

TOWN OF EXETER, NEW HAMPSHIRE

CLIMATE ADAPTATION POLICY

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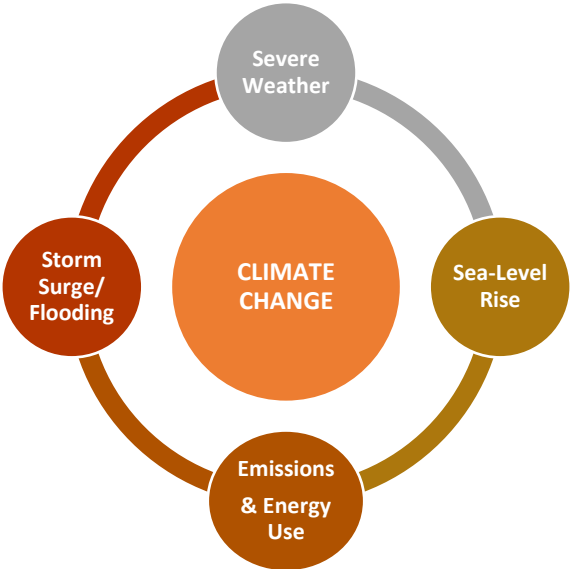
VISION FOR THE FUTURE

“Proactive strategies are identified and implemented that address the impacts of climate change to create a more sustainable and resilient community.”

INTRODUCTION


The purpose of a **Climate Adaptation Policy (CAP)** is to guide local decision making and investment in climate adaptation and implementation.

The CAP is supported by statements in the Vision section of the Master Plan (draft 2017) which states that local government will protect the welfare of residents and continue to provide support that helps prepare for a changing climate. Elsewhere in the Master Plan, responses to changes in climate and its impacts are detailed in the Support, Steward and Prepare sections as well as in the Action Agenda.




ACTIONS AND ACCOMPLISHMENTS

In recent years, Exeter has achieved community support for a number of climate adaptation and resilience initiatives including infrastructure design, planning and regulation.



July 2017 - Adopted a proclamation to uphold commitment to principles of the Paris Climate Accord to address the increase of global temperatures by reducing emissions through implementation of mitigation and adaptation actions.



March 2017 – Completed the Climate Risk in the Seacoast (C-RiSe) Vulnerability Assessment.




????? 2017 – Designed new wastewater treatment plant taking into account projected sea-level rise.



December 2017 – Planning Board reviewed draft recommendations to update the town’s stormwater regulations including use of most current precipitation data and implementation of low impact development techniques.



December 2017 – Planning Board reviewed final draft Master Plan update.



February 2018 – Held a Climate Change Open House featuring municipal and local initiatives aimed at better understanding and addressing potential impacts of climate change and how to address them.

CHALLENGES AND STRATEGIES

Like other coastal municipalities in New Hampshire, Exeter is confronted with a challenging set of concerns relating to coastal hazards and climate change. Although Exeter has not experienced significant impacts during moderate to severe weather events, projected increases in extreme rainfall events and localized flooding from storms and sea-level rise may increase the town's vulnerability in the future in immediate coastal areas and inland. Inland flooding may be compounded by increased stormwater runoff from development and impervious surfaces, and aging undersized infrastructure.

Projected change in climate and coastal conditions will present challenges to many sectors of municipal governance, asset and infrastructure management, sustainability of recreation and tourism, and protection of natural resources and ecosystems. Adapting to changing will play an important part in Exeter's strategic planning and actions in the future. Effective preparedness and proactive land use management can help reduce the town's exposure, improve resilience and thus minimize economic, social and environmental disruption.

ADAPTING AND BEING RESILIENT

Incorporating the latest future projections of sea-level rise and storm flooding into municipal planning and projects will minimize vulnerability and prove beneficial even if future hazards turn out to be less extreme than anticipated. **Adapting** to changing conditions means designing buildings and facilities that account for flooding or modifying uses of land that are compatible under a wide range of conditions. The process of adapting creates buildings and systems that are more **resilient** and better able to perform with fewer impacts.

Adaptation - adjustments in ecological, social, or economic systems in response to actual or expected climatic change and their effects or impacts. It refers to changes in processes, practices, and structures to moderate potential damages or to benefit from opportunities associated with climate change.

[<http://unfccc.int/focus/adaptation/items/6999.php>]

Resilience - a capability to anticipate, prepare for, respond to, and recover from significant multi-hazard threats with minimum damage to social well-being, the economy, and the environment.

[EPA <http://epa.gov/climatechange/glossary.html>]

To be resilient and adapt, Exeter must fully understand future climate related impacts and issues effecting land use, growth and development, and asset and resource management including: present and future coastal hazards; impacts to critical man-made and natural assets and resources; climate related impacts such as temperature and drought; future growth demands; and community adaptation and resilience strategies.

A helpful first step would be to begin discussions with elected officials, and local Boards and Commissions, about long term options for management and regulation of land uses, development and natural resources in areas at high risk of flooding and erosion (e.g. land use development standards, building code, and zoning standards).

Following are a Climate Adaptation Policy vision statement and goals, and recommended implementation actions to achieve them.

ACHIEVING THE VISION

The following eight goals describe a future that achieves the Vision Statement of the Climate Change Policy.

- ➔ **GOAL 1:** Potential climate change impacts are considered when undertaking long-term planning, setting priorities, and making decisions affecting resources, programs, policies and operations.
- ➔ **GOAL 2:** July 24, 2017 Board of Selectmen proclamation to uphold a commitment to the principles of the Paris Climate Accord by reducing greenhouse gas emissions through implementation of mitigation and adaptation actions is continued and strengthened.
- ➔ **GOAL 3:** Innovation and new opportunities are leveraged to provide for a stable and viable economic future.
- ➔ **GOAL 4:** Climate change preparedness and resiliency planning are integrated using the best available climate science and climate change information.
- ➔ **GOAL 5:** Future costs of infrastructure replacement and maintenance are minimized.
- ➔ **GOAL 6:** Natural resources and ecosystems are protected from the impacts of flooding from sea-level rise and storm events.
- ➔ **GOAL 7:** Civic groups and businesses engaged in sustainability and resilience practices in the community work collaboratively with the town.
- ➔ **GOAL 8:** Installations of green infrastructure, renewable energy systems and use of alternative fuel vehicles are supported.

IMPLEMENTATION ACTIONS

Increasing the resilience of man-made structures and natural systems can reduce the current and future risks associated with climate change. Impacts from natural hazards are increasing significantly with climate change and are expected to accelerate over time. Development and infrastructure plans that consider social, economic and environmental risks, and incorporate green infrastructure may be more resilient to changing future conditions. Securing the partnerships, political will and public support needed to accomplish this is a critical step to reducing risk and ensuring a sustainable community. Acting now can save money in the long-term by preventing costly repairs. A “no regrets” policy that protects against current hazards will also serve to alleviate the long-term impacts of climate change.

Implementation actions are organized under the following headings: Municipal Policy & Actions, Management & Investment, Environment & Natural Resources, Regulatory & Land Use Planning, and Community-Based.



Municipal Policy and Actions

Support installations of renewable energy systems and use of alternative fuel vehicles.

Create a “climate adaptation implementation” committee made up of representatives from all departments, boards and commissions to assist with implementation and adoption of the Climate Adaptation Policy action items.

Utilize the best available published climate science and climate change projections in decision making, policy development, and planning.

Monitor the progress of climate adaptation implementation and identify the societal factors that may support or limit the community’s ability to adapt.

Acquire funds to implement flood risk reduction projects including federal and state funding options for shoreland management and protection projects.

Incorporate coastal hazards and risks assessments in municipal emergency management and hazard mitigation plans, and improve connections and efficiencies between these plans.

Update municipal evacuation plans (e.g. maps of vulnerable areas, methods to deliver warnings and announcements and when most appropriate, outreach to affected property owners as needed) and coordinate plans with those of adjacent municipalities.



Management and Investment

Manage infrastructure to incorporate projected future conditions including increases in sea level, groundwater levels, extreme weather, precipitation, and temperature.

Apply the best available climate science and flood risk information in the siting and design of new, reconstructed, and rehabilitated municipal structures and facilities.

Incorporate vulnerability assessment information and adaptation strategies in planning of structures and facilities and investment for long term capital projects in municipal Capital Improvement Programs (CIPs).

Prepare a greenhouse gas emissions and energy use inventory for all municipal buildings and facilities. Adopt emissions and energy use reduction targets for specific facilities and townwide.

Adopt low impact development, green infrastructure, and green building standards for municipal buildings and facilities including purchase of renewable energy.

Conduct detailed drainage analyses to evaluate freshwater/stormwater and tidal flooding impacts. Prioritize replacement of culverts and crossings in high flood risk areas to ensure proper drainage of stormwater and flood water.

Adapt economic development planning approaches to respond to changing environmental conditions, leverage shifting and new opportunities, and promote resilience and sustainability planning as economic development strategies.



Environment and Natural Resources

Protect drinking water sources and groundwater recharge areas, considering the impacts of drought and groundwater rise in managing these resources, and implementation of low impact development strategies to maintain groundwater recharge.

Identify and prioritize actions to protect water quality and water quantity of local aquifers and surface waters.

Utilize ongoing research in the Seacoast region about the future effects of rising groundwater levels on drinking water supplies, natural systems and wildlife habitats, and the developed landscape.

Preserve open space, farmland, wetlands, and riparian and shoreline buffers to increase resiliency to flooding from extreme weather events and future sea-level rise.

Align land conservation practices, and adjust selection/scoring criteria, to facilitate upland migration of saltmarsh systems, maintain or increase flood storage capacity, preserve natural floodplain functions and ecosystems, and protect areas of highest risk flood from development.

Incorporate in natural resource plans consideration of future climate risk and hazards to protect and restore the ecological services these resources provide.



Regulatory and Land Use Planning

Incorporate climate adaptation, resilience and low impact development standards in zoning and regulations for natural resource protection and land development.

Consider adopting freeboard (+1-foot at a minimum) and elevation of utilities above the Base Flood Elevation and low impact development strategies for all new construction and substantial improvements to municipal, residential and non-residential structures.

Revise building codes to enable adaptive construction techniques and designs, considering increases in maximum building height standards to allow elevating structures above the base flood elevation (100-year/1% chance flood).

Encourage adoption of buffers and setbacks that better account for risk and vulnerability of development, and municipal structures and facilities, and to maintain ecosystem services (e.g. flood storage, storm surge protection).



Community-Based

Convene an annual climate change public informational event to showcase town accomplishments and ongoing initiatives in the community (e.g. a climate change open house).

Invite with civic groups and businesses engaged in sustainability and resilience practices in the community to an annual meeting to discuss progress, challenges and opportunities.

Create a climate adaptation resources page on the town's website including past accomplishments and ongoing initiatives and contact information for community based activities.

Provide informational materials about flood risk reduction at public and community events, and hold workshops featuring topics relating to coastal hazards and preparedness, and climate adaptation.

Encourage landowners to preserve the beneficial functions of natural landscape features like wetlands, floodplains, and to restore and protect shoreland habitats and living shorelines.

Partner with federal and state agencies as well as regional and local service providers and organizations to expand resources for education, outreach, and community coordination.

Communicate with children and young adults about climate change issues through social media and engagement projects.

Public Comments from the February 6, 2018 Exeter Climate Change Open House

- ⊕ Develop school programs to raise awareness
- ⊕ Address flood issues at the Recreation Department, Swasey Parkway and Gilman Street
- ⊕ Provide easy and visible tips for combatting climate change
- ⊕ Incorporate environmentally-friendly development standard for pavement and other responsible practices
- ⊕ Do away with plastic bags
- ⊕ Provide curbside composting services
- ⊕ Add hydration stations at water fountains [to reduce single-use plastic bottles]
- ⊕ Move to 100% renewable energy consumption for the town
- ⊕ Encourage paper straws, not plastic straws
- ⊕ Provide bike lanes on all major streets
- ⊕ Increase number of electric vehicles and charging stations
- ⊕ Strengthen wetlands protections