

# HCIC Status Report to Select Board – Dec 2023



CLIMATE ACTION PLAN 2022

# Progress to Date on CAP Focus Areas

- Buildings
  - Energy
- Transportation
- Natural Resources
  - Agriculture
  - Preparedness

# Buildings

	<b>Goal: Convert Harvard’s municipal buildings from carbon-based fuel combustion to high efficiency electric heating</b>	<b>Target Date</b>	<b>Status – Nov 2023</b>
<b>Municipal</b>	Develop a detailed electrification, upgrade and financial analysis plan of municipal heating systems <ul style="list-style-type: none"> <li>- Engineering review by building</li> <li>- Financial review by building</li> </ul>	Phase I: 2023	HEAC Decarbonization plan complete. Building Electrification Phase 1 - Bromfield Heating System - Air Handler Retrofit with Heat Pumps for significant emissions reduction. Initial study complete. Schools issuing RFP for detailed design. Target 2024 for Engineering Design and Cost Proposal.
	Adopt the updated Massachusetts specialized opt in Stretch Energy code	2024	Looking to bring the specialized opt in code to town meeting in 2024 to be implemented in 2025.
	<b>Goal: Reduce waste in town operations through recycling and reuse</b>		
	Reduce municipal town waste by reusing and recycling construction, office and school supplies and materials by 10% per year	10% per yr	Recycled, reuse of supplies purchased through Devens facility open to government and non-profit agencies. Measurement re. reduction % each year unknown.
	Expand purchasing of recycled office supplies through joint purchasing across all municipal and school departments	10% per yr	Schools and Town Admin support recycled goods and equipment. Neither can account for changes. No joint purchasing.

# Buildings (continued)

	<b>Goal: Replace residential building's fossil fuel consumption with high efficiency electric heating and cooling</b>	<b>Target Date</b>	<b>Status – Nov 2023</b>
<b>Residential</b>	Educate and assist homeowners to evaluate the costs and benefits of efficient electric heating and cooling systems including available financial incentives.	2023	Earth Day education. Newsletter info. on up to date incentives. Energy Coaches in place and helping residents. Energy Coach speed dating – June 2023, next Jan 2024
	<b>Goal: Reduce waste through recycling and reuse</b>		
	Encourage residential composting at home, require private haulers to provide the option, and provide composting at the transfer station	2024	Pig farmer used by schools. Black Earth needs 100 residents to enroll (approx. 50 have signed up). Will explore other towns transfer station options.
	Significantly reduce residential waste through changes to consumption practices and by supporting options to “buy local,” recycle and reuse/repair.	2023	Several newsletters on buy local. Green Team batteries recycling. New sign at Transfer station on battery recycling. Changes in state law re. fabric/clothes recycling. BoH will send town wide mailer re. recycle/reuse.

# Energy

	<b>Goal: Convert all electricity to 100% renewable energy sources</b>	<b>Target Date</b>	<b>Status – Nov 2023</b>
<b>Municipal</b>	Negotiate a 100% renewable energy electricity supply contract for all municipal use.	ongoing	New contract in place Nov 2023 for 2 years
	Increase the number solar installations on municipal buildings or property, either as directly owned or leased (such as power purchase agreement (PPA)).	3 by 2025	COA. HEAC creating plan for other sites 2025 date may slip dependent on National Grid ability to accept into the grid.
	Add battery storage to PV solar systems.	2026	No progress to date
	<b>Goal: Increase the number of residential solar arrays and battery storage systems</b>		
<b>Residential</b>	Assist homeowners to evaluate the costs and benefits of PV solar and battery storage systems and educate homeowners on available grants and incentives	ongoing	Solar part of Earth Day. Solar install and community solar farm event scheduled for February
	Advocate for use of community solar for homeowners to receive credits or offsets on electricity bill from a solar farm installed at another location.	2025	EnergySage, Nextamp have community solar options. Will be highlighted at Feb 2024 event and on HCIC website HarvardEnergize link

# Transportation

	Goal: Convert Harvard’s municipal vehicles from carbon-based fuel combustion to electric vehicles or other low carbon options	Target Date	Status – Nov 23
Municipal	Implementation of a de-carbonization plan for the town’s municipal vehicle fleet, including: <ul style="list-style-type: none"> <li>• Conversion of light-duty vehicles to EV’s</li> <li>• A mid- to long-term strategy for heavier-duty vehicles</li> <li>• Explore options for electrification of school buses</li> </ul>	2040	<ul style="list-style-type: none"> <li>• Several hybrid vehicles purchased or in process for police dept.</li> <li>• Decarbonization plan lays out timetable</li> <li>• Grant dollars available to cover partial cost</li> </ul>
	Develop and implement a community-wide plan for public EV charging stations.	2025	Charging station plans under development by HEAC
Residential	Goal: Reduce the climate impact of Harvard’s residential transportation activities		
	Encourage the adoption of electric vehicles amongst residents and businesses through education on incentives and options, promotional events, and expediting permits.	2035	Earth Day EV petting zoo. Newsletter articles on EV incentives
	Develop a high quality, high frequency regional electric shuttle service to and from town center, commuter rail stations, and future park-and-ride locations.	2025	MART in place as of Nov 2023. Parking options to be explored.
	Explore options to increase adoption of school busing over individual cars	2024	No progress to date. Issues around before and after school programs. Idling cars being addressed by Bromfield Green Team
	Improve the reach of Harvard’s bicycle and walking paths to provide a realistic, healthy, and zero carbon alternative to driving.	2030	Participated in Nashoba Regional Greenway project to identify bike and pedestrian routes

# Natural Resources

	Goal: Increase the resilience of Harvard’s ecosystems and community through the coordinated implementation of nature-based solutions	Target Date	Status – Nov 2023
Municipal	Preserve Harvard wetlands through the following: <ul style="list-style-type: none"> <li>• Update the Harvard Wetlands Protection Bylaw and/or regulations to reflect and adapt to changing climate conditions</li> <li>• Educate and advise residents on the management of private land near/in wetlands</li> <li>• Protect wetlands from road run-off</li> </ul>	2025	<ul style="list-style-type: none"> <li>• Land Agent attended workshop on bylaw options</li> <li>• Wetlands bylaw update underway for 2024 town meeting</li> <li>• No progress on road run-off protections</li> </ul>
	Amend erosion control by-law to include tree clearing	2025	MVP grant received to re-write bylaw.
	Address Invasive plants and insects: <ul style="list-style-type: none"> <li>• Develop or expand best management practice programs for Bare Hill Pond, Town conservation land, and other municipally controlled lands where invasives are a risk</li> <li>• Educate and provide resources to residents to manage invasives on private land</li> </ul>	2024	<ul style="list-style-type: none"> <li>• Part of Know Your Land Series. Invasives presented in Oct 2023 program and more focused events planned for 2024.</li> </ul>
	Improve soil health through education and best management practices	2024	Education through Earth Day event and Know Your Land series
	Improve habitat for pollinators and beneficial insects with protection and cultivation of native plants	2024	Education through Earth Day event. Will have pollinator garden kit info in 2024
	Implement flood control through ranking and prioritization of replacement and upgrade of town-owned culverts	2024	No progress
	Monitor for water health, algae blooms and biodiversity of waterways. Provide education and outreach to the public regarding these issues.	ongoing	Pond testing continuing by BoH

# Natural Resources (continued)

	Goal (Land Use): The Town's plans, policies, bylaws, and regulations encourage sustainable land use and development	Target Date	Status – Nov 2023
Municipal	Rewrite the Protective (Zoning) Bylaw and include: <ul style="list-style-type: none"> <li>• Local resilience and carbon reduction</li> <li>• More zoning districts that are sustainable and smart growth models</li> <li>• An updated Open Space Residential Development Bylaw that promotes open space and natural resource protection</li> </ul>	2026	<ul style="list-style-type: none"> <li>• MVP grant assisted in the redrafting of the Open Space Residential bylaw which passed Oct 2023</li> <li>• Affordable housing plan includes climate component</li> <li>• Recent 40B is fossil free and accepted comments from HCIC</li> </ul>
	Educate and inform the public about sustainable land use patterns	2025	Know Your Land Series– see below
	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.	2024	Select Board sent a memo re. climate and sustainability. HCIC involved with CPC, PB, ConCom, Open Space. More work needs to be done with other committees, particularly CPIC
	Acquire high priority climate resilient land	ongoing	2023 MVP grant awarded to purchase biodiverse land



# Natural Resources (continued)

Residential	<b>Goal: Reduce the climate impact of our homes and yards on the local environment.</b>		
	Educate residents on sustainable practices for lawn care, landscaping, tree care, invasive species management, and water management during drought conditions	2024	Know Your Land Series with private land coaches in planning stage for spring of 2024
	Encourage the conversion of lawn care equipment from gas-powered to electric.	2025	All electric equipment on display at Earth Day. Will include in Know Your Land Series

# Agriculture

	Goal: Support the sustainability of the agricultural community	Target Date	Status- May 2023
Municipal	Determine next steps on implementation of the 2020 Agriculture Climate Action Plan: <ul style="list-style-type: none"> <li>Grant writing assistance</li> <li>Prioritize municipal initiatives to promote the economic sustainability of our farms</li> <li>Review Harvard's zoning laws to allow flexibility for farm-related uses</li> </ul>	2025	<ul style="list-style-type: none"> <li>Consider collaborations with Open Space, ComCon, HCT re. land use</li> <li>Need support of grant writing</li> </ul>
	Commit to "Buy Local" for town events and in Harvard's schools	2024	Requested data from HPS to create baseline
Residential	<b>Goal: Strengthen community support for Harvard's agriculture and encourage innovative approaches to farming</b>		
	Establish a forum for the sharing information and best management practices on: <ul style="list-style-type: none"> <li>Regenerative farm practices</li> <li>Soil, pest, and disease management</li> <li>Sustainable pasture management</li> <li>Water management</li> </ul>	2025	<ul style="list-style-type: none"> <li>Education on regenerative farm practice and soil, pest and disease management at Earth Day event.</li> <li>AG Commission educational forum in planning for farmers and homesteaders in 2024. Several topics under discussion (soil health, pasture management, etc.)</li> </ul>
	Support "buy local" for local farms	2023	New signage on many roads re. buy local and right to farm. HCIC e-newsletter and social media used to promote local farms.

# Preparedness

	<b>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</b>	<b>Target Date</b>	<b>Status – Nov 2023</b>
<b>Municipal</b>	Identify and prioritize vulnerable populations for outreach and assistance regarding mitigation and preparation.	ongoing	Ongoing
	Formalize which town buildings will be used as a cooling and warming center for residents and their pets.	2023	Bromfield remains cooling and warming center
	Support the implementation of climate-related priorities in the Hazard Mitigation Plan	2027	No progress to date
	<b>Goal: Educate residents on how to prepare for impacts of climate change to mitigate negative outcomes</b>		
<b>Residential</b>	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	Information on Town website and at Dept. Public Safety Information sent out through HCIC newsletter, Nov 2023
	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 addressed ticks, water use and preservation at Earth Day and in Harvard Press. More outreach will be done in next fiscal year when funding is available. MVP grant will provide educational forums on resiliency

# Grant Opportunities

- ✓ MVP (Municipal Vulnerability Preparedness)
  - ✓ Future? Culvert replacement, Agricultural climate plan actions, Solar installation
  - ✓ All require 25% match but it can be staff and volunteer time
  - ✓ <https://www.mass.gov/info-details/mvp-action-grant>
- ✓ Green Communities
  - ✓ Climate leaders \$ if we adopt specialized opt in stretch code
  - ✓ <https://www.mass.gov/news/healey-driscoll-administration-announces-next-phase-of-green-communities-program>
- ✓ IRA Funds
  - ✓ MA Federal Funds and Infrastructure Office <https://www.mass.gov/orgs/federal-funds-infrastructure-office>
- ✓ FEMA/MEMA
  - ✓ <https://www.mass.gov/info-details/building-resilient-infrastructure-and-communities-bric-flood-mitigation-assistance-fma-grant-programs>