



Climate Resilient Carlisle

(Supported by a Massachusetts Municipal Vulnerability Preparedness Grant)

Meeting with Local Emergency Planning Committee (LEPC)

May 6, 2024 @ 10:00 am

The purpose of this project is to make recommendations for improvements to the local codes (bylaws, regulations, and policies) that will help make Carlisle more resilient to climate change. The discussion at this meeting will focus on those topics that pertain to the Local Emergency Planning Committee, and are based on a review of town planning documents and town bylaws, regulations, and policies, as well as discussions with the public at a Public Forum held on February 15, 2024, and discussions with the Carlisle Municipal Vulnerability Preparedness Core Committee.

Topics for Discussion

Wildfire/Brushfire Mitigation and Preparedness:

The 2021 Update to the Carlisle Hazard Mitigation Plan identified wildfire risk as being a high frequency (greater than 20% risk per year), serious (scattered major property damage; some minor infrastructure damage; essential services are briefly interrupted; some injuries and/or fatalities) hazard to Carlisle. Water for firefighting is serviced by fire ponds and cisterns throughout town, but not adequately services.

Possible actions:

- Require cisterns for all new developments
- Identify high-risk areas, notify public, partner with property owners to install cisterns
- Work with conservation landowners to design a management approach on public and conservation lands that addresses wildfire prevention/mitigation.

Storm and Severe Weather Preparedness

Carlisle frequently experiences power outages as a result of severe storms, due to downed trees and limbs taking out power lines. In addition, downed trees disrupt roadway travel and emergency access throughout town, often times leaving individuals or neighborhoods cut off for meaningful periods of time. Climate change is expected to increase the energy in storms, and this threat of power outages and disruption to access will continue and potentially increase.

Possible actions:

- Better mapping of flood hazards, alternative routes
- Networks of neighbors, know your neighbor, neighborhood emergency preparedness planning, support for those in need and elderly

Safety/Emergency Response implications of new energy/decarbonization approaches

Carlisle is taking intentional steps to lower energy use and greenhouse gas emissions in transportation and the built environment, as stated in the 2022 Master Plan. In addition, Carlisle has adopted the Specialized Energy Code and the Stretch Energy Code for MA. These efforts are leading to the use of new systems and devices at individual homes and properties town, and while there are many positive aspects of these systems, there are also new risks that homeowners and emergency responders may be less familiar with. For example, these may be related to the installation of batteries, generators, solar, geothermal, specialized appliances, new building materials and/or new venting approaches.

Possible actions:

- Identify/map homes with special systems/construction for emergency response purposes

Flooding

Carlisle's physical setting of ledge, till, high groundwater and widespread wetlands combined with historic country roads results in flooding challenges. A changing climate is already bringing more intense rainfall, an increase in overall annual rainfall, a shift in rainfall timing toward fall and winter and away from spring and summer. These conditions will increase the amount of surface runoff in a given storm event, and potentially widen floodplains and enlarge the areas impacted by nuisance flooding.

Possible actions:

- Improved mapping and protection of floodplains and wetlands, plus buffers to encompass potential future flooding.
- Strengthen wetlands and floodplain protections in bylaws/regulations.
- Improved municipal drainage system mapping and maintenance
- Improved/strengthened stormwater management standards townwide

Microgrids for Municipal Services/Emergency Shelter

During emergencies, Carlisle has found that the need for long-term or overnight shelter is limited. However, due to the relatively frequent power outages, there is a need for improved power supply for emergency services, continuation of town services, and provision of a temporary or daytime shelter with water and wastewater services and device charging services. A microgrid that could support the town center has been raised as a potential option to improve resilience for emergency services.

Possible actions:

- Explore the establishment of a microgrid to support emergency services in the town center (Elementary school, town offices, churches, Police, DPW, market)

Discussion:

For each topic, consider if the issue can be addressed through improvements in:

- Carlisle Bylaw/Regulation (yes/no/explain)
- Carlisle Policy (yes/no/explain)
- Education or training (yes/no/explain)
- Additional work on the part of a town department (yes/no/explain)
- Other

Did we miss an important topic for this discussion

Upcoming Meetings with Carlisle Boards, Commissions, and Committees:

May 9 at 6:30 pm

(Planning Board, Conservation Commission, Board of Health, and Zoning Board of Appeals)

May 15 at 7 pm

(Historical Commission and Housing Trust)

June 6 at 7 pm

(Environmental Sustainability Committee)

See Carlisle MVP Webpage for more information:

<https://www.carlislema.gov/1162/Municipal-Vulnerability-Preparedness>