

An Emerging Concern; Cyanobacteria in Freshwater Ponds

Seminar hosted by APCC

Review by Mary Ann Anthony

The Cape's some 1000 ponds were formed by large chunks of glacial ice that left depressions in the land, which filled with water. Called kettle ponds, they are connected to the groundwater and are often referred to as "windows on our aquifer". The Town of Barnstable has some 182-184 ponds, of which Lake Wequaquet and Bearse's Pond are two. We enjoy our ponds for recreational activities, and property values are enhanced by proximity to ponds, but however much we appreciate them, our ponds' health is threatened.

Pollution from untreated storm water discharge, sediments from erosion, excess nutrients from septic systems and fertilizers, invasive species, warming due to climate change, overuse, and harmful cyanobacteria blooms all have negative effects on the health of our ponds. As pond health deteriorates toxic cyanobacteria blooms may become more prevalent. These toxins can be harmful to people and pets by ingestions or even breathing the airborne toxins which can cause a variety of symptoms varying in severity. Blooms are most common in summer and early fall, and frequently appear blue or green, but can also be brown or red. They can change the water's appearance from slightly discolored to something resembling pea soup or thick paint. They can grow quickly and form scums or mats in the water.

What is being done about it?

The Association to Preserve Cape Cod, in collaboration with some local boards of health and other civic organizations and neighborhood associations, has developed a Cyanobacteria Monitoring Program to monitor ponds, communicate results quickly, and support research to increase understanding and raise public awareness. The program involves "citizen scientists", volunteers who sample pond water so that researchers can begin to predict blooms and inform the public.

What you can do:

- Properly maintain your septic system
- When you replace your system consider a shallow field which takes up nitrogen, phosphorus, and emerging contaminants like estrogen; there are many more bacteria in a shallow system, which remove more contaminants
- Use phosphate free dishwasher and laundry detergent
- If you must fertilize, apply correctly; avoid getting it on pavement which may allow transport to storm drains
- Pick up your pet's waste
- Do not feed ducks or geese
- Plant or maintain native vegetation around the water's edge
- Wash your car in areas away from storm drains, or at a commercial car wash
- If you see water that appears to have an algal bloom, do not come in contact with it, and prevent contact and ingestion by kids and pets. Dogs can become very ill from licking algae off their fur. Rinse them off immediately if they come in contact with an algae bloom.

IF YOU SEE A BLOOM, REPORT IT TO THE TOWN OF BARNSTABLE DEPARTMENT OF PUBLIC HEALTH. 508-862-4644 Karen Malkus is the Coastal Health resource Manager who is monitoring the incidents of cyanobacteria.

Source: Association to Preserve Cape Cod www.APCC.org

In Conclusion of Town of Barnstable Health Division Cyanobacteria Monitoring Article ... **GREEN LAWNS MAKE GREEN LAKES!**

During the survey, there were a few homes we observed with very green lawns; the use of fertilizers in such close proximity to ponds is very detrimental to the health of the pond. Fertilizers, even organic forms, contain Phosphorus and/or Nitrogen, two necessary ingredients for cyanobacteria growth. Natural groundwater seeps and rainfall washes all the excess fertilizers into the pond and then cyanobacteria blooms are much more likely to occur. When a bloom happens, often you can see a green scum. When the bloom dies off the cyanobacteria toxins are at their highest levels. When you see postings warning about cyanobacteria, take precautions to avoid water contact, especially for dogs and young children.



Massachusetts Law: Age Restrictions for Operating a Motorboat or PWC

Minimum Age Restrictions

No person under 12 years of age may operate a motorboat, unless accompanied on-board and directly supervised by a competent person 18 years of age or older. Personal watercraft (PWC) users must still be at least 16 years of age in order to operate, with no exceptions. Sixteen and seventeen year olds, see below.

Safety Education Certification

Youth who are between 12 and 15 years of age must complete an approved basic boating course in order to operate a motorboat without adult supervision. Upon successful completion of such a course, students are issued a state "boating safety certificate" which must be in the possession of the certified operator when underway. Personal watercraft users who are 16 or 17 years of age must also complete such a boating course. Youth less than 16 years of age are not allowed to operate personal watercraft.

SPRING /
SUMMER
2019



WEQUAQUET LAKE PROTECTIVE ASSOCIATION, INC.

People that care about Lake Wequaquet

PLEASE JOIN US FOR OUR WLPA Annual Meeting

to be held the morning of
Saturday, June 8
from 9:00 am – 11:00 am

at the
Wequaquet Lake Yacht Club
Centerville MA

Mooring Officer/Assistant Harbormaster,
BRIAN TAYLOR
will be available to perform
mooring inspections after the meeting.
Moorings may be brought in vehicle.
(regular fees apply)

A Word from the President



Hi All,

We are all looking forward to the warm weather and more lake activity. There has been a lot going on and we are glad to provide this spring/summer newsletter. We would love to have some new people join our board of directors, so if you are interested please let us know.

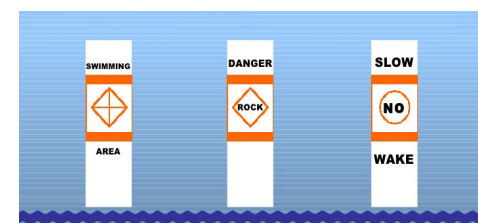
All the best, ~ Mike Falkson

Wequaquet Issues Discussed With Town Manager

On March 27th, WLPA Directors Alan Horvitz, Paul Canniff, and Frank Ward met with Barnstable Town Manager Mark Eills. The meeting was to discuss issues concerning Wequaquet water quality and water safety. Several of the subjects that were addressed are listed below.

- **Sewer Plan Status:** A tentative map has been developed that shows plans to build sewers along Phinney's Lane. These would impact the Lake Wequaquet area. Funding for this plan is currently being discussed at the Town Council Level. Funding for the actual construction would be a few years away.
- **Runoff Repairs:** A rain garden was installed on Holly Point Rd. to prevent road runoff getting in the lake. The WLPA Board would like to see more of these installed around the lake. Mr. Eills said he would support this and suggested efforts be coordinated with Darcy Karle, Karen Malkus or Dale Saad for further action.
- **Fanwart Treatment:** Mr. Eills supported financing for the Bearse treatment. Directors thanked him for his support and credited Darcy Karle for helping the project to move forward.
- **Safety Issues:** Directors informed Mr. Eills that WLPA is helping to pay for more buoys and has met with Mooring Officer, Brian Taylor to discuss placement of the buoys. Directors also have met with Chief Sonnabend to discuss 2019 boating.
- **Can WLPA Help?:** Mark Eills suggested that WLPA continue to educate members regarding the need for sewers around the lake.

**B
U
O
Y
S**



Twenty buoys are scheduled to be installed on the lake by Mid May. They include seven "Danger/Rocks," twelve "No Wake," and one by the Town Beach swim area. In an effort to keep them in good condition, WLPA has paid for replacement buoys on occasion. In 2018, the Association paid for eight buoys and this year, we paid for six.

LAWN TO LAKE

LAWN CARE TIPS FOR GREEN LAWNS NOT GREEN LAKES!

healthy lawn tips | the P problem | posters etc. | about us

- Raising the blade on your mower to 3 inches maintains longer grass that shades out weeds and retains moisture in the soil. Longer grass also means deeper roots which aerate the soil and improves its ability to hold the rainwater.
- Clippings are natural fertilizer. Leaving the clippings not only creates a healthier lawn, it eliminates raking and emptying the mower bag, giving you more time to enjoy other summer activities!
- Removing only 1/3 of the grass blade when you mow reduces the stress to your lawn, keeping it greener and more drought resistant throughout the season.



Cut lawn to 3 inches

to encourage a stronger root system that captures the rainfall and lessens the need to water during a dry spell!

Leave the clippings

for natural FREE fertilizer that builds soil health and eliminates raking and bagging.

Follow the "1/3" rule

to protect the base of the grass blade from drying out. Cut "1/3" of the grass blade height at each mowing.



www.lawntolake.org



RESOURCES

LAWN CARE TIPS, ORGANICS AND PEST MANAGEMENT:

[Cornell Home Gardening Website](#)

[Cornell Turfgrass Program](#)

Cornell Cooperative Ext. Growline
Plattsburgh: (518) 561-7450
Westport: (518) 962-4810 or
askMG@cornell.edu

[Vermont Master Gardener Helpline](#)
(800) 639-2230

[New England Regional Nitrogen and Phosphorus Fertilizer and Associated Management Practice Recommendations \(U. of Connecticut\)](#)

SOIL TESTING:

[Cornell Nutrient Analysis Labs](#)
(607) 255-4540

[University of Vermont Extension](#)
(802) 656-3030

Fertilize...

- Only with **phosphorus-free** fertilizers. Most northeastern lawns and 75% of Chittenden County VT lawns tested by the University had enough phosphorus (P) and only need nitrogen (N)! A soil survey of St. Albans, VT also showed excessive levels of phosphorus there. Similar results have been found for upstate NY.
 - Apply fertilizer once/year—the best time for this region is early fall.
 - Sweep up fertilizer from sidewalks and driveways. Don't fertilize before heavy rain.
- NOTE*** Barnstable law (chapter 78) states that non-certified applicators (most homeowners) may not apply any fertilizer within 100 feet of the lake.

Look for the middle number...

- On fertilizer bags to see the N-P-K nutrient analysis. The middle number is the phosphate (phosphorus) content. A "zero" in the middle means it is phosphorus-free. Lawns rarely need extra potassium (K), but adding some does not affect water quality.



Take a soil test...

- If you are seeding a new lawn, or want to learn more about your lawn's nutrient content, pH level and organic content.

Water...

- If desired, in early morning, when there is less than 1 inch/week of rain. Grass will survive droughts without watering by going dormant.

Plant grass seed...

- On existing lawns in the fall and spring to out compete weeds.
- Use a grass mixture that does well in the setting (soil, light, activity).
- Leave legumes, such as common white clover, among the grass to add nitrogen, which will naturally fertilize your lawn.

Aerate...

- By removing small cores of soil from your lawn to prevent compaction. This will increase water, nutrient and oxygen movement into the soil; improve grass rooting; and prevent fertilizer and pesticide run-off.

Weeds...

- Will be discouraged by following these healthy lawn tips! Just pull any that are left by hand.

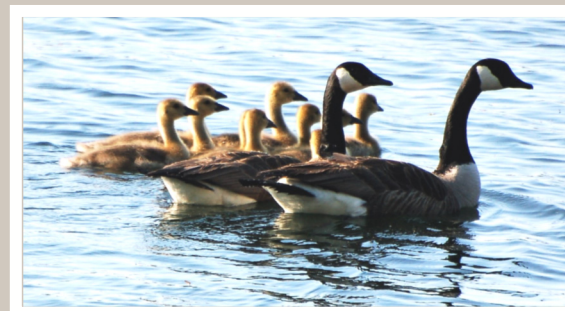


Photos by Armand Menegay

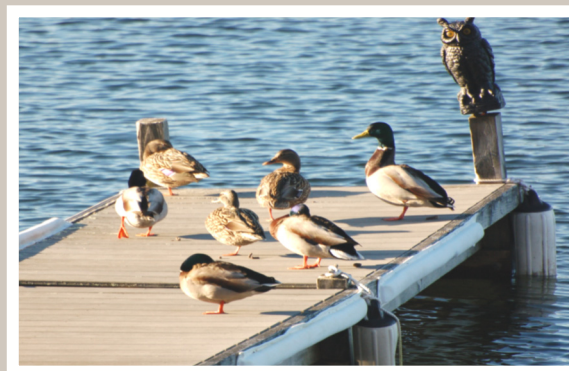
Young Swans, are called 'cygnets.' A group of swans form a "bevy" or a "wedge."

What type of problems can occur when feeding water birds?

- Feeding water birds leads to problems such as:
- behavioral problems in the birds - they lose their fear of humans and become aggressive
- malnutrition from eating foods with low or no nutritional value
- injuries from swallowing hooks and nonfood items;
- entanglement in fishing line - which can lead to starvation, loss of a wing or foot, and death; becoming tame, losing fear of humans;
- increased spread of disease;
- degradation of water quality (from concentrations of bird feces);
- parent birds who are dependent on humans for food and therefore cannot teach their own young proper foraging techniques to feed themselves. (University of FL IFAS extension program)



Young geese are known as "goslings." A group of geese is a "gaggle"



Groups of ducks have several names including: a "brace," a "raft," a "team" and a "paddling." These Mallards will soon be nesting in hopes of hatching "ducklings" that will swim behind their mother in "brood" formation.

SAFE
KIDS
WORLDWIDE™

Boating Safety Tips

Everything you need to know to keep your kids safe when boating.

With almost 100 different kinds of boats – from kayaks to canoes to motorboats – there's a good chance most of us will be having a great time on the water at some point. So when you do, please remember these simple safety tips for the entire family.

Wear a Life Jacket

- Always have your children wear a life jacket approved by the U.S. Coast Guard while on boats, around open bodies of water or when participating in water sports.
- Make sure the life jacket fits snugly. Have kids make a "touchdown" signal by raising both arms straight up; if the life jacket hits a child's chin or ears, it may be too big or the straps may be too loose.



Don't Rely on Swimming Aids

- Remember that swimming aids such as water wings or noodles are fun toys for kids, but they should never be used in place of a U.S. Coast Guard-approved personal flotation device (PFD).

Childproof Your Boat and Develop Some Basic Rules

- Explain some basic boat rules and have everyone follow them. Children need to understand and follow rules such as keeping their hands and feet inside the boat at all times and not running on a boat.

Learn From the Professionals

- Enroll older kids in a boating safety course. Better yet, enroll with them.
- Get a vessel safety check every year for free from the U.S. Coast Guard Auxiliary or U.S. Power Squadrons. For more information go to www.uscgboating.org and click "get a free safety check."

Infant Appropriate Life Jackets

- According to the U.S. Coast Guard's Office of Boating Safety, babies should not travel on a boat — including rowboats, kayaks, motorboats, and sailboats — until they are at the appropriate weight to wear an approved personal flotation device (PFD). Here's some more information on [how to choose the right life jacket](#).

- Hold on to your baby while also wearing your own life jacket. Car seats are not a good option. If the boat were to capsize, the seat would sink instantly.

Keep Little Kids Warm

- Infants and young kids are at a higher risk for hypothermia, so if you are taking a baby on a boat, just take a few extra precautions to keep your baby warm. If your children seem cold or are shivering, wrap them tightly in a dry blanket or towel.

In 2012, 71 percent of all fatal boating accident victims drowned, and of those who drowned, 85 percent were not wearing a life jacket.



Use Your Best Judgment

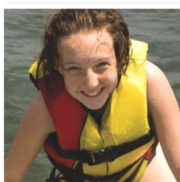
- A large portion of boating accidents that occur each year involve alcohol consumption by both boat operators and passengers. To protect your safety and loved ones around you, it is strongly recommended not to drink alcoholic beverages while boating.
- We know you have a million things to do, but learning CPR should be on the top of the list. It will give you tremendous peace of mind – and the more peace of mind you have as a parent, the better. Local hospitals, fire departments and recreation departments offer CPR training.



- Make sure there's a working carbon monoxide alarm on any motorboat to alert your family to any buildup of toxic fumes from the engine.
- Let your teen operate a boat only in a supervised setting and in adherence to the laws in your area. Laws regarding the operation of a boat or watercraft vary from community to community.

Teach Your Kids the Difference Between Open Water and Pools

- Teach children that swimming in open water is not the same as swimming in a pool: They need to be aware of uneven surfaces, river currents, ocean undertow and changing weather.
- Make sure kids swim only in areas designated for swimming.
- Teach children not to dive into oceans, lakes or rivers, because you never know how deep the water is or what might be hidden under the surface.



Actively Supervise Kids In and Around Open Water

- Every child is different, so enroll your child in swimming lessons when you feel he or she is ready. Teach children how to tread water, float and stay by the shore.
- Make sure an adult is present whenever a teen is operating a personal watercraft.

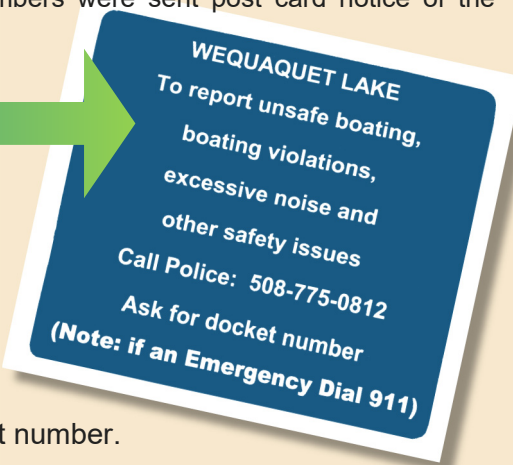
Bearse Pond Fanwart Treatment Plans

Thirty thousand dollars in funding was allocated by the town in time to begin fanwart treatment in Bearse Pond. The Department of Fisheries requests that the limno-curtain be installed early in spring to limit the number of eels and alewife entering Bearse prior to the May treatment. The curtain was installed in March. Early in May, the first Sonar Treatment will be applied and on that one day a sign will be posted closing Bearse Pond. There will be one or two (if needed) applications in late June or July. Again, on the days of the Sonar Treatment, Bearse will be closed. More specific dates and information will be posted on the Conservation Commission page of the Town of Barnstable website and face book page.

Per request of the Conservation Program, in early March, WLPA members were sent post card notice of the upcoming Bearse Pond Fanwart Treatment prospective dates.

KEEP THESE HANDY!

Magnets provided to the WLPA membership for easy access when lake infringements should be reported. These reports aid in future determination concerning the necessity of police boat presence. Remember to get a docket number.



Please remember to visit us at:

www.WEQUAQUETLAKE.COM

