



Climate Resilient Carlisle

(Supported by a Massachusetts Municipal Vulnerability Preparedness Grant)

Meeting with Planning Board, Conservation Commission, Board of Health and Zoning Board of Appeals

May 9, 2024 @ 6:30 pm

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 Planning Board, Conservation Commission, Board of Health and Zoning Board of Appeals, 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.

DISCUSSION QUESTIONS

For each topic below, 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? Do you have any additional concerns?

DISCUSSION TOPICS

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 residents.
- Require power lines to be buried.
- Tree protection/management policy or bylaw townwide

Flooding, Stormwater Management and Wetland Protection

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. Wetlands will continue to play an important sponge role in slowing and detaining stormwater.

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.

Groundwater Protection

Carlisle is dependent on individual drinking water wells for water supply townwide, making groundwater protection an essential task for the town and its residents. Drought conditions pose a risk to drinking water supply, particularly for shallower wells. Wastewater in Carlisle is managed through onsite wastewater systems that discharge into the ground through leach fields, and can also pose a risk to drinking water quality. Wastewater management systems, including traditional septic systems and particularly innovative and alternative systems, require consistent maintenance and upkeep to provide continued treatment.

Possible actions:

- Allow the Town to institute watering bans.
- Consider a 'septic system utility' to manage maintenance, repair and recordkeeping
- Gather data and develop better understanding of local hydrogeology

Upcoming Meetings with Carlisle Boards, Commissions, and Committees:

May 15 at 6:30 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>