

Vermont Climate Assessment 2025

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Vermont Climate Council

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Gund Institute for Environment
Climate Measurements Center of Excellence



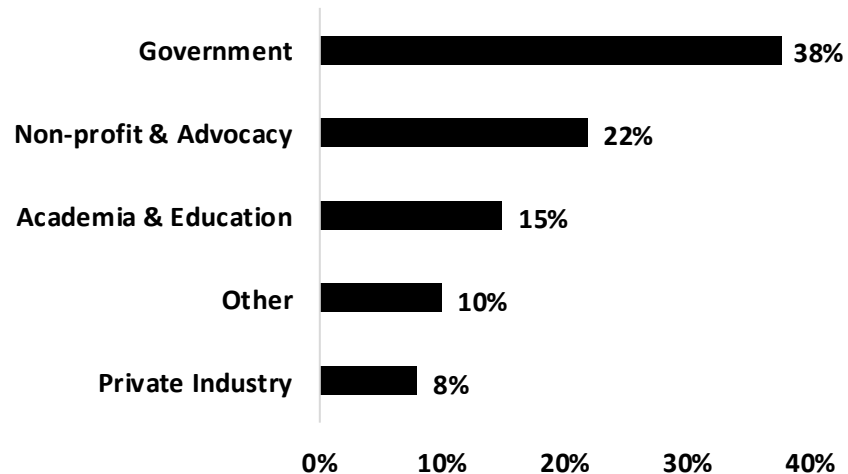
Vermont Climate Assessment 2025 & beyond

- Highlights of VCA 2025
- Climate Measurements Center of Excellence (CMeC)
- State Climate Assessments (SCAs)
- Looking ahead to VCA 2030

By the numbers

195+

Stakeholders



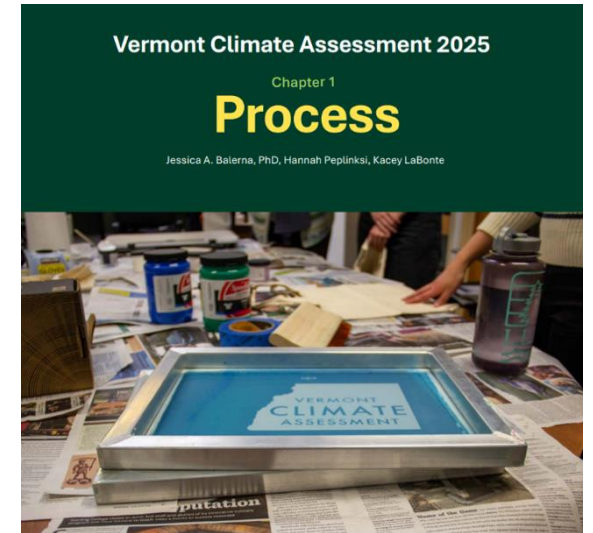
42

Authors

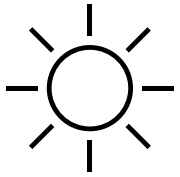


11

Chapters



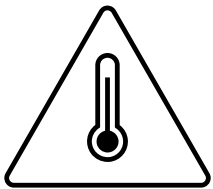
Key Messages



Vermont's climate is becoming warmer, wetter, and more variable



Shifting seasons are transforming how Vermonters live, work, and play



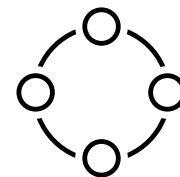
A hotter Vermont increases risks to people, farms, and infrastructure



Vermont is experiencing unprecedented weather extremes

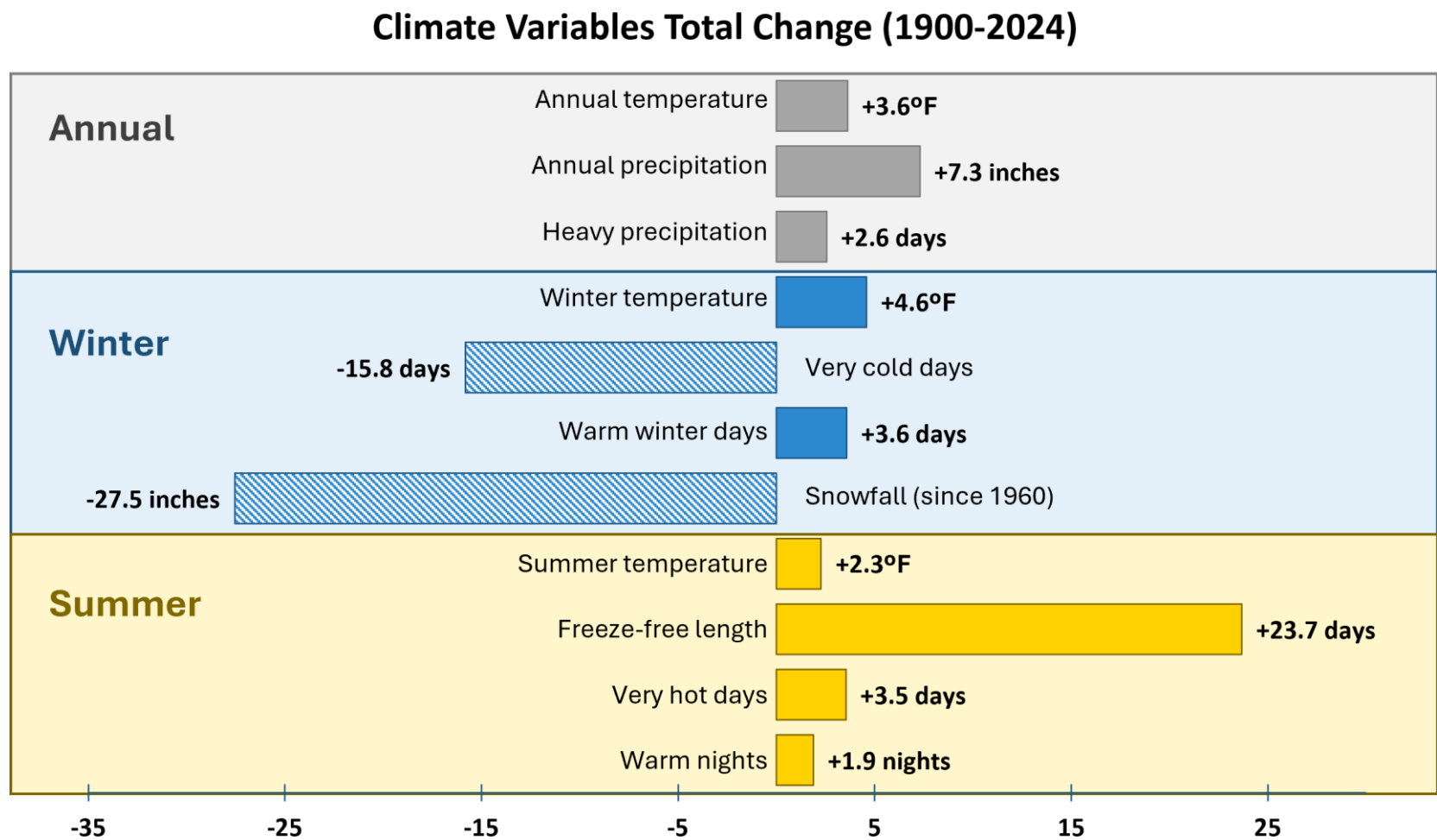


Water is a central climate challenge for Vermont, across all seasons and sectors



Climate risks are interconnected and compounding—requiring action now

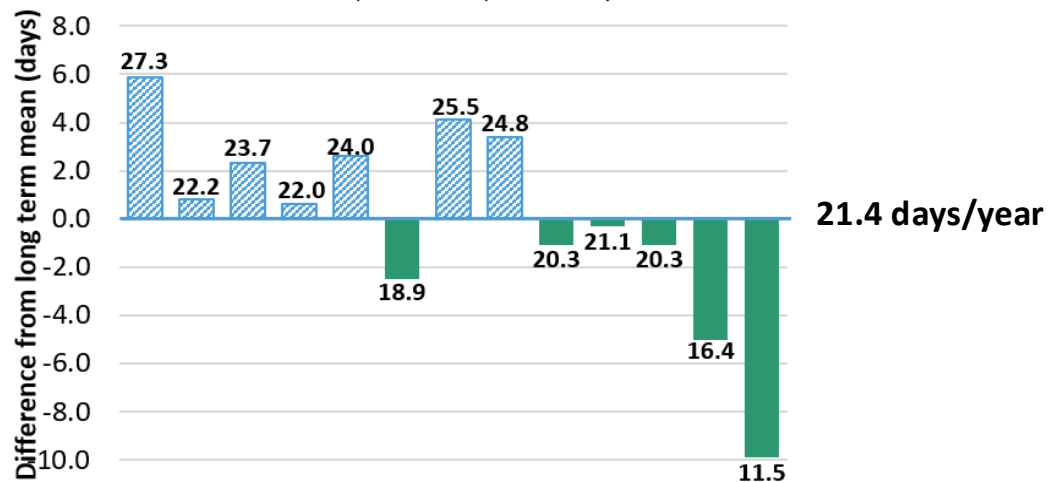
Vermont's climate is becoming warmer, wetter, and more variable



Winter

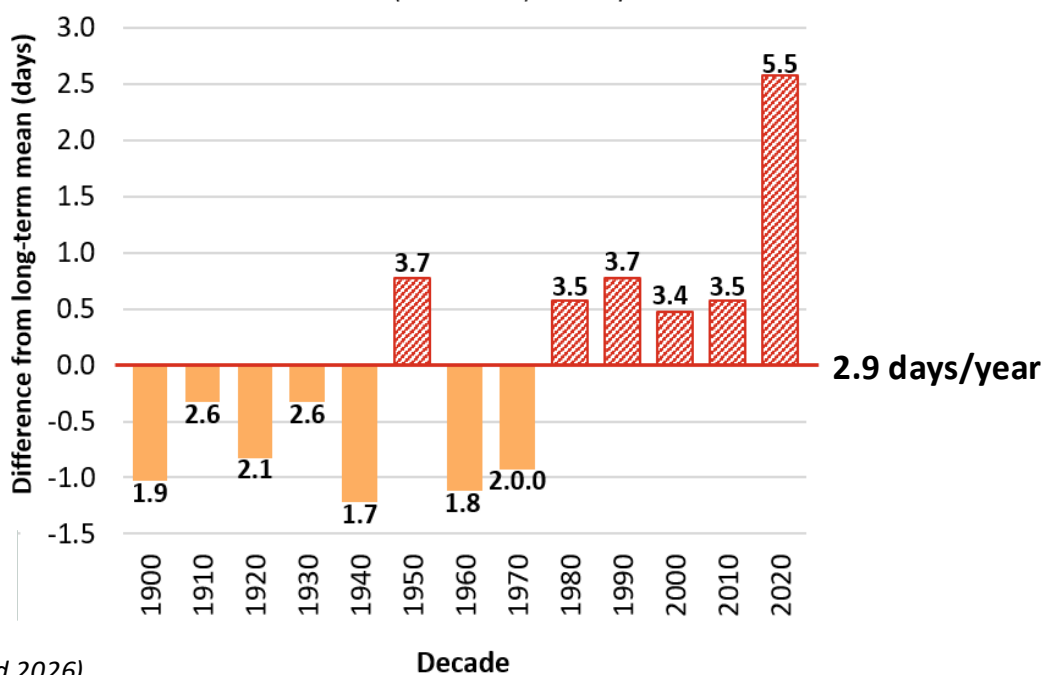
Very Cold Days (Min T. <0°F)

Mean (1900-2024) = 21.4 days



Warm Winter Days (Max T. >50°F)

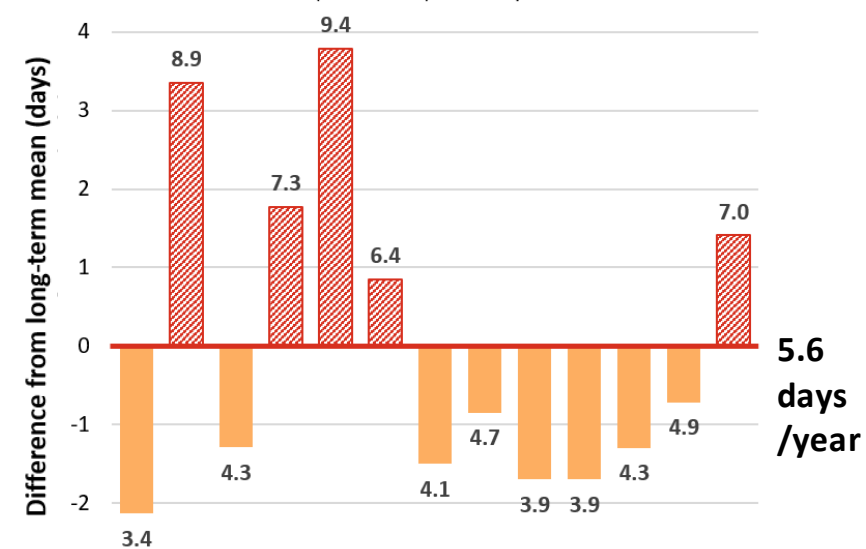
Mean(1900-2024)=2.9 days



Summer

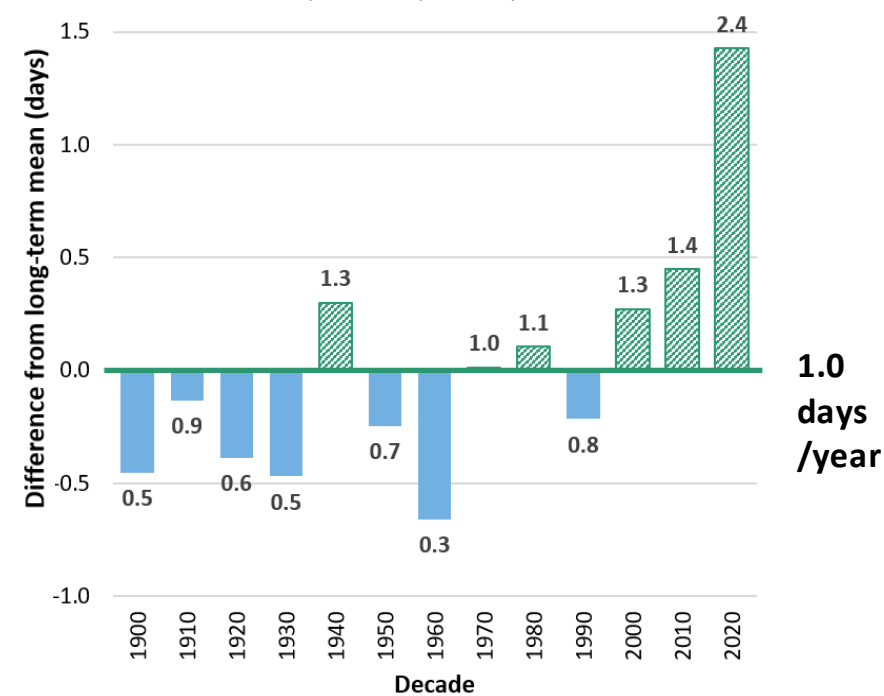
Hot Days (Max T. >90°F)

Mean (1900-2024) = 5.6 days

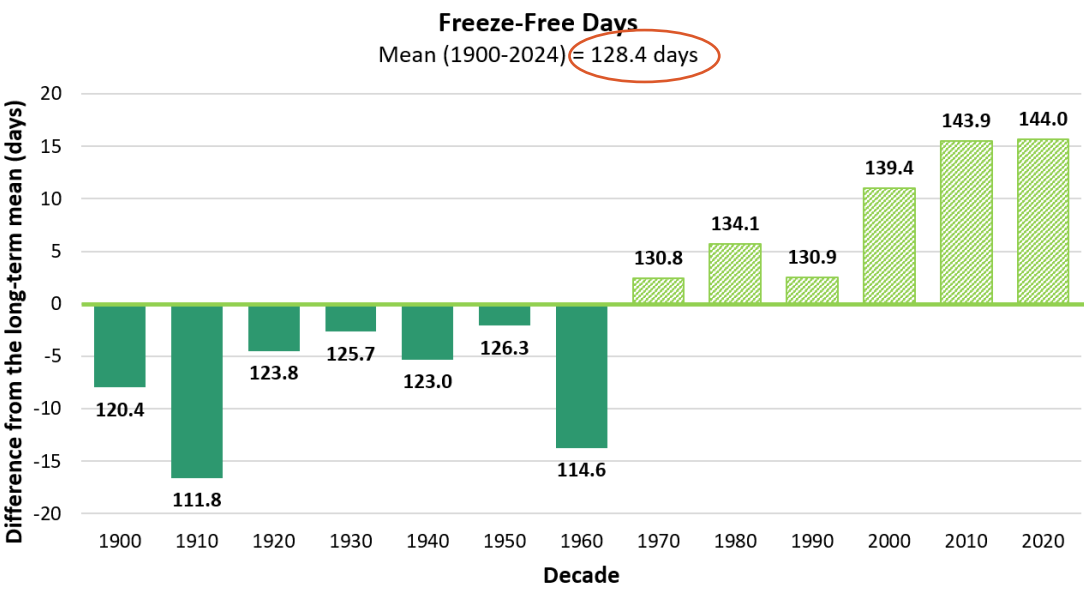


Warm Nights (Min T. >70°F)

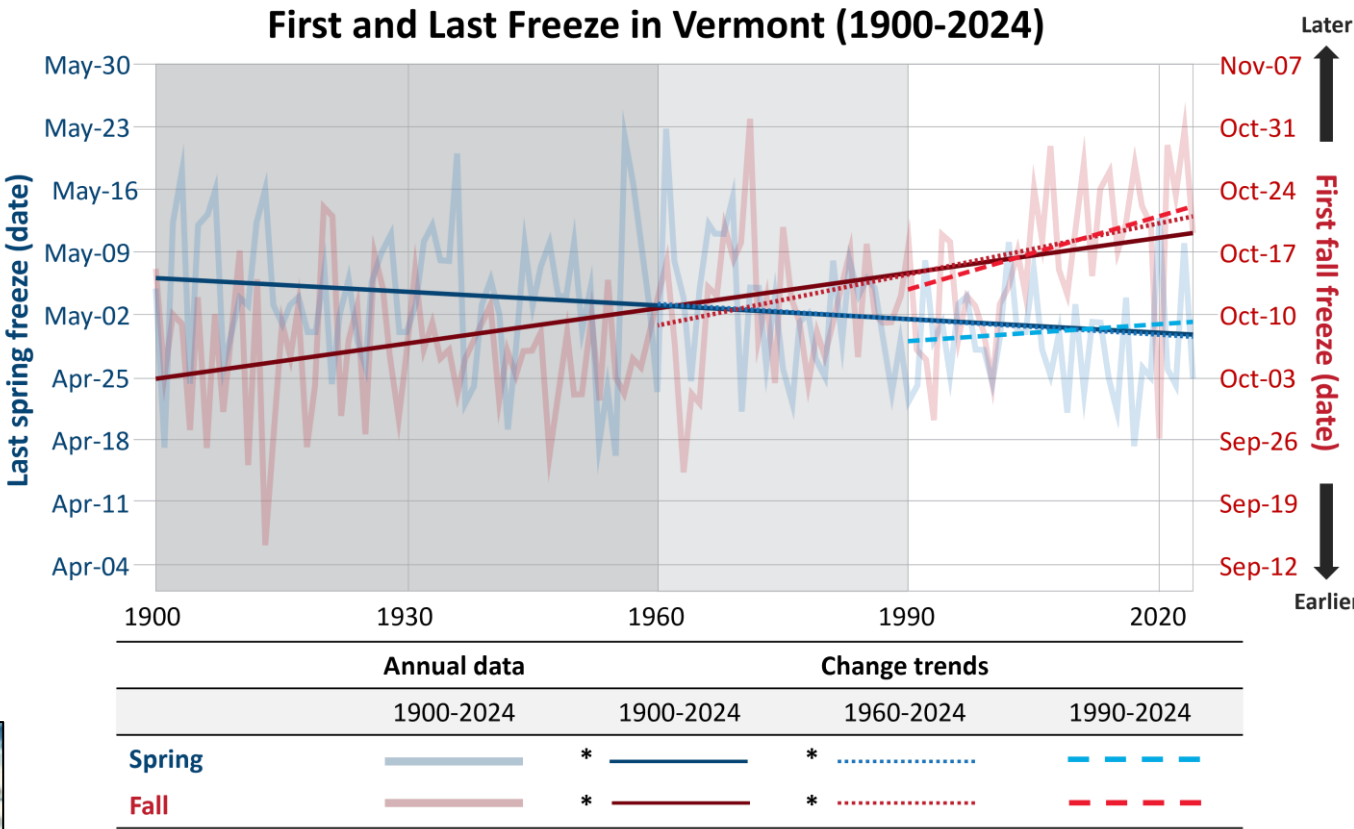
Mean (1900-2024) = 1.0 days



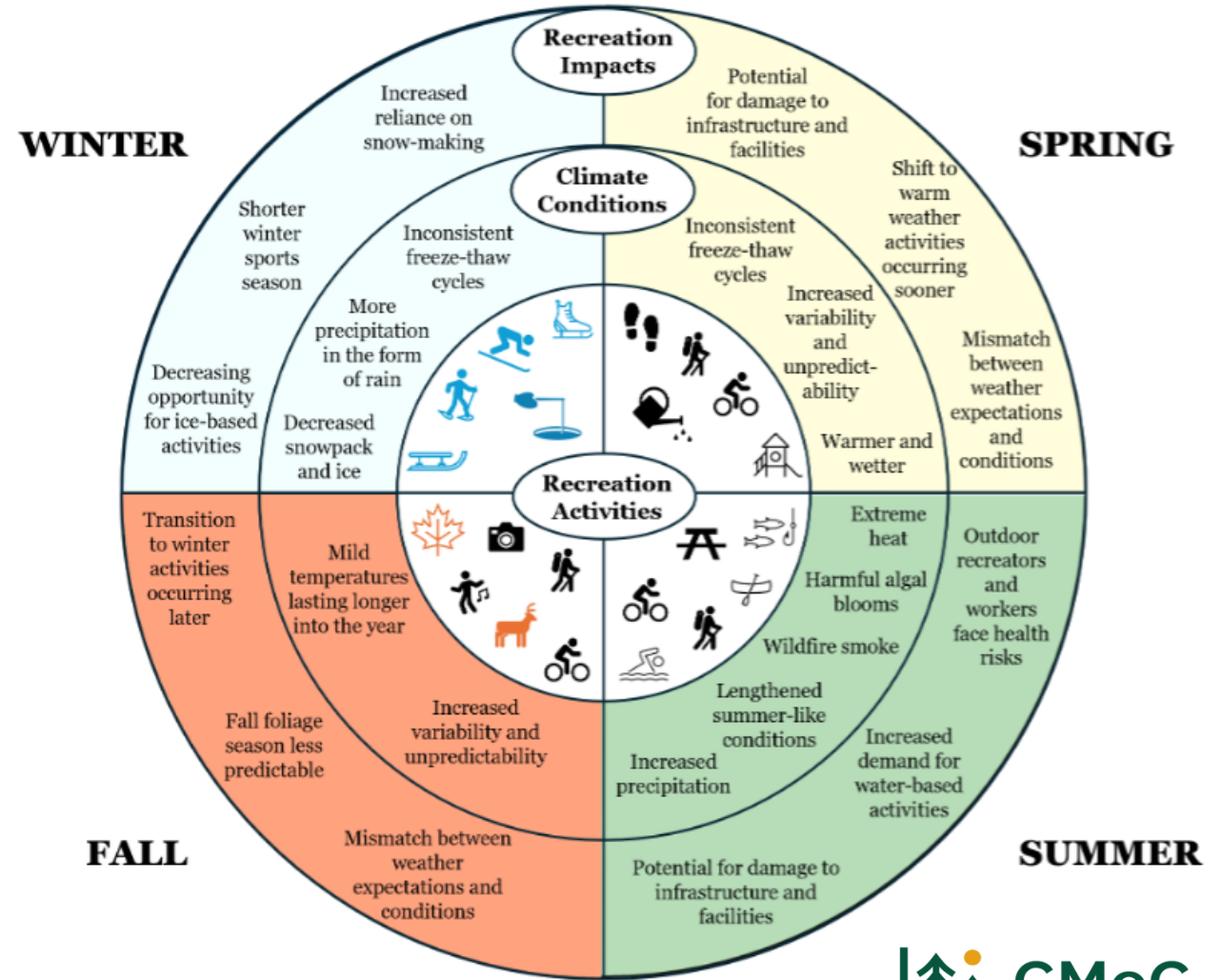
Shifting seasons are transforming how Vermonters live, work and play



Credit: Vermont Public

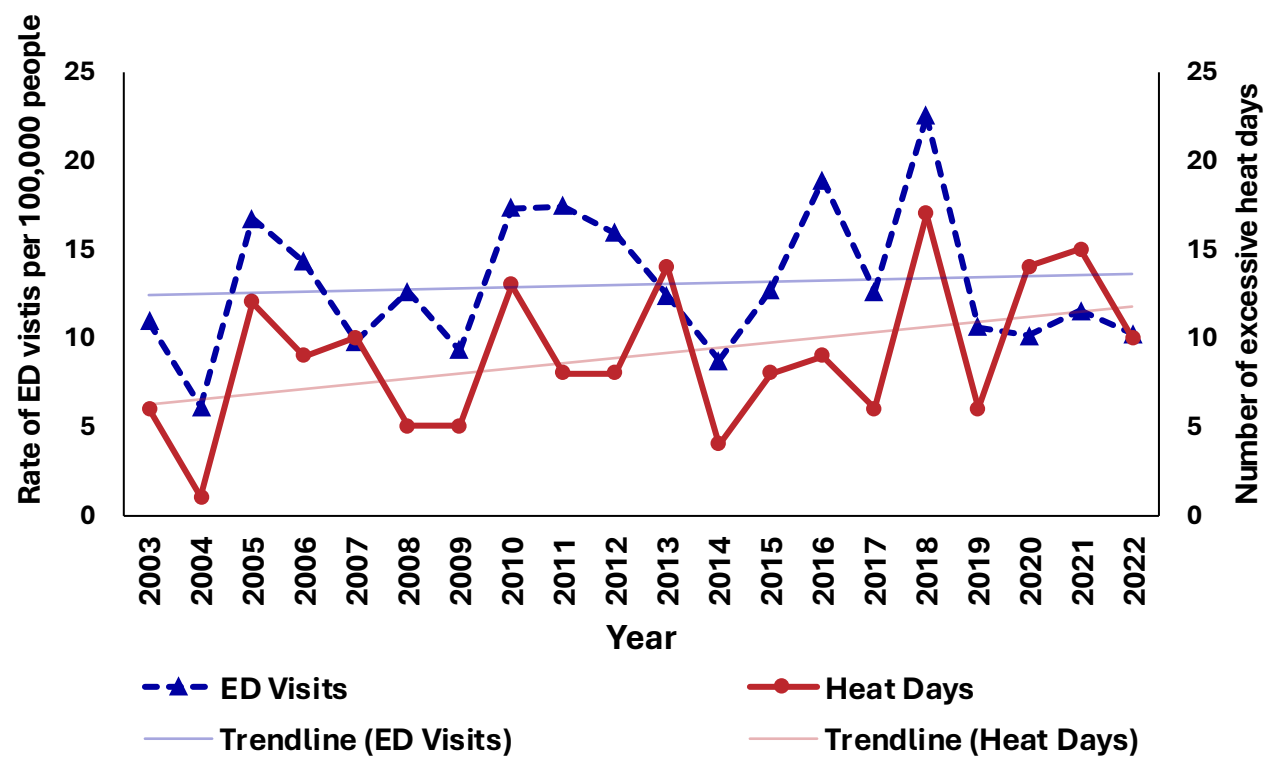


Shifting seasons are transforming how Vermonters live, work and play

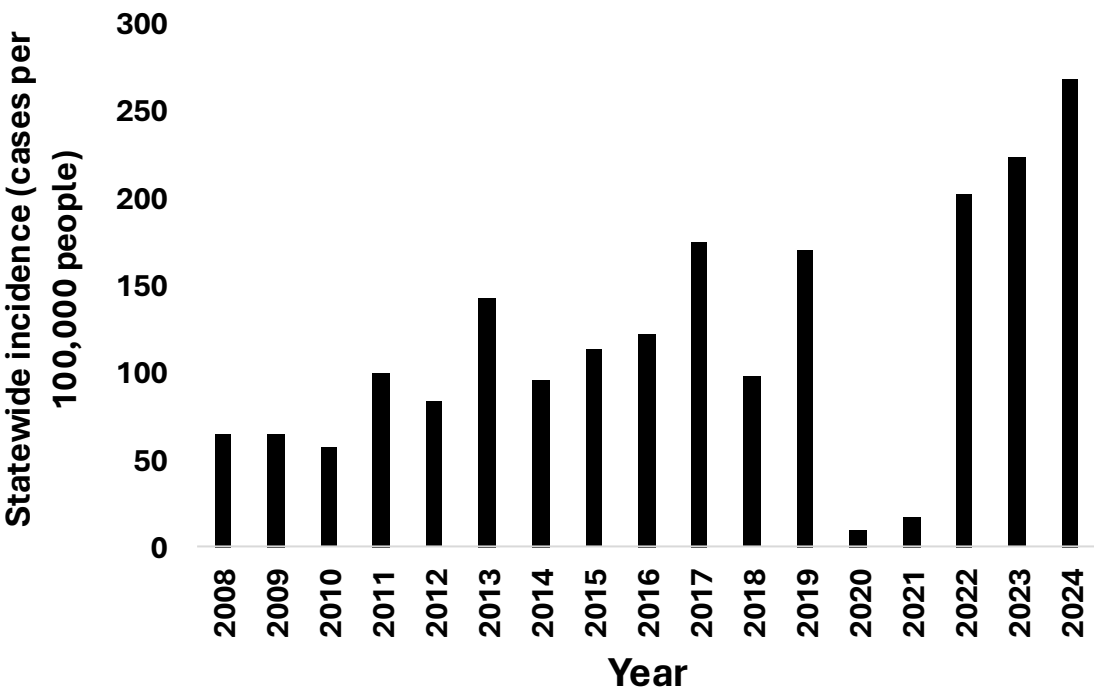


A hotter Vermont increases risks to **people**, farms, and infrastructure

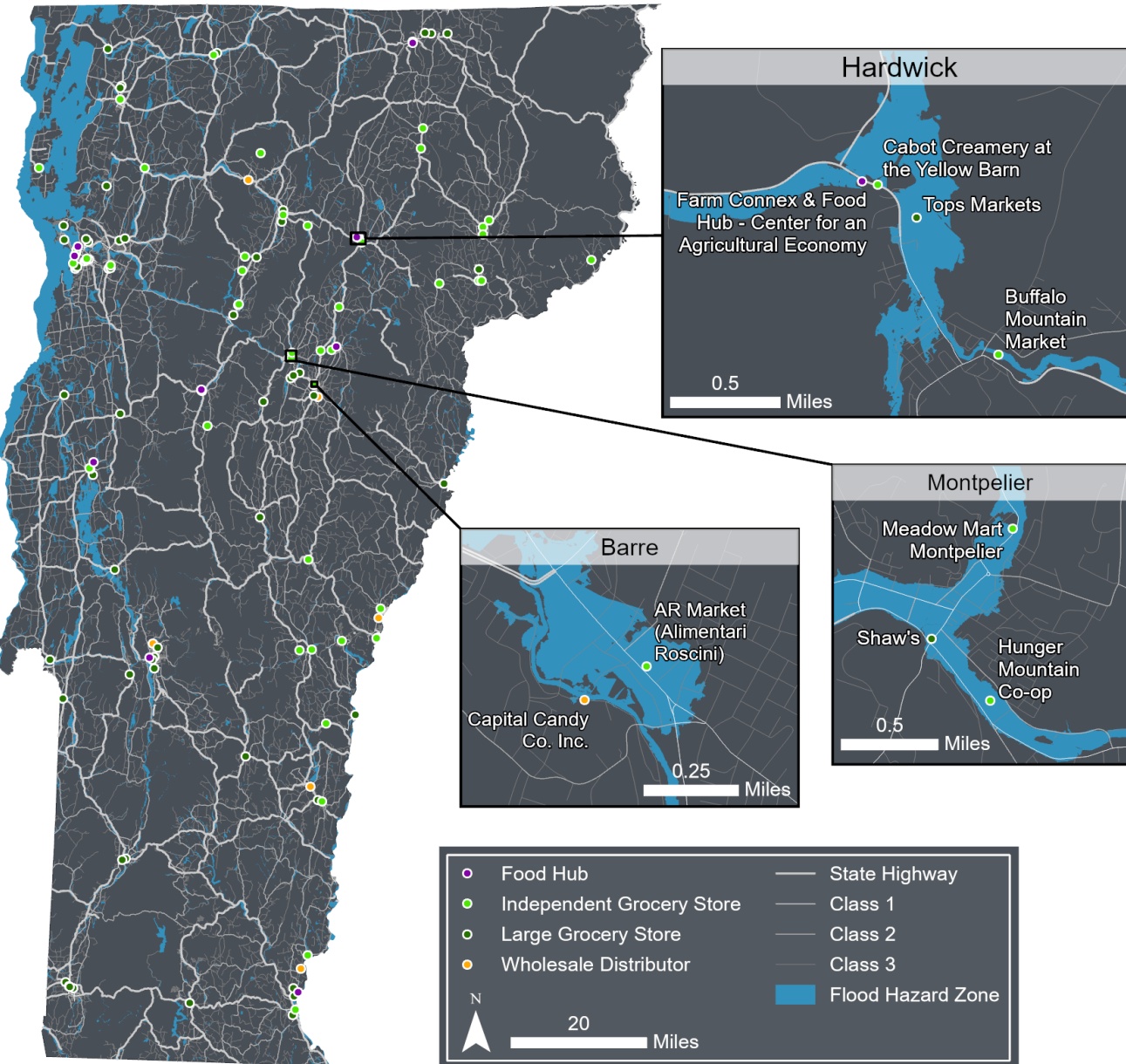
Heat-related emergency department (ED) visits and excessive heat days have increased together



Rates of Lyme disease increased about four-fold between 2008–2024 and new diseases may emerge



Food system



Vermont is experiencing unprecedented weather extremes

- >\$82M: food system losses in 2023 & 2024 due to extreme weather
- 55%: farmers who cannot afford to deal with extreme weather impacts

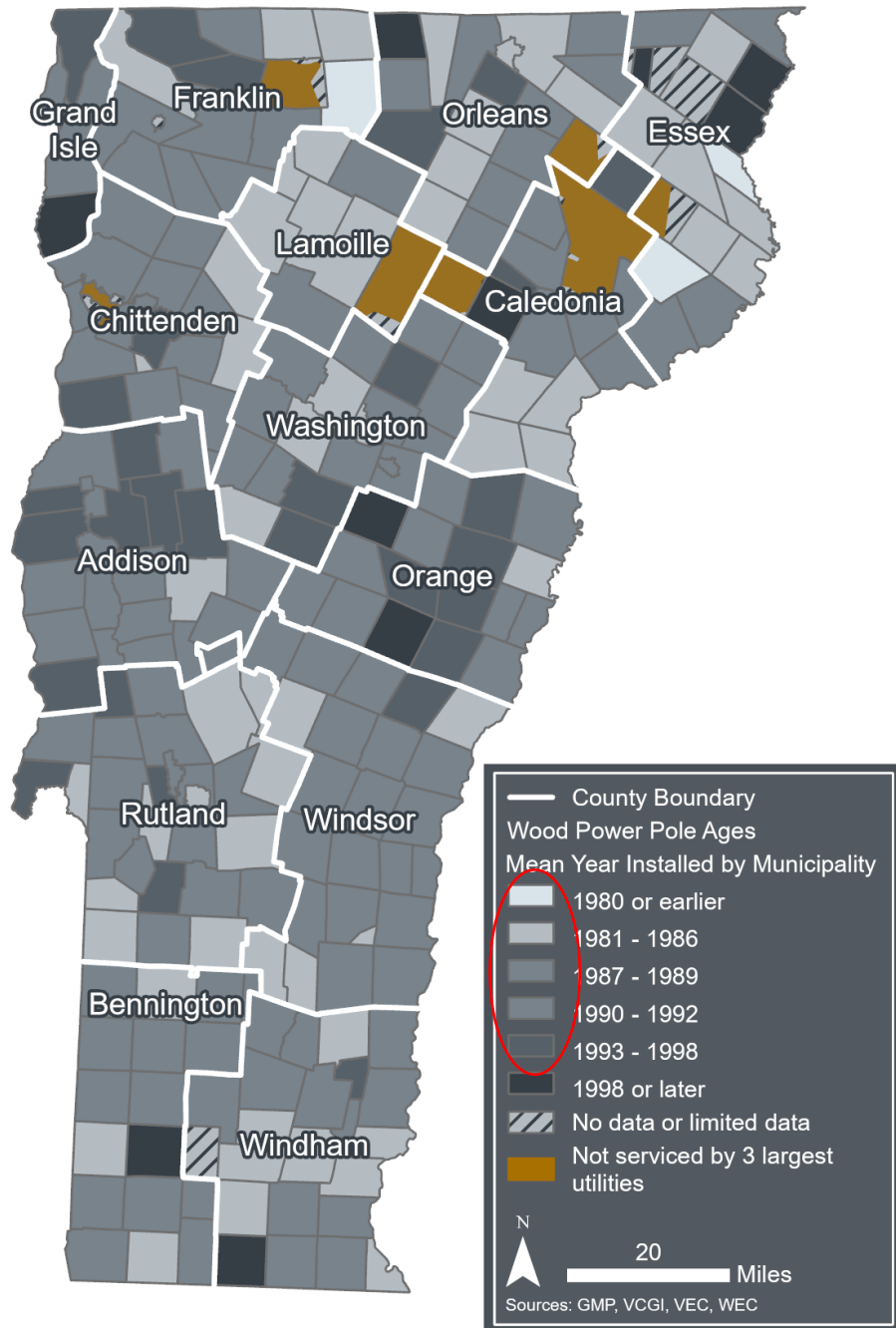
Farm



Credit: UVM

Vermont is experiencing unprecedented weather extremes

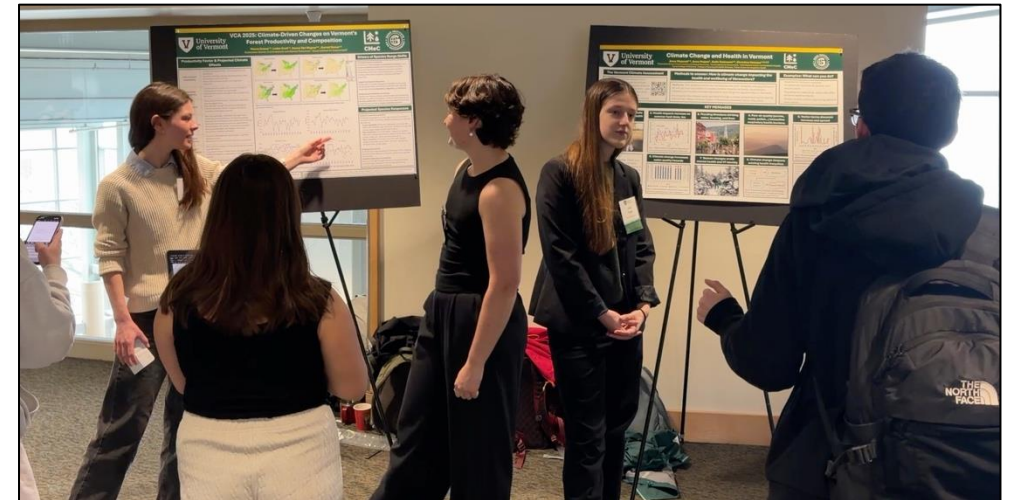
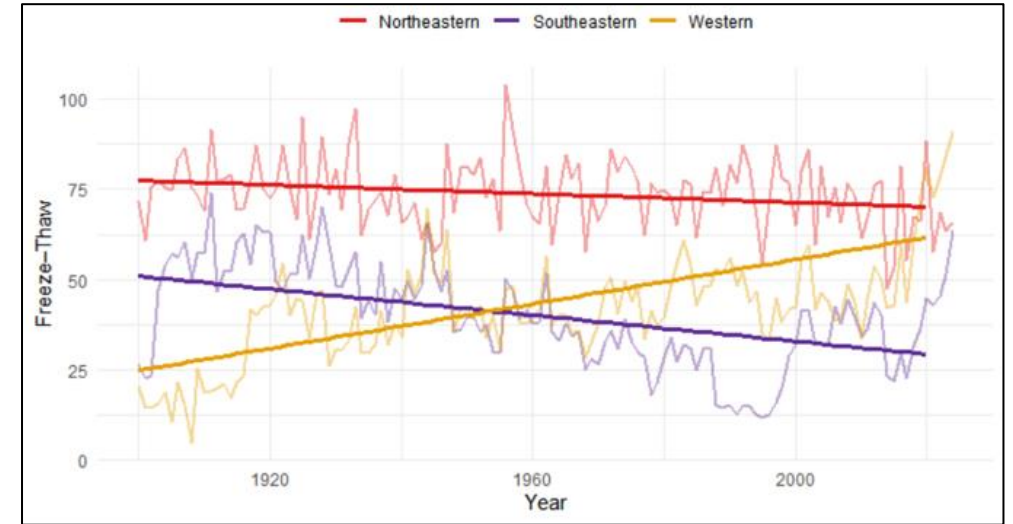
- Old poles snap in high winds, time consuming and costly to replace
- Wooden power poles are rated for 30-50 years of use
- Most VT power poles are decades beyond this safe age



Credit: VEC

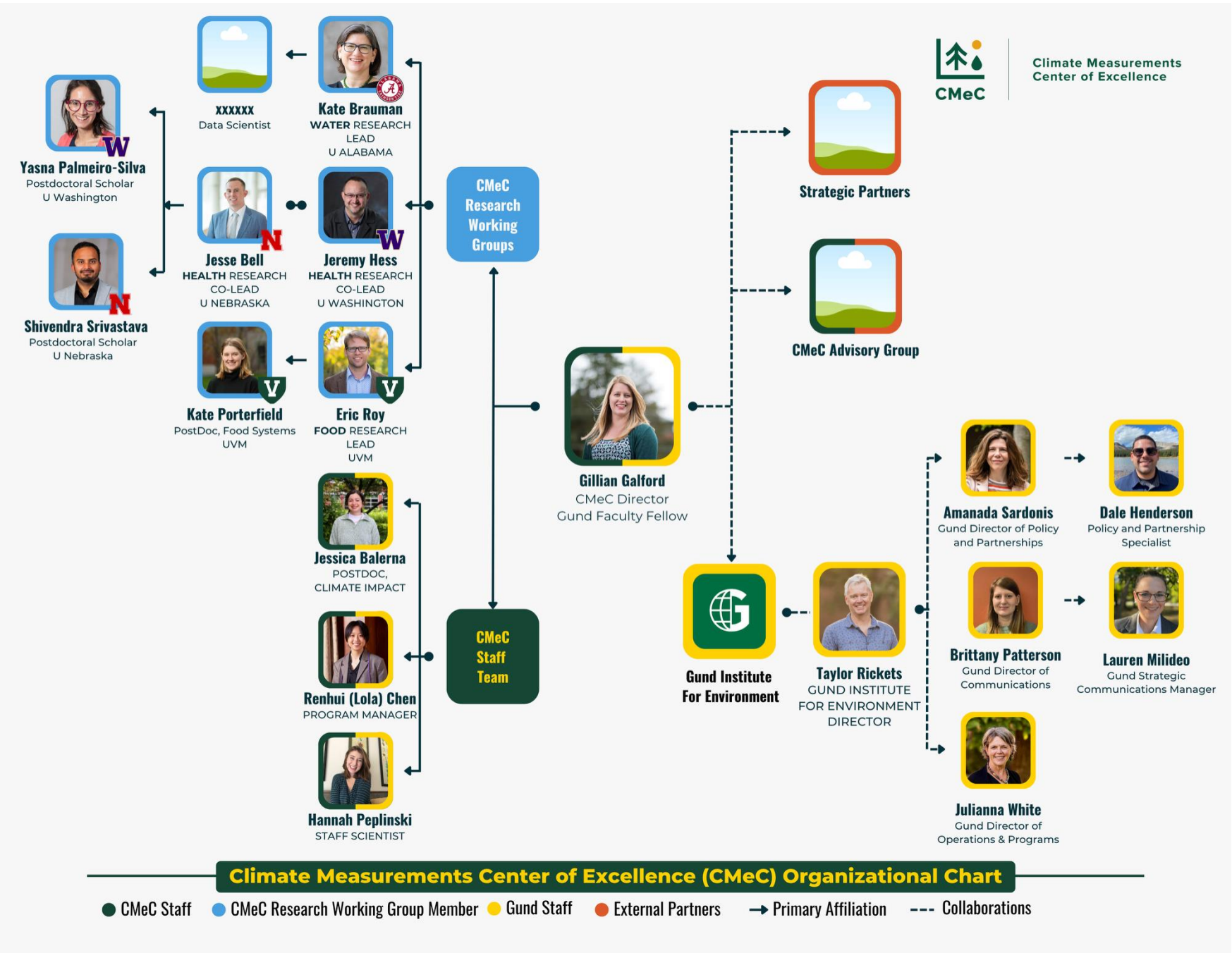
What's next for the Vermont Climate Assessment ?

- Continued outreach
 - Flooding and heat/drought briefs
 - Impacts by climate division briefs
 - Connections with emerging climate concerns
 - Tailored talks and presentations
- Up next... VCA 2030!



Climate Measurements Center of Excellence

Local
Science.
National
Impact.



Climate Measurements Center of Excellence

Build community



University of Vermont



Gund Institute for Environment
Climate Measurements Center of Excellence



CMeC

CLIMATE CONNECTIONS FOR CLIMATE ASSESSMENTS PRESENTER INVITATION

"Climate Connections" is a conversation series from UVM's Climate Measurements Center of Excellence (CMeC) bringing together experts advancing climate assessments across the U.S.
Help strengthen and standardize assessments, exchange insights with peers, and build national connections that shape future assessments.

WHAT WE'D LIKE YOU TO SHARE ABOUT

- What catalyzed your climate assessment?
- How has your team incorporated the needs and expertise of local stakeholders?
- What structure does your assessment take?
- Where does the information in your assessment come from?
- What impact has your assessment had?
- What were some of the biggest challenges that your team faced?
- What tools or strategies would you like to learn more about from other assessment authors and CMeC?

Standardize guidance

Sector

Impact relevant domains of human and/or natural system categories

Sub-Sector

Focus areas within the sector that experience climate impacts in related ways

Issue

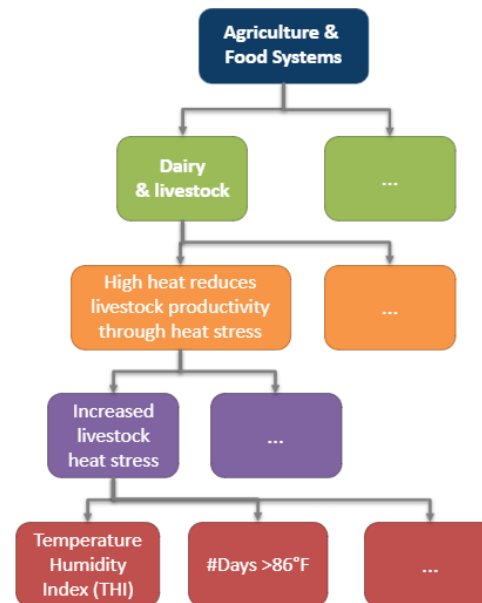
Qualitative description of the expected concern regarding impact of climate change

Indicator

Mechanistic description of how the issue could be quantified

Metric

Specifics of how to quantify or measure the indicator



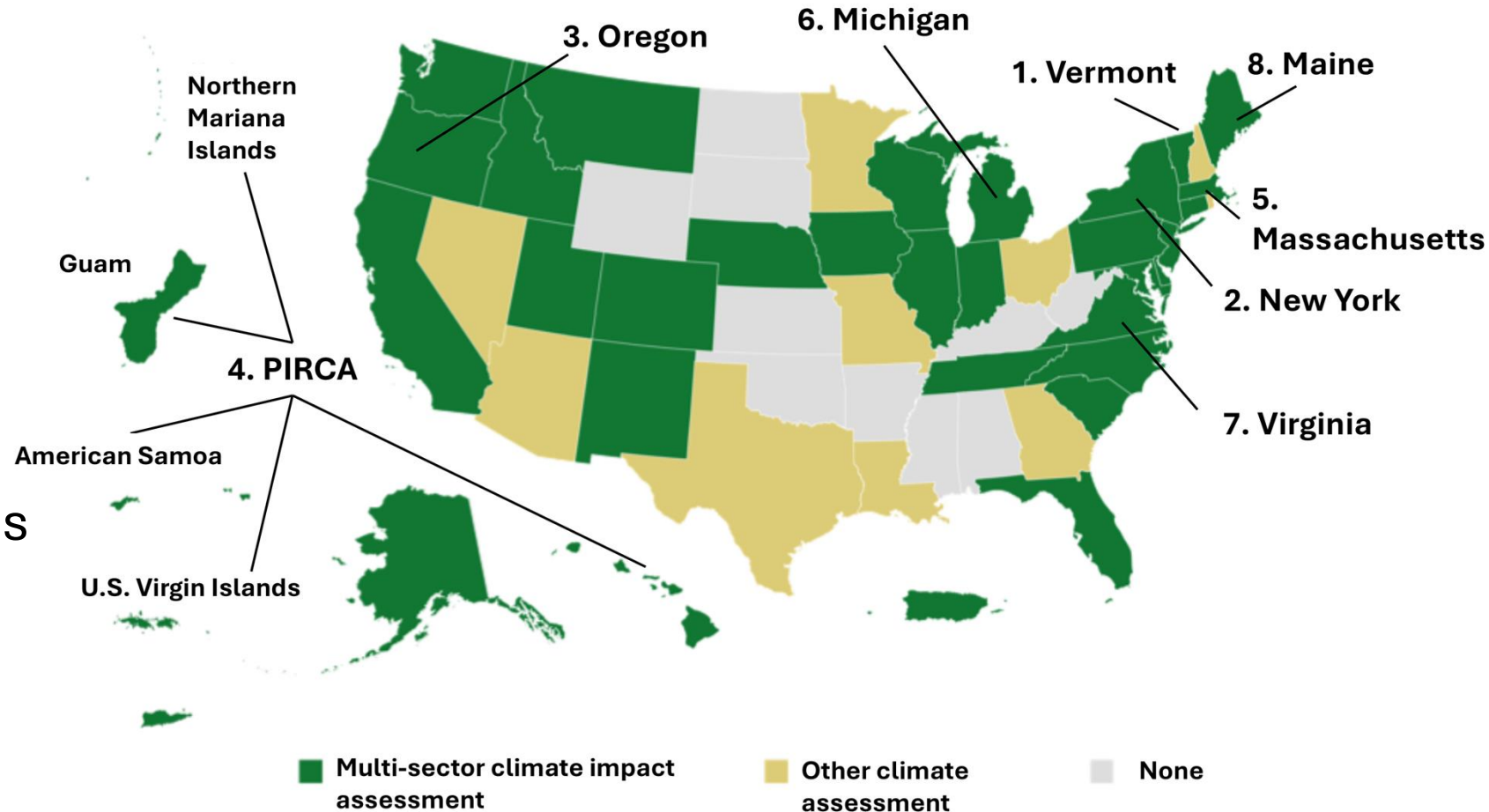
Adapted from Brauman et al. (in review)

Pilot practices in VCA 2025



Climate Connections

- Share *process & methods* (often unavailable publicly), not results
- Long Q&A session to learn from each other
- Generate guiding principles for SCA processes & methods

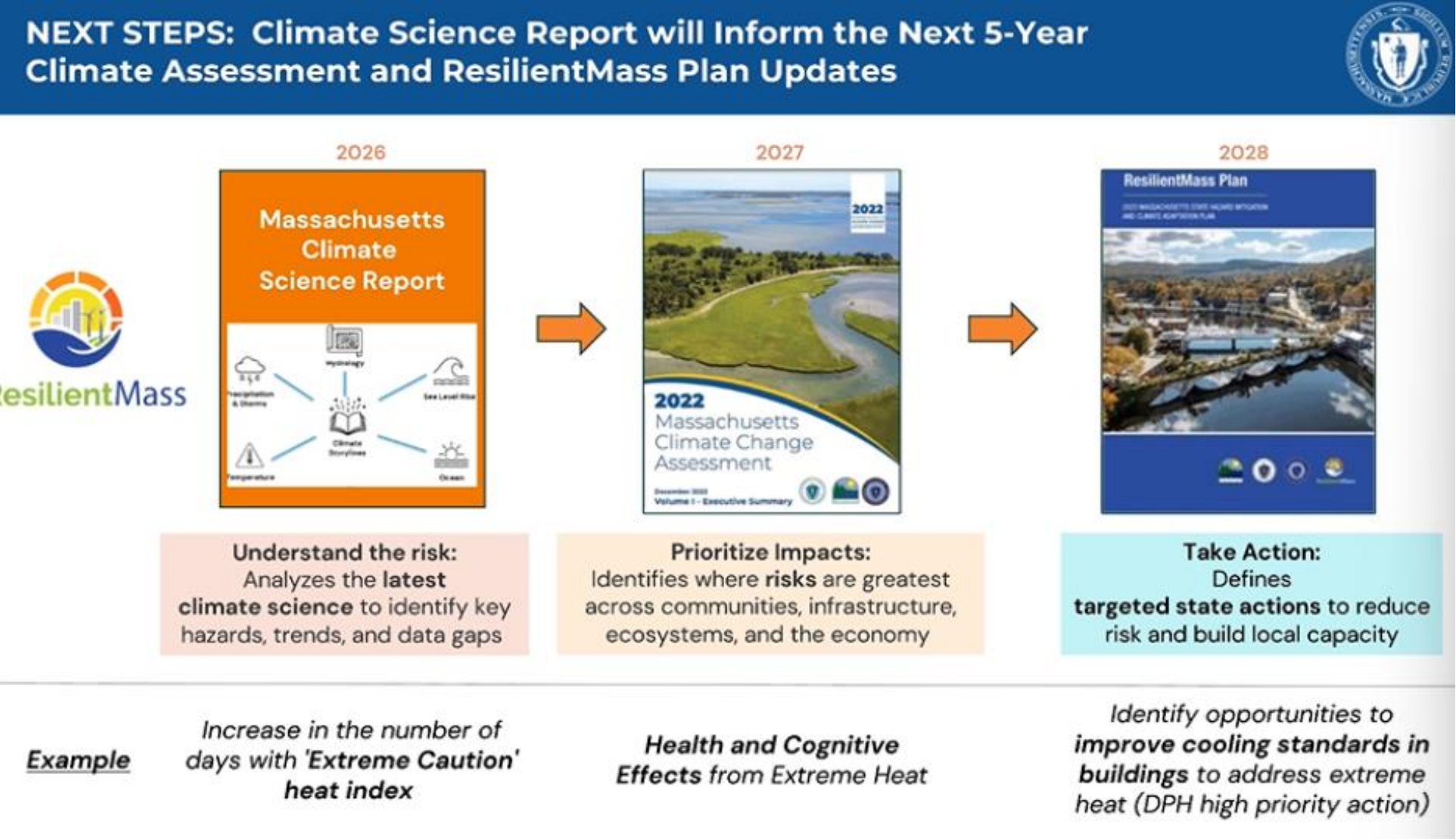


Adapted from Porterfield et al. (*in review*)

Climate Connections

SCA	Mandate	Characteristics	Needs Assessment
Vermont	No: State law mandates a Climate Action Plan	Report, slide decks for knowledge brokers; briefs for public	Yes: survey-based, recruitment of stakeholders across sectors, industries, and geography
Oregon	Yes: 2007 house bill established the Oregon CCRI and mandated a biennial assessment	Alignment with Natural Hazard Mitigation Plan for the state; Community of Practice	Informal: high frequency assessment gives consistency to engagement; capture latest research; respond to needs of community of practice
New York	Sort of: part of NYSERDA's mission is to document climate change impacts	Peer-reviewed publications, website outreach materials by sector, hazard, region for public	No: trusted authors to include what was important/essential; some top-down guidance on topics
PIRCA	No: previously aligned PIRCA with NCAs to contribute to regional chapters	Strong partners across different regions (e.g., American Samoa, Guam)	Yes: seven workshops across different regions + surveys and interviews with contributors from PIRCA 2011
Mass.	Yes: mandate from governor to create climate change impact assessment every 5 years	Report informs State Hazard Mitigation and Climate Adaptation Plan (ResilientMass)	Yes: extensive stakeholder and community outreach by advisors; Community Advisory Council meets regularly, advises, comments on drafts

Science-to-Action Framework – Massachusetts





Save the date:

October 23, 2026

9:00 – 11:00 AM

Davis Center Silver

Maple Ballroom

info@vtclimate.org