Posted 11.10.2022 at 3:30pm by JAD

SELECT BOARD
AGENDA
Tuesday, November 15, 2022
7:00pm

Rich Maiore, Erin McBee, Kara McGuire Minar, Don Ludwig, Charles Oliver

The Select Board Regular Meeting is being held virtually in accordance with legislation S. 2475, an act relative to extending certain COVID-19 measures adopted during the Covid Pandemic state of emergency. 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.
Topic: Select Board
Time: Nov 15, 2022 07:00 PM Eastern Time (US and Canada)
Join Zoom Meeting
https://us02web.zoom.us/j/89427702227?pwd=OWc0aDV6RzJMd09ZUjFrRnN2bFczUT09
Meeting ID: 894 2770 2227
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AGENDA ITEMS

1) Call meeting to order – Chair Rich Maiore
2) Meet with the Transportation Advisory Committee to discuss the current Transportation Plan Actions & Goals (7:00)
3) Presentation of the Climate Initiation Committee's Climate Action Plan (7:15)
4) Public Communication (7:30)
5) Staff Report/Updates (7:35)
6) Public Communication (7:45)
7) Follow up on the Revenue Ideation Committee final report (7:50)
8) Approve minutes from 11/1 (8:00)
9) Action/Discussion: (8:05)
    a) Act on Personnel Board recommendation for FY24 cost of living adjustment
    b) Update on playing fields
    c) Discuss the Select Board FY24 budget
    d) Town Common items:
        - Act on request from Special Education Parent Advisory Council to acknowledge November as SEPAC month
        - Holiday display proposal
        - Future process for town common use
10) Select Board Reports

Next Regular Select Board Meeting
Tuesday, December 6, 2022
7:00pm

CHAPTER 8
CIRCULATION AND TRANSPORTATION

This update to the 2016 Transportation Chapter of the Harvard Master Plan reorients the focus away from a primarily automotive transportation view to a broader scope that includes not only alternative forms of transportation, but also more sustainable circulation goals within a framework of general climate resiliency and consideration. As part of this general effort to improve all manner of modes of transportation, Harvard established a Transportation Advisory Committee (TAC) in 2021 to take a more active role in local circulation and transportation planning. Harvard's transportation system should support safe, efficient, and environmentally responsible movement of people and goods locally and throughout the region, whether it is by automotive or any other modes of transportation.

The local road network has a crucial role to play in addressing Harvard's Master Plan goals, especially for the Town Center, the C District on Ayer Road, and Devens. Depending on the location, it can be a challenge for Harvard's roads to meet the competing demands placed on them. Scenic roadsides abound in Harvard and they are an indelible part of the Town's rural appearance, however, high speed traffic competes with a goal of pedestrian and other non-motorized uses.

Harvard has an impressive network of conservation trails as well, but these trails may not connect important sites and nodes of activity and may not be universally accessible to some residents. Traffic growth and the absence of traffic calming measures, sidewalks or walking paths have created an increasingly unsafe environment for local drivers, walkers, and bicyclists.

Maintaining and expanding on this network of multimodal circulation is a key point in striving to meet Harvard's goals of incorporating climate resilient and ecologically friendly transportation available to the broader community.

The most significant circulation and traffic issue related to the possibility of resuming jurisdiction of Devens is the lack of a direct road connection. While roads once ran between Fort Devens and what is now Residential Harvard, their permanent closure by the U.S Army during Fort Devens' active period effectively sealed the Harvard portion of the Fort's boundary from vehicular traffic. No roads were specified for re-establishment as part of the 1994 Reuse Plan (which opted instead for a Gateway approach, using Jackson and Verbeck Gates), as there was a plan to provide connection at the end of Old Mill Road in 1999 which The Town of Harvard declined. However, since the establishment of the TAC, they have begun working to re-open this connection as a non-automotive shared-use pathway.

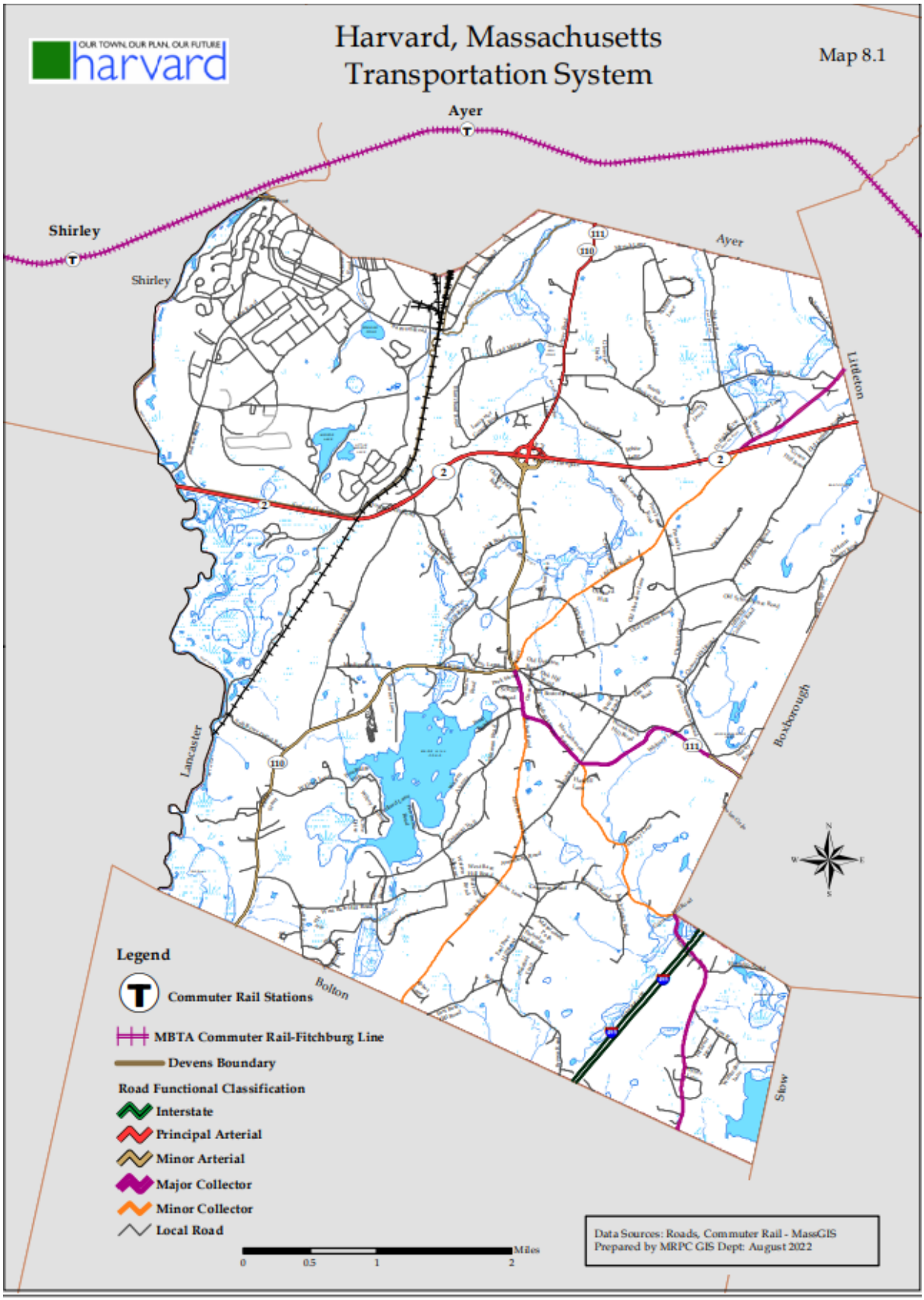
A significant challenge is transportation in the C District. The proposed Ayer Road TIP project is designed to address this challenge by adding a multi-use path for pedestrians and cyclists and adding traffic calming designed to Ayer Road to improve safety and traffic. The proposed connection of walking and bicycle paths between Mill Road and Devens that would connect to the Ayer Road TIP project would significantly improve access of Harvard to Devens as well. The opening of former roads would not be consistent with the neighborhoods and could lead to more challenging traffic conditions in Harvard and Devens.

1. ROAD NETWORK

Overview

Regional Highways: Two major highways, Route 2 and Interstate 495, serve Harvard and connect it with the surrounding regional road network. As shown in Map 8.1, Route 2 runs in an east-west direction across the entire northern section of town and provides interchange access (No. 109) at Routes 110/111 (Ayer Road). A second interchange (No. 106) on the western edge of town connects with the main access road (Jackson Road) into Devens. Route 2 is a four-lane, limited access, divided highway with cloverleaf interchanges controlled by stop signs. It provides a major connection for Harvard to the west toward the Leominster-Fitchburg area and to the east toward I-495/Route 128 and the Greater Boston area. East of the Ayer Road interchange, Route 2 carries approximately 57,800 vehicles per day (2021), which is a slight reduction since pre-Covid 19 pandemic totals of 59,800 (2018). Interchange 109 has a high crash rate due to substandard acceleration and deceleration lanes and traffic merges with exiting Route 2 traffic onto Ayer Road. MassDOT plans a major upgrade of Interchange 109, which includes changes to the cloverleaf to lengthen ramps for safer access, although this is still in the early stages of development.

I-495 crosses Harvard's southeastern corner and is a less prominent highway within Harvard compared with Route 2. Although there are no I-495 interchanges inside Harvard, there is one along Route 111 just east of the Town line in Boxborough. I-495 that provides regional access to all points in eastern Massachusetts and the Massachusetts Turnpike. In the vicinity of the Route 111 interchange, I-495 carries an average of 80,200 vehicles per day (2021) and in 2018 (pre-Covid 19 pandemic) the average vehicles totaled 92,300. Approximately 5,300 vehicles traveled westerly of the interchange in Harvard in 2018 and 4,100 in 2020 during the pandemic.


OUR TOWN, OUR PLAN, OUR FUTURE
harvard
Harvard, Massachusetts
Transportation System
Map 8.1
Ayer
Shirley
Shirley
Ayer
Littleton
Boxborough
Lancaster
Bolton
Stow
Legend
Commuter Rail Stations
MBTA Commuter Rail-Fitchburg Line
Devens Boundary
Road Functional Classification
Interstate
Principal Arterial
Minor Arterial
Major Collector
Minor Collector
Local Road
0
0.5
1
2
Miles
Data Sources: Roads, Commuter Rail - MassGIS
Prepared by MRPC GIS Dept: August 2022

Major Roads: Three major roadways carry most of the local and through traffic in Harvard and provide connections to the region's highway network. They include Route 110 from Bolton north into Harvard Center, Route 111 east from Harvard Center out to I-495, and Routes 110-111 north from Harvard Center to the Route 2 rotary in Ayer. These roads are about twenty-six to thirty feet wide, with appropriate pavement striping that includes double yellow centerlines and edge lines, and are generally less steep than many of Harvard's rural roads.

Harvard Town Center is clearly the focal point of local traffic flows, as shown in Map 8.1. Several routes converge at or near the center of town, including (clockwise from the north) Ayer Road, Littleton Road, Old Littleton Road, Oak Hill Road, Fairbank Street, Massachusetts Avenue, Stow Road, Bolton Road, Pond Road/Warren Avenue/West Bare Hill Road, Still River Road, and Depot Road. However, Ayer Road is by far the busiest road in Harvard. It carries more vehicles on the segment between Route 2 and the Ayer town line (approximately 13,260 in 2021) than south of Route 2 (approximately 6,700 in 2021). A pedestrian and bicycle path is planned to via Lovers Lane and Under Pin Hill Road to enable safe access to Depot Road, its playing fields and to connect to the multiuse path from Depot Road under Route 2 to Lancaster County Road and the playing fields and track adjacent to Ayer Road by the Post Office. It should also be noted that traffic volumes have changed slightly since the Covid-19 pandemic. There was a significant reduction in 2019 and 2020 during the peak of the pandemic and, since that time, traffic has started to return to normal. Traffic volumes on other major roads are shown in Table 8.1.

Other Roads: A number of minor roads provide connections through portions of Harvard, including Prospect Hill Road/Old Shirley Road, Oak Hill/Woodchuck Hill Road, West Bare Hill Road, Bolton Road, and Littleton County Road. Many of these roads have intermittent pavement markings and limited signage. Most carry daily traffic volumes of less than 1,000 vehicles per day, and some less than 500 vehicles per day. They channel traffic that is primarily local, i.e., from points within Harvard and by people who live along them. As a group, these roads do not provide a cut-through route for longer distance trips through town. Roads with traffic volumes over 1,000 are shown in Table 8.1 and the change in traffic volumes on state numbered routes is shown on Map 8.2.

Connectivity to Devens: No roads have been re-established during Devens' redevelopment since 1994. The result is a necessity to pass through either Ayer or Lancaster to travel between Harvard and Devens, which is at least undesirable from a community connectivity standpoint. Re- establishing any former through-roads would present challenges. Among these are potential environmental impacts, environmental permitting, cost, land rights (if former roads have reverted to private ownership), and impacts to landowners and/or neighborhoods within both Devens and Residential Harvard. A feasibility and traffic simulation study would be needed to properly explore any road re-establishment options. Current plans, instead, are focused primarily on improving traffic conditions on Ayer Road and creating multi-use paths to improve connectedness with Devens.

Table 8.1 - Average Daily Traffic on Highways and Major Roads

Road	2018 Daily Traffic	2019 Daily Traffic	2020 Daily Traffic	2021 Daily Traffic	Location
Interstate 495			73,800		South of Route 111 (Boxborough)
Route 2	54,500	55,200	40,900	46,400	Littleton town line
Ayer Road (Routes 110/111)	6,700	6,700	5,940	6,700	South of Route 2
Ayer Road (Routes 110/111)	14,200	14,300	11,800	13,300	North of Route 2
Ayer Road (Routes 110/111)	5,800	5,800	5,100	5,800	North of Massachusetts Avenue
Massachusetts Avenue (Route 111)	3,000	3,000	2,600	2,900	East of Bolton Road
Massachusetts Avenue (Route 111)	5,600	5,600	5,000	5,600	South of Ayer Road
Still River Road (Route 110)	2,500	2,500	2,000	2,200	Bolton town line
Still River Road (Route 110)	2,800	2,800	2,500	2,800	West of Massachusetts Ave
Bolton Road	1,700	1,800	1,600	1,700	South of Route 111
Poor Farm Road	1,300	1,300	1,100	*	East of Ayer Road

*No data is available

Functional Classification

Transportation planners group roads and highways into classes or types that reflect a road's intended service. The key characteristic defining roadway classification is the degree to which a roadway emphasizes movement through an area versus local access. The five major classifications of roads are Freeway/Expressway, Principal Arterial, Minor Arterial, Collector, and Local. These classifications can be subdivided further to acknowledge the varying degrees that a road facilitates travel mobility or local access. For example, local roads provide a greater proportion of direct access to property, while collectors and arterials provide a greater proportion of travel mobility.

Map 8.1 shows the functional classification of roads and highways in Harvard according to data from MassDOT, while Table 8.2 summarizes the total number of road miles in Harvard by DOT's classification system. The specific classification of the arterials and significant collectors in Harvard is also shown in Table 8.2. Several roads in Harvard fall under state jurisdiction (MassDOT), including Route 2 and its ramps, and Route 111 (Massachusetts Avenue) from the Boxborough town line to Still River Road/Old Littleton Road.

The primary function of each type of road in Harvard is as follows:

- **Arterial (Principal and Minor):** The arterial street functions primarily to carry large volumes of traffic through the community. These facilities provide access between the interstate and other highways, and residential and commercial areas in the community via connections to local collector roads. There are 13.5 miles of streets classified as principal arterials (including Route 2 and Ayer Road north of Rt. 2, and 5.9 miles of streets classified as rural minor arterials in Harvard (including Ayer Road south of Route 2 and Still River Road).
- **Collector (Major and Minor):** The collector street functions primarily to carry traffic from local residential roads to arterial roads. Collector streets pass through residential areas both collecting and distributing traffic from local streets. There are approximately 2.4 miles of streets classified as rural major collectors (Massachusetts Avenue) and 9.3 miles of streets classified as rural minor collectors in Harvard (Littleton Road, Bolton Road, and Stow Road). (Note: The terms 'rural' and 'urban' refer to how the Census Bureau defines an area based on density and not to its roadway characteristics.)
- **Local:** Local roads comprise the remainder of streets in Harvard. Local roads primarily provide direct access to property. The local roads also serve to carry traffic to and from the collectors and arterials. There are approximately 63.8 miles of streets classified as local in Harvard.

Table 8.2 - Roadway Miles by Functional Classification

Roadway Classification	Miles
Interstate	2.9
Arterial – Principal	13.5
Arterial – Minor	5.9
Collector – Major	2.4
Collector – Minor	9.3
Local	63.8
Source: Mass. Department of Transportation.	

Table 8.3 - MassDOT Functional Classification of Roadways

Road	MassDOT Classification	Jurisdiction
Interstate 495	Interstate	MassDOT
Route 2 and ramps	Principal Arterial	MassDOT
Ayer Road (Routes 110/111) – north of Route 2	Principal Arterial	Town
Ayer Road (Routes 110/111) – south of Route 2	Rural Minor Arterial	Town
Still River Road (Route 110)	Rural Minor Arterial	Town
Massachusetts Avenue (Route 111)	Rural Major Collector	MassDOT
Littleton Road	Rural Minor Collector	Town[1]
Stow Road	Rural Minor Collector	Town

Source: MassDOT Highway Division

1. A small stretch of Littleton Road is under MassDOT jurisdiction.

Funding Considerations

Some roads are eligible for federal funding for reconstruction projects, based on the road's designation under either the National Highway System (NHS) or Surface Transportation Block Grant (STBG). In Harvard, Route 2 and Ayer Road (Route 110) north of Route 2 are part of the NHS. All rural arterials and rural major collectors not on the NHS are eligible for STBG funding, which applies to Ayer Road south of Route 2, Still River Road, and Massachusetts Avenue. Rural minor collectors (Littleton Road and Stow Road) are eligible for limited STBG funding (capped at 15 percent). MassDOT distributes federal highway funding that it receives between "regional target funding" allocated by the Metropolitan Planning Organizations (MPOs) for regional priority projects that are eligible for federal aid, and funding that is allocated by MassDOT for application to the state-owned transportation system.[68] Funding of the Ayer Road Project is being sought as part of the Transportation Improvement Planning (TIP) process to plan for and potentially construct a major improvement to Ayer Road between Route 2 and the Harvard/Ayer Town line. The goal is to improve safety, control increased traffic and to add a multi-use path to enhance access to the C District and connect Harvard with Ayer, Devens, and the region with pedestrian and bicycle options.

Scenic Roads

In Harvard, roads play an integral part in shaping and reinforcing the Town's visual character. With an eye toward preventing the gradual suburbanization of Harvard's roadsides, the Town has placed nearly all of its local streets under the protective cover of the Massachusetts Scenic Roads Act. The high scenic value of these roads reflects the Town's historic past, and they still retain a winding, rural character. Most roads in Harvard are relatively narrow, lined with trees, stonewalls, farm fences, open fields, and increasingly, with homes. As these rural byways form corridors through the countryside, they generally conform to the contours of the land and provide access to important view sheds that residents seek to preserve. However, while near-universal

application of the Scenic Road designation may help to preserve the character of Harvard's roads, it can make it very difficult to implement safety and capacity improvements. Residents are generally content with this trade-off, preferring narrower roads with slower speeds over wider roads with higher capacity.

Harvard's Scenic Roads Bylaw, Chapter 90 of the Town code, covers the cutting or removal of trees, and the tearing down, destruction, or alteration of stone walls or portions of stone walls within the right-of-way of designated scenic roads. Written consent from the Planning Board, following a public hearing, is required for any such actions. The Planning Board considers, among other things, public safety, scenic views, preservation of historic and regional characteristics, and preservation and enhancement of natural and aesthetic qualities of the environment. As part of the Scenic Road Consent application, the applicant must identify any compensatory action or mitigation measures to the proposed cutting or trimming of trees or the tearing down or destruction of stone walls. The Planning Board will typically grant consent only when stone wall removal is beneficial and with the approval of the Tree Warden. (See Chapter 6 for additional information about scenic roads.) Harvard adopted a newer version of the Scenic Roads Bylaw in 2021 that includes enforcement measures for any actions taken that violate any mentioned activities.

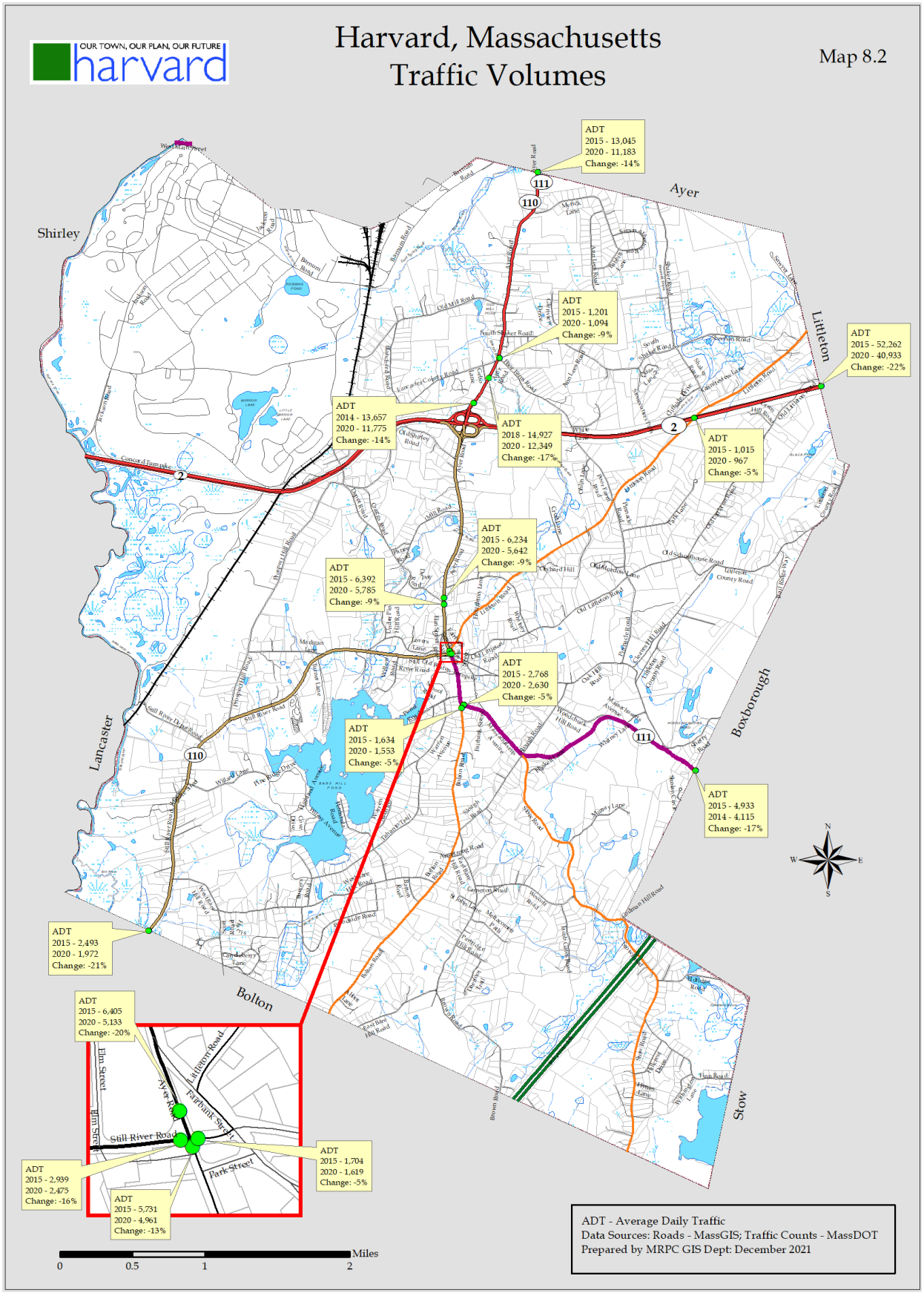
Truck Routes

Along with Interstate 495 and Route 2, Massachusetts Avenue (Route 111), Ayer Road (Routes 110, 111) and Littleton Road are designated truck routes, but Still River Road (Route 110) is not. This means that large trucks as defined by the Surface Transportation Assistance Act (STAA) are allowed to operate on them. This includes truck and semi-trailer combinations, sometimes referred to as 18-wheelers, with semi-trailer length up to 53 feet. Massachusetts Avenue is narrow and steep in parts, and is difficult for trucks to navigate in winter conditions. There are no existing truck exclusions on roads in Harvard. To help mitigate negative impacts of trucks while ensuring the continued delivery of goods and services, the Town should explore establishing bans on truck traffic on selected local residential streets, with permission from the MassDOT Highway Division.

Devens, with a high concentration of manufacturing and research operations, is a significant generator of truck traffic. MassDevelopment has instituted a policy that designates Jackson Gate at the Route 2 interchange as the preferred route for truck traffic oriented to Devens. Nevertheless, not all drivers adhere to the policy and anecdotal reports from residents indicate large trucks use Ayer Road as a short cut to Interchange 109 at Route 2. Ayer Road is a designated truck route, and, truckers cannot be prohibited from using it. The new Ayer Road truck stop has also compounded on this problem by acting as a magnet for trucks throughout the region and has led to greater truck use of the Route 110/111 corridor between Ayer and the interchange. MassDevelopment's cooperation, on-road signage of the policy, local police presence, and use of the Devens Regional Enterprise Zone (DREZ) Chapter 498 truck agreement can all contribute to managing the problem.

Travel Patterns

Outside of Harvard Center, traffic is not concentrated along any single corridor except Ayer Road through the C District north of Route 2. Here, Ayer Road absorbs a high volume of non-local trips associated with local businesses and traffic oriented toward Route 2A and the eastern portion of Devens. While the easterly part of Route 111 generally parallels Route 2 and Route 117, it carries a significantly lower volume of traffic even during commuting periods.



Harvard/Harvard_MasterPlan_Transportation_2021/v10/Harvard_MP_Transportation2021_TrafficVolumes_85x11.mxd [1:60,000] 12_15_21

Street/Road	Location	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Ayer Road	North of Still River Rd						6405	5688	5694	5757	5826	5133
Ayer Road	North of Depot Rd						6234	6253	6259	6328	6404	5642
Ayer Road	South of Depot Rd						6392	6411	6417	6488	6566	5785
Ayer Road	At Ayer Town Line				12230	12903	13045	13215	13331	13518	13572	11183
Ayer Road	North of Gebo Lane									14927	14987	12349
Ayer Road	North of Route 2	13800			12945	13657			14036	14233	14290	11775
Bolton Road	South of Mass Ave.					1650	1634			1742	1763	1553
Littleton Road	Over Route 2					992	1015	1078	1096	1099	1172	967
Massachusetts Ave	At Boxborough Town Line					4822	4933	5239	5328	5344	4988	4115
Massachusetts Ave	East of Bolton Road					2796	2768			2950	2985	2630
Massachusetts Ave	South of Still River Road						5731	5498	5503	5564	5631	4961
Poor Farm Road	East of Ayer Road				1126	1188	1201		1327	1331	1326	1094
Route 2	At Littleton Town Line	47100	45278	45662	46661	47432	52262	53207	53473	54452	55214	40933
Still River Road	At Bolton Town Line	1946	2477	2425	2439	2466	2498	2500	2665	2483	2513	1972
Still River Road	East of Massachusetts Ave.						1704			1816	1838	1619
Still River Road	West of Massachusetts Ave.						2939	2743	2746	2776	2809	

Traffic continued to rise each year from 2010-2019 and then took a dip when the Covid 19 pandemic hit. More people staying home for work and school resulted in dramatic decreases in traffic patterns for the duration of the Covid-19 pandemic state of emergency. Long term transit changes as a result of widespread adoption of tele-work may emerge that alter longstanding patterns, although this remains to be seen.

Several other roadways or combinations thereof provide links within Harvard and between Harvard and adjacent towns. Their rural character and the low-density land uses that surround them argue for standards of shoulder maintenance, signage, and striping that differ from what is appropriate for the Town's more traveled roadways. Though wide enough to accommodate pedestrians, bicyclists, and equestrians, many of the roads that intersect or converge with the more prominent "spokes of the wheel" lack sidewalks or bike paths, and in many places their shoulders are constrained. Posted travel speeds along these secondary roads are low due to their narrow, curvy routes, and slower speeds are advisable due to frequent chance encounters with bicyclists, who enjoy cycling on Harvard's scenic roads. Nevertheless, many of Harvard's roadways experience speeds that are much higher than the posted limits. Traffic calming measures may be necessary to provide cues to drivers to slow down for safety of pedestrians, bicyclists, and vehicles exiting local driveways. As one such measure of introducing widespread traffic calming, the Harvard Select Board has requested home rule from the State so that the town can adopt a singular, town wide speed limit.

A noteworthy feature of the secondary roads between Harvard and adjacent towns is that in most cases, there are no distinctly different or contrasting land uses at the Town line. The transition between Harvard and Boxborough, dominated by a highway interchange and corporate parks, is an obvious exception. However, the development of adjacent communities (Ayer, Devens, Bolton, Stow, Littleton, and Boxborough) is leading to the perception of higher levels of "cut through" traffic, as commuters seek to utilize secondary roads in an attempt to avoid traffic congestion.

Table 8.6 shows the modes of travel to work for Harvard residents and changes that have occurred since the 2010 Census. The proportion of workers who drove alone has decreased but still accounts for the vast majority of commute trips. Meanwhile, the proportion of residents who work at home increased to about 13 percent of all workers. This is fairly common among affluent communities with a labor force of professionals whose occupations have benefited from the rapid evolution of information technology. For those who commute to work, residents are dependent upon automobiles as the lack of public transit service and low employment base make alternative modes of travel impractical for most.

This lack of public transit service is a persistent issue that Harvard has been attempting to address by establishing a Montachusett Regional Transit Authority (MART) route or park in ride within the town, however, there have been longstanding difficulties with accomplishing either of these. MART has not included Harvard within their regular routes as the town does not have a designated stop, and the park and ride has faced issues with determining a location, even with attempts to work with the State to establish a park and ride at the Rt. 2 interchange on state land.

Table 8.6 - Commute to Work (2010-2019)

	Total	Percent	Change from 2010
Workers 16 years or older	2709	100%	5.6%
Drove alone	1947	71.9%	-10.6%
Carpooled	124	4.6%	-9.8%
Public transportation	214	7.9%	777.8%
Walked	59	2.2%	29.4%
Other means	6	0.2%	-86.7%
Worked at home	359	13.3%	30.4%
Mean travel time to work	37.6 minutes	n/a	26.6%
Source: U.S. 2010 Census and American Community Survey 5-Year Estimates (2015-2019). Note: data reported here include residents of Harvard and Devens.			

Except for a brief subdivision boom in the post WW II era, the lack of conventional subdivisions is a distinguishing feature of Harvard's road system. Unlike many neighboring towns, Harvard does not have large subdivisions with interconnecting street grids or multiple access points along one street. The Town's development history, the physical constraints of soil, wetlands and water

features, and the regulations of the local boards help to explain the limited number of conventional subdivisions and the neighborhood street patterns they produce. Rather, it seems that most residents of Harvard live along through-roads. As a result, virtually every street in town serves at least two purposes: through streets for vehicles, and pedestrian/bicycle routes for local residents. However, the streets are not really designed for multi-modal use, and conflicts between vehicles and pedestrians/bicyclists are not uncommon, which is a point of note addressed in the 2017 approved Complete Streets Prioritization Plan as it is intended to address this deficiency throughout the town.

Traffic Operations

Harvard residents perceive speeding as the primary traffic safety issue in their community. In 2021, at the Annual Town Meeting, additional controls were adopted to implement a community wide speed limit and to seek legislative authority to establish additional speed limits with Thickly Settled provisions for areas with significant density, pedestrian, or bicycle traffic. The goal is to have safer streets for non-motorized transport. A challenge is that absent additional legislative authority, speed limits are set based upon the 85th percentile of observed speeds determined by a traffic engineering study. Counter-intuitively, speed limits may need to be increased if the study shows the 85th percentile speed is actually higher than the posted speed limit. One contributing factor to the perception of excessive speeding is linked to the inadequate shoulder widths on rural roads, which creates uneasiness for pedestrians and bicyclists when passed by vehicles.

One appropriate method of reducing the frequency of collisions is traffic calming. Lowering travel speeds when carefully designed measures are put in place that provide visual and physical cues to drivers that they are entering an area where slower speeds are advisable. Traffic calming involves geometric changes in street alignment and other physical measures to slow down traffic in the interests of safety and livability. Such measures are part of the Complete Streets program and target high traffic locations such as schools and village areas like Still River. Examples of traffic calming include:

- Curb extensions/bump outs/neck-downs;
- Narrowed travel lanes and widened shoulders with potential for bike-accommodating shoulders or lanes;
- Raised crosswalks/ speed humps/ raised intersections;
- Adding street trees and other vertical elements that appear to narrow the road; and
- Mini-roundabouts.

Where traffic calming may be a solution to speeding traffic, it is important to reach out to the affected neighborhood to discuss options, listen to concerns, and obtain support for specific measures. Public safety officials should also weigh-in to assure emergency vehicles can navigate the roadway without losing valuable response time. Each location requires an analysis of possible techniques, careful design to standards, and roadway signage for pedestrian safety.

Raised Intersection

Curb Extension

2. AYER ROAD COMMERCIAL CORRIDOR

The first step is to submit a Project Initiation Form (PIF), which broadly outlines the problem and documents community support. An initial review by MassDOT will indicate whether the project is suitable for inclusion on the TIP. If so, Harvard is responsible for completing the design in accordance with MassDOT criteria and acquiring land for any right-of-way expansion. State and federal funds pay for all construction costs. The process may take 8 – 10 years, but the ultimate reward is a functional, safe, and attractive road that will be conducive to fostering new economic growth. Harvard is well on its way to seeing this project through, as the Town has recently completed the 25% design stage for the Ayer Road Commercial Corridor as of March 30, 2022.

Concerns with traffic along Ayer Road have at least some linkage to Devens, especially related to truck traffic, as noted above. This issue is further aggravated by the lack of direct Harvard-Devens road connections, as also discussed above. The 1994 Reuse Plan noted that "several measures [would] be considered to reduce potential truck impacts on local roadways and to downtown Ayer and Route 110/111 in Harvard. These include[d] encouraging truck traffic to use Route 2 by providing easy access through improvements to Barnum and Patton Roads." Further, "monitoring [would] be performed to assess impacts of these trucks on local streets. Additional measures such as truck restrictions at Barnum Gate [would] be considered if truck impacts on local streets require further mitigation. All new users with significant truck use at Devens [would] be required to file truck routing plans and permits may be issued stipulating truck routes."

Several studies have documented safety and congestion concerns related to truck traffic on Ayer Road. It would be helpful to prepare a summary document to identify potential strategies to discourage but not necessarily prohibit truck traffic on Ayer Road. The Selectmen could consider additional mitigation from MassDevelopment and/or MassDOT, particularly with regard to the current policy of routing truck traffic oriented to Devens to the Jackson Road interchange.

3. SAFETY

MassDOT provides crash[1] data and statistics for all communities in the State. A total of 493 crashes occurred in Harvard from 1/1/2018 to 11/2/2021 as follows:

- 147 (29.8% of total) occurred in 2018
- 137 (27.8% of total) occurred in 2019
- 82 (16.6% of total) occurred in 2020 (decrease assumed the result of Covid pandemic)
- 127 (25.8% of total) occurred in 2021 from 1/1/2021 – 11/2/21

Map 8.3 displays all 493 crash locations.

The location analysis conducted by MPRC staff found that the 11 corridors listed in **Table 8.7** below experienced the vast majority of the crashes that occurred in Harvard for the years specified above. The 11 corridors experienced 439 (89%) of the 493 total crashes that occurred in Harvard. Of the 493 total crashes, 146 crashes (29.6%) resulted in fatal and injury crashes. Three (3) were fatal crashes and 143 were injury crashes. The 11 corridors experienced 132 (90.4%) of the 146 total fatal and injury crashes that occurred in Harvard.

The following three (3) corridors experienced 67.5% (333 of 493) of the total crashes and 68.5% (100 of 146) of the total fatal and injury crashes that occurred in Harvard. Of the 493 total crashes, 236 (47.9%) crashes occurred on **Route 2**; 68 (13.8%) occurred on **Ayer Road, north of Route 2**; and 29 (5.9%) crashes occurred on **Route I-495**. Of the **Route 2** total crashes, 68 (28.8% of the **Route 2** total) were injury crashes. Of the **Ayer Road, north of Route 2** total crashes, 23 were injury crashes (33.8% of the **Ayer Road, north of Route 2** total). Of the **Route I-495** crashes, two (2) were fatal crashes and another seven (7) were injury crashes (31% combined of the **Route I-495** total).

Harvard may want to consider further study of 10 of the 11 corridors listed in **Tables 8.7** above beginning with the top ranked corridors. The **Ayer Road, north of Route 2** corridor does not need further study because a roadway project is under design and scheduled to begin construction in 2026. For the **Route 2** and **Route I-495** corridors, MassDOT assumes responsibility for improving safety on those corridors which includes the bridges and the ramps on **Route 2** at Exits 106 and 109. Harvard may want to consider reaching out to MassDOT District 3 to discuss project development for those corridors due to the high rate of fatal and injury crashes on the **Route I-495** corridor and the high rate of injury crashes on the **Route 2** corridor.

[1] The need to use the word crash instead of accident began with the 1997 campaign initiated by the NTSA to describe traffic crashes as events that are avoidable. Most crashes are avoidable by reducing/eliminating behaviors that put drivers at risks.

Table 8.7: Top 10 Crash Corridors

			Corridor Crash Severity						Crash Total	
#	Rank	Corridors	1. # of Fatal Crashes	2. # of Injury Crashes	R1*: 1. & 2. Total	1. & 2. % of Town TOTAL	R3*: % of Cor Crash Total	# of PDO** Crashes	R2*: Cor Crash Total	% of Town Total
1	1	Route 2	0	68	68	46.6%	28.8%	168	236	47.9%
2	NR^	Ayer Road, north of Route 2	0	23	23	15.8%	33.8%	45	68	13.8%
3	2	Route I-495	2	7	9	6.2%	31.0%	20	29	5.9%
4	3	Still River Road	1	4	5	3.4%	33.3%	10	15	3.0%
5	4	Bolton Road	0	5	5	3.4%	35.7%	9	14	2.8%
6	5	Littleton County Road	0	5	5	3.4%	50.0%	5	10	2.0%
7	6	Massachusetts Ave	0	4	4	2.7%	20.0%	16	20	4.1%
8	7	Prospect Hill Road	0	4	4	2.7%	36.4%	7	11	2.2%
9		Stow Road	0	4	4	2.7%	36.4%	7	11	2.2%
10	9	Littleton Road, north & south of Rt 2	0	3	3	2.1%	33.3%	6	9	1.8%
11	10	Ayer Road, south of Route 2	0	2	2	1.4%	12.5%	14	16	3.2%
		#1 - #11 Totals	**3**	**129**	**132**			**307**	**439**	
		Harvard TOTALS	**3**	**143**	**146**	***29.6%***		**347**	**493**	
		#1 - #11 Percent Share of TOTALS	**100%**	**90.2%**	**90.4%**			**88.5%**	**89.0%**	

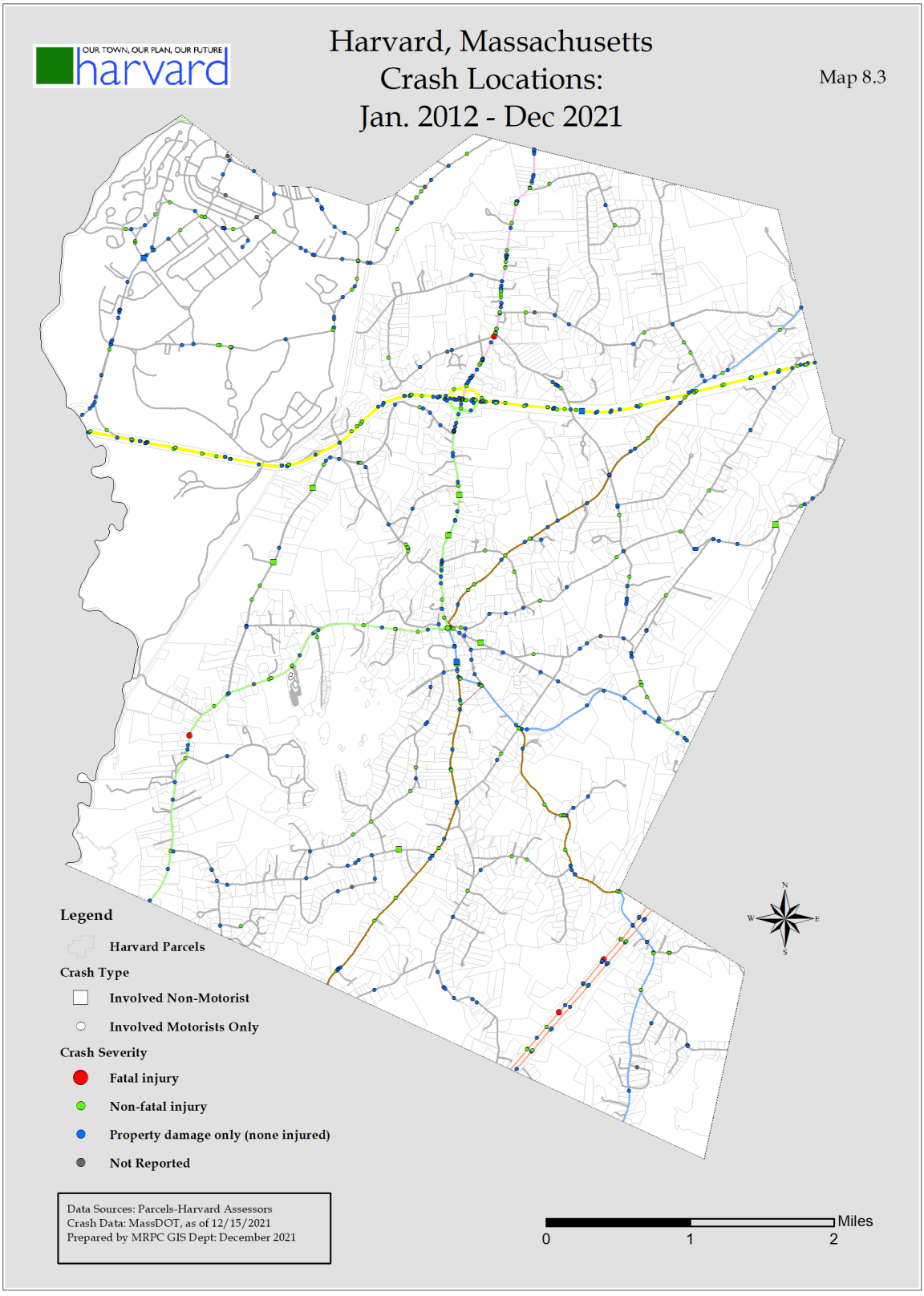
*Columns used for ranking: R1: 1st rank, R2: 2nd rank, R3: 3rd rank **includes Not Reported and Unknown crashes

^Not Ranked due to TIP Project Fatal and injury crash percentage of total crashes

If Harvard chooses to undertake further study of the **Bolton Road** corridor, the study should have some focus placed on the **219 – 223 Bolton Road** location which experienced 60.0% of the corridor injury crashes and 50.0% of the crash total that occurred within the corridor (see **Table 8.8** below). It is noteworthy to mention that the **Ayer Road / Mass Avenue at Still River Road** intersection within the **Ayer Road, south of Route 2** corridor has experienced only three crashes during the specified time period mentioned above.

Table 8.8: Bolton Road and Ayer Road, south of Route 2 Corridor Locations

			Special Location Crash Severity					Crash Total	
Rank	Corridor	Special Location (SLoc) Within Corridor	1. # of Fatal Crashes	2. # of Injury Crashes	1. & 2. Total	% of 1. & 2. SLoc Total	# of PDO Crashes	Crash Total	% of Cor Total
4	Bolton Road	Bolton Rd at 219 - 223 Bolton Rd(near Abbot Ln)		3	3	60.0%	4	7	50.0%
10	Ayer Rd, south of Rt 2	Ayer Road / Mass Ave at Still River Road			0	0.0%	3	3	18.8%



Harvard/Harvard_MasterPlan_Transportation_2021/v10/Harvard_MP_Transportation2021_Crashes_85x11.mxd [1:60,000] 12_15_21

4. PUBLIC TRANSPORTATION

Harvard is one of twenty-two communities that participate in the Montachusett Regional Transit Authority (MART). There is no existing fixed-route transit service in Harvard. The residential density is too low and destinations within Harvard are generally too dispersed to support conventional fixed-route service. However, MART does provide Council-on-Aging (COA) paratransit service for elderly and disabled residents within Harvard, along with an activity-specific paratransit. Scheduling is administered locally by Harvard's COA office.

Public transportation options exist just outside Harvard's borders (see Map 8.1). The MBTA's Fitchburg Commuter Rail Line runs through Littleton and Ayer along Harvard's eastern and northern edges, with stations in Ayer's town center and Littleton at Route 2 and Interstate 495. The Fitchburg Line provides service seven days/week between Fitchburg Station and Boston North Station (the Fitchburg Line also servers Porter Station in Cambridge, with a direct connection to the MBTA's Red Line subway). As of spring 2014, the MBTA provides five weekday peak period trips in each direction (thirteen total trips per weekday in each direction).

Ayer Parking Garage has 172 parking spaces available at $4/day and $65/month. Littleton/495 Station has 226 total parking spaces for daily and monthly parkers. Parking rates are $6/day (Mon-Friday), $2/day (Saturday & Sunday) and $105/month. Because of the limited parking at these locations, the Transportation Advisory Committee is currently working with the Town Planner to explore the construction of a Park & Ride Lot and shared use of the MART shuttle for transportation to the Commuter Rail station in Littleton. Prior to the COVID interruption of mass transit use, parking was insufficient and only available for the first 2 or 3 trains at Littleton. The latter peak trains are thus unavailable parents dropping children at school, for example. As a result, many commuters are without access to commuter rail. Adding MART service, as commuter rail use is restored is an important goal of this Plan Update. MART can assist the Town in the planning and execution of such a system. The transit assessment Harvard currently pays can be applied to help offset the cost of the service, although there is no Town agreed upon parking spot for such services.

5. PEDESTRIAN NETWORK

There are very limited sidewalks within Harvard, and roadway shoulders in many cases are constrained and not adequate for pedestrians (see Map Figure #). Due to the dispersed nature of development and lack of pedestrian facilities, walking on roads in Harvard is difficult. However, the Phase I survey and a follow-up survey for Phase II revealed that there is a desire for a more walkable Harvard. When asked if Harvard should make pedestrian and bicycle safety improvements in the Town Center, 74 percent of respondents agreed compared with 15 percent that disagreed. These survey results have been consistent with additional surveys performed since the original 2016 Master Plan and continues to be a desire for Harvard residents. (See question 43 in the 2016 Master Plan survey appendix.)

The Town Center, which features many Town public buildings, the Bromfield School, and the Elementary School, provides an opportunity to create a more walkable downtown. The layout of these buildings and their parking generally impede pedestrian travel between buildings, due to a lack of sufficient existing pedestrian network or facilities. The pedestrian paths are lacking, poorly defined, or otherwise uninviting. The Harvard School Committee has applied to the Safe Routes for School grant to address these issues but have been rejected due to low density levels near the school failing to justify the improvements. Ideally, parking areas could be somewhat centrally located and within reasonable walking distance of most destinations (five to ten minute walk or ¼ to ½-mile). The long distances and the lack of an adequate pedestrian environment, like safe walking surface, lighting, and wayfinding signage, impede pedestrian travel. In the 2014 survey for this Master Plan, 48 percent of participants wanted the Town to create a comprehensive downtown parking and walking plan compared with 17 percent that disagreed. (See question 38 in the 2016 Master Plan survey appendix.) Since then, the Town as finalized their Complete Streets Prioritization Plan as a central focus to address these concerns and deficiencies and overseen improvements at the Hildreth school parking lot and improvements along Pond Road path behind the stone wall.

In its rather large holdings of federal, state and local conservation land, numerous hiking trails provide opportunities for residents to enjoy Harvard's outdoor resources. In 2013 MRPC created an inventory of trails in Harvard, which was then updated in 2018. Including Devens there are about 70 miles of trails in the inventory. There will undoubtedly be opportunities to acquire additional conservation lands over time, and one objective should be to develop new trails that will connect sites to create longer distance trails and provide links to villages and points of interest in town. It may eventually be possible to create a circumferential trail around Harvard with spokes radiating to popular destinations.

In 2010 the Montachusett Regional Planning Commission (MRPC) conducted a "Safe Routes to School" study due to concern with the safety of students walking to and from schools and to destinations within the Town Center. The town signed up for the Statewide Safe Routes to School program in 2008. This statewide program aims to promote the health and mobility of school-aged children while reducing congestion and air pollution from driving to school when near-by students could walk just as easily. The lack of sidewalks and off-road paths to the ballfields, Library and General Store often places students on street sides with little separation from on-coming traffic. Posted travel speed on Mass. Ave. north of the Elementary School is 20 mph, yet over 30% of vehicles exceeded 25 mph during normal school hours. The report recommended a number of measures to improve student safety:

1. Install and maintain sidewalks along all major routes.

2. Install crosswalks and ramps for students to cross at all major intersections.
3. Monitor and enforce speed limits.
4. Place warning signs in the Town Center to alert drivers of high pedestrian activity.
5. Continue to participate in the Safe Routes to School program, which qualifies the Town for engineering funds for physical improvements.

In 2021, at Town Meeting, the Town authorized the Select Board to seek additional authority to impose stricter speed limits in thickly settled areas and to seek Home Rule authority for additional traffic control and speed measures. This when coupled with additional marking and paths can provide additional opportunities for safer streets for bicycles and pedestrians.

MRPC re-visited the Town Center traffic situation in 2015-2016 with an eye to developing a consensus circulation plan for the area. Since then, Harvard has made significant progress towards all of the recommended goals, from emphasized pedestrian circulation over traffic improvements to reconfiguring the circulation system in the municipal campus to clarify travel routes, improve access to Ayer Road, and organize parking in a logical fashion.

The Town has continued to add new sidewalks and paths to create a continuous network for pedestrian safety, chiefly among school students, which is still ongoing, and overall parking has been improved with the addition of a new parking lot at the elementary school in 2021 to meet average day demand. The parking lot by the General Store was also improved.

Another area in need of pedestrian improvements is the Commercial district along Ayer Road. To address this need, the Ayer Road TIP project has created a pedestrian friendly multiuse path. Sidewalks are non-existent in most locations, and few visitors are willing to risk the hazard of walking along the highway with high traffic volumes and fast speeds. Harvard is re-thinking its approach to development in the district. Rather than stand-alone buildings on separate lots, each isolated from neighboring properties, new development guidelines call for connecting properties via paths and sidewalks to make the area more pedestrian-friendly. Connecting paths to pedestrian destinations, such as Dunkin Donuts and McCurdy Track, should alleviate safety concerns of walkers and bicyclists, especially children. Also as discussed above, public realm improvements in Ayer Road itself call for sidewalks separated from travel lanes with intervening green belts to make pedestrians feel protected from passing vehicles. The Planning Board can encourage pedestrian connectivity by working with developers when reviewing permit applications. The improvement of the path from Depot Road to Lancaster County Road and the plan to create a multiuse path from Old Mill Road to Devens will also improve access in these areas.

6. BICYCLE NETWORK

As is the case for pedestrian facilities, most of Harvard's rural roads do not adequately accommodate bicyclists due to constrained shoulder widths. Harvard's scenic and hilly roads are a destination for enthusiastic bicyclists from Harvard and the surrounding area. There is limited existing signage for bicycle routes or for bicycle safety, but the sign graphic to the right can alert motorists to the possible presence of pedestrians and bicyclists on narrow country roads.

Figure 8.3: Combined Bicycle/ Pedestrian sign appropriate for shoulders on rural roads

While there is limited local demand for off-road bicycle facilities, opportunities to accommodate visiting bicyclists more safely on existing roads exist. As a member community of the Nashoba Regional Greenways group, Harvard is involved in creating more robust bicycle and greenway connectivity throughout the community. Several priority routes have already been established with the help and guidance of this group.

The roadway shoulder is the preferred position to accommodate bicyclists on rural roads (bike lanes and other alternative treatments are more appropriate for urban and suburban contexts where there is typically more traffic). On the lowest volume roads, shoulders are not needed. As traffic speeds and volumes increase, the value of shoulders increases, too. Benefits of shoulders include:

- Allowing for driver error and providing space to make evasive maneuvers
- Increasing sight distance for vehicles, especially for those entering the roadway
- Providing structural support for pavement at the edge of the roadway
- Providing additional space for snow storage, maintenance operations, and signage

Shoulders intended to accommodate bicyclists should be a minimum of five feet wide, if possible. It is not advisable to mark road shoulders as bike lanes. However, widening roads to accommodate five-foot wide shoulders is inconsistent with retaining rural character. It may only be necessary when increasing traffic volumes on local roads imperil pedestrians and bicyclists.

While certainly not a substitute for direct vehicular roadway connection, the viability of a bikeway between Harvard and Devens is being planned with the Old Mill route. This concept has been mentioned to various extents in several Town and Devens planning documents and should be further explored. Such multi-modal transportation opportunities can provide both recreational and commuting functions for at least a portion of the communities, and state and federal funding is frequently available for such projects.

The Transportation Advisory Committee is represented at the regional bicycle "Landline" initiative, that is planning connecting bicycle routes to and from Harvard to neighboring communities and other bicycle trails. Maps are being created for routes that will be marked as preferential bicycle routes and are intended to encourage cycling on roads that offer safer option than main connector roads. Trails are also being improved or planned to help connect the Ayer Road district with Town Center and Devens so that travel on Ayer Road is not needed.

7. TRANSPORTATION IMPROVEMENTS

Table 8.9 identifies the significant transportation projects confronting Harvard in the next ten years. Given the long time-horizon for planning, engineering, and construction, it is important to begin the process of raising local support and working with state and regional transportation planners to get projects on the drawing boards as quickly as possible.

Table 8.9 - Transportation Projects

Facility	Relative Cost	Time Frame
Establish a Trails and Traffic Committee to shepherd projects through conceptual, engineering, and construction phases	- - -	2016
Make low cost sidewalk improvements in the Town Center in conformance with Town Center Circulation Plan	$	1-3 Years
Refine the Safe Routes to School recommendations and work with the School Dept. and DPW on implementation	$	1-3 Years
Reconfigure the traffic pattern and parking layout in the municipal campus of Town Hall, Fire Station 1, and Hildreth House	$$	5-7 Years
Improve parking and traffic pattern at the Elementary School	$$	3-5 Years
Improve the North Parking Lot in the Town Center	$$	2016
Prepare a bicycle guide of scenic routes and engage students to develop a mobile app for bicycle routes and hiking trails	- - -	2016
Complete trail from the Town Center to McCurdy Track	$	2-3 Years
Prepare engineering plans for comprehensive circulation improvements for the Town Center	$$	3-5 years
With TIP funding from MRPC/MassDOT, implement comprehensive circulation plan for the Town Center (State funds > $1.0 M.)	$$	5-7 Years
Prepare and implement a traffic calming plan for Still River.	$	3-5 Years
Develop plan and construct traffic solution for the Ayer Road/Poor Farm Road/Gebo Lane area	$$	2-3 Years
Develop engineering plans for comprehensive traffic and pedestrian improvements for Ayer Road within the C District (100% Town funds required for design)	$$	3-5 Years
With TIP funding from MRPC/MassDOT, implement comprehensive traffic and pedestrian improvements for Ayer Road within the C District (State funds > $1.0 M.)	$	8-10 Years
Key: $: < $250,000; $$: $250,000 - $1,000,000; $$$: > $1,000,000		

Vision

Harvard will work to develop a safe and sustainable transportation system that serves all residents and other local stakeholders, allowing them the mobility to travel to work, school, commerce, and social and cultural activities. Such a system should ultimately be consistent with the Town's climate action goals and be accessible, affordable, safe, convenient, reliable, and comfortable.

Goal 1: Improve the general visibility and condition of bikeability, walkability, and accessibility throughout Harvard by developing and expanding networks for cycling and pedestrian use that can also interconnect with larger regional networks.

Action 1: Make sidewalk and bicycle facility improvements in the Town in conformance with the updated Town Center Circulation Plan (TCCP), the Complete Streets Prioritization Plan (CSPP), and the regional Landline connection project.

Action 2: Implement Complete Streets projects throughout Harvard according to the CSPP.

Action 3: Review and update the TCCP and CSPP on a regular basis, as needed.

Action 4: Designate a route on secondary roads from the Town Center to the Depot Road Fields

Action 5: Designate a route on secondary roads and maintain the trail from Depot Road Fields to McCurdy Track.

Action 6: Work with DEC, MassDevelopment, and MRPC to establish pedestrian and bicycle pathway connection to Devens via Old Mill Road.

Action 7: Explore bicycle and pedestrian facilities, appropriate to the location, for all road projects where feasible, but not impacting scenic road elements.

Action 8: Continue efforts, where consistent with the surrounding environment, to make the town more pedestrian friendly through the construction and rehabilitation of sidewalks, excluding any roads protected under Harvard's Scenic Road bylaw (Chapter 90). Current design standards for ADA compliance should be incorporated.

Action 9: Evaluate the viability of creating sharrows, shared-lane markings, on roads that are desirable for bicyclists but would not be suitable for more extensive construction or pedestrian oriented rehabilitation.

Action 10: Harvard should work with local conservation and land trust organizations to identify, prioritize, and implement additional trail opportunities and consider creating a community trail plan to assist with trail priority development and additional funding opportunities.

Action 11: Work to link Harvard trails and bike routes to various recreational opportunities outside of the town in cooperation with regional organizations and neighboring communities,

such as the Nashoba Regional Greenway (NRG) Coalition and the Montachusett Regional Trails Coalition.

Action 12: Work with DPW and bicycle, trails, and conservation groups to develop and execute a maintenance and repair strategy for trails and bike facilities.

Goal 2: Develop and maintain both new and existing transportation planning documents and procedures as needed to improve Harvard's soft infrastructure.

Action 1: Work with MRPC to develop and enhance a transportation facilities evaluation tool and framework and apply to prioritize new projects and improvements.

Action 2: Work with Town officials and committees to develop a 20-year town-wide Capital Improvements Plan with a five-year programming timeline. The Transportation Advisory Committee (TAC) should develop and maintain a list of circulation and transportation related projects to be submitted for incorporation as appropriate.

Action 3: Continue to use planning documents to guide maintenance and other work, such as road maintenance based off of priority projects.

Action 4: Incorporate green principles, AARP Age Friendly Community, and ADA best practices in ongoing and future planning documentation as a standard practice where possible. The Harvard Energy Advisory Committee (HEAC) should be involved in any planning activities that align with the Decarbonization Plan and any future HEAC plans.

Action 5: Aligning with the Decarbonization Plan and Green Communities, the town should pursue specific municipal fleet decarbonization and environmental impact improvement benchmarks within current and future plans.

Action 6: Complete engineering plans for comprehensive traffic and pedestrian improvements for Ayer Road within the C District (100% Town funds required for design).

Action 7: Continue to utilize traffic counts and crash data to maintain an up-to-date knowledge of current traffic volume and safety conditions throughout the community and utilize the Unified Planning Work Program (UPWP) project requests to MRPC for more in-depth studies as needed.

Action 8: The TAC and relevant town officials should continue to regularly review prior planning documents to ensure that all current and future plans can incorporate continuing actions when appropriate.

Action 9: The TAC should be involved in all transportation related issues, plans, and projects in the Town. This should include working with other Town departments and committees to ensure coordination; identifying and promoting needs and solutions; contributing to Town-wide planning and programming involving transportation and related issues; all to ensure safety, mobility, and quality of life.

Action 10: Work to create planning that allows for the integration of alternative transportation modes within and throughout Harvard, which could include working alongside MART and MRPC to establish a viable shuttle service for the commuter rail and other transportation destinations.

Action 11: Explore available means of providing sufficient professional support to aid the TAC and Harvard in accomplishing goals and actions without overburdening existing municipal staff. Areas that can be explored are changing municipal staff duties to allow for greater support, arranging for shared staff with another municipality, entering a relationship with a consultant, etc.

Goal 3: Work to meet and remain ahead of Harvard's transportation infrastructure needs, prioritizing safety and green principles wherever possible and financially feasible.

Action 1: Using Transportation Infrastructure Projects (TIP) and other applicable funding, develop and execute a traffic solution for the Ayer Road/Poor Farm Road/Gebo Lane Area.

Action 2: Using TIP and other applicable funding, implement comprehensive traffic and pedestrian improvements for Ayer Road within the C District.

Action 3: Make use of TIP and other applicable funding to implement the comprehensive circulation plan for the Town Center identified in the Town Center Action Plan and Complete Streets Prioritization Plan.

Action 4: Identify all alternative transportation means throughout Harvard, especially MART paratransit services, and market their availability to the public to increase public awareness.

Action 5: Establish one or more commuter park and ride lots within Harvard to, among other purposes, serve as a pickup and drop off location for a commuter rail shuttle service. If a park and ride lot cannot be established on public land, consider the use of private land through a lease or shared use agreement if possible.

Action 6: Coordinate with MRPC, serving as staff to the Metropolitan Planning Organization (MPO), on decisions related to project development, prioritization, funding, and scheduling on federal aid eligible roads.

Action 7: Improve parking by continuing to identify priority locations for public parking that serve the needs of the community while maintaining Harvard's desire to use green principles.

Action 8: For Massachusetts Avenue street parking, eliminate spaces from Library Walk to Pond Road and within 50' of the entrance to the Bromfield School. Retain the remainder as striped spaces.

Goal 4: Work to incorporate and complete Harvard Energy Advisory Committee (HEAC) Decarbonization Plan goals where they align or overlap with Circulation and Transportation commitments.

Action 1: Build EV charging stations on municipal properties for town vehicles, backed by renewable energy generation.

Action 2: Identify an approach or timeframe for electrifying heavier duty vehicles for which realistic solutions do not yet exist on the market.

Action 3: Encourage the adoption of electric vehicles amongst residents, businesses through education on incentives and options, promotional events, and expediting permits.

To: Rich Maiore, Kara Minar, Erin McBee, Charles Oliver, Don Ludwig

From: Harvard Climate Initiative Committee

Date: November 10, 2022

It is our pleasure to attach the Climate Action Plan, the result of more than a year's worth of work meeting with town boards and committees as well as public input, to create a document that is a reflection of the town's resolution to address climate change.

The attached plan is a follow-up to our earlier presentation of the goals and actions. The report contains more background information and timelines. All of this work was done in conjunction with relevant town boards and committees. Successful implementation of the Climate Plan will continue to require both coordination and collaboration between the Select Board, HCIC, and town boards as committees. As such, we would like to discuss and move forward on implementation planning. It is timely given the UN Global Climate Change Conference meetings happening this week.

Please note that this document was recently designed with the help of Bromfield Digital Arts teacher and a student. We realize there may be a few cosmetic tweaks that may still be needed but the content will not change. We look forward to your approval so we may formally release it.

Thank you for your attention to our work.

TOWN OF HARVARD, MASS.
INCORPORATED JUNE 29, 1732

CLIMATE ACTION PLAN

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INTRODUCTION

Climate change is a challenge of sobering magnitude and urgency, which requires us to draw on our extraordinary capacity for resilience and innovation. Across the nation in 2021, we saw record heat, record drought, and super storms and fires that took significant economic and human tolls. In Harvard, we also saw record heat, record rainstorms and environmental impacts, such as algal blooms in Bare Hill Pond, the spread of invasive species, and forests under stress. In 2022 these trends have continued and intensified. What's more, the science of climate change indicates we should expect more of what we have seen in 2021 and 2022 in the years ahead. We can rise to the challenge by tapping into the creativity, volunteerism, and entrepreneurial spirit of Harvard. As a small town, but with the exceptional talent and experience of our people, we can be a model for how small towns can address climate change and environmental sustainability.

Municipalities must play a vital role in addressing climate change. The design of cities and towns—how we use our land, how we design our buildings, how we get around—significantly impacts the amount of energy we use, greenhouse gas (GHG) emissions we produce, the health of our residents, and the resiliency of our natural resources. While large cities often get the most attention due to their scale and impact, small communities are more numerous, and a model framework for climate change can and should be developed for them. It is critical, therefore, that towns like Harvard demonstrate that it is possible to address climate change and the changing landscape, while creating a more vibrant and prosperous place to live, play, and work.

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.

INTRODUCTION

Town Resolution

In October 2021, at a Special Town Meeting, Harvard residents approved a climate change resolution. The resolution tasked the Select Board to commit to the following actions:

1. Harvard affirms its support for the greenhouse gas reduction goals established by the Commonwealth of Massachusetts and for any subsequently adopted modifications of those goals, and affirms its willingness to change its practices, policies, and procedures in support of achieving the goals established by the Commonwealth in order to mitigate the impacts of climate change.

2. Harvard commits to evaluating and mitigating the potential negative impacts of climate change associated with all purchases, public projects, planning processes, and policies.

3. Harvard commits to developing and requiring an environmental assessment process to review all purchases, public projects, planning processes and policies and to make this information readily available to town residents specifically on warrants requiring citizen approval.

4. Harvard commits to addressing climate resiliency and adaptation by coordinating the work of Town boards, committees, commissions, and other entities to plan together how to respond to the threats climate change may have on the built environment.

Bare Hill Pond, Harvard., MA

natural resources, and the health of its residents.

The Harvard Climate Action Plan is a roadmap to meet the commitments the Harvard Community made at 2021 Special Town Meeting to reduce Greenhouse Gas emissions. Our plan is in alignment with the Commonwealth of Massachusetts goals in its report titled the "2050 Decarbonization Roadmap and Clean Energy and Climate Plan for 2030" and the 2020

INTRODUCTION

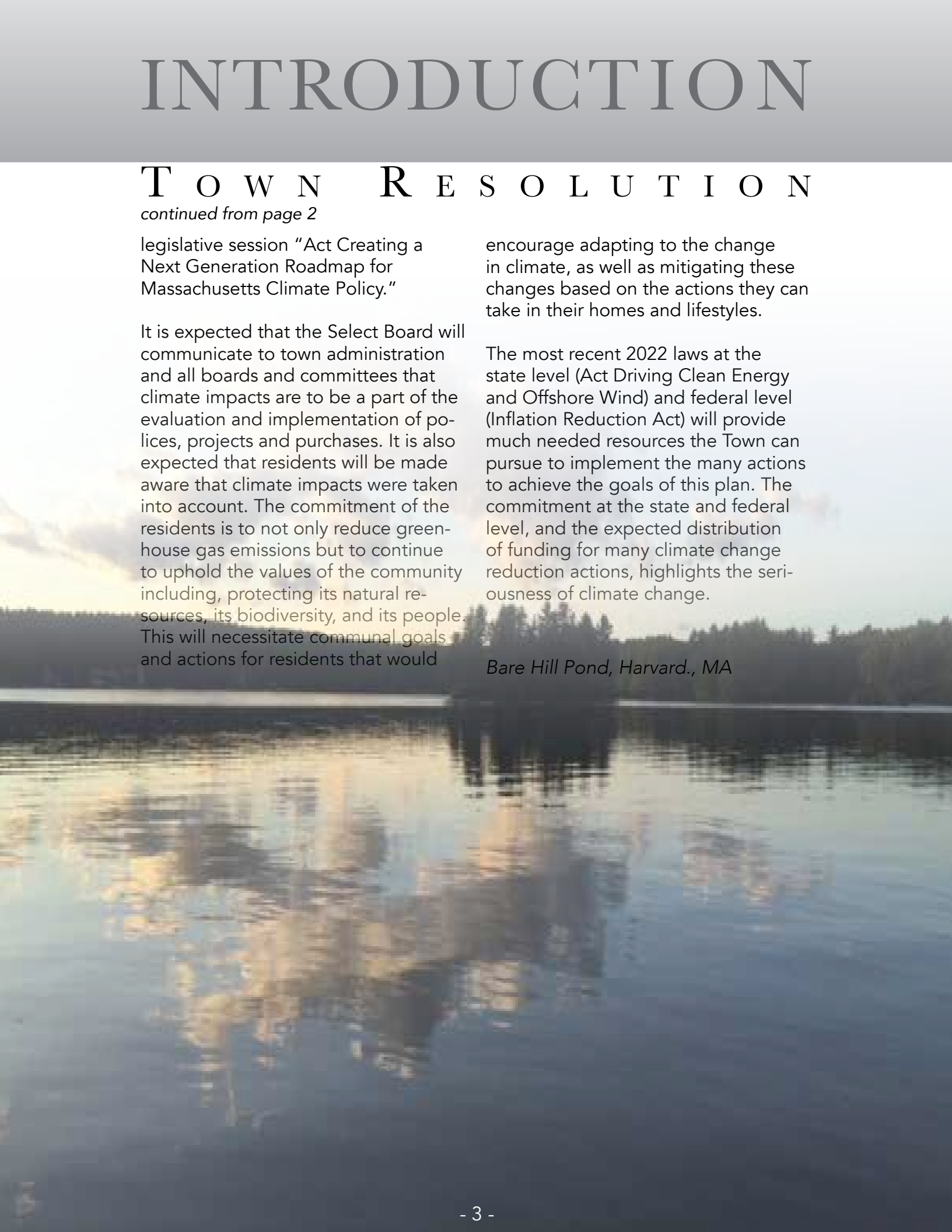
Town Resolution

continued from page 2

legislative session "Act Creating a Next Generation Roadmap for Massachusetts Climate Policy."

It is expected that the Select Board will communicate to town administration and all boards and committees that climate impacts are to be a part of the evaluation and implementation of polices, projects and purchases. It is also expected that residents will be made aware that climate impacts were taken into account. The commitment of the residents is to not only reduce greenhouse gas emissions but to continue to uphold the values of the community including, protecting its natural resources, its biodiversity, and its people. This will necessitate communal goals and actions for residents that would encourage adapting to the change in climate, as well as mitigating these changes based on the actions they can take in their homes and lifestyles.

The most recent 2022 laws at the state level (Act Driving Clean Energy and Offshore Wind) and federal level (Inflation Reduction Act) will provide much needed resources the Town can pursue to implement the many actions to achieve the goals of this plan. The commitment at the state and federal level, and the expected distribution of funding for many climate change reduction actions, highlights the seriousness of climate change.



Bare Hill Pond, Harvard., MA

INTRODUCTION

Vision Statement

The Town of Harvard will be a sustainable community that is resilient to the impacts of a changing climate by reducing greenhouse gas emissions, stewarding natural resources, and supporting health and quality of life.

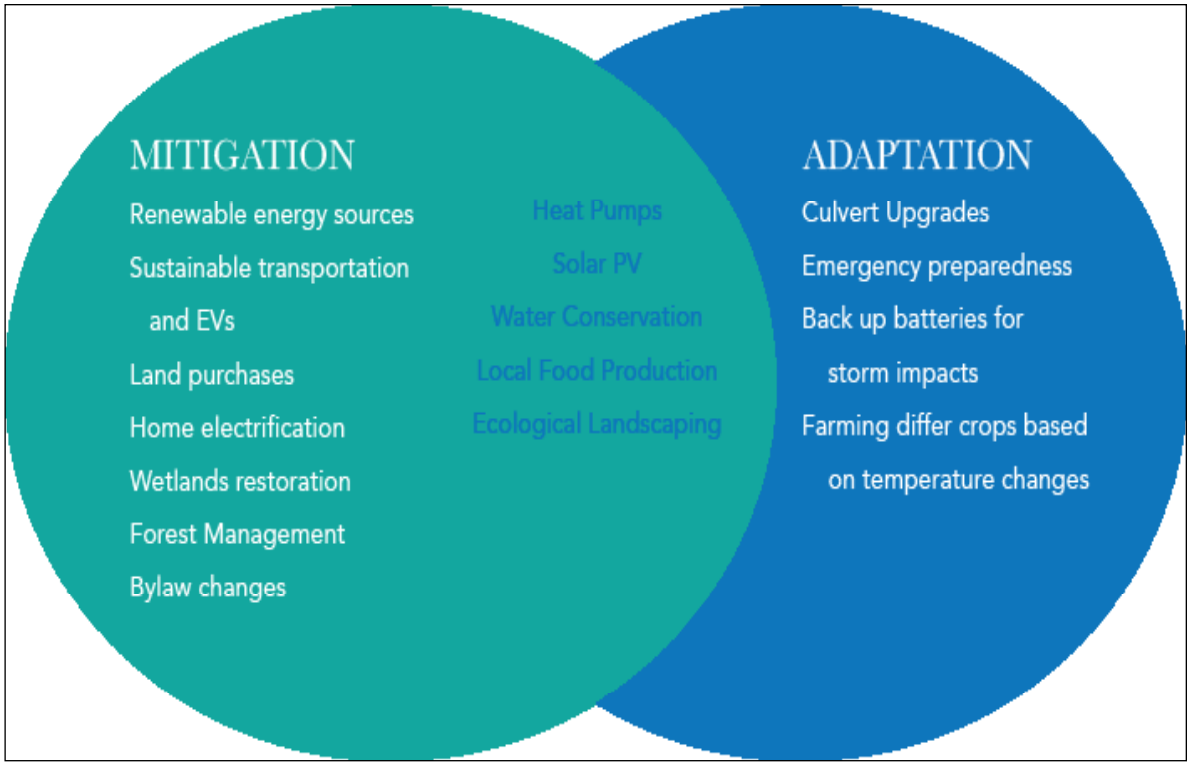
Weather patterns are changing dramaticallly due to climate change. This ice storm is an example of the changing climate.

INTRODUCTION

Harvard Climate Action Plan

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 in January 2022 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

INTRODUCTION

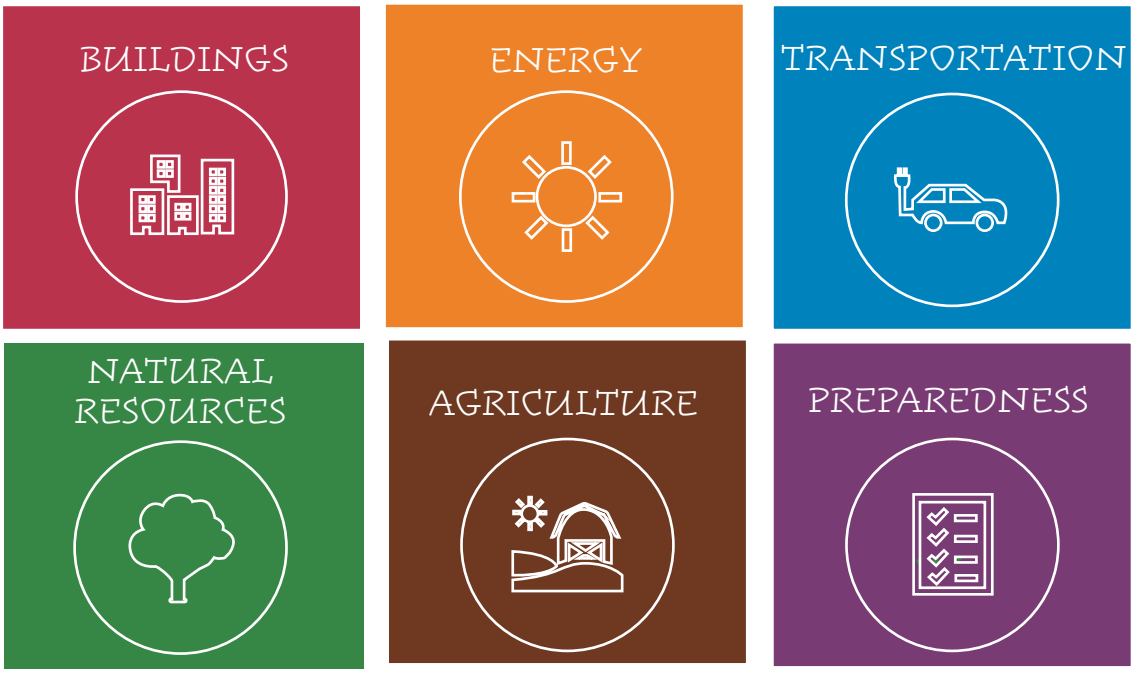
Plan At A Glance

The Harvard Climate Action Plan is organized into six focus areas: buildings, energy, transportation, natural resources, agriculture, and preparedness.

Each focus area consists of a series of goals and actions that represent the town's prioritized response to climate change, in the form of mitigating local contributions to global warming, or in preparation for the consequences of climate change. The goals and actions are for both town government and residents.

These goals will be best achieved through the leadership of the Select Board coordinating the activities of both town administration and committees. This level of direction would range from budget prioritization to staffing resources, from progress on goals and actions to considering climate impacts in future board and committee decisions. Additional, critical success factors should also include broader community engagement and collaboration with other towns, state agencies, and federal efforts.

The focus areas and the associated goals are as follows. Specific actions are described later in the plan.



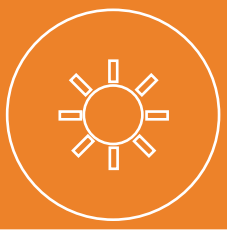
INTRODUCTION

Goals At A Glance

BUILDINGS

1. Convert Harvard's municipal buildings from carbon-based fuel combustion to high efficiency electric heating.
2. Replace residential buildings' fossil fuel consumption with high efficiency electric heating and cooling.
3. Reduce waste through recycling and reuse.

ENERGY



1. Convert all electricity to 100% renewable energy sources.
2. Increase the number of residential solar arrays and battery storage systems.

TRANSPORTATION

1. Convert Harvard's municipal vehicles from carbon-based fuel combustion vehicles to electric vehicles or other low carbon options.
2. Reduce the climate impact of Harvard's residential transportation activities.

INTRODUCTION

Goals At A Glance

NATURAL RESOURCES

1. Increase the resilience of Harvard's ecosystems and community through the coordinated implementation of nature-based solutions.
2. The town's plans, policies, bylaws, and regulations encourage sustainable land use and development.
3. Reduce the climate impact of our homes and yards on the local environment.

AGRICULTURE

1. Support the sustainability of the agricultural community and implement the 2020 Agriculture Climate Action Plan.
2. Strengthen community support for Harvard's agriculture and encourage innovative approaches to farming.

PREPAREDNESS

1. Prepare for and reduce the risk of impact to people, property, and natural resources from storms, fire, flooding, vector borne diseases, and other hazards.
2. Educate residents on how to prepare for impacts of climate change to mitigate negative outcomes.

THE PROBLEM

A Warming Planet

Background:

Scientists know with certainty that increasing greenhouse gas concentrations tend to warm the planet. In computer-based models, rising concentrations of greenhouse gases are producing an increase in the average surface temperature of the earth over time. The imbalance between greenhouse gas emissions and the ability for natural

A Warming Planet

processes to absorb those emissions has resulted in a continued increase in atmospheric concentrations of greenhouse gases. Rising temperatures will likely produce changes in precipitation patterns, storm severity, and sea level. Collectively, this is commonly referred to as climate change. Reference (https://www.eia.gov/energyexplained/energy-and-the-environment/greenhouse-gases-and-the-climate.php)

From an international perspective, one can see we are not immune from these changes. The recent and 6th edition of the Intergovernmental Panel on Climate Change (IPCC), describes the risk of climate change on the planet as well documented and its impacts on the planet and humankind are clear:

"All life on Earth – from ecosystems to human civilization – is vulnerable to a changing climate. Since the first IPCC reports, the evidence has become stronger: our world is warming and dangerous climate change and extreme events are increasingly impacting nature and people's lives everywhere. This can be seen in the depths of the ocean and at the top of the highest mountains; in rural areas as well as in cities. The extent and magnitude of climate change impacts are larger than estimated in previous assessments. They are causing severe and widespread disruption in nature and in society; reducing our ability to grow nutritious food or provide enough clean drinking water, thus affecting people's health and well-being and damaging livelihoods."

"Since the Fifth IPCC Assessment Report, published in 2014, a wider range of impacts can be attributed to climate change. In particular, increasing heat and extreme weather are driving plants and animals on land and in the ocean towards the poles, to higher altitudes, or to the deeper ocean waters. Many species are reaching limits in their ability to adapt to climate change, and those that cannot adjust or move fast enough are at risk of extinction. As a result, the distribution of plants and animals across the globe is changing and the timing of key biological events such as breeding or flowering is altering. These trends are affecting food webs. In many cases, this reduces the ability of nature to provide the essential services that we depend on to survive – such as coastal protection, food supply or climate regulation via carbon uptake and storage "

"We now know that a healthy planet is fundamental to secure a livable

A Warming Planet

future for people on Earth and that's why we say that the needs of climate, nature and local communities have to be considered together and prioritized in decision making and planning - every day and in every region of our world."

Locally, Massachusetts created the 2050 Decarbonization Roadmap which aims to reduce the state's production of greenhouse gases in the coming decades. As stated in the 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 Massachusetts is 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." Reference: (https://www.mass.gov/doc/ma-2050-decarbonization-roadmap/download)

To achieve this goal Massachusetts will require that its cities and towns do the work to address climate change. In addition to identifying how they can reduce greenhouse gases, municipalities will need to develop plans to protect the biodiversity of their communities, be it their forests, lands, diverse wildlife, and water resources, as well as assure the health and safety of their residents.

The most recent passage of laws at the federal and state level will give municipalities and residents the funds they need to implement the Commonwealth's roadmap at the local level and many of the goals and actions set forth in this plan.

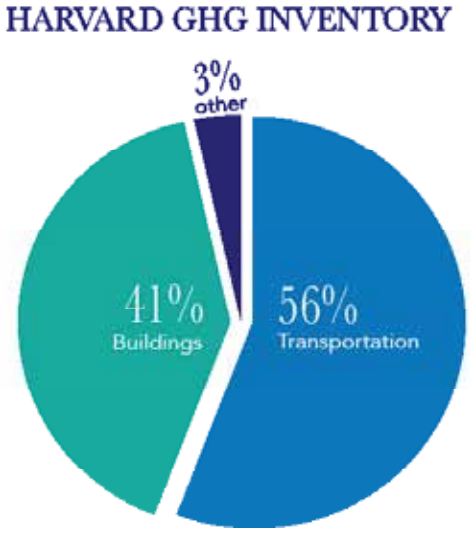
Harvard's Role:

Greenhouse gases are an important measure of the town's role in climate change, but as noted above, it is more than these emissions that the town needs to address when it comes to our land, water resources, and health. 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. The town's forested areas were identified for their carbon sequestration potential. Carbon sequestration is the process of capturing and storing atmospheric carbon dioxide, thus reducing the amount of carbon

THE PROBLEM

A Warming Planet

dioxide in the atmosphere that causes global warming. Carbon sequestration can occur with vegetation, soils, woody products, and aquatic environments, particularly wetlands. Reference (https://www.harvard-ma.gov/sites/g/files/vyhlif676/f/uploads/harvard_ghg_inventory_report.pdf)



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_2e or CO_2.

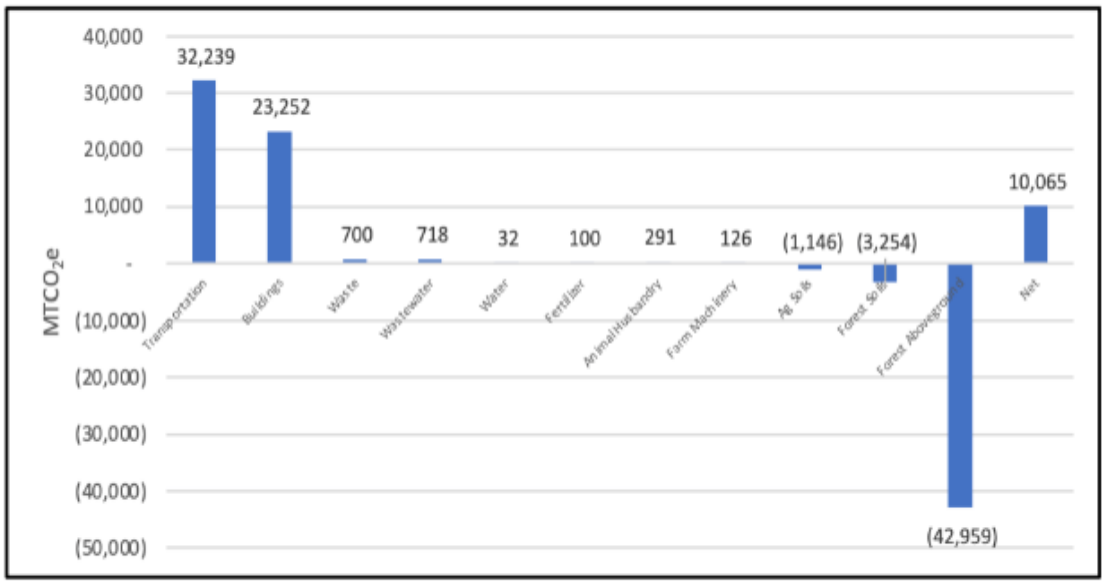
Total greenhouse gas emissions for the Harvard community total 57,453 metric tons carbon dioxide equivalent ($MTCO_2e$) in 2018, primarily from on-road transportation and building energy use. Approximately 3% of those emissions are attributable to municipal operations. Agricultural activities are relatively 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. Reference (https://www.epa.gov/ghgemissions/global-greenhouse-gas-emissions-data)

THE PROBLEM

A Warming Planet

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



Harvard benefits greatly from these extensive forested areas and wetlands as they capture and store carbon from the atmosphere; upwards of 80% of the Town's annual emissions.

But as fortunate as Harvard is to be so well forested, over the years, these areas have been shrinking due to housing and commercial development. The Commonwealth's pressure to create more affordable housing will impact the town's ability to maintain this level of carbon sequestration and it adds to the decisions the town will need to make in its zoning bylaws that respect the environment and meets the Town's resolution on climate. The current bylaws are not up to date to address the environmental impact of such development, particularly on biodiversity (flora and fauna protection), the availability of water resources, wastewater management, stormwater protections, and agriculture and forest protection.

The significant positive impact provided by trees and undeveloped land also 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 403MTCO 2 that would need to be overcome but also would permanently reduce the

THE PROBLEM

A Warming Planet

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, open spaces, wetlands, and agriculture, but it also has a responsibility to help the state, country, and world by protecting and, if feasible, enhancing these resources in order to reduce greenhouse gases produced by homes and cars. In our own state, low-income and marginalized communities are disproportionately negatively impacted by a changing climate. We cannot ignore the capacity of our natural resources and our ability as a community to take actions to mitigate the climate impacts of GHGs thus contributing beyond our borders to those with lesser means and opportunities.

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. 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 to give residents the tools to make a difference. To date, the Harvard Climate Initiative Committee (HCIC) has created a website, harvardsclimateinitiative.org, and joined with other towns to create an "Actions" page on the website that provides significant resources on both small and large actions families can take. HCIC hopes every family in town will register to take action on some component of the Plan because it is doable and because individuals truly want to contribute to addressing the environmental impacts which will be exponentially growing if we

SHORT HISTORY

Addressing climate change in Harvard began in 2018 with a grant from theMassachusetts Executive Office of Environmental and Energy Affairs, Municipal Vulnerability Program. Through public meetings, hazards and vulnerabilities of concern to residents regarding climate change were identified. The top four were:

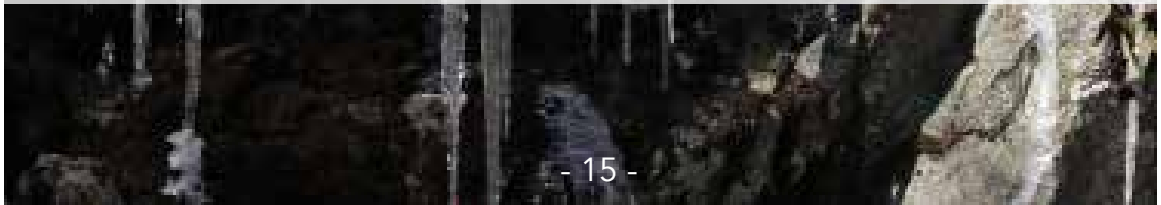
1. Pests and Invasive Species
2. Extreme Precipitation
3. Extreme Temperatures and Temperature Swings
4. Ice Storms

Following the work of the MVP, additional grant funds were obtained to establish the town's greenhouse gas inventory and to begin work on a climate action plan. This work was coordinated by the Community Resilience Working Group (CRWG). An Agriculture Climate Action Plan was drafted and the Town Resolution on Climate was brought to Town Meeting.

Working with Bolton and Devens, the Apple Country Report on recommendations for nature-based solutions to climate change was also completed.

The Town Resolution on Climate required that a new committee be formed to report to the Select Board: The Harvard Climate Initiative Committee, which is currently charged with implementing the town resolution. The work completed by the MVP and CRWG is significant contribution to the HCIC mission.

Footnote: For more history on the prior committees' work go to Appendix 3.

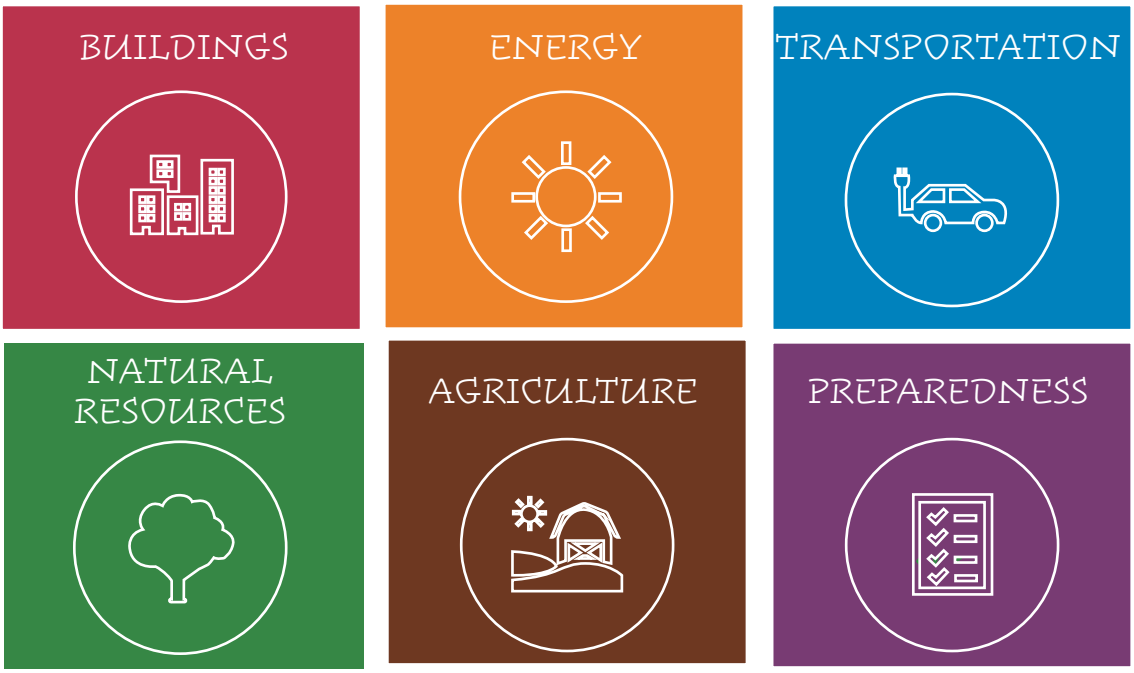


THE PLAN

Goals, Actions and Measurement

has led to the development of this plan: a goal setting and action plan that is timely, realistic, implementable and attainable, in that it can reach the town's goals as outlined in the town resolution. It will require municipal and resident participation

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 typically have one goal for municipal operations and one goal for residents and a small number of action items per goal. As actions are completed, new ones will be added, thus making it a living document.

The plan, though drafted by the HCIC is not the work of HCIC but the outcomes of discussions, interactions, input and feedback

THE PLAN

Goals, Actions and Measurement

received from town committees, municipal operations, and residents. It comprises the ideas of many; those most knowledgeable about what can be accomplished and the timeframe in which the actions can be acheived.

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 devoted to this work and to giving back to the community.

Each Focus Area contains the following:

- Introduction of each climate consideration being addressed
- Municipal Goal, Actions to Date, and Priority Actions to undertake for each climate consideration
- Residential Goal, Actions to Date and Priority Actions to undertake for each climate consideration
- Measurement of progress for each climate consideration

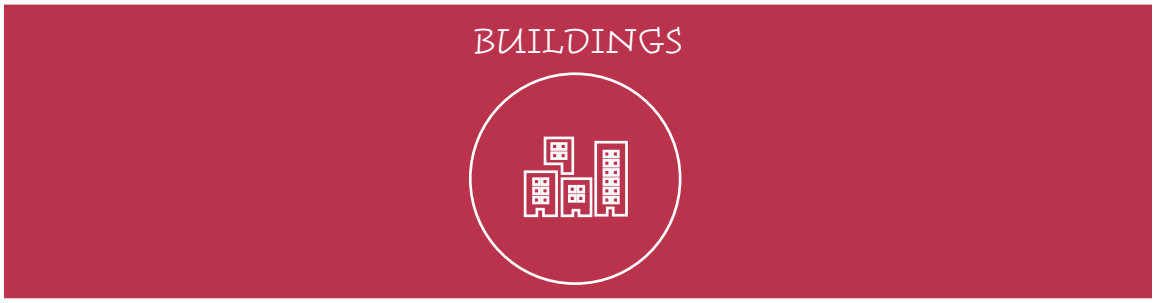
The following committees are tasked with successful completion of the goals and actions described in this Plan:

- AAC: Agricultural Advisory Commission
- BHPWM – Bare Hill Pond Watershed Management
- BoH: Board of Health
- COA: Council on Aging
- ConCom: Conservation Commission
- DPW: Department of Public Works
- HCIC: Harvard Climate Initiative Committee
- HEAC: Harvard Energy Advisory Committee
- PB: Planning Board
- SB: Select Board
- SC: School Committee
- TAC: Transportation Advisory Committee

BUILDINGS

BUILDINGS

CLIMATE CONSIDERATION



Forty-one percent of greenhouse gas emissions in Harvard are due to its buildings – both municipal and residential.

Town buildings utilize fossil fuels. Harvard has 12 facilities with about 337,648 square feet that burn natural gas, oil, and propane for heat and domestic hot water (DHW). With Green Communities funds, energy efficiency and energy reduction projects, such as heating systems improvements and maintenance and weatherization have improved the buildings' performance. However, to reduce greenhouse gases to the levels in the Commonwealth's roadmap, the buildings would need to be converted to non-fossil fuel sources.

Most residential buildings are heated by oil; a small percentage by natural gas, propane or electricity. Harvard homes are larger than the state average and thus emit more GHG. Residential buildings make up 99% of Harvard's building inventory and thus is the single largest area of focus for this plan to have significant opportunity for carbon reduction.

The HeatSmart program in 2017 provided incentives for air source and ground source systems. State data (which is assumed to be undercounted) notes 15 ground source ystems installed between 2015 - 9/2020 and 80 air source systems between 2015 - 10/2019. This is a growing but insignificant number of homes that have been converted to non-fossil fuel systems.

Therefore, the following goals and actions are designed to be the most relevant and applicable to achieving electrification of Harvard municipal buildings and residential homes and reducing greenhouse gasses.

In addition to electrification, the amount of waste, items that are not recycled or reused, is significant in municipal operations and in our homes. From the US Environmental Protection Agency: "Among industrialized nations, the U.S. is one of the largest generators of municipal solid waste per person on a daily basis. Municipal solid waste landfills are the third-largest source of human-related methane emissions in the U.S., accounting for approximately

BUILDINGS

Climate Consideration

BUILDINGS

Electrifying buildings and homes wtih air source or ground source (geothermal) heating and cooling systems.

Reducing waste through recyclling and composting decreases greenhouse gases

CLIMATE CONSIDERATION

BUILDINGS

16 percent of these emissions in 2016.

"Even with recycling options at the Transfer Station, there is significant waste that is incinerated which alternatively could have been re-used, recycled or never consumed. Food waste, in particular, if composted, would have a significant impact on reducing overall waste. The US Environmental Protection Agency states: "Food waste is the single most common material landfilled and incinerated in the U.S., comprising 24 and 22 percent of landfilled and combusted municipal solid waste, respectively."

Municipal:

Goal: Convert Harvard's municipal buildings from carbon-based fue combustion to high efficiency electric heating.

Actions to Date:

The Town of Harvard was designated a MA Green Community in 2010. The Town has implemented significant energy reduction projects paid for with Green Community grants and Utility funding (approximately $1M) every couple of years. These energy reduction projects have reduced emissions. Recent projects include:

- Bromfield School - Lighting LED Retrofit
- Public Library - Lighting LED Retrofit
- Building controls improvements
- Weatherization of Bromfield and Public Library
- Replacement of transformers in Bromfield heating system to improve efficiency

Priority Actions to Implement	Target	Lead Committee/ Entity
Develop a detailed electrification, upgrade and financial analysis plan of municipal heating systems	2023	HEAC
Adopt the updated Massachusetts Stretch Stretch Energy Code	2023	SB/Building Inspector

BUILDINGS

CLIMATE CONSIDERATION

BUILDINGS

Goal: Reduce waste in town operations through recycling and reuse.

Actions to Date:

- Town Administration memo to departments, committees and boards to recycle and use recycled products.
- Schools implemented composting in cafeterias.

Priority Actions to Implement	Target	Lead Committee/ Entity
Reduce municipal town waste by reusing and recycling construction, office and school supplies and materials by 10% per year	10% reduction per year	SB/SC
Expand purchasing of recycled office supplies through joint purchasing across all municipal and school departments	10% increase per year	SB/SC

Residential:

Residential buildings make up 99% of Harvard's building inventory and thus is the single largest area of focus for this plan and significant opportunity for carbon reduction.

Goal: Replace residential building's fossil fuel consumption with high efficiency electric heating

Actions to Date:

- HeatSmart program - A state grant program that provided incentives for home-owners to convert to air source or ground source heat pumps with vetted contractors. 31 homes converted in 2018-19
- HarvardEnergize - a website that provides access to information and goal setting for households to undertake climate actions, including energy saving options. As of Oct. 2022, a total of 107 Harvard households have joined Harvard Energize.
- Harvard Climate Initiative - website, events and resources (harvardsclimateinitiative.org)
- Earth Day Show and Tell Around Town 2022 – A community event of 15 locations that exemplified air source and ground source heating and cooling systems, solar arrays, electric vehicles and house/lawn equipment, native gardens, food production, and composting.

BUILDINGS

CLIMATE CONSIDERATION

BUILDINGS

Priority Actions to Implement	Target	Lead Committee/Entity
Educate and assist homeowners to evaluate the costs and benefits of efficient electric heating and cooling systems including available financial	2023	HCIC

Goal: Reduce waste through recycling and reuse.

Actions to Date:

- Town Transfer Station introduced "Pay by Bag" to incentivize recycling
- Public outreach to residents on recycling

Priority Actions to Implement	Target	Lead Committee/Entity
Encourage residential composting by requiring private haulers to provide the option and/or by providing a facility on town-owned land	2024	BoH
Significantly reduce residential waste through changes to consumption practices and by supporting options to"buy local," recycle and reuse/repair	2023	HCIC

BUILDINGS

CLIMATE CONSIDERATION

BUILDINGS

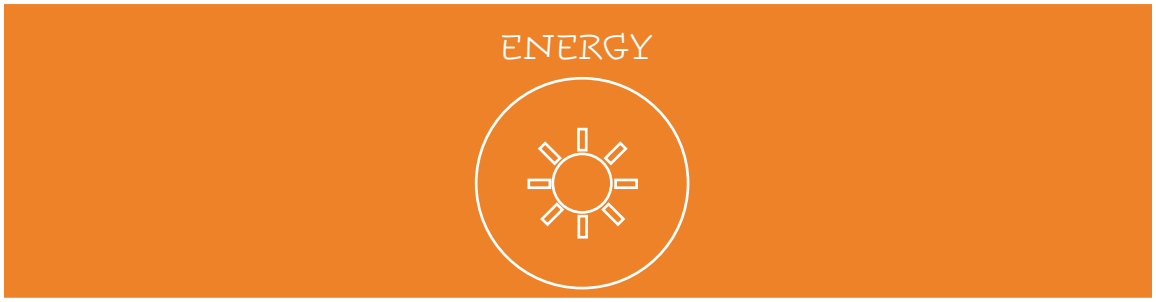
Measuring Progress

Measure	Baseline	Baseline Year	Target	Target Year
Electrification plan	No plan exists	2022	Plan created	2023
Town/School dumpster loads	Number of dumpster loads per year	2022	10% reduction per year	2030
Office supply purchases	Purchase volume of recycled items	2022	10% increase per year	2030
Residential Ground Source systems	Number of homes with ground source systems	2022	10% increase per year	2030
Residential Air Source systems	Number of homes with air source systems	2022	10% increase per year	2030
Composting by private haulers	Investigate current options	2022	Contract in place	2024

E N E R G Y

ENERGY

Climate Consideration



Electricity that Harvard purchases from National Grid includes electricity generated from fossil-fuel and renewable energy. National Grid's electricity generation sources in 2021 were 82% fossil fuel (mostly natural gas) and 18% renewable energy. (Class 1: Solar, Wind, Hydro)State legislation requires National Grid to increase the percent of renewable energy generation 2% each year. The rate of conversion to renewable sources through National Grid will not meet the targets set by the state which have escalated in the last round of state legislation to meeting higher levels by 2030 though they do include a wider range of what is considered renewable (e.g. waste-energy, nuclear).

Harvard has 12 municipal facilities with about 337,648 square feet that burn natural gas, oil,and propane for heat and hot water. Total energy use for these facilities in fiscal year 2019 was: Natural Gas – 133,878 therms, Oil – 3,606 gallons, and Propane – 1,246 gallons.

Harvard's use of electricity for its buildings, other structures, streetlights, and other services in fiscal year 2019 was 1,936,032 kWh or about 6,606 MMBtu.

For residential buildings, in 2019, the Town signed a contract for town-wide electricity (excluding municipal buildings) to be 100% wind renewable energy credits (REC's) thus converting most of the residential buildings in town to a renewable source, unless a family opted out of the program. As of 2021, 86% of households participate. This significantly reduces fossil fuel use, and thus greenhouse gas emissions for home electricity, including those homes that have heat pumps, and for those with electric vehicles who charge their cars at home. Conversion of heating and cooling systems to heat pumps in more homes would accelerate the positive impacts of this renewable energy source. In addition, homes in Harvard that have solar arrays also reduce the use of fossil fuels.

ENERGY

Climate Consideration

ENERGY

Municipal:

- **Goal: Convert all electricity to 100% renewable energy sources**

Actions to Date:

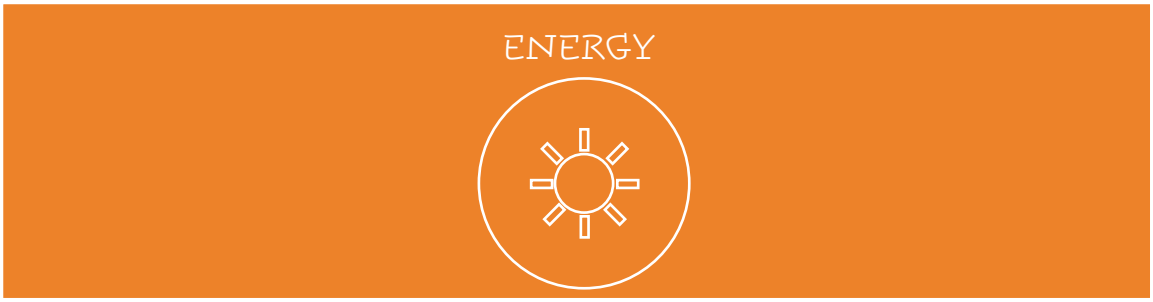
Hildreth Elementary School

- Prior HES – A 6 kW PV solar array installed in 2009 until its demolition
- New HES (2022) - Solar Power Purchase Agreement for a 245 kW photo voltaic rooftop array

Priority Actions to Implement	Target	Lead Committee/Entity
Negotiate a 100% renewable energy electricity supply contract for all municipal use.	as determined by existing contract	Town Admin/HEAC
Increase the number solar installations on municipal buildings or property, either as directly owned or leased (such as power purchase agreement (PPA)).	One Per Year	HEAC
Add battery storage to PV solar systems.	One Per Year	HEAC

ENERGY

CLIMATE CONSIDERATION



Residential:

Goal: Increase the number of residential solar arrays and battery storage systems

Actions to Date:

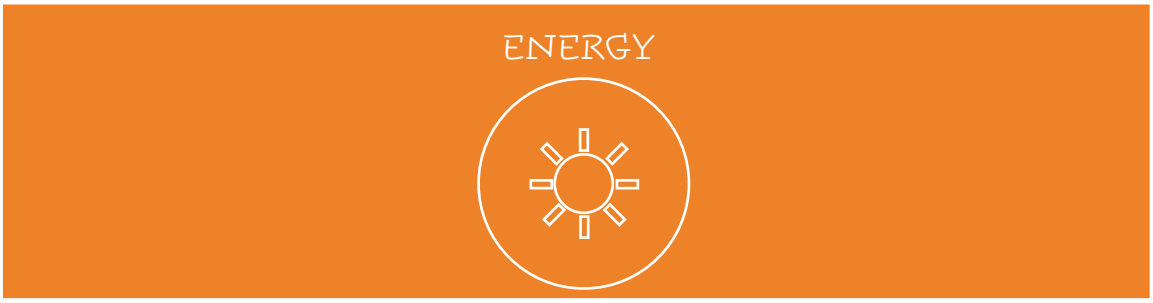
Hildreth Elementary School

- Solarize Harvard, as state funded program for residents, added approximately 200 solar installations on homes since 2000 through mid-2021.
- Harvard developed the first Community Solar Garden in the state with homeowners purchasing shares to offset their electricity use. These homeowners did not have suitable placement of their homes to individually benefit from a solar installation. Two gardens now have 60 participants.
- Community Choice Aggregation (CCA) - Town residents electricity supply converted to 100% renewable wind recs. 86% of town residents receive electricity from CCA.

Priority Actions to Implement	Target	Lead Committee/Entity
Assist homeowners to evaluate the costs and benefits of PV solar and battery storage systems and educate homeowners on available grants and incentives.	ongoing	HCIC
Advocate for use of community solar for homeowners to receive credits or offsets on electricity bills from a solar system installed at another location.	2025	HCIC

ENERGY

CLIMATE CONSIDERATION



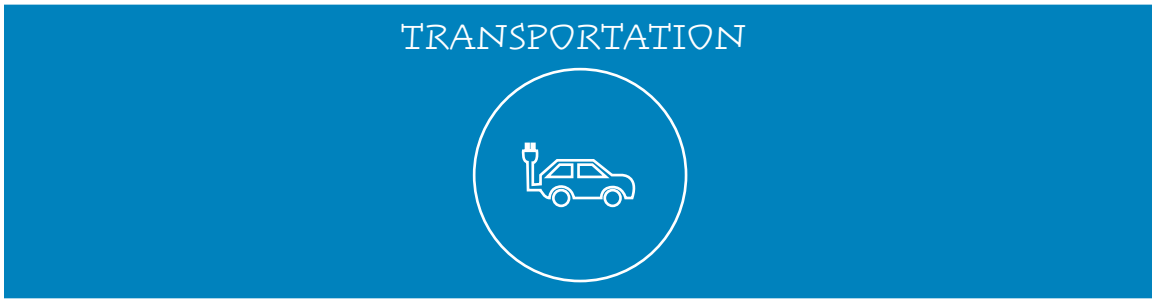
Measuring Progress

Measure	Baseline	Baseline Year	Target	Target Year
Negotiate 100% renewable supply for town bldgs.	Percent of supply that is renewable 100%	2022	Class 1 Recs	2030
Increase solar installations on town buildings	1 building – HES (or % electricity that is solar)	2022	Solar added to all potential municipal bldgs.	2028
Add battery storage to town PV solar systems	No battery storage in any town building	2022	Battery storage added to all potential municipal solar installations	2030
Educate residents on solar, battery storage	Number of residents with solar – 203 through 2021	2021	10% per year	2031
Advocate for community solar for residents	Number of residents in community solar – 60 participants	2021	Alternative solar garden option	2025

TRANSPORTATION

TRANSPORTATION

Climate Consideration



Transportation is the biggest producer of GHGs in Harvard. As a semi-rural community with limited commercial enterprises, particularly the most common needs, such as a full-service grocery store, a pharmacy, a hardware store, etc., most residents leave the area in their cars. There may be no change in services in town, but how residents get to these services can change. Electrification of vehicles would greatly reduce GHGs. As the adoption of electric vehicles grows, public charging stations around town will be necessary to continue to support both out of town visitors and residents.

Town residents have access to commuter rail to Boston in Littleton and Ayer. Harvard is also a member community of the Montachusett Regional Transit Authority (MART) and currently makes use of its Council on Aging transportation services for elderly residents. Future expansion of public transportation options in Harvard would likely be coordinated with MART. In general, use of public transportation reduces GHG emission impacts.

As for the municipal operations, Harvard has 48 vehicles and other equipment that have gasoline or diesel-powered internal combustion engines. Total energy use for these vehicles in fiscal year 2019 was:

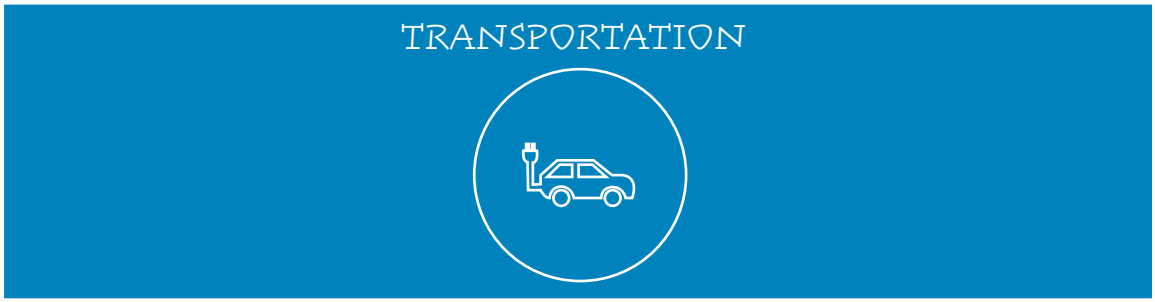
- Gasoline – 14,995 gallons or 133,260 x10^{-3} metric tons of CO_2
- Diesel – 12,202 gallons or 124,216 x10^{-3} metric tons of CO_2

Replacement of municipal vehicles comes to town meeting for approval from the Capital Projects and Investment Committee each year. A few of the town vehicles have been replaced with hybrid versions. There has been an increasing interest at town meeting in the type of vehicles being purchased, though heavy duty electric vehicles are not yet on the market in the United States.

Lastly, the School Committee is responsible for the bus contract, of which 7 buses operate fully on diesel fuel. The continued lack of bus service providers has prevented the committee, so far, from selecting a company that offers an electric fleet.

TRANSPORTATION

Climate Consideration



However, should electric buses become an option in the future, the gains in reducing emissions would be of significant value. The 2022 Inflation Reduction Act has funding designated for electrification of school buses which should increase the likelihood that this should be possible in the

Municipal:

- **Goal: Convert Harvard's municipal vehicles from carbon-based fuel combustion to electric vehicles or other low carbon options 27.**

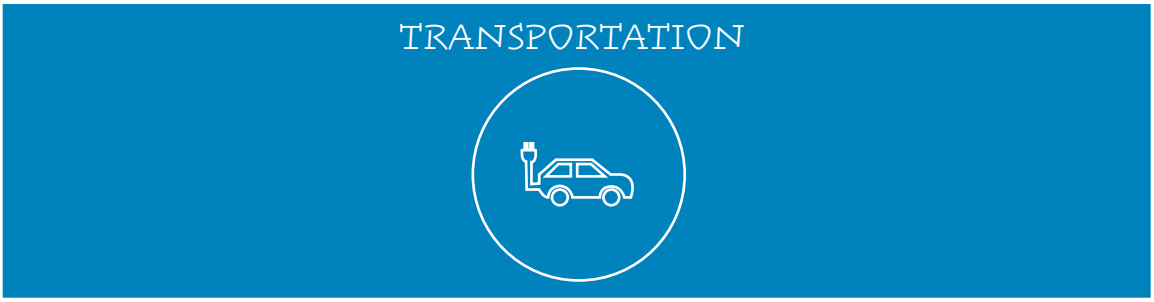
Actions to Date:

- HEAC Decarbonization plan
- School Committee added language to its request for bus transportation proposals to include a schedule for bus conversion to electric vehicles
- EV charging stations added to the Hildreth Elementary School parking lot

Priority Actions to Implement	Target	Lead Committee/ Entity
Implementation of a de-carbonization plan for the town's municipal vehicle fleet, including: • Conversion of light-duty vehicles to EV's • A mid- to long-term strategy for heavier-duty vehicles • Explore options for electrification of school buses	2040	HEAC/SC

TRANSPORTATION

Climate Consideration



Residential:

- **Goal: Reduce the climate impact of Harvard's residential transportation activities**

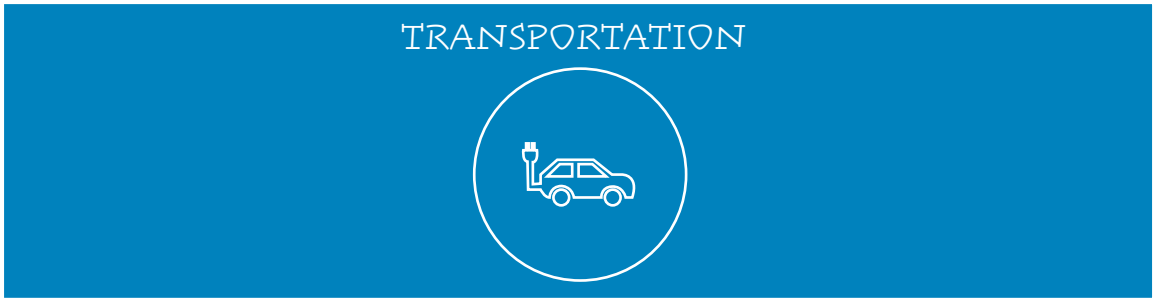
Actions to Date:

- Transportation Advisory Committee established in 2021. This committee coordinates local transportation planning efforts and promotes collaboration in the development of collective transportation goals and priorities

Priority Actions to Implement	Target	Lead Committee/Entity
Encourage the adoption of electric vehicles amongst residents and businesses through education on incentives and options, promotional events, and expediting permits.	2035	HCIC
Develop a high quality, high frequency regional electric shuttle service to and from town center, commuter rail stations, and future park-and-ride locations.	2027	TAC/SB
Explore options to increase adoption of school busing over individual cars	2024	SC
Improve the reach of Harvard's bicycle and walking paths to provide a realistic, healthy, and zero carbon alternative to driving.	2030	TAC

TRANSPORTATION

Climate Consideration



Measuring Progress

Measure	Baseline	Baseline Year	Target	Target Year
Municipal vehicles all (or hybrid) electric	One police car - 2022	2022	All vehicles	2040
EV charging stations on municipal sites	One at HES	2021	Municipal sites identified and installed	2025
Adoption of electric vehicles by residents	Number of electric vehicles owned by residents unknown	2022	All new purchases are electric	2035
Regional shuttle service	none	2022	Regional service in place	2025 service 2027 electrified
Bicycle routes and walking trails expanded	Number of miles of routes/trails	2022	10% increase in number of miles per year	2030

NATURAL RESOURCES

NATURAL RESOURCES

Climate Consideration

The Harvard Climate Action Plan will 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 Select Board, Planning Board, Zoning Board of Appeals, Conservation Commission, Open Space Committee, Parks & Recreation Commission, Board of Health, Water and Sewer, and Bare Hill Pond Watershed Management committees each have jurisdiction and a role in the oversight of land use in town and can have a significant impact on climate mitigation. Harvard Conservation Trust, Sudbury Valley Trustees and Nashua River Watershed Association also play a very significant role in the purchase and protection of major undeveloped lands. All of these entities working together should find ways to identify and significantly protect important carbon sequestration parcels as well as parcels that can meet the needs of agriculture and recreation.

Many of the town bylaws that protect these valuable resources are outdated and were not developed at a time when the impact of climate change needed to be reflected in the bylaws. The Conservation Commission's Wetland Protection bylaw and Planning Board's Open Space bylaw are places to start in order to conserve natural landscapes. Many surrounding towns are reviewing all of their bylaws in light of climate change and there is the ability for Harvard to learn from and utilize what they have developed.

Climate Consideration

NATURAL RESOURCES

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 30 directly and an additional 523 acres under conservation restrictions and agriculture preservation programs. In 2022, 75 acres was added to land holdings for the Community Harvest Project and surrounding land.

CLIMATE CONSIDERATION

Priority Actions to Implement	Target	Lead Committee/Entity
Preserve Harvard wetlands through the following: • Update the Harvard Wetlands Protection Bylaw and/ or regulations to reflect and adapt to changing climate conditions • Educate and advise residents on the management of private land near/in wetlands • Work with DPW to protect wetlands from road run-off	2025	ConCom
Amend erosion control by-law to include tree clearing	2025	PB
Address Invasive plants and insects: • Develop or expand programs for Bare Hill Pond, Town conservation land, and other municipally controlled lands where invasives are a risk • Educate and provide resources to residents to manage invasives on private land	2024	ConCom/BHPWM/ DPW
Improve soil health through education and best management practices	2024	AAC
Improve habitat for pollinators and beneficial insects with protection and cultivation of native plants	2023	HCIC
Implement flood control through ranking and prioritization of town-owned culverts replacement and upgrades	2024	DPW
Monitor for water health, algae blooms and biodiversity of waterways. Provide education and outreach to the public regarding these issues.	ongoing	BoH/BHPWM

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.

CLIMATE CONSIDERATION

Priority Actions to Implement	Target	Lead Committee/ Entity
Rewrite the Protective (Zoning) Bylaw and include • Local resilience and carbon reduction • More zoning districts that are sustainable and smart growth models • An updated Open Space Residential Development Bylaw that promotes open space and natural resource protection	2026	PB
Educate and inform the public about sustainable land use patterns	2025	PB
Include climate change and sustainability as a consideration in all future Planning Board, Zoning Board of Appeals, Parks and Recreation Commission, Conservation Commission, and Open Space Committee proposals and decisions	2023	SB
Ensure land use and transportation planning are coordinated	2028	SB/PB/TAC

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

Climate Consideration

NATURAL RESOURCES

Priority Actions to Implement	Target	Lead Committee/ Entity
Educate residents on sustainable practices for lawn care, landscaping, tree care, invasive species management, and water management during drought conditions	2024	HCIC/ConCom/BoH
Encourage the conversion of lawn care equipment from gas-powered to electric.	2025	HEAC

CLIMATE CONSIDERATION

Measuring Progress

Measure	Baseline	Baseline Year	Target	Target Year
Wetlands updated bylaws complete	Existing bylaws	2022	Updated bylaws	2025
Amend bylaw re: tree clearing	Existing bylaw	2022	Updated bylaw	2025
Programs and education on invasives	Yearly garlic mustard pull	2022	Reduction in invasives	2026
Improved soil health	Current soil health – identify how to measure	2022	Improved soil health	2026
Improved habitat for pollinators	Current habitat- identify how to measure	2022	Increase in acres for pollinators	2026
Flood control re. culverts	Current culverts status	2022	Culverts replaced where needed	2030
Protective bylaw rewrite	Existing bylaw	2022	Reviewed/updated bylaw	2026
Climate change part of decision-making	Not part of current decision-making	2022	Environmental assessment process and climate inclusion	2023
Land use and transportation coordination	Not currently coordinated	2022	Formal interactions in place	2023
Education of residents on sustainable practices	Some through HCIC newsletter	2022	Educational campaign	2024
Residential lawn-care electric equipment	Some in use. Volume unknown	2022	Capture and monitor growth in electric equipment	2025

AGRICULTURE

AGRICULTURE

Climate Consideration

In 2020, with a grant from the Municipal Preparedness Program, Harvard's Climate Resiliency Working Group used the resources to focus on the agricultural community. Harvard's farms and orchards have always been viewed in survey after survey of town residents as an important asset of the community. In Harvard's Agricultural Climate Action Plan of 2020, a separate report focused entirely on Harvard's agricultural community. It stated: *"Agriculture is a fundamental part of Harvard's character and sense of community. The impacts of climate change simultaneously place agricultural activities at risk while also elevating the critical nature of local food supplies."*

Climate change presents significant risks to the agricultural community as identified in the report:

- **Rising Temperature Impacts:**
  New and more pests/pathogens
  Unsafe outdoor working conditions
  Change in crop viability
- **Changes in Precipitation Impacts:**
  Flooding: soil erosion, fertilizer/pesticide/manure runoffs, plant disease
  Drought: crop losses, irrigation demands
- **Storm Impacts:**
  Crop losses
  Damage to buildings and equipment

Although the number of farms in Harvard are estimated to be 100 or more, three are large and the remainder are small with approximately 2500 acres in total. It is known that several farms in Harvard use organic and regenerative practices on their fields. This includes additions of organic matter for fertilizer, reduced tillage, and other actions that lead to improved soil carbon storage.

The farms do not produce a large amount of the town's GHGs but should they be sold for development, not only would it impact the feel of the community, it would substantially increase the GHG emissions.

AGRICULTURE

CLIMATE CONSIDERATION

Municipal:

- **Goal: Support the sustainability of the agricultural community and implement the 2020 Agriculture Climate Action Plan**

Actions to Date:

- Agricultural MVP Prioritization Plan (2019)
- 2020 Agricultural Climate Action Plan

Priority Actions to Implement	Target	Lead Committee/Entity
Determine next steps on implementation of the 2020 Agriculture Climate Action Plan: • Grant writing assistance • Prioritize municipal initiatives to promote the economic sustainability of our farms • Review Harvard's zoning laws to allow flexibility for farm-related uses	2025	AAC
Commit to "Buy Local" for town events and in Harvard's schools	2024	SB/SC

Residential:

Goal: Strengthen community support for Harvard's agriculture and encourage innovative approaches to farming

Actions to Date:

- Participation in HCIC Earth Day Show to Tell with education about regenerative and sustainable farming
- Developed a map of local farms for promoting "buy local"

AGRICULTURE

CLIMATE CONSIDERATION

AGRICULTURE

Priority Actions to Implement	Target	Lead Committee/ Entity
Establish a forum for the sharing information and best management practices on: • Regenerative farm practices • Soil, pest, and disease management • Sustainable pasture management • Water management	2025	AAC
Support "buy local" for local farms	2023	HCIC

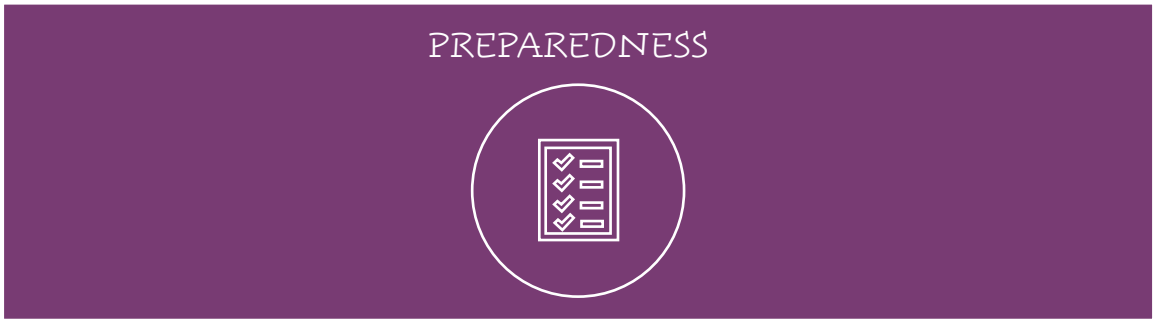
Measuring Progress

Measure	Baseline	Baseline Year	Target	Target Year
Implementation of 2020 Ag Climate Action Plan	Plan actions	2020	Formalized plan on actions to take and who is responsible	2024
Increase town commitment to buy local	% of town and school food purchased locally	2022	10% increase	2024
Increase in best climate friendly practices	Number/size of farms using best practices	2022	10% increase in number / size of farms using best practices	2025
Increase in documented revenue at local farms	Need to determine if there is baseline data	2022	10% increase	2024

PREPAREDNESS

PREPAREDNESS

Climate Consideration



Preparedness is more about adaptation than mitigation. It is hoped that actions taken in other parts of this Climate Action Plan to reduce greenhouse gasses, along with global efforts to do the same, will lessen the impacts of climate change. However, the effects of climate change are already being felt. Within the last two decades, Harvard has experienced extreme events, for example, the ice storm of 2009 and the increasing frequency of drought conditions.

The Ice storm left residents without electricity for up to 5 – 10 days. Though a warming climate may mean less snow events, it could mean more mixed precipitation, such as ice, which can do more damage to the town's tree cover threatening people, animals and homes.

The drought of 2015–17, 2020 and 2022 led to half of the fire ponds being dry. In this case, it was an example of the impacts of one hazard leading to the possibility of another hazard – fire ponds being dry and not able to respond to fires that are more prevalent when conditions are dry.

The recent completion (August 2022) of the Harvard Hazard Mitigation Plan as required by US and the Massachusetts Emergency Management Agencies outlines a town's vulnerabilities to a range of climate and non-climate (e.g earthquakes) related events. It recommends actions to reduce the loss of life and property by lessening the impact of disasters.

Recommendations to mitigate the impacts of disasters is covered in many areas of this report. The goals and actions below for preparedness rely on the some of the report's recommendations.

PREPAREDNESS

Climate Consideration

PREPAREDNESS

Municipal:

- **Goal: Prepare for and reduce the risk of impact to people, property and natural resources from storms, fire, flooding, vector borne diseases and other hazards**

Actions to Date:

- 2022 update to Town Hazard Plan in accordance with federal and state emergency management agencies.

Priority Actions to Implement	Target	Lead Committee/ Entity
Identify and prioritize vulnerable populations for outreach and assistance regarding mitigation and preparation.	ongoing	COA
Formalize which town buildings will be used as a cooling and warming center for residents and their pets.	2023	SB/Fire
Support the implementation of climate-related priorities in the Hazard Mitigation Plan.	2027	SB/DPW

Residential:

- **Goal: Educate residents on how to prepare for impacts of climate change to mitigate negative outcomes**

Actions to Date:

- COA continually educates seniors on having preparations on hand in their homes in case of emergency storms.

PREPAREDNESS

CLIMATE CONSIDERATION

PREPAREDNESS

Priority Actions to Implement	Target	Lead Committee/ Entity
Educate residents on preparations (72 hour and 7 day emergency kits) for natural hazards, the availability of town services and neighborhood approaches to mutual assistance and protection of vulnerable residents.	2023	Public Safety
Educate residents about how to mitigate risk to themselves and their properties such as vector borne disease protection, care of wells and septic systems, water use/preservation and wildfire risk.	2023	BoH/Public Safety

Measuring Progress

Measure	Baseline	Baseline Year	Target	Target Year
Identification of vulnerable population	COA has list	2022	Update and maintain list	yearly
Formalize building shelters	Bromfield	2022	Additional shelters in place	2023
Implement priorities of hazard plan	Plan updated in 2022	2022	Priorities implemented	2027
Education of residents on preparedness	Town messages to households as needed	2022	Education on emergency kits and town services	2023
Resident education to reduce climate change risks	BoH releases periodic information to residents	2022	Added information provided to all residents	2023

Implementing the Plan

Harvard Climate Initiative Committee (HCIC) submits this Climate Action Plan on behalf of its committee members, the town boards and committees who contributed to it and input from the general public. We are dedicated to implementing the plan with the hopes that town leaders, administrators and residents will see the urgency in addressing climate change, being resilient, and creating a sustainable future.

This Plan is intended to be a dynamic document; one that can be readily amended and updated to meet the challenges of the coming years. Successfully addressing the issues before us will require town leadership and residents' personal commitment and action.

Starting with town leadership, all members of the municipal and school administrations should assess policies, regulatory decisions, and purchases through a climate impact lens. There are two major components: policy & accountability, and financial.

Policy and Accountability:

The Select Board is responsible for setting broad policies for the governance of the Town. As such, policies adopted by the Select Board will define the level of climate consideration to be included in all aspects of the town's operations. The Town Administration, as directed by the Select Board, will provide direction to town employees and town boards and committees to consider short and long-term climate impacts in their work. There are tools being developed that will aid employees, committees and boards on how to assess and ultimately reduce the climate impact of a policy, project or procurement.

In furtherance of this, the HCIC recommends that climate considerations be included in warrant articles that go before the Town Meeting, just as articles often have Select Board and/or Finance Committee recommendations. As other towns around the Commonwealth have moved forward with their climate initiatives, we can

also learn from them as to how they integrated climate change into municipal government actions. From a recent roundtable discussion, this is an example of how one Massachusetts town integrated climate impact into their town operations:

Integrate sustainability goals, metrics, and evaluation criteria into Town planning, including staff and department evaluations and budgeting. Under leadership of the Town Manager's Office and the Sustainability Division, the Town will review and update existing administrative policies related to purchasing and procurement to include sustainability and climate resilience considerations. Similarly, they will undertake a review of the Town's capital planning process to establish a decision-making framework, that considers sustainability and resiliency standards and guidelines. This could result in development of a sustainability and resiliency checklist for capital projects.

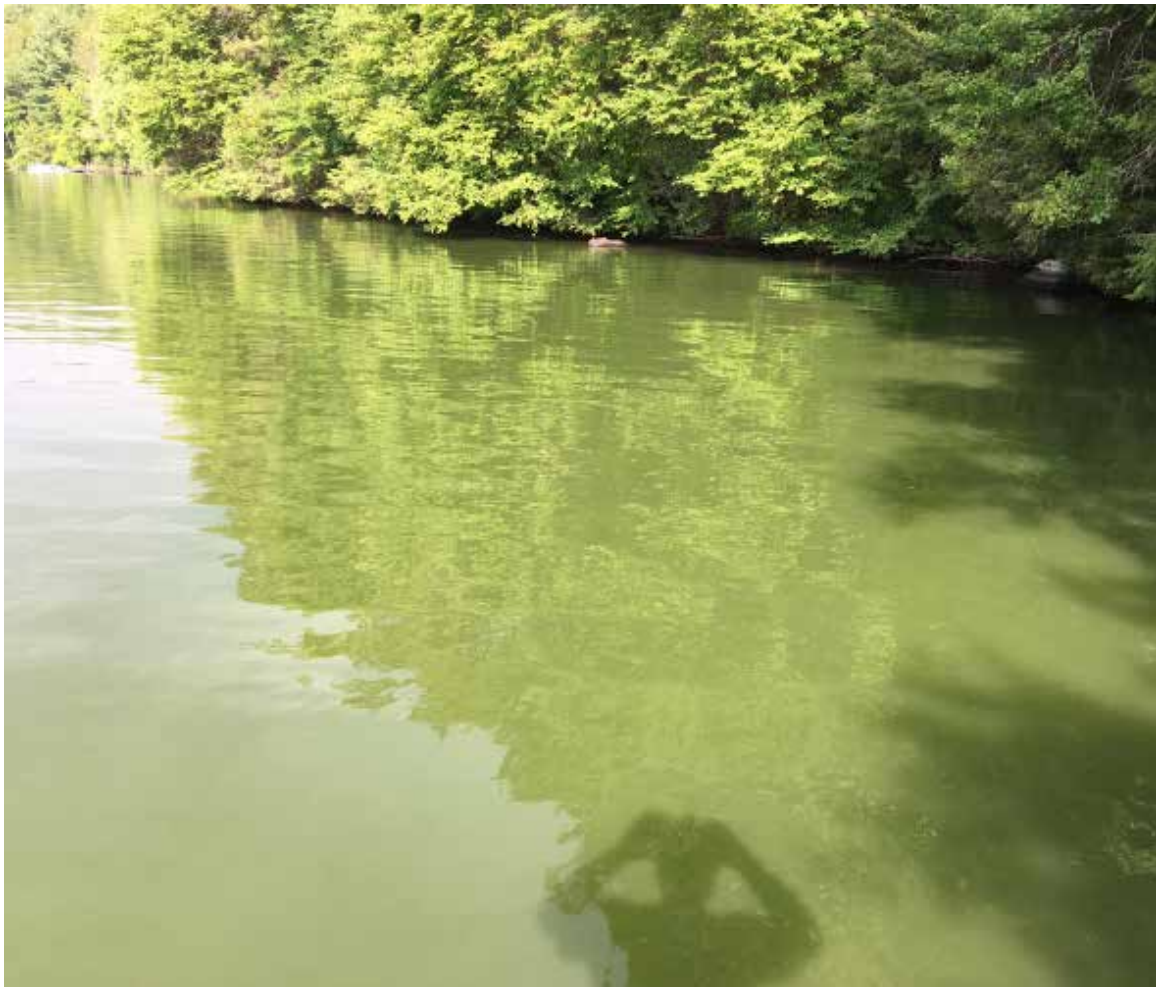
To measure the success of this Plan and its implementation, there needs to be a method of accountability to the public by town boards and departments. The HCIC recomends that the Select Board oversee preparation of an **Annual Progress Report on Climate Actions** as part of the Town's Annual Report. This will assure that the public is continually educated on the progress that is being made and that there is a commitment to measurement of outcomes.

Financial:
There are two aspects of financial consideration: staffing and purchasing decisions. First, the town needs to have the appropriate staffing to shepherd this plan forward. Towns that have sustainability or climate focused staff not only work with town employees, committees, and boards to implement climate action plans, but also bring in grants to support the work. The Commonwealth has recently passed two climate bills that accelerate the need to reach the 2050 roadmap for net zero GHG emissions. The U.S. government has recently passed the Inflation Reduction Act to significantly address climate mitigation initiatives as well. There is money to support many of the goals and actions in this plan but without dedicated staff, there will be missed funding opportunities.

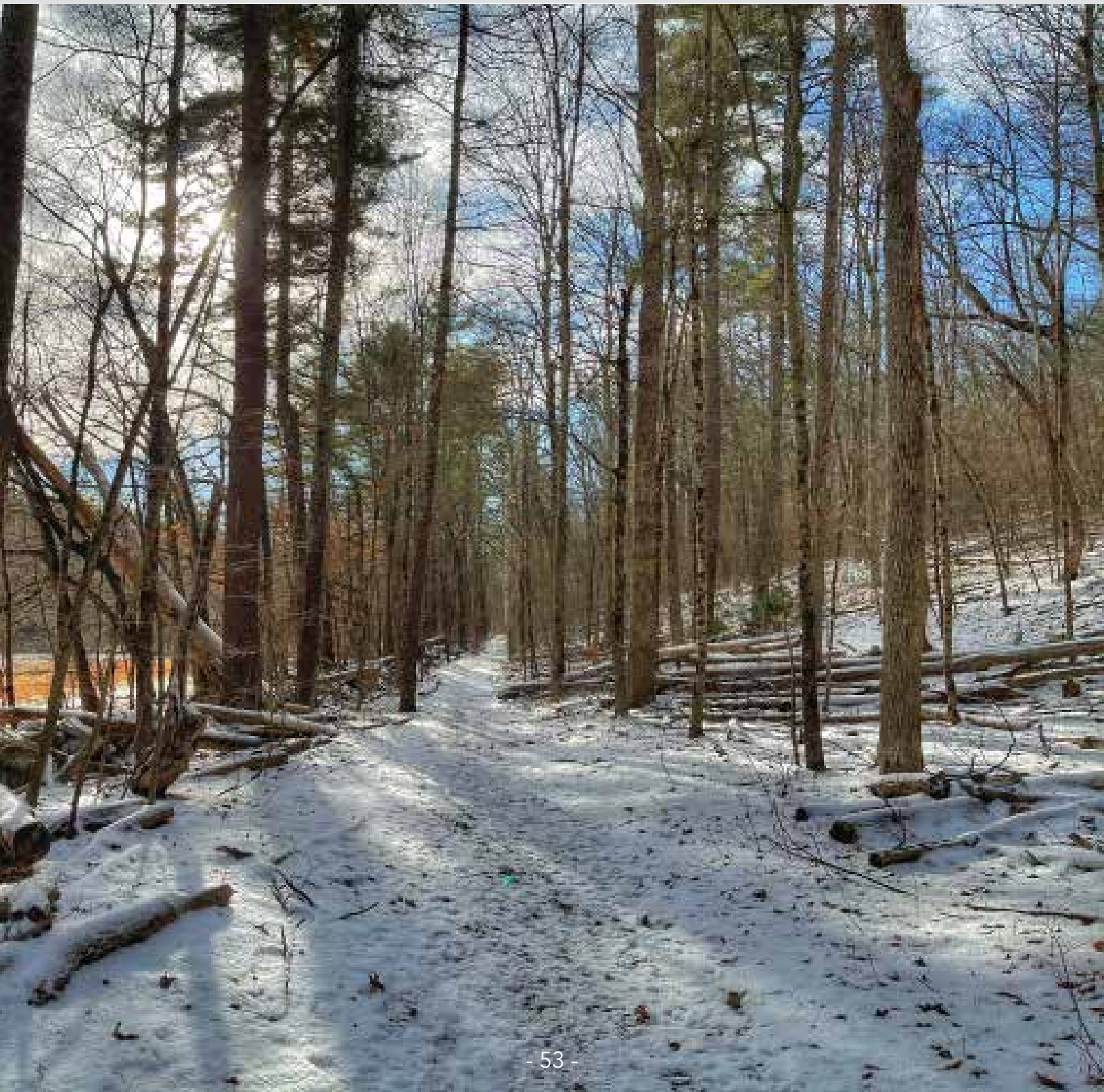
Second, there needs to be a change in how financial impacts are measured. Operational purchases, ranging from paper to utilities, should be evaluated in terms of the environmental benefits. Major capital expenditures should be evaluated to reflect lifecycle costs and environmental costs, not just initial capital expenditures. Is a higher initial investment cost justified if it will result in a longer lifecycle at less cost that will also have less impact on the environment? The HCIC recommends that lifecycle and environmental costs be part of any analysis by the Finance

Committee, Capital Planning and Investment Committee, Permanent Building Committee and Town Administration.

Resident Accountability:
As noted above, this plan is intended for town government and for town residents. Residents of the town produce more of the greenhouse gases than town government due to the number of residential homes and cars. As such, the town can adopt policies and implement plans, but it will take residents to commit to significant changes in the coming years to mitigate climate change. Residents need to transition away from fossil fuels in how they heat and cool their homes and the cars they drive. Fortunately, and most recently, there are significant incentives from federal and state government to financially assist in the transition, as well as laws that will motivate manufacturers to produce fossil fuel free options. HCIC can educate, set goals and actions, and provide moral support, but it will take a concerted effort of each and every resident to meet the goals set forth in this report. It is HCIC's optimistic hope that residents will join with us to meet these goals.



ACKNOWLEDGMENTS



ACKNOWLEDGMENTS

The Harvard Climate Action Plan was developed through a collaborative process first driven by the Community Resilience Working Group (CRWG), a subcommittee of the Harvard Planning Board. It was completed by the Harvard Climate Initiative Committee. Major contributions were made from multiple consulting firms whose work was funded by generous grants from the Massachusetts Executive Office of Energy and Environmental Affairs Municipal Vulnerability Preparedness (MVP) program.

Municipal Participants
Christopher J. Ryan, AICP, Lead Staffer, Director of Community and Economic Development
Elizabeth Allard, Conservation Commission Agent
Timothy Kilhart, DPW Director
Patricia Natoli, Public Safety Administrator
Richard Sicard, Fire Chief

MVP Committee (2019)
Eric Broadbent, Chair
Justin Brown, Planning Board
Kerri Green, Agriculture Advisory Commission
Sharon McCarthy, Board of Health
Kara McGuire Minar, Select Board

Community Resilience Working Group (2019 – 2021)
Peter Kelly-Joseph, Harvard Energy Advisory Committee, Chair
Ellen Sachs Leicher, Citizen Member, HEAC and Acting Chair
Jefferson Burson, Planning Board Member
Alexandra Cronin, Citizen Member
Stacia Donahue, Planning Board
Sharon McCarthy, Board of Health
Adam Meier, Harvard Conservation Trust
Patricia Natoli, Public Safety
Deborah O'Rourke, Citizen Member
Ron Ostberg, Citizen Member
Arianna Thornton, Bromfield High School Member
Elizabeth Toll, Bromfield Green Team
Christiane Turnheim, Agriculture Advisory Commission
Phoebe von Conta, Citizen Member

ACKNOWLEDGMENTS

Harvard Climate Initiative Committee (2022 – present)

Ellen Sachs Leicher, Chair and HEAC
Jefferson Burson, Vice Chair
Paul Green, Past Associate Member
Rich Marcello. Citizen Member
Sharon McCarthy, Board of Health
Adam Meier, Harvard Conservation Trust, Associate Member
Deborah O'Rourke, Citizen Member
Brian Smith, Harvard Energy Advisory Committee
Christiane Turnheim, Agriculture Advisory Commission
Janet Waldron, Conservation Commission
Lucy Wallace, Citizen Member
Patricia Natoli, Public Safety (municipal staff)
Kara Minar, Select Board liaison
Stacai Donahue, Planning Board liaison

Consulting Teams

- Harriman
- Kim Lundgren Associates
- BSC Group
- Linnean Solutions
- Regenerative Design Group

Other Contributors

HCIC greatly appreciates and thanks the many boards and committees in town who had one of their members participate in one or more of the meetings held by HCIC to obtain input to the plan.

Individual Contributors

HCIC thanks the following people for their help in creating a visually impactful document:
Cynthia Fontaine, Visual Communications Teacher, Bromfield School
Joe Donahue, Photography, Student, Bromfield School
Grace Beckett, Graphic Design, Student, Bromfield School

APPENDIX 1

Referenced Document Links

AGRICULTURAL CAP: https://www.harvard-ma.gov/sites/g/files/vyhlif676/f/uploads/harvard_agricultural_climate_action_plan_final_0_0.pdf

APPLE COUNTRY REPORT: https://www.harvard-ma.gov/sites/g/files/vyhlif676/f/uploads/apple_climate_solutions_project_report.pdf

DECARBONIZATION PLANS: Check for decarbonization plans at https://www.harvard-ma.gov/energy-advisory-committee

GREENHOUSE GAS INVENTORY: https://www.harvard-ma.gov/sites/g/files/vyhlif676/f/uploads/harvard_ghg_inventory_report.pdf

MA CLIMATE ROADMAP: https://www.mass.gov/doc/ma-2050-decarbonization-roadmap/download

MVP REPORT: https://www.harvard-ma.gov/sites/g/files/vyhlif676/f/uploads/20190618_harvard_mvp_final_report_only_low-res.pdf

APPENDIX 2

DEFINITIONS

GREENHOUSE GASES – Gases in the atmosphere that have an influence on the earth's energy balance. Reports referring to greenhouse gases usually include carbon dioxide, methane and nitrous oxide. They are found naturally in low concentrations in the atmosphere.

ICLEI – Local Governments for Sustainability. A global network of more than 2500 local and regional governments committed to sustainable urban development. Active in 125+ countries, influencing sustainability policy and drive local action for low emission, nature-based, equitable, resilient and circular development.

MMBtu - acronym for Metric Million British Thermal Unit, and it is a unit traditionally used to measure heat content or energy value. It is widely associated with measurement of natural gas. It is equal to 1 million Btus. Btus represent the amount of energy required to raise the temperature of one pound of liquid water by one degree Fahrenheit. In practice, BTUs indicate how much heat something is able to produce. On ranges and cooktops, you'll see that gas burners are labeled with a BTU value while elements on electric ranges use wattage to measure how hot they can get.

MTCO2e – metric ton of carbon dioxide equivalent. At standard temperature and pressure, one metric ton of carbon dioxide (CO_2) would fill a sphere 32 feet in diameter. The average car in the U.S. will produce this over a three-month period. CO2e accounts for carbon dioxide and all the other gases as well: methane, nitrous oxide, and others.

NATURE BASED SOLUTIONS - involve working with nature to address societal challenges, providing benefits for both human well-being and biodiversity. Specifically, they are actions that involve the protection, restoration or management of natural and semi-natural ecosystems.

RENEWABLE ENERGY CREDITS - Renewable energy credits are tradable, non-tangible commodities that represent proof that 1 MWh of electricity was generated from a renewable energy resource and was then fed into the shared system of power lines that transport energy.

THERMS – a unit of heat equal to 100,000 Btus.

APPENDIX 3

Short History of Climate Action in Harvard

2018 and 2019: 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:

Create an implementation committee to manage the process of creating and monitoring implementation of a comprehensive Climate Action Plan

Establish a Climate Vulnerability Liaison within Town government responsible for capital planning oversight

1. Create an emergency response network and a medical professional network to coordinate professional and volunteer-based emergency and medical response teams.

2. The full report can be found at: https://www.harvard-ma.gov/energy-advisory-committee/municipal-vulnerability-preparedness-sub-committee/pages/mvp-general-and

3. With the designation as an MVP community, the Town became eligible for MVP Action Grants to support the implementation of climate adaptation and mitigation actions.

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.

This same year, the Agriculture-specific Climate Action Plan was drafted to identify opportunities to proactively build resiliency while also being a model for sustainable agricultural practices. Harvard's Agricultural Climate Action Plan centers around a vision for sustaining the agricultural community through four key categories: economic viability, resource efficiency and greenhouse

APPENDIX 3

Short History of Climate Action in Harvard

gas reduction, natural based resilient and regenerative practices, and social cohesion and agricultural character.

2021 and 2022: The outcomes of the 2018 and 2020 committee work identified the problems facing Harvard in addressing climate change and the interest of its residents. Work began on the Climate Action Plan beyond agriculture impacts and priorities.

In October 2021, at Special Town Meeting, residents approved the Town Resolution on Climate.

In January 2022, as an outcome of the Town Resolution, a new committee, reporting directly to the Select Board was formed: The Harvard Climate Initiative Committee.

At the same time, several committees in town were creating plans to address some of the issues raised in the initial Municipal Vulnerability Preparedness (MVP) Project. These included:

1. Hazard Mitigation Plan - an update to FEMA/MEMA which is a required plan for all municipalities. Significant focus was on the identified risks from the MVP project
2. Transportation Advisory Committee Plan - a new plan to develop a safe and sustainable transportation system

The work of these two committees has helped define the goals and actions for this Climate Action Plan in the areas of Preparedness and Transportation.

In addition, the HCIC has:

1. Launched a website about Harvard's climate activities
2. Joined with MassEnergize to create a HarvardEnergize website that provides household level climate actions and education
3. Created a newsletter to distill national, state and local news and to provide information on local events and educational forums, particularly to help households make changes to reduce their carbon footprints
4. Held the first Earth Day Show and Tell around Town where residents in town showcased what they have done to reduce their carbon footprint from electrification of their heating and cooling systems, installation of solar systems, planting native gardens, and more.

APPENDIX 4

Future Actions

The following actions came from meetings held with town committees and boards on the goals and actions for the plan. In light of creating a plan that is time sensitive, that is capable of being implemented and that doesn't stretch the resources of the town and its residents, the following actions will be reviewed periodically and added to the plan as actions are completed.

Natural Resources:

- Implement tree and other vegetation enhancements to built environments for shade, improved buffer, bio-swales, etc.
- Prepare stewardship plans for Town-owned conservation lands
- Prioritize and implement forestry recommendations from Apple Country Report, including additional protections for forested lands

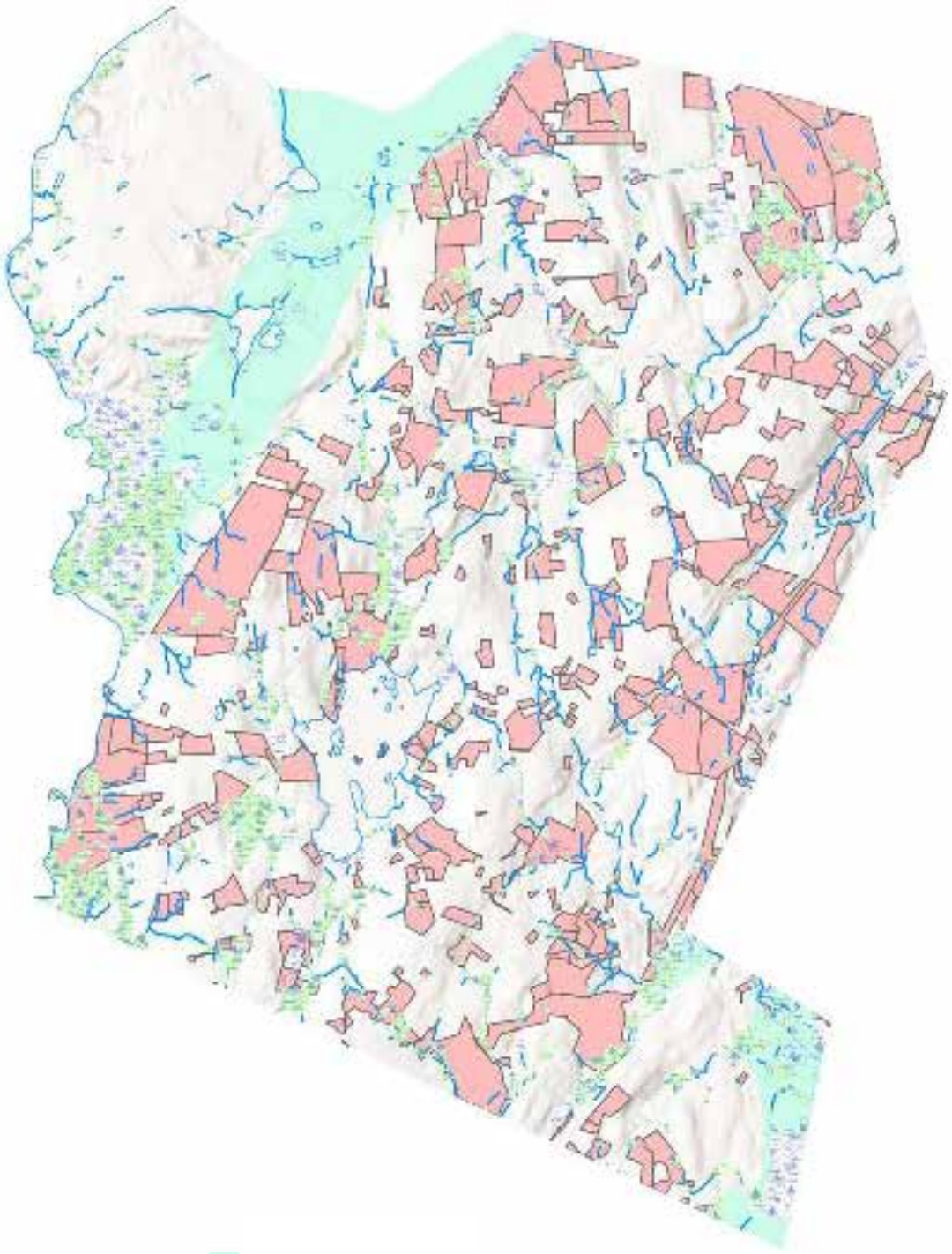
Transportation:

- Work to link Harvard trails and bike routes to various recreational opportunities outside of the town in cooperation with regional organizations and neighboring communities, such as the Nashoba Regional Greenway (NRG) Coalition and the Montachusett Regional Trails Coalition.

Agriculture:

- Explore options to reduce tax burden on farmers for their land, buildings, and equipment
- Pilot a collaborative purchasing initiative to take advantage of volume discounts which can enable wider use of organic fertilizer and other farm supplies. Over time, the initiative could get formalized to develop into a Coop or Grange model, which offers storage solutions for perishable farm produce, a commercial kitchen, organizes CSAs, a farmer market and/or manages a co-op store for local farms.
- Identify opportunities for large scale composting of community-wide food and green waste to reincorporate into agricultural soils.
- Pursue a state grant to establish a centralized shared processing facility with energy star appliances to reduce food processing energy and decrease regulatory requirements amongst individual farms.
- Plant what could feed humans, e.g. butternut trees, hazelnuts, burdock, blueberries, native grapes and other plants, which a) all bloom and help pollinators and b) could in the emergency case feed residents

HARVARD WATER MAP



Select Board Minutes
Tuesday, November 1, 2022
7:00pm

The Select Board Regular Meeting was held virtually in accordance with the Governor's Executive Order Suspending Certain Provisions of the Open Meeting Law, G.L.c.30A. S.20.

Select Board participants:
Rich Maiore, Erin McBee, Kara Minar, Don Ludwig, Charles Oliver
Town Department attendees:
Town Administrator Tim Bragan, Assistant Town Administrator Marie Sobalvarro, Executive Assistant Julie Doucet, Finance Director Jared Mullane and Director or Planning Frank O'Connor
Additional participants:
Warner Free Lecture Trustees: Alison Thornton, Steve Peisch, Michael Kilian, Sheila Simollardes
Planning Board Chair Richard Cabelus, Personnel Board Chair Victor Normand, Ellen Leicher

Vice Chair Erin McBee called the meeting to order.

Joint appointment to the Warner Free Lecture Trustees
Chair Alison Thornton introduced Michael Kilian for appointment to fill the vacancy on the trust. Trustee Steve Peisch was also present. Kilian spoke briefly about his interest in serving. By a roll call vote, Thornton – aye, Peisch – aye, Simollardes aye, Minar – aye, Oliver – aye, McBee – aye, Ludwig – aye, voted jointly in favor of appointing Michael Kilian to the Warner Free Lecture Trustees.

Chair Rich Maiore entered the meeting.

Finance Director review of FY24 budget documents
Jared Mullane worked on the budget documents with the Finance Committee. He reviewed the budget memo which includes important deadlines and the budget goals. Mullane created a template for the budget narrative to provide guidance and standardize the process. He noted in the specific guidelines for budget development the Finance Committee is asking that outside of COLA and contractual agreements budgets increase no more than 2.5%. Mullane is asking budget narratives stay within the allotted space and if necessary, an additional document can be included.

Meet with the Planning Board to review bylaw proposals
PB Chair Richard Cabelus reported hearings on two proposed warrant articles will be held on Monday, November 7th at 7pm.

- 125-7 Agricultural Use Amendment
- 125-59 Town Center Overlay District

He explained they have been working with the Agricultural Advisory Commission on the agricultural bylaw. The Planning Board drafted a letter to the Select Board requesting additional information and inviting members to attend the hearings on November 7th. After the hearings, the Select Board will regroup to formalize the next steps.

Personnel Board recommendation for Cost-of-Living adjustments
Chair Victor Normand reported the board voted for an increase of 8.2% to include cost of living and merit. He acknowledged it is significantly higher but is reflective of the economy we are in right now. He admitted this type of increase may not be sustainable however it is justified as a good strategy to maintain our work force and attract employees moving forward. He indicated the Personnel Board will meet again to finalize their recommendation on the percentage split between COLA and merit.

Public Communication
Town Administrator provided the staff report/updates (Attachment A)

Report presentation from the Revenue Ideation Committee
Committee Chair Kara Minar thanked her fellow members for their efforts to finalize the report. She highlighted the top priorities the committee focused on. They offered seven main recommendations which included agritourism, solar energy, tax compliance, property sales, real estate transfer tax, hire a grant writer and Ayer Rd commercial district. Minar said these are the primary areas the Revenue Ideation Committee recommends the Select Board pursue or investigate further to increase municipal revenue sources for the Town. The Select Board members were appreciative of the report. Rich Maiore will have this as an agenda item at the next Select Board meeting to discuss in more detail and address any questions.

Minutes
By a roll call vote, Ludwig – aye, McBee – aye, Minar – aye, Oliver – aye, Maiore – aye, the board voted unanimously to approve minutes of 10/4 &10/27, as presented.

Climate Survey Mailing
Town Administrator Tim Bragan has been working with HCIC Chair Ellen Leicher on the survey which will go out with tax bills in December. By a roll call vote, Minar – aye, Oliver – aye, Ludwig – aye, McBee – aye, Maiore – aye, the board voted unanimously to approve mailing of the climate survey.

Conflict of interest filed by CPC member John Lee
Town Administrator Tim Bragan explained the Select Board must act on the filing to allow Lee the ability to act on a request before the Community Preservation Committee that is from the Conservation Trust. Lee is a trustee member therefore a conflict of interest must be filed. Bragan explained there is no direct benefit to Lee. By a roll call vote, Ludwig – aye, McBee – aye, Minar – aye, Oliver – aye, Maiore – aye, the board voted unanimously to approve the conflict of interest.

Tax bill insert to increase awareness for electronic payments
Finance Director Jared Mullane requested inclusion in the tax bills information to promote online payments. By a roll call vote, Minar – aye, McBee – aye, Ludwig – aye, Oliver – aye, Maiore – aye, the board voted unanimously to approve the request.

Appointment of Rich Marcello to the Harvard Climate Initiative Committee
By a roll call vote, Minar – aye, McBee- aye, Ludwig – aye, Oliver – aye, Maiore – aye, the board voted unanimously to appoint Rich Marcello as a full member and move Adam Meir to an associate position.

Select Board Reports
Erin McBee is preparing for the Planning Board hearings on Monday. She thanked Agricultural Advisory Commission Chair Kerri Green for her help in navigating the language.

Rich Maiore gave an update on the status of playing fields. He reported the wetland delineation should be done before snow flies allowing for a field engineer to do a more in-depth review on how best to accommodate what is desired.

Charles Oliver reported the Commission on Disabilities has had a consultant tour town building for compliance. They expect a written report in December. He said the are considering a future questionnaire and adding a disclaimer to the town website.

Don Ludwig reported capital is currently reviewing requests, the Devens Harvard Jurisdiction Committee held a public meeting to present Harvard's Summary Plan and solicit public comment and the school building committee is seeking quotes for the stone wall to match on the other side.

The meeting was adjourned at 8:30pm.

Documents referenced:
Michael Kilian vol form – dated 10.4.2022
Budget memo FY24 – dated 10.19.2022
PB letter on bylaws – dated 10.17.2022 w/supporting material
Current entertainment license conditions (reference only)
COLA material (CPI over time & summary) – dated Oct 2022
RIC report – dated 10.6.2022
Draft climate survey – dated Oct 2022
Lee conflict of interest – dated 10.25.2022
Mullane online payment request – dated 10.12.2022
Rich Marcello vol form – dated Oct 2022

Personnel Board COLA Recommendation

In FY18, Town voted for a compensation and classification review to update job descriptions and re-assess our competitiveness vis a vis surrounding communities due to extensive employee turnover. The Personnel Board, per their responsibilities outlined in the Town by-laws[1], sought an outside review.

The earlier step + COLA system was averaging a 4.30% increase per year (COLA at 2%, step increment 2.25%)[2]. The move to a COLA + merit system was intended to establish competitiveness with surrounding communities, incentivize employee performance (instead of merely incentivizing longevity…to a point), and allow for wage growth for long-term (Step 10+) employees.

At Tuesday's Personnel Board meeting they reaffirmed their earlier COLA vote, and likewise tasked members with investigating alternative proposals as a basis for their recommended COLA for FY25→ (e.g., Core CPI versus CPI-U was one example raised.)

The estimated impact of an 8.2% COLA increase is $165k-$175k. (The last two town meetings approved 4 additional/new positions: FF/EMT, Admin Assistant, Recreation Director, and Assistant COA Director; three of the four are unfilled at this time.)

The current system applies retrospective CPI escalation or declination prospectively, much like driving while looking in the rearview mirror – the alternative is looking through an opaque windshield.

Pro	*Con*
Maintain competitiveness and reduce turnover	Fiscal dilemma if revenues don't escalate (aka 'is a recession coming?')
Reduce likelihood of unionization	Impair negotiations with unions (who have escalating steps, but all PR is COLA-focused)
'Walk the talk' of earlier move away from Step + COLA system	PR moment to take a strong stand against increasing costs borne by the taxpayer
Affirm jurisdiction of Personnel Board	
Maintain SB policy-setting expertise versus 'down in the weeds'	

[1] Attached

[2] Handout from 11/1/22 SB meeting packet, page 23

Chapter 78. Personnel

§ 78-4. Personnel system.

[Amended 3-25-1995 ATM by Art. 33]
A personnel system shall be established by promulgation of policies, rules and regulations pursuant to § **78-5**. The personnel system shall make use of current concepts of personnel management and shall include but not be limited to the following elements:

A. Method of administration. A system of administration which assigns specific responsibility for all elements of the personnel system, including: maintaining personnel records, implementing effective recruitment and selection processes, maintaining the classification and compensation plans, monitoring the application of personnel policies and periodic reviews, maintaining a problem resolution system, and evaluating the personnel system.

B. Classification and compensation. A classification and compensation plan for all employees, subject to this bylaw and subject to appropriation, shall be established to include but not be limited to the following parameters:

   (1) Fully qualified and performing employees should be compensated at a rate commensurate with similar work rates (both public and private) in the surrounding area.

   (2) As employees master their work, they should be rewarded for skill development and performance.

   (3) Employees should be rewarded for behavior and performance that exceeds the normal requirements of the position.

C. A recruitment and selection policy. A recruitment, employment, promotion and transfer policy which ensures that reasonable effort is made to attract qualified persons and that selection criteria are job related.

D. Personnel records. A centralized recordkeeping system which maintains essential personnel records.

E. Personnel policies. A series of personnel policies, including rules and regulations, which establishes the rights and benefits to which personnel employed by the Town are entitled and the obligations of said employees to the Town.

F. Standards of conduct. A set of codes governing an employee's standard of conduct.

G. Other elements. Other elements of a personnel system as deemed appropriate or required by law.

FY	Step Increment w/in grade	COLA	COLA + Step from prior year	Merit Max	COLA + Merit Avg	
2008	2.25%	2.50%	5.32%	N/A		
2009	2.25%	2.50%	4.81%	N/A		
2010	2.25%	0.00%	4.39%	N/A		
2011	2.25%	0.00%	2.25%	N/A		
2012	2.25%	1.00%	3.27%	N/A		
2013	2.25%	2.00%	4.30%	N/A		
2014	2.25%	2.00%	4.30%	N/A		
2015	2.25%	2.00%	4.30%	N/A		
2016	2.25%	2.00%	4.30%	N/A		
2017	2.25%	2.00%	4.30%	N/A		
2018	2.25%	1.50%	4.30%	N/A		
2019	No Steps	2.00%	N/A; transition to new system			
2020	No Steps	2.20%	N/A	1.50%	3.07%	Average merit 0.87%
2021	No Steps	1.70%	N/A	1.50%	2.60%	Average merit 0.9%
2022	No Steps	1.40%	N/A	1.00%	2.40%	Average merit 1.0%
2023	No Steps	5.40%	N/A	1.50%	6.30%	Average merit 0.9%**

September CPI (Released October)

**FY22 Merit allocation for FY23

Seven employees removed from assessment:

3 positions adjusted based on salary survey (Conservation Agent, Assistant Town Clerk, Assistant Town Administrator).
The average salary adjustment was 4.6%.

2 positions re-graded by Personnel in FY22, moved to their new grade in FY23 (BOH Administrative Assistant, Cable Station Operations)
All re-graded-and-moved staff were moved to the starting point of the position's new grade.

2 internal promotion (from Receptionist to COA Assistant Director, Library Assistant to Circulation Librarian)

For the remaining 30 employees, the average merit increase was 0.9% (out of a possible 1.5%)

FY24-FORM 1

		FY22 Appropriated	FY22 Actual	FY23 Appropriated	FY24 Requested
	SELECTBOARD				
01123200-571000	*MILEAGE - TOWN ADMINISTRATOR*	5,400	5,400.00	5,400.00	
01123100-511100	*WAGES - PERSONNEL - SELECT BOARD*	314,598	314,116.07	330,696.00	-
	Sub Total: Personal Services	319,998	319,516	336,096	0
01122200-531200	*EMPLOYEE TRAIN & PROF DEV*	1,000.00	287.40	1,000	
01122200-542000	*SELECTBOARD-OFFICE SUPPLIES*	-	2,439.99		
01122200-530000	*SELECTBOARD-PUR SERVICES*	13,000.00	19,214.75	13,000	
01122200-573000	*SELECTBOARD-MEETINGS & DUES*	4,000.00	1,898.57	4,000	
01122200-534300	*TOWN REPORTS*	5,000.00	2,633.29	6,000	
	Sub Total: Expenses	23,000	26,474	24,000	0
	Total: SELECTBOARD	342,998	345,990	360,096	0

TOWN OF HARVARD
FY24 BUDGET
FORM 2. PERSONAL SERVICES - STRAIGHT TIME

POSITION	REQUESTED FY24				
	HR/ WK	Annual Hours	FY23 Rate	FY24 COLA	TOTAL FY24
Town Administrator	40	2080	78.17	0.01	
Asst Town Adminstrator	40	2080	47	0.082	
Exec. Assistant	40	2080	34.69	0.082	
					-
					-

new rate 79.11

FY24-FORM 1		FY22 Appropriated	FY22 Actual	FY23 Appropriated	FY24 Requested
	LEGAL				
01151200-531500	*TOWN COUNSEL-LGL SERVICES*	35,000.00	58,104.47	35,000.00	
01151200-531600	*OTHER LEGAL SERVICES*	20,000.00	29,794.36	20,000.00	
	Sub Total: Expenses	55,000.00	87,898.83	55,000.00	-
	Total: LEGAL	55,000.00	87,898.83	55,000.00	-

Town common request

SCM <sch1star@gmail.com>

Tue 11/1/2022 11:33 AM

To: Julie Doucet <jdoucet@harvard-ma.gov>

Hi Julie,

In my School Committee role and as a parent I sit on the Harvard Special Education Parent Advisory Committee (SEPAC). The SEPAC advises the school district in matters relating to special education and also provides support to students and families. In Harvard we have only recently successfully re-established the SEPAC after many years of trying, and we are still building awareness and doing outreach.

Governor Baker has made November SEPAC awareness month statewide, and hopefully you'll see lots of yellow things around to recognize SEPACs this month. Even the Zakim bridge will spend time lit yellow!

I am writing to ask whether the Harvard SEPAC might secure permission to use some yellow during part of the month on the town common. Specifically we hoped to string yellow lights on a tree, but we are open to other suggestions or recommendations, too.

Could you let me know how I might proceed in asking?

Thank you,
Shannon