SUSTAINABLE CONCORD

Revolutionary Resilient Ready

Climate Action & Resilience Plan

DRAFT

IMPLEMENTATION BLUEPRINTS

MAY 7, 2020

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Built Environment

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Create opportunities town wide to increase the waste diversion rate by 30%.

ACTION NAME	Increase electrification and reduce energy consumption of residential buildings.
DESCRIPTION OF ACTION	Implement financial incentives and deploy education and awareness programs for Concord residents to improve the energy efficiency in their homes and transition to heat pumps for heating and cooling.
CLIMATE BENEFIT	Buildings contribute 60% of the GHG emissions in Concord; residential buildings making up 30% of the total emissions. Significant reductions in the energy consumption and emissions from existing buildings will be critical to achieving GHG goals
CHAMPION	Concord Municipal Light Plant (CMLP), Comprehensive Sustainability Committee (CSEC), andSustainability Division

IMPLEMENTATION STEPS	Timeframe	Key Partners
1. Promote free home energy assessments to homeowners/residents and multifamily property owners. a. Town sponsored education campaign (step 2) b. Financial incentives c. Incentives for property owners to pursue a HERS rating.	2021-2023	• CAAB • Comprehensive Sustainability and Energy Committee (CSEC) • Concord Light Board • CMLP • Multifamily property owners • Financial institutions
2. Design and deploy energy efficiency education and information campaign, including: a. Town of Concord website materials b. Mailed materials c. Presence at relevant events to inform on energy efficiency d. Purpose-specific education events and meetings for: i. Homeowners/residents ii. Multifamily property owners and landlords iii. Built environment professionals (HVAC, general contractors, etc.)	2021-2025	• CAAB • CSEC • CMLP • Multifamily property owners • Financial Institutions • Built environment professionals

3. Explore potential for time of sale energy assessment requirement. a. Understand experiences of communities piloting policies b. Engage with external stakeholder groups on pros/cons and costs to implement c. Engage with state to evaluate potential for state-wide policy	2022-2025	• CAAB • Sustainability Division
4. Encourage homeowners/residents and multifamily property owners to perform energy efficiency upgrades and system electrification, with a focus on: a. Building envelope improvements – thermal efficiency of building exterior including walls, attics, roofs basement rim joists and crawlspaces. b. Electrification of heating/cooling systems with focus on air and ground source heat pumps and heat pump water heaters – will facilitate switch to renewables c. Encourage participation through: i. Town sponsored education campaign (step 2) ii. Financial incentives, both third party and CMLP	2021-2025	• CAAB • CSEC • CMLP • Multifamily property owners • Financial institutions • Built environment professionals • Energy New England • HeatSmart Alliance
5. Encourage homeowners/residents and multifamily property owners to deploy renewables and energy storage. Encourage participation through: a. Town sponsored education campaign (step 2) b. Financial incentives, both third party and CMLP (Financing Resources and Mechanisms table below)	2021-2025	• CAAB • CSEC • CMLP • Multifamily property owners • Financial institutions • Built environment professionals

FINANCING RESOURCES AND MECHANISMS
Residential incentives and rebates: • Mass Save • DOER MVP • CMLP • MassCEC • Mass Solar Loan • Performance Contracting with an Energy Services Company (ESCO) – performance contracting will be a viable option for multifamily properties and can be configured for both owner- and tenant-payed utility models. • Performance Contracting with an Energy Services Company (ESCO) – performance contracting will be a viable option for multifamily properties and can be configured for both owner- and tenant-payed utility models.

- Database of State Incentives for Renewables & Efficiency (DSIRE)

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
• Upfront technology costs may significant, even after incentives. • Homeowners may not be incentivized to make upgrades if the payback is longer than their intended ownership timeline. • Technology knowledge, particularly with air source heat pumps and advanced building envelope improvements may be limited. • The process of selecting among multiple heat pump equipment, envelop improvement, and installer options can be confusing and complex.	• With capital improvements to existing buildings, resources may need to be developed to assist property/homeowners with additional upfront financial burden and understand long-term benefits and how to prioritize different measures. • Split incentive issues may arise where commercial and multifamily property owners are not incentivized to upgrade buildings where tenants pay utilities.
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
Outputs: • Increase in local knowledge of building energy efficiency and renewable energy technologies and practices, reduction in energy use intensity of existing buildings • Increased adoption of heat pumps and building envelope improvements. **Outcomes:** • Reduced GHG emissions from residential buildings • Reduced energy use intensity (EUI) in buildings • Improved indoor environmental quality • More resilient community	When designed and implemented effectively, action steps 1 and 2 will serve as great opportunity to communicate with all stakeholders on the benefits of deep energy retrofits. The Comprehensive Sustainability and Energy Committee (CSEC)'s charge is to engage the community on sustainability initiatives. They have had great success in promoting heat pumps, sustainable landscaping, weatherization, and other sustainability measures. They will be an important stakeholder in engaging the community.

ACTION NAME	Improve energy performance and reduce emissions from commercial buildings.
DESCRIPTION OF ACTION	Use educational and pilot programs, incentives, and policy mechanisms to improve energy performance in commercial buildings through efficiency, renewable energy generation, energy storage, electrification, and demand response to achieve high-performance building standards in existing buildings.
CLIMATE BENEFIT	Buildings contribute 60% of the GHG emissions in Concord. Significant reductions in the energy consumption and emissions from existing buildings will be critical to achieving GHG goals.
CHAMPION	Climate Action Advisory Board (CAAB) and Sustainability Division

IMPLEMENTATION STEPS	Timeframe	Key Partners
1. Analyze energy performance of existing commercial building stock a. Look at costs of commercial energy audits and opportunities to reduce costs or funding mechanisms to cover costs. b. Pilot commercial energy disclosure program by requesting buildings meeting certain use criteria and floor space thresholds perform an energy audit and submit results to the Town. c. Use results of energy audits to create energy performance baselines and performance goals. d. Provide resources and support to pilot participants on how to improve energy performance energy consumption. e. Implement a performance monitoring plan to determine whether a building is performing as High Performing after 1-2 years of operation.	2021-2023	• Property owners • Commercial tenants • Energy services professionals • Builders and contractors • Town Building & Inspections Department • CMLP • CSEC • Mass Save • MA Zero Net Energy Buildings Task Force.

2. Consider and evaluate policy options for commercial buildings, including: a. Requirements for ongoing disclosure b. High-performance standards for buildings undergoing renovations c. High-performance standards for new construction	2021-2025	• Property owners • Commercial tenants • Energy services professionals • Builders and contractors • MA DOER – code adoption • Building Department • CMLP
3. Coordinate education, outreach and technical resources for commercial property owners, such as: a. Business sustainability roundtables b. Frequent communications about incentives available for renewable energy, energy efficiency measures, and energy storage as well as demand response programs c. Presentations from energy services, contracting, and development professionals d. Online platform for sharing of best practices	2021-2025	• CSEC • Property owners • Commercial tenants • Energy services professionals • Builders and contractors • Building Department • CMLP

FINANCING RESOURCES AND MECHANISMS
• CMLP/National Grid – commercial energy audit incentives • Town budget might fund staff time to implement internal analysis, potentially with assistance from energy services contractors or consultants • MA Office of Technical Assistance and Technology - provides free, confidential, onsite technical assistance to Massachusetts manufacturers, businesses, and institutions. Commercial incentives and rebates: • Mass Save • PACE financing • SMART • MassCEC • CMLP • Performance Contracting with an Energy Services Company (ESCO) • Database of State Incentives for Renewables & Efficiency (DSIRE)

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
• Costs of energy audits and upfront costs for energy efficiency improvements • Will require engaging multiple stakeholders • Split incentive issues may arise where commercial and multifamily property owners are not incentivized to upgrade buildings where tenants pay utilities	• With potential for increased design and construction costs, resources may need to be developed to assist developers, builders, and property owners with additional upfront financial burden and understand long-term benefits
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
Outputs: • Increase in local knowledge of ZNE and renewable energy technologies and practices, reduction in energy use intensity of new buildings • Strengthened relationships with commercial property owners **Outcomes:** • Reduced GHG emissions • Reduced energy demand • Improved indoor environmental quality • More resilient community	When designed and implemented effectively, action steps 1 and 2 will serve as great opportunity to communicate with all stakeholders on the benefits of ZNE requirements. The Comprehensive Sustainability and Energy Committee (CSEC)'s charge is to engage the community on sustainability initiatives. Their success in engaging residents could be leveraged to engage businesses.

ACTION NAME	Set progressive sustainability standards for new municipal buildings and schools and develop a phased plan for deep energy retrofits to existing town buildings.
DESCRIPTION OF ACTION	Use policies and planning to achieve high sustainability standards for new municipal and school buildings including net zero energy, all-electric, and resilient design. A zero net energy building is an energy-efficient building that generates as much renewable energy as it uses annually. Develop a plan to complete deep energy retrofits including electrification and renewable energy to existing municipal and school buildings to achieve 50% emissions reduction by 2040.
CLIMATE BENEFIT	Low or zero GHG emissions Superior air quality and ventilation, providing comfortable spaces that are also more resilient to extreme weather.
CHAMPION	Sustainability Division, Facilities Division, and Schools

IMPLEMENTATION STEPS	Timeframe	Key Partners
1. Bring together task force and update Town's Energy Reduction Plan a. Gather town staff to create a task force responsible for facilitating energy performance improvements to existing buildings, perform planning and oversight for new construction and document lessons learned and best practices to be applied to future projects. b. Perform portfolio wide energy efficiency assessment/audit, including inventory of equipment and building envelope status. c. A municipal energy reduction plan is required by Green Communities. The task force will update this plan using the updated building energy audits and energy analysis. Municipal energy reduction plan should indicate top priorities for energy reduction with priority on electrification.	2020-2022	• Town Facilities Division • Sustainability Division • Senior Management Team • Energy services consultants • School administration • National Grid Gas • CMLP • DOER-Green Communities • CSEC

2. Make public pledge to lead by example and achieve high sustainability standards in all new construction of town facilities, including zero net energy (ZNE). a. Agree on standards for new construction b. Set date for when requirements go into effect c. Consider setting standards for major renovation	2021-2024	• Climate Action Advisory Board • CSEC • Town Manager • Select Board
3. Use Municipal Energy Reduction plan to develop capital improvement plan for town facilities. a. Evaluate costs for energy efficiency and electrification improvements b. Work with a phased approach, as funds become available and needs are addressed in order of priority (energy use reduced per dollar spent). c. Develop sustainability checklist for all capital planning projects to integrate sustainability	2020-2024	• Building operators • Energy manager • School administration • Finance committee • CMLP

FINANCING RESOURCES AND MECHANISMS

- MassCEC
- MAPC
- MA DOER – as a designated green community, Concord has the opportunity to apply for grant funds each year.
- Mass Save and National Grid– incentives for municipal buildings and schools – heated with gas
- CMLP rebates and incentives for electric measures
- Performance Contracting with an Energy Services Company (ESCO)

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
• For existing buildings, up-front costs may be significant for retrofits • Some town facilities are historic or in historic districts • Grants available but have specific timelines for implementation and cost share • Procurement process requires low bidder	Equity concerns may arise due to schedule of retrofits. Town will use phased approach and take advantage of grants and incentives to ensure best use of taxpayer funds.
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
Outputs: • Updated Municipal Energy Reduction Plan • ZNE policy for new buildings Outcomes: • Reduced GHG emissions • Reduced energy use intensity (EUI) of buildings • Improved indoor environmental quality • More resilient community	When designed and implemented effectively, action steps 1-4 will serve as great opportunity to communicate with all stakeholders on the benefits of ZNE requirements and garner support for requirements in residential and commercial buildings. Town could sponsor ZNE education for local builders and energy services professionals. Community groups and committees should be engaged to help bolter public support for setting a municipal target. In particular, CSEC who has experience working on municipal energy efficiency projects through Green Communities.

ACTION NAME	Establish policies and incentives for new development to achieve high sustainability and resilient design standards.
DESCRIPTION OF ACTION	Use policy mechanisms, incentives, and resources to achieve sustainability and resilient design standards in new construction and development.
CLIMATE BENEFIT	Reduced GHG emissions Improved air quality Enhanced building resilience
CHAMPION	Climate Action Advisory Board (CAAB) and Sustainability Division

IMPLEMENTATION STEPS	Timeframe	Key Partners
1. Engage stakeholders and conduct research to understand options for local policy mechanisms available to Town to influence new development, such as updating current bylaws or developing new ordinances. Engage with state agencies and legislators to stay up-to-date on progress at state-level for building code and other policies designed for new buildings, and understand opportunities to advocate for progressive policies.	2020-2021	• Department of Planning and Land Management • Sustainability Division • CSEC • Planning Board • Zoning Board of Appeals • Building and Inspections • State agencies • New Buildings Institute • Institute for Market Transformation

2. Explore options, establish priorities and implement town-wide outreach and awareness campaign, including industry training and education, collaborating with regionally where possible. This could include: a. Set up peer to peer mentorship and communication networks to foster development of best practices and knowledge within the construction and development community b. Leverage existing expertise from building sustainability entities such as Passive House Institute US and National Renewable Energy Laboratory c. Partner with other communities/organizations to sponsor and support workshops, Workforce Education and Training. Partner with local technical schools to train future contractors and installers. d. Provide targeted training for the full spectrum of commercial contractors (small, medium and large commercial contractors) on quality installation, commissioning, and advanced controls. e. Create a voluntary leadership-based program for those property owners, developers, and property managers looking to pursue HP earlier than required. This will build local knowledge and support for HP ahead of requirements. f. Highlight town successes: Middle School.	2021-2023	• CSEC • CAAB • Building and Planning Divisions • Developers • Property owners • Commercial tenants • Homeowners • Local technical schools • Northeast Sustainable Energy Association (NESEA)

3. Investigate best practices and options for new construction rebates – incentives for high performance building technologies – most importantly highly-efficient building envelopes that are as close to passive building standard as possible and for on-site renewable energy generation g. Building envelope and thermal efficiency should be first priority. h. Could potentially implement a "High Performance Buildings" zoning requirement that new buildings be very highly efficient as a partial step on the path to HP. i. The Town could also consider providing non-financial incentives to developers, such as higher density allowances or expedited permitting processes.	2021-2025+	• CSEC • CAAB • Developers • Property owners • Commercial tenants • Homeowners • Financing entities • Regional partners
4. Advocate at state-level for improvements to state building code and/or other policies that will allow Town to have more influence over standards of new construction	2021-2025+	• Sustainability Division • CAAB • CSEC • Select Board • Town Manager

FINANCING RESOURCES AND MECHANISMS
• MassCEC (for gas customers) • MAPC • MA DOER – as a designated green community, Concord has the opportunity to apply for grant funds each year. • CMLP rebates and incentives for electric measures • Performance Contracting with an Energy Services Company (ESCO)   ○ SparkFund and Metrus as innovative performance contracting firms with shared risks and benefit models

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
• Some developers and others may raise concerns about feasibility and costs • Siloed stakeholders – partitions exist between renewable energy, storage, demand response, and construction • Technology costs – stakeholders may raise objections and concerns about upfront costs. • Also, may need to introduce internal carbon pricing to more accurately value emission reduction benefits.	• A High-Performance Building/home is an affordable building/home in terms or operational costs. • Resources may need to be developed to assist developers, builders, and property/homeowners cope with additional upfront financial burden. • Provides new opportunities for job/skills training and workforce development. • Increases the asset value of homes and commercial buildings.
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
Outputs: • Financial incentive mechanisms • Assistance and communication/ awareness program **Outcomes:** • Reduced GHG emissions • Increased building and power grid resiliency • Increased MW renewable energy generation/capacity • Reduced energy use intensity (EUI) in new buildings • By 2025, all new construction will be built to High Performance standard.	If designed and implemented effectively, action steps 2 and 3 will serve as great opportunity to communicate with all stakeholders on the benefits of High-Performance Buildings requirements. An in-depth discussion will need to take place about deploying resources now to avoid larger climate change costs in the future. See New Climate Economy 2018 report.

ACTION NAME	Create opportunities town wide to increase the waste diversion rate by 30%.
DESCRIPTION OF ACTION	Develop programs to reduce waste produced, including hard-to-recycle items, and increase waste diverted via reuse, recycling, organics collection/composting methods
CLIMATE BENEFIT	Reduction in landfill GHG emissions
CHAMPION	Public Works Department

IMPLEMENTATION STEPS	Planning Considerations	
	Timeframe	**Key Partners**
1. Inventory Concord's current waste stream and current hauling practices and assess what is needed to increase waste diversion by 30%.	2020-2022	Public Works MA Department of Environmental Protection
2. Conduct best practices research on waste diversion programs and how they could be effective in Concord.	2020-2022	Public Works MA Department of Environmental Protection Sustainability Division
3. Develop pilot programs for • Curbside organics collection • Solid waste reduction incentives Hard-to-recycle items • Development and support of a circular economy	2022-2024	Public Works Sustainability Division Waste Hauler Natural Resources Division
4. Prepare infrastructure and apply for request permits for organics collection and handling and subsequent composting processes	2022-2024	Public Works Natural Resources Division Department of Planning and Land Management Curbside Composting Vendors
5. Procure vendors and new materials (e.g. collection bins).	2022-2024	Public Works Waste Haulers Department of Planning and Land Management Curbside Composting Vendors
6. Launch educational and promotional materials to community for pilot programs.	2022-2024	Public Works MA Department of Environmental Protection Sustainability Division Concord Free Public Library Concord Public Schools Select Board CSEC REUSIT

7. Conduct pilot programs for: • Organics collection • Hard-to-recycle items	2022-2024	Concord Public Works Sustainability Division Select Board
8. Revise programs and launch community-wide.	2022-2024	Concord Public Works Sustainability Division Select Board

FINANCING RESOURCES AND MECHANISMS
Town Budget Sustainable Materials Recovery Program (SMRP) Municipal Grant MassDEP Compost Bin Distribution Program

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Increased programmatic costs but tradeoff is long-term waste disposal savings • Need to implement new processes, such as to rollout organic materials collections	*How can the community incorporate equity into the implementation of this action?* • Provide educational materials in a variety of formats (e.g. audio, visual) to ensure all Concord residents are engaged. • Ensure program benefits are available to all residents whether they subscribe to the Town Curbside program or use a private hauler.
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
How can we measure the progress and success of this action? Outputs: • Improved handling of hard-to-recycle items • Increased community education on waste diversion strategies and opportunities	*How can we engage the populations that benefit from implementing this action?* • Distribute free community compost • Promote DropOff SwapOff programs as a sustainable and affordable way to obtain items of interest.

• Organics collection program • Increased reuse programs and events Outcomes: • Reduction in tons solid waste disposed • Tons of organic waste diverted from waste stream • Reduction in % of organic waste as percentage of solid waste disposal • Tons of recyclable materials diverted from waste stream • Reduction in % of recyclable materials as percentage of solid waste disposal • # of residents participating in organics collection	• Work with local restaurants and grocery stores to donate prepared foods and ingredients to local pantries.

Energy

Redesign electricity rates to support energy conservation, peak load management, electrification, and renewable energy generation.
Provide incentives for businesses/homeowners to invest in renewable energy.
Shift CMLP's electricity supply to 100% non-emitting resources by 2030.
Investigate options for utility-scale energy storage.

ACTION NAME	Redesign electricity rates to support energy conservation, peak load management, electrification, and renewable energy generation.
DESCRIPTION OF ACTION	Concord Municipal Light Plant (CMLP) plans to deploy smart meters for all customers. Smart meters will allow CMLP to implement Time of Use (TOU) rates that incentivize benefits to the customer, utility, and grid. Optimal TOU rates provide benefits such as providing peak load savings, delivering benefits to the grid, allowing customers to best utilize solar + energy storage and providing environmental benefits. The CMLP peak load has shifted to later in the day due to the increased generation of daytime solar energy. CMLP TOU rates will be aimed at shifting when customers use energy to allow for flattening of the load curve.
CLIMATE BENEFIT	Reduces GHG emissions Improves local air quality Improved resilience and reliability of electric grid
CHAMPION	CMLP

IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	Timeframe	**Key Partners**
1. Analyze existing electricity rates and model how modifications to these rates would affect peak load management, renewable energy generation, energy conservation, and electrification efforts. Use analysis to implement re-designed rates. Analysis of existing rates and modeling of new TOU rates should be performed collectively to ensure the outcome reaches the right balance between customer value and utility goals.	2020-2021	• CMLP • Concord Municipal Light Board • Sustainability Division
2. Strategically plan for 100% installation of smart meters to CMLP customers.	2022-2025	• CMLP • Sustainability Division
3. Design and implement marketing/awareness campaign to educate CMLP customers on the benefits of the rate re-design and the installation of smart meters.	2021-2025	• CMLP • Concord Municipal Light Board • Sustainability Division

FINANCING RESOURCES AND MECHANISMS
• CMLP ratepayers • Town budget and staff time

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Deployment of smart meters is a large project and will require a phased approach • Rate changes require careful analysis and approval • Smart meters must be deployed before TOU rates can be widely adopted • Transitioning to TOU rates will require extensive community engagement and education	*How can the community incorporate equity into the implementation of this action?* • TOU rates will be designed to reduce customer costs. • As customers understand their energy use, they can change their behavior for additional cost and carbon benefits. Smart thermostats that sync with the smart meter can help give customers a real-time understanding of their usage. • The Town could consider discounts or no-cost smart thermostats for low-income customers.
MEASURING SUCCESS	ENGAGING THE COMMUNITY
How can we measure the progress and success of this action? **Outputs:** • Operational plan to deploy smart meters • Timeline for rolling out TOU rates **Outcomes:** • Potential reduction in energy consumption if TOU paired with monitoring and appliance control technologies • Reduction in peak demand • GHG reduction	*How can we engage the populations that benefit from implementing this action?* TOU implementation will have an effect on all CMLP customers and the marketing and awareness campaign will be a critical step in gaining acceptance from all Town of Concord residents. Town committees and community groups with sustainability missions can help to build community support.

ACTION NAME	Provide incentives for businesses/homeowners to invest in renewable energy.
DESCRIPTION OF ACTION	CMLP has provided rebates and incentives for solar energy for many years and is committed to continuing to provide robust incentive programs. CMLP and the Town will also explore creative financing options that would encourage investments by residents and businesses in renewable energy and battery technology.
CLIMATE BENEFIT	Reduced GHG emissions Increased energy resilience
CHAMPION	CMLP and Sustainability Division

IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	Timeframe	**Key Partners**
1. Maintain, promote, and enhance solar incentive programs for residential and commercial customers.	2020-2025	• CMLP • Concord Municipal Light Board • CSEC
2. Create Property Assessed Clean Energy (PACE) financing program. PACE programs allow local governments to provide financing for energy efficiency, renewable energy, and water efficiency projects that building owners pay back through property tax assessments. Commercial PACE is available to Massachusetts municipalities and just requires enactment by the Select Board.	2020-2021	• Sustainability Division • Assessor's Office • Select Board • Town Manager • CMLP
3. Explore potential for offering incentives for customer-sited energy storage projects.	2022-2025	• CMLP • Sustainability Division • MA DOER • Information Technology
4. Explore potential for on-bill financing, revolving loan funds, and other financing options for renewable energy, battery storage, and energy efficiency improvements for residential and commercial customers	2022-2025	• CMLP • Sustainability Division

FINANCING RESOURCES AND MECHANISMS
Funding resources: • CMLP ratepayers • Town budget and staff time • DOER • MassDevelopment

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • State solar rebate programs change every few years • Determination of how to structure financing to cover upfront cost of renewables and energy storage • For energy storage and PACE programs, it is critical to ensure proper consumer protection rules are in place.	*How can the community incorporate equity into the implementation of this action?* • The solar and energy storage incentive programs should have a specific carveout for low-income or disadvantaged customers that provides higher incentives (up to 100% incentives in some cases). • PACE and on-bill financing program should reduce or eliminate any fees or interest rates to low-income or disadvantaged customers.
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
How can we measure the progress and success of this action? Outputs: • Solar incentive programs • PACE program • Design for other financing options Outcomes: • Direct energy bill savings to customers • Reduced GHG emissions • Increased MW renewable energy generation	*How can we engage the populations that benefit from implementing this action?* • Marketing, education, and outreach plan will be critical to this effort and getting customers to take advantage of incentives. • Establishing a comprehensive website with information and social media campaign to drive traffic to the website. • Town committees and community groups with sustainability missions can help to build community support.

ACTION NAME	Shift CMLP's electricity supply to 100% non-emitting resources by 2030.
DESCRIPTION OF ACTION	Carbon-free electricity is the most impactful strategy for reducing town-wide carbon emissions, reducing emissions almost 25% by 2030. Implementing this strategy allows us to sooner realize deeper carbon reductions through electrifying buildings and transportation. CMLP will provide non-emitting electricity through Power Purchase Agreements (PPAs) and purchasing Renewable Energy Certificates (RECs). While owning renewable generation is the preferred longer-term approach to decarbonizing CMLP's electric grid, purchasing and retiring RECs can provide a more rapid pathway to 100% carbon-free electricity in the short term.
CLIMATE BENEFIT	GHG emissions reduction
CHAMPION	CMLP

IMPLEMENTATION STEPS	Timeframe	Key Partners
1. Continue with the plan adopted by the Concord Municipal Light Board to purchase and retire Class I RECs to increase the percentage of carbon-free electricity provided to Concord Light customers.	2020-2030	• CMLP • Concord Municipal Light Board
2. Evaluate REC offerings to confirm they are certified and verified according to EPA standards, ensuring they represent a quality renewable resource with all required data attributes. Purchase and then retire RECs according to the interim target schedule. Increase percent of power purchase agreements from renewable sources that include RECs.	2020-2030	• CMLP
3. Educate CLMP customers on the 100% carbon-free electricity by 2030 goal and its associated financial, climate and resiliency benefits.	2020-2030	• CMLP • Sustainability Division

FINANCING RESOURCES AND MECHANISMS
• CMLP ratepayers • Town budget and staff time

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Electricity rates will increase. • Increased electrification of buildings and transportation could increase total town-wide electricity use, increasing the number of RECs needed to be purchased to achieve 100% carbon-free by 2030.	*How can the community incorporate equity into the implementation of this action?* • Town could consider implications and potential alleviation of impact of 'REC purchase' line on low-income ratepayer's electric bills.
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
How can we measure the progress and success of this action? **Outputs:** • Purchase and retirement of RECs **Outcomes:** • GHG emissions reduction (23% by 2030) • Additional GHG reductions for electrification strategies	*How can we engage the populations that benefit from implementing this action?* • Progress toward the goal of 100% carbon-free electricity by 2030 is an example of the Town of Concord's leadership in the Commonwealth. • Progress toward the 2030 goal can be a source of excitement and pride for Concord residents that their community is achieving deep decarbonization and actively addressing the climate crisis. • Town committees and community groups with sustainability missions can help to build community support.

ACTION NAME	Investigate options for utility-scale energy storage.
DESCRIPTION OF ACTION	Evaluate opportunities to contract and install a utility-scale energy storage system in Concord. Energy storage is an essential technology for better integrating renewables to support grid optimization, reduce peak demand period supply, transmission and capacity costs, increase control over how and when CMLP purchases power from ISO-NE, and accelerate the pathway to a decarbonized electricity grid.
CLIMATE BENEFIT	Reduced GHG emissions Ensures grid reliability Allows for additional solar installations Enhanced community resiliency
CHAMPION	CMLP

IMPLEMENTATION STEPS	Timeframe	Key Partners
1. Evaluate options for the installation of a utility-scale energy storage battery system. Evaluation considerations to include: • Technology options; • Ownership vs. lease or PPA models; • Additional financing options and grant availability; • Renewables integration potential; • Cost-benefit analysis for CMLP and ratepayers, including potential stacked value streams (e.g. upcoming MA Clean Peak Standard credits); • Siting considerations (optimum substation location; proximity to existing and potential solar sites); • Potential to support building and transportation electrification; • Potential for key town facility microgrid integration; and • Resiliency benefits.	2021-2022	• CMLP • Concord Municipal Light Board

2. If the analysis in 1 above results in CMLP choosing to install a battery, develop an RFP to engage a vendor to install and operate a utility-scale energy storage system in town. See solicitations from other public entities seeking utility-scale storage. Consider engaging a consultant to assist with RFP development. Key considerations to include: • Technology performance track record, • Software algorithm accuracy, • Performance guarantee, • Maintenance/Battery operator support.	2021-2022	• CMLP • Concord Municipal Light Board •
3. Install energy storage system. Monitor and manage equipment performance, and adjust software algorithms, as needed, to optimize battery discharge, especially during peak demand periods to maximize financial benefits.	2022-2024	• CMLP
4. Evaluate technical and financial performance of energy storage system. Explore possibility of additional utility-scale storage installations and/or residential and commercial energy storage programs.	2022-2024	• CMLP

FINANCING RESOURCES AND MECHANISMS
Potential funding resources: • CMLP ratepayers • Town budget and staff time • DOER • MassCEC • MVP Grant Program • Green Communities • U.S. DOE • Barr Foundation • Energy Storage Project Developers

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • High upfront technology ownership costs (approximate 7-year payback, without grants or subsidies), however costs continue to decline dramatically. • Local grid conditions – infrastructure upgrades may be required to accommodate energy storage.	*How can the community incorporate equity into the implementation of this action?* • A larger share of the electricity cost savings resulting from the energy storage project could be apportioned to low-to-moderate income (LMI) residents.
MEASURING SUCCESS	ENGAGING THE COMMUNITY
How can we measure the progress and success of this action? Outputs: • Utility scale battery storage feasibility study • Utility-scale storage solicitation Outcomes: • Reduced electricity costs • Lowered peak demand • Reduced GHG emissions • Increased renewable energy generation capacity • Increased flexibility, reliability and resiliency of the electricity grid • Increased community resilience	*How can we engage the populations that benefit from implementing this action?* • Initiate a community-wide outreach effort to educate town residents and businesses on the benefits of energy storage. Will be especially important if rate payers must bear any additional costs.

Mobility

Increase use of public transportation and other low-carbon and no-carbon transportation options.
Accelerate adoption of electric vehicles.
Create a long-term plan to electrify school and municipal vehicle fleets.
Improve availability, accessibility, and connections between bicycling and walking paths and sidewalks.

ACTION NAME	Increase use of public transportation and other low-carbon and no-carbon transportation options.
DESCRIPTION OF ACTION	Transportation contributes almost 40% of Concord's GHG emissions. Concord is home to two stations on the commuter rail. By providing first-mile/last-mile transit options to access these stations (from residents' homes to the stations or from the stations to work), we can potentially increase use of public transportation over car travel. Improving ridership of public transportation will reduce vehicle miles traveled (VMT) and GHG emissions from Concord drivers and workers. This could also build demand for increased level of service of the commuter rail resulting in further VMT reduction.
CLIMATE BENEFIT	GHG reduction Improved local air quality
CHAMPION	Sustainability Division, Dept. of Planning and Land Management, Concord Public Works

IMPLEMENTATION STEPS	Timeframe	Key Partners
1. Identify stakeholder groups, gathering baseline data and confirm barriers to public transit access and ridership a. Interview current transit riders on the challenges they face in their journey to and from transit. b. Continue to participate in MBTA meetings and advocate for increased service c. Understand opportunities for regional collaboration d. Evaluate barriers and opportunities for parking solutions at commuter rail stations	2020-2022	MBTA Concord Public Works DPLM MAPC Concord commuters Yankee Line buses rider Crosstown Connect riders CSEC
2. Implement workforce transportation grant to pilot local bus to connect town centers with train stations for Concord workers and residents	2020-2021	DPLM
3. Collaborate with neighboring communities to pilot transportation for visitors between tourist sites	2020-2022	DPLM Tourism and Visitor Services Minute Man National Historical Park Neighboring towns
4. Develop and launch communications plan for encouraging public transit by visitors and residents • Share information on Yankee bus service, commuter rail, and ride-share opportunities on town website and communications platforms • Create self-guided 'trail maps' for accessing historic sites by bike or other sustainable transport. Work with businesses and restaurants to offer perks to participating visitors. • Share interviews with active public transit riders	2021-2022	National Parks Service Tourism and Visitor Services Public Information Office Minuteman Media Network

5. Develop a plan for improved accessibility of MBTA transit stops by low/no carbon modes by inventorying safe walking and biking routes, secure bike parking, charging for e-bikes, pick-up/drop-off locations	2023-2024	MBTA Concord Public Works Concord Recreation Parking Clerk Human Services
6. Establish a central transportation planning function within Town government tasked with transportation demand management, encouraging low-carbon transportation options, and developing a long-term transportation plan	2024-2025	DPLM Town Manager

FINANCING RESOURCES AND MECHANISMS
Town budget may fund staff time. If a transportation function is established within town, that function should be responsible for implementing this action. The first few steps could be completed as part of a UNH Sustainability Institute Fellowship (cost share to the town of $5,000). Other funding could be available through Complete Streets TCI, MAPC or MAGIC.

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • MBTA Ridership also heavily influenced by fares and system reliability • Cycling between historic sites for visitors may be limited to advanced riders on roads without cycling lanes	*How can the community incorporate equity into the implementation of this action?* • Ensure cycling or other wheeled/motorized modes do not impair access or sense of safety for seniors or others with physical limitations.
MEASURING SUCCESS	ENGAGING THE COMMUNITY

How can we measure the progress and success of this action? **Outputs:** • New outreach materials and resources • New facilities (bike parking, established routes, etc) in and around MBTA Stops • New opportunity for green-minded businesses to have impact beyond their own operations **Outcomes:** • Reduced GHG emissions from transportation sector • Higher ridership to/from Concord MBTA stops • High utilization of new facilities • Higher visitation of historic sites by car-free families	*How can we engage the populations that benefit from implementing this action?* • Collaborate with tourism and visitor services to help potential tourists plan for a car-free visit • Install posters at the MBTA train stops • Talk with business owners about employee transportation needs/Survey employees • Survey residents – If you were without a car for the next month, how would you get to work?

ACTION NAME	Accelerate adoption of electric vehicles.
DESCRIPTION OF ACTION	Accelerate transportation electrification by supporting the deployment of Electric Vehicle Supply Equipment (EVSE), providing incentives for EV adoption, and educational programming. Transportation is one of the largest sources of GHG emissions. Electrification of vehicles replaces gasoline and diesel combustion with cleaner electricity reducing per mile emissions by more than half. Additionally, smart management of charging can help to minimize peak loads and maximize the efficient use of the existing electricity distribution system, lowering per kWh rates and lowering vehicle fueling cost.
CLIMATE BENEFIT	GHG emissions reduction from transportation
CHAMPION	Concord Municipal Light Plant (CMLP), Sustainability Division, and EV Working Group

Implementation Steps	Timeframe	Key Partners
1. Analyze existing public deployments of EVSE infrastructure and identify gaps in level 2 EVSE coverage, need for level 3 (rapid) EVSE and number of stations needed to support a strong adoption rate. a. Installation of Town-owned & operated charging stations in public parking lots. Consider EV charging infrastructure integration with Complete Streets upgrades. b. Outreach to Multi-Unit Dwellings (MUDs) and business community to host charging stations with peak demand controls. c. Continue rebates for single family home EVSE installations.	2020-2022	• Property Owners • Commercial Tenants • Public Works • Multi-Dwelling Units
2. Continue to provide, make available, explore new incentives for EV charging. a. Ensure that as time-of-use electric rates are designed they make EV ownership attractive, and incentivize EV charging at optimal times for CMLP operations. b. Maintain EV Miles (off-peak charging incentive) program until new TOU rates are established. c. Explore incentives for residents and businesses to install installation of smart charging (or V2G) infrastructure that can respond to utility signals.	2020-2025	• CMLP • Municipal Light Board • Town Manager • Property owners • Commercial tenants • Homeowners
3. Provide and/or make available financial incentives to residents and businesses to purchase new and used electric vehicles.	2020-2025	• CMLP • Municipal Light Board • Green Energy Consumer's Alliance • State MOR-EV program

4. Promote knowledge of electric vehicles among residents with a wide variety of online, community, and EV sector engagement. For example, website, EV help line, tabling at local events and, an annual ride and drive.	2020-2025	• CSEC • EV Working Group • Clean Energy Stakeholders • Residents • Car Dealers • CMLP • Energy New England

FINANCING RESOURCES AND MECHANISMS
CMLP resources: • EV Miles • EV Level 2 Charger Program • MUD Charging Pilot Program State incentives and funding: • Green Energy Consumers Alliance • MOR-EV Rebates • EVIP Fleet and Charging Grants • Green Communities Grant • Clean Vehicles Grant • VW Settlement Funds

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • EVs will increase electricity use and demand, requiring planning for managing load. • Public perception barriers to EV adoption, include perceived upfront cost, range anxiety, lack of familiarity with EV performance and with vehicle options on the market.	*How can the community incorporate equity into the implementation of this action?* • Ensure that EV infrastructure is deployed throughout the community • Purchasing new vehicles may be out of reach for some residents. Make residents aware of the growing used EV market and potentially offer incentives for used EV purchases

MEASURING SUCCESS	ENGAGING THE COMMUNITY
How can we measure the progress and success of this action? Outputs: • Public charging site plan • EV charging incentive programs • EV Awareness Campaign Outcomes: • Increased deployments of EV charging infrastructure • Increased adoption of electric vehicles as a % of registered vehicles • Charging profile that benefits CMLP • Reduced GHG emissions from the transportation sector	*How can we engage the populations that benefit from implementing this action?* • Infrastructure deployment helps to serve existing EV drivers as well as raise awareness among future EV purchasers. • EV displays at community events and Ride & Drive Events that provide test drive opportunities. • Online engagement and resources for EV promotion including website, webinars, social media, etc. • Town committees and community groups with sustainability missions can help to build community support.

ACTION NAME	Create a long-term plan to electrify school and municipal vehicle fleets.
DESCRIPTION OF ACTION	The town can demonstrate leadership in reducing emissions from the transportation sector by electrifying its municipal and school fleets. Electric vehicles reduce GHG emissions at least 50%, with a greater impact as our electricity supply becomes cleaner.
CLIMATE BENEFIT	GHG reductions Improved air quality
CHAMPION	Sustainability Division, Department Heads, Concord-Carlisle Regional School District Transportation Office

IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	Timeframe	**Key Partners**
1. Conduct a fleet baseline by reviewing the existing vehicles, identifying mileage, fuel use, duty cycle and age. Review any past projects involving vehicle electrification for any best practices, such as the 2016 electric school bus pilot program with Concord Public Schools and funding from MassCEC.	2020-2021	• Town Departments • School District
2. Update Town Vehicle Policy to be an electric-first policy	2020-2021	• Select Board & Town Manager • Planning Board • Public Works • Fire-Rescue • Police • Schools • Finance
3. Use fleet analysis to develop a vehicle transition plan a. Develop a prioritized list of vehicles for replacement b. Identify electric vehicle options that meet needs of current fleet vehicles c. Identify other opportunities for efficiencies by adjusting routes or operational practices. d. Identify procurement implications, including vehicle costs, procurement method, and infrastructure requirement	2021-2022	• Town Departments • School District

4. Identify priority locations (e.g. Schools, Municipal Buildings, Community Centers) for charging infrastructure. a. Conduct an electrical assessment of the sites to see if any infrastructure upgrades will be required to meet current and future charging demands, considering the addition of new fleet EVs. b. Determine the type of charging station that will be required to meet charging demand (Level 1, Level 2, or DCFC). Special consideration should be given to the fact that school buses have larger batteries than a typical EV and therefore will require higher charging capacities.	2021-2025	• Town Departments • School District • CMLP Engineering • Concord Public Works • Town Facilities Division • School Facilities Team • Information Technology
5. Conduct a Vehicle-to-Grid (V2G) pilot with the school bus fleet and/or the town Nissan LEAFs.	2021-2022	• CMLP Engineering • Information Technology
6. Track annual mileage and electricity consumption. a. Ensure vehicles are being used in the most efficient way possible. b. Facilitate staff training on electric vehicle best practices. c. Schools operating electric buses should optimize their routes to maximize the number of students while minimizing miles driven to most efficiently optimize their bus fleet.	2022+	• Town Departments • School District

FINANCING RESOURCES AND MECHANISMS
• Town budget and staff time • DOER/ MA Clean Cities • MassEVIP Fleet Incentives • Regional School District Budget • Public-Private Partnerships • Public Access and Workplace Charging Incentives

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • EVs will increase electricity use overall, potentially making other energy reduction goals harder to meet. • Vehicles with low annual mileage may have limited opportunity for operating cost savings. • Medium/Heavy duty electric vehicles options are limited and have high incremental costs. • Site upgrades may be required for charging infrastructure to be installed	*How can the community incorporate equity into the implementation of this action?* • School busses give all students the chance to experience riding in an electric vehicle. • Work with a phased approach and maximize grant funding to make best use of taxpayer funds • EVs provide public health benefits through improved air quality and improved resiliency
MEASURING SUCCESS	ENGAGING THE COMMUNITY
How can we measure the progress and success of this action? Outputs: • Increased # of EVs in town fleet • Increased # of e-miles driven. Outcomes: • Reduced GHG emissions from transportation sector • Reduced maintenance costs • Savings in Total Cost of Ownership.	*How can we engage the populations that benefit from implementing this action?* • Town and School District leading by example will complement town goal to accelerate adoption of EVs among residents and businesses. • Vehicles can be put on display at community events, parades, farmers markets, etc. to educate members of the community.

ACTION NAME	Improve availability, accessibility, and connections between bicycling and walking paths and sidewalks.
DESCRIPTION OF ACTION	Prioritize sustainable infrastructure projects in the right-of-way (such as dedicated/protected bike lanes, road marking, safe sidewalks, pedestrian bridges, etc.) and identify walking and biking trails that will improve connections between key bicycling and walking paths and sidewalks and encourage active transportation. With safer and more accessible walking and biking options available, Concord residents will be more likely to opt out of driving to their destination.
CLIMATE BENEFIT	Reduced GHG emissions More reliable (resilient) transportation modes
CHAMPION	Concord Public Works, Department of Planning and Land Management (DPLM)

IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	Timeframe	**Key Partners**

1. Through Complete Streets program, identify and prioritize opportunities for projects that improve availability of and access to active transportation in public right-of-way.	2020-2022	• Concord Public Works • Sustainability Division • Department of Planning and Land Management • Residents of Concord and neighboring towns • Bruce Freeman Rail Trail Committee
2. Identify opportunities for improved connections between existing bike and walking trails.	2020-2025	• Trails Committee • Bruce Freeman Rail Trail Committee • DPLM
3. Explore potential funding and regional collaboration opportunities to facilitate feasibility study of multimodal transportation network, corridors, origin/destination study to find where bike/pedestrian transportation gaps exist.	2-3 months	• MAPC/Minuteman Advisory Group on Interlocal Coordination (MAGIC) • Complete Streets
4. Evaluate existing regulations and bylaws for opportunities to integrate consideration of bike/pedestrian connections in new or redevelopment projects, public right-of-way projects, and capital projects.		• Sustainability Division • Department of Planning and Land Management • Concord Public Works

FINANCING RESOURCES AND MECHANISMS
Town Budget and Staff Time MVP Action Grants Metropolitan Area Planning Council (MAPC) technical assistance

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • In fully built out areas, adding additional transportation infrastructure (i.e. sidewalks, protected bike lanes) may require major restructuring within the right-of-way. • Walking/biking needs are highly local—prioritizing projects will leave some areas out • Limited funding • Abutters to under-utilized existing easements and right-of-ways may object to opening these areas to the public	*How can the community incorporate equity into the implementation of this action?* • Engage the community often to ensure projects enhance safety and have broad community support • Evaluate existing infrastructure based on ADA accessibility and ensure all future projects require ADA accessibility
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
How can we measure the progress and success of this action? Outputs: • Increase in miles of sidewalks/walking paths • Increase in miles of bike lanes/paths • Increased connectivity of existing walking and biking corridors Outcomes: • Decrease in % of trips made by car • Decrease greenhouse gas emissions from the transportation sector	*How can we engage the populations that benefit from implementing this action?* • Utilize public surveys to understand the transportation needs of the broader public • Take a regional approach—include members of other towns in the conversation and take advantage of regional planning agencies • Follow any project installation with community education on opting out of driving and safe walking/biking practices

Natural Resources

Develop forest management plan to enhance health of Concord's forests.
Increase indoor and outdoor water conservation.
Work with homeowners to promote sustainable landscaping practices.
Assess the vulnerability of natural resources most at risk to projected climate changes.
Assess and improve Concord's tree canopy.

ACTION NAME	Develop forest management plan to enhance health of Concord's forests.
DESCRIPTION OF ACTION	Quantify the extent and health of public and private forest resources and threats to those resources. Develop management plan for forests on Town conservation land, water supply lands, and forests managed by land trusts and other forest managers.
CLIMATE BENEFIT	Carbon sequestration Reduced heat island Maintain groundwater and water quality Support biodiversity
CHAMPION	Natural Resources Division

IMPLEMENTATION STEPS	Timeframe	Key Partners
1. Convene land managers to identify common goals and scope of forest management plan. Review existing studies/tree inventories of forest lands and data available to assess health, species and age structure.	2020-2021	Natural Resources Division Local Land Trusts CPW - Water/Sewer Division
2. Develop scope for plan that incorporates current and future threats including shifts in the ranges of significant tree species expected with a changing climate	2020-2021	Natural Resources Division Local Land Trusts UMass Extension The Nature Conservancy
3. Develop a plan that establishes decision criteria for management activities that may evolve with a changing climate and creates actionable recommendations for all landowners in Concord.	2022-2024	Natural Resources Division Local Land Trust
4. Implement priority actions identified in the planning process	2022-2030	Natural Resources Division Local Land Trusts

FINANCING RESOURCES AND MECHANISMS
• Grants from programs such as LWCF, EOEEA, MAPC or MVP Action Grants • CPA grants • Partnerships with land trusts and regional organizations • Regional partnerships

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Planning for a changing climate and anticipating future adapted plant communities • Coordination with adjacent landowners • Balancing user needs with ecological functions • Developing the capacity – technical and financial – to undertake plan implementation	*How can the community incorporate equity into the implementation of this action?* • Ensure opportunities for diverse groups to engage with the plan development. • Continue to ensure appropriate access to open land in Concord by all
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**

How can we measure the progress and success of this action?
Outputs:
• Understanding extent of local forests, their health and threats, and carbon sequestration potential
• Plan of actionable management solutions
• Ongoing meeting and coordination among conservation landowners / managers
Outcomes:
• Improvement Across USDA Forest Health Indicators
  ○ Vegetation Diversity & Structure
  ○ Tree Damage & Mortality
  ○ Crown Condition
  ○ Soil Conditions and woody debris
  ○ Lichen communities
	How can we engage the populations that benefit from implementing this action?
	• Inform community of the value of forests and why forest health is important
	• Develop a brand identity for the plan and include this identity on signage or other materials posted where forest management activities are taking place.
	• Use QR Codes or similar means to connect activities in the field with information and other resources to learn more and contribute to the goals of the plan

ACTION NAME	Increase indoor and outdoor water conservation.
DESCRIPTION OF ACTION	Create policies and programs to increase water efficiency and minimize the use of drinking water for outdoor water use. Assess Concord outdoor water use practices and continue to advocate for the adoption of best practices to reduce residential and commercial outdoor water use throughout the town.
CLIMATE BENEFIT	Water conservation Energy reduction Reduced demand on water supply
CHAMPION	Concord Public Works - Water and Sewer Division

IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	Timeframe	Key Partners

1. Conduct Concord water use analysis to assess baseline.	2020-2021	• Public Works' Water and Sewer Division • Concord Municipal Utilities
2. Launch new water efficiency and water conservation campaigns for residents on ways to reduce water use at home.	2020-2021	• Sustainability • Public Works' Water and Sewer Division • Neighborhood associations • Community organizations • Schools • Massachusetts Department of Environmental Protection (toolkits) • Concord Municipal Utilities (bill inserts)
3. Develop program to encourage rainwater harvesting for irrigation use.	2021-2022	• Public Works • Building Department • Sustainability
4. Develop program to encourage residents to complete water efficiency audits and/or upgrade water fixtures and appliances to high efficiency models.	2021-2022	• Public Works' Water and Sewer Division • Neighborhood associations
5. Develop incentive-based program for Town, residential, and commercial sustainable landscaping.	2021-2022	• Public Works • Natural Resources • Neighborhood associations
6. Develop policy and plan to retrofit existing Town buildings with low-flow faucet fixtures and metering and require all new construction to incorporate as standard.	2021	• Building and Inspections • Public Works' Water and Sewer Division • Planning • Municipal Facilities Department

FINANCING RESOURCES AND MECHANISMS
• MVP Action Grants • Regional partnerships

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Costs associated with upgrading water fixtures • Maintenance and upkeep of new systems • Town Bylaw/Policy adoption • State Plumbing Code	*How can the community incorporate equity into the implementation of this action?* • Ensure educational materials/outreach are available on multiple platforms including print, online, TV, etc.
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
How can we measure the progress and success of this action? Outputs: • Water conservation programs • Water audit results • Educational materials Outcomes: • Reduced water consumption • Residents and businesses educated on water use, related impacts, and solutions available	*How can we engage the populations that benefit from implementing this action?* • Engage the community, particularly youth and seniors, in community sustainable gardening days • Engage residents on savings benefits as well as positive impacts on local water resources • Hold fixture swap days, where still-working fixtures (e.g. models swapped out by upgrades) can be utilized by residents in need of replacements.

ACTION NAME	Work with homeowners to promote sustainable landscaping practices.
DESCRIPTION OF ACTION	Concord has begun to promote sustainable landscaping practices through town programs and resources. We will continue to promote sustainable landscaping practices through education, partnerships with garden clubs and other local groups, working with contractors, and providing resources such as equipment and seed libraries. Sustainable landscaping improves our resilience to climate change and reduces GHG emissions by reducing demand on water supply, enhancing ground water recharge, reducing runoff during storms, protecting biodiversity, mitigating flash flooding, increasing resilience to drought, enhancing potential for carbon sequestration, and reducing energy demand for maintenance and water supply.
CLIMATE BENEFIT	Water conservation Improved water quality Stormwater mitigation Resilience to drought GHG reduction
CHAMPION	Concord Public Works , Planning, Natural Resources, Sustainability

IMPLEMENTATION STEPS	Timeframe	Key Partners
1. Develop and execute communications plan to promote Concord's Sustainable Landscaping Handbook	2020-2021	• Sustainability Division • Concord Public Works • Natural Resources Division • Public Information Office • CSEC
2. Develop a list of best management practices and programs for landscape, nursery, and garden center retailers that align with Sustainable Landscaping Guide goals. Incorporate guidance/framework in Subdivision Rules and Regulations.	2020-2021	• Agricultural Committee • Natural Resources Commission • Pollinator Health Advisory Committee • Planning Department
3. Survey area landscaping and gardening providers about sustainable practices. Create ongoing mechanism for businesses to report practices and mechanism for sharing with residents.	2020-2021	• Local businesses • Plant societies (Mass Horticultural Society)
4. Establish a tool share and seed exchange facility at an accessible location	2021-2022	• Parks Division • Garden Clubs • Library • Public Works • Natural Resources
5. Develop ongoing training and education program for landscapers and residents	2022-2024	• Garden Clubs
4. Develop and update outreach mechanism (website, newsletter) to connect residents with information about businesses using sustainable practices, resources available via the tool library, and relevant events	2020-2021	• Public Information Office • Minuteman Media Network

FINANCING RESOURCES AND MECHANISMS
• Business partnerships • Grants from organizations such as MAPC or MVP Action Grants

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Maintaining updated business information over time • Establishing liability protection for tool library • Staff availability • Regulatory Enforcement	*How can the community incorporate equity into the implementation of this action?* • Ensure small businesses are aware of the opportunity to be recognized for good practices • Ensure materials are available in multiple formats and platforms (print, online, TV) • Ensure tool library is accessible nights and weekends
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
How can we measure the progress and success of this action? Outputs: • Accessible resources for residents to choose businesses that align with their values • Accessible tools and plant materials for all residents to contribute directly to sustainable landscapes Outcomes: • Improved health/abundance of pollinators • Reduced chemical burden to land and waterways • Reduced noise and air pollution from fossil fueled equipment • Reduced potable water used on landscapes	*How can we engage the populations that benefit from implementing this action?* • Work with partners to showcase best practices and help residents find businesses • Have representatives attend area industry events and reach out to plant society organizations to identify partners. • Provide opportunities for practitioners to share back success stories via social media with a common brand or hashtag • Town committees and community groups with sustainability missions can help to build community support.

ACTION NAME	Assess the vulnerability of natural resources most at risk to projected climate changes.
DESCRIPTION OF ACTION	Conduct a vulnerability assessment of natural resources most at risk from impacts of climate change. This study will assess the current conditions of habitats, landscapes, wetlands, forests, fields, and water resources on Town conservation and water supply lands at risk of climate change (increase in temperatures and seasonal pattern changes, change in precipitation patterns, riverine flooding, and drought). The action will analyze the existing conditions, identify vulnerable areas, species, habitats, ecosystem process, ecosystem services, and review best practices to approach the challenges identified.
CLIMATE BENEFIT	Conservation of habitat and maintaining healthy ecological system Resilience of critical natural landscapes
CHAMPION	Natural Resources Division

IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	Timeframe	Key Partners
1. Assessment and analysis. Review and prepare detailed list of assets and resources – according to climate change vulnerability assessment (CCVA) tool box and methods 2014 prepare sets of maps, prioritize assets and develop matrix of typologies.	2020-2021	• Natural Resources Division • CPW – Water/Sewer Division • Sustainability Division • Planning Division
2. Regional Effort. Establish a regional working group to coordinate water shed level natural resources and other cross municipal habitats.	2020-2021	• Natural Resources Division • Metrowest Conservation Alliance • MA Association of Conservation Commissions • MA Society of Municipal Conservation Professionals • Mass Division of Fisheries and Wildlife • State agencies
3. Stakeholder engagement and education. Create a task force of property owners and agencies to review and inform the analysis process. This group will participate in the long term monitoring process and development of strategies.	2021-2022	• Natural Resources Division • Metrowest Conservation Alliance • MA Association of Conservation Commissions • MA Society of Municipal Conservation Professionals
4. Develop monitoring program. Based on the prepared list of resource types – prepare a supporting program for long term monitoring. Standards on the ground monitoring with Landsat/drown mapping and other technological solutions.	2021-2022	• Natural Resources Division • example for satellite monitoring – Green City Watch or Sensible City Lab MIT
5. Best practices, recommendations, and pilot projects. Review Town ordinances and policies, develop recommendations for revisions to enhance resilience and preserve natural resources	2022-2024	• Natural Resources Division • Sustainability Division • CPW – Water/Sewer Division • Planning Division

FINANCING RESOURCES AND MECHANISMS
• MVP Action Grants • Regional partnerships

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Monitoring and identifying natural resources conditions is time and labor intensive. Coordination with multiple agencies, stakeholders, and institutions will be necessary. • Active protection and conservation of resources will require land acquisition and development rights and restrictions • The scale of these natural resources extends beyond municipal boundaries and will require coordination with state agencies and abutting municipalities.	*How can the community incorporate equity into the implementation of this action?* • Allocate resources to education and engagement of multiple stakeholders with emphasis on a diversity of voices and perspectives • Prioritize long term and capacity building programs to develop stewardship • Ensure equitable access to natural resources and open space
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
How can we measure the progress and success of this action? Outputs: • List of vulnerable natural resources with prioritization for solutions • Methodology for monitoring and long-term analysis • Recommendations for policy and regulations Outcomes: • Preservation of natural resources • Health benefits of exposure to green space • Increased and connected wildlife habitat • Increased biodiversty • Improved water quality and stormwater management	*How can we engage the populations that benefit from implementing this action?* • Engage the community – schools, seniors, volunteer groups, faith organizations, etc. to participate and/or sponsor tours and monitoring days.

ACTION NAME	Assess and improve Concord's tree canopy.
DESCRIPTION OF ACTION	Concord's tree canopy is core to the Town's character and provides climate mitigation, resilience and health benefits. We will evaluate how to ensure Concord's tree canopy (public and private street and setback trees) is resilient to the projected impacts of climate change and develop a management plan that considers location, tree type, long-term growth, care and maintenance.
CLIMATE BENEFIT	Improved air quality GHG emissions reduction Reduced heat island effect Increased support for wildlife, habitat, and biodiversity Improved water quality and stormwater management
CHAMPION	Concord Public Works and Natural Resources Division

IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	Timeframe	Key Partners
1. Engage town stakeholders to understand baseline data and identify additional stakeholders. Develop scope for tree canopy management plan and appropriate board, committee, or town department to charge with implementation. Plan should consider: a. Annual public tree removal tracking; private tree census b. Establish a Town goal for tree canopy of minimally no net loss of trees, but preferably restoration to a defined level of diversity. c. Establish town policies for equal replacement for public tree removals d. Establish incentives for public tree planting on private land. e. Conduct a health impact assessment to guide tree and canopy placement.	2020-2021	• Concord Public Works • Natural Resources Division • Sustainability Division • Planning Division

2. Evaluate the costs and benefits of applying to be an Arbor Day Tree City USA. Revise current Town codes with program requirements (e.g. establishing a tree board, adopting a tree care ordinance, instituting an arbor day observance and establishing public funding source for tree planting of $2/capita ~$34k/year).	2020-2021	• CPW – Park and Tree Division • Planning Division • Natural Resources Division • Arbor Day Foundation • Sustainability Division
4. Develop community awareness and educational materials about "Trees of Concord" .	2021-2022	• CPW – Park and Tree Division • Natural Resources Division • Sustainability Division • Planning Division • Public Information Office
3. Formalize a tree canopy management plan and embed within an existing town department, committee or board with authority and charge to restore and preserve Concord's tree canopy.	2022-2024	• CPW – Park and Tree Division • Natural Resources Division • Sustainability Division • Planning Division

FINANCING RESOURCES AND MECHANISMS
• Arbor Day Foundation • MA Urban and Community Forestry Challenge Grants • MVP Action Grants

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Need to consider tree maintenance in coordination with utilities and public works • Need to plan for long-term tree growth and impacts on city infrastructure (e.g. sidewalks and underground utilities).	*How can the community incorporate equity into the implementation of this action?* • Ensure equitable distribution of street tree and tree canopy placement across the entire Town. • Prioritize programs and improvements based first on areas with higher instances of urban heat island or temperature fluctuations.
MEASURING SUCCESS	ENGAGING THE COMMUNITY
How can we measure the progress and success of this action? Outputs: • Updates to Treekeeper software • Tree canopy management plan • Community outreach materials on value of trees • Increase in % of tree canopy coverage (including private property). • Increase in # of public trees planted annually • Increase # of private tree incentives utilized annually Outcomes: • Improved air quality and decreased respiratory health impacts. • Health benefits of exposure to green space. • Increased wildlife and biodiversity support. • Improved water quality and stormwater management.	*How can we engage the populations that benefit from implementing this action?* • Engage street teams to survey tree canopy sites. • Town committees and community groups with sustainability missions can help to build community support. • Engage the community – schools, seniors, volunteer groups, faith organizations, etc. to participate and/or sponsor planting days. • Implement Adopt-A-Tree programs with local organizations.

Preparedness

Develop an integrated water resource management plan.
Conduct a threat assessment for Concord's critical infrastructure.
Update stormwater regulations and create a stormwater utility.
Increase the use of green infrastructure and low impact development.

ACTION NAME	Develop an integrated water resource management plan.
DESCRIPTION OF ACTION	Develop an integrated water resource management plan ensuring resilient systems that contribute to the health of the public and the environment. Increase water resilience in Concord and be a model community by planning and implementing systems that go beyond basic requirements for handling stormwater, groundwater, drinking water, and surface water.
CLIMATE BENEFIT	Enhanced water conservation Improved water quality Reduced impact on natural water resources Increased resilience to drought conditions
CHAMPION	Concord Public Works

IMPLEMENTATION STEPS	Timeframe	Key Partners
1. Develop a scope of work for a local integrated water resource management plan including: a. A framework for diverse stakeholder involvement b. Assessment of critical infrastructure as well as system interrelationships between drinking water, wastewater, stormwater, and their relationships to groundwater and surface water c. Implementation strategies	2020	• Concord Public Works • Natural Resources Commission and/or Division • Planning Division • Sustainability Division
2. Develop integrated water resources management plan including a. Stakeholder engagement b. Assessment of baseline c. Recommended policy, regulatory, and programsto achieve resilient water management systems.	2020-2022	• Concord Public Works • Natural Resources Commission and/or Division • Planning Division • Sustainability Division • Community stakeholders
3. Launch community education program on integrated water resource management.	2021-2022	• Concord Public Works • Natural Resources Commission and/or Division • Sustainability Division
4. Develop regulatory and economic strategy to optimize water quality and quantity interests (flow, and load).	2021-2022	• Concord Public Works • Natural Resources Commission

FINANCING RESOURCES AND MECHANISMS
• MVP Action Grants • Concord Public Works Water & Sewer Enterprise budgets • Stormwater utility

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Regulatory barriers including acceptance by state and federal agencies and changing regulatory requirements • Many stakeholders requiring collaboration/consensus relating to cost benefit and schedule.	*How can the community incorporate equity into the implementation of this action?* • Allows for a more equitable cost distribution across drinking water, wastewater, and stormwater rate payers. • Ensures long-term access to quality water, protection of local water resources.
MEASURING SUCCESS	ENGAGING THE COMMUNITY
How can we measure the progress and success of this action? Outputs: • Defined scope of service for resilient water management plan. • Baseline assessment of all current water systems and their interrelationships. • Development of programs to achieve resilient water management systems. Outcomes: • Reduced water consumption • Improved water quality • Reduced impact on natural water resources • Increased resilience to flooding and drought conditions	*How can we engage the populations that benefit from implementing this action?* • Locally and regionally promote Concord's environmentally responsible approach to water resource management and its anticipated benefits and share best practices. • Highlight anticipated benefits to businesses and developers. • Communicate to residents and businesses the economic, health, and environmental benefits of an integrated and resilient water management system.

ACTION NAME	Conduct a threat assessment for Concord's critical infrastructure.
DESCRIPTION OF ACTION	Conduct a threat assessment and security plan for Concord's infrastructure and critical facilities. It will assess the vulnerability and preparedness of Concord's hard infrastructure (e.g. roads, utilities) and critical facilities (town buildings, emergency shelters, etc.) against extreme weather events and develop security and resilience strategies to ensure the continued safety of Concord residents and businesses.
CLIMATE BENEFIT	Increased resilience of facilities and infrastructure to climate impacts Improved social resilience
CHAMPION	Concord Emergency Planning Committee

IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	Timeframe	Key Partners
1. Reconvene Concord Emergency Planning Committee and set expectations and goals for group moving forward. Confirm protocols.	2021-2022	• Fire department • Concord Emergency Planning Committee • All Town departments • Health Division • Planning Division • Public and private schools • Emerson Hospital • NE Deaconess
2. Review existing reports and plans, including the Hazard Mitigation Plan and Municipal Vulnerability Preparedness program assessments. Identify gaps and opportunities related to threat assessment and security.	2022-2023	• Concord Emergency Planning Committee • Sustainability Division • Planning Division
3. Conduct more detailed assessments as needed to understand direct impact/hazard potential, utilizing site inspections, GIS analysis, flood modeling, etc. Integrate any applicable new information and projected climate data into planning process.	2022-2023	• Concord Emergency Planning Committee • Public Works • IT/GIS • Consultants • Sustainability Division
4. Develop and launch updated emergency management and security plan and implementation strategies based on completed threat assessment.	2023-2024	• Concord Emergency Planning Committee • Sustainability Division • All Town departments

FINANCING RESOURCES AND MECHANISMS
• MVP Action Grants • MEMA Emergency Management Grant Programs https://www.mass.gov/mema-emergency-management-grant-programs

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Challenging to make assessments or cost of technical assessments and stay current with infrastructure and security demands. • Communicating the right level of information to the public. • Ability to be proactive vs. reactive during events in order to minimize community and infrastructure impact • Need to take action to mitigate risk during extreme weather events	*How can the community incorporate equity into the implementation of this action?* • Ensure vulnerable populations are specifically addressed, including seniors, youth, and non-native English speakers.
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
How can we measure the progress and success of this action? Outputs: • Convening emergency operations center group meetings • Full department participation • Annual table-top exercises • Alignment of goals and coordination of efforts across Town departments. Outcomes: • # of people certified in Incident Command System (ICS) and National Incident Management System (NIMS)	*How can we engage the populations that benefit from implementing this action?* • Consider establishing neighborhood networks and reviving the Community Emergency Response Team (CERT). • Focus on opportunities to engage and empower the senior community, such as through events and visits. • Inform and educate all committees and boards on the planning process via newsletters, annual reports, and town manager reports.

ACTION NAME	Update stormwater regulations and create a stormwater utility.
DESCRIPTION OF ACTION	In conjunction with information from Concord's 2019 5-Year Stormwater Management Plan ("Phase II Storm Water Program"), assess stormwater needs, permit requirements, and weather/flooding trends to inform updates to current stormwater regulations. Evaluate opportunity to create a stormwater utility to ensure the proper management and maintenance of the Town's stormwater system.
CLIMATE BENEFIT	Improved resilience to flooding Improved water quality
CHAMPION	Concord Public Works

IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	Timeframe	**Key Partners**

1. Conduct an inventory and assessment of current stormwater infrastructure, regulations, and future needs.	2020-2021	• Concord Public Works' Engineering Division • Planning • Buildings and Inspections • GIS expertise • Consultant
2. Research stormwater regulation and best practices from progressive towns and cities and evaluate state recommendations.	2020-2021	• Concord Public Works' Engineering Division • Massachusetts Statewide Stormwater Coalition • Charles River Watershed Climate Compact • EPA Green Infrastructure Modeling Toolkit • Consultant
3. Update stormwater regulations based on assessment.	2021-2022	• Concord Public Works' Engineering Division • Public Works Commission • Planning • Select Board
4. Conduct analysis of appropriate stormwater utility fee.	2021-2022	• Concord Public Works' Engineering Division • Public Works Commission • Planning • Select Board
5. Hold public meetings regarding creation of a stormwater enterprise.	2021-2022	• Concord Public Works' Engineering Division • Public Works Commission • Select Board • Finance Committee • Town Meeting
6. Rollout updated stormwater regulations and have hearing on stormwater utility fee.	2021-2022	• Concord Public Works • Public Works Commission • Concord Municipal Utilities
7. Distribute educational material to residents regarding residential stormwater runoff and solutions.	2021-2022	• Concord Municipal Utilities • Concord Public Works' Engineering

FINANCING RESOURCES AND MECHANISMS
• EPA Urban Small Waters Grants Program • NFWF/Wells Fargo Resilient Communities Grant Program • Massachusetts stormwater project funding programs: https://www.mass.gov/service-details/available-funding-for-stormwater-projects-in-massachusetts

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • New utility fees to property owners based on impact vs general fund support. • Will require community outreach to communicate the benefits	*How can the community incorporate equity into the implementation of this action?* • This action is designed to provide greater equity in establishing a stormwater service fee based on private property impacts. • Ensure analysis of stormwater utility considers resident household income and small business impacts.
MEASURING SUCCESS	**ENGAGING THE COMMUNITY**
How can we measure the progress and success of this action? Outputs: • Stormwater analysis report • Updated stormwater regulations • New stormwater utility Outcomes: • Improved water quality • Improved public health & safety • Reduction in property damage attributed to flooding • Increased Wildlife/biodiversity	*How can we engage the populations that benefit from implementing this action?* • Engage with residents and businesses located in areas prone to stormwater damage/management issues. • Engage with residents and local community organizations regarding improvement to environmental protection and wildlife/biodiversity protection.

ACTION NAME	Increase the use of green infrastructure and low impact development.
DESCRIPTION OF ACTION	Identify and implement policies to increase the use of green infrastructure and low impact development. Utilize green infrastructure and low impact development in new construction, existing buildings, and residential spaces as a low-cost, high benefit-method to manage stormwater runoff, provide green space for recreation, and more.
CLIMATE BENEFIT	Improved stormwater management Reduced urban heat island Reduction in localized surface water temperature extremes
CHAMPION	Department of Land Use Management & Concord Public Works

IMPLEMENTATION STEPS	PLANNING CONSIDERATIONS	
	Timeframe	**Key Partners**
1. Research best practices and code examples in green infrastructure and low impact development (e.g. bioswales, green roofs, lot surface permeability).	2020-2021	• Concord Public Works' Engineering Division • Planning • Natural Resources • Sustainability
2. Conduct town wide assessment of high-benefit areas for green infrastructure installations.	2020-2021	• Concord Public Works' Engineering Division IT/GIS Division • Planning • Buildings and Inspections • External consultant
3. Determine desired planning and code requirements based on project type, size, and cost thresholds and present draft policy recommendations to the Town	2021-2023	• Concord Public Works' Engineering Division • Planning • Buildings and Inspections • Select Board • Consultant

4. Finalize and launch town planning/code requirements for green infrastructure and low impact development in new construction, retrofits, and residential areas.	2021-2023	• Concord Public Works' Engineering DivisionPlanning • Buildings and Inspections • Local architecture and construction businesses • Neighborhood associations
5. Develop and distribute educational materials and design guidelines for residential and commercial spaces.	2021-2023	• Concord Public Works' Engineering Division • Planning • Natural Resources • Sustainability • Neighborhood associations • Local architecture and construction businesses • Community based organizations

FINANCING RESOURCES AND MECHANISMS
• EPA Urban Small Waters Grants Program • NFWF/Wells Fargo Resilient Communities Grant Program • Massachusetts stormwater project funding programs: https://www.mass.gov/service-details/available-funding-for-stormwater-projects-in-massachusetts

TRADEOFFS (CHALLENGES/BARRIERS)	EQUITY CONSIDERATIONS
What are the tradeoffs or challenges associated with implementing this action? • Increased capital costs • Variability of site-specific hydrogeology • Increased Operation/Maintenance needs	*How can the community incorporate equity into the implementation of this action?* • Plan community volunteer days to help implement green infrastructure techniques • Prioritize implementation of green infrastructure projects in areas of highest impact first. • Consider program that allows for off-site equivalencies.
MEASURING SUCCESS	ENGAGING THE COMMUNITY
How can we measure the progress and success of this action? Outputs: • List of identified priority locations for green infrastructure projects • Implementation of new town codes and regulations • Educational materials and design guidelines for implementation Outcomes: • Improved water quality • Improved air quality • Habitat for wildlife/biodiversity • Reduction in localized temperature extremes	*How can we engage the populations that benefit from implementing this action?* • Coordinate with homeowners associations • Provide trainings to residents, building contractors and landscape contractors