



# Climate change in Vermont

Health impacts and responses



Jared Ulmer

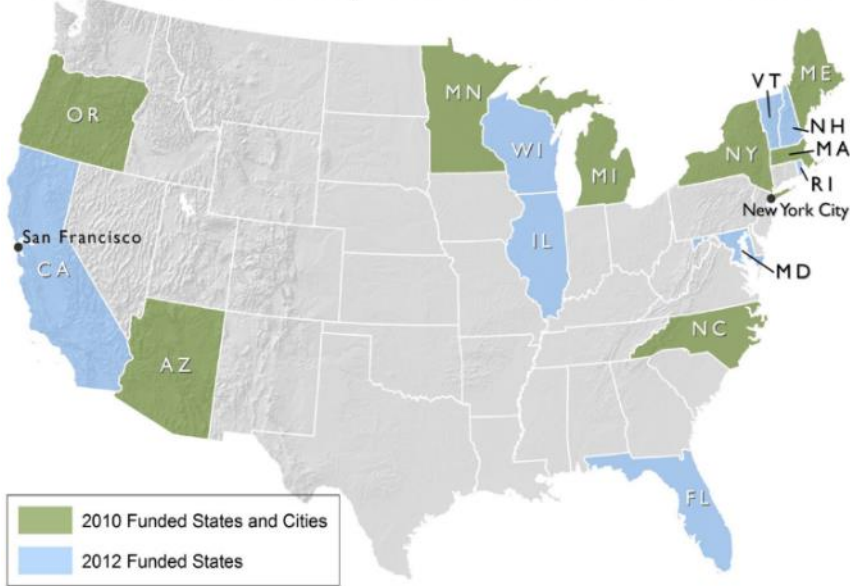
Climate & Health Program Manager

March 12, 2020

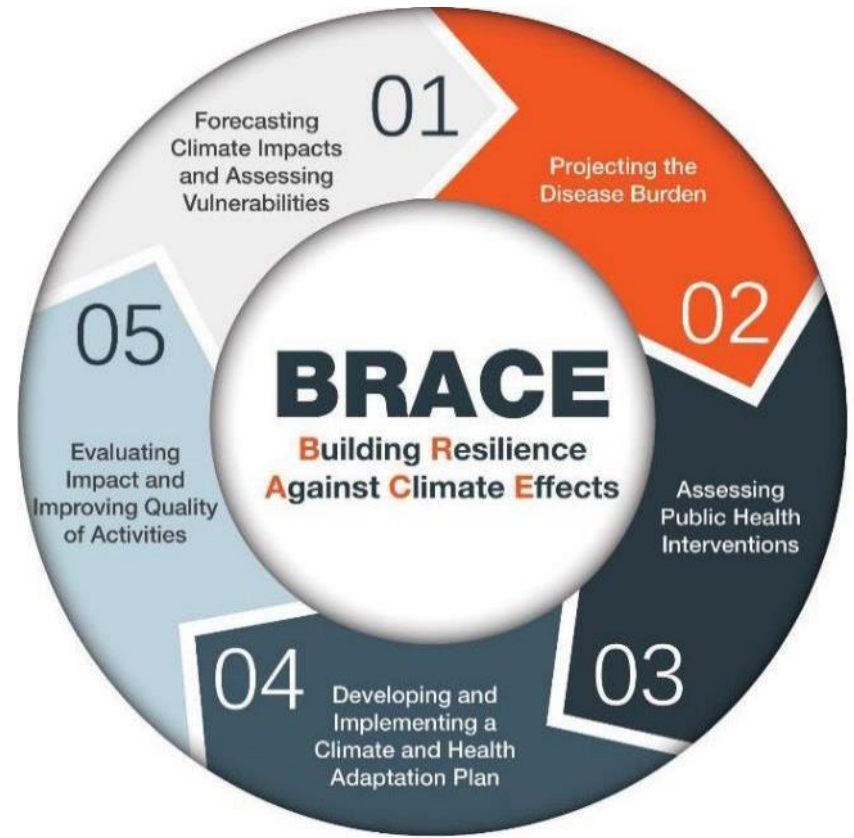


# Building Resilience Against Climate Effects

CDC Climate Ready States and Cities Initiative



**16 states, 2 cities**

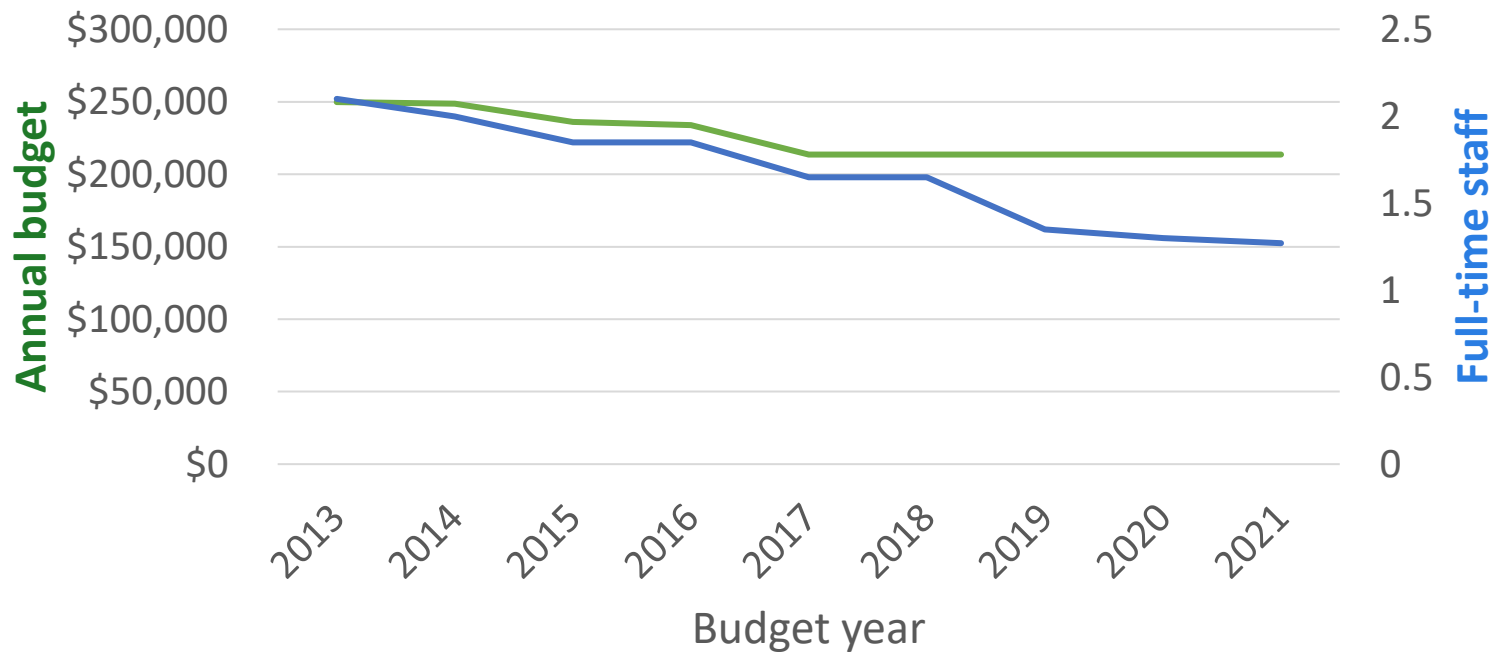


# Climate & Health program context

2012-2016 – assessment & planning phase

2016-2021 – implementation & monitoring phase

Beyond 2021 - ???



# Assessing climate change health risks and responses

## Vermont Climate and Health Profile Report

Building Resilience against Climate Change in Vermont

September 2016



 **VERMONT**  
DEPARTMENT OF HEALTH

Division of Environmental Health

healthvermont.gov

## Climate Change & Health in Vermont



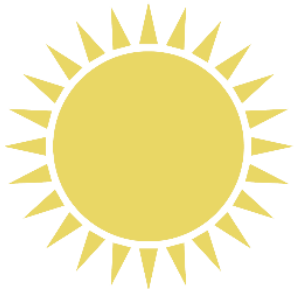
October 2017

Prepared for the 2017  
Agency of Natural Resources  
White Paper Series on Climate Change

 **VERMONT**  
DEPARTMENT OF HEALTH

# Focus areas identified in the Climate & Health Profile Report

Hot weather



Extreme storm events



Tick & mosquito-borne diseases



Mental health



Water & food-borne diseases



Cyanobacteria



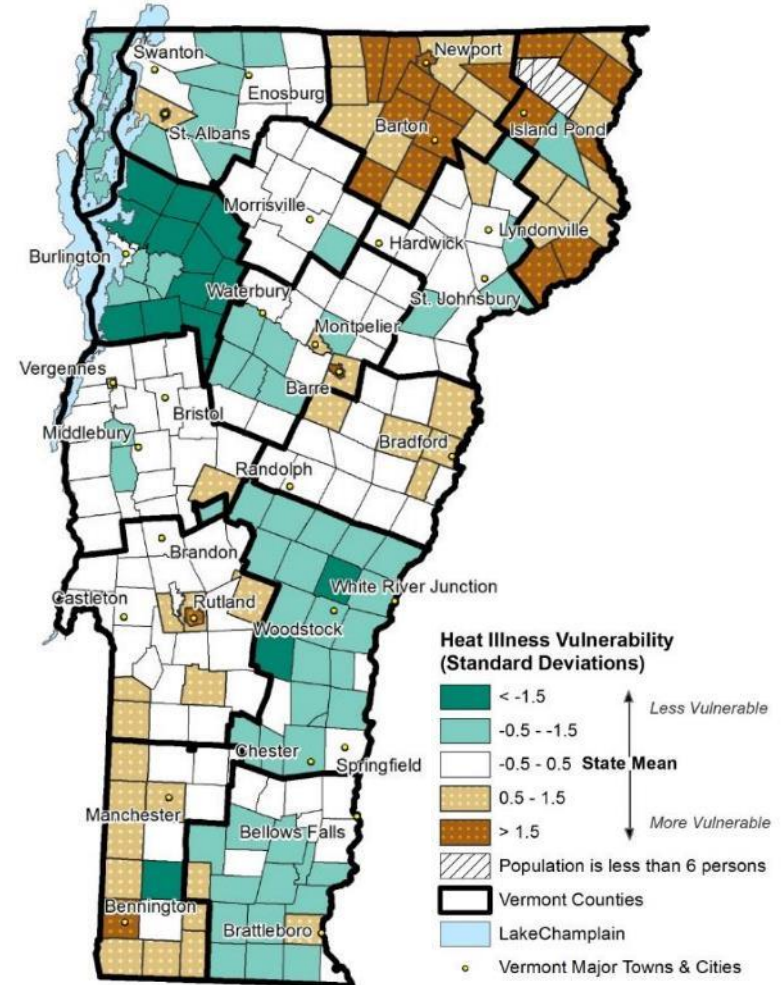
Pollen and air pollution



# Vulnerability assessments

Vulnerability Type	Health Impact Area						
	Extreme Heat	Extreme Weather	Water/Foodborne Diseases	Vector-Borne Diseases	Cyano-bacteria	Asthma, Allergies & Air Quality	
Older adults	X	X	X	X		X	
Children and teenagers	X	X	X	X	X	X	
People with chronic health conditions	X	X	X	X		X	
New Vermonters (refugee and other foreign-born)	X	X	X	X		X	
People with limited socioeconomic resources	X	X				X	
People living alone	X	X					
People who are homeless or housing-insecure	X	X		X		X	
Users of private wells and small water systems			X				
Outdoor workers	X	X		X		X	
Outdoor recreationalists	X		X	X	X	X	
Mobile home communities	X	X	X				
Urban areas (more impervious surfaces, less tree canopy)	X	X					
Remote areas with long drive times to hospitals	X	X					
Flood plains		X	X	X			
Mountain valleys prone to temperature inversions						X	
Locations near recreational waters			X		X		
Forest/field edges and trails where ticks thrive				X			
Areas near stagnant water				X			

Table 1. People and places that are at elevated risk for particular climate hazards are indicated by an "X".



# Implementing adaptation strategies

## Primary goals

Goal	Desired outcome
1. Raise Climate & Health Awareness	Vermont residents, organizations, and local and state leaders are aware of climate-related health impacts and the health impacts of climate actions
2. Support Healthy Climate Mitigation Actions	Vermont residents, organizations, and local and state leaders pursue climate change mitigation actions that provide health co-benefits
3. Strengthen Community Resilience	Vermont communities are prepared to reduce climate-related health impacts

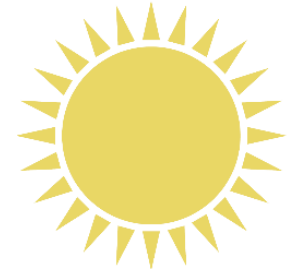
## Secondary goals

Goal	Desired outcome
4. Build Health Department Capacity	The Vermont Department of Health is prepared to reduce climate-related health impacts
5. Reduce Environmental Hazards	Natural and built environments in Vermont are resilient to the impacts of climate change
6. Strengthen Individual Resilience	Vermont residents are prepared to protect themselves from climate-related health impacts



# Key accomplishments & ongoing activities

- **Hot weather preparedness**
  - Heat impact data monitoring & analysis
  - National Weather Service heat advisory threshold
  - Heat safety website, handouts
  - Outreach toolkit, communications protocols
  - Energy-saving trees program
  - Hot Weather Workgroup
    - Hot weather emergency response plan
    - **Community cooling centers / emergency shelters**
    - Home cooling assistance
    - Support community outreach to high-risk households





# Key accomplishments & ongoing activities

- **Outreach and awareness raising**
  - Over 100 presentations, trainings, workshops (since 2015)
  - Developed communications products: website, press releases, reports, handouts, blog posts, social media
  - Developed online climate & health training course:



# Key accomplishments & ongoing activities

- **Promoting healthy climate actions**

- Comprehensive Energy Plan
- Weatherization + Health report and handout
- Transportation + Health analysis and handout
- Ongoing collaboration w/ state and regional partners



- **Pollen & air quality (Asthma Program / DEC Air Quality)**

- Pollen data tracking
- Wood heat & indoor air quality guidance
- Air pollution vulnerability index



# Key accomplishments & ongoing activities

- **Cyanobacteria (Recreational Water Program)**



- Cyanobacteria monitoring and toxin testing
- Cyanobacteria tracking website
- Drinking water system monitoring & response plans
- Cyanobacteria monitoring stakeholder committee

- **Tickborne/mosquito-borne diseases (Infectious Disease)**

- Tick surveillance and pathogen testing
- Outreach campaigns
- Tick Tracker





# Thank you!

## Let's stay in touch.

**Email:** [ClimateHealth@vermont.gov](mailto:ClimateHealth@vermont.gov)

**Web:** [www.healthvermont.gov](http://www.healthvermont.gov)

**Social:** [@healthvermont](https://twitter.com/healthvermont)