

SAAWA's efficient volunteer-led operation reduces phosphorus, improves conditions

St. Albans Bay Weed Harvesting: 16 Years of Improving Water Quality

The St. Albans Area Watershed Association (SAAWA) completed our 16th year of weed harvesting on St. Albans Bay. Over the last 5 seasons of weed harvesting, an average of 237 tons of organic matter has been removed from St. Albans Bay each year. The weeds have a nutrient content comparable to composted cow manure (.06% phosphorous, 2.5 % nitrogen and 2.3% potassium). It can be calculated that 284 pounds of phosphorous, on average, is removed from the Bay each year. If not removed, the weeds decompose, contribute to more organic matter on the bottom of the lake, feed future weed growth and promote algae blooms. Numerous residents of St. Albans Bay have remarked that the weed growth has been reduced over the years and there are fewer incidents of weeds blowing on shore and decomposing. Removal of the weeds also promotes better water circulation and enhances recreational opportunities.

If not removed, the weeds decompose, contribute to more organic matter on the bottom of the lake, feed more weed growth and promote algae blooms.

SAAWA is a group of local volunteers taking pride in running a cost-effective, low overhead harvesting program as a service to the community. In the early harvesting years, Aquatic Control Technology (a company from Massachusetts) was contracted to do the harvesting at a cost of approximately \$32,000.00 for 8 weeks of weed harvesting. After three years, in 2008, SAAWA

purchased an Aquarius Systems EH-420 weed harvester. In 2015, hoping to increase harvesting capacity and flexibility, SAAWA purchased a second harvester — a used Aquamarine H5-200 from the Town of Franklin. John's Auto Care, Inc was again contracted to operate, perform daily maintenance and transport the weeds to



the compost sites.

The success of the weed harvesting program can be attributed to four factors:

1. The decision by SAAWA to purchase a first machine in 2008 and a second machine in 2015. Managing the harvesting program directly, and maintaining local control over harvesting equipment, schedules and repair, has helped reduce costs and increased harvesting flexibility.
2. The collaborative support of the Towns of Georgia and St. Albans and the City of St. Albans which has provided stable annual funding. The funding for weed harvesting is provided by the Town of St. Albans (\$7,500.00), the Town of Georgia (\$2,500.00), the City of St. Albans (\$10,500.00). SAAWA also receives an annual grant from the State of Vermont through the Aquatic Nuisance Control Grant-in-Aid program.
3. SAAWA's excellent working relationship with Andy Pelletier and John's Auto Clinic's ability to maintain and repair these older machines. Andy Pelletier has been the daily supervisor of the program. He and the Pelletier family operate John's Auto Clinic and have the knowledge and tools to maintain and repair

Come on down to the Bay Park! Town Workers Make St. Albans Town Bay Park Shine!

St. Albans is extremely lucky to have a wonderful park on the shores of St. Albans Bay. Over the past few years, the Town of St. Albans has been markedly stepping up efforts to maintain and improve the Bay Park for the community and it shows! The Thursday Farmers Market, addition of an event tent, improvements to the Stone House, continued improvements to the recreational path, sprucing up of ball fields and play areas have drawn more people and events to the park.

Recently, more significant improvements were made. The Town Park staff took advantage of low water levels to rake and clean a wide expanse of beach. This is not only wonderful for visitors to the beach, but should also help in improving water quality by removing the smelly vegetation that builds up on the shore during the summer.

A central ramp is under construction to improve access to the sandy beach. Finally, the Town recently installed a fitness equipment area along the rec path for those who want to add strength training to their walks.

Kudos to the Town of St. Albans and to John Montagne, Facilities Manager/Parks Supervisor, for creating a wonderful place for public recreation. It looks wonderful and maintenance of the beach area may pay dividends next summer in cleaner water and better swimming.

Well done, St. Albans Town!



New Beach Accessibility Ramp



Fitness Equipment area



Freshly raked sand at St. Albans Bay Town Park



John Montagne (right) & park staffer

New Member Feature

St. Albans Area Watershed Organization is a grass-roots, volunteer organization welcoming all members who care about the Lake. There are many opportunities to participate! Please become a member today. Below, meet new SAAWA member Matt Jarvis. Welcome, Matt!

Why I Jumped on Board!

by Matt Jarvis
Since I was a kid, I grew up summering on Lake Champlain. Our Family camp is on the “inland sea”, directly across from the northern tip of Savage Island (about a five mile boat ride south of St Albans Bay). I’ve always enjoyed fishing, swimming and boating on Lake Champlain. The water quality in the inland sea is very clear with low turbidity, although it has its moments of washed-in seaweed. I believe the water quality in the inland sea is mostly due to the fact it’s a large, deep body of water with a lot of volume.

I now live on St Albans Bay. When I heard about SAAWA, it definitely piqued my interest. This is an established outlet to try and help the bay become a cleaner place for the future. I’ve always wondered what the bay was like several hundred years ago before the industrial revolution and dumping waste became a common occurrence. So far, I’ve learned that cleaning up the bay is actually more complicated than it appears at first glance. The Bay I think has a natural turbidity built in, but the part that can be cleaned up is the man made additives that have been introduced over many decades. I think the Bay’s natural turbidity is a reflection on the fact it is relatively shallow, which makes it easier for algae to get sunlight and grow. Then you add phosphorous run off from farms and other sources, mixed with areas of stagnant water with low circulation — it creates a perfect storm. Another innate contributing factor is that Lake Champlain flows from South to North, making it difficult for the water to escape out of the bay and replenish from the broad lake.

This was my fourth summer on the Bay and I’m hooked on the gorgeous sunsets and bass fishing. I’m glad to be part of the SAAWA team and hope to help in some way. I’m new to SAAWA and have much to learn and catching up to do. Thank you for allowing me on board, and letting me put in my 2 cents!

Mill River Observations... It seems the sediment and silt coming out of Mill River and building up over the years is causing water circulation problems in St Albans Bay. The sediment seems to stretch from Georgia Shore almost to Lazy Lady Island. I feel this is a problem for the bay because it basically leaves only the west side of Lazy Lady Island as an outlet for the bay. With Lake Champlain running north, water is effectively being trapped in the bay with no other outlets. With the sediment built up, the only way water exits the bay is through the west side of Lazy Lady Island.

The bubble system used in Lake Carmi is based on the benefits of aeration and circulating water to limit weed growth. It’s no surprise that the major weed growth near the Mill River outlet is a direct reflection of the stagnant water and years of sediment build up.

A future project to dredge some of the Mill River sediment out of the bay could vastly improve water circulation and aeration, cutting down on weed growth and improving water quality. SAAWA may want to look into a future funded grant, this would require a proposal to engineers and the VT congressional delegation.



PO Box 1567, St. Albans, VT 05478

The SAAWA Newsletter is a publication of the Saint Albans Area Watershed Association

Board of Directors

- President | Steve Langevin
- Vice President | Chris Dussault
- Treasurer | Josh Koldys
- Secretary | Jeff Moulton

Visit us on the web: SAAWAVT.org

The Board generally meets on the 3rd Wednesday of the month at 5:30 pm. All are welcome!

Email: info@saintalbanswatershed.org for directions.

JOIN US! Demand Clean Water!

Your support is essential and helps SAAWA keep the focus on clean water in St. Albans Bay! Please complete the form below and return to:

St. Albans Area Watershed Association
PO Box 1567, St. Albans, VT 05478

Name _____

Address _____

City/State/Zip _____

Email _____

Phone _____

Shoreline property owner? yes no

Membership Level

\$10 Individual \$20 Family \$25 Family (includes Shirt)

(Individual, Family and Student memberships receive SAAWA newsletter)

\$50 Lake Advocate \$100 Lake Steward \$150 Business Sponsor

(Winslow book on Lake Champlain) (Website Link)

2020



You may become a member
or renew your membership online at
saawavt.org

If you have an interest in becoming a
SAAWA Board Member, please contact Steve Langevin,
SAAWA president: info@saintalbanswatershed.org.

Join us and speak up for clean water!

Call to Action! Invasive Cormorants on Lazy Lady Threaten Foliage, Native Species & Water Quality



A nesting cormorant on Lazy Lady Island. The birds strip trees of nearby twigs and leaves to build their nests.

This past June, a member of the St. Albans Area Watershed Association and a freelance photographer took to the water and the air as they launched their boat and drone to take aerial video and photo footage of Lazy Lady Island in St. Albans Bay. ([See video link](#)). The expedition took about an hour and a half.

The results — a graphic look at the destruction of the island thanks to the colonization of cormorants. There were scenes that ranged from trees with healthy foliage to trees entering the first stages of destruction, to dead trees covered top to bottom with white cormorant guano.

Double-crested cormorants first started nesting on Lazy Lady Island in the early 2000's. Permission by the island's owner was given for control efforts in 2004. Consequently, there was little to no nesting activity between 2004 and 2015. However, nesting resumed in 2016 as control efforts were halted due to a decision by a federal judge to block programs controlling double-crested cormorants and also because federal and state agencies could not secure permission from the landowner to

access the island. In 2020, wildlife authorities estimated 195 cormorant nests were occupying Lazy Lady and that this may be the only nesting colony of cormorants in the Vermont waters of Lake Champlain.

Young Island provides an excellent example of where Lazy Lady is headed without cormorant control. A google search for Young Island can tell the story of its demise. In short, it took 10-15 years for Young Island to go from a healthy, forested island to a denuded hunk of rock.

We are roughly 5 years into this very process at Lazy Lady. Some of the tree species (red pine) may be past the point of recovery. Under the current (or increased) cormorant nesting level, best professional judgement gives the other tree species (oak, hickory, basswood, white pine, and birch) 3-5 years before they are past the point of recovery. Remember it is not only the guano on the trees but the guano in the soil that will affect the survival of the trees and future growth. The restoration of native vegetation is a long process, as it takes 20-30 years. Four Brothers Island has also experienced the same process set

in motion by cormorants.

A recent *St. Albans Messenger* edition stated, "Cormorants - AKA "rats with wings" to anglers - are taking over waters off the Georgia shore, threatening both water quality and wildlife. Wildlife officials want to destroy the nests on Lazy Lady Island, but can't seem to locate the owners."

"The impact on the general environment is already being seen," Vermont Fish and Wildlife Department biologist John Gobeille wrote in an email about the bird population to the *Messenger*. According to Gobeille, cormorant overpopulation on the island could lead to birds stripping

the island of vegetation for their nests, while their guano – their excrement – acidifies the island's soil and coats tree leaves, making plants unable to photosynthesize and survive." (*St. Albans Messenger, July 2020*)

Some people may recall that in 2003, the U.S. Fish and Wildlife Service allowed conservation organizations to take action against cormorants by spraying oil on cormorant eggs to deprive or suffocate the eggs of the needed oxygen to hatch. Shooting excess cormorants was also allowed by the federal government as a way to mitigate the overpopulation of cormorant colonies.



Acidic guano covers the leaves and ground below the cormorant nesting areas on Lazy Lady..

Too many Lake Champlain islands have been overcome by cormorants, "whose populations had exploded from a single nesting pair into a population that peaked at more than 20,000." (*Adirondack Explorer, November 16, 2018*). The island is in need of immediate attention. To make matters worse, the Vermont Fish and Wildlife Department has reported that the area around Lazy Lady is at risk that measures beyond the cormorant factor. Cyanobacteria (blue-green algae) and a reduction in the fish population is hitting the area hard. It does not help that the guano from cormorants accelerates the growth of cyanobacteria as well.

Several unsuccessful attempts by the Town of Georgia have been made to contact Roger A. Hoenke, owner of the island who resides in Florida. At this moment, the St. Albans Area Watershed Association and the Friends of Northern Lake Champlain are collaborating with the Town of St. Albans to try to address the cormorant issue on Lazy Lady Island.

If anyone in our community is aware of a way to communicate to the property owner that help is available to preserve this lovely island in the Bay, please contact SAAWA at info@saintalbanwatershed.org.

Visit saawvt.org for video footage or click this link: [aerial video footage of Lazy Lady Island, June 2020](#).



credit: Cathy Frank

Results of cormorant infestation, Four Brothers Islands. It will take years to restore native vegetation and bird species diversity. Cormorants bully other birds, leaving only gulls which can coexist with them.

16 Years of Improving Water Quality on St. Albans Bay (cont'd from p. 1)

the weed harvesters.

4. The cooperation of the three local municipalities, the State of Vermont and private citizens. The program also receives contributions and continuing support from SAAWA members and residents of St. Albans Bay.



The cost of operating and maintaining two machines runs about \$30,000.00 each season. The weed harvesters operate from July 15th to September 15th as conditioned in the mechanical weed harvesting permit from the VT Department of Environmental Conservation.

2020 Harvesting Season Report

The two machines were prepared for launching during the week of July 6-10 and launched on July 14. From July 16 to July 30 the weed harvesters operated along the easterly shore of the Bay adjacent to Ferrand and Bingham Shore Roads. The weed growth was moderate to heavy in this area with the harvesters getting 10 to 11 loads a day. The small weed harvester did not operate from July 16-29 due to a leaking hydraulic motor and a delay in delivery

of hydraulic oil. During the first 14 days of operation the large harvester had 116 loads which equals 48,720 bushels of weeds. The small machine harvested 18 loads which equals 3,600 bushels for a total of 52,320 bushels. For comparison, during a similar period last year in 2019, 13,400 bushels were harvested by both machines.

The weed harvesters moved to Hathaway Point Road on August 6. Weed density was moderate. During this period the large machine harvested 15 loads (6,300 bushels) and the small harvester 12 loads (2,400 bushels).

The harvesters moved to Hathaway Point Harbor on August 17. Weed growth was again moderate. This period captured 8 loads with the large machine and 15 loads with the small machine.

Both harvesters returned to the Ferrand Road/Bingham Shore area on August 24. Weed growth was again moderate but beginning to be heavy along the Bingham Shore Area. The weed harvesters continued to operate until September 15, as required by the State of Vermont.

Guest Article: EPA Grant Update

Studying the Links Between Harmful Algal Blooms and Human Well-Being

by Diana Hackenburg and Rachelle Gould, UVM

Since Fall 2017, our research team has been working to better understand the links between harmful algal blooms and human well-being, as well as potential barriers to addressing water quality issues, including how the community views and uses scientific data. Our research hit a few roadblocks due to COVID-19 but most work has now resumed. Thankfully, we were awarded an extension by the EPA that will allow us to continue using the funds and working with our community partners (SAAWA and the Franklin/Grand Isle Community Action Program) through July 2021.

This fall, we will launch a survey open to all Franklin County residents (full-time or seasonal) asking people's opinions on water quality and actions that could help address cyanobacteria blooms. We hope that SAAWA members can share the link with their family, friends, and neighbors (we also will distribute the survey through Front Porch Forum, the St. Albans Community Form, flyers, and social media). **As an incentive, anyone who completes the survey will be entered into a drawing to win a \$50 gift card.** We plan to analyze short interviews about blooms done in St. Albans and Burlington this fall, and the cortisol study examining the links between blooms and stress will take place this spring. Additionally, we are starting to plan ways to wrap up the project this spring and share our findings with the community. Again, stay tuned to

SAAWA social media and communications for updates on how you can participate in this final aspect of the project.

On the data end of things, we have finished collecting the air, fish, and water samples, and graduate student Natalie Flores is hard at work processing and analyzing those samples. She is looking for cyanotoxins in all the samples, as well as examining the fatty acid content in the fish.

In addition to the fish and water samples, graduate student Diana Hackenburg attended many community meetings and interviewed 32 people, including SAAWA members, business owners, farmers, and recreational users, to better understand how the community perceives and talks about cyanobacteria blooms. She currently is working to transform these interviews into models that can be used to compare people's perceptions to one another, as well as to a model based off of professional and scientific understanding of the issue. Diana also collected and reviewed over 1,400 *St. Albans Messenger* articles from 1960 to 2018 that mention cyanobacteria or algae to analyze how the media and different sources have framed the issue over time. In particular, we are interested in how people define the problem, identify solutions, and provide motivation for addressing the blooms.



News/Updates

Birdhouses & Lemonade!



Left to right: Jameson Dente, Marion Moulton, Gabriella Moulton, and Sophia Dente.

This past summer, four local children took it upon themselves to have a lemonade and bird house sale to raise money for the Saint Albans Area Watershed Association.

The four kiddos, along with a little help, made fresh squeezed lemonade and painted about 20 bird houses to sell to nearby neighbors and friends.

Their little group was known as "Cousin Trouble" which consisted of members who are cousins. :-). Altogether, they raised about \$250 to donate to the Association. A big thank you to all who helped make this happen and supported the event.

Town of St Albans approves stormwater utility ordinance

The St. Albans Town selectboard narrowly approved a stormwater utility which sets down rules for runoff, buffers, land usage, development, impermeable surface limits, and illegal discharges. It will also set annual fees, yet to be rolled out, to cover staff and projects to meet the Town's water quality

goals. The average homeowner would likely see a fee around \$65/year. Commercial properties would pay more, based on area of impervious surfaces. The ordinance was approved 9/21/20 and can be downloaded on the St. Albans Town website: <https://bit.ly/33blxOg>. It is open to appeal.

New Kayaker's Guide Available.

Vermont kayakers Cathy Frank and Margaret Holden have released a 2nd edition of *A Kayaker's Guide to Lake Champlain* with updated information on launch site options, points of interest, wildlife, navigation hazards and safety tips, maps, as well as a narrative of their own paddles circumnavigating Lake Champlain. The book includes trips to Burton, Woods, Knights and Butler Islands. Their 2015 book *A Paddler's Guide to Champlain Valley* contains an paddle



up Jewett Brook. It also includes 41 other guided adventures, 28 sidebars and over 60 pages of introductory background on the history, geology, botany, wildlife biology, and ecology of the region and the challenges it faces. Both books are available locally at The Eloquent Page in St. Albans.

Identifying Cyanobacteria and Blue Green Algae

St. Albans Bay experienced a better year in 2020 with less cyanobacteria and fairly good water conditions. We did experience a few blooms, but they were comparatively brief.

Oddly, worse algae problems seemed to appear on Maquam Shore this year. As a reminder, it can be dangerous for people or pets to contact or consume water displaying symptoms of blue green algae blooms. HealthVermont.gov has a short and useful video illustrating the difference between blue green algae and other algae. Find it here: <https://youtu.be/ea0EHw5suDs>



You Can Support Clean Water!

As we were unable to hold SAAWA's Restore the Bay 5K and Annual Meeting this year, we hope you will renew your membership online. We need your support to continue harvesting, to raise water quality issues and explore new projects such as Black Creek Swamp and Mill River restoration. Your membership keeps SAAWA going. You can also attend a **Board meeting and join us!** Meetings are generally on the 2nd or 3rd Wednesday of the month. **Email info@saintalbanwatershed.org** for info. You can help in other ways. Talk with neighbors, family and friends and ask them to join us! Volunteering is a way to learn more about lake issues and contribute to real change. You can also:

- join the SAAWA Board
 - help research water issues or write articles for newsletter & social media posts
 - attend public meetings or contact public officials
 - organize 5K & other events
 - help with the harvester and much more!
- SAAWA is an all-volunteer association. We pride ourselves on a cost effective operation but we need you! Please make this the year that you step up and lend a hand if you are able. If not, renewing your membership helps keep our efforts going and strengthens our voice for clean water.



working to restore Saint Albans Bay

WE WANT TO HEAR FROM YOU!



Participate in a
WATER QUALITY SURVEY
for a chance to win a
\$50 GIFT CARD!

**What do you know about Lake Champlain water quality?
What actions would YOU take to improve St. Albans Bay?**

Participate in a 15-minute online research survey
to help University of Vermont researchers understand public concerns and behaviors related to the lake. After the survey, enter to win a \$50 gift card. Access the survey using the QR code or visit: go.uvm.edu/waterquality



Are you eligible?
You must be 18 years or older **AND** a part-time or full-time resident of Franklin County, Vermont.

Questions:
To learn more about this study, contact Diana Hackenburg at diana.hackenburg@uvm.edu



Free with membership while supplies last!

Restore the Bay Tee Shirts

We still have some awesome performance tees from last year's Restore the Bay 5K. They are comfortable and cool, and make great gifts!

Wear with pride, support SAAWA and send a message that we all want to see clean water in Saint Albans Bay!



\$20/each (includes SAAWA family membership!)

Adult, women's cut & youth sizes available