

Why should Vermont communities prepare for hot weather?

Although Vermont is well-known for its cold winters, a similar number of Vermonters visit the emergency room or call 9-1-1 each year for heat-related illnesses as do for cold-related illnesses. In cool climates, limited acclimation and a lack of preparedness increase heat-related health risks. Over 1,400 people died during a 2021 heat wave in the Northwestern U.S. and Western Canada, an area with a similar summer climate to Vermont.

Climate change is increasing heat-related health risks in Vermont. Average temperatures in Vermont have already risen by 3 °F since 1900¹, resulting in more hot days and warm nights each year when heat may impact health. We can expect more frequent and harmful hot weather in the future, with an additional 3 to 12 °F of warming expected by 2100.

Vermont communities can enhance their emergency planning efforts for the growing threat of harmful hot weather. This summary guide provides information on who is most affected by hot weather and an overview of recommended actions to consider including in local emergency plans. [Find more detailed guidance and a planning template.](#) For more info: ClimateHealth@vermont.gov.

Hot weather and health impacts in Vermont

Vermont data indicate that Vermont residents experience heat-related illnesses at temperatures lower than in many other parts of the country. This is likely related to how infrequently hot weather occurs in Vermont, which has several impacts:

- We do not experience enough hot weather for people's bodies to adapt to hotter conditions,
- Many homes in Vermont are not adequately weatherized and do not have air conditioning,
- At a state and community level, we have not developed plans and policies needed to be prepared for hot weather,
- At an individual level, it can be hard to adapt behaviors to stay safe during hot weather, and
- Vermont has a large population of older adults, who are at more risk for heat-related illnesses.

Heat-related illnesses mainly occur between May and September. It takes time for our bodies to adjust to warmer weather, so unseasonably hot days early in the year can be particularly harmful. The risk for heat-related illnesses and deaths increases substantially when the heat index reaches 90 °F or above in Burlington, which is equivalent to about 85 °F in cooler places like Newport. All emergency department (ED) visits and deaths increase as the heat index rises, as many chronic physical and mental health conditions are worsened by heat exposure. Additionally, hot weather can reduce productivity, cause sleep difficulties, and increase aggression.

¹ <https://statesummaries.ncics.org/chapter/vt/>

Who is at highest risk during hot weather?

Although all Vermonters can be affected by hot weather, there are specific factors that can increase an individual's risk of experiencing heat-related health impacts. The risk for heat-related illnesses tends to be greater for the following groups of people:

- **People with more exposure to hot conditions** – people without access to air conditioning, outdoor workers and hobbyists, people experiencing homelessness, and urban residents
- **People that are particularly sensitive to heat exposure** – anyone not acclimated to hot weather, older adults, young children, people who are pregnant, people who are overweight, people with chronic medical conditions, people with disabilities, people using drugs, alcohol or some prescription medications, and people having a prior heat-related illness
- **People with limited adaptation resources** – people who live alone, have limited transportation options, are unable to purchase or use an air conditioner, or are unable to access community cooling resources

Planning for hot weather events

Hot weather plans will most likely be included in the all-hazards body of a [Local Emergency Management Plan](#) (LEMP) or in an “Incident Action Plan” annex focused on heat emergencies. Developing a hot weather response plan involves the following steps, with public engagement opportunities at every step in the process:

Before getting started on writing or updating a plan, your municipality should consider the following:

- Do any relevant plans already exist?
- Who should be involved in the planning process?
- Who is at highest risk in your community?
- What resources are available to your community?

The core of the hot weather emergency response plan should address:

- **Actions** to take before and during periods of hot weather,
- **Responsible party(ies)** for taking each action, and
- **Action thresholds** for when each action should be taken.

Action thresholds can be based on National Weather Service (NWS) thresholds or tailored to the local context. Lower action thresholds may be appropriate in colder parts of the state. For example, 90°F in Newport presents a similar level of local risk as does 95°F in Burlington. Action thresholds can vary by specific action, as certain actions may only be necessary during the most severe events. Current NWS thresholds for Vermont are:

Risk category	Forecasted heat index (°F)	Advisory/warnings issued
Low Risk	Less than 80°	None
Limited Risk	80° - 89°	None
Elevated Risk	90° - 94°	None
Significant Risk	95° - 104°	Heat Advisory
Extreme Risk	105° or hotter	Excessive Heat Warning

The remainder of this document provides an overview of hot weather response strategies:

Heat safety outreach

Municipalities play an important role in raising awareness in their community about forecasted hot weather, how to stay safe, asking residents to check in on people who may need extra assistance, and providing information about cooling centers or other local resources to help people stay cool. It is important to develop a basic communication plan in advance of hot weather that includes:

1. Templates for hot weather messages that can be quickly customized.
2. Who is responsible for customizing and sending out messages.
3. What media will be used for outreach (for example, post on municipal Facebook site).
4. The conditions for sending out messages (for example, when NWS issues a Heat Advisory).

See the [resource list](#) at the end of this guide for information and sample media to inform your community about heat safety and preparedness. Follow weather and safety alerts from local media and the following:

- [Vermont Alert](#)
- [Department of Public Safety weather alerts](#)
- [NWS Hazardous Weather Outlook](#)
- Social media: #VTHeatSafety, @healthvermont, @vemvt, @NWSBurlington, @NWSAlbany

Activate or direct residents to a call line to address questions about hot weather

Most Vermonters should call Vermont **2-1-1** for non-emergency assistance during hot weather, such as suggestions of where to go to find air conditioning. Communities can consider activating their own helpline if they would like to provide additional assistance to residents, such as heat safety tips or non-emergency health guidance. Anyone needing emergency assistance should call **9-1-1**.

Community cooling sites

Community cooling sites can be an essential resource for community members who do not have access to air conditioning and need extra assistance to stay safe during hot weather. There is an [online map of known cooling sites in Vermont](#). Community cooling sites can include anything from a library with air conditioning that is open to the public during scheduled hours, to a building specially opened to the public for daytime or overnight cooling, to outdoor sites with shade and water.

After identifying community cooling sites, it is important to have a plan for communicating information about these sites to community members. We encourage communities to [submit cooling site information](#) to the Vermont Department of Health to be displayed on our website and shared with Vermont 2-1-1 and media outlets during hot weather events. Also consider waiving entry fees or finding other ways to reduce barriers for residents to use cooling sites on hot days.

If you think you might need help with staffing a cooling site, please contact your local [Medical Reserve Corps](#) unit or [health office](#) to discuss how to request volunteer assistance.

Identify and assist people needing extra assistance

Hot weather plans should place extra emphasis on strategies to identify people at highest risk for experiencing heat-related health impacts and how to check on them and provide aid as needed. Some examples of identification and assistance strategies include:

- Collaborate with health and human service organizations already operating in the community.
- Register residents in an emergency database such as [CARE](#).
- Encourage and empower residents to take responsibility for their neighbors.

Anyone providing safety checks will also need a protocol for providing assistance as needed, including hydration, transportation, or calling 9-1-1 for emergency assistance.

Establish and encourage policies for modifying or canceling activities

For municipal-sanctioned work or recreational activities, it is important to adopt policies and standards to govern activity modification or cancellation. Considerations should include:

- Plans for acclimating to hot weather by easing into outdoor activities.
- Provision of water, rest, shade, and access to indoor cooling if needed.
- Plans for monitoring for heat-related illness symptoms and providing medical attention, if needed.
- Thresholds for shortening, modifying, or canceling activities.

Mobilize extra emergency response and medical personnel

To supplement normal emergency response staffing, communities can consider activating additional personnel and assigning additional duties during hot weather to support these strategies:

- Surge medical response capacity may be needed during a major emergency.
- Standby personnel for high-risk events or activities.
- Proactive safety checks can be provided to high-risk residents.
- Staff support for cooling sites, water bottle distribution, etc.

Coordinate with utilities to ensure continuous service throughout a heat event

Some utilities have policies for restoring previously disconnected service or avoid disconnecting service during periods of extreme weather. The Vermont Public Utility Commission has [rules prohibiting disconnection](#) of gas, electric, and water service during winter months or if the disconnection would create a health hazard. Contact your local electric utility(ies) to learn more about their policies and discuss how to avoid service disconnections during hot weather.

Exercising the plan

Simulating an emergency exercise can be an effective way to train response personnel to enact the plan, and to identify and correct any planning deficiencies before an actual emergency occurs. Post-exercise evaluation should be a key component. Findings can be used to improve the plan, as discussed in the next section. [Ready.gov](#) provides more guidance on exercising emergency plans.

Evaluating success and improving plans

Hot weather plans should be reviewed and updated on an annual basis, or as needed to improve their effectiveness. Consider the following:

- Conduct a “hot wash” after each hot weather event. Summarize findings and recommendations in an after-action report.
- Count and keep a log of cooling site visitors.
- Collect data from local emergency responders about their hot weather response activities.
- Reach out to organizations that represent high-risk groups to learn how they were affected.

Evaluation findings can be used to inform plan updates, any needed policy or operational changes, and to identify additional resources that may be needed in advance of future hot weather events.

Long-term hot weather adaptation and mitigation

In addition to emergency response planning, it is also important for communities to consider long-term strategies for adapting to increasingly hot weather in Vermont. A [Local Hazard Mitigation Plan](#) (LHMP) is the key place to document hot weather risks in your community, along with the policies, actions, and other strategies that can be implemented over the long term to help mitigate these risks. Municipalities can support long-term hot weather adaptation by adopting LHMP strategies to:

- Raise awareness among residents and local organizations about adaptation strategies,
- Provide incentives for residents and local organizations to pursue adaptation strategies,
- Modify public buildings and landscapes to be better adapted to hot weather, and
- Develop or revise local plans and policies to better support hot weather resilience.

Resources and examples

Background and heat safety

- [Hot Weather and Health Impacts](#) (Vermont Department of Health)
- [Illness and Death due to Hot and Cold Weather](#) (Vermont Department of Health)
- [Heat Safety Tips and Resources](#) (National Weather Service)
- [Extreme Heat](#) (Ready.gov)
- [Climate Change and Extreme Heat](#) (Centers for Disease Control and Prevention)
- [Warning Signs and Symptoms of Heat-Related Illness](#) (Centers for Disease Control and Prevention)

Heat and health data

- [Vermont Heat Vulnerability Index](#) (Vermont Department of Health)
- [Seasonal and yearly heat illness data](#) (Vermont Department of Health)
- [Heat and Health Tracker](#) (Centers for Disease Control and Prevention)

Planning for hot weather events

- [Local Emergency Management Plans](#) (Vermont Emergency Management)
- [Heat Response Plans](#) (Centers for Disease Control and Prevention)

- [Excessive Heat Events Guidebook](#) (Environmental Protection Agency)
- [Heat Alert and Response Systems to Protect Health](#) (Health Canada)

Heat safety outreach

- [Hot Weather Media Toolkit](#) (Vermont Department of Health)
- [Heat Safety Outreach](#) (National Weather Service)
- [Vermont Alert](#) (Vermont Emergency Management)

Community cooling sites

- [Community Cooling Site Map](#) (Vermont Department of Health)
- [Community Cooling Center Guidance](#) (Vermont Department of Health)
- [The Use of Cooling Centers to Prevent Heat-Related Illness](#) (Centers for Disease Control and Prevention)

Identifying and assisting people needing extra assistance

- [Citizens Assistance Registry for Emergencies](#) (Vermont Enhanced 911)
- [Block Captains](#) (Bountiful, Utah)
- [Be a Buddy Program](#) (Hunts Point, New York City)

Establish and encourage policies for modifying or canceling activities

- [Working in the Heat – What to Know for Workers](#) (Vermont Department of Labor)
- [Procedure for Athletic Participation in the Heat](#) (Vermont Principals' Association)
- [Vermont Child Care Licensing Regulations](#) (Vermont Department for Children and Families)

Exercising and evaluating the plan

- [Exercises](#) (Ready.gov)
- [Hot wash and after-action review guidance](#) (Minnesota Department of Health)
- [After Action Review of the June 2021 Excessive Heat Event](#) (Oregon)
- [Cooling facility visitor survey and evaluation report](#) (Maricopa County, Arizona)

Hazard mitigation planning

- [Local Hazard Mitigation Planning](#) (Vermont Emergency Management)
- [Vermont State Hazard Mitigation Plan, Extreme Heat](#) (Vermont Emergency Management)
- [Vermont State Climate Summary](#) (National Oceanic and Atmospheric Association)
- [Vermont Climate Assessment](#) (University of Vermont)

Long-term adaptations to hot weather

- [Planning for Urban Heat Resilience](#) (American Planning Association)
- [Vermont Weatherization Assistance Program](#) (Vermont Department for Children and Families)
- Weatherization Programs: [Efficiency Vermont](#), [Vermont Gas](#), [NeighborWorks of Western VT](#)
- [Air Conditioning and Heat Pumps](#) (Efficiency Vermont)
- [Community Canopy Program](#) (Vermont Urban and Community Forestry Program)
- [Urban Heat information and mitigation strategies](#) (Environmental Protection Agency)