

2023



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The Lake is Calling



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Squam Watershed Campaign

In 1904, a small group of Squam visionaries made a simple but bold choice. Convinced that residents and visitors would be better off joining together to promote the protection, careful use, and shared enjoyment of the lakes, mountains, forests, open spaces, and wildlife of the Squam region, they created the Squam Lakes Association.

More than a century later, we remain strongly committed to and tirelessly expanding the SLA founders' vision to preserving and protecting Squam. Every day, we fight back against water quality degradation, climate change challenges, environmentally damaging and unsafe lake uses, and the onslaught of invasive species.



An Ounce of Prevention is Worth a Pound of Cure...

Those who founded the SLA knew this all too well; In 1904, Squam was vastly different from the lake we love. Loggers had cleared the mountains feeding into the watershed. Sawdust several feet thick had settled in many of the coves and driftwood made navigation hazardous. The lakes were littered with refuse, including mattresses and animal carcasses. Something had to be done to reclaim the lakes. SLA led the way in doing just that.

Today, Squam faces even more challenging threats, though the problems are not as obvious to the naked eye as sawdust and mattresses. Now, the challenges are more often microscopic, chemical, ecological, and climatological. SLA's mission and daily efforts remain strongly rooted in preventative actions through conservation and education, but we often feel we are losing ground. SLA has a deeply skilled workforce, but relies on outdated tools and equipment to battle threats of cyanobacteria blooms, land-based contaminants, explosive growth of invasive species, and climate change. There is an urgent need for action, and the SLA is prepared to make the significant investments necessary to reverse the trajectory of the lakes' health.

Working together, we are determined to preserve and protect Squam. It would be irresponsible to approach today's challenges without a sense of urgency, for the lakes are facing a tipping point. While SLA's monitoring work shows healthy water overall in the larger open areas of the lake, we know that the coves and streams are flashing warning signs: green algae, cyanobacteria, sediment-filled water, declining populations of crawfish and frogs, and fish unsafe for human consumption. Warming temperatures are changing wildlife habits and underwater ecosystems. We've fallen behind, and much more needs to be done now to preserve and protect Squam from today's challenges.

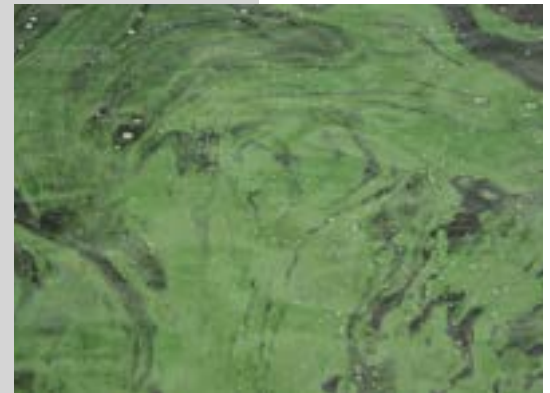
The encouraging news is that we have a comprehensive plan to reverse these insidious threats to Squam. This plan is a result of many years of diligent research, direct work on the land, and measurements from the surface to the depths of the water. Upon completion, the water quality of Squam will be better protected and preserved, the trend toward degradation reversed, and the overall sustainability of our community improved for generations to come.

Some of the water quality work will go toward acquiring and installing state-of-the-art equipment to monitor all depths of the lakes for emerging and damaging chemicals and bacteria. For the first time this will give SLA the tools to detail the problems, and make improvements in water quality. Much of the work will be directed toward the 53 projects described in our Watershed Plan. These efforts, ranging from simple to complex, include culverts, berms, and holding ponds. This will help us gain control of run-off into Squam. This is a precondition to reverse the water degradation and gain control of water-borne chemical and sediment loading.

There is a desperate need for conservation and education programs that will provide outreach and education to the community and various governmental entities, as well as provide trail restoration and relocation to maximize appropriate use and minimize erosion and run-off. It is important to also improve the SLA campus so that it models the best lake protection and preservation strategies, along with creating accessible educational water access.

The Squam Lakes Association has made a huge difference in Squam over our 118 years. Looking only at the last few years, we are enjoying rebuilt trails, growing use of SLA's islands, vibrant summer activities for kids, and reliance on SLA as a center of community activity.

But everything depends on the water. We need to invest in the health of Squam's water quality, or nothing else, in the end, will matter.



The Urgent Need for Action...

Squam has long been an example of what a healthy lake should look like. Our deep basins, which SLA has been monitoring for over 40 years, show improvement in overall water quality over time, thanks largely to the Clean Water Act. The pH has been increasing – that is, improving – primarily as a result of regulations on power plants, which has reduced acid rain.

But unfortunately, this good news is misleading. For the past four decades, we have been tracking phosphorous, water clarity, temperature, dissolved oxygen, and chlorophyll (a proxy for algae) as measures of lake condition (trophic status). Though our monitoring picks up large-scale and long-term changes, **our current monitoring process does not catch modern fast-moving threats to water quality, and these threats will have a major impact on the Squam Lakes if left unaddressed.**

For example, Squam has a significant contamination issue from legacy chemicals – namely DDT and PCBs.

Long banned, these are persistent chemicals in the environment. They bind to soil and move into the lake through run-off. The levels of contamination are not high enough to trigger governmental full-scale remediation; however, the levels are high enough to impact the health of our wildlife and those furthest up the food chain through fish consumption – which is to say, humans. The Squam Watershed Plan, which focuses primarily on controlling run-off, will help keep contaminated soil out of the lake. Over time the impacts of these contaminants will lessen, but only if we keep more from coming in.

A second and troubling threat is cyanobacteria.

Cyanobacteria were once found primarily in degraded, shallow lakes. Now we are seeing more and more harmful algae blooms across the cleaner lakes throughout the country, and Squam is no exception. Though cyanobacteria are by no means ubiquitous here, we are seeing an increase, and this is not something that will be easy to restrict once it gains a foothold.

Cyanobacteria blooms are not merely unpleasant; they can be dangerous. Cyanotoxins have been linked to health issues in humans, and contact with cyanobacteria can have immediate and lethal effects on our pets. **Cyanobacteria, like other algae, are driven by nutrient overloads in the water.** Again, the Squam Watershed Plan is designed to manage run-off, to help filter nutrients from the water before it gets into the lake, and to reduce the overall run-off and sediments moving into the lake. **This plan will help starve cyanobacteria of their food** and will also help control other less harmful, but unpleasant algal blooms in the lakes.

Finally, the climate is shifting.

A changing climate can make it easier for invasive species to establish and thrive. The work the SLA does to eradicate invasives has never been more important. New England is warming quickly, and rain patterns and volumes are changing. The SLA cannot manage climate change, but implementing the Watershed Plan will ensure that as the climate continues to shift, Squam will remain a healthy lake. The healthier our ecosystems are, the more resilient they will be in the face of this change.



The Plan

To preserve and protect water quality, the SLA will do four things rigorously and well.

1.

The first is to do a comprehensive job testing, monitoring, and preserving the water quality of the Squam Watershed Lakes.

We need equipment, tools, and resources to quickly assess what's occurring so we can prevent problems before they arise. We can no longer address 21st-century challenges with 20th-century means.

Proposed budget: \$1,104,000

2.

Second, we need to implement the Watershed Plan itself.

By carrying out the plan in the identified project areas, we will reduce nutrients, contaminants, and sediments throughout the Squam Watershed.

Proposed budget: \$3,230,500

3.

Third, we need to upgrade SLA buildings and grounds to better serve as efficient, effective, and sustainable launching pads and educational hubs for our programs and the community.

Creating efficient office and classroom space with green technology will help us to implement the Watershed Plan. Upgrading our water quality lab will allow us to more efficiently monitor lake health, while providing public access to hands-on experiences. The SLA Campus is a microcosm of the Squam watershed, a gateway for educating visitors on sustainably balancing the natural and built environment.

Proposed budget: \$1,089,500

4.

Fourth, we need to improve, and in some cases relocate and rebuild, a few of The SLA trails.

Iconic and overused trails, like Rattlesnake, will get attention to curb erosion and improve the watershed. Other trails will be selectively restored to better manage storm runoff. We will also improve access to some trail areas to better educate the public on watershed health and how the land and water interrelate.

Proposed budget: \$226,000

Total budget: \$5,650,000

In addition, there are other areas demanding our attention. We have only partial information on the role played by septic systems, but modeling from development of the Watershed Plan tells us that the impact of **septic systems** on the lake is a concern. The SLA will address this through research and education, so all of us can do what it takes to make sure our septic systems work effectively and efficiently. We need to protect the lake from nutrients and bacteria that comes from poorly operating, failed, or non-existent waste treatment. Composting toilets on the SLA islands and headquarters will model low-impact septic solutions to keep phosphorus and other contaminants out of the lake.

We also have a growing concern regarding **road salt and road run-off**. We will address this by working with the towns around the lake to implement best management practices that will keep the lake and the roads safe.

The projects of the Watershed Plan, combined with homeowner education, will create an improved barrier against the intrusion of contaminants. **The Watershed Plan is our roadmap**. It's time to carry out its recommendations for the betterment of all – before the water quality degrades further.

It's important to note that carrying out the Watershed Plan will not be exclusive work of the SLA staff, but rather the unified commitment of the community.

Through education and community programs, we will engage watershed residents to incorporate best practices into their daily decisions. This also means living out our ideals by making sure we model best management practices on our campus and on the islands. We will show how the use of solar energy and adoption of the latest electric marine engines can reduce our carbon footprint, remove the injection of pollutants through engine exhaust, and show a quiet yet effective way to enjoy the lake.



Throughout this effort, our eyes are on the future – and on building future leaders.

The SLA has always been an organization that develops stewards of the lake. Through the JSLA, our educational programs, volunteerism, and the Lakes Region Conservation Corps, we will now double down on our success in creating future leaders and commit to building this leadership for the long haul. We have already placed past SLA and Lakes Region Conservation Corps members in positions across the spectrum of conservation in New Hampshire and the country. From the Newfound Lakes Region Association to the Nature Conservancy, people trained at the SLA have found their professional calling. This illustrates the sustainability of these efforts: from professional to volunteer, from passing recreationist to full-time resident, the SLA will continue to increase its capacity to pass the Squam conservation ethic to all those who benefit from the Squam Lakes – and other lakes near and far.

Finally, through this campaign, the SLA will refine and improve our institutional effectiveness. We have been doing well to manage invasive species such as milfoil, but we have done so with an aging fleet of boats and equipment. Thanks to this campaign for the Squam Watershed, we will improve our capacity, bring our equipment to a level that will make our work against these threats easier and more effective, and increase our outreach and education so that we can all proactively participate in the stewardship of this incredible lake.

* * * * *

We thank you for your history of investing in the protection and preservation of the lake, the mountains, and the Squam community. Your commitment to this special place means so much to all of us who live and work here. We are family and friends, trails, mountains, and coves. When a boat breaks down, someone tows us in. When a family is in need, the community reaches out. When milfoil is spotted, the SLA crew is on the way. We are workers in the lake and on the land every day, all year round. Every person who works for, volunteers at, or gives to the SLA contributes to this special community, and we thank you for all you do. And we thank you for giving this Squam watershed campaign your fullest consideration.

As always, we preserve and protect Squam, together.

Campaign Summary

Sources

\$750,000
SLA CONSERVATION
FUND

\$4,000,000
INDIVIDUALS
& FOUNDATIONS

\$550,000
GRANTS

\$350,000
BUSINESSES

Uses

Water Quality Protection & Preservation		Budget	
Comprehensive Testing, Monitoring, and Preserving Water Quality		\$	1,104,000
Watershed Plan Implementation		\$	3,230,500
Grounds & Facilities Upgrades for Operations and Education		\$	1,089,500
Select Trail Restoration & Education		\$	226,000
	Total	\$	5,650,000

TOTAL CAMPAIGN **\$5,650,000**

Contact Us

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