INDIAN PONDS ASSOCIATION, INC.

Mystic Lake, Middle Pond, and Hamblin Pond

Winter 2003 **Newsletter** **Vol. 3 No.1**

NEW STATUS FOR IPA

THREE RECENT ACTIONS authorized by the IPA Board of Directors are expected to have far-reaching and positive implications for the organization. At the request of the BOD, Director Emory Anderson filed three separate applications with Commonwealth and Federal authorities, two of which have been approved, with the third expected to be approved within the next several months. These actions will hopefully lead to some tangible benefits to the work of the IPA in exchange for a few obligations mainly in the form of annual activity and financial reports.

INCORPORATION — The first of these actions was a submission, on September 4, 2002, to the Secretary of the Commonwealth for recognition as a domestic corporation. On September 24, the IPA was officially incorporated by the Commonwealth and assumed a new name. Instead of being the Indian Ponds Association, it became the Indian Ponds Association, Inc. Among the advantages of being incorporated are non-liability for debts or obligations of the corporation by members and directors.

PUBLIC CHARITY — The second action was the submission, on November 1, 2002, to the Division of Public Charities of the Massachusetts Office of the Attorney General for official designation as a charitable institution (i.e., Public Charity). In early December, the IPA received a Certificate For Solicitation. This designation authorizes the IPA to solicit and accept funds for charitable purposes, as stated in Article 2 of the new Articles of Organization approved at the July 2002 annual meeting, "to preserve and protect the natural environment and ecological systems of the Indian Ponds and surrounding parcels of lands 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".

501(C)(3) — The third action was an application, also on November 1, 2002, to the U.S. Internal Revenue Service for recognition and exemption under Section 501(c)(3) of the Internal Revenue Code. We are presently in the process of addressing several questions raised by the IRS relative to the application. In 1984, the IPA applied for and was granted 501(c)(4) status, qualifying it as a non-profit and tax-exempt organization. However, in contrast to this former status, the 501(c)(3) designation will make it possible for donor contributions to be deductible as charitable contributions on Federal income tax returns. We are optimistic that members and others who value the purpose of the IPA and wish to invest in the scientific and educational services to the community that the IPA would like to sponsor will choose to make charitable contributions that, soon, will be legitimate income tax deductions.

Emory Anderson

PROGRESS MADE IN CONTROLLING HERRING RUN

The Marstons Mills Herring Run connects the Marstons Mills River to Middle Pond. As Mystic Lake flows into Middle Pond through a cut, so both great ponds are the source of water to operate the run. Members of the IPA living on Mystic Lake and Middle Pond became aware that the water level in the lakes was very low in the spring of 2001. We found that the run had been left wide open all winter at a flow of 2,000,000 gallons per day allowing the pond waters to drop 18 vertical inches. When a petition was filed with the Conservation Commission to lower the Marstons Mills Herring Run by 1.6 feet, the IPA took action to protect the water quality and wildlife resources. We filed an appeal with the Mass. Department of Environmental Protection which was later denied. The cost of carrying this action further would be prohibitive ($60,000-90,000). The IPA financially supported a civil suit in Superior Court by 12 concerned residents that temporarily stopped the lowering and caused the Mass. Division of Marine Fisheries (DMF) to review its policy.

After more than a year of negotiating with the DMF, considerable progress was made. The DMF has become much more concerned with preserving the source waters of herring runs in the state. Management of the Marstons Mills Herring Run is now under the control of the Town's Department of Natural Resources. We now have a good management plan for operation of the run. This plan places a limit of 378,000 gallons per day on the amount of water which can flow through the run when it is operating. It establishes a specific schedule for opening and closing the run, a schedule consistent with previous experience and herring migratory characteristics. Additionally, the IPA is to be notified of any pending changes in the management plan so we can comment before they occur.

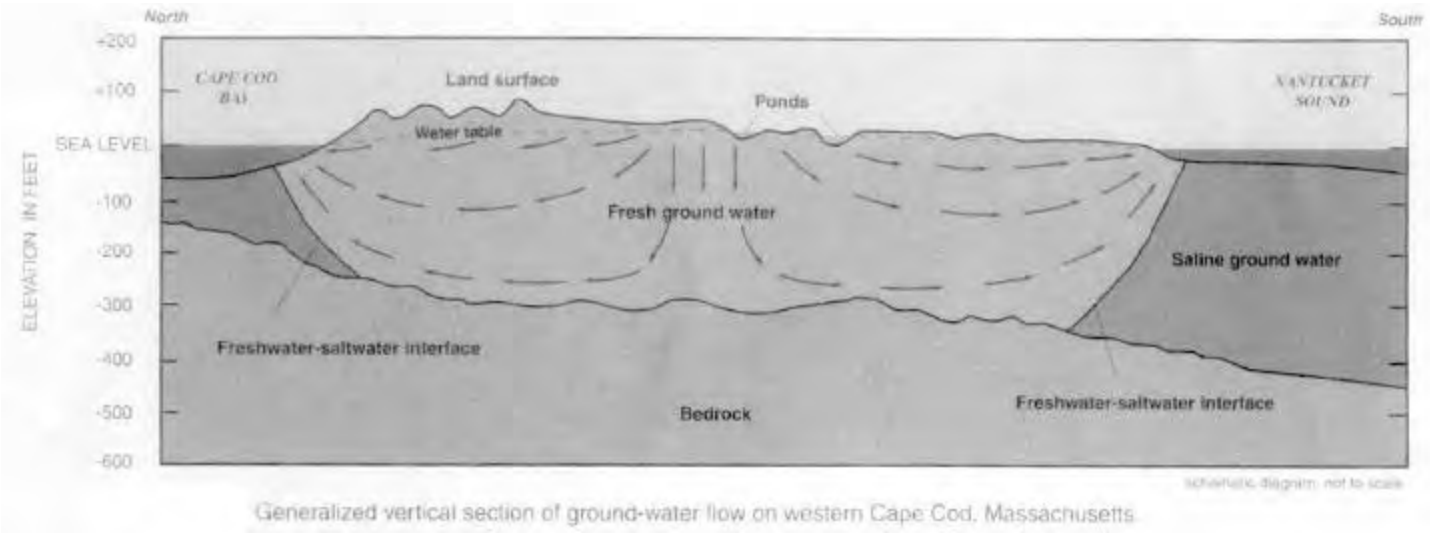
While we were unable to prevent the ultimate lowering of the ladder, we feel that the combination of Town management, a practical management plan and procedures, and IPA oversight will protect the water quality as well as the herring. In view of this, the IPA Board of Directors voted to withdraw the Superior Court suit, and we are presently obtaining the concurrence of the 12 petitioners. The Marstons Mills River Committee is getting the $13,000 grant restored to pay for the lowering, and the $20,000 grant which we obtained will be used to partially line and repair the wooden flume.

Edward Schwarm

WATER, RAIN, SNOW, THE AQUIFER, AND THE LEVEL OF THE PONDS

In the last two years, we've had significantly less rain and snow than in previous years, even though the rain and snow of the past three months may make us think otherwise. The drastic drop in the level of the ponds has shown us how fragile our environment is and has also revealed some misconceptions about the source of our water and the manner in which it affects the ponds.

There is plenty of water on the Cape, although most of it lies below the surface in the groundwater supply – the aquifer. Unlike many other areas, the aquifer on the Cape is largely sandy soil completely saturated with water, reaching a depth of 400 feet in some areas. In addition, ours is a "sole source" aquifer. No other areas outside of the Cape provide water to our aquifer. All of the resupply (or recharge) to the aquifer comes from rain and snow. The Centerville-Osterville-Marstons Mills Water District draws water from 19 wells that are alternately pumped at a combined rate of approximately 3,000,000 gallons per day. Groundwater also flows out of the aquifer to the ponds and eventually to the sea. Our ponds are located in the groundwater, and the pond surface mainly reflects the top of this large aquifer.



Taken from Masterson, J.P., and Walter, D.A. 2000. Delineation of ground-water recharge areas, western Cape Cod , Massachusetts. U.S. Geological Survey Water-Resources Investigations Report 00-4000, 1pl.

As long as the hydrologic cycle remains equal where water evaporates from the ocean and ponds, or is given up by plant life (a process called transpiration) and eventually returns in the form of rain or snow, there would appear to be a continuous and plentiful supply of water. However, when you take into account a number of other factors – such as pollution, development, and land use – then the picture changes significantly. In a subsequent issue of the Newsletter, we'll deal with the effects of these issues on the health of our rivers and ponds.

A substantial rainfall or considerable snow will always add water to the ponds due to water falling directly onto the surfaces of the ponds. We also could expect that rain or snow on the soil will eventually reach the aquifer and raise the pond level. However, after a prolonged drought, the top of the aquifer (the water table) will have dropped, leaving both the soil and sand above the aquifer relatively dry, and our pond levels very, very low. The implications of this are considerable. First, after a heavy rainfall, relatively dry plant life in the soil will absorb much of the moisture. Subsequent rain or snow will help moisten the soil and the sand above the aquifer (i.e., above the water table), but very little of that water will reach the water table – it is simply replacing the water that was normally there under non-drought conditions. As a result, the only water immediately contributing to raising the pond levels will be the rain that falls directly onto the pond surface.

In the past few months, more than one person was surprised to find that there was no appreciable rise in the level of the ponds in the days following a heavy rainfall. The water absorbed by plant life, dry soil, and the dry sand above the aquifer is part of the explanation. However, another reason is the slow rate at which water percolates through the aquifer. In the sandy soil on the Cape, the rate is on the order of a foot per day in the saturated aquifer. In most cases, soil is often many feet above the pond level and the aquifer, and percolation through that soil is even slower. For example, Regency Drive is almost 60 feet about the level of Mystic Lake. As a rough approximation, any rainfall will take approximately 60 days before its effect is seen on the ponds if the soil is well saturated. If the soil and vegetation is dry

after a prolonged drought, it will take quite even longer.

An analogy may make it easier to understand: take a very dry sponge and place it under a dripping faucet. It will take a long time before the sponge is full of water and begins to come out of the underside of the sponge. Our prolonged drought has left the soil and the sand above the aquifer much like a dry sponge. Even when the soil is normally moist, part of the rainfall will saturate additional sand at the top of the aquifer, raising the water table, where it will be retained. This will eventually result in more water reaching the ponds and raising their level, but it will take time. On the other end of the scale, when we receive a heavy rainfall after a prolonged wet season that has left the ground saturated, the water will run off the surface into rivers and streams, carrying the water to the ocean.

The good news is that the significant rain and snow of the past few months – and that which we may receive in the months ahead – will have restored much of the water to the soil and the aquifer. As a result, this future rainfall and snow will recharge the aquifer more directly and thereby contribute to the water in the ponds. Weather forecasters are predicting both snow and a wet spring in many areas this year. If they are right, the ponds should be looking substantially better next summer, although it may be quite a while before we overcome the full effects of the drought. The health of the ponds is another issue, and we'll discuss this in the next issue of the Newsletter.

John Hansen

PRESIDENT'S MESSAGE

The Indian Ponds Association has made considerable progress this year. The Commonwealth's Attorney General has recognized us as a Public Charity, and we also have become incorporated in the Commonwealth. In addition, we've filed an application with the IRS to be recognized as a charitable, non-profit organization and have been advised that we can expect a ruling on this by April. After that occurs, donations and dues to IPA will be allowed as tax-deductible contributions.

Officers of the IPA have met with the Cape Cod Commission, and the Commission has been helpful in suggesting means by which IPA's objectives of protecting the IPA environment can be enhanced. IPA representatives have also attended four meetings of the Massachusetts Watershed Initiative (MWI), an effort spearheaded by the Massachusetts Executive Office of Environmental Affairs (EOEA) (see article on page 4, MASSACHUSETTS WATERSHED INITIATIVE). At these meetings, we have seen that one of MWI's major goals – educating landowners on ways to protect the environment – coincides with IPA goals. Federal and Commonwealth grants are available for programs in this area, and we are investigating that opportunity. The Cape Cod Commission has also generously agreed to assist us in reviewing any of our proposals in this area.

As you may be aware, some members of the IPA filed an appeal in July 2001 with the MA Department of Environmental Protection contesting the approval by the Town's Conservation Commission of a request to lower the herring run by 1.6 ft. The appeal also criticized the way in which the run had been operated for the previous several years. We are pleased that this action, endorsed by the IPA, has resulted in agreement with the MA Division of Marine Fisheries on an improved management plan that will minimize the amount of water drained from the ponds during the periods in which herring enter and leave the ponds. More details on this are included elsewhere in this issue of the Newsletter.

This issue of the Newsletter includes several articles aimed at educating and informing members about the current status of our aquifer and the pond levels and the steps we're taking to protect your property. Members of the various homeowner's associations around the Indian Ponds are also encouraged to contact IPA on issues that should be included in future Newsletter issues or that should be discussed with agencies such as the DEP and the Cape Cod Commission.

We welcome Donna DeFlorio to our Board of Directors to replace Joan Christo, who found it necessary to resign in early November. Donna is already working on the development of a new database for the IPA. At present, we have one vacancy on our Board of Directors due to the resignation of Richard Tompkins in January, and we will also be looking for candidates to stand for election to the Board at the July annual meeting. Please let us know if you are interested in serving on the Board, but remember, Directors are expected to work to help all of us in the IPA – it is not simply an honorary position. Thanks again for your continuing support.

John Hansen

RESIDENT'S GUIDE TO LIVING ON THE GREAT PONDS

This winter is proving to be a good time to work on one of IPA's main goals for the year: the development of a Resident's Guide to Living on the Great Ponds. This booklet is intended to help IPA members and others who are interested in the welfare of the ponds to understand the nature of these precious bodies of fresh water and the challenges in protecting and preserving them. Several of the Board members are involved in this project, along with interested volunteers in the IPA area. The booklet is expected to be ready for distribution to IPA members and others in the spring.

Sheila Place

MASSACHUSETTS WATERSHED INITIATIVE

Editor's Note: *Patti Kellogg informed the IPA on January 31 that the Massachusetts Watershed Initiative had been terminated effective that day due to state budget cuts. However, the EOEA intends to retain the concept and ideas of the MWI to institutionalize watershed-based decision making in its agencies.*

The Massachusetts Executive Office of Environmental Affairs (EOEA) began the Massachusetts Watershed Initiative (MWI) in 1998 looking for more effective protection for our water resources by creating a network of people to work together to find the most cost effective way to protect our resources.

The MWI is a process by which the most important issues are identified for each watershed and key protection, restoration, and management actions are developed. Consequently, time and funding are focused on the most pressing issues and are targeted to the most effective solutions.

The MWI coordinates activities by the boundaries of our natural resources using watersheds as the geographic unit. A watershed is the area of land that drains to a surface waterbody, such as a river or estuary. Water falls on the ground, moves through the soil, passes through ponds and bogs, and is deposited in our estuaries. As the water travels, it picks up a variety of pollutants. For management purposes, all of Cape Cod is considered a major watershed. However, Cape Cod contains about 47 embayment watersheds.

As part of the MWI, each of the 27 major watersheds in Massachusetts has a Watershed Team. Each Watershed Team includes State and Federal employees responsible for environmental protection, as well as representatives from local governments and citizen organizations.

The purpose of a Watershed Team is to:

- compile information on pollution sources,
- expand communication and public education,
- coordinate water and habitat monitoring and data collection,
- develop a plan of action to address pollution,
- work with local groups and municipalities to implement pollution reduction actions, and protect and restore resources.

Watershed Teams are coordinated by an EOEA Watershed Team Leader. Team leaders work with a broad range of stakeholders to develop watershed protection and restoration projects and undertake annual work plans and 5-year watershed action plans. They facilitate interagency coordination and collaboration in service to the watersheds.

The Cape Cod Watershed Team is currently working on the 5-Year Action Plan. This plan will outline priority environmental projects across the Cape and will be used to guide the activities of various agencies and organizations concerned with water management, land use planning, and watershed protection. For example, State officials will use the plan to help allocate grant monies for infrastructure projects.

Teams work with communities to find solutions to pollution and water supply problems that make sense locally and work to empower local groups to take the actions necessary to protect their water resources. The Team has protected resources by helping communities locate funding to identify and eliminate pollution sources and has created partnerships to conduct projects that could not have been otherwise accomplished.

The success of the Watershed Team depends on a broad range of community participation and the strength of the partnerships between varied groups who have diverse roles, power, and influence.

Join the Team!

For more information, please contact Patti Kellogg, Cape Cod and Islands Watershed Team Leader at (508) 457-0648 or e-mail: patti.kellogg@state.ma.us

Learn more about the Massachusetts Watershed Initiative at http://www.state.ma.us/envir/mwi/watersheds.htm

Patti Kellogg

WINTER ON THE PONDS

The wet, cold fall and early winter have provided some much needed moisture to drought-plagued Middle and Hamblin Ponds and Mystic Lake. It is a measure of how low the groundwater levels have been that, with all the precipitation we've had, it has taken into January before there has been any appreciable recovery in water levels. The mild winters of the past several years, while enjoyable, have greatly stressed the ponds, and it is very encouraging to see them slowly recovering.

Winter provides a wonderful opportunity to enjoy the ponds, and the lower water levels, while certainly not desirable, provide an opportunity to walk along the edge, here and there, and experience the tranquility of the "quiet season". With a fresh snowfall, it's really quite beautiful.

". . . broken glass, bits of boards with rusty nails, and lost fish hooks or tackle."

While Conservation Commission regulations prohibit the removal of dead or living plants, brush, or tree limbs from the wetlands around the ponds, there is the opportunity, while we wait for the water levels to recover, to scour the shoreline for hazardous items such as broken glass, bits of boards with rusty nails, and lost fish hooks or tackle. It appears that "Mother Nature" is doing her part to help the ponds recover. It's up to us to do our part by caring for them.

Sheila Place

Cape Cod Pond and Lake Atlas

A "Cape Cod Pond and Lake Atlas," prepared by the Cape Cod Commission Water Resource Office, brings together available information about Cape Cod ponds and lakes, including historic and recent data, in one comprehensive document. The Atlas provides an overall assessment of the general health of specific Cape Cod ponds and lakes as well as regional trends on a town-by-town basis. The information in the Atlas provides a regional and local basis to help understand where Cape communities should prioritize future efforts for lake and pond management, protection, and stewardship. Specific information includes: a basic primer on pond functions and legal issues, a regional overview of pond water quality, a town-by-town overview of pond water quality, and a selected review of water quality in individual ponds with maps and bathymetry.

Gabrielle Belfit

A copy of this report may be obtained after February 2003 by contacting:
The Cape Cod Commission Water Resource Office
3224 Main Street * P.O. Box 226 * Barnstable, MA 02630
Phone: 508-362-3828 * Fax: 508-362-3136 * E-mail: water@capecodcommission.org

FOOD FOR THOUGHT

Have you noticed an increase in the number of fish stories that local Middle Pond and Mystic Lake fishermen are telling about their experiences of last summer? It seems that seasoned anglers as well as first timers had incredible luck in "pulling in the big ones." This writer had several people relate their personal tales of good fortune while fishing and also witnessed a fellow in a boat on Mystic Lake who was quietly following a trophy-size largemouth bass that was in steady pursuit of and feeding on a school of small herring. The man happily was able to finally hook the big bass.

SMEDLEY **By Gordon Nelson**

Another story worth telling is that in the fall of 2001, this writer happened to mention to a long-time resident of the Cape and former Director of the MA Division of Marine Fisheries that the water in our ponds was terribly low and that the young of the year herring wouldn't be able to migrate back into the ocean. His response was a big smile and the words, "That means fishing is going to be great in your ponds next summer."

What led him to say that, and why have the game fish been bigger in the ponds lately?

The biological explanation is that the higher abundance of herring in the ponds provided more food for the game fish than would normally have been available. Because the herring, particularly the young of the year, were unable to make their fall migration out of the Marstons Mills Herring Run for the past two years due to low water levels, they were trapped in Middle Pond and Mystic Lake. As a result, they were a prime food source for sunfish, yellow perch, smallmouth bass, largemouth bass, and pickerel.

Although the inability of the herring to migrate out in the fall might be viewed by some as bad news, for the resident game fish in the ponds and for those who delight in catching them, it was clearly good news. Look for good fishing this summer.

Emory Anderson

JOIN THE INDIAN PONDS ASSOCIATION
IPA MEMBERSHIP IS OPEN TO . . .

- all holders of record title within the Village of Marstons Mills abutting any of the three ponds (Hamblin, Middle, and Mystic)
- including property not to exceed one lot in depth across the bounding highways from the lake area indicated on the Town of Barnstable Zoning Map dated March 8, 1966.
- Bounding highways are Race Lane from Old Mill east to Route 149, south to Lovells Lane, west to River Road, northwest to Bog Road, north to Old Mill Road, and ending again at Race Lane.

To join the IPA, **fill out the enclosed application form** and send it with a $10.00 check made out to:
Indian Ponds Association, Inc., P.O. Box 383, Marstons Mills, MA 02648.
IPA application forms are also available on our website at:
http://www.indianponds.org

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IPA WEBSITE: http://www.indianponds.org

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P.O. Box 383
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First Class Mail

Address Service requested for any address changes