

THE IPA NEWSLETTER

Mystic Lake, Middle Pond, and Hamblin Pond

Winter 2004

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THANK YOU, IPA MEMBERS!

Members of the Indian Ponds Association are to be congratulated for their strong and steadily increasing support of the organization. This endorsement is reflected in a 30% growth in membership in 2003 to over 130 households, representing about 250 members. Furthermore, the end-of-the-year donation request accompanying the fall 2003 issue of *The IPA Newsletter* resulted in a gratifying total of over \$1,000. We thank all members for their dues payments and especially those who made extra contributions. Letters have recently been mailed to all households listed as members in 2003 urging them to renew for 2004 and to submit their dues payments. We hope to see the list of members continue to grow as more households sign up to support the IPA and its mission to preserve and protect the natural environment and ecological systems of the Indian Ponds and surrounding watershed. Thank you, members!

AIRPLANES WILL SOON FLY FROM THE CAPE COD AIRFIELD AGAIN



Edward Schwarm

In his President's letter (page 2), John Hansen gives a background of how and why the Cape Cod Airfield was purchased by the Town of Barnstable. But – the airfield was closed by the Danforths, and much is being done now to reopen it. At the request of the Town Council, Town Manager John Klimm was asked to appoint a committee to reactivate the airfield as soon as practicable. Carolyn Garbutt and Ed Schwarm of the IPA are members of this committee. The first

meeting was on November 24 under the able leadership of Chairman Bob Chase, with the guidance of Town Assistant Attorney David Houghten and Town Chief Procurement Officer David Anthony. It was decided that the Town would not lease directly, but would hire an independent contractor or Fixed Base Operator (FBO) to operate the airfield. The committee has chosen to call it an "airfield" rather than an airport to reflect the true grass-field nature of the operation. Additionally, it was necessary to determine which operations would be permitted, with consideration for the desire to retain the operation at or near the previous level and for the limitations imposed upon Land Bank Fund purchases. The Town plans to invest no Town money into the maintenance or operation of the airfield; instead it will

be the FBO's responsibility to operate and maintain it.

Since this is a Town procurement, the selection of an FBO must also be put out to public bid. With committee input, David Anthony prepared a Request for Proposal, now a 50+ page document. The committee met weekly and worked very hard to complete the RFP, which was issued for bid on January 26, right on schedule to meet the May reopening target date. The committee will assist in evaluating all bids that are received. The Town Council has given the committee strong support. Councilors Leah Curtis, Janice Barton, and Henry Farnum have participated directly in the committee's meetings, providing very useful guidance, as has Doc Mosby, Hyannis Airport Manager.

Edward Schwarm

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This Newsletter is a forum for the exchange of ideas on matters germane to the IPA mission and, as such, the views expressed by authors of articles do not necessarily

PRESIDENT'S LETTER

This has been a busy and productive year for the IPA. The several developments on the airfield, management of the herring run (which allows herring to come up to spawn in the ponds), and meetings with many local and State agencies have kept your Directors busy.

Perhaps our most notable achievement – as highlighted in the last issue of *The IPA Newsletter*, was our success in working with the Town to procure the Danforth property (including the airfield). We continue to work with the Town in its efforts to re-open the airfield (see page 1).

Many people wanted to save the airfield and, for some folks, the preservation of one of the last parcels of open space in Marstons Mills was important. Other folks, young and old, wanted to be able to watch the graceful flights of small aircraft and gliders. More adventurous individuals wanted the opportunity to enjoy seeing the Indian Ponds and surrounding areas from 3,000 feet on a summer day.

For the IPA, there was a far more important issue: if the airfield were not used for light aircraft, it would be open to development in the form of housing, industrial structures, or other forms of recreation that would contribute pollutants to the field, and ultimately to the Indian Ponds. Yet another problem would come from "run off" – the materials and chemicals that are washed into the ponds from paved surfaces that accompany such development. Whether it be fertilizers, household chemicals, or automobile products, they all would ultimately find their way into the ponds. The IPA recognized this, and with the support of the several neighborhood associations and the Barnstable Land Trust, took the issue to the Town Council. The support received from all concerned was very gratifying, and the Town's aggressive efforts leading to procurement of the land were even more impressive.

You may have noted the "Save the Airport" sign near the rotary for the past year. When the Town completed its negotiations and procured the property, we added a new sign that read simply: "We Did!"

We were pleased to have had a hand in all of this, and it is the sort of effort you should expect from the IPA. With your continuing support, we will work to make other things happen that benefit all of us.

We welcome Janice Barton and Leah Curtis, the newly elected Town Council members from Marstons Mills, to our world of environmental concerns of the Indian Ponds.

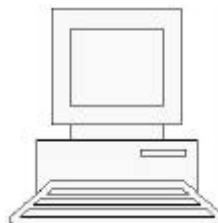
John Hansen

IPA POWERPOINT PRESENTATION

The "Ponds in Peril" Program, organized by the Cape Cod Commission's Water Resources Office, periodically presents a seminar in which several speakers address their work relating to problems associated with local ponds, studies, and research work done on these problems. The IPA was invited to make a presentation at the November 12, 2003 "Ponds in Peril" seminar. Emory and Geri Anderson prepared an excellent PowerPoint presentation describing the history of the IPA, its accomplishments, our current study and monitoring work, and IPA publications. Ed Schwarm, on behalf of the IPA Board of Directors, gave the very well-received presentation, which offered the opportunity to meet and interact with members of similar organizations to discuss mutual interests and activities. We anticipate being able to use this PowerPoint presentation at meetings of neighborhood associations and other groups in the village and Town to inform them about the IPA.

Edward Schwarm

BROWSE THE INTERNET AT HOME OR AT THE LIBRARY



If you don't have a home computer, the Marstons Mills Library and other Town libraries have them for public use.

! Check out the web sites mentioned in articles in this issue
! Check out the IPA web site at www.indianponds.org

- " **Read previous issues of *The IPA Newsletter***
- " **See the IPA's booklet *A Resident's Guide to Living on the Indian Ponds***
- " **Learn about the history of the IPA**
- " **Find out how to become an IPA member**

GREETINGS TO IPA MEMBERS FROM A NEW TOWN COUNCILOR



Janice Barton

It's hard to believe that it's been only two months since the new Town Council was sworn into office. We've been receiving orientations, introductions, and information on various aspects of the Town of Barnstable and how it works. It has been a very interesting and busy time. Through it all, we have been attending committee, village association, and Council meetings and voting on various matters of import to our village and Town. I'm pleased to say there is a lot of positive energy

circulating. Everyone is showing an interest in working together to make positive things happen. An assessment study committee was formed in the first few weeks of our term to answer what was by far the greatest concern of voters – the tax structure and assessment procedure. **A committee formed to find a suitable use for the Cape Cod Airfield prepared and sent out a "Request for Proposals" in late January. The RFP, formed with input from many Marstons Mills residents (in-**

cluding IPA members), carefully considers preserving the character and historic nature of the airfield. A "Request for Proposals" has also been sent out on the homeless wellness campus in Hyannis, with positive results hoped for soon. The Council has established a long-range planning committee and a transition committee. The Council, Town Manger, and administrative staff have all been spending time together learning how to communicate effectively with each other and to be productive. We are also trying to be more accessible to our constituents village and Town-wide. E-mail and Liberty Hall breakfasts, as well as the monthly Marstons Mills Village Association meetings the first Tuesday evening of each month, are helping the Marstons Mills Councilors accomplish this. We have challenging times ahead of us – severe budget constraints, sustainability issues, and preserving the quality of life that makes Barnstable the great town it is to live and work in. It is my hope that everyone will continue in the spirit of working cooperatively to insure that no single group or individual will bear an unfair burden. Even in the short time I've been in office, I've seen that thinking creatively and working together WORKS. Thank you and keep in touch!

Janice L. Barton
Town Councilor, Precinct 10
Marstons Mills

YOU WON'T RECOGNIZE THE HERRING RUN

The boys from the Liberty Hall Club have been working, and working hard, under the supervision of the Town Division of Natural Resources and with oversight by the Marstons Mills River Committee. The IPA is represented on the Committee by Ed Schwarm and Carolyn Garbutt. A new access road has been built by the Town DPW. A coffer dam has been built to hold back the water from Middle Pond while work is in progress. The Marstons Mills Herring Run ladder has been replaced with a solid, reinforced-concrete structure. The bottom of the ladder is now 1.5 feet lower than the previous one to permit fish to enter and leave during low-water periods. This lowering requires the replacement of 140 feet of old and degraded wooden sluiceway to re-establish the downhill grade to the Marstons Mills River. We are investigating the cost of using precast concrete troughs so that the installation will be much longer lived. We expect to actually replace about 200 or more feet of sluiceway using the \$20,000 grant from the Gulf of Maine Council obtained through IPA efforts. Additionally, funds to replace the leaky water gate supplying pond water to John Hamblin's cranberry bog have been made available from the Department of Agriculture. John has patched the gate to reduce the leakage until it is replaced. We plan to have the work on the herring run completed before the spring herring run begins. Remaining to be done at a later date is the re-



View through the new reinforced-concrete ladder of the Middle Pond Herring Run looking upstream towards the channel leading to Middle Pond.
Photo by Emory Anderson

placement of the rest of the wooden sluiceway. We are very pleased with the Town's commitment to this project and, in particular, the excellent project supervision provided by Doug Kalweit, Director of Natural Resources.

Edward Schwarm

WATER BUDGETS – FOLLOWING THE WATER

Although ponds don't get paid for the beauty, fishing, and swimming opportunities they afford us, they do have a budget – a water budget. Much like uncovering unknown motives where we "follow the money," to understand how a pond works, we need to follow the water and keep track of several things. First, how much water is coming in; second, how much water leaves the pond; and third, how much water is stored in the pond.

Water comes into a pond through two mechanisms. The first is simple: precipitation (rain and snow). The second source should be no secret to us Cape Codders: 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. So it is actually "rain" that falls onto the Indian Ponds watershed that enters the groundwater and discharges into the ponds as groundwater. 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.

For the Indian Ponds, water also leaves via the herring run or when pumped from Mystic Lake into the adjacent cranberry bogs. Evaporation from the surface of the Ponds is significant only during the warmer season, so only about half of the precipitation is a net gain, about 14 inches per year. 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 Indian Ponds is nearly 10 feet! Pumping of water supply wells has a small effect on pond levels compared to natural water table fluctuations.

The IPA is concerned about the water budget for two reasons; first, a change in the operation of the herring run can affect the water budget and the pond level. But by how much? Determining the water budget will help the IPA to understand the issue and provide credible advice to the Town on how to better manage it. Second, nutrients in groundwater also enter the pond and, depending on the amount and the period of time they reside in the pond, can lead to eutrophic conditions. Figuring out the period of time or the residence time of water in the pond can be determined from a water budget. The work to calculate the water budget is just one part of an overall pond study under consideration by the IPA. So, when you hear that the IPA would like to determine the water budget of the Indian Ponds, figure it's money well spent.

*Tom Cambareri
Cape Cod Commission
Water Resources Office*

DISSOLVED OXYGEN, METERS, AND PONDS

Dissolved oxygen (DO) is a measure of how much oxygen is dissolved in water. DO concentrations can reflect impacts on pond water quality and frequent-enough readings can quantify the severity of impacts. In addition, because aquatic organisms have a variety of tolerances for the concentration of oxygen, the measurement of DO can indicate which species can thrive and which will struggle within different portions of a given pond or estuary.

For example, waters deep in Hamblin Pond and Mystic Lake during April are likely nearly saturated with dissolved oxygen, allowing high-oxygen species like trout to thrive. However, by August, these waters in Mystic Lake have little or no oxygen, and trout, which also require the cold temperatures found in these deep waters, cannot live in the pond past this period. In contrast, Hamblin Pond, because of the benefits of the past alum treatment, has a thin layer of cool, oxygenated water above the deeper anoxic waters that could allow trout to survive until the pond fully mixes again in late fall.

With the development of easy-to-use DO meters, citizen volunteers can collect meaningful DO and temperature data that

can be used to assess the status of their ponds. A DO meter usually has a probe attached to the meter by a cord long enough to reach the bottom of the pond. The probe is lowered to the desired depth and readings of DO concentration, temperature, and percent saturations are usually collected. Readings are taken for every meter (3.28 ft) or so of depth and are often collected every two weeks between April and October. With the use of a DO meter, readings can be collected from three or more ponds on the same day.

On the Cape, DO meters have usually been among the first equipment purchases by pond monitoring groups. Towns like Orleans and Brewster have purchased a number of meters to ensure that all the ponds they are monitoring are measured within a week. The cost of a meter is usually dependent on the length of the probe cord, with prices generally varying between \$800 and \$900.

*Ed Eichner
Cape Cod Commission
Water Resources Office*

OUR GREAT PONDS TODAY



Rick Wheeler

In our last discussion regarding the interesting origin and legal underpinnings of our Great Ponds, we got about as far as the end of the 19th Century! Remember, in the beginning, it was all about "fishing and fowling?"

Today, we are in quite a different environment. For one, the uses of our ponds have multiplied reflecting the increasing sophistication of our society. Seaplanes land on Middle Pond, there are water jet

skis lurking out there, the unlawful presence of boats with engines in excess of 10 hp is too common an experience, and there are also the deleterious effects of pollution and toxic or other harmful runoffs. In another sense, we have become increasingly aware of the impact plants can have. Finally, we have all come to recognize, with a considerably heightened commitment, the far reaching responsibility that rests with us to protect and maintain these precious bodies of water, the surrounding lands, and their endangered species of wildlife from further deterioration.

The task is not a simple one! The General Laws of Massachusetts exist in a number of volumes that will fill a respectable space in any library. Laws affecting Great Pond matters appear primarily in three volumes covering Chapters 131, 91, and 21. In the General Index, there are 46 separate headings for matters relating to Great Ponds! If you go to the State web site at www.state.mass.us and type "Great Ponds" in the search block, you will be

informed that there are approximately 4,538 pages of individual laws pertaining directly or indirectly to Great Ponds! Feel free to take a look yourself. It will give you a feeling for the dimensions and complexity of the legal framework.

While the Massachusetts Department of Environmental Management is the principal overseer, the Department of Environmental Protection works closely with local conservation commissions with regard to the permitting process. Then, there are a number of other State organizations involved, such as Public Ways and Works, Inland Fisheries and Game and other Natural Resources, the Wetlands Protection Act that regulates land-use activities close to our ponds, as well as the Executive Office of Environmental Affairs. On a regional basis, our Cape Cod Commission has been of great help and assistance in so many areas. At our Town level, there is our own Natural Resources Division. There are, of course, a number of Federal bodies most interested in what is transpiring. Finally, in all of this, we are supported and encouraged by a plethora of very responsible privately constituted organizations. There are many, many players!

SMEDLEY

by Gordon Nelson



Over the past years, the Board of your Indian Ponds Association has grown to recognize the importance of working closely with the various regulatory bodies and interested organizations at all levels. As noted, our local concerns have inexorably become more complex and interwoven with other jurisdictions. As you know, the IPA has been warmly recognized for its cooperative and productive efforts in connection with a number of major initiatives. We will continue to offer our counsel and assistance so that all interested parties can reach a meaningful consensus.

Rick Wheeler

BE POND-WISE!

Cast your VOTE for the Indian Ponds. Join the IPA community so together we can conserve the future of the Ponds.

THANK YOU, IPA FRIENDS!



Photo by Kathryn Olson

John Anderson

Our IPA webmaster and *The IPA Newsletter* computer consultant, John Anderson, and his wife Christie are good examples of FIPA members who live in another state. They live in Rochester, NY where John works for IBM as a computer administrator. Although born in Michigan, he considers himself a native Cape Codder having moved here with his parents Emory and Geri Anderson when he was just a few months old. Growing up on Green Pond in East Falmouth, he developed a love and appreciation for pond life on an estuary. During visits to his parents, who now live on Mystic Lake, John and Christie enjoy all the benefits provided by the Indian Ponds. We appreciate their willingness to help spread the news of the IPA.

The IPA has two categories of members. The majority of our members are residents who live in the IPA area (about 500 households in Marstons Mills), and they make up the backbone of our organization. However, we have a wonderful group of friends, many of them living in other towns and states, who are also very interested in supporting the IPA and its mission. These supporters are called "Friends of the IPA" or FIPA. There are many FIPA members who have helped the IPA over the past few years, and the IPA would like to publically acknowledge and thank all of our generous FIPA members who have given of their time, expertise, and monetary gifts.

The Editor

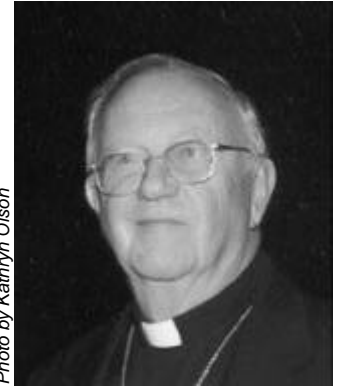


Photo by Kathryn Olson

Gordon Nelson

The Reverend Gordon Nelson is our cartoonist who is featured regularly in *The IPA Newsletter*. The character "Smedley" was created by Gordon while he was in the U.S. Navy during World War II serving as gunnery officer aboard the *USS Fitch*. Cartoons featuring "Smedley" later became his trademark through seminary and the four congregations he served prior to becoming pastor of First Lutheran Church in West Barnstable in 1971 and until his retirement in 1988. He and his wife Carolyn built a lovely home on Wheeler Road in 1983 overlooking Middle Pond and lived there until 1996. They now reside in West Barnstable and continue to support the work and mission of the IPA as FIPA members.

AN OUNCE OF PREVENTION, A POUND OF CURE

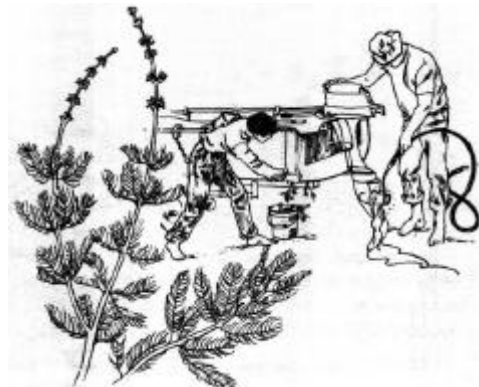
WEQUAQUET POND WATCHERS ON THE ALERT

Centerville's Wequaquet Lake Pond Association (WLPA) Pond Watchers, 12 in all, maintained their vigilance in taking samples each month from the beginning of spring and into the early fall of 2003. This activity has proven exceptionally valuable in monitoring the quality of the water in Wequaquet Lake, and we are fortunate that the F. coliform readings were consistently low. Secchi disk readings on the main lake averaged about 10' while in Bearse Pond they ranged from 7' to 9'. While our lake is in reasonably good shape, the nutrient load has been increasing slowly since 1980. Fanwort (the invasive weed that was treated in the Bearse Pond area two years ago) has shown up in some of the small coves, noticeably in Gooseberry Pond. This situation will be closely monitored in the coming months with a potential for treatment during this coming summer if warranted. Treatment methodology will be determined at that time by the Conservation Department in cooperation with the MA Department of Environmental Protection and the independent contractor who managed the Bearse Pond project.

Hid Welch
President, Wequaquet Lake Protective Association

PREVENT THE SPREAD OF INVASIVE PLANTS

Sometimes aquatic plants that are not native to a particular location can become invasive, overwhelming native plants and taking over a lake. Remove plants from boats and trailers. Aquatic plant stems and fragments are easily transported from one water body to another on boats and trailers.



Courtesy of "Life on the Edge" by Michael D. Dresden and Robert M. Forth, University of Wisconsin Extension and the Wisconsin Department of Natural Resources.