5.4 Assess Climate Vulnerability

5 Points | 10 Points | 15 Points | 20 Points | 25 Points

Action Updates

This action has been revised for the **current certification cycle**. A version of this action from the prior program year is available for comparison. Edits are highlighted in yellow. (Last updated 2021)

Objective

Understand how climate change will likely impact your community and implement projects to adapt and prepare.

Complementary Action:

- Inventory and Assess Historic Resources

What to Do

1. Perform a Climate Vulnerability Assessment. Assess your community's vulnerability to primary effects of climate change, like coastal and riverine flood risk, sea level rise, and extreme temperature fluctuations. This assessment will be an expansion of what is required by the Natural Hazard Mitigation Plan process, and may be useful to include in your Natural Hazard Mitigation Plan, Plan of Conservation and Development, and/or emerging operations plan. Identify unique aspects or areas as outlined in your Plan of Conservation and Development that may be vulnerable to climate change. Create a list of priority vulnerabilities. **(10 points)**

   Submit: A copy of your completed Climate Vulnerability Assessment and a completed worksheet 1. ***Note:*** If your municipality completed a Community Resilience Building (CRB) workshop with The Nature Conservancy as offered through Sustainable CT, you only need to submit a copy of the CRB workshop report (no worksheet required).

   Timeframe for Credit: Eligible for new action credit and rolling credit. This action falls under the action type "Websites, Maps, Inventories, Checklists, Assessments, Plans, Ordinances, Policies, Regulations and Resolutions (see "Timeframe for Credit" Guidance Document for submission requirements).

2. Identify how the secondary impacts of climate change are likely to affect your community. These include agricultural devastation (e.g. food insecurity), natural resource depletion (e.g. water scarcity), public health (e.g. increased incidence of vector borne disease, asthma, heat stroke, etc.), infrastructure damage or failure, and cultural resource damage or destruction. **(5 points)**

   Submit: An assessment of how the secondary impacts of climate change will impact your community and a completed worksheet 2. ***Note:*** If your municipality completed a Community Resilience Building (CRB) workshop with The Nature Conservancy as offered through Sustainable CT, you only need to submit a copy of the CRB workshop report (no worksheet required).

   Timeframe for Credit: Eligible for new action credit and rolling credit. This action falls under the action type "Websites, Maps, Inventories, Checklists, Assessments, Plans, Ordinances, Policies, Regulations and Resolutions (see "Timeframe for Credit" Guidance Document for submission requirements).

3. Demonstrate that special consideration has been given to vulnerable communities (elderly, health risk, refugee, low- and moderate-income, etc.) and their particular vulnerability to impacts of extreme weather events and inability to recover and identify risks to vulnerable communities in your assessment of the primary

impacts of climate change (#1 above) and/or secondary impacts (#2 above). **(5 points each, maximum 10 points)**

Submit: A completed worksheet 1, worksheet 2, or both to indicate where in your assessment(s) special consideration has been made. ***Note:*** If your municipality completed a Community Resilience Building (CRB) workshop with The Nature Conservancy as offered through Sustainable CT, you only need to submit a copy of the CRB workshop report (no worksheet required).

Timeframe for Credit: Eligible for new action credit and rolling credit. This action falls under the action type "Websites, Maps, Inventories, Checklists, Assessments, Plans, Ordinances, Policies, Regulations and Resolutions (see "Timeframe for Credit" Guidance Document for submission requirements).

Timeframe for Credit

Actions can either be "New" or considered for "Rolling Credit."

New Action Credit. Any action completed within the past three years (from January 1 of the year seeking certification) is eligible for potential certification points. If you are applying for recertification in your year of expiration, you may not claim New Action Credit for items that previously received credit.

Rolling Credit. For any action older than three years (from January 1 of the year seeking certification), you must demonstrate ongoing, currently relevant, and meaningful impact in your community to be considered for certification points. If you are applying for recertification in your year of expiration, you must apply for Rolling Credit for any item that previously received credit, even if it was completed within the past three years.

View the "Timeframe for Credit" Guidance Document for detailed submission requirements.

Engaging Partners

Sustainable CT encourages regional collaboration and other forms of partnership. For every action, please complete the "Partners" box in your submission, indicating the name(s) of any municipalities and/or organizations you partnered with (if any) and a brief description of your municipality's role. If you collaborate with other municipalities, each community will receive points. For additional information, please see the "Partners Guidance Document".

Potential Municipal and Community Collaborators

Staff from the planning, emergency services, Board of Education, assessors, building, and engineering departments could be helpful in implementing this action. In addition, your council of governments, University of Connecticut's CT Institute for Resilience and Climate Adaptation (CIRCA) and Adapt CT, The Nature Conservancy, may provide assistance or resources to help you implement this action.

Funding

If available, below are potential funding sources specific to this Action. For a complete listing of potential funding opportunities to assist with implementing Sustainable CT Actions, please visit the Sustainable CT Grants Portal, which is searchable by Action. Please also visit the Support for Your Town page for opportunities for technical assistance and other supports.

- Urban Act Grant Program
- Municipal Grant Program (MGP)
- 2021 Sustainable CT Community Match Fund

Resources

Toolkits, Calculators, Guidance Documents

Flooding Risk Assessment

- National Oceanic and Atmospheric Administration, Sea Level Rise Viewer
- The Nature Conservancy, Coastal Resilience Viewer
- CT Environmental Conditions Online
- Connecticut Institute for Resilience and Climate Adaptation (CIRCA), National Disaster Resilience Competition Flooding Maps
- US Federal Emergency Management Agency, Flood Insurance Risk Maps
- US Climate Resilience Toolkit
- Lower Connecticut River Valley Council of Governments, "Long Term Recovery and Land Use Resiliency Through Community Flood Resilience Study"
- CT Environmental Conditions Online, Sea Level Rise Effects on Roads & Large Marshes

Critical Infrastructure Vulnerability and Adaptation

- Stamford Resilience Opportunity Assessment Pilot Project
- Connecticut Institute for Resilience and Climate Adaptation (CIRCA), "Critical Infrastructure Resilience"

Community Vulnerability Assessment

- Urban Land Institute: "Ten Principles for Building Resilience"
- Rhoades, Jason L., "Enhancing the Resilience of Vulnerable Groups Through Participatory Climate Change Adaptation Planning: A Case Study with the Elderly Community of Bridgeport, Connecticut"
- Connecticut Department of Energy and Environmental Protection, "Climate Change Vulnerability Assessment"
- Wozniak-Brown, Joanna, "Understanding Community Character as a Socio-ecological Framework to Enhance Local-scale Adaptation: An Interdisciplinary Case Study from Rural Northwest Connecticut" (Chapter 4)
- White, C. and A.W. Whelchel, "Southeastern Connecticut Regional Resilience Guidebook"
- Southeastern Connecticut Council of Governments, "Southeastern Connecticut Critical Facilities Assessment"
- US Climate Resilience Toolkit
- ICLEI and CT Department of Environmental Protection, "Preparing for Climate Change in Groton, Connecticut: A Model Process for Communities in the Northeast"
- Government of India, Ministry of Environment, Forests and Climate Change, "A Framework for Climate Change Vulnerability Assessments"
- US Global Change Research Program, "The Impacts of Climate Change on Human Health in the United State: A Scientific Assessment"

Extreme Temperature Event Plan

- Minnesota Extreme Heat Toolkit

Organizations and Relevant Programs

- UConn CIRCA
- UConn Adapt CT
- The Nature Conservancy
- Climate Adaptation Knowledge Exchange
- US Environmental Protection Agency, Climate Change: Resilience and Adaptation in New England (RAINE)

Why This Matters

The climate is already changing in Connecticut and will continue to do so. The sea levels have risen 8 inches since the mid-1800s and are projected to increase anywhere from 1.5 to 3.3 feet by the end of the century. Temperatures will also increase. As we experience more frequent and prolonged extreme heat days, we'll see increased risk of heat-related deaths from cardiovascular incidents, heat stroke, and dehydration. Rising temperatures also contribute to more frequent poor air quality days that will lead to premature death, acute and chronic respiratory and cardiovascular illnesses, unless we are prepared. Impacts on precipitation and intensity and frequency of storms are more difficult to predict, but trends suggest heavier rain storms and potentially more intense storms. Changes in weather patterns and rising temperatures have already contributed to an earlier tick season and increased risk of Lyme disease and other vector borne diseases such as Zika. The effects also enhance risks to the way that our residents live, work, and play. Finally, climate and weather related events can cause stress and other mental health consequences, particularly for vulnerable populations.

While multi-level partnerships are important, you are in a unique position to address your local climate vulnerabilities. The impacts of climate change will happen in your community and will require locally-tailored

solutions.

Benefits

By identifying, prioritizing, and planning for your city or town's particular climate vulnerabilities, you will be better prepared to address both the immediate risks to human health and the environment, and the long-term risks to social, economic, and environmental justice within the community.

Addressing issues around climate change contributes to your community's long-term sustainability by identifying risks, protecting assets, and instituting measures that reduce burdens on future generations.

CT Success Stories

- Ashford - Oct 2019 Certification
- Essex - Oct 2019 Certification
- New Haven - Oct 2019 Certification
- West Haven - Oct 2019 Certification
- Old Saybrook - Oct 2020 Certification