

THE IPA NEWSLETTER

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

Spring 2018

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PROF. JACK AHERN TO BE ANNUAL MEETING GUEST SPEAKER



Professor Jack Ahern, Vice Provost for International Programs and Professor of Landscape Architecture and Regional Planning at the University of Massachusetts Amherst, will be the guest speaker at the 61st Annual Meeting of the Indian Ponds Association to be held **Sunday, July 22**. His talk will include a brief summary of the program in landscape architecture and regional planning at UMass, an overview of some of the projects that he and his graduate students have done in the Three Bays and Marstons Mills River watershed, and some general advice to homeowners relative to landscape projects that can be beneficial to improving water quality. Jack authored an article on this general topic in our 2017 fall newsletter.

Jack has a Ph.D. in environmental sciences from Wageningen University in The Netherlands and has been on the UMass Amherst faculty since 1986. He is a well-published researcher, having authored numerous books, book chapters, journal articles, conference proceedings, and other published reports, as well as being a nationally and internationally recognized speaker and lecturer. In short, he is a respected expert and educator in the field of landscape architecture, and we are fortunate to have him as our guest speaker.

The 2018 Annual Meeting will be held outdoors from 4:00 to 6:00 pm at the home of John and Deirdre Kayajan at 32 Heath Row in Marstons Mills. The business meeting will include approval of the minutes and treasurer's report from the 2017 meeting, vote on proposed changes to the IPA by-laws (see article on page 4,) election of directors, a brief president's report, presentation of this year's Schwarm Scholarship recipient, and address by our guest speaker. This will be followed by our traditional social hour where attendees can enjoy good food, drink, and conversation. We look forward to seeing a large turnout this year.

Emory D. Anderson

IN MEMORIUM



Photo courtesy of Yarmouth Police Department.

Although not directly related to the ponds and the mission of the IPA, nevertheless the recent tragic death of Sgt. Sean Gannon of the Yarmouth Police Department merits special attention in this issue of the newsletter. The incident, which emotionally impacted people on the Cape and beyond, took place right here in Marstons Mills, but more importantly directly affected a member of the IPA Board of Directors. Kathy Bryan, a director as well as editor of this newsletter, and her husband Dean are the parents of Sean's wife Dara (Bryan) Gannon. The Bryan family has expressed profound thanks to everyone for their kindness and tremendous support during this unimaginably difficult time. In return, all of us in the IPA wish to convey our heartfelt condolences coupled with the assurance of our continued



thoughts and prayers as they grapple with this loss. Because Kathy and her family are devoting needed time with Dara, this issue of the newsletter is being handled by IPA President Emory Anderson assisted by Clerk Maggie Fearn.

IN THIS ISSUE

- PROF. JACK AHERN ANNUAL MEETING GUEST SPEAKER
- IN MEMORIUM
- SCHWARM SCHOLARSHIP RECIPIENT
- POND TESTING BEGINS
- PROPOSED BY-LAW CHANGES
- CAPE COD WELL WATER STUDY
- LATEST ON MIDDLE POND HERRING RUN REBUILD
- HERRING COUNTING
- POND DEBRIS CLEANUP
- FOURTH OF JULY BOAT PARADE
- HYDRILLA TREATMENT
- BUNTING BY ANY OTHER NAME
- THREE DIRECTORS COMPLETE TERMS
- STATUS OF MYSTIC LAKE AND MIDDLE POND

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GO TO THE IPA WEBSITE: www.indianponds.org**

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**2018 SCHWARM SCHOLARSHIP AWARDED TO
MARSTONS MILLS SENIOR**

The IPA is pleased to announce that this year's recipient of the Edward Schwarm Memorial Scholarship is Sophie Gibson. She was selected by the IPA Scholarship Committee based on her academic achievement, extracurricular activities, and community service related to the mission of the IPA.

The Schwarm Memorial Scholarship was established in 2005 in memory of Edward Schwarm, a former IPA director and officer who died in May 2005.

Sophie is the daughter of Miles and Elizabeth Gibson of Marstons Mills. She graduated this year from Sturgis Charter Public School where she has been

Student Council President, Invitation Member, New Student Ambassador, and has received Academic Achievement Awards for academic excellence. She also participated in field hockey. Sophie has volunteered her time for outreach projects and planning youth retreats. Last year, she took on the role of being the Cape and Islands youth representative in the Diocesan Youth Council. For the past three years, she has partnered with the Woods Hole Oceanographic Institution as a team design student working on a dolphin rescue carrier. On March 31, the team's invention was formally presented to the International Fund for Animal Welfare. Sophie, the team's legal lead, is working on a patent for a unique portion of this equipment.

Sophie has indicated that she will attend the University of Virginia as a Jefferson Scholar this fall and plans to pursue a career in law, specializing in Native American rights.

Roberta Gough

POND TESTING BEGINS AGAIN

Routine testing of the three Indian Ponds in 2018 by IPA volunteers began the third week of May. This represents the continuation of routine sampling of the water quality of the ponds by the IPA that began over 20 years ago. The testing, done at roughly two-week intervals from May to October, depending on weather conditions, consists of several measurements of water quality. Over the deepest part of each pond (48 feet in Mystic Lake, 33 feet in Middle Pond, and 63 feet in Hamblin Pond), measurements of dissolved oxygen and temperature are taken at 1-meter intervals from the surface to the bottom, and water clarity is determined with a Secchi disk. Each sampling takes about half an hour for each pond.

A special sampling is done in August or September as part of the Cape Cod Commission's Pond and Lake Stewardship (PALS) program. In addition to the above-mentioned measurements, water samples are collected at various depths for subsequent laboratory analysis of nitrogen, phosphorus, alkalinity, chlorophyll a, and pH.

Testing will again be done in Hamblin Pond by Bob Derderian and in Mystic Lake and Middle Pond by Emory Anderson and various other volunteers. We welcome anyone who wants to assist in the testing, learn how to use the equipment, and better understand the importance of this program. To volunteer, contact Emory Anderson at 508-420-2303 or emoryanderson@comcast.net.

Emory D. Anderson

POND DEBRIS CLEANUP

Following a six-year hiatus, the IPA Board of Directors has scheduled a cleanup of derelict boating and dock equipment and other debris on Saturday, June 16. First done in 2006, such cleanups were done by IPA volunteers every spring through 2012. Being aware of reports of seemingly abandoned equipment and debris seen around the shorelines of some of the Indian Ponds, it was felt that another cleanup was warranted. In previous years, because volunteers who participated in such cleanups lived around either Mystic Lake or Middle Pond, efforts were subsequently restricted to those two ponds. However, if any IPA members living around Hamblin Pond have access to motorized boats and wish to participate in a cleanup effort on that pond, they are asked to contact Emory Anderson at emoryanderson@comcast.net or 508-420-2303.

In advance of this cleanup, waterfront property owners and residents who have docks, floats, boats, and other equipment moored or otherwise placed along the shore are asked to ensure that such items are properly secured, well labeled, and not left in such a state as to suggest abandonment. Any owners and residents who are aware of any items that may have drifted away during the winter storms, please contact Emory so that those items, if found during the cleanup, may be returned to their owners.

Anyone wishing to participate in the cleanup should meet at 9:00 AM at the Anderson landing at the northeast end of Mystic Lake (22 Indian Pond Point). If you have a boat with motor, please bring that together with rope and any other equipment that might assist in gathering and towing debris. Material collected that is deemed to have been abandoned and in need of disposal will be deposited on the Town beach or way to water of each respective pond where it will be collected and disposed of later by personnel from the Town Department of Public Works.

CELEBRATE THE FOURTH OF JULY WITH A BOAT PARADE

Some IPA members launched an annual July 4th boat parade in 2008 on Mystic Lake and Middle Pond to help celebrate the IPA's 50th anniversary and to also honor the memory of former IPA member and Director Ted Elliott who had died in August 2007. Long-time residents will remember that Elliott had a tradition of traveling around the two

ponds on the 4th on his pontoon boat that was decorated with flags and colorful bunting and with patriotic music playing on his sound system. He always visited both public and private beaches to present small US flags to all children and to wish Independence Day greetings to everyone. This boat parade was held each year through 2015, after which interest appeared to wane.

Although this event is not sponsored by the IPA, nor does the IPA assume responsibility for any accidents, the Board of Directors, at its April 12 meeting, felt that an attempt should be made to revive the parade. Boats of all sizes and shapes are invited to participate. Participants are encouraged to decorate their boats with flags, bunting, ribbons, and balloons, and to wear appropriate costumes. The idea is to be imaginative, have fun, and celebrate our nation's day of independence. Pontoon boat owners are especially encouraged to decorate their boats and join in the parade. Readers can explore some of the 2008–2015 newsletters (see archive at <http://www.indianponds.org/>) to see photos of some of the past parades and the wide variety of well-decorated watercraft that participated.



A portion of the flotilla of boats that participated in the July 4, 2011 parade on Mystic Lake and Middle Pond. Photo by Bob Nichols.

Participants should gather at the north end of Mystic Lake off the Race Lane beach at 3:00 pm on Wednesday, July 4. The parade will proceed counterclockwise around Mystic Lake, stopping at each beach to present flags, and then continue through the cut into and around Middle Pond to do the same.

Please join in and help make this a truly fun event for young and old alike.

THREE DIRECTORS COMPLETE THEIR TERMS

Three IPA directors, Chris Bizinkauskas, Greg Cronin, and Roberta Gough, will rotate off the board this July after the Annual Meeting as a result of serving the maximum three consecutive two-year terms. All three have served important roles on the board and will be greatly missed. Chris' main job has been to organize the social hour for each Annual Meeting. Greg has been the IPA treasurer, while Roberta has chaired the Schwarm Memorial Scholarship committee each year. Although each of these individuals is not eligible to be re-elected this year, we are sure they will remain involved in the work of the IPA and may possibly consider coming back onto the board sometime in the future. In the meantime, we extend a hearty thank-you to each of them.

IPA BOARD RECOMMENDS BY-LAW CHANGES

The Board of Directors is proposing two changes to the IPA By-laws to be approved by members at the July 22 Annual Meeting. The first is to create a new category of membership, and the second is to formally create the position of "associate director".

The principal reason for the new membership category stems from the difficulty experienced in recent years in finding candidates from among resident members for election to the Board of Directors. The board has had extensive discussion on the matter and considered various possibilities before deciding on a recommendation.

The board is now proposing a change to the By-laws that will allow interested and dedicated individuals living outside the IPA area to enjoy the same rights and privileges as resident members (i.e. vote at Annual Meetings and hold office). The new recommendation to Article I – Name and Membership would change the number of membership categories from two to three. In addition to the present categories of resident members and friends of the IPA (FIPA), the third category would be non-resident members. This category would be defined as follows:

"Membership in this category is solely by invitation of the board of directors and is restricted to households anywhere outside of the IPA area which have, in the determination of the board, demonstrated a strong and clear desire for the protection and preservation of the Indian Ponds. Non-resident membership is granted upon a letter of invitation, signing of a register of members maintained by the clerk of the Association, and payment of dues. Non-resident members may vote at IPA annual meetings and may hold office."

The second change to create the position of associate director would formalize in the By-laws what the board has been doing informally for nearly the last 10 years. In 2009, former director Richard Wheeler led an effort to develop future leaders of the IPA. The idea was to give individuals called "associate directors" an opportunity to gain a greater understanding of the many challenges that confront the IPA and provide them with the chance to share their individual views during the decision-making process at board meetings. They could express their opinions, but not vote on the various agenda issues. Associate directors could also be prospective candidates for election as directors in subsequent years. The original goal was to have up to six associate directors, each representing one of the neighborhood associations in the IPA area. In reality, we have generally had only two or three at any one time.

The board is recommending the inclusion of the following third item in Article III – The Board of Directors:

"3. Associate Directors: The board of directors may nominate up to three resident or non-resident members who are in good standing and who have expressed an interest in standing for election as full-time directors to be appointed as associate directors for a term not to exceed two years. Associate directors may attend and participate in regularly scheduled board meetings, receive copies of all documentation relevant to those meetings, but may not be counted as part of a quorum nor vote on matters arising at such meetings."

The board urges members to endorse and vote in favor of these recommended changes.

Emory D. Anderson

UPDATE ON 2018 MILL POND FISH LADDER HERRING COUNT

Barnstable Clean Water Coalition (BCWC) and the Town of Barnstable's Natural Resources Program are working together again in 2018 to coordinate the monitoring of herring at the Mill Pond and Middle Pond fish ladders along the Marstons Mills River.

Every spring, two species of river herring – alewife (*Alosa pseudoharengus*) and blueback (*Alosa aestivalis*) – migrate up the Marstons Mills River to spawn in Middle Pond and Mystic Lake. River herring spend most of their lives in the sea, but travel to freshwater to reproduce. After spawning, adults return to the sea; once hatched, young herring spend the summer feeding before going out to the ocean.

With the assistance of over 80 volunteers, BCWC has provided the Massachusetts Division of Marine Fisheries (DMF) with valuable herring population data from the Mill Pond fish ladder since 2012. Volunteers count herring as they travel up the fish ladder into Mill Pond. The "run" usually starts in early April with the arrival of alewives after

water temperatures reach 51°F. When water temperatures rise to 57°F, bluebacks start running.

In 2017, BCWC volunteers counted 5,251 herring passing over the Mill Pond fish ladder. From this data, DMF scientists calculated an estimated run size of 36,148 in the Marstons Mills River in 2017. This figure was much higher than the 2016 estimate with a visual count of 2,043 fish and a run-size estimate of 13,954 herring.

The official herring count this year began on April 1, with the first recorded sighting of herring crossing over the Mill Pond fish ladder on April 12. The unusually cooler water temperatures resulted in rather erratic daily counts in April. At the end of the first full week in May, over 1,000 herring had been counted at the Mill Pond ladder. This number is considerably lower than last year's count. We hope that the warmer May temperatures will bring an influx of herring up the Marstons Mills River.

Heather Rockwell, Barnstable Clean Water Coalition



WHAT'S IN YOUR WELL WATER?

Find out! Volunteer for FREE private well testing.

Why study well water?
In some areas of Cape Cod, PFASs have been found in drinking water.

What are PFASs?
PFASs are chemicals found in household products and firefighting foam. They've been around for 60 years, but their harmful health effects have only drawn concern in the last 20 years.

How can PFASs get into my well water and what are the harmful effects?
They can seep into the ground and move through groundwater to your well. They suppress certain immune system functions, particularly in kids, impact metabolic and liver functions, and are linked to some cancers and adverse effects on pregnancy, such as low birth weight.

Who can participate and how much time will it take?
Private well owners who live in Barnstable County on Cape Cod are eligible to participate, and participation will take about three hours.

What's the purpose of this study?
To test 50 private wells on Cape Cod each year over the next 5 years. Wells will be chosen from areas in Barnstable County that may be impacted by PFASs. The benefit to Cape Cod residents is a better understanding of PFAS exposure and contamination.

Who is doing the study?
The STEEP project is part of a National Institutes of Health Superfund Research Project led by the University of Rhode Island. URI and Silent Spring Institute will collect well water samples and Harvard University will analyze them.

Will I receive the test results?
We will report individual results and interpret them for each participant. We will share summaries of our findings with Cape residents in reports and public meetings. Names and addresses of participants will be kept confidential.

For more info, or to apply, contact either:

<p>Laurel Schaidt, Ph.D. Research Scientist Silent Spring Institute schaidt@silentspring.org (617) 332-4288 x224</p>	<p>Alyson McCann Water Quality Program Coordinator University of Rhode Island alyson@uri.edu (401) 874-5398</p>
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www.uri.edu/stEEP







STEEP is funded by the Superfund Research Program, National Institute of Environmental Health Sciences under award number P42ES027726. This is URI research approved by URI's Institutional Review Board.

UPDATE ON 2018 MIDDLE POND LADDER HERRING COUNT

Now in its second year, Natural Resources continues to run the herring count program at the Middle Pond flume. Reconstruction will begin this summer after the adult herring have gone back to sea, but while the fry are still putting on growth in Middle Pond and Mystic Lake. Although there is continuous speculation that some of the herring at this location move into Middle Pond at night, outside of our count windows, we are pleased to announce that volunteer

count attendance has been wonderful this season, even in light of slightly atypical spring weather, although participation in the count program has not been as good as last year. The run has been very much coming in waves; we will not be able to examine and provide the count data until after the spawning season has concluded.

Amy Croteau, Town of Barnstable Natural Resources Officer

PONDS TO AGAIN RECEIVE *HYDRILLA* TREATMENT

Mystic Lake and about five acres of Middle Pond will again be treated this summer as part of the Town's long-term program to control and hopefully eventually eradicate the invasive pond weed *Hydrilla*. A contract for this work will again be awarded to SOLitude Lake Management headquartered in Shrewsbury, MA. Activities will include pre- and post-treatment tuber sampling, actual application of the liquid Sonar herbicide, and, if necessary, diver hand-pulling or diver-assisted suction harvesting following the Sonar treatment. The first application of Sonar will be in early July, with up to two additional booster treatments in August.

As reported in the winter issue of this newsletter, no *Hydrilla* plants or tubers were found in either Mystic Lake or Middle Pond in 2017 following the summer treatment. However, SOLitude Lake Management recommends continued monitoring and treatment as the tubers can remain dormant for 5+ years before sprouting.

Initially discovered in Mystic Pond in summer 2010 by former IPA Vice President Bob Nichols and Dr. Ken Wagner, IPA volunteers began a manual removal effort (i.e. hand-pulling) coupled with the placement of benthic barriers of black, special-purpose cloth over patches of *Hydrilla* to prevent resprouting of tubers. In spite of considerable effort that summer and in subsequent summers, new patches of *Hydrilla* continued to be found. In summer 2011, the Town provided funds for 4 days of hand-pulling by SCUBA

divers from Aquatic Control Technology (now SOLitude Lake Management). In summer 2012, the Town funded seven days of diver-assisted suction harvesting as it was becoming apparent that IPA volunteer efforts were not making headway in eradicating this invasive plant from the lake. In July 2013, a 6 x 10 ft patch of *Hydrilla* was found in Middle Pond, just inside the cut from Mystic Lake. Later that month, Aquatic Control Technology (contracted by the Town) applied the contact herbicide Aquathol K (endothal) over a two-day period to a 5.5-acre cove in the northwest part of Mystic Lake where *Hydrilla* had become the most established. Beginning in 2014 and continuing to the present, the Town has allocated increased funds for *Hydrilla* control in Mystic Lake, with work each year contracted to ACT/SOLitude. In 2015, Sonar, a systemic herbicide fluridone, began to be used instead of Aquathol K, and treatment extended into that portion of Middle Pond where *Hydrilla* had been found. The amount of Town funding for the *Hydrilla* control program in 2018 will total \$95,405, and will be used for Long Pond in Centerville as well as for Mystic Lake and Middle Pond in Marstons Mills.

As a courtesy, residents living near Mystic Lake and Middle Pond will be alerted several days in advance of each treatment by e-mail messaging or other means by the IPA or representatives of the various neighborhood associations around the two ponds. The contractor will also post notices announcing the treatments, which are harmless to humans, fish, and other animal life.

Emory D. Anderson

STATUS OF MYSTIC LAKE AND MIDDLE POND IN 2017

Mystic Lake was treated with aluminum sulfate (alum) in 2010 as a result of deteriorating water quality caused by excessive phosphorus in the sediments that led to periodic summer cyanobacteria blooms and low oxygen in deeper water. These conditions resulted in massive kills of mussels in 2009 and 2010 in Mystic Lake and portions of Middle Pond. Monitoring of water quality in both ponds was done by Water Resource Services, Inc. (WRS) in 2011 and 2012 as immediate follow-up to the alum treatment. Because of subsequent reports of algal blooms in Mystic Lake, the Town again contracted WRS to assess conditions in the two ponds in 2017. The 40-page WRS report, authored by Dr. Ken Wagner, can be viewed on the IPA website at <http://www.indianponds.org/wp-content/uploads/2018/05/Mystic-and-Middle-Ponds-monitoring-2017-050618.pdf>.

The MA Natural Heritage & Endangered Species Program (NHESP) initially denied approval of the alum treatment because of its concern for endangered mussel species in Mystic Lake. Later, after the first mussel kill in 2009, the NHESP finally authorized the treatment, but at dosages less than recommended. Incidentally, post-treatment analysis indicated no mussel mortality from the alum. To quote Wagner's recent report, **"Overall, conditions have been**

improved in Mystic Lake and Middle Pond by the phosphorus inactivation treatment, but have not improved to where they were several decades ago. Occasional later summer cyanobacteria blooms remain threats to human users and ecological health, and appear linked to incomplete inactivation of phosphorus in Mystic Lake and legacy inputs to Middle Pond." In short, **it appears that the 2010 alum treatment will not last the typical 15 years.**

The report concludes, therefore, that **an additional treatment of Mystic Lake would be needed to prevent the recurrence of the toxic cyanobacteria blooms.** This would need to be done (i) where alum had previously been applied, (ii) in additional shallower areas not treated before, and (iii) in early spring (when all of the phosphorus would be in the sediments) instead of late summer (as was done in 2010, when much of the phosphorus was still in the water column). Of the three options mentioned in the report for managing the internal loading of phosphorus (dredging, alum, and aeration), **alum would be the most cost-efficient in the long term.** Further improvements to the two ponds are desirable and should be pursued by the Town. The IPA would clearly support such action.

Emory D. Anderson

BUNTING BY ANY OTHER NAME

As a fairly experienced birder, there is one thrill that has eluded me. I think it would be really neat to come across a bird that shouldn't be where I find it. This circumstance happened to a friend of mine recently when she walked out in her yard and found a **painted bunting**. It must have gotten blown into her yard on the winds of a recent storm, but it didn't get blown into my yard.

If you consult your bird book, you will find that painted buntings are native to a very small area covering the eastern two-thirds of Texas where I was born, graduated from high school, and started college. Its range also covers Louisiana, Arkansas, and most of Oklahoma, but not Cape Cod. They migrate through Mexico and down to Central America almost as far as South America. There is a second, smaller population along the Atlantic coast from North Carolina south to Florida. This population migrates through Florida down to Cuba and the Bahamas.

When Claire and I went back for my 50th high school reunion, we went out to Mineral Wells State Park to give her a break from some of the rednecks we would otherwise be hanging out with.

When we went into the park, we asked some of the rangers what, if any, birds they were seeing at the moment. They told us that they had just started seeing some painted buntings along the pathways of the park.

We parked the car and started walking into the park. Just a few steps into the park, we came to a dust wallow with a little bird thoroughly enjoying a dust bath. Rather than disturb him, we stood there and watched him enjoy his bath. When he was done, he hopped out and shook himself vigorously and flew off. Then we were able to see that it was a painted bunting.

You will notice that I kept referring to the bird as "he". That is because only the male is "painted". They are a vivid blue, green, red, and yellow that you won't be able to see in the printed version of this article. You'll have to look them up online or in a book. Better yet, visit the IPA website (<http://www.indianponds.org/>) to view this newsletter in color. Female and immature birds are bright green.

Once we saw him, we could have gotten back into the car and gone back to the motel, but that wouldn't have given Claire much of a break.



The western population of painted buntings begin their migration before molting, molt in stages as they progress through northern Mexico, and then continue to migrate farther south. The eastern population molts on its breeding grounds before it migrates.

The French name of the painted bunting is *nonpareil*, meaning "without equal". The oldest wild painted bunting on record was 12 years old.

This bird's diet consists mainly of seeds, supplemented with high-protein insects. On the breeding grounds, he stakes out and defends territories up to several acres. The female builds a cup-shaped nest in a small bush or tree. She lays three or four eggs in each brood and may have up to three broods a year. Chicks are fed by the female and fledge after 12–14 days.

Other birds in the same family, *Passerina*, include the other four buntings, cardinals, and tanagers.

Dave Reid

MIDDLE POND HERRING RUN RECONSTRUCTION

The design for this project has been broken into two parts. Part 1, the fishway, is 100% designed based on comments and design revisions from the Natural Resources Conservation Service (NRCS) and Mass DMF. Minor revisions were done to the existing concrete weir structure to elongate it to allow better flexibility within the fishway. The Denil structure was abandoned due to its inefficiency to operate well under drought conditions. Once approval is received from NRCS, we will begin to bid this project in mid-May. We are estimating to have a contractor on board by June/July.

Part 2, the Marstons Mills River concrete weir, will require a better solution than the existing fish gate, which has been deemed beyond repair by Mass DMF. This weir would direct fish into the fishway. Our consultant is work-

ing through the additional design requested to incorporate the river. We will need to amend our order of conditions and finalize the design. This should occur over the summer.

DMF would be scheduled to construct a new concrete weir this summer followed by the contractor beginning work on the new fishway this fall. It is estimated that all construction will be completed in summer 2019.

The total budget for all the remaining work is estimated to be \$770,000. The Town will be reimbursed up to \$400,000 from NRCS. The remaining money is matching funds from the Town's Capital Improvement Project program.

Amanda Ruggiero, Assistant Town Engineer

"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

