



Chocorua Lake Conservancy

SPRING 2020 NEWSLETTER



Spring green climbs the flanks of Mount Chocorua. | Kristina Folcik

2019 Annual Report

PRESIDENT'S LETTER

Dear CLC members and friends,

I hope this newsletter finds you, your family, and friends healthy and staying as well as possible in these challenging and uncertain times.

It is not clear how long this period of social distancing will last. If you live in the Chocorua area, why not embrace social distancing by visiting CLC conservation lands and trails in the Chocorua Lake Basin? Being in nature—within guidelines set by public health officials—can be an enjoyable and healthy way to practice social distancing.¹

Over the weeks and months to come, the CLC will be sharing more outdoor places to explore—as allowed by state and federal guidelines—ideas for place-based learning with kids, inspiring books and movies to enjoy at home, and more, to keep you connected to this place we care about.

Many of our educational programs are on hold for now. If possible within official guidelines, we will hold some of our outdoor programs with new protocols, asking people to bring

their tools and employ physical distancing as they work, for example. If we are able to hold outdoor events, we invite you to join us for one or more events as we ready our public access locations for the summer.

2019 Annual Report

CLC had total operating revenue of \$157,822, which included a \$54,361 draw from our Stewardship Fund and Chocorua Lake & Land Access Fund, board-designated funds we created in late 2018 from contributions to the *Timeless Chocorua* campaign. The CLC incurred total operating expenses of \$160,468, so we ended 2019 with a small operating loss.

We received donations totaling \$93,803 to our **2019 Annual Fund** from 484 households across 65 New Hampshire towns and 31 states. We also received \$2,775 in contributions from 14 local businesses and \$945 in cash donations from visitors to our public access areas in the Grove and Island. We were delighted to receive support from 79 first-time donors, including 28 local households. Overall, the CLC had a 65% donor renewal rate during 2019 excluding one-time memorial donations.

CLC staff and volunteers are completing work on the **Basin View Lot**, which will protect forever the iconic view from the hill overlooking Chocorua Lake. Over the winter, additional forestry work was done at the Basin View Lot to reestablish its historic view of the Little Lake and Narrows Bridge. With assistance from members of the two families who own the property, we have finalized the site layout for the visitor access area and

¹ In this newsletter you'll find resources to help you find your way around the Lake Basin—the Chocorua Map app, and a handy tear-out paper map of many of our trails.

parking spots, and will complete the management plan this summer. An official opening of the visitor access area is being planned for this summer or fall when family members will be in town and available to take part in the celebration.

We are expecting to move back into our **CLC office** in Chocorua Village this summer. A year ago, the building which housed our office was badly damaged by an accidental fire. Thankfully no one was hurt and nothing irreplaceable or archival was damaged in the CLC office, but the entire building has been closed while our wonderful landlords, who run Mari's Treasures, repair the damage and renovate the building. For the past year, the CLC has been renting temporary office space in the basement of the Chocorua Community Church.

Thanks to funding from the *Timeless Chocorua* campaign, **Lynne Flaccus** continues in her full-time Stewardship Director position. Lynne is responsible for advancing the CLC's stewardship program, through which we manage, steward and protect almost 4,000 acres of conservation land and protected properties.

Juno Lamb joined the CLC last year as a part-time Director of Programming & Outreach. She began working with us two years ago helping with 50th Anniversary events. In her new role, Juno is also in charge of all CLC communications, including this newsletter, our monthly e-newsletters, and social

media. Thanks to Juno, the CLC recently launched a redesigned website—check it out at www.chocorualake.org. During 2019, Juno and Lynne organized over 50 events for CLC members, the local community, and the general public. These events included stewardship events for volunteers, outdoor explorations for all ages, indoor educational events, and community-building events.

We are excited to have **Troy Emerson** back for his seventh year as the CLC's part-time Lake Patrol Officer. From late May through October, twice a day and seven days a week, Troy patrols the CLC's lakefront public access areas, picking up trash and ensuring that rules for these sites are followed by visitors.

Land conservation is more important than ever: Having beautiful and inspiring outdoor spaces in the Chocorua Lake Basin that are available for everyone to use and explore during these trying times is an invaluable resource.

As a volunteer-led land trust with only one full-time employee, CLC depends upon the hard work and generous financial contributions of our members and volunteers. Thank you to everyone who helps out in ways large and small.

Regards,

Alex

Alex Moot
Board President

BOARD OF DIRECTORS

Alex Moot
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Sheldon Perry
Vice President

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Penny Wheeler-Abbott
Secretary

Melissa Baldwin

Andrew Fisher

Steven Lanou

William Mayer

Jean McKinney

Neely Lanou
President Emerita

Margaret Wheeler
President Emerita

STAFF

Troy Emerson
Lake Patrol
(May to October)

Lynne Flaccus
Stewardship Director

Juno Lamb
Programming
& Outreach Director

Help Us Find Great Board and Committee Members

Do you know someone who would make a good candidate to serve on the CLC's Board of Directors, or on a Board Committee?

Think about your personal and professional acquaintances in the community, and about the members of your extended family, and share your ideas by Tuesday, June 16, with Melissa

Baldwin, Chair of the Governance and Nominating Committee, at mbaldwin@chocorualake.org. Self-nominations are permitted, but not encouraged.

We'd like to know why you believe the person is a good candidate for the Board of the CLC. The Nominating Committee will evaluate all suggestions and present a recommended slate to

the Board. The Board will present its recommended slate for action by the CLC membership at the Annual Meeting on Saturday, August 15, from 3-5PM at Runnells Hall, in Chocorua Village. We look forward to your suggestions and thank you for your help!

—Melissa Baldwin

UPCOMING EVENTS

As this newsletter goes to press, we are postponing many indoor events and may postpone outdoor events, too. The safety of our community is our priority. Please visit www.chocorualake.org for up-to-date information.

MAY

May is Stewardship Month!

Friday, May 1, 10AM–12PM
Stewardship Day. Trail clearing in the CC Browne Memorial Woods.

Wednesday, May 6, 6–7:30PM
Sense of Place Community Forum: Balancing Sustainable Recreation & Wildlife. Ragged Mountain Equipment, North Conway.

Friday, May 8, 8:45–10:30AM
CLC Highway Trash Pickup. Meet at The Grove, Chocorua Lake.

Partner event!

Saturday, May 9, 8:30AM–4PM
Chocorua Mountain Club Trail Clearing Day. Meet at Wheeler Field.

Friday, May 15, 9–11:30AM
Stewardship Day. Tackling bittersweet at the Brown Lot, Chocorua.

Tuesday, May 19, 5:30–7:30PM
Volunteer Program & Pizza Party. Runnells Hall, Chocorua.

Thursday, May 21, 10AM–12:30PM
Stewardship Day. Spreading wood chips at The Grove, Chocorua.

Saturday, May 23, 7:30–9:30AM
Bird Walk with Lynne Flaccus and Susan Lee. CC Browne Memorial Woods.

Thursday, May 28, 10AM–12:30PM
Stewardship Walk. Location TBD. Learn to monitor a CLC property off-trail.

JUNE

Wednesday, June 3, 6–7:30PM
Sense of Place Community Forum: Recreating in a Changing Climate. Zip's Pub at Cranmore, North Conway.

Friday, June 5, 9–11:30AM
Stewardship Day. Weeding and mulching fruiting shrubs at Moose Meadows, Chocorua.

Monday, June 8, 1PM
Best Management Practices Field Trip at Chocorua Lake, with Green Mountain Conservation Group & expert guest speakers. Learn about mitigating stormwater runoff and protecting water quality in your community. Meet at The Island parking lot.



Image: Chocorua Lake Crankie artists

Wednesday, June 10, 7PM
Protecting Our Lakes From Aquatic Invasive Species with Amy Smagula from DES. Cook Library, Tamworth.

Saturday, June 13, 9–11:30AM
Stewardship Day. Spreading wood chips at the Island.

Friday, June 19, 8–10:30AM
Lake Paddle with Lynne. Meet in the Grove. Help us patrol for invasive aquatic plants!

Wednesday, June 24, 10AM–12:30PM
Wetlands Wander with Lynne. Moose Meadows, Chocorua.

JULY

Sunday, July 5, 8:45–10:30AM
CLC Highway Trash Pickup. Meet at The Grove, Chocorua Lake.

Saturday, July 18, 9–11:30AM
Heron Pond Nature Exploration with Lynne. Meet at the Hammond Trail parking on Scott Road.

Tuesday, July 21, 7PM
The Sensory Ecology, Cognitive Abilities and Other Wonders of Neotropical Bats, with Rachel Page, Research Biologist, Smithsonian Tropical Research Institute. Learn about challenges to our local bats, too. Cook Library, Tamworth.

Thursday, July 23, 9–11:30AM
Stewardship Day. Field trimming around CC Browne.

Saturday, July 25, 10AM–2PM
Chocorua Day. Come visit with us.

July, date TBA
Learn About Insects with Linda Graetz.

AUGUST

Saturday, August 1, 9AM–1PM
Tamworth Street Fair. Come visit with us.

Friday, Aug. 7, 8–10:30AM
Little Lake Paddle with Lynne. Meet in the Grove. Help us patrol for invasive aquatic plants!

Wednesday, August 12, 9–11:30AM
Stewardship Day. Weeding & mulching Browne lot plantings.

Saturday, August 8, 12PM
CLC Members Cookout. Wheeler Field, Chocorua.

Monday, August 10–Saturday, August 15, times TBA
Water Week. Science. Art. Exploration. Song.

Saturday, August 15, 3PM
Annual Meeting & Social Hour. Runnells Hall, Chocorua. Professor Bob Newton & Tara Schroeder from GMCG will speak on the results of their Ossipee Aquifer groundwater study.

SEPTEMBER

Saturday, September 5, 5:30PM
Donor & Volunteer Appreciation Party. Location TBA.

Sunday, September 6, 6PM
Annual Potluck & Parade of Lights. The Grove, Chocorua Lake.

Thursday, September 24, 9–11:30AM
Stewardship Day. Weeding and mulching at Moose Meadows.

Sunday, October 11, 8:45–10:30AM
CLC Highway Trash Pickup. Meet in the Grove at 8:45.

The Aquifer Beneath Us

BY MATT HOWE

Executive Director
Green Mountain Conservation Group

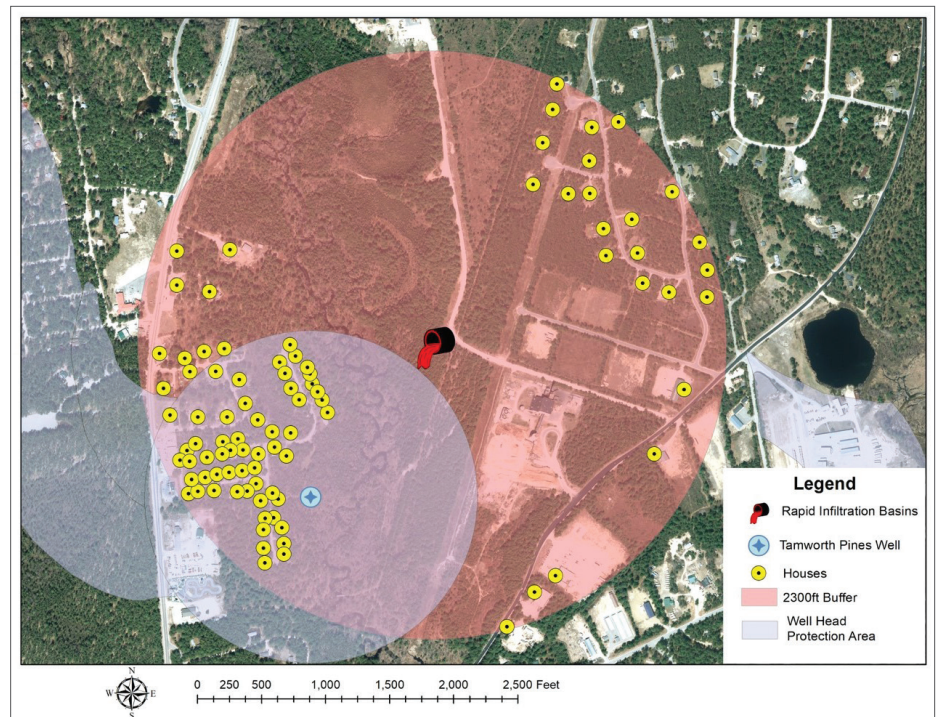
Fifteen thousand years ago the glaciers of the last ice age began their retreat from what is now the Ossipee Watershed. Over many centuries these mountains of melting ice formed massive rivers that scoured the landscape and deposited deep layers of sand and gravel across East Central New Hampshire.

A full history of that geological era is rife with complexity and is there for those who seek it. Yet we needn't delve into the myriad intricacies of Pleistocene glaciations to understand some basic, critical facts about the land we have settled and the water beneath it.

The towns of Eaton, Effingham, Freedom, Madison, Ossipee, Sandwich and Tamworth sit above New Hampshire's largest *stratified drift aquifer*, meaning an underground water supply that lies within deposits of sand and gravel. While it is tempting to imagine cavernous underground rivers flowing amidst large boulders from the Sandwich Range to the Maine border, a more accurate image is that of an expansive underground sponge in which billions of gallons of water seep slowly through the small spaces between small rocks and grains of sand.

Stratified drift aquifers are also known as *unconfined aquifers*. This term helps illustrate the unique vulnerability of the Ossipee Aquifer as a water source that has no protective layer of bedrock to shield it from whatever toxins we mistakenly release at the surface. Simply put, the ground around here leaks, and it leaks right into what is also known as a *sole source aquifer*—an aquifer that provides 50% or more of the drinking water supply of a given community. Indeed, in our towns the reliance is near 80%.

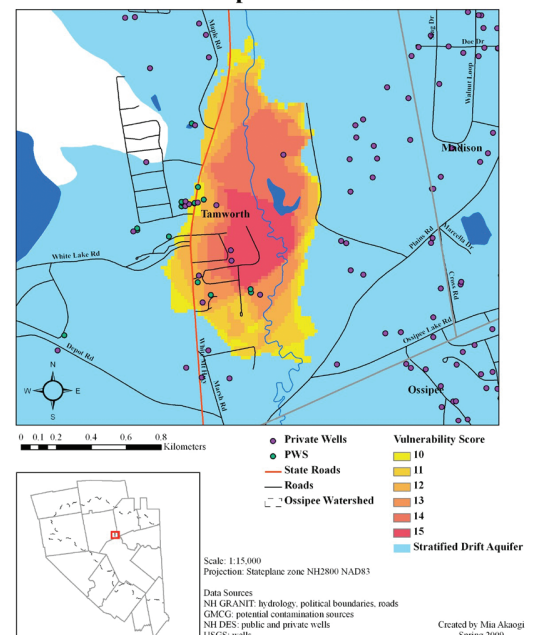
Whenever it rains and stormwaters sweep across our roads and parking lots and farms and backyards, all the substances we have introduced to the



ABOVE: This map shows the areas that could potentially be impacted by the infiltration of wastewater by the business that requested discharging up to 100,000 gallons per day rate for 5 years. The total volume of aquifer that would be filled by waste would be the area shown in red to a thickness of 1ft. Over 90 homes and businesses in Tamworth (wells highlighted in yellow) are within the 2300ft buffer and would suffer the direct consequences. *Image courtesy of Green Mountain Conservation District.*

AT RIGHT: This map from a study from a 2009 by Mia Akaogi shows the area in and surrounding Tamworth as the most vulnerable to groundwater contamination in the Ossipee Watershed. The composition of the Ossipee Aquifer is primarily sand and gravel deposits. This means water is easily accessible but also easily contaminated. *Image courtesy of Green Mountain Conservation District*

Area with the Greatest Groundwater Vulnerability in the Ossipee Watershed



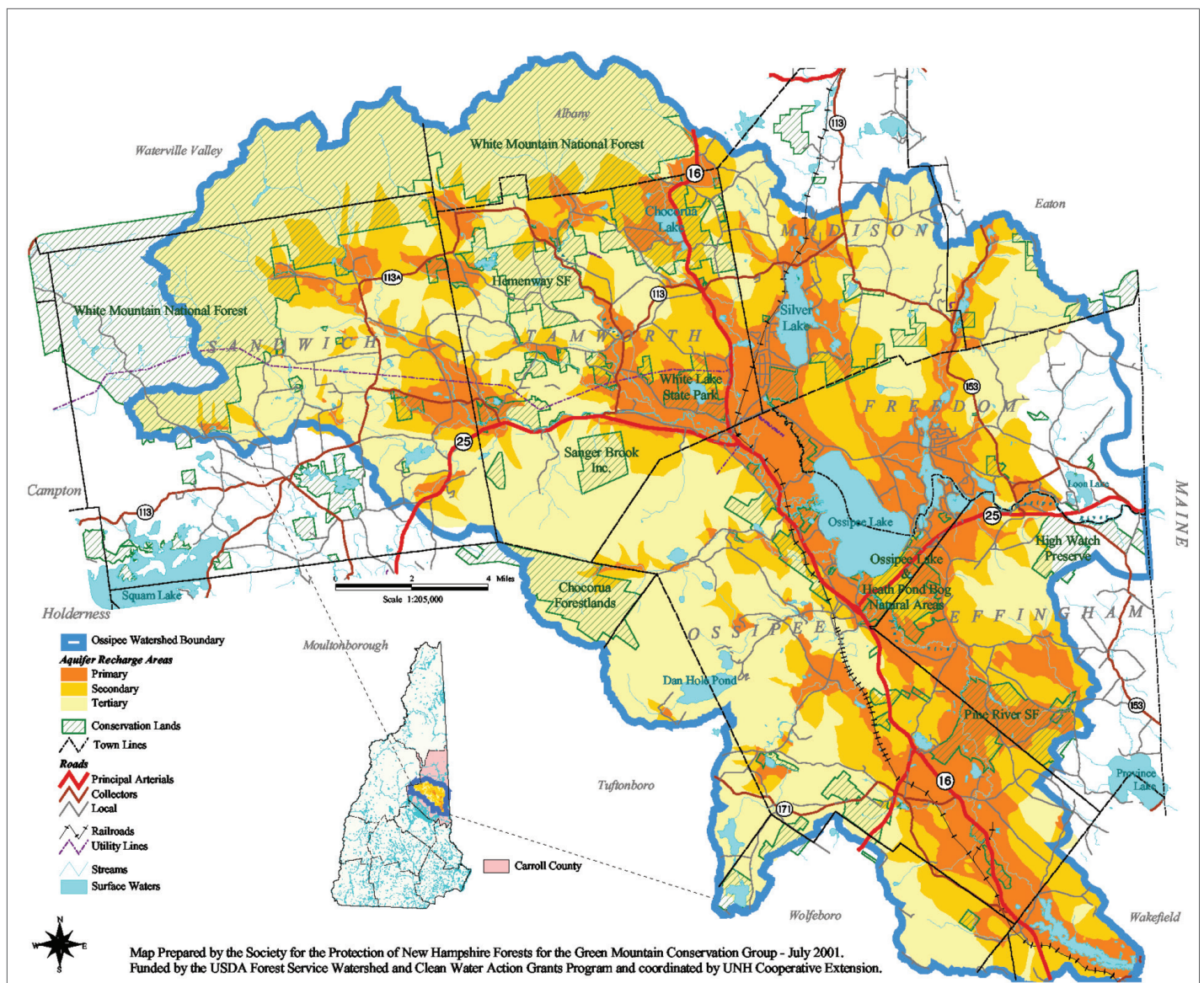


Image courtesy of Green Mountain Conservation District

environment are carried along and ultimately descend toward the aquifer through “recharge,” the never-ending process of water moving from the surface to the water table.

Road salts. Fertilizers. Pesticides. Herbicides. Petroleum. Septic tank effluent. They all combine with surface water as it begins its journey toward our sole supply of drinking water.

The relentless threat these chemicals and compounds pose to the Ossipee Aquifer inspired the Green Mountain Conservation Group over two decades ago to launch a series of initiatives to protect our communities’ groundwater. In collaboration with town officials, NH DES and regional planning commissions, GMCG has promoted

the adoption of local Groundwater Protection Ordinances to protect the aquifer in a consistent manner across the watershed. Water moving underground knows no boundaries.

A 2009 study found that due to high soil permeability and human activity, sections of the aquifer below the Route 16 corridor in Tamworth are among the most vulnerable to contamination. In 2019 Pine Tree Power applied for a discharge permit to release up to 100,000 gallons per day of wastewater for five years in a critical recharge area. In response to comments submitted by state representatives, local citizens, the Ossipee Aquifer Advisory Committee, and GMCG, the application was withdrawn. This groundwater discharge

could have impacted over ninety Tamworth residents and many local businesses. In the long term, it may have also impacted drinking water in other towns.

The marvelous geological story of glacial meltwater rivers holds a certain irony. The fast-draining sandy soils deposited across our level landscape are ideal for development. This region offers enticing opportunities for enterprise and population growth, but without safe drinking water, what is the value of our property and what are the prospects for economic growth? As we look to the future we must be ever mindful that what lies beneath us is one interconnected, irreplaceable water supply shared by all.

On Shining Waters: Part 2*

OR Reflections on Twenty Years of Water-Quality Sampling

BY DWIGHT BALDWIN

Background

Chocorua Lake has held a very warm spot in the hearts of many who have visited the White Mountains of New Hampshire. But, as the “many” have grown exponentially over the years, so has the threat to the quality of these waters that represent the essence of this special place.

The first recorded attempt to halt and/or reverse the persistent degradation was taken by Charles P. Bowditch, who recognized that deleterious land use practices along the Chocorua River above the lake were threatening the lake’s water quality. But it was not until the early 1980s that long-term water quality data began to be collected by volunteers through the auspices of the Lake Lay Monitoring Program run by the UNH Center for Freshwater Biology.

In 1995, nineteen years of previous water-quality data revealed an alarming deterioration of water clarity. This led to the CLC being awarded several federal and State grants to minimize shoreline erosion and the input of phosphorus into the lake’s waters, which in turn brought about a marked improvement in clarity.

A Sampler’s Reflections

This ongoing monitoring effort has, of course, but one goal—to preserve the pristine quality of the lake water and its surrounding lake basin for current and future generations. Many readers of this brief essay know the peace and joy that this lake can provide. Imagine floating on its perfectly glass-like surface on a late summer’s morning with a lake-hugging, early-morning fog layer shrouding the distant shore. As you paddle on through the lily pads, the fog begins to lift and the sun’s first bright rays begin to warm the air. Chickadees sing from the branches of a shoreline pine, thrushes trill from the neighboring wetlands, and cedar waxwings dart out



Mount Chocorua reflected in the pristine waters of Chocorua Lake. / Kristina Folcik

over the lake for insects that fill the air.

What could be better than having the “responsibility” of monitoring the water quality from early spring to late fall? Protocol requires that at least 10 samples be collected and analyzed each summer at approximately two-week intervals. This means that the sampler has the pleasure of being on the lake at set intervals throughout the summer and thus the opportunity of experiencing the lake basin from the early blush of light greens and reds in the early spring as buds begin to swell to the reddening of the swamp maples turned crimson in the early fall.

We have come to expect corresponding seasonal changes in the quality of the lake water. But no two years are exactly the same. Seasonal variations in such variables as rainfall intensity and duration as well as air temperature all play a role and it is difficult to predict what to expect when setting out on a sampling expedition.

The monitoring of the ever-changing variations in water quality has a long and rich history. This lengthy database provided the information necessary to recognize the slow deterioration of the health of the lake and helped generate grants which reversed this negative



Water so clear you can see every sand ridge on the lake floor. / Juno Lamb

trend. But those who have had the pleasure of getting out on the lake at regular intervals to collect this data, as I have, have also received a gift of inestimable value. Not only have we had the opportunity to continue the heritage of environmental conservation begun by earlier generations, but we have also had the chance to experience the lake in its various moods—from early morning stillness to roiling waters with whitecaps rolling southward down the lake. And what could be more special than having a curious loon surface right next to your canoe as you are anchored at the “deep point” collecting data. Such a privilege indeed!

If you would like to help monitor water quality in Chocorua Lake, please let us know at info@chocorualake.org.

*You can read Part One of this piece in our publication *Timeless Chocorua, 50 Years of Conserving the Basin (1968-2018)*, available on our website.

Variable Milfoil, Fanwort, and Bears, OH MY!

BY LYNNE FLACCUS

Stewardship Director

Okay, well, no bears are found in Chocorua Lake, at least not usually, and thankfully none of the invasive weeds listed above are found there either. Exotic milfoils, fanwort, water chestnut, and curly-leaved pondweed are just a few examples of invasive aquatic plants now found in over 90 lakes and water bodies in New Hampshire.



Lynne Flaccus

Why are exotic weeds such a problem? After all, lakes and ponds are filled with all types of algae and aquatic plants, right? Like most “invasive” species, exotic weeds have not evolved in NH waters and so have no “predators” that can help keep them in check. They tend to grow very quickly, some spreading as much as one to three inches in a day! As a result, they can quickly out-compete native plants, and change the nature of habitats for many animals that live in the lake. They also make boating and swimming a challenge, and maybe a little less pleasant for us humans!

The CLC has a long history of caring for water quality in Chocorua Lake with the help of many volunteers. Reducing erosion through stewardship of the public beaches, establishing the berms and swales along old Route 16 to reduce runoff, and protecting and caring for the surrounding uplands all contribute to the health of the lake. Maintaining good water quality, including by reducing phosphorus input, limits the likelihood of algal blooms or abundant weed growth, whether exotic or native.

How do exotic plants spread from lake to lake? It takes only a small plant fragment to be carried in on a boat motor, paddle or canoe, boots, or fishing gear. No motorboats are allowed on Chocorua Lake, which is helpful, but this doesn't

mean we should not be diligent in keeping an eye out for these pests. And it's important to educate ourselves and others on how they can spread.

In June of this year, CLC will host Amy Smagula, Exotic Species Program Coordinator at the NH Department of Environmental Services (DES) for an introduction to exotic weeds that are found in NH lakes. She'll help us with the what, why, and how of exotic aquatics, and how to keep them from becoming established in Chocorua Lake. She'll explain the state's Weed Watcher Program so we can continue to keep an eye out for both native and exotic varieties.

Our goal? A team of volunteers who will help be eyes on the water, looking for unusual growth and plants that don't belong. Later in the summer we'll have an introductory paddle around the lake looking for aquatic weeds, exotic and native (and maybe catching a glimpse of the resident loon family!). Once these plants become established, they are impossible to eradicate, so best to catch them early before they complete a growing season.

Interested in helping us out? EAPP! (Exotic Aquatic Plant Patrol!) Or maybe you have an idea for a different name? We hope you'll join us for Amy Smagula's talk on June 10, and patrol paddles on June 19 and August 7. If you can't make those dates, but are interested in learning more, give us a call.

Read all about the Frightful Fourteen, plants we DON'T want in our waterways, in a downloadable PDF from the NH Department of Environmental Services, found here: bit.ly/frightful14.



Variable milfoil flower stalk. / Courtesy of NH DES

Check with NHDES before doing any work in a shoreland zone

The Water Division of the NH Department of Environmental Services is responsible for oversight of activities in and around rivers, streams, ponds and lakes throughout the state.

Planning to build a seasonal dock, work on a boathouse, or cut trees within the shoreland zone? The DES is the go-to agency for finding out what is allowed and whether permits are required. Even if permits are not required for activities a landowner might be planning, the DES is a great resource for how to manage your shorefront property with water quality protection and wildlife in mind.

Here is the link to the Water Division website: bit.ly/2wPotis

And a FAQ sheet about Shoreland permits sure to answer many questions here: bit.ly/38BzzrT

Changes this year allow for a “Permit by Notification” for certain projects that will not require a full permit application. Planning a project and not sure if a permit is needed or which one? Try these survey monkey questionnaires through the DES to help you through the process:

Determination for Shoreland Permits: <https://www.surveymonkey.com/r/shoreland>

Determination for Alteration of Terrain Permits: <https://www.surveymonkey.com/r/WS2VKBN>

Determination for Dock Permits: <https://www.surveymonkey.com/r/docks>

Remember that we all live upstream of someone else! And thank you for doing your part, whatever water body you may be connected to!

—Lynne Flaccus

2019 Annual Report

For the period from Jan. 1–Dec. 31, 2019

INCOME	2019	2018	EXPENSES	2019	% total expenses	2018	% total expenses
Household Memberships & Cash Donations	\$94,748	\$58,576	Land Conservation				
Business Partner Donations	2,775	4,572	Staff Compensation and Benefits	\$83,787	52.2%	\$70,124	55.3%
Forestry & Forestry Grants	0	22,199	Legal Expense	60,390		57,061	
Merchandise	5,140	7,866	Rent and Office Expenses	14,233		4,875	
Events	271	4,428		9,164		8,188	
Donated Services	528	2,507	Education & Outreach	\$40,436	25.2%	\$12,970	10.2%
TOTAL INCOME	\$103,461	\$100,148	Staff Compensation and Benefits	19,761		0	
			Merchandise Costs	9,028		3,648	
NON-OPERATING ACTIVITY			Newsletters (Spring & Fall)	7,388		7,229	
Interest, Dividends & Gains	\$337,799	(\$91,253)	Office Expenses	1,653		1,289	
Timeless Chocorua Campaign	\$133,364	\$636,541	Outreach Events & Sponsorships	1,610		250	
Donations & Pledge Receipts	133,364	619,880	Member Events	996		554	
Grants Received	0	108,050	Property Management	\$20,637	12.9%	\$35,681	28.1%
less: Campaign and 50th Anniversary Expenses	0	(91,389)	Staff Compensation & Benefits	8,707		7,891	
Land Interests Acquired	\$0	(\$256,438)	View Project	4,400		0	
			Liability Insurance	2,115		2,240	
ASSETS (as of Dec. 31)			Forestry	1,847		22,844	
Bank Balances & Due from Broker	\$50,249	\$125,737	Public Convenience	1,366		1,366	
Inventory	0	8,986	Payments In Lieu of Taxes	918		707	
Investments (CLC Operating & Project Reserve)	95,434	58,841	Grove, Island, Bridge, & Dam	900		250	
Investments (Fund for Timeless Chocorua)	1,699,464	1,234,360	Water Tests	384		384	
including Unrealized Gain/(Loss)	265,180	(31,331)	Development & Membership	\$10,692	6.7%	\$4,187	3.3%
Total Current Assets	\$1,845,328	\$1,427,924	Membership Appeals	9,959		3,710	
Conservation Covenants & Easements	\$441,552	\$441,552	Donation Processing Fees	733		477	
Fee-Owned Properties	510,461	510,461	Administration (Governance & Finance)	\$4,916	3.1%	\$3,834	3.0%
Total Fixed Assets	\$952,013	\$952,013	Membership Dues to Other Organizations	1,950		2,075	
TOTAL ASSETS	\$2,797,341	\$2,379,937	Annual Meeting and Board Meetings	1,645		212	
			D&O Insurance	897		852	
MEMBERS & DONORS			Office Expenses	284		500	
Family Memberships (\$100 and up)	272	310	Accounting, Audit, Tax and Business Fees	75		75	
Individual Memberships (\$50 to \$99)	118	113	Conferences	65		120	
Friends & Student (\$1 to \$49)	77	99	TOTAL EXPENSES	\$160,468		\$126,797	
Business Partners (\$100 to \$1,000)	17	13	DRAW ON INVESTMENTS PER SPENDING POLICY	\$54,361		\$0	
TOTAL	484	535	OPERATING SURPLUS (DEFICIT)	(\$2,646)		(\$26,649)	
Other Donor Information							
First-time donors	79	190					
Local donors	157	169					

VOLUNTEER RECOGNITION

An enormous thank you to all of our volunteers, many of whom help out in myriad ways, contributing significant hours to the CLC each year. We could not accomplish our work without you all, and getting to spend time with you is a pleasure. Apologies if we've missed your name here—you have our gratitude!

Dylan Alden
 Mitch Alden
 Rick Allmendinger
 Geneva Avery
 Barbara Baldwin
 Dwight Baldwin
 Melissa Baldwin
 Renne Baldwin
 Tim Baldwin
 Meena Lamb Bhargavan
 Kathy Bird
 Mason Browne
 William Bucey
 Ashley Bullard
 Molly Canfield
 Willa Canfield
 Laura Cannon
 Andy Chamberlin
 Lora Colten
 Dick Devens
 Jim Diamond
 Maureen Diamond
 Angela Driscoll
 Jennell Dulaney
 Dave Farley
 Andy Fisher
 May Fisher
 Kristina Folcik
 Anne Foley
 Nancy Fryberger

Richard Gerard
 Leslie Greer
 Geoff Gill
 Laura Glowick
 Alec Guyer
 Sarah Lloyd Hall
 Benedicte Hallowell
 Ginny Harlan
 John Harlan
 Henry Hodgman
 Harriet Hofheinz
 Hope Hutchinson
 Willy Kasuli
 Juno Lamb
 Neely Lanou
 Steve Lanou
 Bruce Larson
 Susan Lee
 Pete Lewis
 Susan Lirakis
 Simone Maule, Americorps
 Bill Mayer
 Beth McCarthy
 Tish McIlwraith
 Jean McKinney
 Chele Miller
 Alex Moot
 Amey Moot
 Kit Morgan
 Angelica Muir

Adrian Nkwocha
 Sheldon Perry
 Shirley Perry
 Penny Purcell
 Matthew Pyster, Americorps
 Jay Rancourt
 Nancy Roosa
 Amy Sager
 Ethan Sager
 Marion Lloyd Salois
 Lauren Salois
 Bob Seston
 Nancy Sheridan
 Norm Sizemore
 Ken Smith
 Georgia Stafford
 Thomas Stafford
 Sarah Staley
 Helen Steele
 Louise Taylor
 Kate Thompson
 John Watkins
 Ruth Weld
 Charlotte Westfall
 Isaac Westfall
 John Wheeler
 Peg Wheeler
 Penny Wheeler-Abbott
 CC White
 Shaelin Wood



Volunteer mermaids and more in the Tamworth 4th of July Parade. | Sheldon Perry

The Chocorua Map App!

RICK ALLMENDINGER

What if you could have a personal guide to the Chocorua Basin and Mountain that would show you where the trails and publicly accessible lands are, what cool things to look for along the way, and explains how glaciation shaped the spectacular landscape? The CLC recently released an iPhone/iPad app that does just that. The **Chocorua Map** app uses an exquisitely-detailed shaded relief base map created with LiDAR elevation points spaced every one meter (3.3 ft). All of the publicly-accessible trails in the region are shown as tappable traces that reveal the trail name and length and also shows the hiker how far they have come and how much farther they have to go. The app also incorporates a full digital elevation model so the user can plot trail profiles and measure how steep different sections of each trail are, as well as determining the position and elevation of every tapped point. To the earth scientist, the topography reveals the glacial history of the region in astonishing detail and the app, written by a professional geologist, communicates that history to the users as tappable points of interest (POIs) which contain a written description as well as a photo or diagram of the feature. For the truly geeky, the user can even toggle on a bedrock geology overlay. POIs are also used to illustrate points of historical interest with some quoting from Frank Bolles' iconic books on the regional natural history. Finally, the user can add their own points of interest and photos as a kind of digital diary of their explorations in the region; user POIs also provide a means to send a user's position to another user via text or email.

The Chocorua Basin has notoriously poor cell phone coverage—a small price to pay for the preservation of a primeval landscape uninterrupted by cell phone towers—so the Chocorua



Have you seen this extraordinary and enormous glacial erratic, long since split in two? If you explore our conserved lands this summer using the Chocorua Map app, you will find it. / Juno Lamb

Map app is completely self-contained with all of the information, topography, etc. that it needs to operate without any data connection necessary. Data are never downloaded from the internet and, unless the user explicitly chooses to send a text or email with their location to a specific recipient, all of their personal information remains completely private on their phone. The app is free to download for iOS devices

and is not supported by any advertising; unfortunately, there is no Android version available at this time. If you are planning a trip to Chocorua or the lake basin, download the app and give it a try. If you find the app useful, please take the money that you would have spent on such an app and donate it to the CLC via the handy link in the app's Info screen! Download the app at bit.ly/chocorua-map-app.

All About Sphagnum Moss

BY LYNNE FLACCUS

Stewardship Director

Have you ever really crouched down or gotten onto your hands and knees to look closely at sphagnum moss? If you have, you likely got your knees wet!

Sphagnum moss grows in wet places, especially in bogs, marshes and swamps, and around the edges of lakes and rivers. You can also find it in the woods in depressions where water collects and growing conditions are just right.

Each plant looks a little tree-like, with branches tightly packed at the tip and leaves filled with water. It comes in different colors from lime green to purple and red and many shades in between. Such diversity even in a single wetland—you can often find several different species in a single square meter!

Sphagnum moss is just one type of plant that plays a role in the functioning of wetlands. It's packed with water cells, and has an amazing ability to absorb and hold water (up to ten times its weight!). Like a sponge, it helps to absorb spring snowmelt and floodwaters. It also acts like a filter, helping to strain sediments and even toxins from the water. In some places it forms a living mat, growing out across open water and building a platform for orchids and members of the heath family that commonly grow in boglike habitats.

Most of the places where sphagnum grows are nutrient-poor and water-logged, and as it collects and uses nutrients, the moss tends to acidify its own surroundings. This limits what else can grow with it, and slows decomposition both of its own tissues as well as general decomposition in the soil or mat where it grows. A number of plants including blueberries, cranberries, sweet gale and Labrador tea grow in this acidic,



From top: A pitcher plant growing out of a moist bed of sphagnum moss. / Photo: Greg Shute; Sphagnum moss. / Lynne Flaccus

saturated, mossy “soil.”

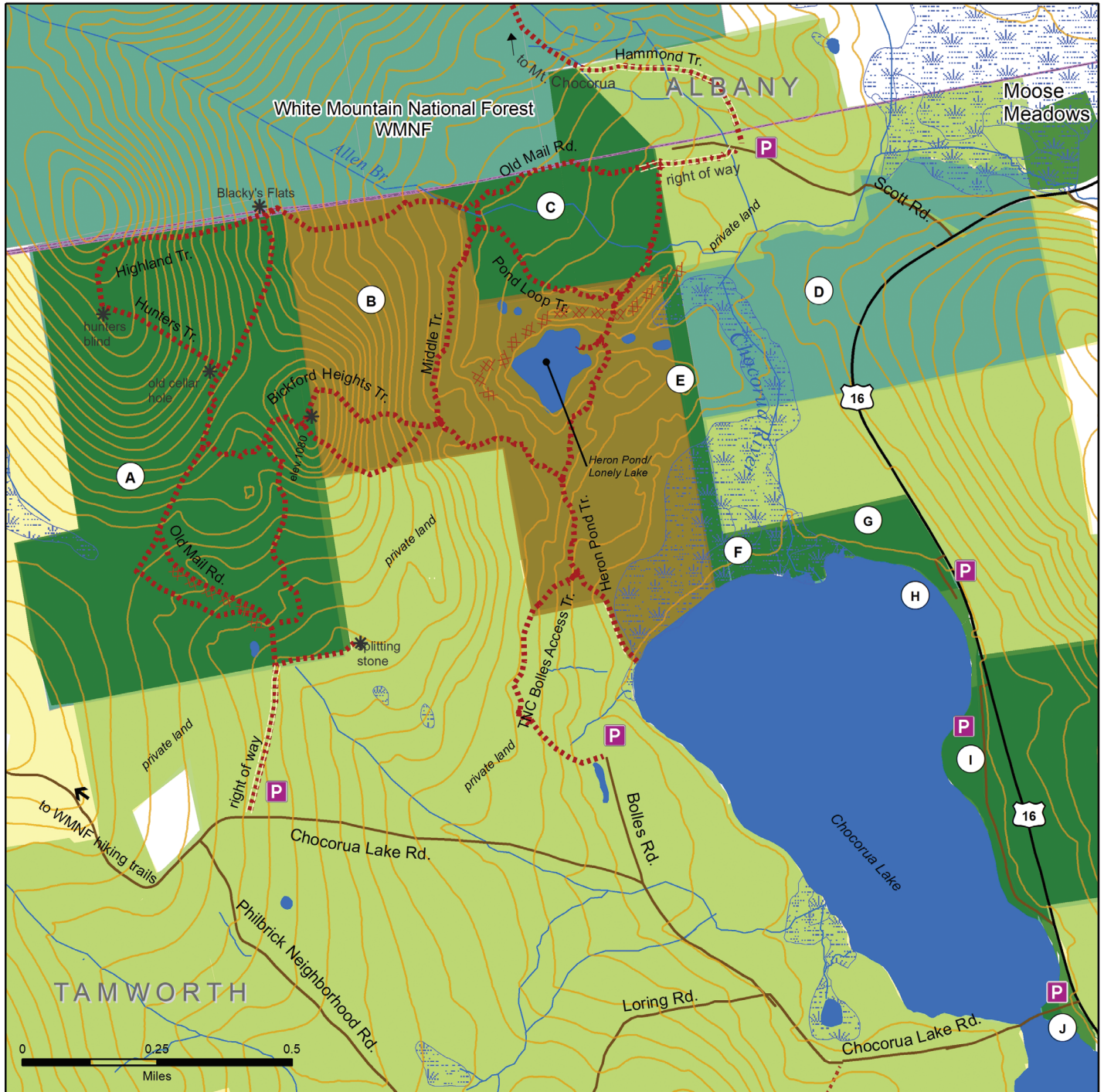
Did you know that sphagnum moss was often used during World War I to pack wounds? The acidic properties reduced the growth of bacterial infections! And some indigenous tribes used dry sphagnum in diapers to absorb moisture, with the antibacterial properties helping with diaper rash.

Look for this lovely moss growing at the north end of Chocorua Lake where extensive wetlands surround the incoming Chocorua River, or at the

CLC Moose Meadows property. You'll see it growing along the edges of Little Lake, and even on the hummocks where the loons sometimes nest. Can you find some at Heron Pond/Lonely Lake on the Bolles Reserve?

Perhaps you can find a patch to lie down in, feel its cushiony (but wet) softness, and take the time to breathe in the wonderful smells of this moss. Please no harvesting on CLC land for your medical kit or diapers, though!

How many of these trails have you explored? Enjoy this handy tear-out map in every season.



- CLC Owned Properties
- CLC Conservation covenants or easements
- The Nature Conservancy
- State and Federal Public lands
- Other conservation easements

- Trails
- State Roads
- Town Roads

- Freshwater Wetlands
- Freshwater Pond or Lake
- eskers

CHOCORUA LAKE CONSERVANCY

Public Access Map



Download a copy of this map at
<http://bit.ly/clc-trail-map> or
 check out the Chocorua Map app for iOS

- A. Clark Reserve
- B. Frank Bolles Nature Reserve-
The Nature Conservancy
- C. Mary P. Scott Reserve
- D. Bowditch Runnells
State Forest
- E. Abigail Adams
Scott-Korson Nature Preserve
- F. Bowditch Reserve
- G. Woodhouse reserve
- H. Tamworth Residents Beach
- I. The Island
- J. The Grove

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The Chocorua Lake Conservancy publishes and distributes an educational newsletter twice a year, in the Spring/Summer and Fall/Winter. Current and past issues are posted online at chocorualake.org.

Have an idea for a newsletter article? Let us know!

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The Chocorua Lake Conservancy is a volunteer-led land trust dedicated to its mission of protecting the natural beauty of the Chocorua Lake Basin and providing public access for present and future visitors.

Water is life!



Can you name any of these three macroinvertebrates commonly found in Chocorua Lake? | K. A. Brett students, from their Life at Chocorua Lake crankie

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