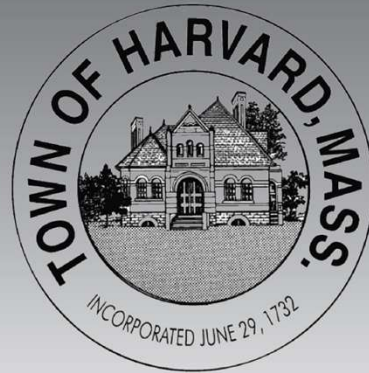
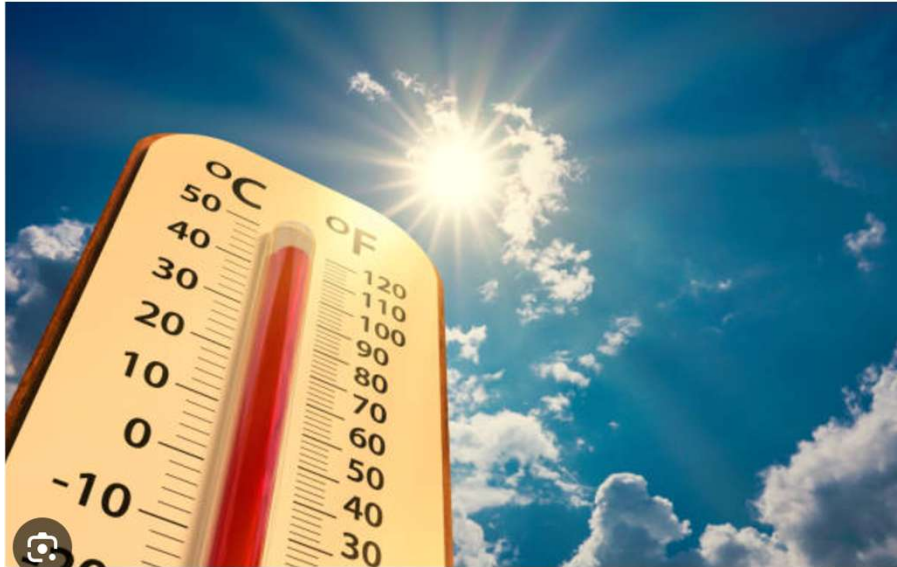


HCIC PROPOSED CHANGES TO THE PLAN Select Board Sept. 2025



CLIMATE ACTION PLAN 2022

ADDRESS A HARSHER AND UNPREDICTABLE FUTURE: TEMPERATURE, FLOODS



ADDRESS A HARSHER AND UNPREDICTABLE FUTURE: ALGAL BLOOMS, FARMS & FOOD LOSS



ADDRESS A HARSHER AND UNPREDICTABLE FUTURE: DROUGHT, WILDFIRES



HCIC FOCUS ON MITIGATION MUST ALSO INCREASE EDUCATION AND FUNDING TOWARD ADAPTATION

MITIGATION

- Reduce carbon emissions
 - Buildings, transportation, waste management (heat pumps, building specs, EVs, composting, recycling, etc.)
- Change energy supply to renewables
- Carbon capture
 - Protect forests/trees/wetlands
 - Land purchase
- Protect biodiversity
 - Invasive management
 - Fertilizer and run-off reduction

ADAPTATION

- Prepare for heat, storms, flooding, drought, wildfires
 - Cooling options/centers
 - Solar, battery back-up, generators
 - Neighborhood emergency support and communication
 - Rules and education for outdoor water use, fire prevention
- Build infrastructure
 - Culvert updates
 - Rain gardens
- Prepare for new health risks
 - Public health education, prevention

Progress to Date on CAP Focus Areas

Mitigation v. Adaptation

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

How to Read the CAP Update

- **Green Items** – These denote adaptation action items. Those that remain in black are mitigation action items.
- **Blue items** – These designate both adaptation and mitigation items
- **Purple items** – Update on progress since previous report of Dec. 2024.
- **Yellow items** - Changes in the target dates, where in all cases they were extended

Buildings

	Goal: Convert Harvard’s municipal buildings from carbon-based fuel combustion to high efficiency electric heating	Target Date & Lead	Status – June 2025
Municipal	Develop a detailed electrification, upgrade and financial analysis plan of municipal heating systems <ul style="list-style-type: none"> - Engineering review by building - Financial review by building 	Phase I: 2023 Phase 2: Bromfield 2025 HEAC, School Comm, Library	HEAC Decarbonization plan updated in 2025 and adopted by SB, SC as required by DOER Climate Leaders for which Harvard applied in June 2025. Building Electrification Phase 1 - Bromfield Heating System - Air Handler Retrofit with Heat Pumps for significant emissions reduction. Comprehensive study by NV5 in 2025. Target 2025-26 for Engineering Design and Cost Proposal. Library Energy Assessment Study and Recommendations for Decarbonization completed in June 2025.
	Adopt the updated Massachusetts specialized opt in Stretch Energy code	COMPLETE	Passed Town Meeting 9/28/24. Effective 1/1/25.
	Goal: Reduce waste in town operations through recycling and reuse		
	Reduce municipal town waste by reusing and recycling construction, office and school supplies and materials by 10% per year	Baseline: 2025 SB, TA	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	Baseline: 2025 SB, SC, TA	Schools and Town Admin support recycled goods and equipment. Neither can account for changes. No joint purchasing.

Buildings (continued)

Residential	Goal: Replace residential building's fossil fuel consumption with high efficiency electric heating and cooling	Target Date	Status – June 2025
	Educate and assist homeowners to evaluate the costs and benefits of efficient electric heating and cooling systems including available financial incentives.	2023 ongoing HCIC	Earth Day education. Newsletter info. on up to date incentives. Heat pump Coaches in place and helping residents. Heat pump Coach speed dating – June 2023, Jan 2024, June 2024, January 2025, May 2025 (Open houses)
	Goal: Reduce waste through recycling and reuse		
	Encourage residential composting at home, require private haulers to provide the option, and provide composting at the transfer station	2026 BoH Transfer Sta. Comm.	Pig farmer used by schools. Black Earth needs 100 residents to enroll (approx. 50 have signed up). To discuss again with new DPW Director in 2025 and the Transfer Station Committee if it still exists. Looking at Black Earth options again.
	Significantly reduce residential waste through changes to consumption practices and by supporting options to “buy local,” recycle and reuse/repair.	2026 HCIC	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. Consider a repair clinic in 2026.

Energy

	Goal: Convert all electricity to 100% renewable energy sources	Target Date	Status – June 2025
Municipal	Negotiate a 100% renewable energy electricity supply contract for all municipal use and residential customers.	Ongoing TA, HEAC	New contract for municipal signed in 2025. Not 100% renewable. New CCA supplier for Nov 2025 for 2 years. 100% renewable.
	Increase the number solar installations on municipal buildings or property, either as directly owned or leased (such as power purchase agreement (PPA)).	3 by 2027 HEAC	HES & COA. HEAC has plans for other sites. 2025 date not doable with NGRID given substation capacity. Energy Manager may be helpful in moving forward.
	Add battery storage to PV solar systems.	2028 HEAC	No progress to date. Dependent on future PV systems.
Residential	Goal: Increase the number of residential solar arrays and battery storage systems		
	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	Solar part of Earth Day. Solar install and community solar farm event Feb 2024. Solar coaches started spring 2025.
	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 HCIC	EnergySage, Nextamp have community solar options. Highlighted at Feb 2024 and 2025 events.

Transportation

	Goal: Convert Harvard’s municipal vehicles from carbon-based fuel combustion to electric vehicles or other low carbon options	Target Date	Status – June 2025
Municipal	Implementation of a de-carbonization plan for the town’s municipal vehicle fleet, including: <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Several hybrid vehicles purchased by police • Decarbonization plan lays out timetable • Grant dollars available to cover partial cost • ZEV First policy passage by SB and SC for Climate Leaders funding program
	Develop and implement a community-wide plan for public EV charging stations.	2026 HEAC	Charging station plans delayed.
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 HCIC	Multiple Earth Day EV petting zoos. Newsletter articles on EV incentives. Next EV event on Sun Day Sept 21, 2025
	Develop a high quality, high frequency regional electric shuttle service to and from town center, commuter rail stations, and future park-and-ride locations.	2024 TAC, SB	MART in place as of Nov 2023. Parking spaces secured. Low use.
	Explore options to increase adoption of school busing over individual cars	2024, SC, Green Team	No support except education by Green Team and Superintendent.
	Improve the reach of Harvard’s bicycle and walking paths to provide a realistic, healthy, and zero carbon alternative to driving.	2030 TAC	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 – June 2025
Municipal	Preserve Harvard wetlands through the following: <ul style="list-style-type: none"> • 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 • Protect wetlands from road run-off and fertilizer use 	2025 ConCom	<ul style="list-style-type: none"> • Wetland changes approved through regs. and finalized 2025 • Education through postcard to all residents • No progress on road run-off protections
	Amend erosion control by-law to include tree protection	2025 HCIC	Complete except no private property protections. Consider in future years.
	Address Invasive plants and insects: <ul style="list-style-type: none"> • Develop or expand best management practice 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 & ongoing ConCom HCIC BHPWM DPW	<ul style="list-style-type: none"> • Part of Know Your Land Series. Invasives presented at two Trail Programs by HCIC • Joint grant ConCom & HCIC – SVT speaker well attended. Pamphlets and tools available to residents • More education is planned.
	Improve soil health through education and best management practices	2025 & ongoing AAC	Some education through Know Your Land series. More to come in the future
	Improve habitat for pollinators and beneficial insects with protection and cultivation of native plants	2025 HCIC	Education through Earth Day and Know Your Land events. More to come in the future.
	Implement flood control through ranking and prioritization of replacement and upgrade of town-owned culverts	2026 DPW	No progress. Can apply for MVP and state specific culvert funding in 2026

Natural Resources (continued)

Municipal	Goal (Land Use): The Town's plans, policies, bylaws, and regulations encourage sustainable land use and development	Target Date	Status – June 2025
	Monitor for water health, algae blooms, pollutants, and biodiversity of waterways. Provide education and outreach to the public regarding these issues.	Ongoing BoH, BHPWM	Pond water testing continuing by BHPWM and BoH. Turtle/frog counts by BHPWM
	Rewrite the Protective (Zoning) Bylaw and include: <ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • MVP grant assisted in the redrafting of the Open Space Residential bylaw which passed Oct 2023 • Affordable housing plan includes climate component • Recent 40B is fossil free and accepted comments from HCIC
	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.	2025 SB	Select Board sent a memo re. climate and sustainability. HCIC involved with HEAC, CPC, PB, ConCom, Transportation, CPIC, Park & Rec, Public Safety. More work needs to be done with other committees
	Acquire high priority climate resilient land	Ongoing Open Space, ConCom	2023 MVP grant by Open Space Committee awarded to purchase biodiverse land. Did presentation on CRs and Chapter 61 land in 2024.

Natural Resources (continued)

Goal: Reduce the climate impact of our homes and yards on the local environment.			
Residential	Educate and inform the public about sustainable land use patterns, including invasive species management, tree coverage and maintenance, rain garden/barrels, fertilizer use and water use.	2024 & ongoing HCIC, ConCom BoH	<ul style="list-style-type: none"> Know Your Land Series. ConCom and HCIC Wild & Scenic Grant had SVT speaker and has pamphlet and tools to borrow for invasives from Library. Postcard to homes regarding tree removal and protection near wetlands
	Encourage the conversion of lawn care equipment from gas-powered to electric.	2025 HCIC	All electric equipment on display at Earth Day, in July 4 th parade and at EV petting zoo events
	Educate on migration of plants from the south that will become native to this area. Focus on drought resident plants.	2026 NEW HCIC	Educational event held in collaboration with the Garden Club

Agriculture

	Goal: Support the sustainability of the agricultural community	Target Date	Status- May 2023
Municipal	Review Harvard's zoning laws to allow flexibility for farm-related uses to adapt to climate change and ensure sustainability	2025 AAC, HCIC	<ul style="list-style-type: none"> Consider collaborations with Open Space (DONE), ConCom, HCT re. land use Applied for MVP grant with MRPC. Was not awarded. May edit & resubmit.
	Commit to "Buy Local" for town events and in Harvard's schools	2024 SB, SC	Requested data from HPS to create baseline. No progress
Residential	Goal: Strengthen community support for Harvard's agriculture and encourage innovative approaches to farming		
	Establish a forum for the sharing information and best management practices on: <ul style="list-style-type: none"> Regenerative farm practices Soil, pest, and disease management Sustainable pasture management Water management 	2025 & ongoing AAC	<ul style="list-style-type: none"> Education on regenerative farm practice and soil, pest and disease management at Earth Day event. AG Commission met with farmers to discuss the status of farming in Harvard. Conducted survey of farmers/homesteaders re. sustainability.
	Support "buy local" for local farms	COMPLETE HCIC, AG	New signage on many roads re. buy local and right to farm. HCIC e-newsletter and social media used to promote local farms.

Preparedness

	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	Target Date	Status – Nov 2023
Municipal	Identify and prioritize vulnerable populations for outreach and assistance regarding mitigation and preparation.	Ongoing COA	Ongoing
	Formalize which town buildings will be used as a cooling and warming center for residents and their pets.	2023 SB, FIRE, COA	Bromfield remains warming center. COA used for cooling, 2025. Will be warming center going forward
	Support the implementation of climate-related priorities in the Hazard Mitigation Plan	2027 SB, FIRE, DPW	First review expected in 2025
	Goal: Educate residents on how to prepare for impacts of climate change to mitigate negative outcomes		
Residential	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.	2024 & ongoing Public Safety, HCIC	Information on Town website and at Dept. Public Safety Information sent out through HCIC newsletter Focus on education around neighborhood planning piloted
	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	Ongoing BoH, Public Safety	<ul style="list-style-type: none"> BoH addresses ticks, water use and preservation at Earth Day and in Harvard Press. Arm in Arm includes town info in special envelope in Welcome Bags.