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Greener Communities, Climate Change, and Sustainable Living
Actions for Local Climate Change Mitigation and Adaptation

Communities have many opportunities to take action at the local level to reduce greenhouse gas emissions and adapt to unavoidable effects of climate change already underway. There are five initial steps for communities in Massachusetts to be officially designated as Green Communities:

- ✓ Adopt community zoning providing for as-of-right siting in designated locations for renewable energy facilities, research and development, or related manufacturing;
- ✓ Adopt expedited permiting for facilities under the zoning;
- ✓ Measuring a baseline of the municipal government's energy use with a plan to reduce use by 20 percent within five years;
- ✓ Provide for the purchase of fuel-efficient vehicles for municipal use; and
- ✓ Establish requirements for minimal energy use in new construction, by adopting the Stretch Code or through other similar and enforceable actions.

A municipality that meets these five requirements and becomes a Green Community can access state grants to assist with energy efficiency and renewable energy actions.

Beyond these initiatives, there are many other opportunities to guide growth and development in a manner that is more sustainable and which will have additional benefits for the community's quality of life and fiscal health. By adopting land use plans and tools to support open space conservation and keep the state's forested and natural (carbon-absorbing) lands intact, communities can further reduce emissions while protecting important water resources and providing buffers to climate extremes including heat, floods, and drought.

For example:

Decreasing Heat-trapping Gases

Carbon dioxide and other pollutants emitted from the burning of fossil fuels (coal, gas, and oil) used to power, heat, and cool our homes as well as power our vehicles can be reduced in many ways:

- By encouraging compact (vs. sprawling) development, walkable village centers, regional bike lanes, and other smart growth techniques, reductions can be achieved in vehicle miles traveled, lowering transportation-related emissions.
- Retention of native vegetation on development sites, minimization of pavement, use of green roofs, and appropriate selection and siting of landscape trees can significantly reduce heating and cooling costs and associated emissions.

Keeping Carbon-Absorbing Lands Intact

- Large houses on large lots diminish our remaining forestlands more quickly, and release carbon dioxide stored in the soil. Forests absorb about 10 percent of the state's heat-trapping carbon dioxide emissions, filter drinking water and provide clean air for people and wildlife. Modifications to local land development rules can help preserve forests while reducing local government infrastructure costs, such as pavement and stormwater system maintenance.

Preparing for Climate Change

Water: Climate change is expected to cause increased frequency of summer droughts as well as more intense storms and flooding events. Natural flood controls (wetlands, flood plains, and absorbent landscapes) and water resources can be protected and restored to reduce these vulnerabilities. Actions communities can take include:

- Adoption of Low Impact Development practices, stormwater management regulations and utility districts, aquifer protection bylaws/ordinances, and local wetlands protection provisions; all of which mimic or help maintain the landscape's natural ability to absorb and filter rainwater after a storm event.
- Evaluation of critical infrastructure vulnerabilities related to flooding and drought, such as inadequately sized road/stream crossings, obsolete dams where removal may reduce hazards and improve water resources, water supplies and wastewater systems, and stormwater systems.

Resilient Landscapes: Protecting important and large areas of forest provides clean air for humans and needed corridors for wildlife, aiding the ability of wildlife to adapt to changing local conditions that result from climate change.

Green Infrastructure: Maintaining existing natural vegetation, protecting and restoring stream corridors, and landscaping with native plants are beneficial both for reducing the loss of stored carbon into the atmosphere and in making natural and built communities more resilient to the effects of climate change.

- Innovative zoning techniques such as Open Space Design, Mixed Use zoning, Low-Impact Development regulations, and voluntary actions promoted through education and incentives are among the many tools available to accomplish these actions.

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