



The Lake Matters

The official publication of the Lake St. Catherine Conservation Fund, Inc. July, 2010

LSCCF Opens Lower Channel to Navigation



Pulling up tangled wooden branches laid in by beavers over the past years.

Taking a load to shore to be hauled away by truck and trailer.



(Photos by Susan Wonderly)

In mid-May a group led by the LSCCF conducted a channel-clearing project in the lower channel of Lake St. Catherine. This project became a necessity because beavers had laid in large amounts of tangled tree limbs and sticks of wood over the last year that clogged the channel and made it impossible for residents of the lower channel to get their boats in and out.

Last fall the LSCCF submitted an application requesting permission to use mechanical dredging in the channel, but the Vermont Agency of Natural Resources had delayed granting the permit for several months and still had not given the okay. Unwilling to wait longer, and with permission from the state, the LSCCF crew conducted a manual clearing of

the center of the channel, enough to make it navigable to the resident boaters.

Using hand tools and small watercraft, the group of seven pulled up much of the debris left by the beavers and passed it along to shore, where it was placed in vehicles and hauled away in many loads. Resident Kay McNeil allowed the crew to use her property to access the channel. On hand for the project were Bill Steinmetz, Max Emmons, Ron Dreher, Bill Frye, Tim Makepeace, and David Rathbun. Susan Wonderly photographed the event.

Approval of the permit by the Vermont Agency of Natural Resources is expected by early August. The contractor Shorline Weed Control has scheduled work under our permit for early September.

LSCCF now a non-profit corporation

On July 10, President Bill Steinmetz announced at a Directors' meeting that the LSCCF had been granted non-profit status by the state of Vermont, and that our name now officially must carry the "Inc." extension. We are also in the process of acquiring the designation of 501(c)(3) from the Federal Government, which will mean that contributions (not dues) will then be tax-deductible. We expect this to be completed before the end of 2010.

LSCCF Membership Now over 80

In our first newsletter we were happy to announce over 52 member families. We are now delighted to report that our membership has reached 83—that's a whopping 60% increase in only about six weeks! Our growing membership is a clear indication that lake property owners are looking for new solutions to a rapidly growing problem, and are putting their trust in the leadership of the LSCCF. Be assured that we are working hard to serve our members by our research, our plans for implementation of various initiatives, our seeking of funds, and our ongoing development of relationships with those who can help us achieve our goals.

Here's a list of current members:

Bruce Abrams	Donald Dalton and Nancy Flowers	Michael and Debra Noonan
B&D Properties	Bill and Tonya Frye	Howard J. Osborne, Jr.
Loren and Jo-Lynne Bartholomew	Mike and Joan Fucito	C. Pascarella
Harold Bates	Barbara Hall and George Garner	John and Paul Pesale
Kirk Beach	George W. Gates	Robert and Tina Peterson
Charles and Marilyn Boyle	Joan Gates	Douglas and Jeanne Poray
Thomas and Debra Bradder	Douglas and Jeanne Gilbert	Gerard and Jacqueline Riso
Tomas and Barbara Bump	Fran and Laurel Gilman	Matthew and Sachi Rochlin
Clare Cameron	Elaine Guhl	Anthony Rogers
Fred and Charlotte Capron	Donald and Jean Hart	Alexander and Ann Rosol
Bill and Dot Carter	Robert and Lynne Holmes	Bill and Victoria Rozensky
Allen and Linda Clark	Bonnie Lee Hughes	Tracee Oakman Rupe
Thomas and Laura Clark	Robert and Margaret Huss	Gilmer H. Saddler
Edward and Barbara Corrigan	Christopher Kostyun	Robert and Kathy Scarcello
Al and Donna Cote	William and Diane Kudrez	Kenneth Schaefer, Jr.
Owen Crawford	Hernan and Evelyn LaFontaine	Hugh and Becca Schweitzer
Muriel Cray	Lois Langlois	Betty and Dale Bardin Sheldon
Robert and Nancy Dauenhauer	Bob and Carole Loffredo	Robert and Denise Short
Rita Devine	Kenneth and Deborah Loseby	Richard and Diane Shovak
Frederick and Lisa Dreher	Marie West Lowe	Patricia Sickler
Ron and Judy Dreher	Brian and Katherine Lyford	Bill and Judy Steinmetz
Paul and Jacqueline Dufresne	Tim and Jennifer Makepeace	Anita Stubbings
Rick DuPont	Carol Mathis	Vladimir and Karen Svirsky
Juli Eekoff	Catherine McNeil	Raymond Tatko
Janet and David Emmons	Charles Gerard Merritt	Owen and Sophia Thomas
Max Emmons	Arthur and Sandi Michels	Charles and Barbara Vengrove
Lee and Sue Evans	David A. Mook	Justin Romanow and Mark Whitman
Judith Sabella and Tom Flanagan	John Moreno	Susan Wonderly

Our thanks go out to all of you who have shown your support and become members. We are including the form below for those who read this newsletter and would like to join the Conservation Fund and support us with their membership.



Please join today!

Please make checks payable to:

The Lake St. Catherine Conservation Fund, Inc.
P.O. Box 52, Wells, VT 05774

Annual membership starts at \$50. We call this the Silver Level. Gold membership is \$100, Platinum membership is \$150, and Commercial membership is \$300.

Name: _____
Address: _____ Camp # _____
Email: _____ Phone: _____
Contribution amount: _____

Fish kill on Little Lake alarms LSCCF Members

On July 10 two of our directors discovered an alarming 87 dead fish as they traveled around the perimeter of the Little Lake. David Emmons and Bob Short documented with photos mostly Northern Pike ranging from ten to twenty inches long both floating and submerged. They also found dead bass, perch, and a snapping turtle.



Two dead northern pike were among 87 dead fish found on Little Lake St. Catherine July 10

As part of the ongoing vigilant monitoring program of the Little Lake by the LSCCF, the pair also noted that the lake water temperature was at 90 degrees Fahrenheit on that day. Such high temperature can be lethal for some fish, especially pike, according to Shawn Good of the Vermont Fish and Game Department, who was immediately notified. Good acknowledged that the high temperature of the water is at least partly due to the shallowness of the lake, a condition which has been worsening in recent years because of a buildup of silt and vegetative matter. Good explained that the hotter water cannot hold enough oxygen to sustain the life of larger Northern Pike and other species. The LSCCF also alerted Marli Rupe of the Mettowee Valley Conservation District to the condition.

As we study initiatives that can be taken to restore the lake to former health and accustomed use, we are recognizing more than ever the conditions that not only lessen our enjoyment of the lake, but also endanger the very biosystem itself.



LSCCF on the move...

Looking for funds

It's clear that all of our objectives will require substantial funding. In our quest for financial support, we are looking into acquiring grants and donations from any sources available. As part of this program, Vice President Ron Dreher and Secretary Lee Evans will be attending a grant-writing course at the Stafford Institute this summer.

Once our corporation has been designated as a federal 501(c)3 non-profit organization, donations made to the LSCCF will be eligible for tax deduction. Dues, however, will not be tax deductible.

Working with the experts

Keeping our efforts in concert with professionals will help us maintain a high level of credibility when dealing with the officials who will be considering our permit applications. To that end we are keeping up contacts with both the state environmentalists, the administrators, and others. We have engaged the services of Larry Eichler of Rensselaer Polytech to give us guidance and ultimately put a stamp of approval on our findings and recommendations. We are also maintaining a relationship with the Army Corps of Engineers, who may be a valuable source of funding of any projects of which they approve.

Marli Rupe, director of the Poultney-Mettowee Valley Conservation District, has brought in a student from Green Mountain College to do some surveying on the lake and also evaluate treatment options. He will be meeting with our directors as part of his studies. He is being funded by the Lake St. Catherine Association. We are also looking into the possibility of setting up a long-term research project on the lake with a university as well.

Gathering Information

This summer has been an exciting and active time for the LSCCF. Our love of the lake has led us to explore a variety of pursuits as we form objectives and develop strategies.

One of the important steps has been to document the condition of the lake. As part of that objective, we conducted a survey of the northwest corner of the Little Lake, the part that appears to be eutrophying the fastest. On June 11 and 12, Bill Steinmetz, Fran Gilman, and Bob Short, Bill Frye, and Tim Makepeace gathered information to provide to the Vermont Agency

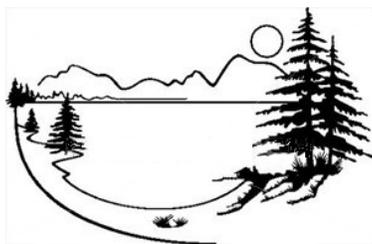
of Natural Resources as a preliminary step in our plan to apply for a permit to do a pilot project using hydraulic dredging. To date, hydraulic dredging has not been used in Vermont, and it will be necessary for us to encourage ANR to approve this and other clean-up methods. We believe the state will approve of hydraulic dredging once it is demonstrated that hydraulic dredging is a cleaner, better means mechanically removing muck and weeds than the currently approved practice of hydro-raking. In the survey, which was conducted with GPS coordinates, the crew documented a number of measurements and observations.

- *Silt depth for the first ten feet from shore reached 5 feet.*
- *Water depth (to the top of the silt) was only about 2 feet at 100 feet from shore.*
- *Weed identification included seven different species with elodea, milfoil, and lily being the most dense.*
- *Bait fish and pan fish were lacking, few bass and pickerel were observed, and spawning beds were not observed.*
- *Other marine life: 4 clams, 0 crayfish, 1 snail*

Bob Short's report of the survey can be seen in greater detail on our website (www.lakematters.org).

We have also been conducting water quality monitoring on a regular basis. We collect samples and deliver them to a limnologist, Larry Eichler, of Rensselaer Polytechnic Institute.

Using information from our surveys and from his own investigations, David Emmons has prepared a series of maps showing the location of the various infestations of plant life. The maps will augment the documented data we will be compiling for the state and for our eventual permit applications. These maps will be posted on our website when they are finalized.



In the works...

Dredging the lower channel was the initiative that gave birth to our organization. Our permit to dredge parts of the lower channel is

expected to be finalized and approved by Vermont ANR by early August. It has taken nine months to reach final approval, and we hope to see the work done this fall. Many members have also signed up for hydro-raking around their shorelines through the Lake St. Catherine Association's program.

Fish and Wildlife Department tells us that oxygen levels are a critical factor in the health of the lake. Our levels are down due to high temperatures caused in part by the shallowing of the lake. We are looking into acquiring a device to monitor the amount of oxygen in the water. Another direction is the use of "Solar Bees," devices that use solar energy to aerate the water. This oxygenation will provide a healthier habitat for fish and also encourage natural bacteria to reduce the level of organic silt.

Another project in the works is the erecting of a welcome sign to be located by the waterfall on North Street. Carved in slate, it will bear the name of the Lake St. Catherine Conservation Fund.

Tim Makepeace, Max Emmons, and Lee Evans have been preparing a handout that will be given to people at the boat launch. The flyer will provide information about our organization and also suggestions for keeping the lake free of invasive species.

ATTENTION ALL MEMBERS! ATTENTION ALL MEMBERS!



Annual Meeting Coming Up

The Lake St. Catherine Conservation Fund will be holding its first annual public & members' meeting on August 28 at the Wells Schoolhouse at 9 AM. Please plan to attend this very important event in the course of our journey to a restored lake. See you there!! *For the Sake of the Lake.*

Blue-green Algae Alert

Although no human cases of illness related to blue-green algae have been documented in Vermont since the Vermont

Department of Health has issued the following warning:

“The current sunny, hot weather has created ideal growing conditions for blue-green algae blooms. Sightings of blooms have been reported from many areas of Lake Champlain, and parks and recreation departments are watching beaches closely. Anyone recreating on the lake should watch for dense blue-green algae accumulations, especially in calm, still water.

The Vermont Department of Health advises anyone recreating on the lake – boaters, swimmers, water-skiers, waders, parents, pet-owners and residents – to take precautions around algae blooms:

- **Avoid all contact with algae-contaminated water.**
- **Do not swim or bathe in the water. Remember that children are at higher risk because they are more likely to drink the water.**
- **Monitor water intakes for private residences. If you see algae near the intake, switch to an alternate safe source of water.**
- **Do not use algae-contaminated water to prepare meals or brush teeth. Boiling water will not remove toxins.**
- **Do not allow pets in algae-contaminated water.**

Exposing skin to some types of blue-green algae can irritate or cause allergic reactions. Drinking water containing algae that is producing toxins can cause nausea, vomiting and diarrhea. Anyone who has symptoms is advised to seek medical attention. Swimming is not the only danger of exposure. People can also inhale or swallow blue-green algae when water skiing or using a jet ski.”

Trees to be submerged in Lake St. Catherine

From the President...

The summer has been unusually warm, and whether you attribute this to global warming or just the cycle of our weather, the Little Lake has suffered. Weeds, both domestic and invasive, have flourished in the warm

The Vermont Department of Environmental Conservation has approved a permit for the fishing organization known as *Rutland Bass* to provide woody habitats for fish in Lake St. Catherine. At up to 20 locations, trees and branches will be anchored to the bottom of the lake to provide such habitats. These will be in about 15 feet of water and there will be at least 5 feet of water depth above them. They are not expected to interfere with any recreational activities on the lake. The insertion of the trees and branches may be completed any time before November 1, 2015. All of the locations are around the perimeter of the big lake only.

Vermont Land Trust, Town of Wells to Protect Delaney Property

There is a once-in-a-lifetime opportunity to protect the 300-acres of farmland, forestland – the largest undeveloped parcel on the lake – at the northern end of North Street. The Town of Wells, lake residents and the Vermont Land Trust (VLT) are working together to protect the Delaney property for farming and recreation. The goal is for the town to acquire part of the land to create a town forest and offer lake access for Wells residents for kayaking and canoeing.

VLT used its revolving line of credit to purchase this property. VLT is a private, nonprofit land conservation organization. While most of the \$850,000 required to make this possible will come from public sources, \$150,000 will need to be raised locally. Some of this will come in the form of a town appropriation following a town meeting and ballot process, but most will need to come from the community. There is tremendous enthusiasm for conserving the Delaney land, encouraging farming, and connecting the town’s residents and neighbors more closely to the lake through public access. The lakeshore and dry-land property owners will both benefit from keeping this beautiful property undeveloped and creating designated public use areas; it should be a great enhancement to the LSCCF’s ultimate objective to restore the lake.

Tim Makepeace, Ron Dreher, David Emmons, and Bill Steinmetz have joined the process representing LSCCF, which supports the move enthusiastically. For more information please contact Donald Campbell at VLT at (802) 442-4915.

water conditions that were 66 degrees three weeks after ice out and that peaked at near 90 degrees Fahrenheit during our warmest July days (surface water temperatures). The lake “narrowing” phenomenon we have been observing for several years continues—check out the entire southern end, and the northeast and northwest corners for visual evidence. The lake “shallowing” phenomenon, while less observable, continues as plant material settles to the bottom and excessive siltation continues to invade our lake system.

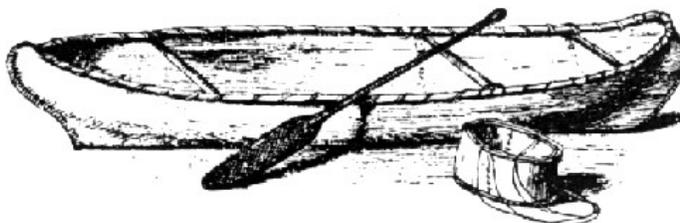
The good news is that your Conservation Fund is actively working toward actions that over time will reduce and reverse the eutrophication process. Some of these activities are:

- We have been promised our first shoreline hydro-raking permit from the State of Vermont Agency of Natural Resources by the end of July or early August. While focused on the lower channel this year—we expect to stay active in this small part of the lake maintenance process in coming years.
- We are already planning to apply for another multi-year hydro-raking permit this autumn. All shoreline property owners who are interested should contact us to become part of this process for 2011.
- We are encouraging ANR to formally accept hydraulic dredging as one of the techniques approved for lake restoration in Vermont. This is the technique illustrated at our last members meeting. You can learn more via internet. Just Google hydraulic dredging or “mudcat” to get more information.
- We have a “place at the table” for the Lake Management Plan process that is run by ANR to control invasive species. There was no Renovate treatment in the Little Lake this year despite massive milfoil banks on the west and east shores. If Renovate is the right treatment option, we should have seen treatment on Little Lake. If it isn't, and many of us doubt its effectiveness and safety, then we need a Management Plan that works. Stay tuned!
- We continue to monitor Little Lake water quality on a monthly basis. We are particularly concerned about Chlorophyll and Phosphorus levels as these are indicators of a eutrophic state. So far we have not exceeded $\frac{3}{4}$ of the standard for both, but we remain vigilant.
- The major fish kill on the Little Lake on July 10 got all of our attention. Vermont Fish and Wildlife experts say this is normal in such warm weather conditions and such fish kills were recorded all around the state in shallow water bodies. But ... a little more depth even in some places would lead to safe havens for those wonderful northern pike—another reason for effective lake restoration.
- We support lake front treatment options that will reduce siltation from shoreline areas into the lake. There are lots of barrier and buffer ideas that can help. See the enclosed article for more information. We are pleased to work with and endorse Marli Rupe's work in this regard.

We are glad you are all with us in this important venture. Take some time to read carefully this entire newsletter and do provide us your input on Lake Use Classification. If Lake Use Classification is new to you, see the article in this newsletter and contact one of the Board members to provide your input. We continue to draft The Strategy for Lake Saint Catherine and look forward to reviewing it with you at our next Members' Meeting later this summer. This meeting is scheduled for Saturday, August 28, at 9 AM at the Wells School.

We hope you all can make it...***for the sake of the lake!***

Respectfully submitted, Bill Steinmetz



Our Lake Use

Classification Map in Progress...*Member input needed!*

From its early formation, the LSCCF has focused on developing a lake use plan that will be used to formulate goals for the restoration and treatment of the lake. We are committed to determining a strategy that conforms to the desires and aims of our members.

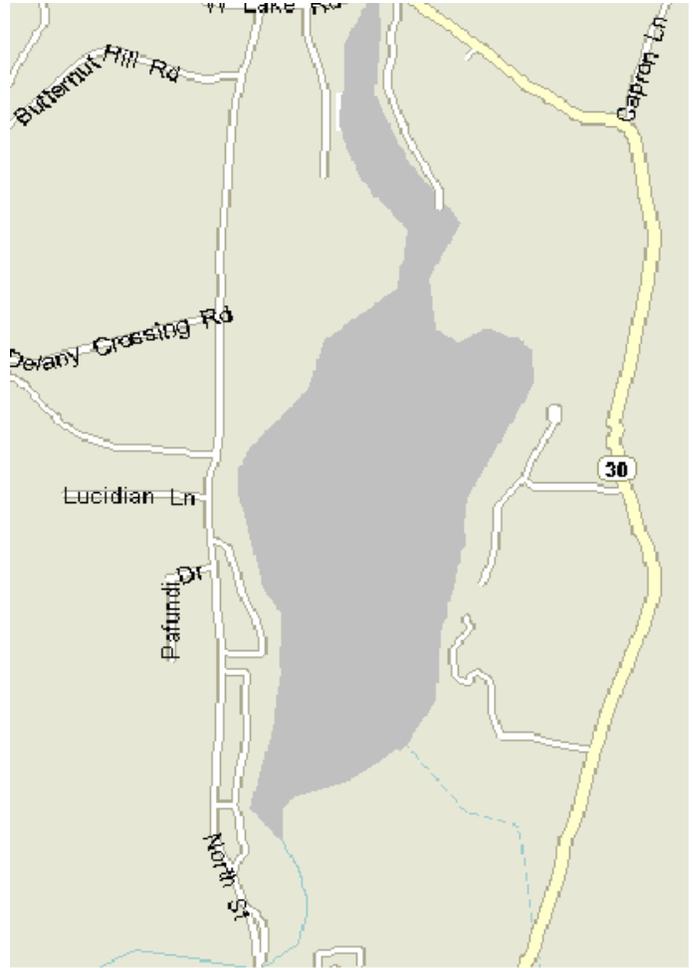
At our members' meeting on May 29 we began the process by presenting a large map of the Little Lake and inviting members to affix colored dots to areas of the map to indicate their preferences.

As we get closer to finalizing a lake use plan, we ask that you also respond with your own objectives by indicating your vision for the future of the lake. Please return a copy of the map below with any notations you wish to include that will show how you would like to see the part of the lake that you love. You can pick one of the numbers and just write it on the map.

Thanks for helping us prepare the best plan for the lake.

Suggested Lake Use Classifications

- 1 Open, deeper water
- 2 Steep shore fronts leading to deeper water
- 3 Gradual shore fronts leading to open deeper water portions of the lake that may require intervention to restore accustomed use.
- 4 Shallow, clear portions of the lake that may require intervention to maintain accustomed use.
- 5 Wetlands that develop naturally without intervention.
- 6 Channels that would be kept open and navigable.
- 7 Wetlands with dock access that would require intervention only around dock areas and access lanes
- 8 Beach front
- 9 Dock area



A Message from

The Federal Agency (FEMA) has maps that indicate some areas of Lake St. Catherine, including Little Lake and Lily Pond are in the flood plain.. If your property is one of those designated in the town tax maps as being in the flood plain, you may encounter difficulty when refinancing or selling your home, as most lenders will require extremely expensive flood insurance.



the Vice President

Emergency Management currently updated flood plain

However, I have investigated some areas so designated and checked the elevations of five of those properties. When I submitted my findings to VT FEMA, I found that some were not in the flood plain after all. You can contact FEMA directly or email me at wellslister@comcast.net and I will let you know if you are in the flood plain and will assist you with the process for appealing your status if you so desire. I have the tax map software from the Rutland Regional Planning Agency.

It is hard to understand why areas that have never flooded and appear high above the level of the lake are considered as part of the flood plain. I am making plans to meet with FEMA Vermont officials, Rutland Regional Planning officials, and elected state officials in September to address this FEMA process.

Sincerely, Ron Dreher

Be a Buffer!

As we have learned from both the Agency of Natural Resources and the Poultney-Mettowee Valley Conservation District, one of the major contributors to the rapid growth of weeds and algae in the lake is the runoff of nutrients from surrounding properties. Planting a buffer garden along the shoreline is an easy and inexpensive way to help stem this rush of phosphorous and nitrogen from seeping—sometimes rushing—into the lake water.

A buffer garden is simply a strip of plantings, preferably of typical local flora, along the shore. These flowers or shrubs will absorb a lot of the nutrients before they go into the lake. Marli Rupe of the Poultney-Mettowee Valley Conservation District will even send out a group of volunteers to do the planting. All the property owner needs to do is pay for the plants. Some of your LSCCF directors have already taken the suggestion and have completed or are in the process of getting their own buffer gardens going. When completed, the garden is an attractive addition to the property, and there is an extra bonus: the garden presents an obstacle that keeps the Canada geese looking elsewhere to come ashore.

If you think you'd like to join the growing number of residents who are helping to protect the lake in this way, you can contact Marli directly by email (pmmred@sover.net). She will help you with arrangements, and can provide you with a list of recommended plantings. You can also get in touch with LSCCF secretary Lee Evans who will help you with arrangements.



A recently planted buffer garden along the shore of Little Lake, done by Marli Rupe's crew.