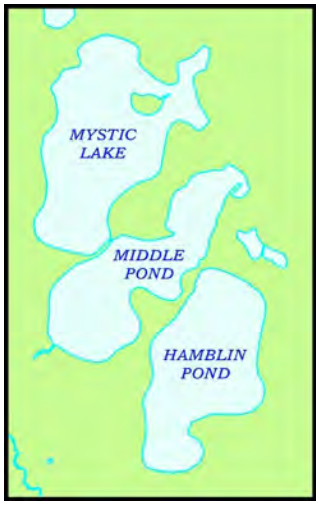
THE IPA NEWSLETTER

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

Fall 2016 **A quarterly publication of the Indian Ponds Association, Inc.** **Vol. 16 No. 4**

FLUCTUATIONS IN POND LEVELS



Local residents are well aware that water levels of the three Indian Ponds are much lower now than earlier in the year. Some may wonder if the levels now observed are unusual and whether there is cause for concern. Those most familiar with the ponds understand that water levels fluctuate over the years because of variations in annual precipitation. What we are witnessing is ample evidence of below-average precipitation in 2016.

Some basic information on the ponds and water in general on Cape Cod needs to be mentioned. The Cape is underlain by a single aquifer that supplies all of our groundwater. The surface of each pond is a reflection of the top of the water table. Water enters a pond in two ways: (i) precipitation (i.e. rain and snow) and (ii) groundwater from the aquifer. As reported by **Tom Cambareri**, Cape Cod Commission Water Resources Office, in an article in the winter 2004 issue of this newsletter, “the aquifer discharges groundwater into the pond on the ‘up-gradient side’ at a constant rate every second of every year. But let’s remember, the sole source of water to our aquifer is also precipitation.”

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HOBBIES ON HAMBLIN

"Starboard!.....Starboard!" shouts Ed. Peter, who is on port tack, and is trying to squeeze Ed into falling short of the mark, but Ed's boat is too fast, and Peter has to give way as starboard tack has right of way. Peter accordingly falls behind. This sailboat race is not taking place on Nantucket Sound, but Hamblin Pond. The Cape Cod Model Sailing Club (CCMSC) is holding one of their bi-weekly races and today seven boats are out there competing. The club sails under the auspices of the American Model Yacht Association, which sets the rules and specifies boats that can be raced, so as to keep the competition about skill — as much as possible — rather than boat size.

When I joined the club the boat most used locally was the “Victoria", a very capable vessel able to withstand some fairly high winds and still maintain some semblance of control. The hulls are all very standardized with only sails and rigging left to the owner. Tuning the sails for the wind conditions and setting the "rake" (forward-to-aft tilt of the mast) is up to the racer.

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IPA OFFICERS AND DIRECTORS, 2016-17

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NEW PROTOCOL FOR FUTURE *HYDRILLA* TREATMENTS IN MYSTIC LAKE

Readers should be well versed on the invasive aquatic plant *hydrilla* that was discovered in Mystic Lake about six years ago and in Middle Pond three years ago by virtue of the many articles on this subject in past issues of this newsletter. Responsibility for the control and (hopefully) eventual eradication of this aggressive weed has been taken over by the Town of Barnstable, which for the last two years has contracted with SOLitude Lake Management (formerly Aquatic Control Technology) to treat portions of the two ponds with a systemic herbicide fluridone (Sonar™). Treatments in 2016 were on July 7 and August 11.

A few days prior to each treatment, the contractor posted notices around the ponds, mainly on access roads to areas with waterfront properties and at public access points. These notices consisted of orange sheets of heavy paper tacked to trees or poles with a message warning people not to use the water for drinking, cooking, boating, fishing, swimming, and watering of livestock on the day of treatment. After the August 11 treatment, some residents complained that they had not seen the posted notices, were therefore unaware of the treatment, and had used the ponds for swimming on the day of treatment.

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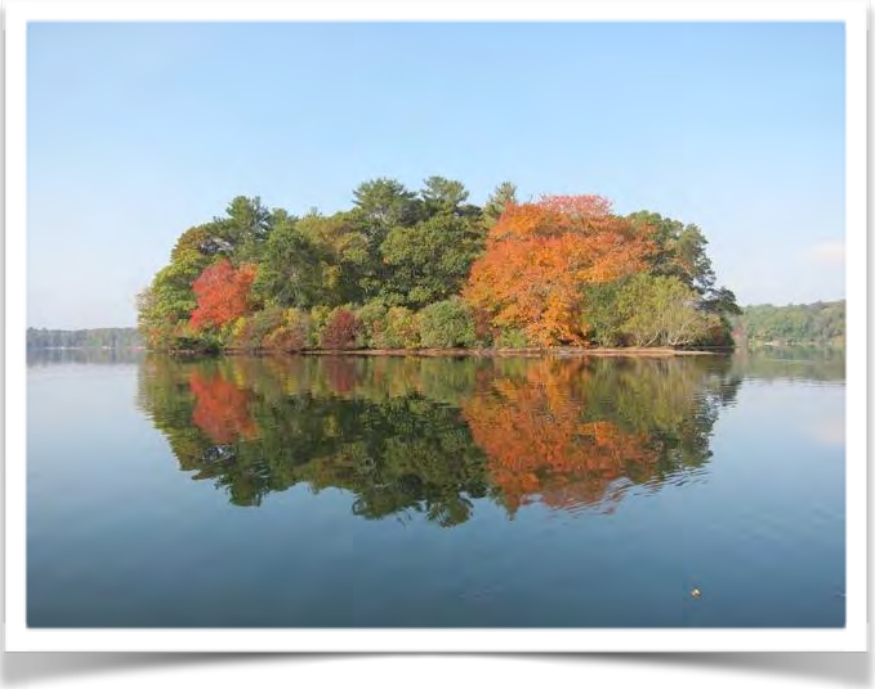

HOBBIES ON HAMBLIN

(*Continued from page 1*)

Another popular boat is the “Soling 1M” — a miniature replica of the full-scale boat commonly in use at yacht clubs. The Soling is larger than the Victoria and does well with higher winds, with fewer fussy control issues.

The CCMSC is a small club (20 members) which has been racing at Hamblin for many years. Most participants come from the Cape. The races are held every Wednesday and Saturday from 10AM to 3PM starting early May until November, weather permitting. When I first moved to Hamblin Pond I noticed this group of model sailboats clustered around some red buoys at the town boat ramp right off Route 149. Curiosity got the best of me and I went over to see what was happening. Along the shore was a group of guys fooling around and laughing at the goings on out in the water. Several racers were sitting in beach chairs occasionally jumping up when the sight of their boat got blocked by other boats at "traffic" jams rounding the marks. "Starboard" was the common exclamation shouted to remind infringing boats to get out of the way. Unlike full-scale boats (usually!) the models do smash into one another. Each model is controlled by a hand-held transmitter which sends a signal to only that operator's boat, allowing him to control the rudder with one stick, and another stick to control the sheets (lines) adjusting the jib and the mainsail just like full-scale boats. It's a little tricky deciphering left and right steering when the boat is coming towards you versus when it's going away. I was admonished that "left", "right" and "ropes" are not used around sailboats.

At the end of the race **Ed Goodhue** introduced himself and graciously offered me one of his boats to try. Fortunately I knew some of the racing rules from full-scale sailing experience. Bob, the Commodore, announced the course calling out the marks: start A C to 4 then 3 and back home to A C. Each mark is assigned a letter or number. While jockeying for position at the starting line, several mallards came cruising by and totally immersed themselves among the boats. The ducks seemed impervious to the goings on and crossed the starting line nonchalantly. Needless to say after the race I was hooked; there was lots of excitement and funny situations with everyone quite friendly even though I crashed Ed's boat into three others at the starting line. I apologized, embarrassed, but nobody told me to leave so I stayed and raced. I think they loved having someone who was always last! The club has a website: just google Cape Cod Model Sailing Club. Also the national site is www.theamya.org.

Now I race whenever I can and am looking to upgrade from my Victoria to a Soling. The club welcomes anyone who would like to watch and learn how to sail radio-controlled sailboats. Call Ed at 508 759 0248 and he will gladly get you started.

For now, alas, the marks have been pulled and another season has come to an end.

NEW GRAY WILLOW REMOVAL INITIATIVE

An article in the previous issue of this newsletter reported some renewed interest within the Indian Ponds community to have invasive gray willows removed from waterfront properties. At its September 29 meeting, the IPA board of directors discussed this matter to determine if there were sufficient interest in developing a new removal plan in collaboration with Bartlett Tree Experts, and - if so - to seek a new permit from the Town. **Darcy Karle**, Town Conservation Administrator, attended that meeting, reported that the Conservation Commission would be receptive to a new and similar group application, and indicated that she would enquire if the Town would be willing to participate in the program for the removal of the remaining gray willows on their own property on Mystic Lake and Hamblin Pond. Accordingly, the board agreed to pursue this new initiative by first contacting Bartlett Tree Experts to ascertain their willingness to again participate in a new removal program and then to contact waterfront property owners where gray willows are still thought to exist.

IPA president **Emory Anderson** and vice president **Peter Atkinson** met on October 14 with **Steve Heywood**, manager of Bartlett Tree Experts Cape Cod office in Osterville, to discuss the new initiative. Steve confirmed that Bartlett would be willing to participate, but that the cost for individual property owners would depend on the number and size of the trees to be removed, the difficulty of access to the trees, and the total number of owners who sign up. Since most of the cutting and removal would have to be done from the waterside, Steve indicated that a minimum of about a dozen property owners would need to sign up to justify the rental of boats and barges by Bartlett.

Using previous information on the location of gray willows on waterfront properties on all three ponds and on owners who participated in the previous removal program in 2008–2010, a list of about 60 properties and owners was compiled. Emory wrote in early November to each of these owners, including the Town of Barnstable, with background information explaining what the IPA had done previously vis-à-vis the gray willows, why their removal is important, and providing information about the new opportunity to help remove the remaining gray willows around the Indian Ponds. Owners were encouraged to write to Bartlett Tree Experts, PO Box 177, Osterville, MA 02655 or call Steve at 508-428-2397 (or e-mail him at sheywood@barlett.com) to schedule a time for him to visit the property to determine a cost estimate.

It is hoped that a sufficient number of owners will respond positively to this initiative so that plans for a new group permit can proceed. The paperwork for a new permit would need to be prepared and submitted to the Town in early spring so that removal work could begin in June or July.

-Emory D. Anderson

Photo Credits: Pages 2, 6, 8 - Betsey Godley; Page 3 - Aaron Fishman

HYDRILLA PROTOCOL

(continued from page 2)

Recognizing the need to facilitate improved communication to the public regarding future herbicide treatments, **Darcy Karle**, Barnstable Conservation Administrator, and **Keith Gazaille**, Regional Director of SOLitude Lake Management, were invited to meet with the IPA board of directors on September 29. Keith acknowledged that notifying residents of scheduled treatments is an important issue that his firm takes seriously and for which they normally post notices one to seven days prior to the operation. He assured the board that Sonar™ poses no known risks to humans, pets, or the environment and that there are no required restrictions on swimming, fishing, or boating on the days of the treatments. The one-day restriction included in the posted notice was for practical reasons so that swimmers and boaters would not interfere with or impede the application of the herbicide. There is a 30-day restriction after application of Sonar™ on the direct taking of lake water for cranberry irrigation, but this restriction does not apply to the use of water from wells in close proximity to the lake.

Prior to future treatments, it was agreed that in addition to posting notices, the Town and/or the contractor would notify the IPA as well as a designated person for each of the five homeowner associations abutting the three Indian Ponds who, in turn, would notify their members via e-mail blasts or other means as to the nature and dates of the proposed treatments. The IPA will be responsible for obtaining and providing the contact information for these designated persons to Darcy Karle and to the contractor (probably SOLitude). It was further agreed that notices of scheduled treatments posted in the future would exclude the swimming, fishing, and boating restrictions. It is hoped that this new protocol for notifying residents will be a satisfactory arrangement reflecting the continued high level of cooperation by the IPA, Town of Barnstable, and SOLitude Lake Management in combating the invasive *hydrilla*.

-Emory D. Anderson

RESIDENTIAL WATER CYCLE

Water comes and water goes; the faucet brings it in, the drain takes it away. But that's only a very brief story. Unlike Boston, which gets its water from Quabbin Resevoir and dumps its sewerage after treatment into the ocean, the Cape is a closed water system, meaning all water is returned to its source for reuse. The water at your faucet has undergone much pumping and testing and travels significant distances before it gets to you. Here in Marstons Mills our water comes from community wells which tap the local aquifers. Aquifers are replenished by rain, surface water and septic systems. Mass. Dept. of Environmental Protection has strict rules governing what cannot happen within certain radii (zones) around every public well.

Wells use pipes into the ground and draw water from the aquifer with pumps which direct the water to tanks usually elevated so gravity can distribute the water to neighborhoods. The higher the tank the greater the pressure. When you're done using the water it returns to the ground and eventually back to the aquifers through your household drains or directly, as when watering lawns or washing your car. Here's where the problems start to creep in. What's in the chemical you washed your car with? What's in the fertilizer and weed killer you spread?

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POND LEVELS

(*Continued from page 1)*

"So, it is actually 'rain' that falls onto the Indian Ponds watershed that enters the groundwater and discharges into the ponds as groundwater," CCC's Tom Cambareri continued. "There are no significant streams that feed water to our kettle-hole ponds. Water leaves the pond mainly through the ground on the 'down-gradient' side where pond water discharges back into the ground every second of every year." In the case of the Indian Ponds, groundwater flow, which is about one foot per day, enters from the northwest (up-gradient side) and leaves towards the southeast (down-gradient side).

In that same article, Tom also noted that "for the most part, the water budget of a pond is well balanced and shows that the amount of water coming in equals the amount of water leaving. But, if there is a difference, the amount of water in storage (the pond itself) changes. Think about it. If more water than usual comes in (e.g. during a very rainy period), the pond level rises. Conversely, if less water enters the pond (e.g. during the drought of 2001), then the pond level falls. This holds true for aquifer storage as well, so we notice that the water table and pond level changes are synchronous with each other. The range of water table fluctuation around the Indian Ponds is nearly 10 feet!"

This writer, who has lived on Mystic Lake since 1994, witnessed the very low water levels in 2001–2002 when much greater amounts of shoreline were dry compared to today. For example, on Middle Pond near the entrance to the channel leading to the herring run flume and ladder, it was 75 feet from the shoreline to the private wooden platform for Whistleberry residents (which is normally zero feet). Only a trickle of water flowed through the cut between Mystic Lake and Middle Pond. Residents commented that a two-lane road could easily fit around the shoreline of each of the Indian Ponds at that time. By comparison, today's pond levels are much better. Comparing this year with the average for 1981–2010, total precipitation for Hyannis in January–May was 16 percent above average, but 62 percent below average in June–October, which is why pond levels are currently down. For January–October, precipitation is 21 percent below average. Let's hope for lots of snow this winter and rain next spring to replenish both our ponds and the aquifer!

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GOLDEN EAGLES

From even the quickest glance at a bird book that shows ranges, it will be obvious Cape Cod is on the easternmost edge of the golden eagle's *winter* range. I suppose that, for this purpose, November could be considered winter. On the other hand, this guy might be the forward scout for eagles to come. In any case, it seems as though we now have a golden eagle living at Fort Hill in Eastham. If he is just the lead scout and we can expect others, he seems to have found a good starting point.

We regularly see bald eagles on the ponds but I don't believe we are quite so used to seeing goldens. Offhand, I can't think of an instance of seeing a golden on Cape Cod unless it was during a hawk watch down in Truro.

The golden's main diet consists of small mammals, squirrels, rabbits, prairie dogs, etc. Since mammals tend not to eat those types of food that have been treated by chemical sprays and other types of fertilization, or metabolize those chemicals, the eagle eggs don't develop the thin, fragile shells of some other raptors and therefore are more successful parents.

The golden is the most common official national animal in the world and is the emblem or on the flag of at least five countries. While traveling on the Isle of Bute on the west coast of Scotland, my wife, Claire, and I saw golden eagles frolicking in the air like seagulls off the Isle of Arran, Bute's neighbor to the West. They appeared huge even from a distance of two to three miles: the golden is one of the largest birds in North America, with wings broad and long.

Goldens favor partial to completely open territory, preferably around mountains, hills and cliffs. Eastham's Fort Hill would suit them perfectly. They also prefer areas near streams and rivers. They are most common in the western part of the United States and are rare in the eastern half.

A few interesting facts about golden eagles: the rough-legged hawk, the ferruginous hawk and the golden eagle are the only American raptors to have feathers all the way to their toes. The oldest recorded golden was at least 31 years, 8 months old when found in 2012. The golden is one of the largest, fastest, and nimblest raptors in North America.

They are much like goldeneyes in their migratory habits. They will stay as far north as possible until the first lasting snow falls start and then move south until they are out of snow cover.

If you have the chance it would be well worth the time to drive down to Fort Hill to see if you can catch a glimpse of the one that is here now. Since they most often travel in pairs, it is not unreasonable to suppose that there may be two of them soon.

-Dave Reid

RESIDENTIAL WATER CYCLE (*Continued from page 5)*

Back in the house the drains feed into your septic system tank which, through a clever piping trick, separates the solid from the liquid sending the the liquid on to the leaching field which distributes it back into the ground to eventually rejoin the water in the aquifer. You'd better empty those solids (septic pumpout) or eventually the tank will get full and no separation of solid and liquid will take place causing the solids to go on to the leaching field until the system clogs and fails. Pumpout every three years is recommended for light use. The number of "legal" bedrooms in a house is determined by the size of the septic system not the number of bathrooms.

The ground is a fantastic filter cleaning up all sorts of remaining undesirables making the water "pure" again as it heads back to the aquifer. Towns regulate how close the bottom of the leaching field can get to the highest ground water level. This controls how far the waste water has to travel to return to the ground water. Conflicts always exist: longer depths are conservative allowing more filtering, while shorter depths make it easier to approve more developable lots for new construction. Unfortunately the earth cannot remove drugs, volatle organic compounds such as gasoline (especially its additives), nitrogen, phosphorus, many modern chemicals and non-soluble materials. The returned water is added to the aquifer to use again including everything that made it past the "earth filter". Whole house filters at the water's input to your house therefore make a lot of sense.

What do our washing machines and toilets have to do with algae in the ponds and rampant vegetation growth? Everything. Our beautiful ponds are nothing more than an extension of our aquifers. If we send phosphorous and nitrogen to the ground water it will promote growth of algae and other prolific plants which take over our ponds and the watershed leading to our coasts. The ground water we tap into is a vast underground network of water which collects in some areas and flows with its own river system underground. These underground flows (plumes) are of concern when hazardous waste has been deposited into the ground (e.g., the situation with Otis Air Force Base). When the surface land drops below where the groundwater resides, lo and behold there are our ponds. When you look at most of our ponds, unless they're fed with a creek or river, you're looking at the groundwater. Now you can understand how our homes, the water we drink, the ponds, and the discharged wastewater are all interrelated. If you put junk down the drain or on your lawn, or don't clean up after your dog, it all in some form or other goes back to the aquifer and the ponds. Think about it next time you throw or pour something on the ground or down the drain.

-Aaron Fishman

VOLUNTEER SPOTLIGHT - EMILY WHEELER

At our Annual Meeting this past summer, Emily Wheeler reached the end of term limits and cycled off the IPA board, having served as secretary (clerk) for most of her years on the board.

We thank her very much for her years of service and also acknowledge her special place in the group of folks who live around the pond. Emily succeeded her father as he too cycled off after years of service, but anticipate that the Wheeler family will still be around for years into the future. Let me share some of their proud and long commitment to the Indian Ponds.

In 1939 Emily's grandfather, Wilfrid Wheeler Jr., an arborist with a long career at Bartlett Tree Company, purchased their property on what is now Wheeler Road. He built the Cape house above Middle Pond during the early 1940s and called it Windrift. Emily's grandfather, known as Boysie, and his family lived in Belmont but spent most of their weekends in Marstons Mills. Her father, Richard W. Wheeler, was 10 years old at the time of the land purchase and has enduring and cherished memories of enjoying Windrift as a boy and, later, as a father himself with the next generation of Wheelers there.

Emily's grandfather had help in building Windrift from his father, Wilfrid Wheeler, a farmer and horticulturalist at Ashumet Farm in Falmouth, who oversaw construction projects during the winters when he wasn't farming (or so goes the lore). The forty-plus-foot "feature" holly trees that surround the house at Windrift came from Ashumet Farm, where Wilfrid Wheeler collected and preserved many varieties of American hollies native to Cape Cod. Part of his farmstead is now a MA Audubon property, the Ashumet Holly and Wildlife Sanctuary.

Four generations of caring for the trees, water, land and people of Cape Cod, a proud heritage indeed. Thank you Emily.

-Alex Frazee

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" 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."

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