

Posted May 4, 2021 @ 2:15pm by LA

**TOWN OF HARVARD  
CONSERVATION COMMISSION AGENDA  
THURSDAY MAY 6, 2021 @7:00PM**

The Conservation Commission meeting is being held virtually in accordance with the Governor's Executive Order Suspending Certain Provisions of the Open Meeting Law, G.L.c.30A. S.20. Interested individuals can listen in and participate by phone and/or online by following the link and phone # below:

UpperTH ProWebinar is inviting you to a scheduled Zoom meeting.

**Join Zoom Meeting**

<https://us02web.zoom.us/j/87887789284?pwd=RDFnN1p4VVp2T1V4L1QxUkY0VkdRQQT09>

**Meeting ID: 878 8778 9284**

**Passcode: 330783**

**One tap mobile**

**+19294362866,,87887789284# US (New York)**

**+13017158592,,87887789284# US (Washington DC)**

**Dial by your location**

**+1 929 436 2866 US (New York)**

**+1 301 715 8592 US (Washington DC)**

**Meeting ID: 878 8778 9284**

**Find your local number: <https://us02web.zoom.us/j/87887789284>**

**New Business:**

1. Interview Interested Volunteer
  - Brian Sage (7:00pm)
  - Dan Tracey (7:10pm)
  - Bob Douglas (7:20pm)
2. Board of Health Request to Support Application for an Alternative Mosquito Management Plan to Opt-Out of Spraying Conducted by the State
3. Draft Priority Habitat Map of rare Species Public Comment May 3 – July 3
4. Wetland Violations
  - 96 Ayer Road
  - 129 Poor Farm Road
  - 14 Park Lane
  - 71 Lancaster County Road
  - 232 Still River Road
  - 28 Shaker Road
  - 193 Old Littleton Road
  - 320 Ayer Road
  - 25 Clinton Shore Drive
5. Land Stewardship Subcommittee Updates:
  - Bare Hill Wildlife Sanctuary boardwalk, Small Nature trail, parking areas, re-blazing, signs
  - Allocation of \$2500.00 of Community Preservation Act Invasive Management Funds for Summer Intern
  - Re-appointment of Jim Adelson & Peter VonConta
6. Request to Place Educational Signs for the Apple Country Natural Climate Solutions Site Tour
7. Zoning Board of Appeals Request for Comments – 24 Mill Road
8. Approve Minutes
9. Approve Invoices/Reimbursement
  - Bare Hill Pond 2021 Road Dues - \$200.00
  - Wendy Sisson - \$32.98

**Public Hearings:**

7:30pm Continuation of a Notice of Intent Hearing – Harvard Department of Public Works,

**Harvard#0321-04**, the bridge crossing of Bower's Brook between 6 and 22 Old Mill Road for the replacement of traffic safety features and minor patching along the substructure within the resource area and its 100' riverfront area at the bridge crossing of Bower's Brook between 6 and 22 Old Mill Road, Harvard.

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.

7:35pm **Continuation of a Request for Determination of Applicability Hearing – B&C Associates, Inc., 169 Littleton County Road, Harvard#0121-03**, for the removal and management of invasive plant species within the 100' buffer zone of a wetland resource area – ***Requested Waiver***

8:00pm **Continuation of the Revisions to Code of Harvard Chapter 147 Harvard Wetland Bylaw Regulations**

8:10pm **Request for Determination of Applicability Hearing – Toby Bazarnick, 12 Houghton Lane, Harvard#0421-01**, for the extension of an existing deck and constructing a 12'x15' screened porch within the 200' riverfront area

8:25pm **Notice of Intent Hearing – Collen Yout, 24 Mill Road, Harvard#0421-02**, for the construction of an addition and covered patio within the 200' riverfront area

8:45pm **Notice of Intent Hearing - of Alma Gregory & Kristiina Sorensen, 23 Peninsula Road, Harvard#0421-03**, for the replacement of existing steps and railings with new stairs and deck platform, the addition of boulder steps, stone pavers, landscape walls, new landscaping throughout, extension of an existing shed, removal of nine trees and replacing the existing dock with a bigger prefab pier structure

**Old Business:**

1. Pine Hill Village Request to Install Foundations within the Sunrise Neighborhood

**NEXT MEETING: MAY 20, 2021**

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.

# TOWN OF HARVARD

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## VOLUNTEER APPLICATION (12/02/2008)



Thank you for your interest in serving the town of Harvard. Please complete this application to be kept informed of volunteer opportunities and/or to apply for a specific position or fill a vacancy when one occurs. You may be also be contacted based on your stated areas of interest for other opportunities to volunteer. Your application will be kept on file for 3 years.

**Date of Application:** April 14, 2021

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**Applicant Information:**

**Name:** Brian Sage

**Address:** 27 Peninsula Rd Harvard, MA 01451

**Home/Work Phone #** 860-575-6894      **Mobile Phone#** 860-575-6894

**Email Address:** brian@sageartworks.com

**Indicate below which Board(s) or Committee(s) are of interest to you:**

Conservation Commission

**Have you previously been a member of a Board, Committee or Commission (either in Harvard or elsewhere)?** If so, please list the Board name and your approximate dates of service:

**Do you have any time restrictions?**                      YES                       NO

**Are you a registered voter?**                               YES                      NO

**Please list your present occupation and employer (you may also attach your résumé or CV)**  
resume

**Do you, your spouse, or your employer have any current or potential business relationship with the Town of Harvard that could create a conflict of interest? (If YES, please describe the possible conflict)** NA

**Please outline any education, special training or other areas of interest you have that may be relevant to the appointment sought.**

Outdoorsman (National Outdoor Leadership School graduate)

Natural History

Hunting and Fishing

Foraging

Wildlife Artist (would like to help generate interest in Harvard Conservation through the arts)

Received by Town of Harvard

Return to: Town Of Harvard, 13 Ayer Road, Harvard MA 01451 or email [jdoucet@harvard.ma.us](mailto:jdoucet@harvard.ma.us)

## **BRIAN SAGE**

27 Peninsula Rd  
Harvard, MA 01451  
(860) 575-6894  
brian@sageartworks.com  
[www.sageartworks.com](http://www.sageartworks.com)  
[www.bsagedesign.com](http://www.bsagedesign.com)

## **EDUCATION**

MFA Lesley Art and Design, Cambridge, MA  
BFA Studio Art, Rollins College, Winter Park, FL  
National Outdoor Leadership School, Lander, WY

## **EXPERIENCE**

Art and Design Teacher, Catholic Memorial High School, West Roxbury, MA — 2019-Present

Art Teacher, Artists For Humanity, Boston, MA — 2019  
Landscape painting instructor for all levels working in oil and acrylics.

Program Director, Midway Gallery, Boston, MA — 2016  
Coordinate and support arts and performance programming of exhibitions and events in collaboration with numerous artists, art organizations, universities, and community groups.

Production Designer, Gauntlet Films, Boston, MA — 2015-Present  
Concept, Design, and fabrication of various specialized set props for film production.

Designer, Art of the Event Inc, Wilmington, MA — 2015-2018  
Special projects manager for private and corporate events. Responsibilities include concept development, design, team management, production implementation, and installation.

Gallery Owner, B. Sage Studio & Gallery, Newport, RI — 2011-2015  
Managed gallery as working studio and space for supporting programming and instruction, including seasonal Landscape Painting and Still Life Painting workshops.

## **SOLO AND GROUP EXHIBITIONS**

2019 33rd Annual Omer T. Lassonde Juried Exhibition, Portsmouth, NH  
2019 Full Spectrum Fort Point Juried Exhibition, Boston, MA  
2019 Rewilding The Grid, Raizes Gallery, Cambridge, MA

- 2018 In The Future, The Gallery at Atlantic Wharf, Boston, MA
- 2018 Something You \_\_\_ Is Almost Gone, VanDernoot Gallery, Cambridge, MA
- 2017 Performativity of Mortuary Rituals, Decentered Gallery, Puebla, Mexico
- 2016 New Member Show, Upper Gallery Copley Society, Boston, MA
- 2014 New Artist Show, Wyland Gallery, Las Vegas, NV
- 2013 Think Outside the Box, Objects and Images Gallery, Bronxville, NY
- 2012 New Artist Show, Westport River Gallery, Westport, CT

## **HONORS AND AWARDS**

- 2019 Guest Speaker, BC High School AP Awards Ceremony. Dorchester, MA
- 2018 Visiting Artist Critic, Senior Crit Day, Lesley University, Cambridge, MA
- 2017 Visiting Artist Critic, Junior Crit Day, Lesley University, Cambridge, MA
- 2017 Art Residency, Arquetopia Foundation Puebla, Mexico (October 5- November 9)
- 2016 MFA in Visual Arts Strauch-Mosse Scholarship Lesley University, Cambridge, MA
- 2015 Copley Society of Art, Artist Membership
- 2014 Greater West Hampton, NY 42nd Annual Art Show, Outstanding New Artist
- 2013 Ben Markus, *365 Surfboards*, MVP books p.272
- 2013 Under The Oaks Art Show, Vero Beach, Jean Nagy Memorial Award
- 2005 Art by the Sea Vero Beach Museum of Art, Best in Show
- 2004 Art by the Sea Vero Beach Museum of Art, First Place, Oil Painting
- 2004 AE Bean Backus Museum Show, First Place, Oil Painting



# TOWN OF HARVARD

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## VOLUNTEER APPLICATION (12/02/2008)



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**Date of Application:** April 30, 2021

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### **Applicant Information:**

**Name:** Daniel Tracey

**Address:** 149 Shaker Rd Harvard, MA 01451

**Home/Work Phone #** (978) 772-0285      **Mobile Phone#** (978) 235-6237

**Email Address:** detracey@gmail.com

### **Indicate below which Board(s) or Committee(s) are of interest to you:**

Conservation Commission

**Have you previously been a member of a Board, Committee or Commission** (either in Harvard or elsewhere)? If so, please list the Board name and your approximate dates of service:

No

**Do you have any time restrictions?**       YES      NO

**Are you a registered voter?**       YES      NO

**Please list your present occupation and employer** (you may also attach your résumé or CV)

Retired; Part-time self-employed consultant

**Do you, your spouse, or your employer have any current or potential business relationship with the Town of Harvard that could create a conflict of interest?** (If YES, please describe the possible conflict) No

**Please outline any education, special training or other areas of interest you have that may be relevant to the appointment sought.**

PhD in Biology with 30-year career in pharmaceutical research

Volunteered for the past 12 years at the Wildlife Clinic at the Tufts Veterinary School

Completed an 11-week Mass Audubon field naturalist course in 2018

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# TOWN OF HARVARD

## VOLUNTEER APPLICATION (12/02/2008)



Thank you for your interest in serving the town of Harvard. Please complete this application to be kept informed of volunteer opportunities and/or to apply for a specific position or fill a vacancy when one occurs. You may be also be contacted based on your stated areas of interest for other opportunities to volunteer. Your application will be kept on file for 3 years.

**Date of Application:** 4/30/21

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**Applicant Information:**

**Name:** Robert Douglas

**Address:** 163 Stow Road, Harvard, MA 01451

**Home/Work Phone #** 978-623-8630 **Mobile Phone#** 978-482-6639

**Email Address:** drbobdouglas@yahoo.com

**Indicate below which Board(s) or Committee(s) are of interest to you:**

### Conservation

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**Have you previously been a member of a Board, Committee or Commission (either in Harvard or elsewhere)?** If so, please list the Board name and your approximate dates of service:

Inner City Outings, Sierra Club "90s, Diabetes Research Institute Foundation "90s; Bare Hill Pond Committee "03?; Harvard Cons trust, "20.

**Do you have any time restrictions?**

YES

NO

**Are you a registered voter?**

YES

NO

**Please list your present occupation and employer (you may also attach your résumé or CV)**

Town of Andover Conservation Director

**Do you, your spouse, or your employer have any current or potential business relationship with the Town of Harvard that could create a conflict of interest?** (If YES, please describe the possible conflict) No

**Please outline any education, special training or other areas of interest you have that may be relevant to the appointment sought.**

Conservation scientist. Please see additional information sent seperatly.

Received by Town of Harvard

Processed by on

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In Andover, I have provided opportunities to involve the public in the responsible management of Conservation land. In Harvard, I have hosted Vernal Pool walks with a local church group and the Conservation Trust, and last year I sponsored a Bromfield student who assisted with the placement of wildlife cameras on Conservation land as part of a Deer Management study. I have participated in educational hikes sponsored by the Commission's Stewardship Subcommittee, and I would enjoy assisting with these kinds of activities as a Commission member.

As Chair of Harvard's Deer Management Subcommittee since 2018, I have become intimately familiar with this part of the Commission's work. Our subcommittee has conducted research, consulted with experts and communicated with the public, including hosting public forums, publishing press articles and presenting reports, in addition to running the town's Deer Management Program, which finished its first season at the end of 2020. This position has given me extensive experience working with my fellow Harvard residents and finding solutions in a setting with diverse views, and I believe that the knowledge and skills I have acquired in this role would prove valuable to the Commission's work.

Please see below for a list of my educational and career accomplishments that pertain to conservation work.

Thank you for the opportunity to apply for this position. I look forward to my interview with you and to answering any questions you might have.

Sincerely,

Bob Douglas

### **Work experience:**

#### **Town of Andover – Conservation Director (15+ years):**

- Currently supervise over 200[+] staff, contractors and volunteers, including Conservation Overseers (80), Deer Management Volunteers (80) plus eagle scouts, church groups, contracted wetland scientists and engineers.
- Managed the writing and publishing of two Open Space & Recreation Plans
- Panelist at Massachusetts Association of Conservation Commissions Annual Meeting.
- Restored herring and other migrating fish runs by removing two old mill dams, coordinated permitting with several state and federal agencies.

**BOB DOUGLAS**  
**163 STOW RD, HARVARD, MASSACHUSETTS 01451**

Harvard Select Board  
13 Ayer Road  
Harvard, MA 01451

Dear Select Board Members,

Thank you for the opportunity to apply for a seat on the Harvard Conservation Commission. Environmental Science and Conservation have been my lifelong passion, the basis of my education and the focus of my career, and I would greatly value the opportunity to contribute to our town by serving on the Commission.

As the Director of Conservation for the town of Andover for over 15 years, I am intimately familiar with Conservation operations. I work with the Wetlands Protection Act, the guiding document for Massachusetts conservation, on a daily basis. I also have an understanding of the Clean Water Act and the Harvard town bylaws, which are integral to the Commission's work.

I have always been interested in the interaction between people and natural systems and the balance between development interests and the preservation of wildlife and habitat. In the environmental application process, I understand "both sides of the table." I have worked in industry for clients such as golf courses and power plants and as a professional wetland consultant for developers and homeowners seeking permits. I have also been a regulator and enforcer of wetland laws as a Conservation Agent for two Massachusetts municipalities. In this capacity, having both a conservation background and a knowledge of construction timelines and development practices has been very valuable to me in working with applicants and drafting permits. It has given me an appreciation of the needs of applicants, a sense of duty to safeguard our environment, and an ability to find common ground where these two interests are in balance.

As the land manager of Andover's 2000 acres of Conservation property, I believe I have achieved this balance through designating portions of land for a variety of recreational uses while safeguarding the environment. We have added access for passive recreational activities including a community garden, deer management, mountain biking, kayaking, hiking trails, birdwatching and other activities. We also have "no trail" areas that provide a protected refuge for wildlife, and this year we established a protected area for several endangered species of moths and turtles. We are working with state officials on a management plan for these areas, and we are educating the public about the importance of preserving them.

I believe that education is an important part of conservation and that, if people use, understand and connect with the land, they will appreciate it and protect it.

- Awarded two State "LAND" Grants for purchase of Town Conservation properties.
- Planned and constructed a Town Dog Park and a Community Garden on Conservation land. Both are tremendously popular with residents of Andover and the surrounding communities.
- Planned and built "Serio's Grove". A riverside camping area for Boy Scouts, Girl Scouts and other groups.

**Harvard Conservation Trust - Trustee**

**Town of Wilmington – Conservation Agent and Assistant Planner**

- Created public access site for the Wilmington Town Forest.

**LEC Environmental – Wetland Consultant.** Planned and conducted wetland delineations, fieldwork, drafted permit applications, and represented applicants at Conservation Commission project presentations.

**Nashua River Watershed Association –** Planned/conducted training and laboratory analysis for volunteer water sampling program. Hosted a Vernal Pool presentation at the Harvard Library.

**"Lady Rose" –** served as first mate on trans-Pacific sailing voyage from Panama to Australia.

**Miccosukee Tribe of Indians –** Managed water sampling program, deer and alligator surveys, prepared scientific data for legal cases. Conducted the *Miccosukee Everglades Study* on the 200,000 acres of Tribal lands. Co-authored the *Miccosukee Water Quality Standards* which have been recognized as state law.

**Turkey Point Nuclear Power Station - Environmental Specialist - NPDES** Permit and ground water sampling – managed one of the largest hatcheries of wild marine crocodiles in the USA.

**High School teacher, Miami –** Biology, Marine Biology, Physics

**Environmental Legal cases of note:**

**SOUTH FLA. WATER MANAGEMENT DIST. V. MICCOSUKEE TRIBE (02-626) 541 U.S. 95 (2004) 280 F.3d 1364**

Miami Everglades: Supported litigation to prevent sugar plantations from polluting Tribal lands. Presented in Federal court for a case that ultimately reached the US Supreme Court. Presented field data on phosphorus levels on a tribal reservation that showed the extent of pollution. Provided consultation for to the tribe's attorney (former US Attorney Dexter Lehtenin) and legal team in the courtroom.

**Town of Wilmington vs Robert Scorano**

Wilmington Wetlands: Supported litigation that appealed DEP's decision on filling in wetland. Appeal was successful, resulting in a landmark decision which disallowed filling a wetland in order to make setbacks on septic systems. Working with Town Counsel, provided expertise to DEP's Adjudicatory division. Prior to this decision, it had been legal to fill wetlands in order to allow septic systems to meet the required 50-foot setback.

**Douglas vs. Fox Realty Trust.**

Harvard Vernal Pools: Supported a successful appeal of DEP's decision to allow a developer to destroy the Historic "Boundary Oak" and partially fill a Stow Road vernal pool with listed species in it. (Harvard ConCom and Harvard Planning represented by Attorney Mark Lanza were parties to this case as well.)

**Education:**

University of Miami- B.A., Biology

EPA Clean Water Academy Atlanta – Graduate

UMass Keystone forestry training.

US Army Corps of Engineers – Wetland delineation

Massachusetts Association of Conservation Commissioners - Training (and later panelist)

## *Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

### INTRODUCTION

- Pursuant to M.G.L. Chapter 252, Section 2A, municipalities may opt out of spraying, including aerial or other mosquito control spraying, conducted by the State Reclamation and Mosquito Control Board (“SRMCB”). To opt out of any spraying conducted by the SRMCB, a municipality must have an alternative mosquito management plan (“Plan”) approved by the Executive Office of Energy and Environmental Affairs (“EEA”).
- Approval of a Plan allows a municipality to opt out of spraying (including both aerial or wide-area) conducted by the SRMCB under M.G.L. c. 252, Section 2A. It does not extend to any spraying conducted by a mosquito control project or district (“MCD”) of which a municipality may be a member. Any questions related to services provided by an MCD should be directed to its attention.
- A Plan must be approved in order for the SRMCB to recognize any municipality’s request to opt out of spraying.
- This process applies only to municipalities. Any other requests to opt out of spraying or exclude private property must be made in accordance with M.G.L. c. 252 or 333 CMR 13.00. More information on these options is available on the SRMCB website at <https://www.mass.gov/how-to/how-to-request-an-exclusion-or-opt-out-from-wide-area-pesticide-applications>.
- A Plan shall be effective from the date of approval through December 31<sup>st</sup> of the year in which it was approved.

### PROCESS

The following steps must be completed prior to submitting a Plan to EEA for its review:

1. The municipality must hold a meeting of the City Council or Select Board, at which a vote must be taken indicating the municipality’s intention to opt out of spraying (including aerial or other mosquito control spraying) conducted by the SRMCB.
  - a. This meeting should include input on the Plan from the local board of health and allow for public comment.
  - b. The vote should include the following:
    - i. The date and time of the public meeting
    - ii. That the board of health was consulted;
    - iii. That public comment was allowed;
    - iv. Whether the municipality is opting out of all spraying or only certain spray activities, such as aerial spraying. If a vote does not include that it is for a specific type of spraying, the vote will cover all spray activities conducted by the SRMCB under M.G.L. c. 252, Section 2A; and
    - v. That the vote to opt out will only be honored if **an alternative mosquito management plan** is submitted and approved by EEA.
2. The municipality must include a copy of the certified vote must be included as part of the application for approval of a Plan.
3. The municipality must complete this application for approval of a Plan and submit it to EEA at the following address: [EEAopt-out@mass.gov](mailto:EEAopt-out@mass.gov)
4. All applications must be received by **May 15<sup>th</sup>** of the year for which the request is being made.

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

**CONTACT INFORMATION**

Please provide contact information for your municipality:

- Town/City: Harvard
- County: Worcester
- If your municipality is currently a member of a Mosquito Control District or Project, please enter the Project/District Name:
- Point of contact:
  - Name: Timothy Bragan Title: Town Administrator
  - Email: tbragan@harvard.ma.us Phone: 978-456-4100
- **A copy of the certified vote** (must be submitted along with this application)

Is the person responsible for overseeing the work outlined in this plan different than the point of contact above?  Yes  No

If yes, please enter their information below:

- Point of contact:
  - Name: Title:
  - Email: Phone:

**MOSQUITO CONTROL SERVICES**

Who is providing services? Check all that apply:

MCD (If this box is checked, skip to the **MOSQUITO HABITAT** section on page 6)

Contractor

- Contractor name and contact information, if available:
- Number of staff to be provided: Full-time: Part-time: Contract:

Municipal Staff

- Number of staff to be provided: Full-time: 3 Part-time: 2 Contract:
- Description of staff roles, licenses held to perform work, etc.

Alison Flynn, Board of Health (BOH) Clerk; Ira Grossman, Health Agent, Registered Sanitarian; Timothy Kilhart, Department of Public Works (DPW) Director; Department of Public Works Staff.

**SERVICES TO BE PROVIDED**

Check off all that apply:

- Education, Outreach & Public education (REQUIRED)
- Source reduction (tire removals)
- Water Management/Ditch maintenance
- Larval mosquito control
- Larval mosquito surveillance
- Adult mosquito control
- Adult mosquito surveillance (species ID and populations counts only)



*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

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- Adult mosquito arbovirus testing (For EEE, WNV, etc.)**
- Research**
- Other (please list):**

**Comments:**

### EQUIPMENT

Equipment needed for mosquito management, to be provided by contractor or in-house (if any):

- Modified wetland equipment (Number:        and type:        )
- Larval control equipment (Number:        and type:        )
- ULV sprayers (Number:        and type:        )
- Vehicles (Number:        )
- Other (please describe):

### SOURCE REDUCTION

*If you plan to conduct tire removals or other methods of source reduction, please fill out the section below.*

The DPW is available to collect and dispose of old tires on the side of  
Please describe your program: the road.

What time frame during the year will this method be employed? Year-round.

**Comments:** The Select Board (SB) and BOH support an annual Townwide Cleanup in late-Spring to minimize trash and containers on the side of the road.

### WATER MANAGEMENT/DITCH MAINTENANCE

*If you plan to have a water management or ditch maintenance program, please fill out the section below, or skip ahead to the next section.*

Please check all that apply:

- Inland/freshwater habitats
- Saltmarsh/coastal habitats

Please describe your program:

The DPW cleans out catch basins and drop inlets using a clam shell bucket on a truck. Culverts, and inlet and outlet pipes are cleaned off with hand tools. Culverts are also flushed with a fire hose as necessary. Ditches are cleaned and shaped using mechanized equipment as needed. Areas of greatest need are prioritized and address first. The DPW continually re-evaluates the program, making any necessary adjustments.

Check off all planned maintenance types that apply:

- Culvert cleaning        ( Freshwater     Saltwater)
- Hand cleaning        ( Freshwater     Saltwater)
- Mechanized cleaning ( Freshwater     Saltwater)

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

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Stream flow improvement

Other (describe):

**Comments:**

What time frame during the year would this work be done? April- November, and winter in a emergency situation.

**If available, please attach a map of ditch maintenance areas (or a website link to that map).**

Ditch work areas are not mapped out. As a small, rural community, locations of ditch maintenance areas of kept in a file by the DPW. Specific locations can be provided as needed.

**LARVAL MOSQUITO CONTROL:**

*If you plan to have a larval mosquito control program, please fill out the section below. **NOTE THAT THE USE OF PESTICIDES IS UNDER THE JURISDICTION OF M.G.L. c. 132B, THE MASSACHUSETTS PESTICIDE CONTROL ACT, AND THE REGULATIONS PROMULGATED THEREUNDER AT 333 CMR 2.00 THROUGH 14.00 ET SEQ.***

Describe the purpose of this program:

What months will this program be active?

Describe the types of areas where you intend to use this program:

What will your trigger be for larviciding operations? (check all that apply)

Best professional judgment

Historical records

Larval dip counts – please list trigger for application:

Other (please describe):

**Comments:**

What control methods will you use (check all that apply):

Ground application of larvicide (hand, portable and/or backpack, etc.)

Aerial applications of larvicide (typically helicopter)

Catch basin treatments

Other (please list):

**Comments:**

Harvard relies on DPH for larval sampling and supports DPH in control actions they deem necessary. We are in discussions with a local college and university to collaborate with us on a larvae monitoring program in Harvard.

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

**ADULT MOSQUITO SURVEILLANCE**

*If you plan to have an adult mosquito surveillance program, please fill out the section below, or have the contractor provide this information if a contractor has already been selected.*

Describe the purpose of this program:

Harvard relies on the State surveillance program, as run by DPH. The Town is working with DPH to identify ways to expand testing and develop a more robust surveillance program. We are in discussions with a local college and university to collaborate with us on an adult mosquito monitoring program in Harvard.

What months will this program be active? As determined by DPH.

List all trap types you intend to employ (CDC light traps, gravid traps, ovitraps, etc.):

**ADULT MOSQUITO CONTROL**

*If you plan to have an adult mosquito control program, please fill out the section below, or have the contractor provide this information. **NOTE THAT THE USE OF PESTICIDES IS UNDER THE JURISDICTION OF M.G.L. c. 132B, THE MASSACHUSETTS PESTICIDE CONTROL ACT, AND THE REGULATIONS PROMULGATED THEREUNDER AT 333 CMR 2.00 THROUGH 14.00 ET SEQ.***

Describe the purpose of this program:

What is the time frame for this program?

Describe the types of areas where you intend to use this program:

What methods of control will you use? Check all that apply:

- Aerial applications (typically helicopter)
- Portable applications (ex. Backpack sprayers)
- Truck applications (ultra-low volume (ULV) sprayers, misters, etc.)
- Other (please list):

**Comments:**

Residents may hire their own contractors with portable applications on private property throughout the Town, with limited applications in areas abutting sensitive environmental receptors. Additionally, Integrated Pest Management (IPM) is applied throughout the Town on commercial and residential orchards and farms.

What will your trigger be for adulticiding operations? Check all that apply:

- Arbovirus data
- Best professional judgment
- Complaint calls (Describe trigger for application: )
- Landing rates (Describe trigger for application: )
- Trap data (Describe trigger for application: )

**Comments:**

Residents use best personal judgment as informed by the BOH's robust education and outreach program, as detailed below.

### ASSESSMENT OF MOSQUITO MANAGEMENT PLAN EFFICACY

**Describe efforts for assessing the efficacy of your mosquito management program, if your plan involves any of the following:**

- Aerial Larvicide – wetlands:
- Ground ULV Adulticide:
- Larvicide – catch basins:
- Larvicide-hand/small area:
- Source Reduction:
- Other (please list):

Provide or list standard steps, criterion, or protocols regarding the documentation of efficacy (pre- and post- data), and pesticide resistance testing (if any):

### INFORMATION TECHNOLOGY (IT)

Does your program intend to use (check all that apply):

- Aerial Photography
- Databases
- Dataloggers (monitoring for temperature, etc.)
- GIS mapping (Describe: Oliver and USGS )
- GPS equipment
- Smartphones
- Tablets/Toughbooks
- Other (please describe):

**Comments:**

All of the above resources are available to consult by Town boards and commissions.

### MOSQUITO HABITAT

Has any potential mosquito habitat been identified in your municipality?  Yes  No

If so, how? Please indicate all that apply:

- Mapping of wetlands
- Mapping of catch basins
- Past surveillance, done by:

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

- DPH
- Mosquito Control District
- Contractor
- Municipality

**MOSQUITO TESTING AND ARBOVIRUS**

Indicate below which arboviruses have been found in your area during the last five years. If the box is checked please provide number of positive mosquito pools, equine (horse) and human cases. Information available from your MCD, or at: <https://www.mass.gov/lists/arbovirus-surveillance-plan-and-historical-data>

Arbovirus	Positive Mosquito Pools	Equine Cases	Human Cases
<input checked="" type="checkbox"/> Eastern Equine Encephalitis (EEE)	1	0	0
<input type="checkbox"/> West Nile Virus (WNV)	0	0	0
<input type="checkbox"/> Other (please list):			

**Comments:** Reflective of historical data from 2016- 2020. The single EEE-positive mosquito sample was dated 8/17/19.

**EDUCATION, OUTREACH & PUBLIC RELATIONS**

*All municipalities are required to have an education/outreach program.*

Provide a 1-2 paragraph narrative of the proposed outreach plan:

Please see the attached Exhibit A: Narrative of proposed outreach plan, including actions associated with the six different levels of risk.

Check off all education/outreach methods that you intend to employ:

- Development/distribution of brochures, handouts, etc.
- Door-to-door canvassing (door hangers, speaking to property owners, etc.)
- Social media accounts (Facebook, Twitter, or other social media)
- Mailings (Describe target audiences :
- Media outreach (interviews for print or online media sources, press releases, etc.)

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

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- Presentations (in-person or virtual)
- School-based programs, science fairs, etc.
- Tabling at events (local events, annual meetings, etc.)
- Website (URL: \_\_\_\_\_ )
- Other (please describe): \_\_\_\_\_

Select the audience types you intend to target from the list below:

- Residents (homeowners, apartment dwellers, etc.)
- Landlords (for large apartment or condominium complexes)
- K-12 (teachers, students, camps, etc.)
- Municipal staff (highway dept., parks and recreation, board of health, conservation commission, etc.)
- State/Federal land managers (state parks, national wildlife refuges, etc.)
- Transportation industry (Busing companies, commuter rail, truck/rest stops, etc.)
- Recreational venues (fairgrounds, sports complexes, ballfields, etc.)
- Other land owners/managers (please describe): \_\_\_\_\_
- Other (please describe): \_\_\_\_\_

Additional Comments:

List a minimum of 3 education/outreach activities you plan to execute for the upcoming mosquito season:

- . Townwide postal mailing and electronic mailing to educate on arbovirus precautions.
- . Updating arbovirus resources on Town website, print media (The Harvard Press), and local social media platforms.
- . Distribute DPH resources (e.g. fact sheets, videos) on EEE, WNV, repellents at Annual Town Meeting and Townwide Cleanup.
- . Hosting a guest speaker series on arbovirus.
- . Inform Town of EEE risk levels through the use of the mobile electronic message board and Press releases.

## OTHER COMMENTS

Please use this section to add any comments here on topics not covered elsewhere in this report:  
Please see the attached Exhibit B: Topics not covered.

## REPORTING REQUIREMENTS

Municipalities that receive approval of alternative mosquito management plans from EEA are required to submit an annual report for all activities conducted during the mosquito season **by January 31st**.

Annual reports must be submitted to: [EEAopt-out@mass.gov](mailto:EEAopt-out@mass.gov)

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

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**ACKNOWLEDGEMENT**

*Please mark each check box indicating your acknowledgement of the items below, and sign and date the application before submitting it.*

- The Municipality acknowledges that any work performed will be subject to applicable local, state, and federal regulations, ordinances, and statutes and all necessary permits, licenses, approvals, or other permission must be obtained prior to the commencement of any work. The approval of this Plan does not constitute work under M.G.L. c. 252 or authorize any exemption provided for work conducted under said chapter, unless otherwise expressly provided for by law.
- The municipality acknowledges that approval of a Plan allows it to opt out of spraying conducted by the SRMCB under M.G.L. c. 252, Section 2A. It does not extend to any spraying conducting by a mosquito control project or district ("MCD") of which a municipality may be a member.
- The municipality acknowledges that it has conducted the required public meeting, that a vote is included with this Plan, and that any vote to opt out of spraying performed under M.G.L. c. 252 is subject to the approval of this Plan. No such opt out will be honored without an approved Plan.

Signature and Title (Sign or Type Signature)

Date

Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board

**Exhibit A: Narrative of Proposed Outreach Plan**

**EDUCATION, OUTREACH & PUBLIC RELATIONS**

*All municipalities are required to have an education/outreach program.*

Provide a 1-2 paragraph narrative of the proposed outreach plan:

Harvard is a rural town located approximately 30 miles West of Boston at the intersection of Rt 2 and 495, with a population of approximately 6000 people with numerous orchards and other farming activities. The Town is part of the Nashoba Associated Boards of Health which provides us with a variety of services including: a registered sanitarian, public health nurses, restaurant inspections, and water testing at the Town Beach. The Harvard Board of Health is all volunteer and we employ a part-time clerk for 19hrs/week. The Harvard Board of Health (BOH) members are all professional scientists, two of which have PhDs and the third has a MS and MBA. These volunteers have relevant technical backgrounds and provide the community with sound data driven support. The Harvard Board of Health (BOH) routinely conducts public outreach activities for vector borne diseases (both mosquitoes and ticks), and thus the residents expect, and are receptive to, these types of communications. Communications are directed at the general population, sensitive sub-populations (e.g. Council-On-Aging) as well as targeted to participants in sports activities, businesses with outdoor programs, and other recreational programs. Our communications focus on educating residents to be responsible for their own safety and personal protection. For homeowners, we remind people to repair screens and proactively manage potential breeding grounds by removing standing water, cleaning birdbaths, and cleaning gutters. The Board of Health provides residents, as well as participants in sports and all other outdoor activities, with information on using appropriate insect repellents and clothing, and limiting exposure outdoors during peak mosquito activity. This information is also provided to the school district as well as the Harvard Athletic Association, which runs numerous sports activities in Town. Information for residents is distributed at townwide events, e.g., Town meeting, Garden Club plant sale and other community gatherings. During peak mosquito season, we provide information to residents via the BOH e-mail subscribers and the Townwide alert systems and provide information on Nextdoor Harvard (our local social media source). The BOH also consistently writes articles for and works with our local weekly newspaper on articles about mosquito-borne diseases and personal protective measures.

The specific activities undertaken by the BOH are based on risks posed by mosquito borne diseases. The following table summarizes the steps we take for each level of risk expanded from the DPH EEE Risk Map with more actions as described below.

Risk Level	BOH Action
Remote	Revise protocols (this table) annually
	Monitor DPH, HHAN
	Surveillance <ul style="list-style-type: none"> <li>• Evaluate feasibility of partnerships with other organizations (e.g., colleges or NAHB communities) to develop surveillance activities.</li> </ul>
	Education and outreach <ul style="list-style-type: none"> <li>• Plan for articles in local paper to increase awareness and remind citizens of personal actions they should take to protect themselves during mosquito season</li> <li>• Coordinate with DPW for collection of old tires</li> <li>• Update BOH arbovirus web page</li> </ul>

Exhibit A: Narrative of proposed outreach plan



*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

	<ul style="list-style-type: none"> <li>• Share the BOH risk table action plan with the community</li> <li>• Provide homeowners information on larval control</li> <li>• Prepare list of tips to send out as e-mail alerts to BOH subscribers</li> <li>• Revise EEE, WNV briefing document</li> </ul>
	<p>Personal protection</p> <ul style="list-style-type: none"> <li>• Educate on prevention measures including: <ul style="list-style-type: none"> <li>○ wearing long sleeved shirts, long pants, and socks</li> <li>○ active use of repellents and clothing containing repellants</li> <li>○ use of netting and repairing of screens</li> </ul> </li> </ul>
	<p>Conduct planning for a Mosquito Task Force comprised of Town entities and interested citizens to be ready as conditions warrant</p>
	<p>Research</p> <ul style="list-style-type: none"> <li>• Impact of climate change on arboviruses</li> <li>• Effectiveness of spraying in rural settings</li> <li>• Evaluate the cost and effectiveness of larval control actions</li> <li>• Review the effectiveness of Bti in waterbodies</li> </ul>
<b>Low</b>	<p>Monitor DPH, HHAN</p> <ul style="list-style-type: none"> <li>• Ensure 2 BOH members can access alerts 24/7</li> <li>• Participate in DPH info sessions</li> </ul>
	<p>Surveillance</p> <ul style="list-style-type: none"> <li>• Explore with DPH how additional surveillance locations could be established in Harvard</li> <li>• Actively explore collaborations identified at previous risk level</li> </ul>
	<p>Education and outreach</p> <ul style="list-style-type: none"> <li>• Sponsor speaker on arbovirus issues and the importance of personal protection</li> <li>• Townwide mailing on arbovirus with reference to DPH website</li> <li>• Distribute DPH resources (e.g. fact sheets, videos) on EEE, WNV, repellents</li> <li>• Work with Friends of Oxbow, Sudbury Valley Trustees, Harvard Conservation Trust to post signs</li> <li>• Send e-mail alerts to BOH subscribers</li> <li>• Actively educate target populations (e.g. informational talks to the Council-on-Aging)</li> <li>• Messages posted to local cable and social media</li> </ul>
	<p>Personal protection</p> <ul style="list-style-type: none"> <li>• Reinforce recommend prevention measures including: <ul style="list-style-type: none"> <li>○ wearing long sleeved shirts, long pants and socks</li> <li>○ active use of repellents and clothing containing repellants</li> <li>○ use of netting and repairing of screens.</li> </ul> </li> </ul>
	<p>Collaboration with Town entities</p> <ul style="list-style-type: none"> <li>• Weekly updates to Select Board and Emergency Manager on surveillance data</li> <li>• Review with DPW activities related to drainage ditch, fire pond and storm water infrastructure management and maintenance</li> <li>• Conservation Commission –Request information on any mosquito breeding grounds observed during inspections and monitoring of properties</li> <li>• Conduct presentation to Council-on-Aging on how to avoid mosquito bites</li> </ul>
	<p>Research</p> <ul style="list-style-type: none"> <li>• Use GIS data in combination with Assessor’s maps to identify water bodies on private properties to create a targeted list of homeowners to receive information on larval control</li> </ul>
<b>Moderate</b>	<p>Monitor DPH, HHAN</p> <ul style="list-style-type: none"> <li>• Ensure 2 BOH members can access alerts 24/7</li> <li>• Participate in DPH info sessions</li> </ul>

Exhibit A: Narrative of proposed outreach plan

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

	<p>Surveillance</p> <ul style="list-style-type: none"> <li>• Petition DPH to provide additional surveillance locations</li> <li>• Implement collaboration(s) identified at previous risk level to increase surveillance</li> </ul>
	<p>Education and outreach</p> <ul style="list-style-type: none"> <li>• Distribute DPH resources (e.g. fact sheets, videos) on EEE, WNV, repellents</li> <li>• Continue to send e-mailed alerts to BOH subscribers</li> <li>• Additional reminders on minimizing potential mosquito breeding grounds such as standing water</li> <li>• Use of mobile electronic message board to alert the Town to the Moderate EEE risk level</li> <li>• Messages posted to local cable and social media</li> <li>• Send information on larval control with Bti to homeowners with waterbodies on their property</li> </ul>
	<p>Personal protection</p> <ul style="list-style-type: none"> <li>• Strongly reinforce prevention measure recommendation including: <ul style="list-style-type: none"> <li>○ wearing long sleeved shirts, long pants and socks</li> <li>○ active use of repellents and clothing containing repellants</li> <li>○ use of netting and repairing of screens</li> <li>○ avoid outside areas with mosquito activity</li> </ul> </li> </ul>
	<p>Collaborate with Town entities</p> <ul style="list-style-type: none"> <li>• Weekly updates to Select Board and Emergency Manager</li> <li>• Meeting of Mosquito Task Force to coordinate Town response</li> <li>• Updates to Beach Director, Park &amp; Recreation on EEE risk level and recommended actions</li> <li>• DPW to provide update on maintenance activities conducted to date. BOH to request Town Administrator provide additional resources if necessary.</li> <li>• Conservation Commission to share information on any potential mosquito breeding grounds identified during inspections. BOH to add properties to list to receive information on larval control methods.</li> </ul>
	<p>Inform Town groups of restrictions at Moderate level, and requirements for High level</p> <ul style="list-style-type: none"> <li>• Sports groups, schools</li> <li>• Commercial operations including Fruitlands Museum, Friendly Crossways, General Store, Westward Orchards, Carlson Orchards Cider Barn, other outdoor venues</li> <li>• Harvard Conservation Trust, Friends of the Oxbow, Sudbury Valley Trustees</li> <li>• Harvard-based landscapers and outdoor contractors</li> <li>• Other groups: Scouts, youth groups, Garden Club, Camp Green Eyrie</li> </ul>
High	<p>Monitor DPH, HHAN</p> <ul style="list-style-type: none"> <li>• Ensure 2 BOH can access alerts 24/7</li> <li>• Participate in DPH info sessions</li> </ul>
	<p>Education and outreach</p> <ul style="list-style-type: none"> <li>• Inform residents to limit outdoor activities at dusk and dawn</li> <li>• Post signs at playing fields, Town Beach, Post Office, Library, COA, Schools, conservation trails</li> <li>• Provide information to residents via the BOH e-mail subscribers and the Townwide alert systems</li> <li>• Distribute DPH resources (e.g. fact sheets, videos) on EEE, WNV, repellents</li> <li>• Ask churches, schools, athletic groups, etc. to distribute info</li> <li>• Messages posted to local cable and social media</li> <li>• Use of mobile electronic message board to alert the Town to the High EEE risk level</li> </ul>
	<p>Surveillance</p> <ul style="list-style-type: none"> <li>• Report to Town residents surveillance data as available</li> </ul>
	<p>Personal protection</p> <ul style="list-style-type: none"> <li>• Strongly recommend prevention measures including:</li> </ul>

Exhibit A: Narrative of proposed outreach plan

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

	<ul style="list-style-type: none"> <li>○ Wearing long sleeved shirts, long pants and socks</li> <li>○ Active use of repellents and clothing containing repellants</li> <li>○ Use of netting and repairing of screens</li> <li>○ Avoid outside areas during periods of mosquito activity (e.g., dusk to dawn)</li> <li>○ Reschedule activities if possible</li> </ul>
	<p>Collaborate with Town entities</p> <ul style="list-style-type: none"> <li>● Weekly updates to Select Board and Emergency Manager</li> <li>● Mosquito Task Force coordinates with all groups in Town</li> <li>● DPW to provide update on maintenance activities conducted to date. BOH to request Town Administrator provide additional resources if necessary.</li> <li>● Ask Conservation Commission to publicize mosquito risk level and recommended personal protections to their contacts.</li> <li>● Ask Harvard Conservation Trust to publicize mosquito risk level and recommended personal protections to their members</li> </ul>
	<p>Inform Town groups of restrictions at High level, and requirements for Critical level</p> <ul style="list-style-type: none"> <li>● Sports groups, schools</li> <li>● Commercial operations including Fruitlands Museum, Friendly Crossways, General Store, Westward Orchards, Carlson Orchards Cider Barn, other outdoor venues</li> <li>● Harvard Conservation Trust, Sudbury Valley Trustees, Friends of the Oxbow</li> <li>● Harvard-based landscapers and outdoor contractors</li> <li>● Other groups: Scouts, youth groups, Garden Club, Camp Green Eyrie</li> <li>● Medical providers (doctors, veterinarians, dentists, EMS)</li> </ul>
Critical	<p>Monitor DPH, HHAN</p> <ul style="list-style-type: none"> <li>● Ensure 2 BOH can access alerts 24/7</li> <li>● Participate in DPH info sessions</li> <li>● Provide information from DPH to residents through mechanisms identified above.</li> </ul>
	<p>Education and outreach</p> <ul style="list-style-type: none"> <li>● <i>Cancel outdoor activities</i></li> <li>● Post signs at playing fields, Town Beach, Post Office, Library, COA, Schools, conservation trails</li> <li>● Provide information to residents via the BOH e-mail subscribers and the Townwide alert systems</li> <li>● Distribute DPH resources (e.g. fact sheets, videos) on EEE, WNV, repellents</li> <li>● Ask churches, other groups to distribute info</li> <li>● Use of mobile electronic message board in Town announcing cancellation of all outdoor activities from dusk- dawn</li> <li>● Messages posted to local cable and social media</li> </ul>
	<p>Personal protection</p> <ul style="list-style-type: none"> <li>● Reinforce personal protection actions published at prior risk levels and add recommendation of cancelling outdoor activities</li> </ul>
	<p>Collaborate with Town entities</p> <ul style="list-style-type: none"> <li>● Coordinate with Select Board and Emergency Manager on messaging to town residents.</li> <li>● Mosquito Task Force coordinates with all groups in Town</li> <li>● Recommend closure of town-owned outdoor spaces</li> </ul>
	<p>Inform Town groups (same groups identified above for High risk level) of restrictions at Critical level</p> <ul style="list-style-type: none"> <li>● Recommendation that outdoor activities be curtailed until further notice.</li> </ul>
Post-Mosquito Period	<p>Conduct review of mosquito data and actions taken. Recommend revisions to plan for subsequent seasons.</p>

Exhibit A: Narrative of proposed outreach plan

## Exhibit B: Topics Not Covered

### OTHER COMMENTS

Please use this section to add any comments here on topics not covered elsewhere in this report:

Three topics “not covered elsewhere in this report” include: 1) previous outreach activities performed by the Board of Health; 2) a description of Harvard’s rural landscape because that landscape impacts the efficacy of large-scale mosquito spraying, 3) a description of protected lands, including the Oxbow National Wildlife Refuge, a large area where any mosquito control activities are closely controlled by the US Fish and Wildlife Service, and 4) community position on mosquito spraying.

#### Previous BOH outreach activities

Listed below are the outreach activities conducted by the Harvard Board of Health in 2019 and 2020. This work was done because the Harvard Board of Health recognizes the importance of education on the topic of mosquitoes and how our citizens can protect themselves. The activities included:

- Organized an emergency meeting with the Select Board and Town Administer to discuss Harvard's threat level, possible response scenarios, and prepared a briefing document for the same.
- Prepared a press release following the finding of a single EEE positive mosquito sample.
- Prepared Urgent alerts to Board of Health and Town e-subscribers regarding the positive sample in Harvard as well as DPH data showing the first human cases of WNV/EEE in MA.
- Contacted all Town groups with late afternoon & evening outdoor activities to advise of the risk and provide reference materials (MDPH EEE fact sheet & MDPH info sheets on mosquito repellents)
- Provided informational materials to all doctors, dentists, and veterinarians in Town (MDPH EEE fact sheet & MDPH info sheets on repellents)
- Distributed DPH handouts on EEE & WNV, mosquito repellents, and mosquito control tips to residents.

Such actions as these were data driven and have served the community well. They gave the community information from a source they could trust, gave veterinarians and medical professionals information to raise awareness of EEE to their patients, and provided guidance to the Select Board.

#### Description of Harvard

The Town of Harvard encompasses 27 square miles. Citizens of Harvard take pride in the Town’s rural character, protected lands and water bodies, and agricultural lands with significant commercial (home to the largest apple orchard in the state) and privately cultivated farmland, many of which are organic farms. The majority of land coverage in Harvard are forests, consisting of mainly central hardwoods with some transition hardwoods and some elm-ash-red maple and red and white pine. Many major rivers drain this area. Approximately 26% of the land is “open space” and protected in perpetuity.

The following table and graphic describe the types of land coverage in Harvard. The following analysis is based on 2019 land cover data from MassGIS (<https://docs.digital.mass.gov/dataset/massgis-data-2016-land-coverland-use>). Table 1 and the following pie chart present this analysis.

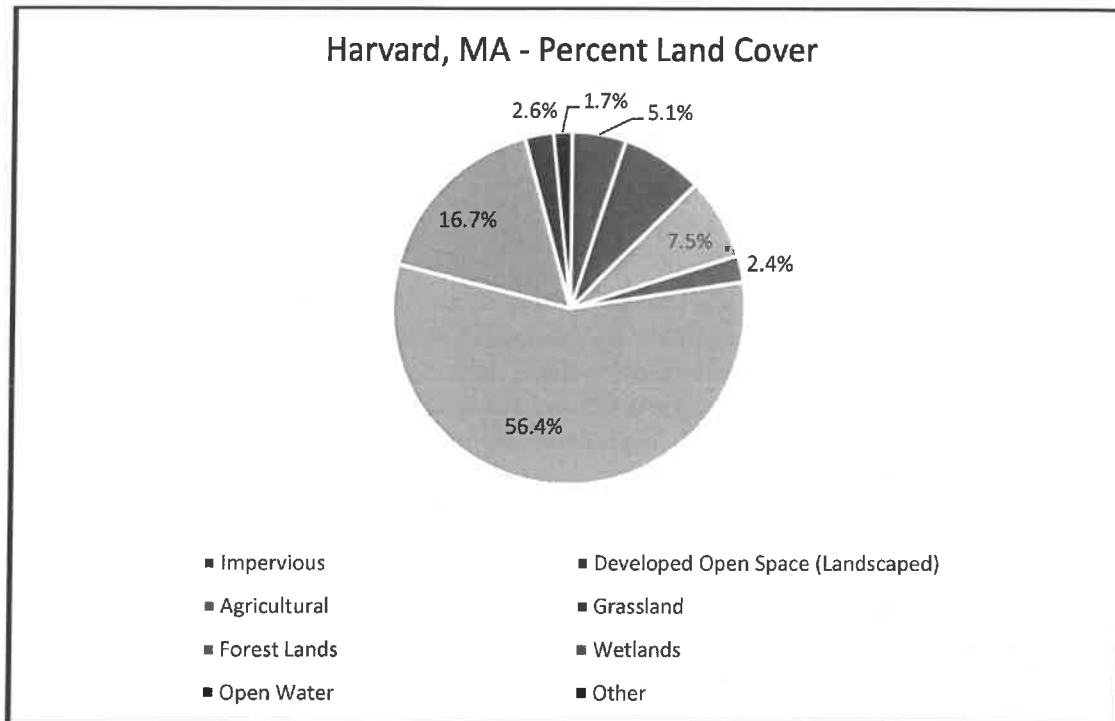
Exhibit B: Topics not covered

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

Table 1.

Land Cover Type	Percent	Acreage*
Impervious	5.1%	744
Developed Open Space (Landscaped)	7.5%	1108
Agricultural	7.5%	1103
Grassland	2.4%	358
Forest Lands	56.4%	8284
Wetlands	16.7%	2455
Open Water	2.6%	380
Other	1.7%	245
<b>Total</b>	<b>100.0%</b>	<b>14677</b>

\*excluding Devens portion of historical Harvard



The majority of land in Harvard is trees or forested (~56%), agricultural and grasslands and agriculture make up ~10%, lawn and landscape area only account for 7.5%. The agricultural category includes pastures, hay fields, orchards and numerous organic farms. It is important to recognize that due to the extensive tree and forested land any form of spraying will not be as effective because the tree canopy will intercept the spray. Open water applies to Bare Hill Pond, in the center of the town. This is a Great Pond, under state regulations. Bare Hill Pond Watershed Management Committee is actively monitors and takes actions to protect this valuable resource. Wetlands account for ~17% of the area (2,455 acres). Approximately, 32% of this wetland area is the Oxbow National Wildlife Refuge, which is described in a following section. The

Exhibit B: Topics not covered

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

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remaining wetlands are associated with river or small stream systems and also maybe within the forested lands.

Harvard also has many homes and structures which are set back substantial distances from public rights of way, as shown in Table 2.

Table 2

<b>Structures - Harvard</b>		
<b>Distance from Roadway (ft)</b>	<b>Structure Count</b>	<b>PCT</b>
<25	147	4.6%
25-50	287	9.1%
50-100	807	25.4%
100-200	1,039	32.8%
200-300	371	11.7%
300-400	193	6.1%
>400	327	10.3%
<b>Total</b>	<b>3,171</b>	<b>100%</b>

These data indicate that only 15% of structures (mostly houses but also barns and other free-standing units) are within 50ft of a public right of way and another 25% are within 100 ft. It is likely that the remaining 60% of structures have trees and tall vegetation between the public right of way. According to the DPH Arbovirus Surveillance Plan (2020), roadside spraying reaches approximately 300' from the roadway but only when there is a clear line of sight. Harvard's setback structures and heavy vegetation coverage will greatly reduce the effectiveness of road-side spraying.

**Protected Lands**

*Oxbow National Wildlife Refuge*

The Oxbow National Wildlife Refuge is on the western edge of Harvard covering 787 acres in Harvard with an additional 362 acres in the portion of Devens which falls within the historical boundaries of Harvard. The Federal Fish and Wildlife Service regulates what mosquito control activities are permitted in their jurisdiction. According to the Wildlife Refuge Complex Manager, Linh D. Phu, the following restrictions apply: "The Eastern Massachusetts National Wildlife Refuge Complex does not allow spraying (both larvicides and adulticides in any form of spray treatment) for mosquitoes for nuisance issues. When it is deemed a high public health risk, we will review documentation from Mosquito Control districts and issue special use permits to spray larvicides following an Integrated Pest Management request to be reviewed by our Regional Office. "

*Core Habitat and Critical Natural Landscapes*

The BioMap2 Report for Harvard (2012) notes that approximately 26% (4445 acres) of Harvard land is protected in perpetuity, 28% (4876 acres) is Core Habitat, and 16% (2834 acres) is Critical Natural

Exhibit B: Topics not covered

*Application for an Alternative Mosquito Management Plan Required for a Municipality to Opt Out of Spraying Conducted by the State Reclamation and Mosquito Control Board*

Landscape. These land use types provide important habitats for insects which are extremely important to a thriving ecosystem and must be protected.<sup>1</sup> Additional land has come under protection since 2012, e.g. Horse Meadows Knoll which is home to several endangered species and is under the auspices of Sudbury Valley Trustees and Harvard Conservation Trust.

*Bare Hill Pond*

Bare Hill Pond is an important natural resource in Harvard that supports critical ecosystems, both aquatic and terrestrial. It is now host to nesting Bald Eagles, considered a “species of special concern by the State.

**Community position on spraying**

The Town of Harvard has never joined a mosquito control district. The Board of Health has strong support from the community to limit the broad-scale use of insecticides. There has only been one EEE positive mosquito found in the last 5 years. Given this level of risk, we fully expect that our education and outreach activities will continue to allow our residents to protect themselves from mosquito-borne diseases. This position is supported by Conservation Commission and the Bare Hill Pond Watershed Management Committee. The Bare Hill Pond Watershed Management committee issued the following statement regarding this application: “. Avoiding the use of Mosquito spray in and around the Bare Hill Pond Watershed is an important objective, as it could damage the ecosystem and harm important other species with limited benefit due to the forested conditions in the Town. The Committee voted to endorse the recommendation of the Board of Health to opt out of the Program.”

[Con com meets 5/6; will add their statement on 5/7]

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<sup>1</sup> *BioMap2: Conserving the Biodiversity of Massachusetts in a Changing World*. Harvard 2012. Massachusetts Division of Fisheries and Wildlife/Natural Heritage & Endangered Species Program (NHESP), and The Nature Conservancy/Massachusetts Program. [http://maps.massgis.state.ma.us/dfg/biomap/pdf/town\\_core/Harvard.pdf](http://maps.massgis.state.ma.us/dfg/biomap/pdf/town_core/Harvard.pdf)







MASSWILDLIFE

## DIVISION OF FISHERIES & WILDLIFE

1 Rabbit Hill Road, Westborough, MA 01581

p: (508) 389-6300 | f: (508) 389-7890

[MASS.GOV/MASSWILDLIFE](http://MASS.GOV/MASSWILDLIFE)

DATE: April 23, 2021  
TO: Conservation Commission  
RE: Draft Priority Habitat Map of rare species available for public comment, May 3, 2021 through July 3, 2021

Dear Conservation Commission:

Pursuant to the Massachusetts Endangered Species Act (MESA, M.G.L. c. 131A) and its implementing regulations (321 CMR 10.12), the Natural Heritage and Endangered Species Program (NHESP) of the Division of Fisheries and Wildlife (Division) would like to inform you of the availability of the DRAFT Priority Habitat map for public comment beginning on May 3, 2021 at [www.mass.gov/nhesp/mapcomment](http://www.mass.gov/nhesp/mapcomment). The DRAFT map has been revised to reflect new biological information, as well as land use changes. *Specifically, the Division is requesting public comment on the status of areas proposed for delineation or removal as Priority Habitat regarding the physical or biological features of the habitat, or the current scope of existing development in the area.*

**PLEASE NOTE:** The DRAFT Priority Habitat Map for the 15<sup>th</sup> Edition of the Natural Heritage Atlas should be used for commenting purposes only and not for project planning or regulatory review. The 14<sup>th</sup> Edition Atlas (available through the Division website located at [www.mass.gov/nhesp](http://www.mass.gov/nhesp)) is still in effect until the 15<sup>th</sup> Edition is officially published.

This comment period will end on July 3, 2021. Please encourage your constituents to view the DRAFT map and participate in the public comment period. Written comments on the proposed Priority Habitat map may be submitted to the Division electronically as explained on the above referenced website, or by submitting them to the Division at the following address:

Division of Fisheries & Wildlife  
Natural Heritage & Endangered Species Program  
Attn: Priority Habitat Comments  
1 Rabbit Hill Road  
Westborough, MA 01581

If you have additional questions regarding this notification, please contact NHESP at [natural.heritage@mass.gov](mailto:natural.heritage@mass.gov) or (508) 389-6360.

**Thank you for working with us to protect the Commonwealth's endangered species.**

MASSWILDLIFE



# **Bare Hill Pond Homeowners Association**

## **2021**

Last year we accomplished a large resurfacing project, in addition to pothole repair. 2020 resurfacing project was expanded thanks to additional personal donations by Ted Maxant (\$5K) & Barry Jordan (\$1k)!

2020 expenditures totaled: **\$19,141.49**. **Current balance: \$-55.88**.

In order to keep pace with road conditions, the 3 groups (CSDCA, WSRT, SRRT) and several homeowners voted to increase the annual road dues to \$200.00/house starting in 2021.

## **2021 road dues - \$200.00/house**

Make your check payable to: **“Bare Hill Pond Homeowners Association”**

Write on back of check: **“for deposit only”**. Mail your check to:

Bare Hill Pond Homeowners Association

C/O Garry Baer - Treasurer

237 Wheeler Road, Ashby MA 01431

Please email me ([garrybaer@yahoo.com](mailto:garrybaer@yahoo.com)) so I can circulate annual invoices electronically. As always, if you have any questions please feel free to talk to us (stop us on the road, give us a call...). The BHPHA summer road Committee:

- Garry Baer/CSDCA & treasurer (cell:508-523-1974)
- Dennis Quinn/SRRT (winter plowing/sanding)
- Greg Louis/WSRT

*FYI: Willard Lane is used by 59 homeowners & the Harvard Conservation:*

- **Summer repair & maintenance** of the roads (Willard lane, Pine Ridge & Cove to the property lines) is funded & managed by BHHA. (Garry Baer/Treasurer, [garrybaer@yahoo.com](mailto:garrybaer@yahoo.com), phone:508-523-1974)
- **Winter plowing & sanding** is funded & managed separately by Dennis Quinn ([dwquinn@worcester.edu](mailto:dwquinn@worcester.edu) phone:978-456-3751)



## Pine Hill Village Request to install Foundations in Sunrise Neighborhood

All items have been completed on tucks way except for the septic. Rain gardens will be completed soon and all the utilities except for the septic. And so while they're working on that, we'd like to get going on the foundations on Sunrise. This will allow us to take advantage of the warm weather and get everything graded which will also help with erosion control. Additionally, a with the Units in Pine Bank being almost ready to be moved in, this will help prevent any hazards to the new residents. Lastly, it will allow us to take full advantage of the growing season to get the ground germinated before winter.



## Construction Progress Report as of May 4, 2021

### Pine Hill Village

#### Construction Sequence

#### Construction Phase 1

#### Development of Roadway Infrastructure and Pine Bank Neighborhood

1. Install Erosion Control Measures per Order of Conditions Plan and SWPPP (Plans), for all areas within or directly down-gradient of entire Pine Hill Village land-alteration, construction, and stockpiling areas. **COMPLETE**
2. Cut and remove trees from Stow Rd to roadway station 9+00 including full width of work area defined by proposed tree edge/limit of clearing in Plans, then beyond sta. 9+00 clearing roadway to Public Water Supply (PWS) pump house and areas of Sunrise and Tucks Way buildings and Septic Systems to tree edge/limit of clearing in Plans. Trees on East and West Serpentine Way neighborhoods will not be cut at this time. **COMPLETE**
3. Stump and grub roadway from Stow Road to cul-de-sac, including bioretention cell.
4. Install 3-sided concrete culvert at intermittent stream crossing near roadway sta. 3+00.
5. Stump and grub for Lot 1 - Pine Bank Neighborhood, Constructed Wetlands, and material stock-pile areas. Remove all stumps. **COMPLETE**
6. Mark the locations for the Phase 1 Rain Gardens (RGs #22 and #23) and install/institute measures to prohibit soil compaction. **COMPLETE**
7. Construct the Bioretention Cell near roadway sta. 1+00 and the Constructed Wetlands near roadway sta. 4+00, and their forebays. Plant/seed these stormwater features. Allow time for basins to become vegetated. **COMPLETE**
8. Stump and grub for Public Water Supply (PWS) Pump House, sub-surface water supply storage tank, and access to wells and PWS distribution system. **COMPLETE**
9. Install drainage infrastructure (piping system) within first 830 feet of roadway, i.e. from Bioretention Cell and Constructed Wetlands, up to Drain Manhole #2 (at roadway sta. 8+30), inclusive of: DMHs #1 and #2, CBs #1 and #2, and associated drain pipe, riprap, and sediment control measures. **COMPLETE**
10. Construct Roadway from Stow Road to sta. 7+20, completing road cross section up through gravel base and swale along north side of road. Include construction of a hammer-head for turn-around at sta. 7+00, consisting of roadway plus driveway entrance as hammer-head. Improve roadway/cart path beyond sta. 7+20 only as necessary to bring to stable, graded sub-grade and provide access for construction of PWS pump house and water storage tank. **COMPLETE**
11. Install Pine Bank Neighborhood Waste Water Treatment and Septic System. **COMPLETE**
12. Install Foundations for all five buildings in Pine Bank Neighborhood. **COMPLETE**

13. Construct/install PWS pump house, water storage tank, and connections with wells. **COMPLETE**
14. Install PWS water distribution line and laterals to curb-stops, from Pump House to Pine Bank Neighborhood (at approx. roadway sta. 7+20), into and around Pine Bank Neighborhood, and ending with flushing hydrant near roadway sta. 5+60. **COMPLETE**
15. Complete rough grading of Pine Bank Neighborhood and Roadway from Stow Road to sta. 7+20. **COMPLETE**
16. Install underground electrical/telephone/cable service to Pine Bank Neighborhood and PWS Pump House. **COMPLETE**
17. Build Model Home in Pine Bank Neighborhood; followed by remaining four buildings in Pine Bank Neighborhood. **COMPLETE**
18. Complete Pine Bank Neighborhood Septic System, test, have inspected, and make operational. **COMPLETE except for final inspection and making it operational**
19. Complete PWS system, test, have inspected, and make operational to service Pine Bank Neighborhood, Tucks Way, and Sunrise Way houses. **COMPLETE except for final inspection and making it operational**
20. Install roadway binder pavement, curbing, and sidewalk base, from Stow Road to sta. 7+20. **COMPLETE**
21. Install driveways and parking in Pine Bank Neighborhood; complete to binder and curbing. **COMPLETE**
22. Construct Phase 1 Rain Gardens (RGs #22 and #23). **COMPLETE**
23. Within Pine Bank Neighborhood and the first 720 feet of Roadway: finish Grade, install street trees, loam & seed, and install Landscaping. **Loam and seed COMPLETE**

#### **Construction Phase 2**

##### **Development of Tucks Way and Sunrise Way**

1. Maintain and/or augment Erosion Control Measures per Order of Conditions Plan and SWPPP (Plans), for all areas within or directly down-gradient of Phase 2 land-alteration, construction and stockpiling areas. **COMPLETE**
2. Stump and grub construction areas within Tucks Way and Sunrise Way. Remove stumps. **COMPLETE within Tucks Way, but not Sunrise Way.**
3. Mark the locations for the Phase 2 Bioretention Cell (in center island of cul-de-sac) and Rain Gardens (RGs #3-5, #10-11, #16 and #20-21) and install/institute measures to prohibit soil compaction. **COMPLETE**
4. Construct the Bioretention Cell in center of cul-de-sac, initially as a sedimentation basin. **COMPLETE**
5. Install drainage infrastructure (piping system and cul-de-sac cell) in upper roadway



above sta. 8+30 , inclusive of structures and piping for: CB#3, MH#3, CBs#4 & #5, CB#6, and laterals to rain gardens; and, install drainage infrastructure in Tucks Way Common Driveway, inclusive of structures and piping for: MH#4, MH#S, and laterals to rain gardens. **COMPLETE**

6. Construct Road from sta. 7+20 through cul-de-sac, with completion of gravel base and grading of swale along north side of road. **IN PROCESS**

7. Install Tucks Way Waste Water Treatment and Septic System. **NOT COMPLETE**

8. Continue construction of Tucks Way Common Driveway and parking, with completion of gravel base. **NOT COMPLETE**

9. Install Fire Cistern. **COMPLETE**

10. Install Foundations for all five buildings in Tucks Way and rough-grade neighborhood. **COMPLETE**

11. Complete Tucks Way house connections to PWS. **COMPLETE**

12. Construct Rain Gardens for Tucks Way houses (RGs # 3-5). **COMPLETE**

13. Install underground electrical/telephone/cable service to Tucks Way and Sunrise Way. **COMPLETE**

14. Build Model Home In Tucks Way followed by construction of remaining four buildings in Tucks Way. **NOT COMPLETE**

15. Complete Tucks Way Septic System, test, have inspected, and make operational. **NOT COMPLETE**

16. Complete Tucks Way house connections to electrical/telephone/cable services. **COMPLETE**

17. Install pavement binder, curbing, and sidewalk base, for roadway sta. 7+20 to around cul-de-sac, and pavement binder for Tucks Way common driveway and parking. **NOT COMPLETE**

18. Construct remaining Tucks Way Rain Gardens (RGs #10, #11, and #16). **COMPLETE**

19. Within Tucks Way: Finish Grade, complete Rain Gardens, loam & seed, and complete Landscaping. **NOT COMPLETE**

**\*\*\*\*\*REMAINING ITEMS NOT COMPLETE\*\*\*\*\***

20. Install Sunrise Way Waste Water Treatment and Septic System.

21. Construct Sunrise Way Common Driveway and parking, with completion of gravel base.

22. Install Foundations for all four buildings in Sunrise Way and rough-grade lot.

23. Complete Sunrise Way house connections to PWS.

24. Construct three buildings in Sunrise Way.
25. Complete Sunrise Way Septic System, test, have inspected, and make operational.
26. Complete Sunrise Way house connections to electrical/telephone/cable services.
27. Install pavement binder and curbing for Sunrise Way common driveway and parking.
28. Construct Sunrise Way Rain Gardens (RGs #20 and #21)
29. Within Sunrise Way and upper 650 feet of roadway: Finish Grade, plant street trees, complete Rain Gardens, loam & seed, and install Landscaping.
30. Install Bus Shelter at entrance from Stow Road.
31. Install sidewalk binder for sidewalk from Stow Road to ends at cul-de-sac.

### **Construction Phase 3**

#### **Development of East and West Serpentine Way**

1. Maintain and/or augment Erosion Control Measures per Order of Conditions Plan and SWPPP (Plans), for all areas within or directly down-gradient of Phase 3 land-alteration, construction, and stockpiling areas.
2. Cut and remove trees, Stump and grub construction areas within East and West Serpentine Way. Remove stumps.
3. Mark the locations for the Phase 3 Rain Gardens (RGs # 12-15, and #19) and install/institute measures to prohibit soil compaction.
4. Install East Serpentine Way Waste Water Treatment component (below parking).
5. Install PWS water distribution line and laterals to curb-stops in East and West Serpentine Way common driveway, to end at flushing hydrant. Test, have inspected, and make operational to support East and West Serpentine Way houses.
6. Install drainage infrastructure (piping system) in East and West Serpentine Way Common Driveway, inclusive of structures and piping for connections between RGs #12 to CB# 6 (in cul-de-sac bioretention cell), along with sedimentation control measures.
7. Construct East and West Serpentine Way Common Driveway and parking with completion of gravel base.
8. Install East Serpentine Way Waste Water Treatment and Septic System.
9. Install Foundations for all four buildings in East Serpentine Way and rough-grade

lot.

10. Complete East Serpentine Way house connections to PWS.
11. Construct Rain Garden #19 to rear (east) of East Serpentine Way foundations.
12. Install underground electrical/telephone/cable service to East and West Serpentine Way.
13. Construct four buildings in East Serpentine Way.
14. Complete East Serpentine Way Septic System, test, have inspected, and make operational.
15. Complete East Serpentine Way house connections to electrical/telephone/cable services.
16. Install Foundations for all three buildings in West Serpentine Way.
17. Complete West Serpentine Way house connections to PWS.
18. Install pavement binder and curbing for East and West Serpentine Way common driveway and parking.
19. Construct remaining Phase 3 Rain Gardens (RGs #12-15).
20. Within East Serpentine Way: Finish Grade, plant street trees, complete Rain Gardens, loam & seed, and complete Landscaping.
21. Install West Serpentine Way Septic System and connections with West Serpentine Way Waste Water Treatment.
22. Construct three buildings in West Serpentine Way.
23. Complete West Serpentine Way Septic System, test, have inspected, and make operational.
24. Complete West Serpentine Way house connections to electrical/telephone/cable services.
25. Within West Serpentine Way: Finish Grade, complete Rain Gardens, loam & seed and complete Landscaping.
26. Within entire Pine Hill Village, install final paving on roadway and common driveways and parking.

