

Climate Resilient Carlisle

Environmental Sustainability Committee

January 16, 2025



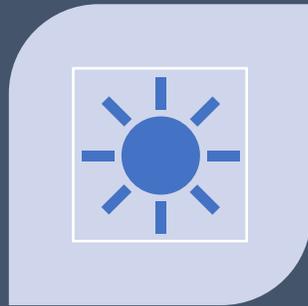
Agenda

- Recap: What we have learned
 - Existing conditions and trends
 - Resilience goals
 - Tools and methods
- Final Report Structure
- Discussion: Recommended Actions
 - Feedback
 - Successful implementation

Existing Conditions and Trends: Climate Change



Greater annual
rainfall with more
intense rainfall
events



More frequent and
intense drought



More frequent and
intense storms
with high winds



Warmer winters
and warmer
summers

Existing Conditions and Trends: Land Use and Demographics

- Heavily forested
- Significant floodplains and wetlands
- Private well water and septic
- Large houses on large lots
- Aging residents

Resilience Goals

Ecosystem
protection

Social
resilience

Housing
resilience

Flood
mitigation

Forest fire
protection
/mitigation

Water
resource
protection

GHG emissions
reduction
/efficiency

Resilient
energy
systems

Multi-modal
transportation

Emergency
response

Local
food/farming

Tools and Methods



Change in
Local Code

Change in
Town Policy



Education

Town Initiative,
Program, or
Action



Resilience actions

...are
interdisciplinary

- Most actions advance multiple goals

...can be advanced
in many ways

- Each action will be advanced through one or more of the tools/methods

...need champions

- We want to develop a roadmap that you can (and will!) implement

Final Report Structure

Roadmap for a Climate Resilient Carlisle

- Intro: Existing Conditions and Trends
- Resilience Goals
- Tools and Methods
- Actions

Actions are most likely to be implemented when they:

- ✓ Are clearly defined, especially the immediate next steps
- ✓ Are important, urgent, or high priority
- ✓ Have champions with the capacity and the authority to advance them

Today's Discussion

- Review the actions associated with the ESC
- Feedback
- Implementation
 - What's the next step?
 - What is highest priority?
 - What is low hanging fruit?
 - What can you own and champion?

Nature: Ensure that open spaces required by various development approvals are valuable and connected

Goals Advanced

- Ecosystem protection
- Flood mitigation
- Water resource protection

Groups Involved

- Zoning Board of Appeals, Planning Board, Select Board, Environmental Sustainability Committee, Conservation Commission

Tools and Methods

- Change in local code
- Change in local policy
- Education



Nature: Encourage resilient yards and landscaping for residential, public, and other properties

Goals Advanced

- Ecosystem protection, flood mitigation, forest fire protection/mitigation, water resource protection

Groups Involved

- Planning Board, Conservation Commission, ESC

Tools and Methods

- Change in local code
- Education
- Town action



Nature: Increase the use of green infrastructure on public and private property

Goals Advanced

- Ecosystem Protection
- Flood Mitigation
- Water Resource Protection

Groups Involved

- Planning Board, Select Board, Environmental Sustainability Committee, Conservation Commission, Town staff

Tools and Methods

- Change in local code
- Education
- Town action



Drainage: Clarify ownership and implement maintenance program for roadside and agricultural ditches

Goals Advanced

- Ecosystem protection
- Flood mitigation
- Local food and farming

Groups Involved

- Conservation Commission, Town staff

Tools and Methods

- Change in local policy
- Town action



Fire: Work with large landowners/conservation organizations to develop forest management plans for forest fire mitigation

Goals Advanced

- Ecosystem Protection
- Forest Fire Prevention/Mitigation

Groups Involved

- ESC
- LEPC
- Conservation Commission

Tools and Methods

- Education
- Town Action – Convene working group



Fire: Promote safe installation and use/storage of onsite energy storage batteries, EVs, and electric scooters

Goals Advanced

- Housing Resilience
- Forest Fire Prevention/Mitigation
- Resilient Energy Systems

Groups Involved

- ESC
- LEPC
- Town staff

Tools and Methods

- Change in town policy (register equipment)
- Education



Housing: Promote small scale density, reuse existing buildings/materials, variety of housing options

Goals Advanced

- Social resilience
- Housing resilience
- Carbon emissions reductions/efficiency

Groups Involved

- Planning Board, Affordable Housing Trust, Municipal Vulnerability Preparedness Core Team, Environmental Sustainability Committee

Tools and Methods

- Code or policy changes
- Education



Well/Septic Standards: Promote clarity about protections offered and constraints created

Goals Advanced

- Ecosystem protection
- Housing resilience
- Water resource protection

Groups Involved

- Board of Health, Planning Board, Affordable Housing Trust, Environmental Sustainability Committee

Tools and Methods

- Education
- Possible Code Update



Septic Systems: Consider a septic system utility to maintain and report on all on-site wastewater systems

Goals Advanced

- Ecosystem protection
- Water resource protection
- Resilient housing

Groups Involved

- Board of Health
- Town staff

Tools and Methods

- Town action



Transportation: Study potential first/last mile transportation options to the MBTA station(s)

Goals Advanced

- Carbon emissions reductions/efficiency
- Multi-modal transportation

Groups Involved

- Town staff
- Environmental Sustainability Committee

Tools and Methods

- Education
- Town action



Social: Cultivate community and social connections to strengthen social resilience

Goals Advanced

- Social Resilience
- Emergency Response

Groups Involved

- LEPC
- Town staff
- Other volunteers (Carlisle Cultural Council?)

Tools and Methods

- Education
- Town action



Questions?

Reach out if anything comes to mind!

Thank you!!

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