

**HARVARD CONSERVATION COMMISSION
MINUTES OF MEETING
AUGUST 5, 2010
APPROVED: August 19, 2010**

Chairman Paul Willard called the meeting to order at 7:04pm in the Town Hall Meeting Room

Members Present: Paul Willard, Don Ritchie, Jim Breslauer, Jaye Waldron, Patrick Doherty and Lewis Beilman (Associate Member)

Others Present: Liz Allard (LUB Admin), Lou Russo, Al Combs, John Boardman (Hancock Assoc.), Bruce Leicher (BHPWMC), Bill Johnson (BOS), Tom Cotton (BHRA), Jeff Ritter (BHPWMC) and Mark Hardy (BHPWMC)

Discuss Ayer Road Meadow Easement/Agreement for Wheeler Realty Trust

Lou Russo, of Wheeler Realty Trust, was present to discuss the agreement drafted by Jim Breslauer. Mr. Russo stated the very nature of the system will release some nitrates and nitrogen, so to make the statement within the agreement that none will be released can not be done. Jim Breslauer stated he is concerned that if there is an increase, will the Commission have a fight in court as to what the cause was. Mr. Russo stated the type of septic system being installed is not a typical system; the type being installed requires testing to be done on a monthly basis on both influent and effluent. Mr. Russo added there are a lot of safe guards in place. All reports required by the Department of Environmental Protection (DEP) can be sent to the Commission as well. Jaye Waldron questioned how the Commission will know if there is an increase in nitrogen if there are no monitoring wells on the Conservation land. Mr. Russo stated there will be monitoring wells on the Conservation land. Mr. Russo stated the first place you will see an increase in nitrogen would be within the system and not on the non-facility credit land (Conservation Land).

Members reviewed the changed being proposed by Mr. Russo. Paul Willard stated he has no problem with either version of the language. Patrick Doherty wanted to know how in the future the Commission will know if the limits change. Mr. Russo stated DEP regulations will need to be met in the monthly reports. Mr. Breslauer asked what happens if the fail safe system does not work, and there is a release of nitrogen and the issue is resolved, then the next month there is an increase in the monitoring well. Mr. Russo stated that even if a failure is corrected at the system there would still be a spike that would correspond with that failure. Mr. Breslauer stated the Commission is in the dark as to what DEP is going to require for monitoring wells. Mr. Russo stated he does not have the exact location for the wells but he is anticipating three wells. Mr. Breslauer suggested adding the language "due to any non-compliance of the DEP requirements and the Harvard Board of Health regulations". Mr. Russo was agreeable to that addition. Mr. Breslauer also included a title to the document. Mr. Russo will include the changes discussed this evening.

Mr. Russo stated the State has signed and passed the easement that the Town had voted for at Town Meeting this past spring. With no further discussion Jim Breslauer made a motion to allow Paul Willard to sign the agreement as agreed upon this evening. Don Ritchie seconded the motion. The vote was unanimously in favor of the motion.

Once the final easement is received from the DEP it shall be brought back to the Commission for a final review and approval.

Notice of Intent Hearing – Wolfgang Franzen, 45 Woodside Road, DEP#177-581, Harvard#0710-01. Opened at 7:30pm

Minutes

Jim Breslauer made a motion to approve the July 1, 2010 minutes as written and the June 17 and July 15, 2010 as amended. Jaye Waldron seconded the motion. The vote was unanimously in favor of the motion.

Funding Update

Liz Allard explained to the members that in the spring she had informed the Commission that the Town Administrator had stated the Commission would need to look into additional ways to fund her position as the previously available funds are getting low. Members agreed to look into the current fee schedule to determine if any of those fees can be increased to help resolve this issue. The members agreed to review the fee schedule at the next meeting.

Planning Board Request for Comments – Special Permit, New Cingular Wireless PCS, LLC (AT&T) 0 Brown Road (Map 36 Parcel 93.4T)

Liz Allard explained that the application received by the Planning Board (PB) is for the renewal of an existing Special Permit for the wireless communications tower on Brown Road. There is no new construction taking place. The members agreed that they had no comments to the applications as submitted. Ms. Allard will send a letter to the PB in that regard.

Request to Submit Letter of Intent rather than a Request for Determination of Applicability for a Chapter 91 filing

Liz Allard explained to the members that a recent Notice of Intent filing at 70 Warren Avenue brought to light that the existing dock did not have a Chapter 91 permit. The current homeowners are in the process of filing the appropriate applications with the State. The homeowners' engineer requested that a formal letter be submitted rather than a Request for Determination of Applicability (RDA). The Commission agreed that they want a RDA filed for the activity even though it is after the fact.

Request to Extend Order of Conditions – MHOC, 15 Littleton Road, DEP#177-535

Liz Allard informed the members that a letter had been received from Massachusetts Housing Opportunities Corporation requesting the Order of Conditions for 15 Littleton Road, DEP#177-535, be extended for one year. Don Ritchie made a motion to extend the

Order of Conditions for one year. Jim Breslauer seconded the motion. The vote was unanimously in favor of the motion.

Discuss & Approve New Policy on Electronic Filing of Applications

Liz Allard explained that with the new requirements under the Open Meeting Law it would be useful to have a policy that all applications are submitted in an electronic format as well as a paper format. Applications can be either emailed to Ms. Allard or submitted on disc along with the paper application when filed with her. Members asked about applicants that would not have the ability to file in such a manner. Ms. Allard stated that most applications are filed by engineering firms on behalf of the applicant, for the few that she receives directly from a home owner she is willing to scan those applications and create a file. Don Ritchie made a motion to make it a policy of the Conservation Commission that all applications submitted shall include a copy of the application and its supporting material in an electronic format. Jim Breslauer seconded the motion. The vote was unanimously in favor of the motion.

Request for a Partial Certificate of Compliance – Farrell, 119 Tahanto Trail, DEP#177-567

Liz Allard stated she has received a Request for a Partial Certificate of Compliance from Kathryn Farrell off 119 Tahanto Trail for the installation of the septic system only. The deck has not been constructed as of yet. Ms. Allard has reviewed the site and all disturbed areas have been stabilized. Jim Breslauer made a motion to issue a partial Certificate of Compliance for DEP#177-567 for the installation of the septic system only. Jaye Waldron seconded the motion. The vote was unanimously in favor of the motion.

Update of Bare Hill Pond Watershed Management Committee

Jaye Waldron attended the July 28th meeting of the Bare Hill Pond Watershed Management Committee at which the Committee discussed the recent rain event (July 19) that caused several “blowouts” at some of the drainage systems under construction for the Storm Water Management project. The Commission was not notified of the blow outs; they were discovered during a routine inspection by the agent. The engineers have submitted remediation plans to better control the flow of water during such events.

The Committee discussed the draw down plan stressing that they wanted the Commission to read the documents submitted to them prior to tonight’s meeting. The staff gage was going to be installed this week. The excavation of the beach area and filing of a Notice of Intent was also discussed. Rich Nota would like to come up with a plan to dewater the dredge material better before removing it from the site.

Bare Hill Pond Watershed Management Committee Annual Report and Approval for the 2010 Draw Down

Bruce Leicher, chairman of the Bare Hill Pond Watershed Management Committee (BHPWMC), presented a power point presentation (See Attachment A) that included a review of the watershed plan and a review of BHPWMC draw down proposal. Mr. Leicher stated that in 1999 the State reported excessive phosphorus and invasive aquatic species within the pond. Reducing these should have a positive effect on the ecosystem.

In 2004 the BHPWMC came up with a long term strategy that has a two prong approach; in the near term address the invasive species problems, and for the long term address the phosphorus problem by storm water control and outreach and education.

Mr. Leicher stated he included portions of the Generic Environmental Impact Report (GEIR), which was adopted in 2005, with the annual report distributed to the members of the Commission. The GEIR is a guideline from the Department of Environmental Protection (DEP) for lake management. The GEIR determined that nitrification was not being controlled. The BHPWMC is doing more than is required by the GEIR. Without control Milfoil and Water Chestnuts will deplete the pond of oxygen. The pond has not suffered from algae.

In 1998 a plant survey of the pond was conducted showing that 50% of the pond was covered with invasive species. The BHPWMC has had great success since 2003 in controlling invasive growth around the pond. There has been an increase in native species. The inner Clapp Book area has been reduced in the amount of required harvesting. Patrick Doherty asked if the plant survey was done for the entire perimeter of the pond. Mr. Leicher stated that within the Quality Assurance Project Plan (QAPP) of 2004 there are transects in which the density of the water column is measured every three years by a consulting biologist. Mr. Leicher paddles the entire perimeter of the pond, as well as 100' segment photos at ten different locations to see if there is an effect on the shoreline as a result of the draw down.

The BHPWMC strategy to control invasive weeds is water chestnut harvesting by manual pulling and mechanical cutting, as well as the draw downs. Data suggests that the process must be repeated yearly until the weeds are under control. The BHPWMC found that conducting a draw down two years in a row and taking a year off caused a dramatic resurgence of growth. The time to discuss the time frames of the draw down will be next year when a new Notice of Intent is filed. Mr. Leicher believed they have reached significant control, but not total control.

In lake testing done in June shows a phosphorus level of 0.019mg/L at the surface, 0.025mg/L in the Great South Bay and 0.047mg/L in the deep hole. In 1998 the Phosphorus was 0.05mg/L at the surface. The phosphorus levels are currently below DEP limits for recreational water. The best theory for the reduction is the dilution factor (water flowing into the pond). Mr. Leicher explained that phosphorus binds to sediments on the bottom of the pond and is released by anaerobic action. Tests results may indicate that phosphorus is being controlled in the pond.

Gravity draw downs were permitted in 2001 which showed a significant plant reduction in the draw down zone. To address the deeper zones the BHPWMC built the pump station to further draw down the pond. The monitoring has measured neutral/positive environmental impacts on the pond that include the return of native plant species, fishing data reports are excellent, amphibian and reptile reports suggest limited impact and species diversity, downstream wetland habitats are thriving, there are no reports of any

impacts to wells around the pond and the data collected is consistent with expected results within the GEIR.

Al Combs, of 35 Oak Hill Road, asked about impacts and monitoring of the upper wetlands. Mr. Leicher stated there are no specific monitoring plans other than physical observations. People have reported an increase of Phragmites. Mr. Combs stated that the Phragmites indicate a change is going on. Mr. Combs stated it takes a long time to definitively determine there is a change. Mr. Combs suggested training volunteers to be able to do more extensive survey of the upper wetlands. Mr. Leicher asked if Mr. Combs would be willing to help out with that. Mr. Combs stated he could point him in the right direction. Mr. Leicher stated newer members to the BHPWMC are more proficient in these areas.

Mr. Leicher continued with the phosphorus strategy of the BHPWMC, which includes the reduction of phosphorus inflows by capturing and treating storm water runoff, street sweeping, working with abutters to the watershed to eliminate phosphorus from landscape maintenance, evaluating the impact of draw down dilution and removing phosphorus-enriched peat from the pond bottom.

Mr. Leicher stated to accommodate the rowing club the plan is to hold the draw down depth at 3 feet until October 23rd, which may require some pumping between October 15th and the 23rd. Pump no more than 3.5 feet by October 29th. Then pump to 5 feet for a mussel check, not only to determine if they are surviving, but to determine if they are reproducing as well. Finally, the pond will be pumped to 6.5 feet stopping at a hard freeze or November 30th which ever comes first. This process will keep the pond one foot higher during rowing season.

Mr. Leicher believes the BHPWMC needs to do a better job of communicating with the Commission and will do so by notifying the Commission when the hold point is reached, the results of the mussel check and when and if there is a hard freeze.

Paul Willard stated some years ago the Committee talked about taking a year off from the draw downs, what has changed from that. Mr. Leicher stated when the BHPWMC started the draw downs Ken Wagner, who wrote the 2002 report, stated that if you do not take a year off you breed invasive dominance. The BHPWMC has not seen evidence of that. Taking a year off saves on the electrical cost of the pump and for financial reasons alone the BHPWMC would want to get to off years. Mr. Willard clarified that to the BHPWMC taking a year off means gravity draw down only and not using the pump.

Mr. Leicher worries the shell fish will be affected if you change the draw down level. Mr. Leicher again stated that taking a year off shows significant growth of invasive species with in the pond. It is Mr. Leicher's understanding that you should only consider taking a year off once things are under control. Mr. Willard asked what is under control. Mr. Leicher stated the pond is not getting any worse and that the transects are remaining the same. What we are seeing is things getting worse in the deeper areas and

stabilizing in the shallow areas. The BHPWMC may try doing the requested draw down for another two years.

Mr. Willard stated he would like to have an outside professional look at the pluses and minuses of the draw down and the affects they are having on the upper wetlands. Mr. Leicher feels this is a matter that can be addressed in the Notice of Intent that will need to be filed next year for another three years of draw downs. Mr. Doherty asked if the weeds will grow back faster if you are harvesting them. Mr. Leicher stated they are no longer harvesting the milfoil.

With no further questions, Jim Breslauer made a motion to approve the draw down to initiate with gravity on September 20, 2010, hold draw down to 3' until October 23, 2010, with the potential of some pumping between October 15th and October 23rd depending on the rate of the gravity draw down, pump to no more that 3.5' by October 29, 2010, then pump to 5' for a mussel check, then pump to 6.5' stopping at the time of a hard freeze or November 30, 2010 per the Order of Conditions. Jaye Waldron seconded the motion. The vote was unanimously in favor of the motion.

Review and Discuss Conservation Land Regulations

With the absence of Wendy Sisson for the month of August the members agreed to pick up this discussion in September.

Review and Discuss Tree Cutting Policy

With the absence of Wendy Sisson for the month of August the members agreed to pick up this discussion in September.

Discuss How to Deal with Questions Regarding Setbacks, Chapter 147-16 and other Request from Applicants

With the absence of Wendy Sisson for the month of August the members agreed to pick up this discussion in September.

Adjournment

Jim Breslauer made a motion to adjourn the meeting at 9:37pm. Don Ritchie seconded the motion. The vote was unanimously in favor of the motion.

Respectfully submitted,

Liz Allard
Land Use Administrator/
Conservation Agent

**Harvard Conservation Commission
Notice of Intent Hearing Meeting Minutes
Wolfgang Franzen, 45 Woodside Road, DEP#177-581, Harvard#0710-01
August 5, 2010**

This public hearing was opened at 7:30pm by Chairman Paul Willard under the Massachusetts Wetland Protection Act, Ch. 131 §40 and the Harvard Wetland Bylaw Chapter 119 of the Code of the Town of Harvard in the Town Hall Meeting Room

Members Present: Paul Willard, Don Ritchie, Jim Breslauer, Jaye Waldron, Patrick Doherty and Lewis Beilman (Associate Member)

Others Present: Liz Allard (LUB Admin) and John Boardman (Hancock Assoc.),

This hearing is for a Notice of Intent filed on behalf of Wolfgang Franzen for the installation of a septic system upgrade within the 100' wetland buffer zone at 45 Woodside Road, Harvard.

John Boardman, of Hancock Associates, gave an overview of the site location and the proposed project. The grading is the part of the system that will be within the 100' wetland buffer zone, which is a repair for the existing house. Mr. Boardman stated that during the site walk on August 2nd, there were a few trees that the Commission had concern with being removed; Mr. Boardman took some measurements that evening and determined the trees in question are outside the 100' buffer zone and the removal of those trees would still be necessary regardless of the shifting of the system as requested by the members on site. Mr. Boardman stated the disturbed area will be allowed to re-vegetate naturally. The Commission recommended three granite post be placed evenly spaced at the 102' contour line. The members agreed that only silt fence shall be required for erosion control. The granite post shall be at a minimum 24" – 36" above grade.

Don Ritchie made a motion to close the hearing and issue an Order of Conditions that includes the installation of three granite post along the 102' counter lines as shown on the Sewage Disposal Plan, Project 15802 dated 5/25/10 and the use of silt fence only as the erosion control barrier. Jaye Waldron seconded the motion. The vote was unanimously in favor of the motion.

Respectfully submitted,

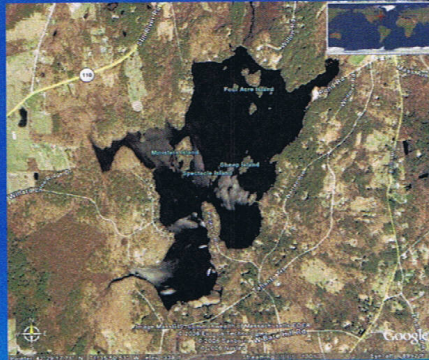
Liz Allard
Land Use Administrator/
Conservation Agent

ATTACHMENT A

Annual Drawdown Report to Conservation Commission

August 5, 2010
Bare Hill Pond Watershed
Management Committee

Protecting and Enhancing the Bare Hill Pond Watershed



Bare Hill Pond Watershed Management Committee

Agenda

- Review of our Watershed Plan
- Review of our Drawdown Proposal

Why are We Concerned?

- US EPA/ MA DEP Places Bare Hill Pond on the list of Endangered Lakes and Ponds in MA
 - Section 319 Program – Federal Water Pollution Control Act
- Causes and Identified Risks by DEP
 - Excessive Phosphorous and Eutrophication
 - Non-Native Invasive Plants
 - Milfoil
 - Fanwort
 - Waterchestnut

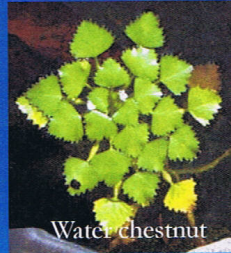
The Risks - Eutrophication

- Phosphorous favors invasive plant growth and algae blooms
- Invasive Plants fill the Pond with Peat
- Invasive Plants deplete Oxygen
- Fish, crustaceans and ecosystem put at risk due to Eutrophication
- Pond could become a marsh in 100 rather than 1000 years
- Recreational Risks

Our Watershed Plan

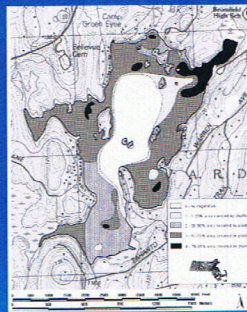
- 2004: Create long-term strategy based on environmentally-friendly Best Management Practices
- 2005-2015: Addressing the near-term invasive species problem
- 2008-2030: Addressing the long-term phosphorus problem
 - Storm water control
 - Outreach and Education
- Key factor to consider under the GEIR

The invasive culprits



Plant Survey in 2003

- 1998 – 50% invasive species coverage
- Major Concern in the 1999 TDML Study



Invasive Weed Control Strategy

- Waterchestnut harvesting
 - Manual pulling
 - Mechanical cutting
- Drawdowns
 - Mechanism of Action
 - Freezing and Thawing
 - Mechanical Action
 - Restoration of Shoreline
 - Data suggests must be repeated yearly until under control

Weed pulling



We need volunteers to make this work !

Waterchestnuts *before*
harvesting

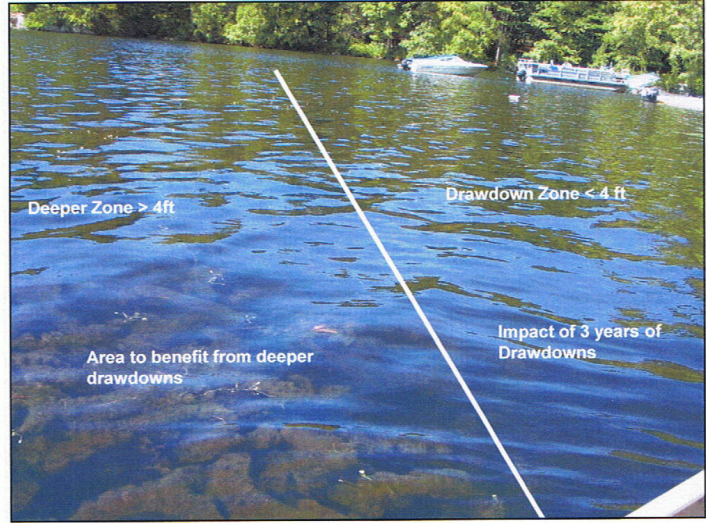


Waterchestnuts *after* harvesting



Gravity Drawdowns

- Permitted in 2001
- 3.5 Feet Possible
- Significant Plant Reduction in Drawdown Zone



To address the deeper zones, we built the pump station

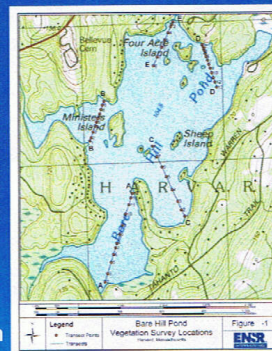
The collage consists of four photographs: 1) Two men in work clothes standing on a sandy shore next to a large, dark pipe. 2) A group of people sitting on a log in a lake, with a small boat visible in the background. 3) A close-up view of the pump station machinery, showing pipes and mechanical components. 4) Water being pumped over a rocky structure into a stream, creating a small waterfall effect.

We are slowly increasing the drawdown depth



Monitoring has measured neutral/positive environmental impacts

- Return of native plant species
- Fishing Data reports are excellent
- Amphibian/reptiles reports suggest limited impact and species diversity
- Downstream wetlands habitat thriving
- No reports of impacts on wells
- Data appears to be consistent with expected results in GEIR



Phosphorus Reduction Strategy

- Reduce phosphorus inflows
 - Capture and treat storm water runoff
 - Street sweepings/low-salt road treatment/etc.
 - Work with abutters to watershed to eliminate phosphates from landscape maintenance
- Evaluating Impact of Drawdown Dilution
- Remove phosphorus-enriched peat from pond bottom
 - Plans to be discussed later this month
 - Separate NOI and approval

Drawdown Plan for Fall 2010

- Initiate the Drawdown with gravity September 20
- Hold drawdown to 3 feet until October 23
 - Some pumping may be required 10/15- 10/23 depending on rate of gravity drawdown
- Pump to no more than 3.5 ft by October 29
- Then pump to 5 feet for a mussel check
- Then pump to 6.5 feet, but
 - Stop at Hard Freeze or Nov 30 per OOC
- Note: This holds the Pond 1 foot higher during rowing season

Communicate with Cons Com

- We will notify Cons Com:
 - At each date we reach a hold point
 - With the results of the Mussel Check
 - If there is a hard freeze

The GEIR

- Goals (Sec. 1.1.1)
 - Promote a holistic approach to lake management
 - Streamline the permitting process
 - To promote the importance of lakes and ponds within the ecosystem
 - To assure that decisions on management techniques remediate the impact of eutrophication and non-native invasive species
 - To promote sound planning by providing guidance to regulators

The GEIR

- Key Management Decisions Should:
 - Consider existing human alterations
 - Focus on the possible, not the perfect, and be affordable
 - I.E, they should:
 - Be effective
 - Be inexpensive or at least affordable
 - Cause few adverse impacts
 - Be feasible

Proposal is Complies Fully with GEIR

- GEIR extensively studied methods for intervention to prevent eutrophication
- Drawdowns are a presumptively permitted method:
 - When the invasive species are drawdown targets
 - Milfoil and Fanwort Are
 - When wells are not impacted
 - When conducted in the Fall and refilled prior to April to not impact watershed and its habitat
- Our monitoring program predates and exceeds the requirements of the GEIR

BHPWMC is Dedicated to Protecting the Watershed

- New members with more expertise in monitoring
- We have made substantial progress and its critical to continue or the tide will swing back
- Per the 2002 ENSR Report and GEIR, the opportunity to alternate years will arise once the invasives are under control
- Bottom Line: Invasives and eutrophication are an ecosystem hazard and this intervention is key to protecting and restoring native species and habitat

DOCUMENTS & OTHER EXHIBITS

Notice of Intent Hearing – Wolfgang Franzen, 45 Woodside Road, DEP#177-581, Harvard#0710-01

- WPA Form 3 Notice of Intent Application dated July 13, 2010
- Sewage Disposal Repair Plan final revision date June 25, 2010

Request to Extend Order of Conditions – MHOC, 15 Littleton Road, DEP#177-535

- Letter from Massachusetts Housing Opportunities Corporation, dated July 26, 2010
- WPA Form 7 – Extension Permit for Orders of Conditions
- Refer to: C:\Documents and Settings\Land Use\My Documents\Conservation\Permits\Extensions\2010\177-535

Request for a Partial Certificate of Compliance – Farrell, 119 Tahanto Trail, DEP#177-567

- WPA Form 8A – Request for Certificate of Compliance, DEP#177-567
- Letter from Deschenes & Farrell, P.C., dated July 14, 2010
- WPA Form 8B – Certificate of Compliance, DEP#177-567 – Refer to: C:\Documents and Settings\Land Use\My Documents\Conservation\Permits\COC\2010\177-567 Partial

All documents and other exhibits listed above may be viewed in the Land Use Office, Harvard Town Hall, 13 Ayer Road, Harvard, MA 01451