our region with cutting-edge training to protect water quality. Landscapers, property managers, builders, and septic pumpers attended the workshops alongside local residents, members of town boards, and LSPA Watershed Committee volunteers. Participants learned a wide array of approaches they can use throughout the Lake Sunapee Watershed and beyond to reduce erosion and prevent water quality degradation.

Emma Erler, Lead Horticulturalist at the Squam Lakes Natural Science Center, explained the importance of using native plants in the landscape.

Randy Shuey from Northpoint Engineering shares information about different types of erosion control practices and the maintenance required for small construction sites.

Erosion Control Workshop

In September, close to 60 people attended an erosion control training workshop and field day at LSPA's Center for Lake Studies. They learned about the latest technologies aimed at protecting water quality and addressing the growing challenges posed by more frequent and intense storms. The morning session included speakers from Plymouth State University, UNH Stormwater Center, NH Department of Environmental Services and EJ Prescott. In the afternoon, attendees rotated through five field stations to learn how to reduce erosion at project sites. Leaders of the field stations included experts from the Squam Lakes Natural Science Center, Gradient (Landscape Architects), Northpoint Engineering, Team EJP and an independent Erosion Control Specialist. Continuing education credits were made available to participants through the NHDES Subsurface Bureau.

Snowfighters Seminar

In mid-October, LSPA hosted a Snowfighter's Seminar geared towards snow removal contractors and property managers. This workshop explained strategies to minimize the use of chloride products on our roads and shared practices that help reduce impacts on water quality, such as calibrating equipment correctly, reviewing application rates and using alternatives to road salt.

Septic System Workshop

The septic system workshop, held in mid-November, was geared towards septic designers, installers, inspectors and Town health officers. A retired USDA Soil Scientist reviewed soil considerations in septic system design, a Regional Septic System Inspector from NHDES explained NH state regulations and a Project Manager from Pierre Bedard and Associates discussed the best designs for septic systems on shorefront properties. Properly designed and maintained systems prevent pollution in our groundwater and waterways which is vital to public health and to water quality.

Mike Everhart, Erosion Control and Stormwater Specialist sharing information on how to protect shorelines from erosion.

Educational Outreach Learning and Action

LSPA's educators have wrapped up a highly successful summer of community engagement and launched into a busy fall season of field trips and workshops here at the Center for Lake Studies.

Summer highlights included:

Love Your Lake Day

LSPA's annual outreach event drew people of all ages to the Center to learn, engage with volunteers and staff and enjoy a beautiful day in the Harbor. This open house day gives LSPA a chance to connect with members and non-members alike to share information about watershed protection, water quality and the positive actions we can all take to benefit both.

Natural History Cruise and Full Moon Cruise

Two wonderful lake cruises rounded out LSPA's summer programming for adults. Participants learned about our watershed's wildlife and nocturnal mysteries while being out on the lake. These beautiful evenings highlighted natural connections all around us and the actions we can all take to have a positive impact on the watershed. Beautiful sunsets, loons, shimmering water, and good company made these events a wonderful success! Thank you to the staff of the M.V. MT. Sunapee and Captain Kara for two wonderful excursions!

School Programs

The fall sees LSPA Educators returning to work with area students and teachers. The strength of the school program is the sequential nature of our offerings. Seeing students multiple times as they progress through the years of their educational journey allows the program to build on and reinforce important watershed concepts that will be carried into adulthood. Our Watershed Discovery Days at the Center provide fifth grade students, their teachers, and adult volunteers with a full day of experiential learning about the water cycle, watershed dynamics, runoff and natural water filtration.

Nature Exploration Story Time (NEST)

Every Tuesday morning the Center is filled with the excited voices of participants enjoying our most successful program for young children and adults. The adults are parents, grandparents and caregivers and the children are enthusiastic and energetic! Each session explores a different natural topic both inside and outdoors and gives both children and adults the opportunity to expand their knowledge of these themes.

While the styles and methods of LPSA's educational outreach programs are varied, the messages are consistent. The content of every program aims to fulfill the mission of preserving and enhancing the environmental integrity of the Lake Sunapee region.

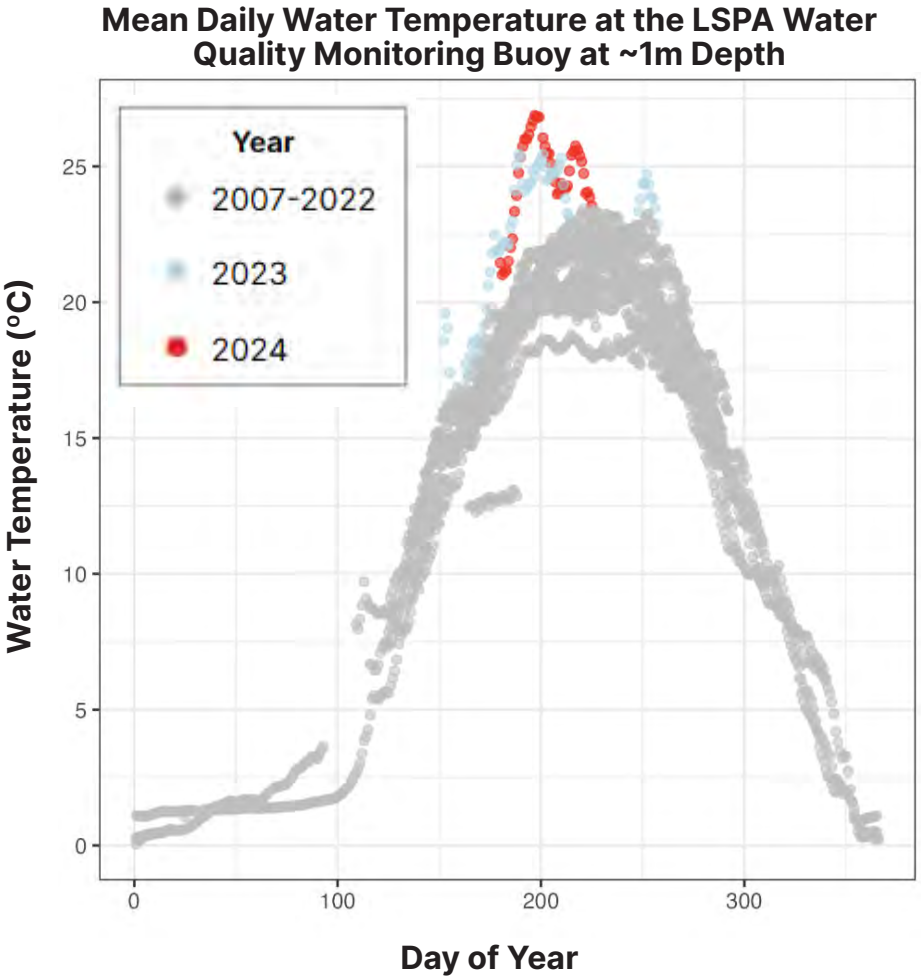
Virginia Tech Calhoun Fellows

Katie (right) is a graduate student doing research on phytoplankton and cyanobacteria, focusing on forecasting algal blooms in lakes and reservoirs. Sean (left) is a junior majoring in environmental science.

This past summer, VT-LSPA Calhoun Fellows Katie Hoffman and Sean Kenny furthered multiple research and community outreach projects at Lake Sunapee. Katie is starting her second year as a Ph.D. student, and Sean is a junior at Virginia Tech. Their research addressed several issues of concern to LSPA and the Lake Sunapee community, including cyanobacteria blooms and increasing water temperatures. They communicated their research with community members and volunteers on and off the water, at LSPA events, and through the LSPA live buoy page. Over the summer, Katie and Sean collected water quality monitoring data at three sites on Lake Sunapee: Herrick Cove, Sunapee Harbor, and the LSPA water quality buoy at Loon Island.

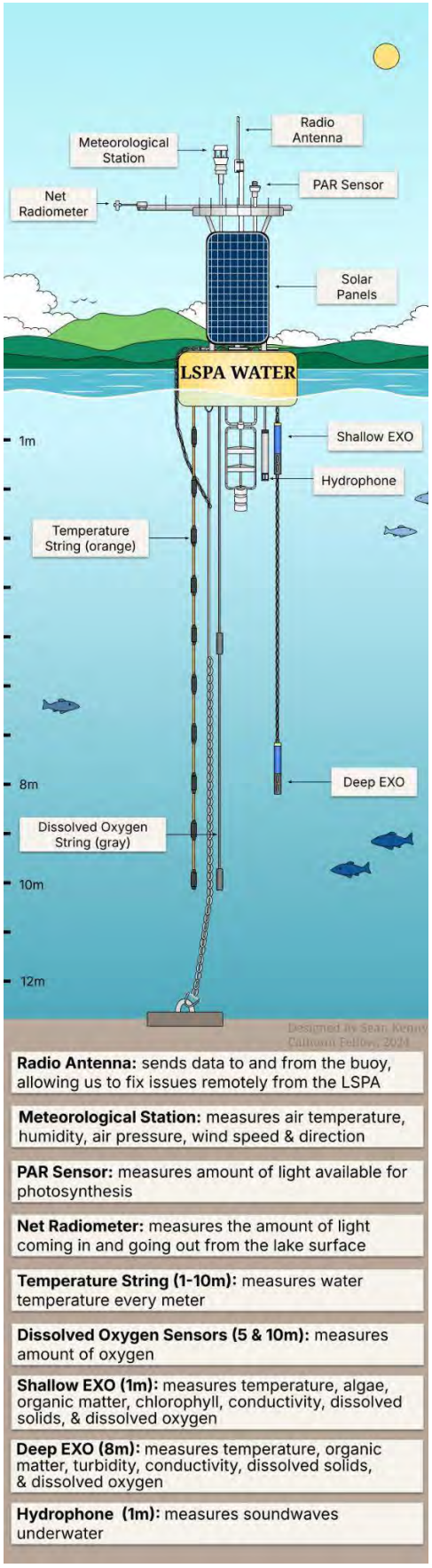
These data are being used to inform Katie's chlorophyll forecasting research as well as other research projects. Notably, Katie and Sean observed that the lake exhibited its warmest mean daily water temperature at one meter depth this past summer, relative to the 2007-2024 buoy monitoring period. Katie and Sean also saw an increase in chlorophyll around 8-10 meters, which indicates that there is an accumulation of phytoplankton below the surface of the water. They will be working with LSPA to continue to examine these trends in subsequent summers.

In addition to their research, Katie and Sean worked closely with LSPA staff to help get the new buoy up and running. A large part of their summer involved checking on the buoy's new instruments and sensors and ensuring that the buoy transmitted data correctly to the computer at LSPA's Center for Lake Studies. Once the data arrived at LSPA, Katie worked with the buoy team to ensure that LSPA's webpages were automatically updated with current buoy conditions. Katie continues to work closely with Watershed Director, Geoff Lizotte, to ensure that the buoy data are "live" and constantly updating.



The figure above illustrates the average daily water temperature at 1 meter depth recorded by the LSPA water quality buoy over time. The summer of 2024, shown in red, was the warmest summer ever documented by the LSPA water quality buoy. The summer of 2023, shown in light blue, was the second warmest on record.

LSPA's New Water Quality Buoy



Grapic designed by LSPA-VT 2024 Calhoun Fellow, Sean Kenny.

New Water Quality Buoy Timeline

Deploying the new buoy required the expertise and collaboration of scientists and volunteers.

May
Buoy launch

May
Troubleshooting

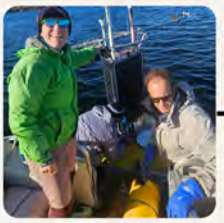
June
Fixing wiring

June
Deploy buoy to Loon Island

July
New buoy chain deployed

July
Testing and updates

August
Buoy is fully functioning



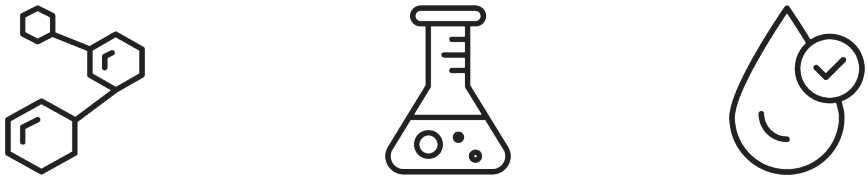
October
Buoy brought to its winter location in Sunapee Harbor

Check out LSPA's Live Buoy webpage: lakesunapee.org/live-buoy

Summer 2024 in the Water Quality Lab

LSPA's water quality lab is housed at Colby-Sawyer College and managed in partnership with the New Hampshire Department of Environmental Services (NHDES). The lab analyzes water samples from over 24 lakes in New Hampshire and regularly conducts water quality tests at 80 sites in the Lake Sunapee Watershed. This annual sampling process contributes to a long-term data set that helps us understand water quality trends over time and across the state. Dozens of dedicated Volunteer Lake Assessment Program (VLAP) volunteers collect the water samples and bring them to the lab throughout the summer and into the fall each year.

This year, Lab Manager, Teriko MacConnell along with interns Ryan Bassi, Danny Cronin, Noelle Killarney and Vinny Leone logged a total of 865 water samples, analyzing up to seven different parameters per sample. Some tests are a simple procedure where the instrument's probe is placed in the sample, interns push a button, wait a bit, and get a result. Other tests are much more involved, requiring many steps and taking as long as 15 minutes per sample. The most time-consuming test is for total phosphorus, which requires six hours to run the analyses for the weekly samples. Another complicated test is chlorophyll-a, which involves a vacuum pump, a centrifuge and a spectrophotometer. These processes are time consuming and involve many steps, but they are essential in helping us track the long-term trends in all 24+ lakes that use this lab.



2024 Water Quality Lab Recap:

- 865 Samples processed
- 657 pH Analyses
- 657 Conductivity
- 657 Turbidity
- 657 Total Phosphorus
- 71 Acid Neutralizing Capacity (Alkalinity)
- 516 Chloride
- 219 Apparent Color
- 28 Chlorophyll-a
- 130 *E.coli*
- 3592 Analyses conducted

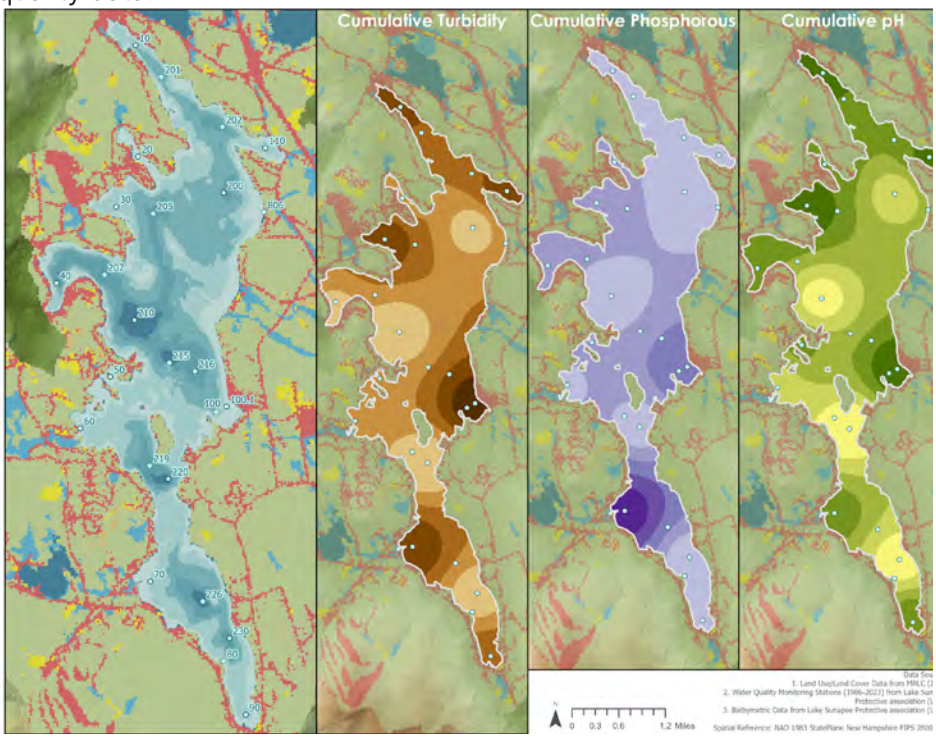
Evaluating the Impact of Land Use Changes on Water Quality at Lake Sunapee

GIS Analyst Alyssa Spencer is pursuing a Masters degree in Environmental GIS at Unity College. She recently completed an impressive GIS mapping project using LSPA's long-term water quality data.

Her project "explores how land use changes have affected water quality in Lake Sunapee, New Hampshire, focusing on pH, total phosphorus (TP), and turbidity from 1986 to 2023." Using data from 25 of the water quality stations in LSPA's long-term data set, Alyssa analyzed trends over time and created interpolation maps illustrating water quality metrics and their relationship to land use changes. The concluding statement of Alyssa's project report is an excellent reminder of the importance of our work:

"As development continues, even on a small scale, ongoing efforts to manage runoff and pollution sources will be critical in preserving Lake Sunapee's health for years to come."

Scan the QR code to see Alyssa's project report on her website.



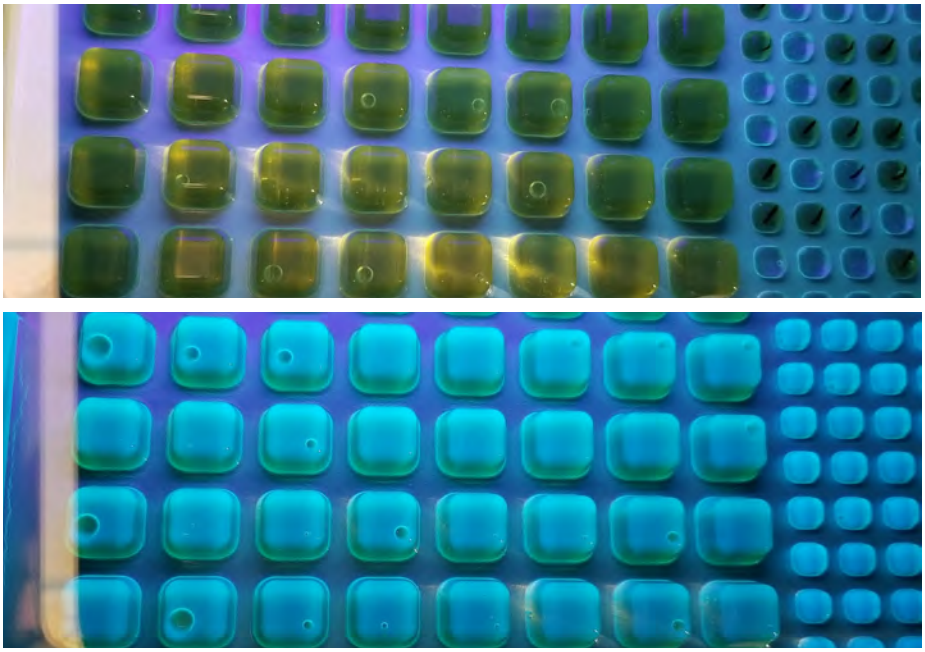
Developed areas are indicated in red in the maps above. Darker shades of brown (turbidity), purple (total phosphorus) and green (pH) indicate higher values.

E.coli Blitz Summer 2024

LSPA Interns Vinny Leone, Ryan Bassi, and Noelle Killarney with the *E. coli* samples before they were processed.

Thanks to the Burkehaven Family Foundation for funding our new *E.coli* testing equipment. LSPA interns and staff were able to conduct a survey of all of Lake Sunapee's in-lake and near-lake tributary stations in a single day this past summer. We called July 22 our '*E. coli* Blitz Day'.

After a morning of sampling the deep sites for our regular water quality samples and our additional *E.coli* samples, the crew split into two teams. One team continued to every cove site to sample for *E.coli*, and the other team sampled each tributary location. We collected a sample and a field duplicate at all locations (except one brook that only had enough flow for one sample), resulting in a total of 55 samples that were processed in the lab that afternoon and evening. Processing this number of samples in a single day was only possible due to our new *E. coli* testing equipment which substantially reduces the amount of time required to run each sample.



The photos above show two *E. coli* samples after being processed. When *E.coli* is present, the sample will light up under UV light as shown in the bottom photo.

The in-lake results were reassuringly consistent. Most stations had a reading of 0 colonies per 100 ml. None of the in-lake stations had over 15 colonies per 100 ml. For perspective, the NHDES standard for Class A waterbodies, is less than 153 colonies per 100 ml. Class A waters are high-quality surface waters that are suitable for recreation and for use as drinking water sources when adequately treated.

The tributaries showed much more variability, with none having a zero count and all but one having less than 100 colonies per 100 ml. Muzzey Brook in Georges Mills had the highest reading of over 2000 colonies per 100 ml. This is the stream that didn't have enough flow to take a second sample, so we did not have a field duplicate at this site to verify our reading. We followed up with a sample the next week, and the reading at that point was 307 colonies per 100 ml. This count is high compared to in-lake sites, but the NHDES standard for Class B waters, which is what our tributaries are considered, is less than 406 colonies per 100 ml. LSPA will continue to monitor this stream in the future. *E. coli* levels tend to be highly variable over space and time. Our new *E. coli* equipment allows us to gather the data needed to better understand this important metric of water quality.

LSPA Intern Danny Cronin processing *E. coli* samples.

Lake Sunapee Successfully Fledged Another Loon Chick in 2024!

In late June, Lake Sunapee welcomed another loon chick in the northern end of the lake! With a trail camera on the nest raft capturing still photos at regular intervals, we were able to get a closer look at the daily behavior of the nesting loons, much of which involved patiently sitting on the egg(s)! We were able to confirm the leg bands on the female member of this pair who was initially banded in 2019. While we don't know exactly how old this loon is, she is assumed to be at least 12 years old given that loons in New Hampshire typically start breeding at six years of age.

A second pair of loons abandoned their nest after their egg failed to hatch. The egg was collected and taken to the Loon Preservation Committee (LPC) where it will be stored for use in future research. It was just one of the many loon eggs that were collected this summer from failed nests across New Hampshire.

One of the loons from the Herrick Cove pair. Photo by Midge Eliassen.

Lake Sunapee's lone loon chick was spotted most recently in October and was still doing well. Several other loons have been seen on the lake this fall. Some are resident loons and others are visitors who have stopped in on the way to their ocean wintering grounds.

As the ice begins to close in on Lake Sunapee this winter, keep an eye out for any loons who may have stayed too long. Loons need a large area of unfrozen water to be able to take off from a lake. Occasionally they become trapped as ice cover reduces the amount of open water. If you see a loon that might be trapped, please call LSPA at 603-763-2210 right away to report it.

Special thanks to the many volunteers on LSPA's Loon Committee who kept a close eye on the loons all season. Volunteers submitted observations to "captains" this year who then sent monthly summaries to LPC. These observations augment season-long observations made by LPC's field biologist, helping to paint a more complete picture of the loon activity on the lake.

Lake Sunapee Remained Free of Cyanobacteria Blooms Again in 2024

In another record-breaking year for cyanobacteria warnings in New Hampshire, Lake Sunapee once again remained free of toxic cyanobacteria blooms. Blooms were reported, however, and warnings were issued by NHDES for two waterbodies in the Lake Sunapee Watershed: Baptist Pond and Little Lake Sunapee.

Cyanobacteria bloom on Baptist Pond this past summer.

Cyanobacteria blooms are most likely to occur when nutrient levels in lakes are high. You can reduce the chances of toxic cyanobacteria blooms occurring through these actions:

- Do not apply fertilizer within 100+ feet of shorelines and streams
- Pump your septic tank every three years and inspect the whole system frequently
- Pick up your pet waste
- Direct stormwater and roof runoff into rain gardens and natural areas
- Minimize your lawn area and plant a wide vegetated buffer (at least 50 feet or more) if your property is along the water's edge

Another Busy Year for Our Lake Hosts!

This season, our Lake Hosts logged over 2,300 hours conducting more than 5,500 courtesy boat inspections for boats coming and going from Lake Sunapee. The most critical inspection came on the dreary morning of Memorial Day when a Lake Host found a piece of curly-leaf pondweed on the trailer of a departing boat. A few days later, LSPA staff member Susie Burbidge and Dave Beardsley, Chair of LSPA's Aquatic Invasive Species (AIS) Committee, kayaked near the boat ramp in Georges Mills to look for signs of the invasive plant. Sadly, they found several curly-leaf pondweed plants that day, all of which were at the end of the ramp encircled by a ring of native water celery (also called tapegrass). Amy Smagula, Exotic Species Program Coordinator at NHDES quickly connected us with a trained dive team who hand-removed a total of 15 plants the following week. This save would not have been possible without our partners at DES and at NH LAKES, who oversee the Lake Host program. LSPA supports the Lake Host program at Lake Sunapee's boat ramps through a combination of funding sources including membership donations, a grant from NH LAKES, and funding from the Towns of Sunapee, Newbury and New London in support of our invasive species prevention programs.

Lake Host Renee Brandon.

Bettina Wise,an Invasive Watch volunteer, joined a group paddle on Lake Sunapee in late July.

Lake Sunapee's Invasive Watch Volunteers on High Alert Following Curly-leaf Pondweed Scare

LSPA's Invasive Watch volunteers were put on high alert as soon as curly-leaf pondweed was discovered in Lake Sunapee this summer. More than 50 volunteers kept a very close watch all summer long, paddling or swimming in their designated section of shoreline to look for invasive plants and animals. Thankfully they did not see any signs of curly-leaf pondweed in the lake. This large network of trained volunteers is a crucial part of our strategy to keep Lake Sunapee invasive free!

Spiny Water Flea

We are keeping a close eye on the situation with Spiny Water Flea, a microscopic crustacean that was discovered for the first time in New Hampshire in the fall of 2023, and whose numbers are on the rise in Lake Winnipesaukee. This threat is yet another reason to always "Clean, Drain & Dry" your boat, trailer and recreational gear including, fishing rods and lines, between waterbodies. So far, Spiny Water Flea has not been detected in the Lake Sunapee Watershed.

Invasive Watch Group Paddles

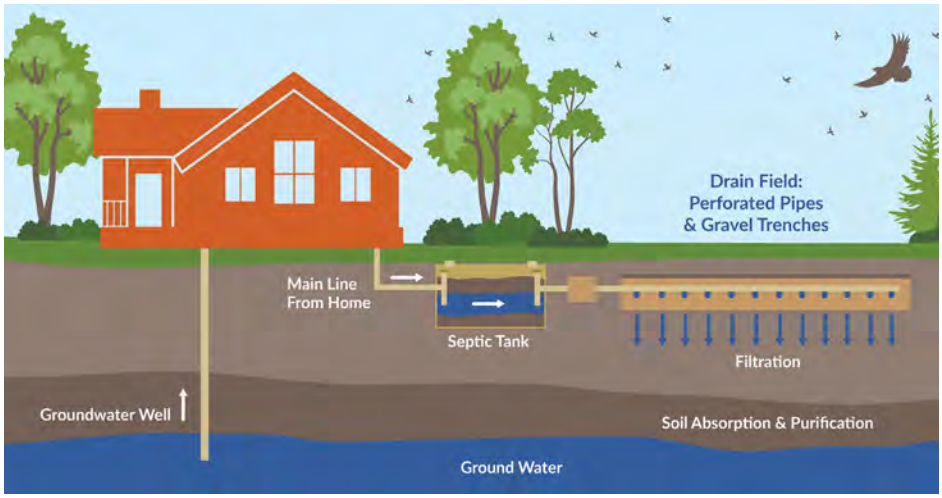
Susie Burbidge and Dave Beardsley led two group paddles this summer, one on Mountainview Lake and one on Lake Sunapee. These events were a big success again this year, providing volunteers an opportunity to meet each other, share stories and identify some of the more common native plants found in those lakes.

Help us Keep Lake Sunapee Invasive-free!

If you are interested in volunteering as a Lake Host or an Invasive Watcher on Lake Sunapee, please send an email to Susie at susieb@lakesunapee.org. If you live on or visit another waterbody, we can also help connect you with the invasive species coordinator there so you can get involved.

Don't Neglect Your Septic System

Failing septic systems are both a health issue and a water quality issue. Septage from poorly maintained septic systems can contaminate drinking water sources and areas where swimming and boating take place, exposing us all to unhealthy levels of bacteria and viruses. Nutrients like phosphorous and nitrogen that leach into waterbodies feed cyanobacteria and can lead to toxic blooms that are harmful to people, pets and wildlife. Fortunately, these problems have a relatively simple solution. When homeowners maintain their systems properly, these issues can be avoided. While many homeowners and businesses are diligent in maintaining their septic systems, it is not uncommon for people to be unaware of proper maintenance, and even those who know that their systems need to be serviced often forget to pump their tanks regularly. Multiple unmaintained septic systems throughout the Lake Sunapee Watershed fail every year, resulting in septage backing up into people's homes, saturating their lawns, running onto neighboring properties, and contaminating water sources.



Septic Regulations are on the Horizon in Three Additional Watershed Towns

Momentum is building throughout towns in the Lake Sunapee Watershed to address the issues posed by poorly maintained septic systems. Local rules adopted at the town level can help to educate and remind homeowners about regular septic maintenance. The Town of Sunapee adopted septic regulations in March of 2023 that require homeowners in the shoreland overlay district to pump their systems at least every three years, with some exceptions. Similar regulations are now being considered in New London, Springfield and Newbury. Springfield's Health Officer recently proposed to the Springfield Selectboard that septic systems in the Shoreland Overlay District should be required to be pumped and inspected once every three years. He also suggested including the following statement in the revised policy: *"Everything in the watershed ultimately drains into our groundwater, streams, and lakes. Any leaking or failing septic system regardless of proximity to our lakes can have a negative impact on water quality. This is a community issue that requires all residents to participate. Every septic system* ***should be*** *pumped and inspected a* ***minimum of every three (3) years.***"

Waterfront Property Transfers Now Require Septic Evaluations

As of September 1, 2024 all buyers of waterfront property with septic systems in the protected shoreland in New Hampshire will be required to have a professional septic system evaluation conducted by a state licensed evaluator in advance of the sale. Reducing wastewater pollution reduces risks to public health and reduces the risk of other negative impacts, such as cyanobacteria blooms.

Scan the QR code for more information from NHDES.

How can you help?

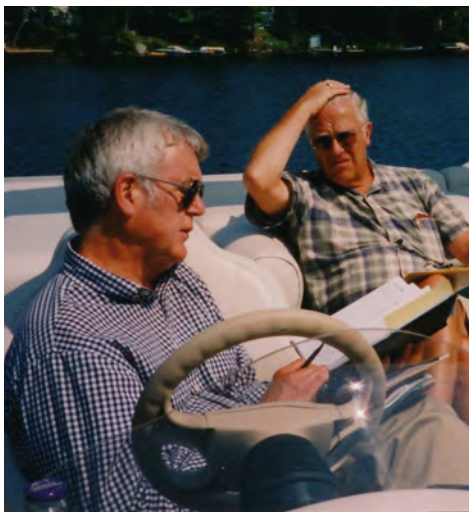
- Don't wait for septic rules to be implemented in your town – make sure your septic system has been pumped within the past three years.
- Support the implementation of septic regulations in your town. Show up to town meetings to be part of the conversation.
- Help to inform your friends and neighbors in the watershed about proper septic maintenance.

Learn more on our website
lakesunapee.org/septic-systems

You can also pick up informational cards on septic maintenance at our Center for Lake Studies at 63 Main Street in Sunapee Harbor or at Town Offices throughout the watershed. Feel free to pick up extras to share with your friends and neighbors!

Remembering Gordon Marshall

Gordon Marshall dedicated over 30 years to LSPA as a volunteer, board member and as LSPA's Executive Director from 1998 – 2003. Under his capable leadership, LSPA grew as an organization and effectively rose to meet many important challenges. During this time, LSPA eradicated invasive milfoil, initiated the "Weed Watcher Task Force," collaborated with Ausbon Sargent to protect the Red Water Creek Wetland, established the Centennial Endowment Fund, and ensured support for a full-time professional staff. LSPA would not be the organization that it is today without Gordon's leadership during this crucial time.



Gordon Marshall and another past LSPA Executive Director Cliff Vermilya. Photo by Midge Eliassen.

Gordon pioneered LSPA's emphasis on the watershed surrounding the lake, even before he served as Executive Director. He chaired a special Celebrate Your Watershed weekend during our Centennial celebration in 1998, introducing the watershed concept to many. He led LSPA in the implementation of its first watershed management plan, undertaking many significant runoff and erosion reduction projects. We continue to use these strategies in our work today, regularly revising the watershed management plan and identifying and implementing new projects.

Gordon Marshall and his wife, Betty Herrick, in 2023. Photo by Midge Eliassen.

As an educator himself, Gordon prioritized LSPA's education mission. He supported Education Director, Kathleen Stowell, in establishing school programs and curricula that have reached many hundreds of students in local schools. He also supported the development of programs to reach adults, including educational workshops for those working on the land throughout the watershed.

Gordon partnered with volunteer and Vice President Walt Goddard to establish LSPA's milfoil prevention program. Together they started the Weed Watch volunteer team and created the Launch Monitor program to inspect boats coming into Lake Sunapee and prevent invasive species introductions. This innovative approach became the statewide Lake Host program that is now run by NH LAKES, and every year since, LSPA has hired Lake Hosts and trained volunteer Invasive Watchers, ensuring that this important work continues.

Gordon recognized and valued the roles of LSPA staff and volunteers in achieving our mission. When he became Executive Director in 1998 he said, "The critical element in the success of LSPA has been the time and energy that have been given by its members. It has demonstrated the value and importance of volunteers, and I will work to promote this special quality in the future." At the end of his tenure as Executive Director in 2003, Gordon remarked that "LSPA is successful because we share a common commitment and work as a team." As stories about Gordon have been shared among staff, volunteers and long-time members of LSPA, one word that is often repeated is thoughtful. Gordon was a kind person who enjoyed brainstorming and problem solving, thinking deeply and discussing ideas. Those ideas translated into important actions that have made a meaningful difference in protecting the Lake Sunapee Watershed. Much of LSPA's work today is rooted in initiatives begun during Gordon's tenure. We are grateful for his leadership and vision.

Gordon Marshall, Walt Goddard and LSPA staff member, Teriko MacConnell discussing the milfoil prevention program.

LSPA
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In August, Jerry Cooper was presented with the New Hampshire Department of Environmental Services (NHDES) Secchi Disk Award at LSPA's annual Volunteer Appreciation BBQ. The Secchi Disk Award is presented to recognize individuals who display outstanding volunteerism. Jerry has dedicated over two decades to NHDES's Volunteer Lake Assessment Program (VLAP) sampling on his home lake, Kolelemook, in Springfield. Jerry's volunteer efforts also included serving as the Town of Springfield's representative on LSPA's Board. Congratulations to Jerry! If you would like to volunteer with with LSPA, please go to lakesunapee.org/volunteer.

Remember to renew your annual membership with LSPA!

Membership dollars are the most important source of funding for our work throughout the Lake Sunapee Watershed.
Renew your membership at lakesunapee.org/membership

The Mission of LSPA

LSPA, founded in 1898, is dedicated to preserving and enhancing the environmental integrity of the Lake Sunapee Region, especially its lakes and watersheds, through education, research, and collaborative action.

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