TOWN OF HARVARD CONSERVATION COMMISSION AGENDA THURSDAY JUNE 16, 2022 @7:00PM

Pursuant to Chapter 22 of the Acts of 2022, An Act Relative to Extending Certain COVID-19 Measures Adopted during the State of Emergency, and signed into law on February 15, 2022, this meeting will be conducted via remote participation. Interested individuals can listen in and participate by phone and/or online by following the link and phone number below.

UpperTH ProWebinar is inviting you to a scheduled Zoom meeting.

Join Zoom Meeting

https://us02web.zoom.us/j/89585650612?pwd=bnZTamc1WFBpRjgrTDNGcGFtWVFrQT09

Meeting ID: 895 8565 0612

Passcode: 498602

One tap mobile

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+13017158592,,89585650612# US (Washington DC)

Dial by your location +1 929 436 2866 US (New York) +1 301 715 8592 US (Washington DC) +1 312 626 6799 US (Chicago)

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Meeting ID: 895 8565 0612

Find your local number: https://us02web.zoom.us/u/kb7Bf6mnFC

New Business:

- 1. Land Stewardship and Deer Management Subcommittees Annual Appointments
- 2. Climate Action Plan Input on Goals and Action Items under Natural Resources (Jaye)
- 3. ZBA Request for Comments 37 Pine Ridge Drive
- 4. Land Stewardship Subcommittee Update (Wendy)
 - Ayer Road Meadow Access
 - Tully Land Culvert
 - Bowers Springs boardwalk and bridge repair
 - Prospect Hill culvert and causeway over beaver wetland
 - Haskell land update
 - Request to use the Stone Land for AKC Search & Rescue Tracking Training, June October
- 5. Request for Certificates of Compliance
 - 129 Ayer Road, DEP#177-154 & 255
 - 165 Littleton County Road, DEP#177-288
 - 113 Poor Farm Road, DEP#177-696
- 6. Approve Minutes
- 7. Approve Invoice
 - Moore's \$333.62
 - Gatsby Grounds Co., Inc. \$1950.00 (Haskell Land)

Public Hearings:

The listing of matters are those reasonably anticipated by the chair which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

- 7:25pm Request for Determination of Applicability Hearing Girl Scouts of Central & Western

 Massachusetts, Inc., 69 Still River Road, Harvard#0522-03, for the installation of a changing room within 200' of Bare Hill Pond
- 7:30pm Continuation of a Notice of Intent Hearing Yvonne Chern, 203 Ayer Road, Harvard#0322-01, for the construction of commercial structures with associated parking, grading and drainage within the 100' wetland buffer zone
- 8:00pm Notice of Intent Luciano Manganella, 171 and 175 Littleton County Road, Harvard#0522-04, for the replacement of the existing 12" culvert with an 18" culvert, including the reconstruction of the gravel crossing, and the installation of utility connections to the single-family residence within the wetland resource area and its associated buffer zone

Old Business:

- 1. Bare Hill Pond Watershed Management Committee Update Algal Bloom
- 2. Discuss Japanese Knotweed on Harvard's Roadside & Town-Owned Land
- 3. Pine Hill Village Update

NEXT MEETING: JULY 7, 2022

The listing of matters are those reasonably anticipated by the chair which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

OFFICE OF THE

CONSERVATION COMMISSION

13 AYER ROAD HARVARD, MA 01451

978-456-4100 EXT.321

www.harvard-ma.gov



DATE: June 14, 2022

TO: Harvard Conservation Commission

FROM: Liz Allard, Conservation Agent

RE: Re-appointments to Land Stewardship & Deer Management Subcommittees

The tables below detail the proposed appointments for the above referenced Subcommittees of the Conservation Commission for Fiscal Year 2023:

LAND STEWARDSHIP 3-YEAR T	ERM
Wendy Sisson	
Jim Burns, ConCom Rep	
Rob Traver	

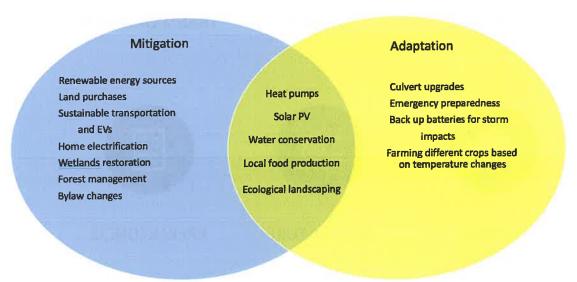
DEER MANAGEMENT 2-YEAR TERM
Bob Douglas
Paul Willard, ConCom Rep
Tom Cotton, HCT Rep
Ben Urquhart
Joe Pulido

Climate Action Plan Overview

Introduction

At the special town meeting in October 2021, the residents voted to adopt a resolution on climate change and part of that resolution is to create a Climate Action Plan (CAP). The Harvard Climate Initiative Committee (HCIC) was formed with the charge to create the plan that would help guide the Town in meeting the Commonwealth of Massachusetts greenhouse gas emissions goals by 2050. The HCIC has framed this CAP around mitigation and adaptation.

This chart, is an example of mitigation and adaptation scenarios and the overlaps show how the two elements of the plan come together.



Reference: Climate Action Planning Guide, Climate Smart Communities of New York State

With state funding, some of the work began in 2020. An Agricultural CAP was released and the outline or framework of a comprehensive CAP was prepared. This work has led to the development of this plan: a goal setting and action plan that is attainable, that can reach the town's goals as outlined in the town resolution, and that will require municipal and resident participation and commitment. We believe Harvard will commit to acting on the CAP. It will be an iterative process that is collaborative, that it will require commitments from all parts of our municipal government and will be ever evolving.

Organization of the Plan

There is much the Town and residents can do, but the goals and actions have to be realistic, implementable, timely and focused. For this reason, the plan targets six areas that reflect the Commonwealth's goals, the data on GHGs, the input the community provided to date and the desire to achieve both sustainability and resilience.

The areas include:



These six areas have one goal for municipal operations and one goal for residents and typically two action items per goal. As actions are completed, new ones will be added, thus making this a living document. It reflects the ability of the plan to be realistic in what can be accomplished and timely as actions are completed and new ideas emerge.

The plan, though drafted by the HCIC is not the work of HCIC but the outcomes of discussions, interactions, input and feedback received from Town committees, municipal operations, and residents. It is the ideas of many; those most knowledgeable of what can be accomplished and the commitments they can make to meet the goals.

Some of the work has already begun due to the commitment of a key group of stakeholders in town. These accomplishments are noted and celebrated. Much of this work relies on the many volunteers who are so devoted to this work and to giving back to the community.

The following pages contain the substance of the plan:

- Introduction of the climate consideration being addressed
- Municipal Goal, Actions to Date, and Priority Actions to undertake
- Residential Goal, Actions to Date and Priority Actions to undertake
- Measurements for success criteria

Short History of Climate Action in Harvard

2018: With the establishment of Municipal Vulnerability Program (MVP) Subcommittee of the Energy Advisory Committee and state funding by the Executive Office of Environment and Energy Affairs (EOEEA), hazards and vulnerabilities of concern in the Town regarding climate change were identified. Thirteen (13) areas of concern were identified, with these being the top four:

- 1. Pests and Invasive Species
- 2. Extreme Precipitation
- 3. Extreme temperatures and Temperature Swings
- 4. Ice Storms

Other hazards included flooding, large storm events, wind, drought, sea level rise, extreme thunderstorms, tornadoes, extreme heat, and wildfires.

The conclusion of the MVP subcommittee's work was three recommendations to improve resilience to the changing climate:

- 1. Create an implementation committee to manage the process of creating and monitoring implementation of a comprehensive Climate Action Plan
- 2. Establish a Climate Vulnerability Liaison within Town government responsible for capital planning oversight
- 3. Create an emergency response network and a medical professional network to coordinate professional and volunteer-based emergency and medical response teams.

Additionally, there were eleven (11) High Priority recommendations, thirteen (13) Moderate Priority recommendations, and fourteen (14) Lower Priority recommendations. The full report can be found at the Town of Harvard website.

2020: With additional funds from EOEEA, a new subcommittee, the Community Resilience Working Group, reporting to the Planning Board, was established. The Greenhouse Gas Inventory discussed above was one of the outcomes of the 2020 funding. This identified the areas that Harvard needs to address to reduce GHGs. A survey was also conducted that asked residents about their concerns regarding climate change and where actions should be focused.

Three hundred fifty-four residents took the survey. Residents were most concerned about the impacts of climate change on natural resources, energy, agriculture and infrastructure/buildings. Drought and intense storms were the climate impacts residents felt would do the most harm and this would affect the town's agricultural business, degrade the town's natural resources, increase disease and illnesses, and disrupt the energy grid.

: The outcomes of the 2018 and 2020 committee work identified the problems facing Harvard in addressing climate change and the interest of its residents. The next section of this report outlines what has been done to date to address these problems and what is being put forth as the Town of Harvard's Climate Action Plan.

The Problem: Greenhouse Gas Emissions

Background:

Scientists know with virtual certainty that increasing greenhouse gas concentrations tend to warm the planet. In computer-based models, rising concentrations of greenhouse gases produce an increase in the average surface temperature of the earth over time. The imbalance between greenhouse gas emissions and the ability for natural processes to absorb those emissions has resulted in a continued increase in atmospheric concentrations of greenhouse gases. Rising temperatures may produce changes in precipitation patterns, storm severity, and sea level. Collectively, this is commonly referred to as *climate change*.

The Massachusetts 2050 Decarbonization Roadmap aims to reduce the state's production of greenhouse gases in the coming decades. As stated in their Roadmap: "The climate crisis is a generational challenge that, without decisive action, leaves residents and communities across the state on the front lines. Recognizing the urgency of this crisis, the Baker-Polito Administration listened to the science, and set Massachusetts on an aggressive path to Net Zero greenhouse gas emissions by 2050. Reducing emissions to achieve Net Zero by 2050 is the Commonwealth's primary and most important line of defense in preventing the significant threats presented by a changing climate."

Harvard's Role:

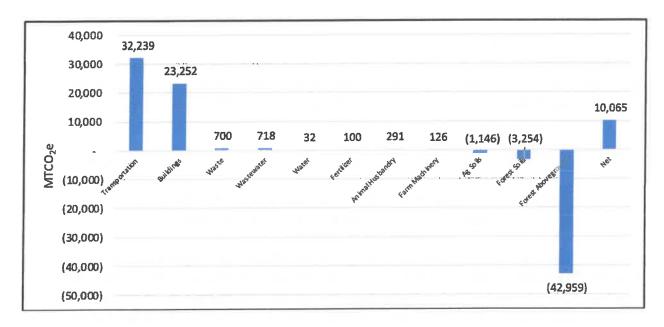
In 2020, a report of Harvard's greenhouse gas (GHG) emissions was conducted based on community wide activities of residents, businesses and municipal operations in the year 2018 . The findings also highlighted GHGs from agricultural activities as well as an estimate of the carbon sequestration benefit provided by forests, wetlands and other tree cover in the community.

The inventory of GHG emissions for calendar year 2018 was the most recent year in which energy utility data was available. It considered three primary GHGs: carbon dioxide (CO_2) , methane (CH_4) , and nitrous oxide (N_2O) , all presented in terms of CO_2 e or CO_2 .

Total greenhouse gas emissions for the Harvard community total 57,453 metric tons carbon dioxide equivalent (MTCO₂e) in 2018, primarily from **on-road transportation and building energy use.** Approximately 3% of those emissions are attributable to municipal operations. Agricultural activities are relatively small (< 1%) contributors to the GHG footprint of the community and come from unique sources related to fertilizer use, animal husbandry, and farm machinery use.

With 1864 households, this is approximately 25-30 metric tons per household, given there are few commercial enterprises that account for much of the total. The average metric tons per household in the United States from several sources puts it at 20 metric tons. The average worldwide is 4 metric tons.

The figure below identifies the sources of GHGs in Harvard as well as the offsets of carbon from our forested areas.



Harvard benefits greatly from its extensive forested areas and other tree cover. These forested areas along with wetlands capture carbon from the atmosphere and is upwards of 80% of the Town's annual emissions.

But as fortunate as Harvard is to be so well forested, maps over the years show that these areas are shrinking due to development. The significant positive impact provided by trees and undeveloped land represents significant potential for release of carbon should the land be developed. On a per acre basis, the release of GHGs from development would create a significant increase in emissions of 403 MTCO₂ that would need to be overcome but also would permanently reduce the rate at which tree cover in Harvard sequesters carbon by 4.26 MTCO₂ per year.

Harvard also needs to reflect on climate justice. It has the good fortune of its forests but it also has a responsibility to help the state, country, and world by protecting its forests and reducing greenhouse gases produced by its homes and cars. In our own state, low-income and marginalized communities are disproportionately negatively impacted. We cannot ignore the benefits we have of where we live. We must recognize the role we must play in bringing justice to these communities by doing our part individually and collectively to take responsibility for the carbon footprints we create and thus reduce them.

Reducing GHGs from its sources will require action on the part of residents to improve the efficiency of their homes, electrify their heating systems, drive electric vehicles, care for the land and take other actions both big and small to reduce GHGs. It is understood that many of

the changes that need to be made are financially difficult, but the long-term impacts of not making changes will be financially devastating. It is the goal of the Harvard Climate Action plan to seek educational, financial and other support and to make it known to its residents.

Climate Impacts from GHG's

The changing climate impacts our lands, water resources, plants and animals, and ourselves, in terms of our health and well-being. We have already seen some of the impacts and we must do things, both large and small, to address our future, through two different avenues:

- ✓ Adaptation (also called resilience): how to adapt to or withstand the negative impact
 of climate change
- Mitigation (also called sustainability): how to prevent or reduce the adverse impact
 of climate change, usually by taking actions to reduce GHGs

In order to address both adaptation and mitigation, the Town has sought input from residents, through workshops, surveys, and the establishment of several different committees who over time have been charged with developing plans to address climate change. These activities have led to the identification of what concerns residents: the problems brought on by climate change, now and foreseen, that need to be addressed.

Will add additional climate content for the problem statement, including:

- Biodiversity
- Environmental justice
- sustainability
- Water management
- Forest management
- Agriculture

Natural Resources

Climate Consideration

The Harvard Climate Action Plan will follow-up and implement recommendations from the 2021 Apple Country Report. This report notes that the preponderance of land in Harvard in its natural state of forests fields, and especially wetlands is the town's greatest asset in terms of sequestering and storing carbon. By far the greatest impact we can have in nature-based solutions to climate change and increasing resilience is to retain as much of this ecologically functioning land as possible and to minimize conversion to pavement, buildings, septic systems, or traditionally landscaped areas.

Harvard's Planning Board, Zoning Board of Appeals, Open Space Committee, Parks & Recreation Commission and Select Board each have jurisdiction and a role in the oversight of land use in town with this most significant climate impact in mind. In addition to supporting efforts of other town boards, the Conservation Commission has an important role to play. The Commission's core mission, to administrate the Wetlands Protection Act and the Town's Wetland Protection Bylaw, and conserve natural landscapes, is entirely in line with this primary goal in response to climate change. It can increase its impact by doing this job more effectively while focusing on climate impacts and adaptations to current environmental changes.

Municipal:

Goal: Increase the resilience of Harvard's ecosystems and community through the coordinated implementation of nature-based solutions.

Actions to date:

- MVP Prioritization Plans
- 2021 Apple Country Report
- 2016 Open Space and Recreation Plan
- 2016 Master Plan, Chapter 3
- The Conservation Commission, Harvard Conservation Trust, Sudbury Valley Trustees and other local partners have helped to protect over 1,900 acres of conservation land directly and an additional 523 acres under conservation restrictions and agricultures preservation programs.

Priority Actions:

- Wetlands are of particular importance as carbon sinks, for species diversity, flood control, water quality, etc. To strengthen their protection the Conservation Commission could:
 - Update the Harvard Wetlands Protection Bylaw utilizing the work in other area towns, including the consulting taking place in Bolton/Clinton as a result of the Apple Country Natural Climate Solutions Project
 - When permitting consider present and fluctuating conditions not reflected in typical data sources, such as Extreme Precipitation Analysis, by utilizing the most up-to-date data available for precipitation, location of floodplains and wetlands, and stream stats.
 - Proactively document changing conditions for input to regional and Statewide mapping of floodplains, wetlands and biodiversity
 - Increase protection within jurisdictional wetland buffer zones
 - Educate and advise residents on the management of private land near/in wetlands (The Apple Country report prepared a self-guided educational tour that could be promoted or offered as a guided walk.)
 - Work with Department of Public Works to protect wetlands by managing road runoff, designing and maintaining BMPs, assessing culverts and improving as needed, reducing impacts on wetlands surrounding the transfer station, etc.
- 2. Improve land management to increase resilience and biodiversity
 - o Invasive plant and insect management:
 - Continue existing programs for Bare Hill Pond and on Town conservation land
 - Expand to other municipally controlled land, especially roadsides where invasives are spread and introduced to adjacent land and waterways
 - Educate and provide resources to residents to manage invasives on private land
 - o Improve soil health
 - Educate, minimize disturbance and implement best management practices to improve soils on agricultural land, town-owned turf, and residential properties.
 - o Increase and improve habitat for pollinators and beneficial insects with protection and cultivation of native plants.
 - Implement tree and other vegetation enhancements to built environments for shade, improved buffer, bio-swales, etc.
 - o Prepare management plans for Town-owned conservation lands

Land Use Goal: The Town's plans, policies, bylaws, and regulations encourage sustainable land use and development.

Actions to date:

- Established an Open Space Residential Development Bylaw in response to 2002 Master Plan.
- Created a mixed-use overlay zoning district to facilitate smart growth.
- Land purchases by Conservation Commission, Harvard Conservation Trust and Sudbury Valley Trustees
- Erosion Control Bylaw approved by Town Meeting 2021

Priority Actions:

- 1. In the process of rewriting the Protective (Zoning) Bylaw, the Planning Board will ensure that the revised Bylaw includes a full range of provisions to develop local resilience and mitigation (carbon reduction) in line with local and state goals.
- 2. Include more zoning districts and development types that are sustainable and resilient smart growth models; remove or replace provisions that are not in line with this framework.
- 3. Educate and inform the public about sustainable land use patterns and planning practices and why they have better environmental, social, and fiscal outcomes.
- 4. Pass an updated Open Space Residential Development Bylaw that promotes open space and natural resource protection and also meets resilience needs by providing housing options to increase diversity of housing stock.
- 5. Include climate change and sustainability as a consideration in all future Planning Board decisions and bylaw proposals.
- **6.** Ensure land use and transportation planning are coordinated as their consequent impacts are interlinked.

Residential:

Goal: Reduce the climate impact of our homes and yards on the local environment.

Actions to date:

- HarvardEnergize information on native plantings
- Harvard Press Garden Column on environmentally friendly options

Priority Actions:

- 1. Significantly reduce food waste amongst residents through composting, "buy local," and changes to consumption practices.
- 2. Provide residents with information on sustainable practices for lawn care, landscaping, tree care, and invasive species management.

Measuring Progress:

TBD

Second Draft: Natural Resources Goals and Actions

Climate Consideration

The Harvard Climate Action Plan will follow-up and implement recommendations from the 2021 Apple Country Report. That report noted that the preponderance of land in Harvard in its natural state of forests, fields, and especially wetlands is the town's greatest asset in terms of sequestering and storing carbon. By far the greatest impact we can have in nature-based solutions to climate change and increasing resilience is to retain as much of this ecologically functioning land as possible and to minimize conversion to pavement, buildings, septic systems, or traditionally landscaped areas.

Harvard's Planning Board, Zoning Board of Appeals, Open Space Committee, Parks & Recreation Commission and Select Board each have jurisdiction and a role in the oversight of land use in town and can have a significant impact on climate mitigation. However, the Conservation Commission has a major role to play in implementing nature-based solutions. In addition to supporting the efforts of other town boards, the Commission's core mission, to administrate the Wetlands Protection Act and the Town's Wetland Protection Bylaw, and to conserve natural landscapes, is entirely in line with this primary goal in response to climate change. It can increase its impact by expanding its efforts to include consideration of climate impacts and adaptations to current environmental changes.

Goals	and Priority Actions	Accept/Reject/Modify?
Natura	al Resources	
	nal Goal: Increase the resilience of Harvard's ecosystems and nity through the coordinated implementation of nature-based as.	
	Wetlands are of particular importance as carbon sinks, for species diversity, flood control, water quality, etc. To strengthen their protection the Conservation Commission could: Update the Harvard Wetlands Protection Bylaw utilizing the work in other area towns, including the consulting taking place in Bolton/Clinton as a result of the Apple Country Natural Climate Solutions Project When permitting consider present and fluctuating conditions not reflected in typical data sources, such as Extreme Precipitation Analysis, by utilizing the most up-to-date data available for precipitation, location of floodplains and wetlands, and stream stats. Proactively document changing conditions for input to regional and Statewide mapping of floodplains, wetlands and biodiversity Increase protection within jurisdictional wetland buffer zones Educate and advise residents on the management of private land near/in wetlands (The Apple Country report prepared a self-guided educational tour that could be promoted or offered as a guided walk.) Work with Department of Public Works to protect wetlands by managing road runoff, designing and maintaining BMPs, assessing culverts and improving as needed, reducing impacts on wetlands surrounding the transfer station, etc.	

Goals and	Accept/Reject/Modify?	
2. Impr	ove land management to increase resilience and biodiversity Invasive plant and insect management: Continue existing programs for Bare Hill Pond and on	
	Town conservation land	
	 Expand to other municipally controlled land, especially roadsides where invasives are spread and introduced to 	
	adjacent land and waterways	2011
	 Educate and provide resources to residents to manage invasives on private land 	
0	Improve soil health	
	 Educate, minimize disturbance and implement best 	
	management practices to improve soils on agricultural land, town-owned turf, and residential properties.	1 1 1 - 12
0	Increase and improve habitat for pollinators and beneficial insects with protection and cultivation of native plants.	
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Goal	s and Priority Actions	Accept/Reject/Modify?
Natu	iral Resources	
	Use Goal: The Town's plans, policies, bylaws, and regulations encourage nable land use and development.	
1.	In the process of rewriting the Protective (Zoning) Bylaw, the Planning Board will ensure that the revised Bylaw includes a full range of provisions to develop local resilience and mitigation (carbon reduction) in line with local and state goals.	
2.	Include more zoning districts and development types that are sustainable and resilient smart growth models; remove or replace provisions that are not in line with this framework.	
3.	Educate and inform the public about sustainable land use patterns and planning practices and why they have better environmental, social, and fiscal outcomes.	
4.	Pass an updated Open Space Residential Development Bylaw that promotes open space and natural resource protection and also meets resilience needs by providing housing options to increase diversity of housing stock.	
5.	Include climate change and sustainability as a consideration in all future Planning Board decisions and bylaw proposals.	
6.	Ensure land use and transportation planning are coordinated as their consequent impacts are interlinked.	

Goals	and Priority Actions	Accept/Reject/Modify?
Natu	ral Resources	
	ntial Goal: Reduce the climate impact of our homes and yards on the nvironment.	
2. 3.	Significantly reduce food waste amongst residents through composting, "buy local," and changes to consumption practices. Provide residents with information on sustainable practices for lawn care, landscaping, tree care, and invasive species management. Encourage the conversion of lawn care equipment from gas-powered to electric.	

Sould Citle Company

Worcester, Mass. July 1, 1977 at 12:30 P.M.

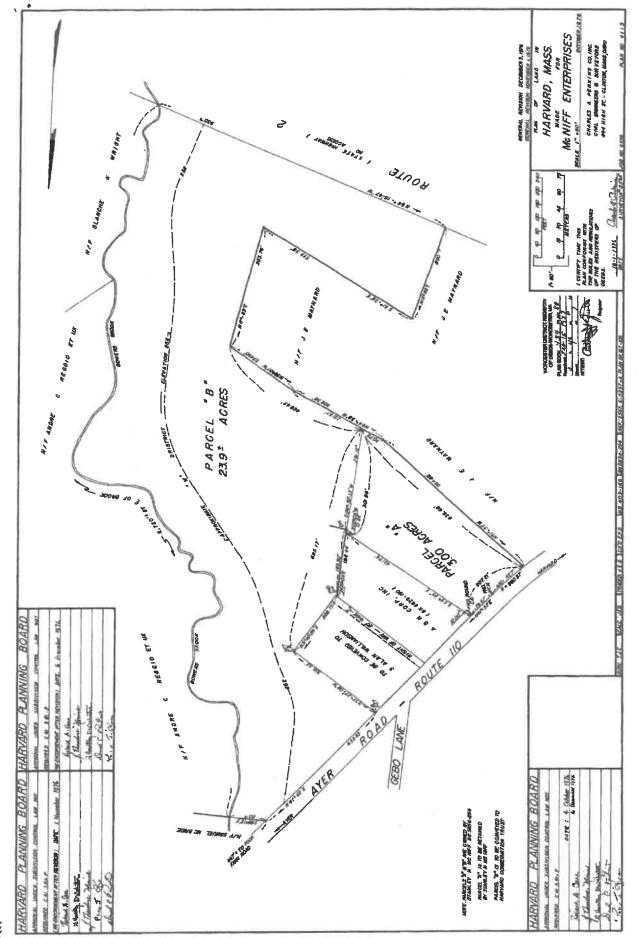
ords, as index ess than 90	Trancis P. Coolidge et al Trusties of Harvard Conservation Trust Inhahitants of the Town of Harvard	June 29, 1977 and recorded in said Registry of Deeds July 1, 1977 No. 27362 is in	INHABITANTS OF THE TOWN OF HARVARD	Right to use for all purposes which private and public ways are used in the Town of Harvard, the Right of Way 20° wide as shown on Plan in Book 434. Plan ss.		
From an abstract p Worcester District I The record title to	Francis to Inhahita	dated June 29 Instrument No.	and free from all a	Right to use for al		

By: COULD TITLE COMPANY

By: Trust

Abstract for the foregoing report prepared and certified by

A Trust under a Declaration dated March 6, 1973



Re: Dog training at Stone field

R Mandell <rmandell@verizon.net>

Thu 06/09/22 10:52 PM

To: mwsisson4@gmail.com < mwsisson4@gmail.com >;Liz Allard < lallard@harvard-ma.gov>

Thank you both for your efforts and assistance! I checked out the Stone land today and it will work beautifully for our training. The cover is a bit tall right now so we'll wait until after it has been mowed. Thank you so much for protecting these open space resources for the town.

I've appended our request to the Commission.

-Roseann	

June 9, 2022

Conservation Commission Town of Harvard MA

Our group would like permission to use the Stone land field for instruction in AKC search and rescue tracking training. There would be no more than 8 handlers, each with one dog. Dogs are always on lead, and only one or two dogs work at a time. No whistles or noise making devices are used. There is minimal impact on the land as the dog and handler walk through the field. Nothing is left on site.

We request one training day per month from June through October on Tuesday mornings, 8:30am-noon, and would like to begin after the field is mowed in June. The requested dates are either June 21 or June 28, July 19, August 16, September 20, October 18.

Thank you for your consideration.

Roseann Mandell Yankee Golden Retriever Club Tracking Committee

----Original Message----

From: Margaret Sisson < mwsisson4@gmail.com>

To: Liz Allard lallard@harvard-ma.gov Cc: R Mandell <rmandell@verizon.net> Sent: Thu. Jun 9, 2022 4:24 pm Subject: Dog training at Stone field

I recontacted Roseann Mandell and she's good with using the Stone land starting in late June after first mowing and then periodically on Tuesday mornings through October as previously proposed. I also contacted Mike Hampson who said it would be fine with him. Roseann asked if she needed a permission letter, which she offered to pick up. I didn't think to answer that, but yes, once the start date is determined, if you Roseann can send in a few sentences with the dates, times, numbers of people and activity, then we can give you a permission letter from the Commission. Thanks,

Wendy-

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DRAFT HARVARD CONSERVATION COMMISSION **MINUTES OF MEETING APRIL 21, 2022**

Chair Don Ritchie called the meeting to order at 7:04pm, virtually, pursuant to Chapter 22 of the Acts of 2022, An Act Relative to Extending Certain COVID-19 Measures Adopted during the State of Emergency, and signed into law on February 15, 2022, under MGL Chapter 131 §40 Wetland Protection Act and Code of the Town of Harvard Chapter 119 Wetland Protection Bylaw

Members Present: Don Ritchie, Wendy Sisson, Paul Willard, Jaye Waldron, Joanne Ward, Jim Burns, Mark Shaw and Eve Wittenberg (Associate Member)

Others Present: Liz Allard (Land Use Boards Administrator/Conservation Agent), Bruce Ringwall (GPR, Inc.), Lou Russo (Wheeler Realty Trust), Marty Green (Harvard Press) and Brian Cook (Planning Board Master Plan Representative)

Request to Amend Order of Conditions - 74 Poor Farm Road, DEP#177-710, Harvard#0122-01

Bruce Ringwall, of GPR, Inc., explained the owner and builder decided to move the previously approved detached barn to be attached to the existing garage. The site has been reviewed with the Conservation Agent to determine edge of wetland and agree to the buffer zones. The revised barn will be reduced in size from 38'x40' to 24'x28', and still provides for a drip edge. Per the Wetland Protection Bylaw Regulations, the Commission must determine if the amendment to the plan requires the re-opening of the public hearing or can be granted as a De Minimus change. After briefly discussing, Jaye Waldron made a motion to require the re-opening of the hearing for the amendment to the site plan. Wendy Sisson seconded the motion. The vote was unanimously in favor of the motion by a roll call, Jim Burns, aye; Jaye Waldron, aye; Joanne Ward, aye; Paul Willard, aye; Mark Shaw, aye; Wendy Sisson, aye and Don Ritchie.

Ratify Emergency Certification – 44 Old Littleton Road

Liz Allard stated the Emergency Certification (EC) recently issued was for a clogged foundation drain that was causing water to enter the basement of the dwelling. The drain daylights into the existing stream that crosses under the driveway and is in poor quality. The EC allows for a new headwall to be installed and removal of the existing flexible line in the stream. Jim Burns made a motion ratifying the Emergency Certification issued for 44 Old Littleton Road. Paul Willard seconded the motion. The vote was unanimously in favor of the motion by a roll call, Jim Burns, aye; Jaye Waldron, aye; Paul Willard, aye; Wendy Sisson, aye and Don Ritchie. NOTE: Joanne Ward and Mark Shaw were not able to vote due to technical issues.

Land Stewardship Update Tripp Land - Trails & Parking

Wendy Sisson stated Harvard Conservation Trust (HCT) has purchased the New England Power Company land now referred to as the Eastern Greenway. Access to this corridor of land will be through the Townowned land known as the Tripp land, which makes a very good connection. There has been encroachment on the Tripp land, as it appears the abutter was using it as a wood lot, which has been resolved. HCT has requested signage at the trailhead. Ms. Sisson suggested one of the standard brown conservation signs, with one board stating Harvard Conservation Land, a second with Tripp Land and then a third board with Eastern Greenway and HCT. The Commission was agreeable to this request.

Continuation of a Request to Amend the Order of Conditions - Luciano Manganella, 175 Littleton County Road, DEP#177-694. Opened at 7:30pm

Notice of Intent Hearing - Yvonne Chern, 203 Ayer Road, Harvard#0322-01. Opened at 7:31pm

Approve Minutes

Minutes were not available for approval this evening.

Harvard Climate Initiative Committee Earth Day Show & Tell Around Town Participation Reminder Liz Allard reminded the members of their commitment to participate in the Earth Day Show & Tell next Saturday. Wendy Sisson has gathered a significant amount of information from the Conservation office to use during this event.

Pine Hill Village Update

The Commission discussed the affect lighting has on wetlands and its environment, particular wildlife habitat. It was agreed to request the developer install a lower luminary in the first two light posts along the roadway within the development.

Adjournment

Jaye Waldron made a motion to adjourn the meeting at 8:03pm. Jim Burns seconded the motion. The vote was unanimously in favor of the motion by a roll call, Jim Burns, aye; Jaye Waldron, aye; Joanne Ward, aye; Paul Willard, aye; Mark Shaw, aye; Wendy Sisson, aye and Don Ritchie, aye.

Respectfully submitted,

Liz Allard, Land Use Administrator/ Conservation Agent

EXHIBITS & OTHER DOCUMENTS

Conservation Commission Agenda, dated April 21, 2022

 Commercial Development Special Permit prepared for Yvonne Chern, JOB 211009, prepared by GPR, Inc., dated March 2022

Harvard Conservation Commission Continuation of a Request to Amend the Order of Conditions Hearing Luciano Manganella, 175 Littleton County Road, DEP#177-694, Harvard#0820-04 April 21, 2022 The public hearing was opened at 7:30pm by Acting Chair Wendy Sisson under MGL Chapter 131 §40 Wetland Protection Act and the Code of the Town of Harvard Chapter 119 Wetland Protection Bylaw virtually, pursuant to Chapter 22 of the Acts of 2022, An Act Relative to Extending Certain COVID-19 Measures Adopted during the State of Emergency, and signed into law on February 15, 2022. Members Present (and able to vote on this application): Don Ritchie, Wendy Sisson, Joanne Ward and Jim Burns Others Present: Liz Allard (Land Use Administrator/Conservation Agent), Paul Willard, Jaye Waldron, Mark Shaw and Eve Wittenberg (Associate Member) This hearing was continued from April 7, 2022 for a Request to Amend the Order of Conditions filed on behalf of Luciano Manganella to revise the utility connections to a single-family dwelling with temporary impacts to the wetland resource area and the 100' wetland buffer zone at 175 Littleton County Road, Harvard. With no word as of yet from the Natural Heritage and Endanger Species Program, Wendy Sisson made a motion to continue the hearing to May 5, 2022 at 7:25pm. Joanne Ward seconded the motion. The vote was unanimously in favor of the motion by a roll call, Joanne Ward, aye; Mark Shaw, aye; Wendy Sisson, aye and Don Ritchie, aye. Respectfully submitted, Liz Allard, Land Use Administrator/ **Conservation Agent**

159 160	Harvard Conservation Commission Notice of Intent Hearing
161 162 163	Yvonne Chern, 203 Ayer Road, Harvard#0322-01 April 21, 2022
164 165 166 167	The public hearing was opened at 7:30pm by Acting Chair Wendy Sisson under MGL Chapter 131 §40 Wetland Protection Act and the Code of the Town of Harvard Chapter 119 Wetland Protection Bylaw virtually, pursuant to Chapter 22 of the Acts of 2022, An Act Relative to Extending Certain COVID-19 Measures Adopted during the State of Emergency, and signed into law on February 15, 2022.
168 169 170	Members Present: Don Ritchie, Wendy Sisson, Paul Willard, Jaye Waldron, Joanne Ward, Jim Burns, Mark Shaw and Eve Wittenberg (Associate Member)
171 172 173	Others Present: Liz Allard (Land Use Administrator/Conservation Agent), Bruce Ringwall (GPR, Inc.) and Lou Russo
174 175 176 177 178	This hearing was continued from April 7, 2022 for a Notice of Intent filed on behalf of Yvonne Chern for the construction of commercial structures with associated parking, grading and drainage within the 100' wetland buffer zone at 203 Ayer Road, Harvard.
179 180 181 182 183 184 185 186	Bruce Ringwall, GPR, Inc., stated the proposals for peer review were due today, but have not received any responses as of yet. Mr. Ringwall detailed the previously discussed existing wetlands, replication, structures and drainage. The entire development area is just under eight acres and is being devolved under the Protective Bylaw Ayer Road Village-Special Permit (ARV-SP). Stormwater will drain towards the existing wetland area. Although the use of the remaining two structures has not been determined the drainage calculations includes stormwater from those proposed facilities, which includes roof runoff and surface water. The stormwater facilities as design meet the criteria of reducing rate and volume by 5%. Currently the badminton facility is the only structure to be constructed once approve.
187 188 189 190 191 192 193 194 195	Jim Burns asked what type of maintenance is required for these types of drainage systems. Mr. Ringwall stated the underground structure, behind the badminton building, is designed to capture roof run off that typically would not have sediment or silt in it. The stormwater report contains a full Operations & Maintenance plan. Jaye Waldron asked if the other portion of the property is developed differently would the stormwater be different. Mr. Ringwall stated if the buildings or the parking under the ARV-SP change the applicant would have to back to the Planning Board for those changes to confirm the impervious areas are similar and not larger; if larger additional basins would be needed.
196 197 198 199 200 201	With a consultant not yet engaged for peer review Wendy Sisson made a motion to continue the hearing to May 5, 2022 at 7:40pm. Jim Burns seconded the motion. The vote was unanimously in favor of the motion by a roll call, Jim Burns, aye; Jaye Waldron, aye; Joanne Ward, aye; Paul Willard, aye; Mark Shaw, aye; Wendy Sisson, aye and Don Ritchie, aye.
202 203 204	Respectfully submitted,
205 206 207	Liz Allard, Land Use Administrator/ Conservation Agent

MOORE LUMBER & HARDWARE 22 WEST MAIN STREET **AYER, MA 01432** FAX (978)772-0396

PHONE: (978) 772-0900 WWW.MOORELUMBER.COM

HARVARD HIGHWAY DEPT. HARVARD HIGHWAY

47 DEPOT RD

HARVARD

MA 01451

SHIP JIM LEE

110 EAST BARE HILL ROAD

HARVARD

MA 01451

cust No: 29550

APPLY TO: TRIPP

TERMS: 5% 10th Net EOM

DATE: 5/31/22

TIME: 8:11

CLERK: 22

TERMINAL: 603

SALESPERSON: 81 SPENCER L

TAX: NON NON TAXABLE SALE

REFERENCE: PO # TRIPP ORDR # 37969

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ORDER: 379698

INVOICE: 379698/1

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2	4	EA	21012PT	2x10-12' #1 PRESSURE TREATED	4		36.33 /EA		
3	3	EΑ	4412PT	4x4-12' #1 PRESSURE TREATED GC	3		31.42 /EA		
4	2	EΑ	448PT	4x4-8' #1 PRESSURE TREATED GC	2		22.78 /EA	45.56	N
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TAXABLE NON-TAXABLE SUBTOTAL

** AMOUNT CHARGED TO STORE ACCOUNT ** 16.68

333.62

0.00 TAX AMOUNT 333.62 TOTAL

0.00

333.62

333.62

TOT WT: 0.00

Received By

INVOICE

Customer # 51492

Service Address

Printed 6/14/2022

Gatsby Grounds Co., Inc. (978) 582-1594 (877) 842-8729 **Harvard Conservation Commission** Still River Rd Harvard, MA

http://www.gatsbygrounds.com

Invoice #: 138770

Tax: \$0.00

Please Remit: \$1,950.00

Cell. (978) 660-8181

Vegetation Control

1,950.00

Vegetation Control

Apply a non-selective herbicide to the 6 Acres of field that the conservation commission has outlined to be sprayed to kill all vegetation growing in that

Please note that this product is non-selective.

Wendy Sisson will be notified at 978-660-8181 prior to application.

It was indicated that the Commission would be applying seed themselves, please note that you must wait at least 10 days (after spray) before reseeding.

Payment terms as follows:

Payment is due 30 days from service date. Invoice will be mailed the day after the service is completed.

1.00

1.00

For your convenience, we have added a new payment option! You can now pay online at www.gatsbygrounds.com.

Gatsby Grounds Co., Inc. P.O. Box 72 Lunenburg, MA 01462

Bill To Address

Harvard Conservation Commission -13 Ayer Rd Harvard, MA 01451

> Gatsby Grounds Co., Inc. P.O. Box 72 Lunenburg, MA 01462

			ds.com

Amount

PLEASE INDICATE PAYMENT AMOUNT & CHECK NUMBER

Charge My:	■ Alliann	DISCOVER	□
Card #:			Security Code:

Job # 337302 Customer # 51492

Check

Tax: \$0.00

Please Remit: \$1,950.00

Printed 6/14/2022

Invoice #: 138770

Bare Hill Pond Watershed Management Committee Town of Harvard Harvard, MA 01451

June 6, 2022

Conservation Commission Town of Harvard Town Hall Harvard, MA 01451

Re: Summary of Summer Low Volume Pumping Plan

Dear Commissioners:

Thank you for taking the time to consider the proposal to conduct a trial of low volume pumping this Summer under the existing Order of Conditions. As discussed at the June 2 meeting, the Bare Hill Pond Watershed Management Committee plans to operate the pump at a low speed 15Hz (with an option to increase it up to 20Hz during periods of significant rainfall) to remove water from below 10 feet in lieu of surface water flowing over the Dam. This level of pumping is substantially less than the pumping during the draw down process (55Hz). The pumping would begin on June 20th and run until August 19th. If data indicates that it is providing a benefit, and there appears to be a benefit to continuing until mid-September, the Committee will advise the Commission and seek approval of an extension.

The pumping at this reduced rate will be stopped if the Pond level decreases below its normal level. The level of the Pond will be monitored regularly. When the pump is operated at this rate in December and January, the Pond maintains its level. When the pump operates at its full rate (55Hz) it drops 1-1.5" per day so that it will be relatively easy to ensure that the Pond stays at its normal height.

Attached is a schedule of monitoring of dissolved oxygen, temperature and phosphorous to be conducted by Wendy Gendron to help us determine if there any concerns and whether the low volume withdrawal is providing a benefit or has no effect.

Sincerely,

Bruce A. Leicher

Chair, Bare Hill Pond Watershed Management Committee

Cc: Wendy Gendron, ARS

Bare Hill Pond 2022 Monitoring

Due to the increase and severity of algal blooms in Bare Hill Pond, Aquatic Restoration Consulting, LLC (ARC) has expanded the annual water quality monitoring in the lake. During 2022, ARC will perform the following:

- Monthly (April-October) temperature and dissolved oxygen (DO) profiles at five locations (Figure 1)
- Monthly water quality nutrient sampling:
 - o Surface grab sampling at two locations (BHP-1 & BHP-2) for total phosphorus (TP), dissolved phosphorus (DP) and total suspended solids (TSS);
 - Bottom grab sampling at four locations (BHP-2, BHP-3, BHP-4 & BHP-5). Samples at BHP-2 are analyzed for TP, DP and TSS analysis and the remaining stations are analyzed for TP only.
- Phytoplankton and zooplankton sampling at one location (BHP-2) once during the months of June, July, August, September, and October.

ARC will use the temperature and DO profiles to ensure that the summer pumping does not cause a significant temperature increase in the bottom water or destratification. ARC will use the additional bottom TP samples and temp/DO profiles at the added sample locations (BHP-3, 4 & 5) to assess whether the sediment in these areas are likely to contribute to internal phosphorus loading and may require mitigation.

OFFICE OF THE

CONSERVATION COMMISSION

13 AYER ROAD HARVARD, MA 01451

978-456-4100 EXT.321

www.harvard-ma.gov



June 16, 2022

Harvard Select Board 13 Ayer Road Harvard, MA 01451

Re: Japanese knotweed

Dear Board members,

We have all become aware of the fast-growing invasive Japanese knotweed on the sides of our roads. At this point it is no longer in a handful of sites but progressively occupying sites all over Town. It is a problem for the Department of Public Works (DPW) because it impedes sightlines along roads and can be a safety hazard. It is also an ecological hazard because it is spreading from roadsides and culverts into wetlands where it can dominate and push out established native vegetation. Japanese knotweed, which is particularly rampant in the northeastern United States (US) and Canada, has become a scourge around the globe and reports on its economic impact by devaluing property (its roots can penetrate concrete) are impressive. According to a 2019 report, Britain spends \$250 million annually on control and Europe 5 billion Euros. Like other invasives, it flourishes after disturbance of soil which is why it is seen on construction sites and along roadways. It is commonly introduced through fill and equipment and then spreads by seed and vegetatively, growing from intact and broken pieces of stout rhizomes. It grows quickly up to 13 feet and can tolerate sun, shade, high temperatures, road salt, drought and flooding.

Japanese knotweed it notoriously hard to control, unless mowed weekly like a lawn. However, mowing actually spreads the plant, as it reaches out with its underground rhizomes in response to being cut. Except for individual new plants, digging is also ineffective, as the plant can grow from broken pieces of rhizome and huge craters would be left after removing sufficient soil. Disposal of plant material and associated soil is another significant problem. Smothering with wire mesh or heavy plastic can be accomplished with persistent effort, but is not feasible along roadways.

The Conservation Commission has been struggling with stands of Japanese knotweed on Conservation land for the past ten years and has learned that control requires a concerted effort and annual attention. The most effective method is early-season mowing followed by focused herbicide treatment at the time of flowering. Professionals have various techniques to administer herbicide to the plant in a controlled fashion. Biocontrol is being actively pursued and after years of research and testing, the release of a sap-sucking psyllid, A itadori, was approved for release in the US in 2020. This insect, native to Japan, has been previously introduced in the United Kingdom and Canada, but has failed to establish large enough populations to affect Japanese knotweed there.

Given the current situation, the concern of townspeople, and the potential of slowing the spread Japanese knotweed in Harvard before it is over-run, the Conservation Commission recommends that a program be developed to reduce the spread of Japanese knotweed and to control existing stands along

our roadways. In addition to education of Town staff and the public and potential local regulation, the Commission suggests that under DPW leadership, a company be engaged to develop and implement a roadside treatment plan for Japanese knotweed in Harvard. There are large businesses with years of experience and trained crews that specialize in this work.

On behalf of the Commission,

