



PONDERINGS

FROM THE FRIENDS OF WHITE POND

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THE STATE OF THE POND

This has been an eye-opening summer for those who care about and for White Pond. The pond has had algal blooms off and on since the 1980's but nowhere near the size, severity and frequency that we have seen this summer. What's going on?

An over-abundance of nutrients in White Pond, particularly phosphorus, and the eutrophication that this over-abundance causes has been a concern for decades now. Eutrophication is the fate of a pond rich in nutrients, such as phosphorus, that results in a dense algal, cyanobacterial and aquatic plant population. Eventually, eutrophied ponds are seriously impacted by the aquatic vegetation as well as the algae and cyanobacteria that occasionally increase in numbers and then die off in "algal blooms". These blooms become scums of dead algae and cyanobacteria on the surface of the pond. The organisms in the blooms eventually decompose and sink to the bottom using some or all of the oxygen in the deeper waters which impacts animal and plant life in the pond. Lack of oxygen in the deep waters also changes the biochemistry of the pond, releasing more phosphorus that has been stored in the sediments – a very vicious circle.

Most algal blooms are a nuisance and an unwelcome experience. However, sometimes the cyanobacteria in the bloom population produce toxins. There are different kinds of cyanobacteria and each produces its own unique toxin – some more harmful than others. White Pond has cyanobacteria that produce the toxin Microcystis and this is what has happened this summer in White Pond. There is a useful article on cyanotoxins in Wikipedia.

The response to this summer's blooms has been swift and intense. Dr. William Walker (who carried out the 1988/89 water quality studies of White Pond and is the head of the volunteer water quality monitoring program), the Friends of White Pond (volunteer water quality monitoring and advocacy group), the Concord Natural Resources Department, the Concord Health Department, the Massachusetts

Public Health Department and Environmental Science Services (ESS - the Town's current environmental consultant on the White Pond Watershed Management Plan) have all stepped forward to gather data, to understand exactly what has happened, and to work out plans to manage/eliminate future toxic blooms. We are grateful for their efforts.

Judith Sprott

What now? There are things that can be done immediately to limit the amount of phosphorus getting to the pond:

- Prevent surface water run-off from carrying phosphorus into the pond.
- Ensure regular maintenance and properly functioning septic systems in the watershed to limit the phosphorus in the leachate as much as possible.
- Avoid plantings (especially lawns) in the watershed that require significant water and fertilizer to grow well.

THANKS TO THE DIVISION OF NATURAL RESOURCES

Delia Kaye (Natural Resources Director), Natural Resources Division staff, Town rangers and a group of volunteers from the watershed began implementing the White Pond Watershed Management Plan, following its approval by the Board of Selectmen. On July 8th they erected erosion control blankets and installed coir logs and other temporary measures to restore the banks of the pond and mitigate erosion caused by surface water run-off and overuse.

For a more permanent fix, the Natural Resources Division has submitted a Department of Environmental Protection Section 319 Non-point Source Pollution Grant application to implement watershed improvements at White Pond. The application focuses on managing Town lands, restoring eroded slopes, and upgrading surface water run-off management at the public boat launch and access road. Decisions on the grant will be made by the Commonwealth's Department of Environmental Protection in October.

The mitigation efforts would be designed over the winter and implemented in the summer of 2016.

The Town has contracted with Environmental Science Services (ESS) to take samples from the water to try to identify algal species in the pond, and collect further data on phosphorus and nitrogen levels, temperature, dissolved oxygen, turbidity, and other water quality parameters.

Delia Kaye is in contact with the Commonwealth's Division of Fish and Wildlife to determine if the current fish stocking plans are appropriate considering the possibility that the fish population may play a role in the pond's algal bloom problems this summer.

Kate Blair with Delia Kaye

WHITE POND ADVISORY COMMITTEE UPDATE

While the past year may have been quiet on White Pond due to the lengthy closure, it was anything but for the White Pond Advisory Committee (WPAC). The first major committee event was the receipt and review last fall of the draft Watershed Management Report from environmental consultant Environmental Science Services (ESS). This report identified key management issues, assessed town-owned parcels in the watershed, and described and prioritized critical actions to protect the watershed. After lengthy reviews and discussions with ESS, they delivered the final report on May 29.

In the middle of winter, along with Concord's Planning Department and the EPA, the WPAC helped organize, plan, and execute the White Pond Forum, a public forum on the many issues facing White Pond. Following the Forum, and incorporating information collected from it, we prepared a report for the Select Board entitled "A Shared Future: A Comprehensive Vision for White Pond, Its Watershed, and Its Neighborhoods". This Vision expanded upon the ESS report and described in detail the areas of Major Concern, namely Water Quality, Neighborhood Issues, Recreation and Stewardship, and Town Support. More importantly, this Vision report outlined actions that the town should undertake to address both Resource Management and People Management. Several of these actions have already been initiated, including the stabilization of heavily eroded areas on Town land.

Throughout the year guest speakers have helped the WPAC collaborate and coordinate with various town departments. Representatives from the Police Department, the Division of Natural Resources, and the Health Department each met with the WPAC to discuss areas of common concern including regulation enforcement, water quality measurements, and the algal bloom.

The coming year promises to be busy as well, as much work remains to be done to address the algal blooms and the many interconnected issues.

If you have any questions or comments about these topics or the work of the WPAC, we encourage you to attend our meetings. The WPAC usually meets every fourth Wednesday at 7:30 PM at 141 Keyes Road in Concord.

Jerry Frenkil, Chair

BRUCE FREEMAN RAIL TRAIL UPDATE

The BFRTAC continues to make great strides in the completion of the Bruce Freeman Rail Trail. Another year of meetings at the local and state levels, site visits and continued discussions have resulted in more finalized plans for the trail. A major milestone has been the submission of the 75% design of the 2C section of the trail being submitted to MassDOT. Once they have reviewed this document, a community meeting will take place to discuss the final results. Hopefully this meeting will take place by December and I encourage everyone from the White Pond community to attend.

There were multiple site walks along the Jennie Dugan section of the trail as well. This included neighborhood feedback on tree removal; fencing and questions about trail alignment and easements. These were very positive site walks, which included members of the WPAC, BFRTAC, NRC, Town Planner and abutters.

Currently the 2C section of the trail will end at the Powder Mill Road culvert. The hope continues to be that Sudbury moves their section along as soon as possible so all fencing along White Pond can be installed.

The WPAC/BFRTAC sub-committee continues their work together for the betterment of the White Pond watershed. New members Deborah Elwood and James Lyon did a site walk earlier in the year for proposed historical and informative signage along the BFRT. Currently we are discussing stewardship and gathering ideas to be presented for a long-term stewardship commitment.

Please continue to attend meetings of the WPAC and BFRTAC. It is a great way to stay informed.

Jim Lyon, BFRTC member

WHITE POND ON-LINE

The world-wide web has become a major source of information and interaction about White Pond. Here is a list of the websites that the Friends of White Pond are aware of:

1. www.wwwalker.net/whitepond

This is the website of Dr. William W. Walker, Jr. He did the original water quality studies of White Pond (1987-90) and has continued monitoring the pond's water quality with the volunteer monitoring group he established. His website contains historical and current water quality data, including transparency and dissolved oxygen testing, as well as his extensive analyses of the trends shown by the data, and other information. If you click on the "Friends of White Pond" category on his home page, you can also read copies, from 1987 to the present, of *Ponderings*, the Friends' newsletter. *Ponderings* is an easy way to track 25+ years of life on, in and around the pond.

2. www.preservewhitepond.org

This website belongs to White Pond residents Robert and Christine Gerzon and represents the Preserve White Pond Coalition. Its mission is to raise awareness about issues concerning the pond and its environs and support the White Pond Management Plan, which, when implemented, will preserve White Pond, its ecosystem and its watershed. The website is a valuable resource, both for general information about White Pond and current Town activities concerning White Pond, as well as day-to-day happenings around the pond. It has a blog feature for comments.

3. www.white-pond@googlegroups.com

Dr. Walker has established a Googlegroup website for White Pond where we can post information, offer opinions, ask questions, etc. for anyone to read and to reply or comment, etc.

4. www.concordma.gov

This is the Town website and it includes entries for Town boards, committees, and commissions, such as the Natural Resources Commission and White Pond Advisory Committee, which can have minutes and other materials with information about White Pond. Also, anyone can sign up with the Town for internet copies of the Town Manager's Report and other documents that can be useful for information about White Pond issues and activities.

Judith Sprott

HELP NEEDED

The Friends of White Pond underwrite a yearly volunteer water quality testing program that would make a wonderful summer activity for adults or science project for youngsters. It could be a perfect opportunity for anyone who lives on or near the water to get their feet wet in a scientific study (pun intended) while simultaneously aiding the pond.

Watershed resident Matt Leblanc has very generously donated the use of his green aluminum rowboat, electric motor, and battery, giving volunteers the chance to gather data with much less effort than had previously been required. Volunteers who live on the pond could store the battery and motor on their property, and then take Matt's boat to the deepest part of the pond to record weekly transparency measurements and monthly dissolved oxygen and temperature readings.

It would require some training by Dr. Walker and his volunteers. Boating experience, strength, attention to detail, and loyalty to the program would be some requirements. But, speaking as someone who has undertaken the testing tasks, the rewards of going boating on a beautiful day while doing something worthwhile for the pond, far outweigh the sacrifice.

The testing season runs from late May to mid-September, perfect for students and retirees. If you are interested in helping the pond, please call Kate Blair, at 978-340-0514, or email her at kdblair46@aol.com. It would be fantastic to have a group of volunteers who could either take turns, or work together to gather information that might help us avoid another toxic algal bloom. And what a great science fair project!

Kate Blair

KEEP UP THE GOOD WORK

The pond is fortunate to have so many individuals and groups that care about its future and are working to preserve and protect it. It has been a hard summer, but the job has just begun. We all need to stay informed - use the White Pond websites and attend meetings - and do what we can on our own properties and work with others to prepare for a better summer next year.

Joan Turner

FRIENDS OF WHITE POND

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Ponderings is distributed to over 200 households in the White Pond watershed as well as Concord Town officials and other interested parties.

Membership dues (\$10) and contributions are gratefully received by the Treasurer, Judith Sprott, c/o 20 Darton St., Concord

FOR THE FRIENDS OF WHITE POND



