

THE IPA NEWSLETTER

Mystic Lake, Middle Pond, and Hamblin Pond in Marstons Mills, MA

Summer 2026

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OPTIMISM AND CONTINUED VIGILANCE: THE IPA MARKS ANOTHER SUCCESSFUL YEAR

Progress, positivity, and proactive vigilance was the message for members attending the Indian Ponds Association's 68th Annual Meeting on July 26. Around 40 IPA members and guests gathered at a new venue, the Osterville Village Library, which offered air conditioning, excellent audio-visual facilities, and kindly let us use their function room free of charge.



IPA vice president **Scott Borden** opened the meeting at 1:13 PM and conveyed thanks to the Library, Stop & Shop for donating food and drink (as they have for many years), Rachel Jones for photographing the event, and the IPA board, who all pitched in to organize the meeting.

Minutes of the 2025 Annual Meeting and the 2026 treasurer's report were both accepted as submitted. Treasurer **Greg Cronin** reported the IPA's finances to be in a stronger position than last year. Contributions rose by \$4,400, and our checking account balance is ap-

prox. \$5,000 higher than at this point a year ago. Fixed expenses saw the board approve a \$10/household increase in dues to \$35, and members have supported that. Donations to the Scholarship Fund, however, will not be sufficient to award two scholarships in 2027. The board accordingly decided to discontinue the Schwarm Scholarship and continue

with the Anderson Scholarship. Special thanks to board member **Captain Bob Kohl** for donating a cruise on his harbor catamaran, that raised \$2,300 last August for the IPA. He has generously offered us the same opportunity this year on August 11. Kudos also to **Tom Hamilton** who has done a

great job taking on the responsibility of the IPA database. We rely on the generosity of our members and friends and thank you for your support.

Roger Lockwood was confirmed as a director for his first 2-year term; **Scott Borden**, **Ron Thalhémier**, and **Barry Schwartz** for their second 2-year terms; and **John Chiniara** for his third 2-year term. All nominations were unanimously approved. The board is seeking to fill up to three associate directorships (there were no nominations from the floor).

Scott thanked outgoing director **Tom Odjakjian** for his tremendous efforts on behalf of the IPA over several years – including chairing the Scholarship Committee and being a liaison with the Town DPW, Barnstable Clean Water Coalition, the Herring Run and Indian Lakes homeowner associations, and the Marstons Mills Village Association. We are seeking a new chair of the Scholarship Committee.

Tom Odjakjian presented the 2026 Edward Schwarm Memorial Scholarship to Justin Solgovic. Riley Hickey, winner of the Emory and Geri Anderson Scholarship, was unable to attend. Justin received his check and shared his educational goals. We had a record 12 outstanding applicants this year.

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MESSAGE FROM YOUR OUTGOING PRESIDENT

IPA OFFICERS AND DIRECTORS 2026-27

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Vice President

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The IPA is a 501(c)(3) organization and a registered public charity. All dues and contributions are tax deductible. This newsletter, with a circulation of over 800, is a forum for the exchange of ideas on matters concerning the IPA mission, and the views expressed by authors of articles do not necessarily re-present official IPA policy.



In preparing for the 68th Annual Meeting of the Indian Ponds Association, I was struck by the IPA's longevity, tireless work, and accomplishments over nearly 70 years! This is entirely thanks to our volunteers and supporters who appreciate just how special our ponds are and want to help them stay clean, healthy, and safe for people, flora, and fauna for now and future generations alike.

The IPA's calendar runs perennially as the seasons, and there are all sorts of ways you can get involved, meet neighbors, make new friends, and make a difference. In January, we chart our priorities for the year ahead, solicit membership renewals, dues and donations, and begin planning for our Annual Meeting in July. Our Scholarship Committee meets in April or May to select our recipient(s), and you have heard about the exceptionally qualified winners this year and over the years.

Annual pond testing starts in late April, continuing roughly biweekly through October. For many years, Bob Derderian has tested Hamblin Pond, while Emory Anderson – assisted by IPA volunteers – covers Mystic Lake and Middle Pond. They sample at the deepest spot in each lake, taking water clarity measurements using a Secchi disk and temperature and dissolved oxygen concentrations at 1-meter intervals from the surface to near bottom using a dissolved oxygen meter.

Since last year, in order to monitor the effectiveness of the December 2024 Mystic Lake alum treatment, Town DPW staff Brooke Withers, Amber Unruh, and summer interns (assisted by Emory and his trusty boat), have conducted monthly water sample collections at three locations in Mystic Lake and one in Middle Pond.

Continued testing – literally over decades – has created a wealth of pond water quality data which has informed not only the IPA's work but also that of the Town and other agencies and groups working to promote and preserve freshwater ponds across the Cape, Massachusetts, and nationally. The most recent example is the IPA's lobbying the Town for the 2024 alum treatment. We are also giving the Town every support as they progress with a Hamblin Pond water quality study and will advocate for appropriate response once the findings are known.

Volunteer outreach, recruitment of new directors and associate directors, fundraising, and producing our quarterly newsletter and website updates progresses year-round. Balancing our modern, high standard of living with the fragile natural ecosystem becomes ever more challenging as the Cape's population swells and temperatures continue to rise. Indeed, in times like this when things are going along pretty well, our vigilance, education, and community outreach are as important as ever.

You care enough to read this newsletter, and we cordially invite you to take a more active role if you're not already doing so. There is so much more to be done. No special skills or expertise is required, just interest and a couple of hours a month to pitch in. Please join us in our mission. Thank you!

Barry Schwarz

IS IT TIME TO HAVE YOUR SEPTIC TANK PUMPED?

MassDEP recommends that septic systems be pumped at least once every three years for homes not having a garbage disposal. If the home's system has a garbage disposal, it should be pumped every year.

ARE THERE FUNGI IN THE INDIAN PONDS (and if so, what are they doing there)?

We tend to think of fungi as somewhat weird terrestrial plantlike organisms that we observe growing out of the ground or on rotting logs, trees, or other things that have been in the fridge too long. Some, like morel mushrooms, are a culinary delicacy. Others are poisonous. When we discover them in our houses, in the form of mold or mildew, we hasten to eradicate them. The part of a terrestrial fungus we normally see is the fruiting body, the organ that seasonally produces and distributes spores, while the rest of the organism resides underground in a vast network of threads called a mycelium. The fruiting bodies of fungi come in many shapes, such as mushrooms and puffballs, some attractive and others whimsical, bizarre, or grotesque in appearance. Many fungi are microscopic, but considering the size of the mycelium, a few are among the largest living organisms on Earth.

Fungi are not scientifically considered to be plants, as they share many genes with animals. They are by no means exclusively terrestrial. They have evolved to inhabit nearly every possible ecological niche. Their principal function is to recycle dead materials into food for living organisms. They have no chlorophyll, so they cannot photosynthesize to make their own food or produce oxygen. They get all their nutrition from outside sources, and digestion takes place externally. They live in damp or wet places, including both fresh and salt water worldwide. Fungi are extremely ancient, although their origins are hard to pinpoint, as their soft bodies don't usually fossilize.

Although the presence of fungi in the Indian Ponds has not been mentioned in any studies, we may reasonably infer that many kinds of freshwater fungi do live abundantly, but inconspicuously, in the Indian Ponds because without them the ponds would not function as they do. Fungi are found in freshwater resources everywhere and it would be seriously abnormal if they were somehow missing from Mystic, Middle, and Hamblin ponds.

The activities of fungi are critical to the health of ponds in many ways. Fungi share with bacteria the ceaseless toil of decomposing all kinds of organic material and recycling elements such as oxygen, nitrogen, and carbon. They also help to control populations of algae by consuming them directly and thus help to regulate the oxygen budget of the pond indirectly. Most of the estimated 3 million species of fungi are microscopic, although larger fungi may be visible as growths on leaves, wood, or in the sediments. Collectively, fungi influence and interconnect many parts of the pond ecosystem in ways we don't yet understand. They are

an integral part of the web of chemistry and biology that supports the survival of fish and mussels, the production of algal blooms, odors, and water clarity.

When a leaf falls into a pond, it is colonized first by fungi and then by bacteria. Working in concert, and assisted by tiny invertebrates such as shrimp, they break down the leaf, consuming dissolved oxygen in the process. Fungi have strong chemicals that can break down hard, woody substances such as cellulose and lignin. In small ponds, this decomposition process consumes oxygen and can make the pond hypoxic. Fish and mussels (and indeed fungi and bacteria) may become stressed by this process and die from insufficient oxygen.

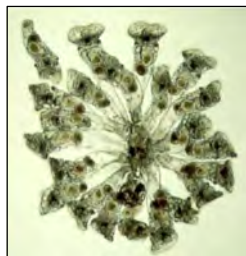
On the positive side, fungal decomposition distributes food particles into the water column, making their nutrients available to fish, mussels, zooplankton such as *Daphnia*, and invertebrates such as *Hydra*.

The leftovers fall into the pond sediments, which are a mucky stew consisting of remnants of dead plants and animals, feces, live fungi and bacteria, and reduced chemicals. These are all oxygen-consumers, removing dissolved oxygen from the water column.

Besides decomposition, another critical function of fungi is their role in the recycling of organic nitrogen (ammonium) and carbon into the inorganic gases nitrogen oxide(s) and carbon dioxide. One way fungi in the sediments contribute to recycling is by breaking down large molecules into smaller ones. Some of these waft into the air and some remain in the sediments, where they become more available to bacteria and other small organisms, including the fungus itself, thus helping to feed the pond's foodweb. Microscopic fungi have been shown to protect plants from disease and even repel insects and herbivores.

The various roles of fungi in the Indian Ponds are not mentioned specifically in the searchable pond reports on file with the Cape Cod Commission for a number of possible reasons. Pond studies tend to focus more on chemistry than biology. Also, it is laborious to identify individual species of microscopic fungi or measure quantities or concentrations. Additionally, fungi are not part of the "nutrient budget" of a pond, and thus generally not subject to regulatory standards. But their role in the world generally is immense, and they are an integral part of the story of how a pond works, besides being unique and impressive organisms to study.

Holly Hobart



A FRIENDLY REMINDER ABOUT MOTOR LIMITS ON LOCAL PONDS

Many of us enjoy the beautiful waters that make our Indian Ponds such a special place to live. Whether you're kayaking, paddleboarding, swimming from a public or neighborhood beach, fishing from a small boat, or simply enjoying the view, these waters are shared community resources. That's why it's worth remembering that several Barnstable ponds, including Long Pond (Marstons Mills), Lovell's Pond, Mystic Lake, Hamblin Pond, Middle Pond, Shubael's Pond, and Long Pond in Centerville, are subject to a 10-horsepower limit for internal combustion engines under Town Code Chapter 40, §40-1(C) (https://town.barnstable.ma.us/Departments/HarborMaster/Plans_-_Regulations_-_Laws/Barnstable-Code-Chapter-40-Boats.pdf)

The limit is not intended to discourage boating. Rather, it helps protect the character and health of these relatively shallow freshwater ponds. Larger engines can create substantial wakes that accelerate shoreline erosion, damage vegetation that helps stabilize pond banks, and disturb wildlife habitat. Those natural shoreline areas play an important role in water quality and ecosystem health.

Safety is another important consideration. Our ponds are heavily used by kayakers, canoers, paddleboarders, rowers, anglers, and swimmers. Public beaches and neighborhood association beaches often have families and children in the water throughout the summer. Smaller engines help reduce boating speeds and wake size, making the ponds

safer and more enjoyable for everyone sharing the water. Noise is also a factor. One of the things residents value most about our ponds is their peaceful atmosphere. Limiting engine size helps preserve the quieter recreational experience that attracts so many people to these waters in the first place.

The Town's regulations are enforced by the Harbormaster, Assistant Harbormasters, and authorized police officers patrolling Town waters. Town Code §40-7 grants those enforcement powers, and §40-8 provides for fines when violations occur. First violations carry potential fines ranging from \$25 to \$200, with subsequent violations subject to higher minimum penalties.

Residents may have noticed enforcement officers on the ponds recently. Their presence reflects concerns about a growing number of larger-engine boats operating on waters where the 10 HP limit applies. In most cases, boaters simply may not be familiar with the local rules.

A little awareness goes a long way. By choosing watercraft that comply with the regulations, we help protect water quality, wildlife habitat, shoreline vegetation, public safety, and the quiet enjoyment of these beloved ponds for everyone. Thank you for doing your part to keep our local waters healthy, safe, and welcoming.

APPRENTICE WEBMASTER & SOCIAL MEDIA MANAGER WANTED!

Love the Indian Ponds? Looking for real-world experience to boost your resume?

We're seeking a tech-savvy high school or college-age student to help manage the IPA's website and social media presence. This volunteer role takes just an hour or two per week—flexible—and offers a chance to make a meaningful impact on local pond conservation.

What's in it for you?

- Hands-on experience in web and social media management
- An Associate IPA Board Director position
- Mentorship and networking with experienced community leaders and professionals
- A valuable addition to your college or job applications
- The satisfaction of helping protect Cape Cod's treasured ponds

Perfect for someone who cares about conservation, enjoys technology, and wants to build skills while giving back.

Interested? We'd love to hear from you! **Contact IPA Webmaster Scott Borden:**

scott_borden@comcast.net

OPTIMISM AND CONTINUED VIGILANCE: THE IPA MARKS ANOTHER SUCCESSFUL YEAR (Continued from page 1)



Our first guest speaker, **Brooke Withers**, Town of Barnstable Water Resources Coordinator, outlined the scope and time-frame of the Hamblin Pond water quality study. Part of the Town's Pond and Lake Management Plan framework, the study will help identify sources affecting Hamblin's water quality and recommend solutions to maintain or improve its freshwater systems. Phase 1 (monitoring stream,

stormwater, nutrient loadings, phosphorous, and nitrogen levels) was completed this spring. The Town is now working through phase 2 with SMAST (part of the UMass Dartmouth School of Marine Sciences) to analyze the test results and develop recommendations. SMAST's report is expected by the end of this coming winter (Q1 2027). Middle Pond will be studied circa 2028 (the Town does one pond per year, ranked by priority of need). Mystic Lake's plan was completed prior to the 2024 alum treatment, the findings providing the basis for that action. The Cape Cod Commission (<https://www.capecodcommission.org/>) receives testing data from any organization gathering it, and such data are also available on the Barnstable Water Resources website (<https://barnstablewaterresources.com>).

Brooke also updated members on the Upper Marstons Mills Fish Passage, which will restore the concrete fish ladder between Middle Pond and the Marstons Mills River. An alternative idea to restore the historical route off Whistleberry Drive was designed with support from private property owners along the route. Unfortunately, permitting regulations involving culvert crossings that needed to be added or repaired were unpalatable to the owner whose cranberry bog was transversed. The DPW accordingly has reverted to the 2001 design, which hopefully will be fully permissible by late spring next year. The route is important to preserve the key role of herring in the ecosystem.

Dr Ken Wagner, founder of Water Resource Services, is a long-time friend to the IPA, bringing 50 years of lake management experience and intimate knowledge of our three ponds. He has continually studied Cape Cod lakes since 1985 and was the lead planner on all four alum treatments on Hamblin Pond and Mystic Lake. After retirement later this year, Ken will continue his *pro bono* work for organizations such as ours.

In a wide-ranging presentation followed by discussion with members, Ken explained his view that the IPA ponds are in

good-to-great shape, thanks to vigilance, regular testing, and timely treatments. Cyanobacteria blooms are a risk for all freshwater bodies given the right mix of excess nutrients, depth, water temperature, sunlight, and wind. Blooms can develop rapidly when threshold conditions are met. One scenario sees cyanobacteria getting just enough light from above and nutrients from below the thermocline (the layer of water that sharply separates the bands of warmer water above and colder below)

with wind mixing surface waters. Another scenario sees 'guest pockets' of cyanobacteria lodge at the sediment-water interface (rather than in the water column) that receive just enough light from above but no movement at the lake bed—say 15–30 feet deep. Phosphorus is the main driver of excess nutrients supporting freshwater blooms, whereas nitrogen is the culprit for saltwater, and tends to figure into which algae become dominant in freshwater. Phosphorus remediation approaches include dredging (prohibitively expensive and disruptive to the overall ecosystem), oxygenation (which keeps phosphorus at bay, but must be done annually), and aluminum, which typically offers a decade-plus benefit lifespan.

Ken stressed the importance of context and care in evaluating whether pond waters are safe for swimming, noting a localized sample detecting cyanobacteria does not mean an entire lake is affected, nor does it mean the bacteria are toxic (a specific test is required for that). Cyanobacteria, aka blue-green algae, are usually not of sufficient quantity to produce toxins at widely hazardous levels, but are more of a risk to pets and children, given their propensity to ingest water and their small body sizes. Be careful when you see surface scums, especially when wind blows it into a small cove where it can accumulate in a confined area. But it's misleading to label a whole lake or pond as affected based on a localized sample registering some cyanobacteria, which may or may not be toxic. Awareness and appropriate caution, rather than reflexive alarm, are the best way to enjoy our ponds safely.

Addressing several members' questions, Ken explained that water clarity and quality are not the same thing. Mystic Lake is not as clear as Hamblin, likely because of its biological structure, and especially the presence of herring (N.B.



Emory Anderson explored this topic in the spring 2026 IPA newsletter). Zooplankton in Hamblin, the clearest of the three ponds, consumes algae, whereas in Mystic and Middle Pond, herring eat the zooplankton. Herring also fuel an amazing marine system and bring great benefits. Accordingly, Mystic Lake clarity is likely as good as it could get. There is no reason to think that the 2024 alum treatment to address excess phosphorus is not working, as cyanobacteria have been minimal since treatment. Cyanobacteria can be found in virtually all lakes; it is when they become dominant lake wide that a serious problem is indicated.

Warmer temperatures and climate change create better conditions for cyanobacteria to grow, particularly when the water is 70°+. Low oxygen at the bottom, which allows phosphorus to be released back into the water column, is another important driver of blooms. Middle Pond, being relatively shallow and less subject to low oxygen, is less at risk of toxic cyanobacteria blooms than Mystic or Hamblin. The biggest influence on such blooms is phosphorus trapped in sediments of Mystic Lake from the old Hord Dairy Farm, the former Clear Lake Duck Farm on Hamblin Pond, and historical cranberry bog farming practices.

As to what residents can do on their own properties to help, natural vegetation is preferable to lawns running down to the shore, with thoughtful use of fertilizers (always ensure they are phosphorus-free!). Septic leach fields are not an immediate threat to freshwater ponds (the nitrogen emitted from them is more a factor for salt water), but eventually phosphorus does make its way to the ponds, so septic systems are a long-term risk. Phosphorus entering the pond from septic systems tends to bind with iron, precipitate to the sediment, and fuel the internal load when and where oxygen is low.

The invasive weed *Hydrilla* has not become as problematic in Mystic Lake and Middle Pond as Ken once feared, owing mainly to rapid and ongoing response by IPA members and the Town. The Town continues to monitor and treat for the stubborn weed (there is a small pocket in Middle Pond). Mussels—extraordinary freshwater filtration systems and a key indicator of pond health—are far more at risk from cyanobacteria than aluminum treatment. The loss of more than 90% of the mussels in Mystic Lake in 2009–2010 during blooms has restricted filtration in that pond, although substantial recovery has been documented over the last 17 years since the first aluminum treatment.

Summing up, Ken said the state of our IPA catchment area indicates sound water management, although there is always room for improvement. All three ponds support their designated uses and are suitable for swimming, boating, fishing, and general enjoyment. But threats exist and warrant ongoing monitoring, education, and occasional intervention.

The IPA extends kudos to the DPW for their collaborative approach and continued efforts to protect our freshwater ponds, and to Dr Wagner for being a longstanding friend and invaluable resource to the IPA.

On behalf of president **Barry Schwartz**, who was unable to attend, Scott Borden delivered highlights of the IPA's mission, calendar, and activities. More than ever, we need more people to join us in the effort—not just financially, but getting involved in our activities. No special skill set is required, just interest in the cause and willingness to help. He summed up with a quote from English explorer Robert Swan, who was the first man to set foot on both poles: "The greatest threat to our planet is the belief that someone else will do it."

The meeting concluded with promotion for the IPA's sunset cruise on August 11, a reminder to download the Town of Barnstable's MyBarnstable app for up-to-the-minute water quality alerts (and more!), and to consult the IPA website for a wealth of resources and links to other organizations committed to protect and preserve the natural environment and ecological systems of our freshwater ponds and watershed, including APCC, Barnstable Water Resources, UMass School of Marine Sciences and Technology (SMAST), and the Cape Cod Commission.

Adjournment at 3:02 PM was followed by a social gathering with refreshments. The board met immediately after the formalities, at which Greg Cronin and Maggie Fearn were re-elected treasurer and clerk, respectively. The roles of president and vice president will be determined; in the meantime, the board will cover those roles collectively. **We are actively seeking associate directors, which is a great introduction to the IPA, how the board works collaboratively, and a pathway to full directorship. Please consider getting more actively involved: your IPA needs you!**

Maggie Fearn

Photos courtesy of Rachel Jones

**TO VIEW THIS NEWSLETTER IN FULL COLOR,
GO TO THE IPA WEBSITE: www.indianponds.org**

IPA FUNDRAISING SAIL ROUNDS THE MARK

On a postcard perfect August evening, IPA supporters and friends enjoyed a special fundraising sail aboard the 45-foot catamaran *Bay Breeze*. The second consecutive summer that IPA director, **Captain Bob Kohl**, has donated the proceeds, this year's sunset cruise raised \$1500. We launched from Hyannis Inner Harbor into Lewis Bay and Nantucket Sound, sharing the seascape and magical Cape Cod

twilight with good friends for a great cause. Our thanks to Captain Bob and all who made the night memorable and successful. Learn more about the *Bay Breeze* and Bay Spirit Tours at: <https://bayspiritours.com/the-bay-breeze/>

Photos by Tom Odjakjian, Scott Borden, and Mark Hartman



Bay Breeze at the Hyannis dock



Passengers relaxing underway.



IPA board members (l-r): Tom Hamilton, Greg Cronin, Maggie Fearn, Scott Borden, Tom Odjakjian, and Bob Kohl.



Beautiful sunset after a relaxing sail.



HAVE CAMERA, WILL PHOTO

Fiona Atkinson, wife of IPA director **Peter Atkinson**, who seems to always have a ready camera on hand, captured two of our wild pond neighbors from the beach at their home on Mystic Lake this past June.

The image on the left shows an adult osprey enjoying lunch, a recently captured fish, on the deck railing of their home. It's amazing that the bird was willing to pose for the camera.

The image on the right is of an otter swimming towards shore, again seemingly oblivious to being photographed.



"To preserve and protect the natural environment and ecological systems of the Indian Ponds and surrounding parcels of land and watershed and to participate in studies and work with other agencies, individuals, and groups to educate the public, serve the community, and promote and preserve the Indian Ponds and surrounding areas." IPA Mission Statement

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FORWARDING SERVICE REQUESTED

