



Newsletter 2018

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Presidents Letter 2018

It is always so energizing to get out on the lake. Of course, sometimes we have more projects than energy! Luckily, we have the able assistance of volunteers and donors to help. I'm always surprised how much we get done, and it's not possible without you. How fortunate we are to be part of this beautiful setting and wonderful community.

So many of our readers take steps to help protect the environment. Many individuals together can make a big contribution to a cleaner and more sustainable lake. So every time you chose to pump out your septic tank, or pick up after your dog, or use non-phosphorus fertilizer, or join the Three Lakes Council, you take an action that makes a difference for all of us. Read on to find more ways.

You may have heard about the NY Harmful Algal Blooms

HABs initiative. While none of our three lakes is one of the 12 lakes for intensive study, read more to see how this initiative relates to our water quality studies and how we might be able to apply any new findings from the research.

Long Pond Preserve continues to keep us busy. The preserve is critically important to protect the water quality of our lakes. Ownership has rightfully made us focus more on the lakes' watershed in addition to the lakes. We continue to manage storm water erosion on the



preserve and we planted 11 large trees this spring. We found new invasives and are taking control steps. We anticipate continued patrols to discourage rowdy behavior.

You are invited to walk the trail and see what a treasure we now manage.

We only issue one newsletter a year. We update our **website** more frequently. See the information at

www.theelakescouncil.org

We'd like to hear your feedback and suggestions for the site.

We are also reissuing **boat stickers**. If your boat doesn't have a blue turtle boat sticker, get your new boat sticker now. See how in this newsletter.

Back by popular demand – a reprint of lake guidelines. When you have guests or renters, please share the good neighbor page with them.

Also back by request is a graphic on phosphorus sources. Learn how you can help keep phosphorus out of our lakes.

Continue reading for our state of the lakes report. We also have county maps showing the septic pumpout status around our lakes.

Please join us at our Potluck and Annual Meeting at the Waccabuc Country Club beach on **July 21**, to hear more about these topics and anything new.

See you there and around the lakes!

*Janet Andersen, President
Three Lakes Council*

threelakescouncil@gmail.com

Harmful Algal Blooms (HABs)

All lakes have some algae - and that's a good thing. Like terrestrial plants, algae convert sunlight to sugar, thereby forming the base of the aquatic food web. Algae enable the survival of all that eat them – from small aquatic animals up to fish, and birds like the blue heron that eat them. As a byproduct of photosynthesis, algae release oxygen. Globally about half of our oxygen is produced by algae. That's the good news about algae.

Bloom, gloom, doom.

The bad news is that algae are able to grow and reproduce like crazy given sufficient warmth, sunlight, nutrients, and calm water, and a bloom results. In these situations, cyanobacteria will often out-compete algae.

Sometimes called blue-green algae, **cyanobacteria** are classified as photosynthetic bacteria - that is, bacteria that can convert sunlight into food. Because cyanobacteria can produce toxins that harm people, cyanobacteria blooms are called Harmful Algal Blooms (HABs).

Not all cyanobacteria produce toxins, and those that can don't produce them all the time. Since it costs cyanobacteria energy to produce the toxins, they must get some benefit, but we don't know what it is. Scientists believe that HABs are occurring more often. HABs also are appearing in low

nutrient lakes that "shouldn't" have algal blooms. Further, toxins are starting to appear in drinking water sources.

New York Initiative

In 2018, these circumstances led to a New York \$65 million HABs initiative, led by the DEC. This spring, HABs summits were held in 4 regions of the state. Twelve waterbodies got action plans. Next, advanced monitoring programs and mitigation actions will be piloted.

Early findings

The early findings from the four regional summits include:

- HABs are complicated
- We're in for the long haul
- Improvement is possible
- Nitrogen as well as phosphorus need control
- Progress requires expanded partnerships and research

What about us?

Most of the 16,000 NY lakes that are not one of the 12 intensely studied lakes want to know how they can benefit from this initiative.

Here's what has happened so far. Data gathered on our three lakes has been used in analysis of what triggers a bloom, and may suggest actions. Our water quality monitoring program has expanded this year to support added research into nutrients. The pilot mitigation programs will include solutions that might be applicable to our lakes, and will probably expand the range of actions permitted in NY. Mitigation programs are

likely to include nutrient inactivation, ultrasonic devices, and hydrogen peroxide.

Phosphorus is a critical nutrient: adding a pound of phosphorus can produce 1100 pounds of algae. The role of other nutrients is still under investigation.

Three Lakes Council remains a participant in the state's water quality monitoring program. We also serve on the CSLAP committee that manages the program.

While we didn't report any HABs in 2017, we've had blooms in the past. The HABs problem is likely to worsen over time. Warmer water means more blooms, and climate change seems to be warming lakes about three times faster than the air and ground. The more quickly we can apply science to this issue, the better the outlook is for our lakes. Stay tuned.

Jan Andersen



Cyanobacteria on Waccabuc, 2012

How to be a good lake neighbor

Our lakes are special and we want to enjoy them – and we must share them as well. Here are a few lake considerations to help everyone enjoy the lazy hazy crazy days of summer. Please inform your guests of these rules and guidelines. You can tear out this page to post it for all to see!

Noise



Sounds carry across water. Please keep

voices down and remember not everyone enjoys your musical preferences. This is especially true in evenings when other noises diminish.

Town law prohibits noisy motorized equipment from 7pm to 8am and all day Sunday. We encourage additional voluntary “quiet times” late afternoons and evenings on summer Fridays and Saturdays.

Dogs



Town code requires dogs to be on a leash unless they are on the owner's

property. Dog poop should be picked up and put in your own trash.

Boating



Local customs supplement NYS and town

regulations in governing motor boat use on the three lakes.

Lewisboro Town Law

Motorboat horsepower limits are 25 hp on Lake Waccabuc and 10 hp for Lakes Oscaleta and Rippowam.

Town law states that motor boats can be used between 8:30 a.m. and 1/2 hour after sunset. Skiing and tubing are allowed only between 10 am and 4 pm, and both a spotter and a driver must be on the boat. The law requires motorboats to be operated in a safe and prudent manner.

New York Laws

NY requires mandatory boat safety education for all motor boat operators born on or after May 1, 1996. A boating refresher course is useful education for everyone. Boats with an electric or gas motor should be registered with NYS.

Informal lake use guidelines

Boats at speed should not come within 100' of a float or a dock. Coves are slow speed areas and boats should not tow anyone in those areas. That means no skiing or tubing in the coves!

The channels that connect our lakes help make these lakes special. Take care when entering, transiting, or exiting a channel.

Although swimmers have the right of way, common sense safe swimming means staying within 100' of a shoreline, where boats should not operate at speed. You can also swim

before 8:30 am, when motor boats should not be operated.

Invasive species



Boats, fishing gear, and water toys are the most common ways for invasive species

to move from one lake to another. Please don't take these items between waterbodies – but if you must, ensure you clean, drain, and treat them as required by law.

Do not release aquarium plants or animals, fish, or any leftover live bait into the lakes. Many of these are invasive and can spread and do harm.

Private property



Of course you can stop on a float if you have an emergency, but

remember that these lakes, docks, boats, and shores are all privately owned. Don't assume you are invited. Castle Rock is also private property.



Keep it clean!

Please don't litter in the lake. Carry any recyclables and garbage off the lake and properly dispose of it at home.

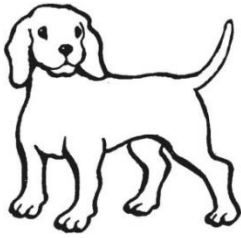
Phosphorus sources

What adds phosphorus to our watershed? Match the source

with the annual amount of phosphorus it contributes.

Source

Phosphorus



1. A typical dog



A. 3.0 pounds a year



2. An average person



B. 3.8 pounds a year



3. A pair of geese



C. 0.2 (one-fifth) of a pound



4. An acre of forest



D. 3.6 pounds a year



5. An acre of lawn



E. 1 pound a year

Answers: 1 D, 2 A, 3 B, 4 C, 5 E

Why do we care so much about phosphorus?

Phosphorus is important for plants and algae to grow in lakes

Plants and algae need carbon, nitrogen, and phosphorus to grow. Our lakes have lots of carbon and nitrogen nutrients so phosphorus acts as the limit on growth. Adding 1 pound of phosphorus allows 1100 pounds of plants or algae to grow.

Many of causes of growth are outside our control – except phosphorus

The amount of algae that grows is dependent upon water temperature, sunlight, wind strength, predators, and nutrients. Of these, only the nutrient phosphorus is something we can control.

Take actions to limit the addition of phosphorus to our lakes

Phosphorus comes from many sources. In our lakes the inputs are diverse and dispersed, so many different actions can reduce phosphorus inputs to our lakes.

- Pump your septic system regularly
- Pick up after your pets and throw their poop in the trash
- Plant a buffer of native shrubs and ground cover between the lawn and the lake to slow flow to the lake
- Reduce impervious surfaces and lawn areas to slow polluted runoff
- Don't feed ducks, geese or swans.
- Support geese population control efforts
- Limit use of fertilizers and pesticides
- Plant or mulch all bare soil
- Don't blow leaves into the lakes

We can act to help our lakes

Aquatic plants in our three lakes

Lake residents are bothered by weeds in our lakes.

In our 2006 and 2016 surveys, about 55% of residents told us that weeds are an important lake quality indicator. As expected, after BEEP in 2009, more people found that invasives are a serious problem than native plants. Survey responses below.

Weeds are serious problem		
	2006	2016
Native	25%	21%
Invasive	53%	38%

Our lakes have nuisance levels of aquatic weeds

Our plant surveys in 2008 were notable for finding the invasive Brazilian elodea, which led to the BEEP project. After the suction harvesting in 2009, we continued surveys in Lake Waccabuc. While the primary reason was to search for Brazilian elodea, we also gathered data on the presence and density of plants in the littoral zone of our lakes. Medium or dense levels are nuisance quantities.

Littoral zone: where light hits the bottom so plants grow

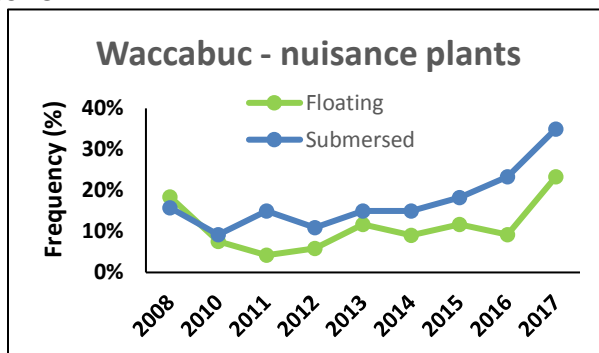
The littoral zone is the shallow area around our lakes, and it's also where we access lakes for boating and swimming. In our lakes, often the steep north and south lake shores have fewer plants than in the shallower west and east coves.

Plant categories are submersed or floating leaf.

Floating leaf plants are plants that mainly grow on the lake surface. In our lakes, these are white water lilies, spatterdock, watershield, and duckweed. We also found and removed invasive water chestnut.

Submersed plants have most of their biomass below the water surface, although they can have some floating leaves or flowers that go above the surface. Our dominant submersed plant is invasive Eurasian watermilfoil. Our other common submersed plants are bassweed, coontail, and various waterweeds and pondweeds.

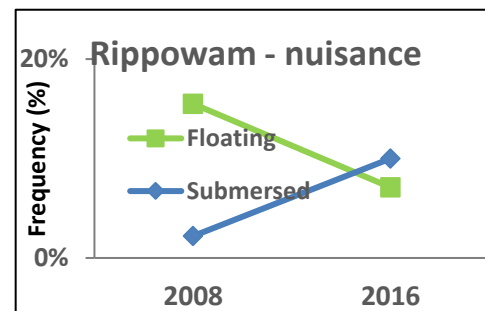
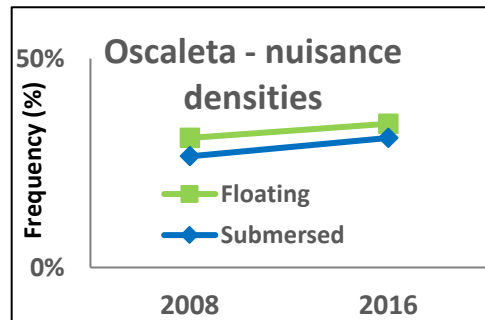
The occurrence of nuisance plant levels increased in 2017.



In Waccabuc, the percent of sampled locations that had nuisance densities of floating plants increased from the teens to over 20% and nuisance submersed plants increased from about 20% to 35% in 2017.

In Lakes Oscaleta and Rippowam, we had different teams conduct surveys. We only can compare the surveys taken by the same observers in 2006 and 2016. Those did not show a large increase in nuisance plants.

We did not survey Oscaleta and Rippowam in 2017. We plan to sample all three lakes in 2018.



Is the increased density seen in 2017 a trend or is it normal annual variation?

We don't know. We know that temperatures are warming, and lakes warm about 3 times faster than the earth as a whole. Plants grow faster in warmer water. As the growing season lengthens and the lake waters warm, we can expect more plant growth. Weeds will also grow for a longer portion of the year. The lakes were clearer than usual in 2017, so more light could get to plants, helping them to grow.

Will 2018's cooler spring lead to slower plant growth? We'll see! Besides temperature, plant growth can also be affected by cloudy days and the amount of algae in the water, both of which reduce available sunlight to the plants.

Janet Andersen

Get pumped!

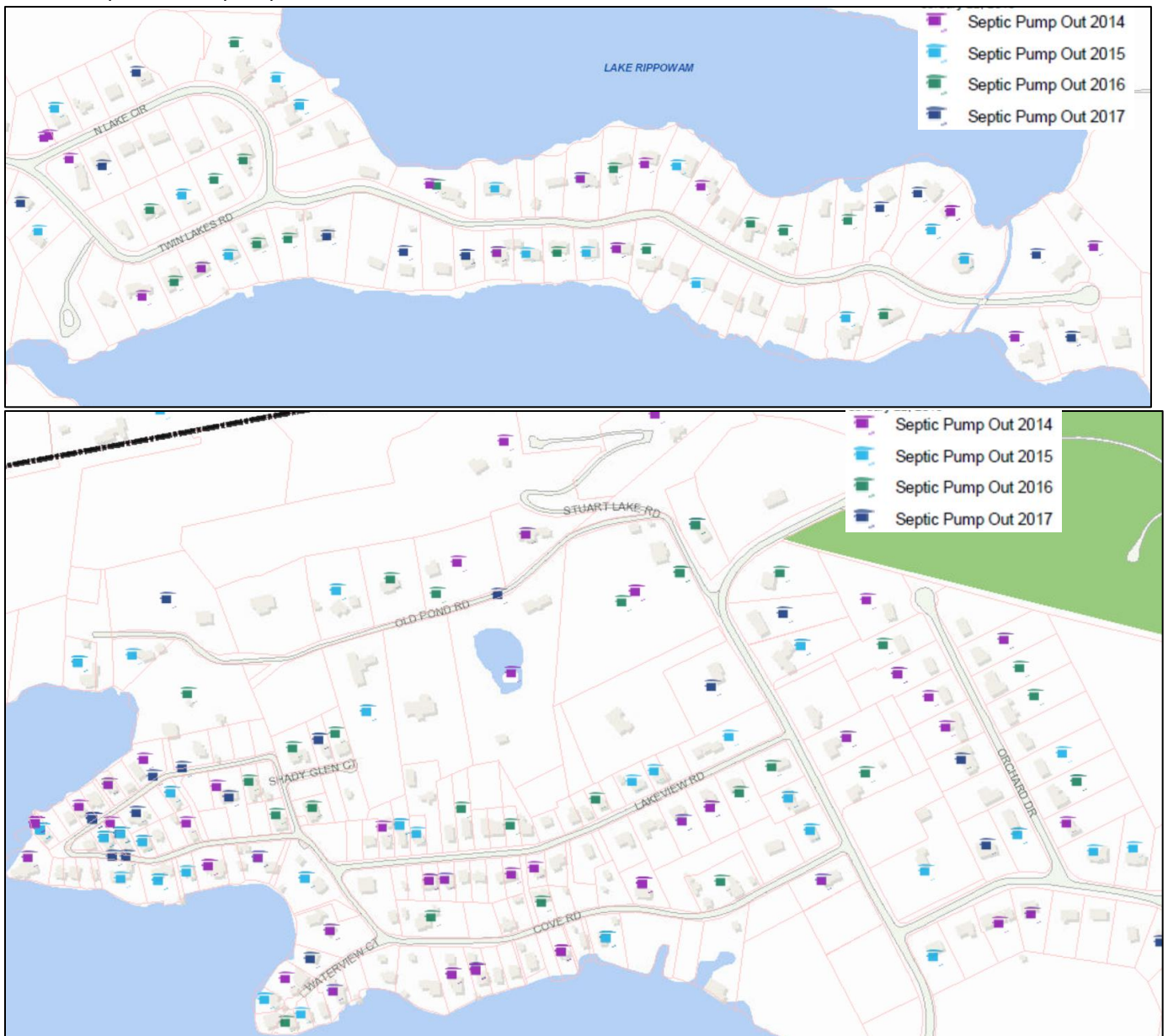
It's a good idea to maintain your septic system regularly **and now it's also the law.** To protect the quality of the area's drinking and lake water, Lewisboro passed a septic inspection law in 2011 that requires that each septic system be pumped at least once every 5 years. So by year-end 2018, you should pump

your septic system if it hasn't been pumped since 2013. Many lakeside systems are likely to require more frequent attention than required by law.

If your septic is pumped by a Westchester County authorized septic hauler, Westchester County will get a record of that pumping. Keep your copy of the septic system inspection

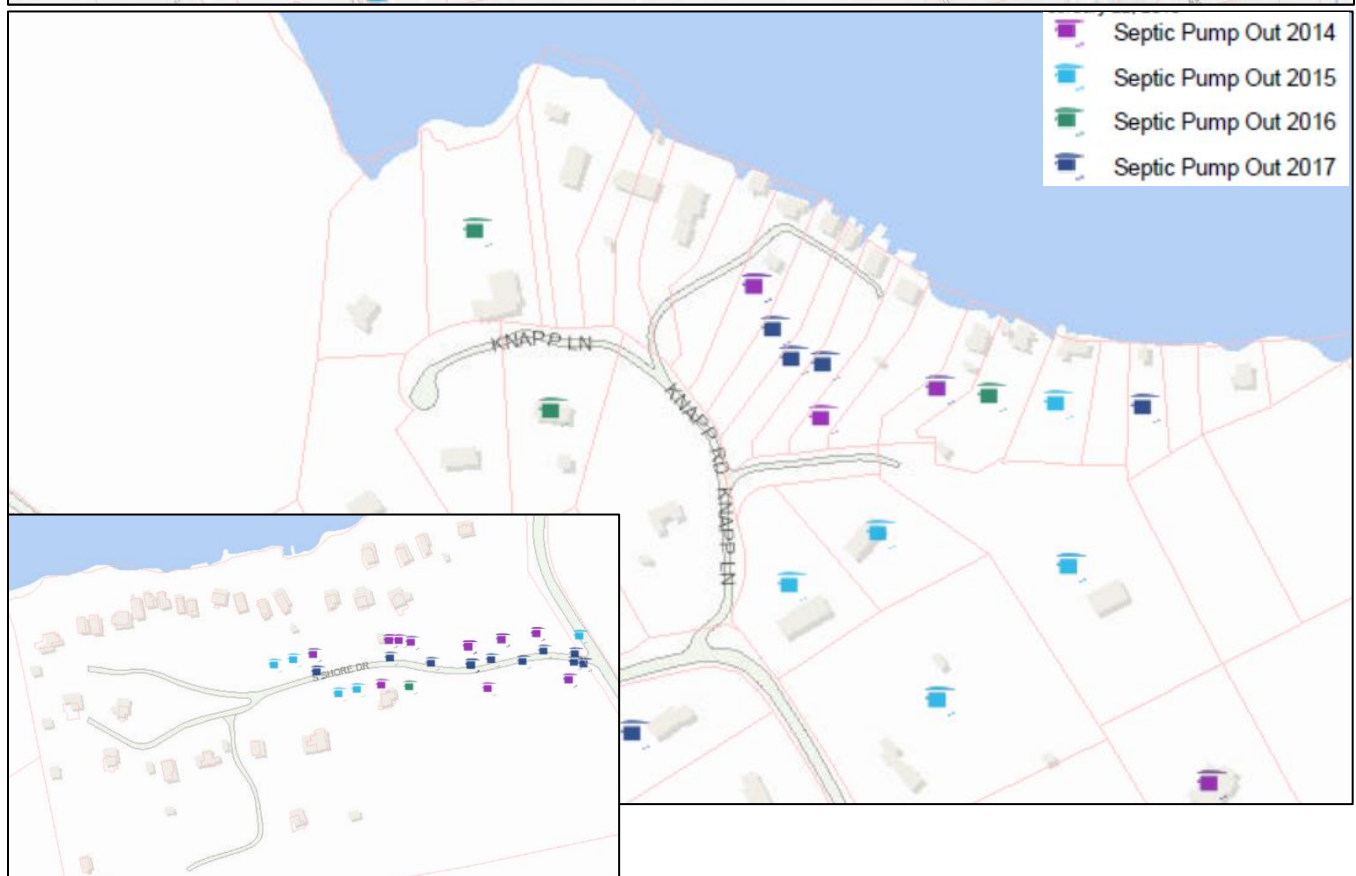
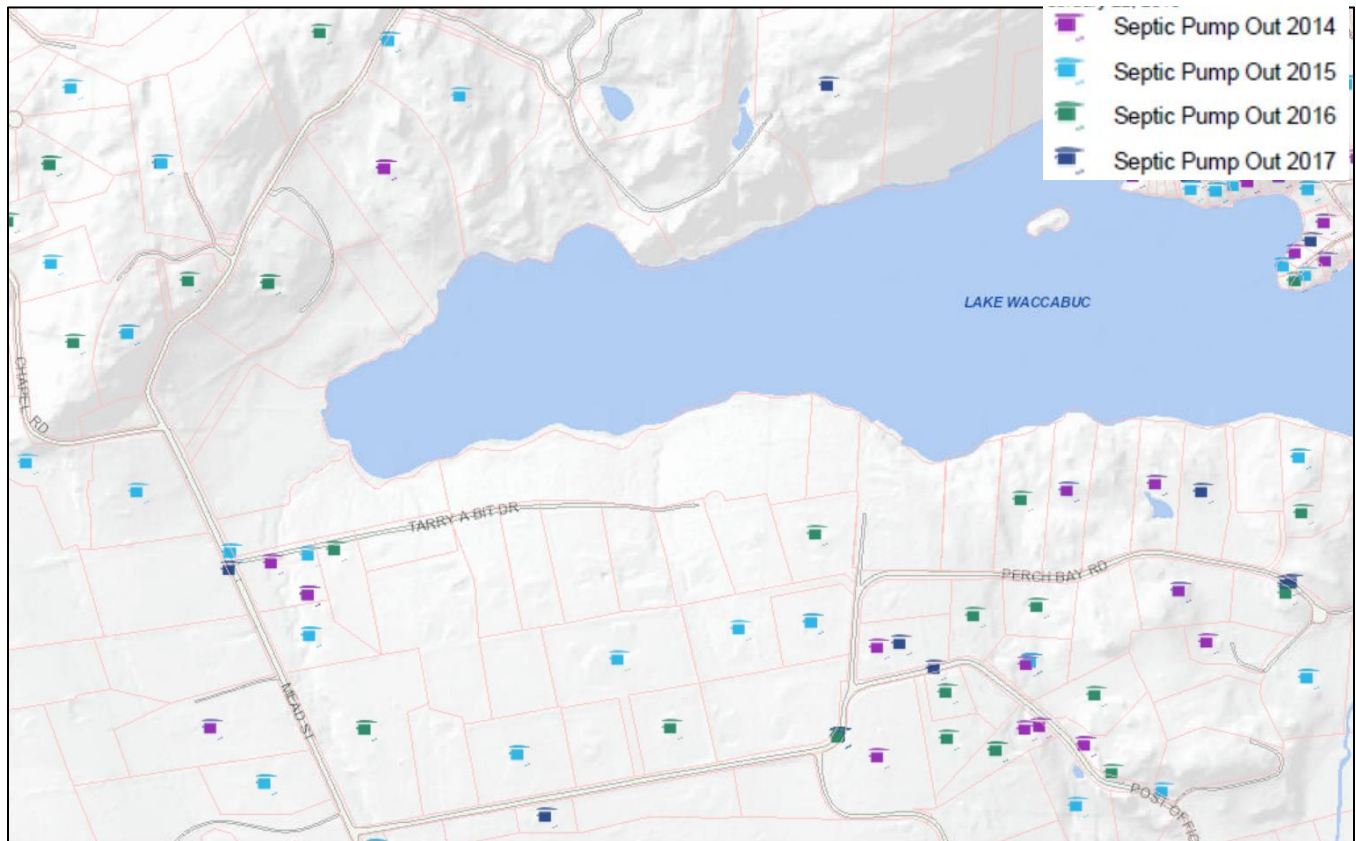
report in case of a mistake or dispute.

These Westchester County maps show septic systems pumped from 2014 to 2017. Septic pumping in 2018 is not yet public. Some septic icons may not be placed on the correct parcel. However, the maps are indicative of the overall status.



Maps from Westchester County GIS website

Watershed septic pump out maps... continued



South Shore pumping locations are not shown near homes.

Long Pond Preserve update

Three Lakes Council took ownership of Long Pond Preserve in 2015 because actions on the preserve affect lake water quality. We currently have **three initiatives**.

Preserve the land to protect the waters.

Long Pond Preserve composes approximately 9% of Lake Waccabuc's shoreline, and its natural landscape helps protect the quality of the lake's waters. A large tributary and several smaller streams cross Long Pond Preserve to Lake Waccabuc. The major stream, Waccabuc Creek, floods quickly after heavy rains, erodes stream banks, and has deposited a sand bar in the lake that can be seen from space.

Over the years, Three Lakes Council has taken steps to reduce erosion of stream banks and to improve stream waters. The first step was to plant trees and bushes along the stream to reinforce the stream banks and provide cooling shade for the stream waters. Many of the bushes did not survive deer browse but some of the trees are now quite tall and effective.

A second step was to redirect the polluted runoff from 39 acres into a new wetland near Mead Street. This has a double benefit of reducing the storm-

driven stream flow and filtering pollution before it reaches the lake. It also reduces some sediment previously dropped by catch basin runoff.

In 2016 and 2017, Three Lakes Council, with the assistance of the Watershed Agricultural Council, planted willow stakes along the stream edges and at points where meanders eat into the meadow. The willow stakes in the stream banks survived, but those in the meadow did not do as well.

The stream meanders continue to claim more land and dump more nutrient-laden sediment into the lake, so this spring we planted larger willows and trees. We continue to explore options to improve stream quality and reduce its polluted waters flowing to the lake.

Provide habitat by fighting invasive species.

Many pollinators and animals are dependent upon native plants that can be outcompeted by aggressive invasive species. When we first planted trees, we removed large areas of invasive barberry on the east side of the stream, but much of the forest understory remains long-established Japanese barberry. Along the streams that cross the preserve is another invasive plant, lesser celandine, which spreads aggressively. We have begun the long, slow process of

cutting back phragmites to weaken that reed and slow its spread. The wet meadow is susceptible to invasive shrubs like Autumn olive, so we will mow the field when required to control these shrubs. We aim to maintain the rare wet meadow habitat. These are all long-term projects.

Some newer invasive arrivals are a higher priority because we hope to limit their presence.

Mile-a-minute is a vine that, as the name indicates, grows very rapidly. Its thorny vines quickly cover grasses, bushes, and trees. On Long Pond, mile-a-minute spreads aggressively along the start of the path. In 2017, in an effort to control its growth, Three Lakes Council purchased and dispersed weevils that feed only on this plant. We have ordered \$1000 worth of additional weevils that we plan to release this summer. These bio-control bugs are about the size of a grain of pepper as you can see by the picture of their release from a coffee cup last year. We are



counting on the weevil's outsized appetite to control the mile-a-minute vine.

Unfortunately, in 2017 we found another new invasive, the beautiful bittersweet nightshade. It grew in a relatively small 10'x10' area, so



we were able to hand-pull it. We will have to continue to monitor the preserve for its reappearance. Other invasive species are on the property, so the long term program calls for patience and prioritization, but we want to respond to new arrivals of invasive species as soon as possible.

We appreciate the support of the Waccabuc Landowner's Council. Last year WLC restored the wall that runs along Long Pond Preserve on the east side of Mead Street and removed fallen trees and debris, making the area much more attractive.

Encourage proper enjoyment of the preserve.

Everyone is welcome to walk the trail that extends along the lake and through the woods, crossing several streams. Please take out any materials that you

bring in: trash mars the landscape, harms the habitat, and attracts pests. **Lake access is not allowed from the preserve.** Transient boats are

prohibited because they can bring invasive species from neighboring water bodies. Removing

one bad aquatic invasive from Lake Waccabuc took several years and we are still monitoring to ensure that it does not reappear. We hope all users will respect the property and the preserve's neighbors.

When we found many people carrying boats across the preserve to the lake, we decided that we needed to take additional steps. We hire members of the Lewisboro Police part time to encourage appropriate use of the

preserve. Please come and enjoy the plants and wildlife.

Stay up to date with Three Lakes Council actions.

Join our google group! This email distribution allows us to send stewardship updates quickly. If you aren't yet a member, send your name, lake address, and email address to threelakescouncil@gmail.com and we'll add you to the list. Or like us on facebook!

Do not release fish or aquatic plants

Alternatives to dumping unwanted pets, fish, snails or plants in our lakes:

- Return them to a retailer for proper handling
- Give them to another aquarist or water gardener
- Donate to a local school or aquarium business
- Seal plants in plastic bags and dispose in the trash



3LC reissues boat stickers

If your boat isn't sporting a pair of snazzy new boat stickers – get them now!

moved or owners have transferred their boats. With new stickers, now we will be able to reunite boats with their owners. Boat stickers are issued to residents with deeded lake rights.

out a form at threelakescouncil.org/boats. We issue two stickers for each boat. Put one sticker with the same number on each of the port and starboard sides near the bow to improve the visibility of the stickers.



We reissued new boat stickers starting last year because some of the prior stickers had become hard to read. We'd also lost track of many boats as people have

We've issued 600 new boat stickers already! If you don't yet have new blue boat stickers, please request them for each of your boats. Fill

Report found boats with lost owners to threelakescouncil@gmail.com. Let us know the number on the boat sticker and the location of the boat. If you can't see the number, tell us the type of boat, color, and location, and we'll try to match it to our records.

Show you're a proud Three Lakes resident with your free new boat stickers!

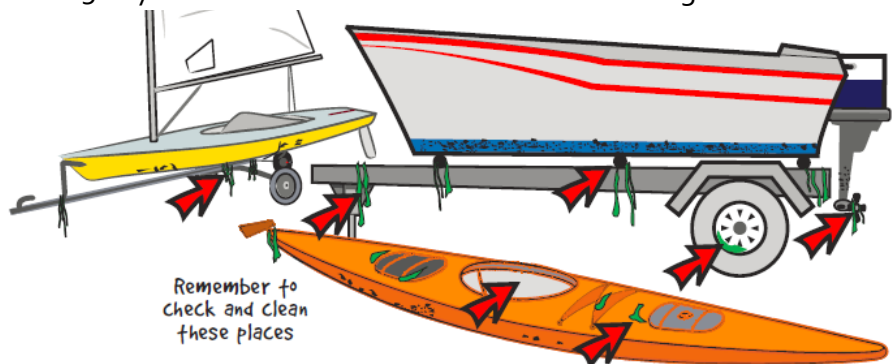
How to clean boats

Of course we hope you don't transport your boats to other water bodies. Nearby lakes and rivers have some truly scary invasive species that could hitchhike a ride. Some of them can hide in mud and plants, and others, like zebra mussels, spread with youngsters that are not visible to the naked eye.

To avoid transporting invasives, take reasonable precautions. **Clean, drain, and treat** your boat before launching it onto one of the Three Lakes. Wash, inspect, and let your boats dry for at least 5 days.

Take care to clean lake toys and fishing gear too.

Find out more about how to properly clean your boats at our website www.threelakescouncil.org under the living on lakes tab.



Fish report 2018



This fishing season got off to a hot start with just about everyone reporting great crappie action in all three lakes. Not only were the number catches high but the fish were significantly larger than in previous years. The run is getting to the end as most fish have completed their spawning. In another couple of weeks, they will be back in their normal spots and should continue to provide some good action. When selecting your bait for Crappie think small.



Crappie

The large mouth bass have moved up and onto their nesting sites and can be caught in as little as 3 to 4 feet of water over hard bottom. They will strike just about anything that gets close to their nest and I'm

getting reports of a lot of 2 to 4-pound fish from all three lakes. Morning and evenings working top water lures is always one of my favorite ways to catch bass. The lake is usually quiet with little boat traffic and it is just an overall beautiful time to be on the water fishing.

On June 2nd we stocked 470 eleven-inch brown trout of which 350 were placed in Waccabuc and the balance in Oscaleta. Many thanks to John Lemke and Ron Teteleman for the use of their boats to get the fish out into the lake and also to all of those that came and helped out with the stocking. The weather held for us and it all went very well.

Speaking of trout, Teddy Laquidara caught and released a nice 20 incher in Oscaleta the

other day on live bait. Pat Black reported that he has been catching trout in the east end of Waccabuc on lures.

Perch and sunfish populations are still depressed and would love to see that change soon. Pickerel remain strong in the western end of Oscaleta. So, get out on the water and take a kid with you and enjoy our great fishery.

Joe Tansey

3LC Membership Matters

The community comes together to maintain the health of the lakes. We all share this responsibility, and through the Three Lakes Council, we make decisions on what actions we will take. Your membership support enables 3LC to continue our research, outreach, advocacy, and stewardship actions.

Since 1970, the Three Lakes Council is the organization that acts on the environmental concerns for all three lakes and our surrounding watershed.

Membership is \$55, and we appreciate the many generous donors who contribute much more. We are grateful for those of you who renew your 3LC membership every year. We are pleased that for the past three years over 200 members have joined.

If you are a member – thank you! If you haven't joined yet this year, please do so now. Send your name, address, and \$55 check to Three Lakes Council, PO Box 241, South Salem, NY 10590. Your support enables the Three Lakes Council to fulfill our commitment to our lakes, our watershed, and our residents.

Doug Housman



Treasurer's Report

The Three Lakes Council enjoyed another successful year in 2017. For the past three years, we've had over 200 members, and member donations have been above \$30,000. This level of support has enabled us to continue our work and plan for more activities. Your magnanimous

contributions fund our ongoing lake management, water testing, sampling for harmful algal blooms, fish stocking, website, insurance, taxes, newsletter, mailings, and the annual meeting and potluck – and now, maintenance of Long Pond Preserve. Please talk up the good things being done by 3LC and encourage your neighbors to join.

The 3LC 2017 expenses were \$27,260, which included \$4,253 for the continued surveillance for invasive species as part of our BEEP efforts. We spent \$3,378 in outreach and education, which covers the newsletter, website, and other publications. Our lake water

quality studies cost \$5,554. Stewardship activities, including \$4,986 for the upkeep and patrol of Long Pond Preserve, and \$2507 for new boat stickers, totaled \$11,965. Overhead, including taxes and insurance, was \$2,111.

We are in strong financial shape for 2018. Thanks to your support, we plan to continue our stewardship activities, initiatives, and to invest additional funds in needed activities at Long Pond Preserve.

Thank you for all your financial support, which makes our work to maintain the beautiful lake environment possible.

*-John Lemke
Treasurer, Three Lakes Council, Inc
(501) (c) (3) charitable organization*

Three Lakes Council Newsletter

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Three Lakes Council 2018

Officers

President	Janet Andersen
Vice President	Peter Gross
Treasurer	John Lemke
Secretary	Jean Lewis

Committee Chairs

Annual Meeting Potluck	Kelley Housman
Beaver Debris	Joe Tansey
Boat Stickers	Jan Andersen
Fishing	Joe Tansey
Lake Preservation	Paul Lewis
Membership	Doug Housman
Preserve Patrol	John Lemke
Preserve Trails	Kevin Karl

Board Representatives

Darrell Alfeiri	Waccabuc Country Club
Janet Andersen	Two Lake Club
Ellen Bailey	Perch Bay Association
Fred Cowles	At Large
Randy Glading	Waccabuc Land Council
Peter Gross	Two Lake Club
Doug Housman	Lake Waccabuc Association
John Lemke	Lake Waccabuc Association
Jean Lewis	At Large
Paul Lewis	Lake Preservation Chair
Jonathan Peter	South Shore Association
Joe Tansey	Lake Oscaleta Association
Ron Tetelman	Lakeside Association

State of the Lakes

When I see people around the lakes, one of the first things that I am asked is “how’s the water?” I’m sure that most people are looking for a quick answer, but I tend to answer in paragraphs – sorry! So here I go again.

The state of our lakes can be compared to what is normal for the time of year – since our lakes tend to have seasonal cycles – and we also look for trends across years. Our long data sets allow us to tease out real trends from normal annual variability.

We also compare our lakes to each other. Our three lakes have the same weather and geology and are connected by channels, yet they often have different water quality. We’re not sure why. Their different sizes and depths, different land uses around them, or other currently unknown factors could explain the variation.

For example, it’s hard to explain the **water temperatures** we observed. Our stratified lakes have distinct upper and deep layers. In 2017 Waccabuc and Rippowam had upper waters that were warmer than typical, but Oscaleta had average upper temperatures. Warmer shallow water supports **more algae and plant growth**. Overall, we expect the trend towards warmer upper waters to continue.

Our lakes also showed distinct **water clarity** trends. Waccabuc had significantly better clarity than in a typical year, Rippowam had worse, and Oscaleta was about average. Algae levels are the biggest factor for worse clarity on our lakes.

We had no reported algal blooms during the summer on our lakes in 2017. We had slightly lower than typical **phosphorus levels**. This is despite a multi-year trend towards higher phosphorous levels seen on all three lakes. The combination of more phosphorus and higher water temperatures is a concern.

The increasing trend in **conductivity** on all three lakes reflects added human activities in the watershed, as does the presence of chlorides.

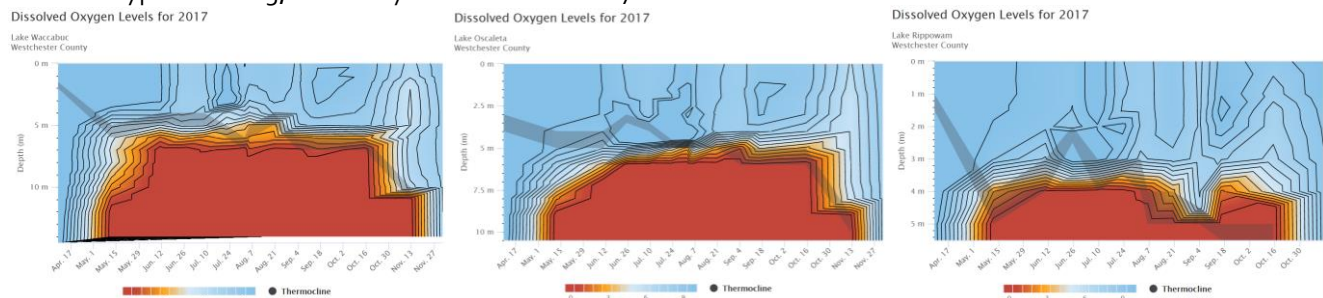
The amount of dissolved oxygen in the water indicates the presence of organic material. The upper layers can get oxygen from the atmosphere, but the density of cold, deep waters keeps them isolated. Our deep lake waters all are anoxic, or without oxygen, for much of the year. This makes it hard for cold water fish like trout to survive.

Without oxygen, the chemistry in the bottom layer changes, which frees phosphorus to enter the water from bottom sediment. This phosphorus can migrate to the upper water when the stratification breaks down. Rippowam showed weakened stratification after a big storm in mid-August last year.

For more information, see the 2017 water quality reports under the reference tab on our website.



In the water quality graphs above, deeper - towards the bottom of the graphs - indicates better water clarity. The blue line is the typical reading, and the symbols show the 2017 measurements.



The red color shows that all of the lakes were anoxic – without oxygen – in the cold deeper waters for much of the year.

Thank you to all of our 2017 members

Ellen Adrian
 Darrell & Amanda Alfieri
 Mimi & Barry Alperin
 Janet Andersen
 Susan Annar
 Robin Arita
 Richard Attridge
 Gary Austin
 Ellen & John Bailey
 Deborah Baker
 Peter & Lyn Beardsley
 Stephen & Patricia Beckwith
 Ferne Bendel
 Jennifer Fisher & David Berger
 Susan Berk and Jack Weinstein
 Alan & Elaine Berman
 Robert & Amy Bernstein
 Chris & Linda Binns
 Devera Black
 Patrick Black
 Barry & Terry Bocklet
 David & Joy Brenner
 Curtis Brockelman
 Regina Anderson & Christian Brutzer
 Ed Buroughs
 John & Patti Burr
 Jean Mitchell & Frederick Cannon
 Ed & Francesca Cantine
 Barbara Capo
 David & Laura Caravella
 Dominick & Agnes Catalano
 Audrey Cirulli
 Linda Van Tassell Clark
 Stephanie Steifel & Robert Cohen
 Rick & Bobbie Cohlman
 Joan Colello
 John & Ingrid Connolly
 Eugene & Linda Conroy
 Frederick & Christina Cowles
 James & Jane Crimmins
 Nan Dale
 Ann Goodson & Kevin Daley
 Robert & Peggy Daley
 Tim Kennedy & Liz DeAngelis
 Douglas & Jake Decandia
 Joseph Deck
 Lisa & Tim Delaney
 Denise & Terry Denson
 Bill & Jane Donaldson
 Paul & Deanna Donahue
 Kenneth & Janet Donohue
 Ellen Dougherty
 Raymond Duffy
 J & Jody Durst
 Jenny & John Eckerson
 Linda Broudy & David Eggers
 Jane Balanoff & Jean Emond
 Mario Erlach
 Clotilde Farrell
 Andrew & Jeraldine Federiw
 George Fedoriw
 Lou Feeney
 Senia Erlich Feiner
 Paul & Katharine Fennelly
 Richard & Christine Ferrarone
 Jessica Gladstone & William Field
 William Finke
 Bart & Wendy Friedman
 Lou & Lois Froelich
 Donald & Glenn Gale
 Joe & Jennifer Garrity
 Jeffrey & Paula Gaynor
 Kelly & Eric Germa
 Laura & Nicholas Giardina
 Laura & Randall Glading

Steve Zambito & Renee Goldstein
 Chris Culler & Melissa Gordon
 Mariana Canelo & Michael Gordon
 Allan & Alice Gottlieb
 Scott Mori & Carol Gracie
 Carlotta & Gregory Gramas
 James & Elizabeth Grant
 Michael & Amy Grossman
 Waldie & Barbara Gullen
 June Gumbel
 Robert & Karen Gureasko
 Peter Hall
 Nancy Hallberg
 Richard & Martha Handler
 David & Anne Hardy
 Ethna Harris
 Susan Harris
 Karen Ludwig & Sara Hartley
 Judy Hausman
 Susan & James Henry
 Leslie & Ross Henshaw
 Helen & Richard Henshaw III
 Katherine Hersch
 Theresa Doherty & Scott Hershman
 Charles & Susan Herzog
 Thomas & Mary Herzog
 Stephen & Deborah Heyman
 Cameron & Jennifer Hillyer
 Raymond & Patricia Hinkley
 Mary Horowitz
 Kelley & Doug Housman
 Graeme & Laurence Hunter
 Janet Karl
 Kevin Karl
 Argie & George Kazazis
 David Kelly
 Ed Kelly
 Frank & Kathleen Kelly
 Bradford & Bonnie Klein
 Jane Weiser & Daniel Kleinman
 Allan Young & Lucy Koteen
 Gail Kuziak
 Bill & Bernadette Langenstein
 Elizabeth Lanza
 Morvin & Charlotte Leibowitz
 John & Liz Lemke
 Nadine Netter Levy
 Paul & Jean Lewis
 Robert & Margaret Lieb
 Denise Ferris & Chan-Li Lin
 Jane & Daniel Lindau
 Andrew & Alison Llewellyn
 Shirley Lobenthal
 Ted & Nancy Lundberg
 Matthew & Andrea Lustig
 Jeannette Maiorino
 Jill & Larry Mango
 Randolph & Helen Marshall
 Harriet Mayer
 Alejandra Salazar & William McArthur
 Robert & Carol McBride
 John & Carlyn McCaffrey
 Trevor & Katherine McGinn
 Desmond & Catherine McGowan
 James & Carol McMonagle
 Deborah & Bruce Michel
 David Migden
 Mike Miller
 Steve Miller
 Katherine & Rick Moreau
 Jeffrey & Ann-Marie Morris
 Sondra & Austin O'Hanlon
 Wayne & Victoria Ohlandt
 Amy Handler & Stephen Ohnemus
 Stephen Olsson

Christopher Owen
 Malcom Frank & Tara Owen
 Elizabeth Palmer
 Fran Parker
 Marianne Pei
 Mary Jane Massie & William Pelton
 George & Sara Peterkin
 Christopher & Fatima Peters
 Dave & Judy Petro
 Paul Phaneuf
 Barbara Posner
 Stanley Pottinger
 Karen Foley & Tadeuse Rajwer
 Laura Rajovic
 Mrs. F. F. Randolph, Jr.
 Sheaffer & Lindsay Reese
 Ogden & Mary Louise Reid
 Robert Reynolds
 Peter & Audrey Rinaldi
 George Roberts
 David Robinette
 Bonnie Robins
 Rebecca Leahy & James Robinson
 Robby & Kathryn Rothfeld
 James Ryan
 John & Kira Ryan
 Boris & Svetlana Ryzhik
 Arthur Rauch & Lynn Saidenberg
 Nick & Lisa Savastano
 Melissa Benzuly & Jonathan Schaffzin
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 Frank & Ann Secret
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 William & Diane Shannon
 Michael & Vivien Shelanski
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 Les & Susan Simon
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 Andrea Joyce Kuslits & Harry Smith
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 Catherine Baggaley & Keith Thompson
 Robert & Renee Torre
 Peter & Betty Treyz
 Lauren Van Kirk
 Alayne Vlachos
 Waccabuc Country Club
 Lisa & Marc Wachtell
 Susan & Ken Wallach
 Nancy Walsh
 Elizabeth Wattles
 Carol & Ross Weale
 John Rudge & Sara Weale
 Charles & Joanne Weisman
 Dan & Debbie Welsh
 Philip & Susan Wick
 Marie Williams & Family
 Victor & Sherri Wilson

Please join or renew in 2018



THREE LAKES COUNCIL ANNUAL MEETING & POTLUCK

Saturday, July 21, 2018 - 6 PM to 9 PM

Location: Waccabuc Country Club Beach

Rain location: the Waccabuc Country Club Carriage House (on Mead Street)

Menu: Filet mignon, chicken, hamburgers, hot dogs, beer, wine, soda and your "pot luck" salads and dessert

Admission:

Free for families who have paid the \$55 annual membership.

Guests and non-members are welcome at \$25 per person.

Reservations are critical to our planning process.

If you will attend, please fill out the response form and mail it to:

Three Lakes Council, P.O. Box 241, South Salem, NY 10590

or send an email with the information to ThreeLakesCouncil@gmail.com

Response Form

Name _____

Local address _____

Mailing address if different _____

e-mail _____

phone _____

I will bring: salad for 8 _____ or dessert for 8 _____ (please check one)

Number of members attending picnic: _____

Family membership (if not already paid) @ \$55 \$ _____

Adult guests # _____ @ \$25 \$ _____

Total \$ _____



Waccabuc – Oscaleta – Rippowam

P.O.Box 241

South Salem, NY 10590

2018 Annual Newsletter of the
 **Three Lakes Council**

Inside Find:

Harmful Algal Bloom Update
Lake Guidelines
Long Pond Preserve Activities
Get Pumped! Septic, that is
Fishing Report
State of the Lakes
Annual Meeting Potluck Reservations – July 21
And more!