



The Federation of Vermont Lakes and Ponds Newsletter Spring 2016

Editor's Corner

By Roger Crouse; FOVLAP Board Member

What a mild winter! Spring is here and FOVLAP is involved in three events, NEC NALMS, Lake Seminar, and our annual meeting. Details on all three are in this issue. You will also find a legislative update, several articles focused on our lakes and ponds, and a focus on increasing our knowledge on improving our water bodies and watersheds. See you at the events.

What Goes on During The Spring Ice Melt?

By Art Brooks, FOVLAP Board Member

(Ed note: An article by Art Brooks, same title, was included in last Fall's newsletter, and discussed what happens as water freezes for the winter. This, the 2nd in the series, discusses the return of spring and the result as the ice recedes from the water body.)

As spring approaches the sun gets higher in the sky, the days get longer and the snow covering the ice on the surface of the lake melts exposing the ice to the sun's radiation. As the ice darkens, more and more radiation is absorbed and the ice begins to melt and weaken. Sometimes the ice melts in place, whereas under windy conditions it may be blown to shore like a bulldozer moving rocks and docks in its path. Other times, honeycomb, icicle-like, features are formed that get blown to shore where they pile up in beautiful crystalline formations that sparkle in the sunlight.

Just beneath the ice the water temperature may be colder than the temperature of maximum density (4°C, 39°F) producing unique conditions with a cold layer overlaying warmer water below, albeit just a few degrees below the freezing point. As was the case in the fall, when the surface water temperature reaches the temperature of maximum density water begins to sink and mix with the deeper waters of the lake. Once the water surface of the lake is exposed to the wind additional mixing can take place and the phenomenon of spring overturn commences. In shallow, organically rich lakes the bottom waters may have become depleted of oxygen under the ice resulting in winter fish kills. As mixing proceeds in the spring oxygen from the atmosphere is mixed downward to restore conditions where fish and other organisms can survive. During this time deeper waters are brought to the surface carrying nutrients (N, P and Si) that were trapped at the bottom. The combination of increasing nutrient concentrations and more sunlight trigger a spring bloom of algae that form the base of the food web that ultimately leads to fish, frying pans and summer fun.

The generalized conditions described above represent what happens under "normal" seasonal conditions. The winter of 2015-16 was not normal with a warm Christmas, sap flowing in February and ice forming later and not developing a thick enough layer to safely support winter activities. Willoughby Lake never did freeze in the deep, 300ft. areas between the mountains and ice fishing was limited to the shallow shore zone.

What remains to be seen, is if the ice-out dates picked by contestants entering ice-out contests have to be adjusted in order to win the prizes on lakes hosting such contests. Winning contest dates that have been recorded for decades provide an excellent record of climate change. Scientists have used these dates from lakes around the world, including Vermont, to document warming trends. It is hard to deny the story that lake ice tells us about the recent past and what we may expect in the future!



Photo by Gary Seslar

President's Message
By Jackie Sprague, FOVLAP President

Spring has arrived in Vermont! Many of the lakes have celebrated their *Ice Out* three to six weeks earlier than usual. What a bizarre winter with few shanties and fishermen on the lake and the thunderous noises as the water moves beneath the thin ice. Despite the weather, the FOVLAP Board of Directors has stayed in touch and busy. We continue to meet regularly through conference calls to discuss upcoming events, legislative action and planning.

Many thanks to new board member, Roger Crouse, for taking on an additional newsletter to our offerings. I hope you all enjoyed receiving the fall newsletter! This job entails deciding what needs to be included, reaching out to potential authors, design and layout, but the most difficult task is getting people to actually write the article and send it to him! Hats off to Roger for his tenacity and patience!

We are excited to offer the Lake Seminar on June 3 at the Ed Kehoe Conservation Center on Lake Bomoseen. NEC NALMS is being hosted by Massachusetts on May 20 and 21 in Marlboro, Massachusetts. The annual meeting of the Federation of Vermont Lakes and Ponds is on Monday, July 25 at the Steak House on the Barre Montpelier Road. Many regional workshops are being planned around the State. Please take a few moments to read the newsletter as to what is happening in Vermont. Visit vermontakes.org regularly for updates on events legislative action and registration for Lake Seminar and the annual meeting.

We look forward to seeing many of you this summer at events around the state.

NEC NALMS, May 20 and 21

The New England Chapter of North American Lake Management Society (NEC NALMS) Meeting will be held on May 20-21 at the Holiday Inn in Marlborough, MA. Workshop sessions will be on Friday, technical sessions on Saturday. Registration is noon-1PM on Friday, \$75. Workshop topics (time to attend 2) are: Algae identification and control, Building an effective lake association, Aquatic plant identification, Calculating the tax value of a lake, LID techniques for homeowners, Plant control options, Available funding programs for lake management, Aluminum treatments for algae control, Cyanobacterial monitoring and health threats, Establishing a tax district, and Shoreline erosion assessment and control. Saturday will include discussions on lake management, funding and organizational structures. For hotel reservations, contact the Holiday Inn at 508-481-3000: For conference questions, contact: Ken Wagner at kjwagner@charter.net. See "www.vermontlakes.org" for registration information.

Vermont Lake Seminar, June 3, Lake Bomoseen

Save the date! The annual spring seminar will be held on Friday, June 3rd at the Ed Kehoe Education Center, Lake Bomoseen. This year's theme is: "From Policy To Action: Protecting And Restoring Vermont Lakes." Topics include learning more about the Vermont Clean Water Act, a workshop on a demonstration of aquatic invasive species decontamination, and opportunities for citizen science. More information and online registration will be available at vermontlakes.org starting on May 1st. Group discounts will be available.

FOVLAP Annual Meeting

The annual meeting of our organization, Federation of Vermont Lakes and Ponds is always on the 4th Monday in July. His year, it will be on July 25th at the Steak House, RT 302, Barre, VT. Stay tuned to our website, vermontlakes.org, for details and registration information.

Scheduled Trainings for Public Access Greeters

The Vermont Lakes Program staff is again offering free workshops for boat access greeters. These greeters will be trained on invasive species identification, boat inspection and decontamination and other topics. They are scheduled as follows:

Saturday, April 30, Elementary School, 100 School St., Glover

Saturday, May 7, Community Center, 2108 Main St. Castleton

Monday, May 16, ANR Storage Annex, 100 Junction Rd., Berlin

Wednesday, May 18, Community Church, 27 Hinton Hill Rd, Westmore

Saturday, June 4, Upper Valley Fire Station, 5445 E. Lake Morey Rd., Fairlee

All sessions run from 9AM to 1PM. Please plan to have your greeters attend one of the sessions.

Got Shoreland Projects? Hire A Contractor Certified in Natural Shoreland Erosion Control Practices By Amy Picotte, Lakeshore Manager, DEC

As part of the new Shoreland Protection Act, five Natural Shoreland Erosion Control trainings were offered throughout the state during the past winter. More than 150 contractors, engineers, designers, landscapers, foresters



and public administrators attended the trainings and have earned their certification in shoreland Best Management Practices (BMPs). This voluntary certification course covered landscaping techniques to control stormwater runoff and best shoreland conservation practices for wildlife habitat, including native plantings. During the bioengineering session, case studies on shoreland stabilization projects from the Great Lakes were reviewed because these methods that use a mix of native plantings and hard structure are relatively new in Vermont and there are not many local examples. The group also discussed the best products available for treating stormwater and protecting habitat from erosion control mix, pollinator

species, fiber coir rolls to pervious pavers. Everyone worked in a group to design a lake friendly development by selecting and placing stormwater BMPs and picking a bioengineering method for stabilizing an eroding shore. All of the site plans mirrored real, challenging shoreland development situations and the groups presented excellent solutions for their plans.

Those earning their Certification in Natural Shoreland Erosion Control practices are now listed on the Agency of Natural Resources and the Lakes and Ponds Program web sites. These contractors will be given preference for Ecosystem Restoration Program grant-funded shoreland projects. To learn more about who attended the eight hour training and has been certified in lakeshore BMPs near your lake, check out the list on the web or contact Amy Picotte at: Amy.Picotte@vermont.gov.

The next round of these day long trainings will be offered in November, 2016.

Wise About Water

By Angela Shambaugh, Aquatic Biologist, DEC

Visit the “Wise About Water” blog on FOVLAP’s webpage to learn about all things connected to water. Recent posts include the 2016 schedule of Greeter Program Trainings presented by the Lakes and Ponds Program, a video about lake stratification, and links to a series of winter stories about life in Vermont wetlands through the voices of resident wildlife. Though the snow is gone and water is flowing again, the posts are always available on line so you can enjoy them on a rainy spring day.

“In winter, a wetland and much of the land around it may appear devoid of life, a place without sound or movement. Most of the birds have flown south, with the exception of the occasional chick-a-dee, blue jay or raven. You may hear a barred owl in the evening hours off in the distance. But what about the four-legged critters who can’t fly away when the snow begins to fall?” Continue reading at: <http://vermontlakes.org/status/2016/03/28/winter-story-telling-from-the-heart-of-vermont-wetlands/>



Spring Phosphorous Sampling Started

By Ann Bove, Aquatic Invasive Species Management, DEC

On March 30, the Lakes and Ponds Management and Protection Program began its annual spring phosphorus sampling program to collect baseline phosphorus (and other nutrient data) on Vermont lakes. In 2016, this program’s 39th year, 89 lakes are on the list for sampling. Kellie Merrell, shown in photo at left of Lake Carmi, coordinates this effort for the Lakes Program (VTDEC photo).

Lake Wise Trainings

By Amy Picotte, Lakeshore Manager, DEC

Learn how to be a Lake Wise Leader and participant in the Lake Wise Program by hosting a workshop this summer. Lake Wise trainings cover the best trees for rope swings and hammocks, and the best native plants for your gardens and the bees. Come learn how native plants can brighten your yard AND stabilize steep slopes, shorelands, filter stormwater runoff, prevent erosion and provide essential habitat for wildlife. The Lake Wise training will teach gardening tips for healthy lakes while also covering erosion prevention and property protection from using waterbars for driveways, driplines for houses and good septic maintenance practices. Review of the core standards and requirements of the new Shoreland Protection Act will also be discussed. Lakeshore properties with good management practices are eligible to earn the beautiful Lake Wise Award sign. The Award Sign is recognition of exemplary shoreland stewardship and helps teach others by example, what a lake friendly property looks like. Please contact Amy Picotte to learn more about how you can become a Lake Wise Leader on your lake and to find out how to earn the Lake Wise Award and manage your property in a lake and watershed friendly way. The next training, “Lake Wise Leader Training in the NEK”, is on June 24th 9:00am – 12:30pm, at the Silvio O. Conte National Fish and Wildlife Refuge, Brunswick (~20 minutes east of Island Pond), hosted by the Essex Natural Resources Conservation District and Maidstone Lake friends. For more information, contact Heather Robinson, Essex County District Manager at: essexnrcd@gmail.com. To learn more about hosting a Lake Wise Training, please contact Amy Picotte, Vermont Lakeshore Manager, Watershed Management Division, at: Amy.Picotte@vermont.gov.



The Number of Butterfly and Moth Species (baby bird food) Supported by Native Tree Species

Learn what to plant on your shore at a Lake Wise Training

Happenings at the State House

By Ginny Garrison and Cindy Swanson

FOVLAP’s Legislative Committee watches what’s going on in the Vermont Legislature and keeps members informed through periodic Legislative Updates to FOVLAP’s website: <http://vermontlakes.org/legislativeupdates/>. In 2016, 480 bills have been introduced, of which eleven are of particular interest to FOVLAP members. Of the eleven, eight passed the House and went to the Senate. One passed by the Senate in 2015 went to the House. The remaining have not been acted upon in the Legislature this year. Since this is the second year of the biennium, these bills are unlikely to pass. If you are interested in learning more about a particular bill, the text and current status can be found via the Legislature’s website search system. Just type the bill number into the search box on the Legislature’s home page: <http://legislature.vermont.gov/>. A link to each bill is also contained in updates on the bills in the Legislative News section of FOVLAP’s website: <http://vermontlakes.org/legislativeupdates/>. If you would like to stay up-to-date on bills the legislative committees are working on, the weekly committee agendas can be viewed online here: <http://legislature.vermont.gov/committee/meetings/2016>



The bills with potential action in 2016:

By the Senate Natural Resources Committee:

H.517 proposes to change the classes of waters in the State and would enable the individual reclassification of one or more uses of all or a portion of a waterbody.

H.518 proposes to require six members of the public or House and/or Senate to be appointed to the Clean Water Fund Board.

H.570 proposes to amend various requirements relating to hunting, fishing or trapping in Vermont, including the purchase and sale of fish caught in Vermont and the introduction, or attempt at introduction, of fish into Vermont waters. This bill would also repeal the existing prohibition on the use of felt-soled boots or waders in Vermont waters.

H.595 proposes to require the Secretary of Natural Resources to adopt rules allowing the use of a surface water as a potable water supply source for an individual residential dwelling if certain conditions are satisfied.

H.610 proposes to clarify current law relating to the Agency of Natural Resources' Municipal Water Pollution Control Grant Program and the Clean Water State Revolving Fund.

H.674 proposes to require the operator of a wastewater treatment facility to notify the public, the Agency of Natural Resources, and local health officers of untreated discharges from the wastewater treatment facility.

By the Senate Agriculture Committee:

H.829 proposes to make technical amendments to water quality requirements for small farms.

By the Senate Rules Committee:

H.877 is the Transportation Funding Bill, which includes changes to the Motorboat Registration Fund that funds the Department of Environmental Conservation's aquatic nuisance control grants. All motorboat registration fees are proposed to be increased, and the formula that allocates funding among several departments and agencies is proposed to be significantly changed.

By the House Natural Resources and Energy Committee:

S.123 is a far-reaching bill that would affect most or all VT Department of Environmental Conservation permit programs. The bill proposes to establish standardized procedures for public notice, comment periods, and issuance of decisions on permit applications and approvals issued by the Department of Environmental Conservation.

If you would like to receive an email when the FOVLAP Legislative Committee posts updates to FOVLAP's Legislative News page, go to <http://vermontlakes.org/legislativeupdates/> and type your email address into the "Follow updates by email" box on the upper left side of the page and click on "Subscribe."

New Lakes and Ponds Website

By Perry Thomas, VTDEC Lakes & Ponds Program Manager

Newsflash! The Lakes & Ponds Program has a new website, expected to go live by the time this newsletter is printed (URL: <http://www.dec.vermont.gov/watershed/lakes-ponds>). Much hard work has gone into preparation for the launch, led by staff members Bethany Sargent, Pete Stangel, and Josh Mulhollem. We encourage FOVLAP members to explore the site.

The Status of Act 64

By Perry Thomas, VTDEC Lakes & Ponds Program Manager

Lakes and Ponds Program staff members are paying close attention to all the changes triggered by the new Vermont Clean Water Act (Act 64), including revisions of the Vermont Stormwater Management Manual, Accepted Agricultural Practices (soon to be Required Agricultural Practices), and new standards required for all municipal roads (all classes of roads). The original draft documents for the Stormwater Manual and the AAPs are currently being revised based on extensive feedback from the public. New drafts will be available soon.

We note that Stormwater Treatment Practices (STPs) are designed to reduce phosphorus and sediment runoff. The STPs offer one arrow in the quiver of measures we can take to protect our lakes, but they do not address all threats to lakes. They do not, for example, directly address the need to improve shallow-water habitat. We also note that road runoff is addressed through a different (although sometimes overlapping) set of Best Management Practices.

As this newsletter goes to print, the Stormwater program's website URL is poised to change. We recommend searching for "Vermont Stormwater Management Manual" to find the latest draft. Best Management Practices for roads are listed on the VTTrans website at <http://vtransoperations.vermont.gov/bmp>.

While we cannot yet anticipate exactly what actions will be listed in the new Required Agricultural Practices, we expect they will include:

- Preventing gullies from forming and eroding valuable agricultural land;
- Building fences to keep livestock out of streams and rivers;
- Developing training and certification programs for businesses that apply manure to fields; and
- Increasing farm inspections to ensure compliance with state agricultural water quality rules;

To read Act 64 in its entirety, go to:

<http://legislature.vermont.gov/assets/Documents/2016/Docs/ACTS/ACT064/ACT064%20As%20Enacted.pdf>

Shoreland Pollinator Species – A Beckon to Gardeners By Amy Picotte, Vermont Lakes and Ponds Program

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This past March 2016, the Agency of Natural Resources held a packed (175 participants) conference on Pollinator Species with the goal of inspiring more actions for protecting native species for bee and bird habitat. Over-clearing and managing our lands has led to a drastic decline in native plants, especially pollinator species, and the message is to leave more wild spaces on your property and... yes, clean up less. If you haven't seen the FOVLAP designs for lakeshore plantings, you can find a copy of "A Guide to Healthy Lakes Using Lakeshore Landscaping" on the FOVLAP web site. This booklet provides a list of many beautiful native pollinator species and helps you identify and plant them along your shore.

Deb Markowitz, Secretary of Vermont ANR points out "In Vermont, many species of birds and other wildlife feed on blueberries, blackberries, apples and serviceberries." Continued loss of habitat threatens both pollinator species and the pollinators and thoughtful shoreland management techniques can help reverse this trend while being protective of water quality.

Doug Tallamy, professor and chair of the Department of Entomology and Wildlife Ecology at the University of Delaware, explains, "Plant wisely. Plant to sustain what you love: clean lakes, kingfishers, loons, flowers, fruit, fish, and yes, the birds and the bees." Tallamy reports that gardeners can "change the world" by ensuring their plants provide food for their local wildlife.

Reduce lawns. Lawns are sterile environments and offer no benefit for wildlife nor do they soak up stormwater. According to Tallamy, native plants are essential for wildlife survival and ornamentals and other non-native species, like turf grasses, offer no nutritional value and serve as sterile statues in the landscape.



Honey Bee on Native Joe Pye Weed,
Eupatorium maculatum



The monarch butterfly, *Danaus plexippus*, depends solely on milkweed, *Asclepias syriaca*, to lay its egg and feed as a larva. Milkweed is essential to the survival of the monarch.

The monarch butterfly is the poster image for an insect species that has coevolved for 1000s of years with one native plant, the milkweed. Without milkweed, there will be no monarchs. But, astonishingly, 90 percent of all plant-eating insects are specialized to feed on one or a few native plants.

Since most insects have not evolved with non-native turf grass or lawn, they don't have the ability to eat it. Without healthy insect populations, song birds, land mammals, frogs, turtles, and fish cannot survive. If home gardeners reduced or eliminated their lawns and planted native species, then they single-handedly and collectively would be saving biodiversity and ecosystem services faster and better than any other entity. Gardeners have the power to make a beautiful difference on this planet and let's help it happen at home along a Vermont lakeshore. To learn more about shoreland landscaping with native plant species, visit the Lake Wise Program.

From Roadside to Rescue: A Tale of Determination and a Lost Loon
By Ali Wagner, birder, citizen scientist and educator of Huntington, Vermont

“Two expressions I often use when birding are: Timing is everything and birding trumps everything. On August 18, [2015] a Common Loon chick convinced me that only one of these statements is true as the chick changed the course of my day.

“Route 105 in the Northeast Kingdom can be a busy road with 18-wheelers and fast cars. A few miles east of Island Pond in the middle of this drag strip, I saw the distinct shape of a loon. Oh no. But this was not an adult that mistook the glossy road for a body of water. It was a chick, still mostly covered with natal down. HOW did you manage to fly, Little Guy?” (Photo of “Little Guy” © Ali Wagner

(This interesting story about Little Guy, in three installments, can be found on the web at <http://vtecostudies.org/blog/from-roadside-to-rescue-a-tale-of-determination-and-a-lost-loon/>

Thanks, Jackie, for submitting this information to me. - Ed)



Time To Renew Your Membership
By Bruce Barter, FOVLAP Treasurer

Two types of application forms are included in this newsletter: 1) Individual and 2) Lake Association/Lake Representative/Business. An Individual membership in The Federation of Vermont Lakes and Ponds connects you to fellow members and lake association members throughout Vermont; enables you to stay abreast of the latest lake management techniques, lake-related research, and legislation; and supports the many programs and activities of FOVLAP. In addition, Lake Association members and Lake Representatives (representatives of lakes without an association) are eligible to vote at the annual meeting on July 25th provided that they are paid members of FOVLAP prior to voting at the annual meeting (there is a limit of one vote per lake). Please direct questions to me at treasurer@vermontlakes.org.





FOVLAP Key Contacts

To contact an officer or director of FOVLAP, go to www.vermontlakes.org and click on “Contact Us.” ...

Officers:		Directors:
Jackie Sprague, President, Harvey’s Lake		Art Brooks, Willoughby Lake
Bruce Durgin, Vice President, Lake Morey		Roger Crouse, Lake Iroquois
Mary Jo Teetor, Secretary, Lake St. Catherine		Andy Dales, Caspian Lake
Bruce Barter, Treasurer, Seymour Lake		Lori Fisher, Lake Champlain
		Jamie Longtin, Sunset/Sunrise/Perch
		Bruce Tanner, Willoughby Lake
		Beth Torpey, Lake Seymour
		Don Weaver, Northern Lake Champlain
One Open Position (fill remaining term for Mary Jo Teetor, now serving as an officer)		
ANR DEC: Amy Picotte, Amy.Picotte@vermont.gov Angela Shambaugh, Angela.Shambaugh@vermont.gov Ann Bove, Ann.Bove@vermont.gov		

Dedicated to the conservation, promotion and development of environmental quality standards for Vermont lakes and ponds

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