

What Conservation Commissions Can Do to Protect Natural Resources in a Changing Climate

The growing risk of coastal flooding from storm surge, sea-level rise, and extreme precipitation requires municipal action to protect local resources from increased impacts and ensure vibrant coastal communities in the future. Communities can take actions to protect key natural resources, become more resilient to coastal flooding, and preserve healthy habitats and ecosystems.



Photo credit: Amy Hansen

HOW WILL CLIMATE CHANGE AFFECT NATURAL RESOURCES?



Warmer temperatures will contribute to the spread of invasive species, pests, and diseases that threaten forest health, timber productivity, agriculture, wildlife, and human health.



Increasing precipitation, more frequent storms and sea-level rise will increase flooding and erosion, causing potential damage to habitats and ecologically significant areas as well as increasing sedimentation in water bodies.



Changing precipitation patterns may increase drought, affecting drinking water, wildlife, agriculture, forestry, wetlands, surface waters, and recreational opportunities.

TOP FIVE ACTIONS CONSERVATION COMMISSIONS CAN IMPLEMENT

- 1. Encourage landowners to preserve the beneficial functions of natural features,** such as wetlands, stream and wetland buffers, and upland areas that provide flood storage

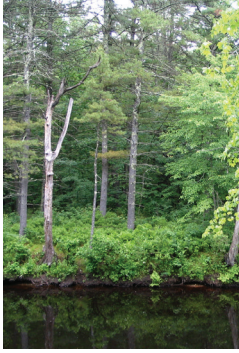


Photo above: UNHCE; center: Emily Lord

- 2. Control invasive species** on town-owned properties and encourage landowners to do the same



- 3. Communicate and build public awareness about climate change** via activities such as local workshops and other events, climate-focused signage, demonstration projects, or high-water mark projects

- 4. Incorporate climate change into municipal documents,** e.g., Natural Resource Inventory; land conservation plan; open space, forest, and farmland management and restoration plans; Master Plan chapters; Hazard Mitigation Plan; and Capital Improvement Plan

- 5. Develop and add climate vulnerability and adaptation benefits to the criteria** used for prioritizing land conservation projects and conservation easements

WHAT ELSE CAN CONSERVATION COMMISSIONS DO?

MANAGEMENT AND RESTORATION

- Conduct restoration projects to improve habitat and ecosystem health (e.g., living shorelines)
- Monitor municipal properties to identify problems and track changes over time (e.g., increase in erosion issues due to flooding, damage from storm events, expansion of invasive species)
- Implement best practices for land management (e.g., remove invasive species where feasible)
- Identify opportunities to modify culverts and remove other barriers to stream flow, especially in areas that may allow reconnection of tidal influence to facilitate marsh migration



Photo credit: Emily Lord

LAND CONSERVATION

- Assess existing and potential future conservation lands for climate resilience and their ability to protect water quality and provide storage for flood waters and stormwater runoff
- Pursue funding for conservation and stewardship projects, especially in high-risk areas
- Protect land that allows coastal habitats and populations to adapt to changing conditions
- Partner with local and regional land conservation organizations

LAND USE PLANNING AND REGULATION

- Promote municipal regulations that reduce vulnerability and protect ecosystems (e.g., cluster development, wetland/riparian buffers, coastal flood hazard overlay district, elevation of new structures in the floodplain)
- Encourage your municipality to consider implementing transfer of development rights and other incentives to acquire or conserve property in high-risk or repetitive loss areas
- Explore options to minimize shoreline hardening and promote natural shorelines
- Develop water-efficient landscaping regulations that restrict water uses during droughts

COMMUNICATING AND EDUCATING

- Bring the NH Coastal Adaptation Workgroup's outreach programs – such as *Preparing for Climate Change*, *Climate in the Classroom*, or other topic-based events – to your community
- Engage students and community groups in monitoring and restoration projects
- Identify and foster community conservation champions and tell their stories
- Encourage private property owners and businesses to incorporate best available climate science and vulnerability assessments into decision-making and planning
- Provide information to property owners and residents about shoreline and landscaping best management practices, flood protection safety, and leak-detection programs, and promote water use restrictions during drought
- Consider implementing FEMA's High-Water Mark Initiative to raise awareness about flooding
- Encourage homeowners with private wells to test for salinity if close to the coast
- Encourage other municipal officials to include climate science and vulnerability assessment recommendations into Capital Improvement Programs, budgets, and work plans

INFORMATION, MAPS, AND OTHER RESOURCES

Management and Restoration

- [Picking Our Battles](#)
- [Good Forestry in the Granite State](#)
- [NH Bugs](#)
- [Stewardship Network New England resources page](#)
- [Taking Action for Wildlife](#)

Land Conservation

- [NH Coastal Viewer](#) – Explore these layers: Conservation and Public Lands; Land Conservation Focus Areas (2006) and Water Resources Update (2016); Wildlife Action Plan; Sea-Level Rise Predictions; Sea Level Affecting Marshes Model (SLAMM); National Wetlands Inventory
- [Land Conservation Plan for NH's Coastal Watersheds \(2006\) and Land Conservation Priorities for the Protection of Coastal Water Resources \(Technical Report, 2016\)](#)

Land Use Planning and Regulation

- [Innovative Land Use Planning Techniques guide](#)
- [Natural and Structural Measures for Shoreline Stabilization](#)
- [Managing Shore Zones for Ecological Benefits](#)
- [Model regulations for water-efficient landscaping for subdivision and site plan applications](#)
- [Model water use restriction ordinance for water systems](#)

Communicating and Educating

- [NH Coastal Adaptation Workgroup outreach programs, resources, and social media](#)
- [Preparing for Climate Change and Climate in the Classroom](#)
- [NH Coastal Risk and Hazards Commission reports](#)
- [C-RiSe and Tides to Storms vulnerability assessments: Strafford Regional Planning Commission municipalities / Rockingham Planning Commission municipalities](#)
- [Climate Change in Southern NH: Past, Present, and Future \(2014\)](#)
- [Climate Change in the Piscataqua/Great Bay Region: Past, Present, and Future \(2011\)](#)
- [Shoreland Homeowner's Guide to Stormwater Management](#)
- [Protecting Water Resources and Managing Stormwater: A Bird's Eye View for NH Communities](#)
- [FEMA's High-Water Mark Initiative](#)

POTENTIAL FUNDING SOURCES

Local

- [Great Bay Resource Protection Partnership](#)

State

- [NH Land and Community Heritage Investment Program](#)
- [Aquatic Resource Mitigation \(ARM\) fund](#), NH Dept. of Environmental Services (note: not available in 2017)
- [NH Coastal Program](#) (as funds are available)
- [Piscataqua Region Estuaries Partnership](#) (as funds are available)
- [NH Conservation and Heritage License Plate Program](#)

Federal

- [USDA Natural Resource Conservation Service](#)
- [USDA Forest Legacy Program](#)
- [US Fish and Wildlife Service](#)
- [Land and Water Conservation Fund](#)
- [FEMA Pre-Disaster Mitigation Grant Program](#)
- [FEMA Hazard Mitigation Grant Program](#)

Other

- [Wildlife Conservation Society Climate Adaptation Fund](#)
- [Open Space Institute Resilient Landscapes grants](#)
- [NH Charitable Foundation](#)

ORGANIZATIONS

- [UNH Cooperative Extension](#)
- [NH Sea Grant](#)
- [The Stewardship Network, New England](#)
- [NH Coastal Adaptation Workgroup](#)
- [Rockingham Planning Commission](#)
- [Strafford Regional Planning Commission](#)
- [The Nature Conservancy, NH Chapter](#)
- [Great Bay Resource Protection Partnership](#)
- [Southeast Land Trust](#)
- [Rockingham County Conservation District](#)



New Hampshire Setting SAIL

Acting on the Coastal Risk and Hazards Commission Science, Assessment, Implementation, and Legislation Recommendations

Dover • Durham • Exeter • Greenland • Hampton • Hampton Falls • Madbury • New Castle • Newfields
Newington • Newmarket • North Hampton • Portsmouth • Rollinsford • Rye • Seabrook • Stratham

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