THE TOWN OF
LINCOLN
MASSACHUSETTS

2023 Comprehensive Climate Action Plan (L-CAP)

Summary of Goals & Implementation Strategies

Lincoln's Climate Goals

Lincoln's climate goals guide the development and implementation of both short and long-term climate mitigation and resilience efforts in Lincoln.

1. Transition to clean energy technologies to support the Town of Lincoln's path towards carbon neutrality.

2. Prioritize accessibility, walkability, and connectivity to the Town's commercial centers and community spaces, while ensuring that these interconnected multimodal transportation systems are also affordable, reliable, and climate resilient.

3. Protect Lincoln's agricultural, historic, and environmental resources from climate change impacts.

4. Make sure Lincoln residents, especially those who are underserved and underrepresented, are prepared to address major climate hazards related to flooding, drought, severe storms, extreme heat and more.

5. Increase town-wide diversion rate through programs and policies to prevent, reduce, reuse, compost, and recycle waste.

6. Engage and support local business owners and residents in making their buildings and homes more sustainable and resilient, in an equitable, affordable, and accessible way.

7. Align local efforts with the State's climate goals and programs. Connect and share progress of Lincoln's climate actions with others in the region, and advocate for

climate solutions at the regional and state level.

Recommended Strategies for L-CAP Implementation

The following section presents the recommended strategies, developed in collaboration with municipal staff and community stakeholders, for the six planning areas of L-CAP: Energy, Built Environment, Mobility, Working Lands and Natural Resources, Social Resilience and Education, and Water and Waste Management. These strategies provide a mix of necessary actions, such as building capacity for municipal staff, assisting businesses and residents to better understand available resources and technical assistance, and continued advocacy efforts at regional and state levels.

Note: Strategies labeled **Priority** were selected as top priority strategies, based on feedback from Lincoln municipal staff and the L-CAP Working Group members. These priority strategies have built out Implementation Roadmaps; see the full L-CAP for more details.

ENERGY

Priority , E1: Identify opportunities for ground-mounted solar installations, while ensuring the protection of local biodiversity and habitats.
Priority , E2: Develop materials and establish a resident ambassador program to educate and assist residents with understanding and accessing available federal and state grant programs for weatherization, building energy retrofits, adoption of solar PV, and battery storage, etc. Ensure access for Environmental Justice (EJ) communities, renters, low/moderate income households, and additional priority populations.
Priority , E3: Promote the Lincoln Green Energy Choice program by encouraging the option to choose 100% green electricity (i.e., Class 1 RECs). Consider the option for schools and other municipal buildings.
E4: Develop partnerships and collaborate with local utility companies to support the Town's electrification and energy decarbonization plans.
E5: Work with local businesses to support a transition to clean energy technologies and adaptation measures to increase resilience to climate impacts.
E6: Assess the benefits and safety challenges of battery storage systems. Study the development of microgrids.
E7: Investigate and keep abreast of evolving renewable energy technologies in residential homes, apartments, and condo-complexes, including roof-top and community shared solar.
E8: Work with utility partners (e.g., National Grid) to track and repair methane leaks in Town.

E9: Advocate for increased educational, technical, and financial support and incentives, at the state level, to increase the adoption of energy efficient appliances and renewable energy technologies in residential homes.

MOBILITY

Priority , M1: Increase connectivity among roadways, roadside paths, and conservation trails to ensure walkability, accessibility, and safety for alternative transportation modes (e.g., pedestrian, bikes, scooters, power chairs, etc.).
Priority, M2: Promote the development of local public transportation services, such as shuttles, buses, and bike shares at businesses, community centers, and other destinations.
Priority, M3: Transition municipal fleets and school buses to all-electric where feasible.
Priority , M4: Promote adoption and use of electric vehicles through outreach and installation of EV chargers at publicly accessible facilities, while also working with local businesses to identify opportunities on their properties.
M5: Adopt climate-smart parking policies. For example, establish lower parking requirements for new development to maximize efficient use of spaces and reduce use of single occupancy vehicles; prioritize space for ride sharing, etc.
M6: Develop resources and provide education on installation of electric vehicle charging in residential buildings.
M7: Improve pedestrian and cyclist safety by lowering speed limits within the Town's jurisdiction and installing enhanced safety measures such as speed bumps and other traffic calming measures.
M8: Support multi-town transportation options to major tourist destinations in Lincoln and connections to neighboring towns.
M9: Improve wayfinding signage on trails and continue regular maintenance of the trails to ensure accessibility and encourage usage by both locals and visitors. Ensure educational signage meets accessibility needs, such as related to height and visuals, so that individuals in wheelchairs can access it, as well as residents who have low vision or are blind.
M10: Study the feasibility of an EV car sharing program. Consider developing an income-tiered program in partnership with community organizations and affordable housing developments.
M11: Partner with neighboring communities to expand trails and dedicated bikeways for safe access to critical destinations, such as village districts, town centers, and commercial/office districts, across municipal borders.
M12: Advocate for MBTA improvements to infrastructure and platforms and shelters to ensure ADA compliance, comfort, and protection of users from extreme temperatures and weather events.
M13: Advocate for electrification of the regional transit system, including the MBTA commuter rail, while ensuring affordability, accessibility, and frequency of services.

M14: Enforce anti-idling laws in public areas, including the school campus, especially during school pickup hours. Promote increased use of school buses.

BUILT ENVIRONMENT

Priority , B1: Engage with commercial building owners, multi-family residential property managers, and landlords to discuss opportunities for building retrofits and decarbonization. Advocate for residents who are condo owners, renters and/or living in multi-family buildings to be able to increase energy efficiency.
Priority , B2: Analyze best practices for deep retrofitting and other energy efficiency measures for older homes. Consider engaging/recruiting various home types in town to participate as case studies.
Priority , B3: Conduct a municipal facility assessment to determine a pathway for clean energy transition (i.e., building retrofitting, phasing out fossil fuel furnaces and appliances, etc.).
B4: Develop informational materials and a communication plan for residents and developers on the newly adopted Specialized Code and Mass DOER's Demonstration Project.
B5: Educate property owners and contractors on embodied carbon in building materials and provide ideas for alternatives.
B6: Assess all municipal facilities and infrastructure that are vulnerable to flooding and prioritize critical infrastructure improvements.
B7: Require all proposed development and major renovation projects to include feasibility assessment and/or cost benefit analysis for implementing renewable energy options (for example, installation of solar PV, energy storage, and/or solar energy storage).
B8: Consider changes to the zoning bylaw to allow for multifamily housing in all districts.
B9: Develop a greenhouse gas emission reduction and energy performance standard for municipal facilities and buildings.
B10: Promote transparency by tracking and publishing municipal buildings' energy use intensity (EUI).
B11: Maintain existing stormwater infrastructure and improve stormwater drainage on roadways, while considering climate change projections for the region.
B12: Promote the disclosure of Energy Use Intensity (EUI) in commercial and residential purchases and sale.
B13: Mitigate stormwater surface runoff by encouraging the use of green infrastructure and low impact development techniques (including rain gardens, porous pavement, right-sizing culverts, etc.).

B14: Establish a policy to consider embodied carbon emissions in construction materials used in construction or renovation projects for municipal buildings and facilities.
B15: Review zoning regulations to enable more diverse, affordable, and energy efficient housing, such as higher density, multi-family buildings and transit-oriented development (TOD).
B16: Adopt a net zero standard for newly constructed municipally owned and funded buildings.
B17: Adopt a Green Building Code that sets minimum requirements for resiliency and mitigation measures and incentives.

WORKING LANDS AND NATURAL RESOURCES

Priority, NR1: Encourage local farmers in Lincoln to participate in the Boston region's effort in supporting local food systems and increasing food security.
Priority, NR2: Update Lincoln's Wetlands Protection Bylaw to ensure incorporation of nature-based solutions, climate resilience, preservation of native species and ecosystem health.
Priority , NR3: Work with the Agricultural Commission and local farmers to promote climate change adaptation strategies for farming such as improving soil quality, diversifying crop rotations, modifying planting schedules, and techniques to avoid the use of pesticides and herbicides.
Priority , NR4: Work with homeowners to promote sustainable landscaping practices. This includes, for example, prioritizing the planting of climate resilient species to withstand anticipated climate change impacts (such as extreme temperatures, drought, flooding, extreme weather events, etc.).
NR5: Provide educational resources to residents and landscaping companies on sustainable lawn maintenance practices, including electric lawn equipment and use of climate resilient native plants for landscaping and restoration projects.
NR6: Partner with local conservation groups to provide outreach on sustainability and climate preparedness best practices.
NR7: Support the expansion of local agriculture to increase local food production. Ensure healthy ecosystems and soil quality in Town to support ecological soundness.
NR8: Continue protecting and preserving areas that provide carbon sequestration, such as forests, wetlands, and meadows. Develop mechanisms to capture data and track progress of carbon sequestration by natural resources in town.
NR9: Coordinate with local farmers to discuss climate change impacts on local agriculture.
NR10: Encourage school children to learn about native planting, carbon storage and habitat restoration.

NR11: Identify priority sites to manage invasive plants that threaten unique or sensitive habitats.
NR12: Identify land protection opportunities in flood-prone areas.
NR13: Collaborate with DPW to reduce the use of road salt and consider alternative products that have less environmental impact.
NR14: Consider deer control measures to improve forest health by allowing native tree seedlings to thrive.
NR15: Enhance wildlife corridors and natural shelters by increasing habitat connectivity.
NR16: Explore regenerative agriculture (e.g., no-till and permaculture), promote composting and ecosystem health, and explore options for "climate-smart" agricultural practices.

SOCIAL RESILIENCE AND EDUCATION

Priority: Educate residents on incorporating climate-smart practices into their daily lives. Promote the Town's climate resilience actions through educational signage. Ensure signage meets accessibility needs, such as height and visuals. Coordinate with local schools to teach students about energy efficiency, net zero buildings, and resilience efforts in Town.
Priority, SE2: Educate residents on incorporating climate-smart practices into their daily lives. Promote the Town's climate resilience actions through educational signage. Ensure signage meets accessibility needs, such as height and visuals. Coordinate with local schools to teach students about energy efficiency, net zero buildings, and resilience efforts in Town.
SE3: Establish a diverse and inclusive Town committee to continue the work of the L-CAP. Ensure this work is seen through an equity lens. This group will be comprised of individuals from priority populations, various income levels, backgrounds, and experiences.
SE4: Work together with neighboring towns and schools to create a coalition of environmental youth advocates.
SE5: Promote mental health programs and integrate climate considerations.
SE6: Maintain an emergency response and evacuation plan, including providing access to emergency shelters, food, and essential supplies. Ensure priority populations are supported.
SE7: Educate residents on Indigenous rights and build relationships with Indigenous peoples to support their climate concerns and listen to their lived experiences.
SE8: Partner with neighboring municipalities to advocate for air quality and public health concerns related to aviation activities and future development at Hanscom.
SE9: Provide schools with educational resources and tools to encourage students and to make sustainable decisions and behavioral changes.

SE10: Encourage all land-based organizations in Lincoln to participate in diversity, equity, inclusion, and belonging centered education, conversations, and planning.
SE11: Promote and support the sale of locally sourced goods and products. Evaluate Lincoln's preparedness to address major climate hazards. Establish a neighborhood response and management program, such as a "buddy system", to account for all residents in the event of extreme weather and emergencies. Ensure information on disaster preparedness is available and accessible for all residents.

WATER AND SOLID WASTE MANAGEMENT

Priority: Implement sustainable solid waste disposal methods in Town. Consider allowing farmers access to the transfer station. Create municipal and school composting programs. Educate and encourage zero waste habits and promote waste reduction.
Priority, WW2: Implement sustainable solid waste disposal methods in Town. Consider allowing farmers access to the transfer station. Create municipal and school composting programs. Educate and encourage zero waste habits and promote waste reduction.
Priority , WW3: Promote water conservation efforts by encouraging use of rain barrels and grey water systems. Educate residents who use well water about water conservation and efficiency measures.
WW4: Encourage the Agricultural Commission to negotiate agreements with the Water Department to regulate water usage in times of drought or low water table.
WW5: Implement sustainable solid waste disposal methods in Town. Consider allowing farmers access to the Transfer Station. Create municipal and school composting programs. Educate and encourage zero waste habits and promote waste reduction.
WW6: Pursue state and federal technical and financial assistance to treat per- and polyfluoroalkyl substances (PFAS, also known as the forever chemicals) from the Town's water supply, including private wells. Look for alternative water supplies free of PFAS.
WW7: Monitor regulations on best practices for recycling solar panels and batteries
WW8: Monitor cyanobacteria blue/green algae in surface water and provide information to residents to mitigate growth and improve water quality.
WW9: Continue to monitor the distribution of clean drinking water and reduce water leaks.
WW10: Investigate ways to keep septic systems healthy, including treatment by an anaerobic digester.
WW11: Promote water conservation efforts by encouraging use of rain barrels and grey water systems. Educate residents who use well water about water conservation and efficiency measures.
WW12: Control pet waste near surface water to reduce nutrient loading. Carefully track water pollutants to develop water treatment solutions that target these hazards.

Consider joining the Massachusetts Water Resources Authority (MWRA) services in the future.

ADDITIONAL L-CAP IMPLEMENTATION SUPPORT STRATEGIES

The strategies below do not pertain to any particular planning area organized in sections above but are still critical to support the implementation of the Lincoln Climate Action plan overall. These supporting strategies represent overarching actions that ensure monitoring and tracking of climate action and implementation progress, setting up operational structures, as well as building capacity and expertise to advance L-CAP goals and strategies overtime. Successful establishment of these supporting strategies will assist with smooth transition and more effective implementation of the rest of L-CAP strategies.

Designate a department in Town to be responsible for pursuing state and federal grants and programs that can help make clean energy technology adoption and other greenhouse gas reducing strategies more affordable to residents.
Fundraise to create an implementation fund that can help subsidize costs associated with climate actions for lower-income residents.
Establish a Town committee to ensure the implementation of the Town's Climate Action Plan, especially through the lens of equity to prevent or minimize unintended consequences on the priority populations as well as those whose lives may be already severely impacted by climate change. Focus on engaging and supporting priority populations such as people of color, elders, youth, environmental justice populations, families with young children, diverse residents, and low-income families.
Ensure climate change consideration and best practices are integrated into town policies and projects for alignment and consistency.
Hire a Climate and Sustainability Director to support L-CAP goals, implementation, and next steps.
Use universal language and jargon-free vocabulary for all climate action outreach. As needed, include American Sign Language (or CART - Communications Access Real Time Translation), as well as translation and interpretation of materials for the Town's three top non-English languages.
Conduct regular town-wide greenhouse gas inventory updates to track emissions sources and report on mitigation progress.
Develop an online dashboard that showcases Lincoln's climate goals, implementation strategies, and metrics to measure progress, gaps, and opportunities for improvement.
Conduct voluntary Town census to gather data on household vehicle usage, residential heating systems, and clean energy technologies.
Sponsor training by residents or outside experts on how to access the wide range of rebates, loans, and tax credits available from the State and the Federal government. Provide jargon-free resources and toolkits that are accessible to all.

Develop a detailed technical analysis of the Climate Action Plan strategies to better understand the emission reduction potential, costs of implementation, and feasibility to prioritize short- and long-term L-CAP implementation.
Review and update the Climate Action Plan every 3-5 years.

For full details of the Lincoln Comprehensive Climate Action Plan, its goals, implementation strategies and roadmaps, check out the full technical report, available at http://www.lincolntown.org/1411/Climate-Action-Plan .