

Ludlow Local Hazard Mitigation Planning

Wednesday, January 31st

6:00pm at the Ludlow Town Hall and Zoom

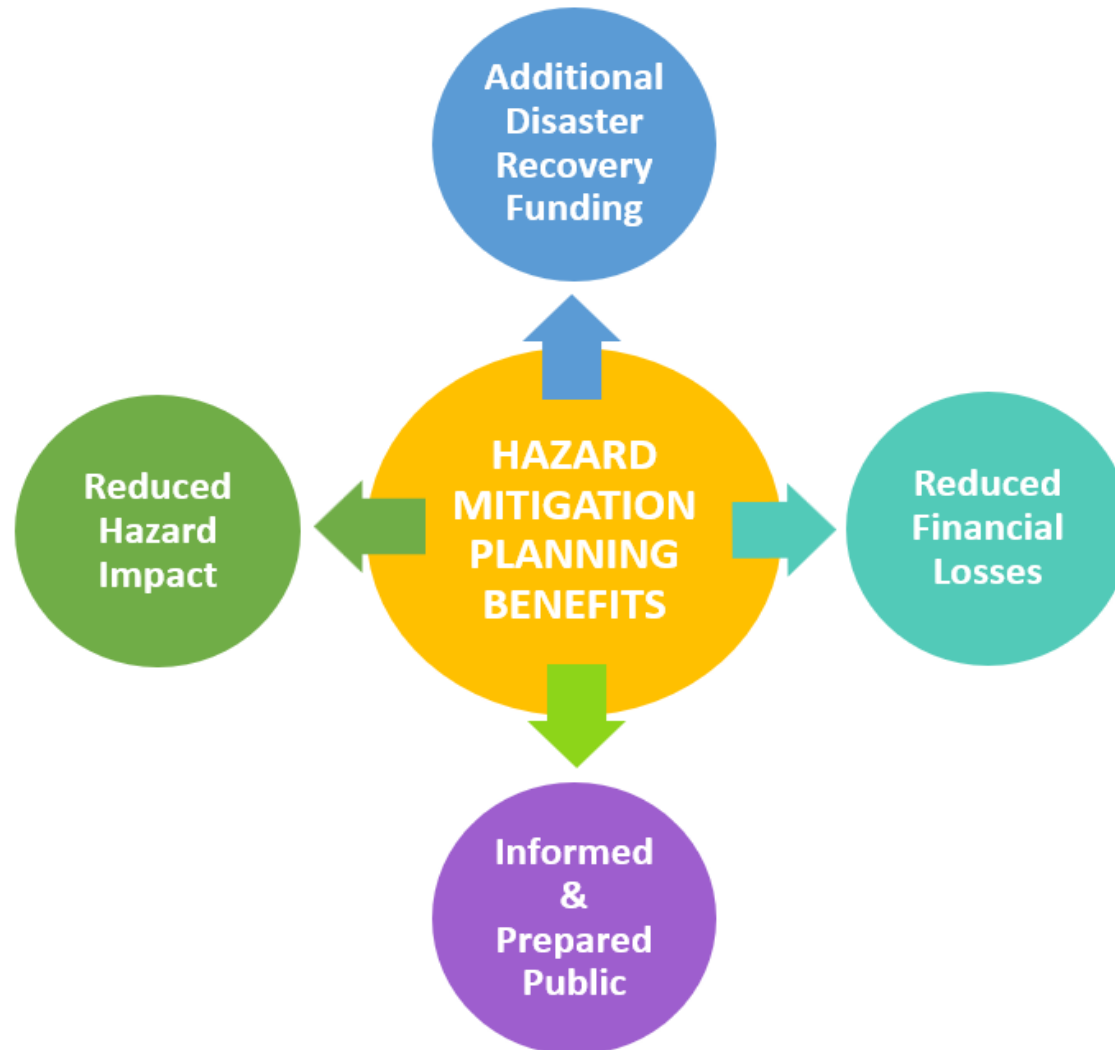
What is Hazard Mitigation Planning?

- Local Hazard Mitigation Plans (LHMP) form the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage.
- LHMP's are updated every 5 years.
- Hazard mitigation planning will enable local governments to better protect lives, property, and natural systems. The purpose of mitigation planning is to identify policies and actions that can be implemented over the long term to reduce risk and future losses.

What is Hazard Mitigation Planning?



Benefits for Municipalities



Benefits for Municipalities

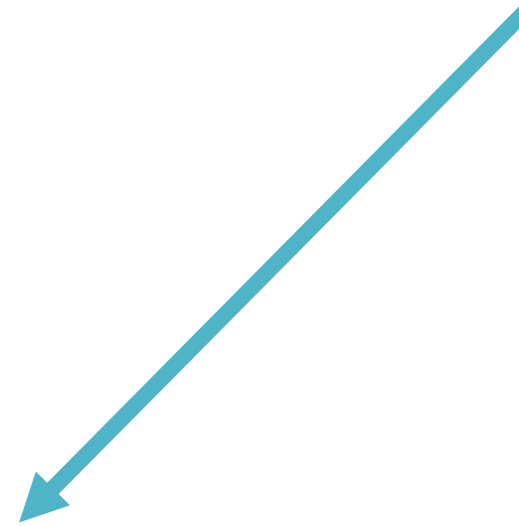
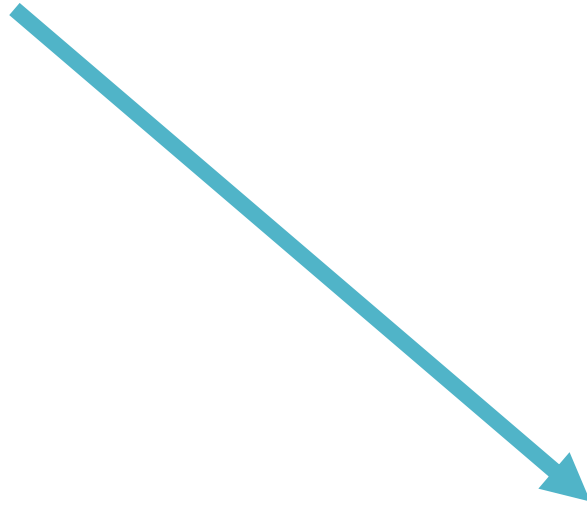
- A FEMA-approved LHMP is required for local governments that wish to receive federal funds from the FEMA Hazard Mitigation Grant Program (HMGP) and Building Resilient Infrastructure and Communities (BRIC) program.
- The LHMP is also one of the mitigation actions needed to qualify for additional post-disaster funding through the Emergency Relief and Assistance Fund (ERAF).

ERAF

- The Emergency Relief and Assistance Fund (ERAF) provides State funding to match Federal Public Assistance after federally-declared disasters
- Eligible public costs are reimbursed by federal taxpayers at 75%
- The State of Vermont will contribute an additional 7.5%
- For communities that take specific steps to reduce flood damage the State will contribute 12.5% or 17.5% of the total cost
- **What does this mean for Ludlow?** Once the 2023 LHMP draft is submitted to Vermont Emergency Management for review, Ludlow's ERAF rate will be 12.5%

Town of Ludlow

Village of Ludlow



Single-Jurisdiction Plan:

2023-2028 Ludlow Local Hazard Mitigation Plan

What funding is being used to develop the 2023 Ludlow LHMP?

- The Town of Ludlow received a State award through the Building Resilient Infrastructure and Communities (BRIC) program, administered by Vermont Emergency Management.
- The Town has contracted with the Mount Ascutney Regional Commission to develop the updated 2023 LHMP.
- Upon completion of the contract, the Town will be reimbursed at 75% with BRIC funds.
- The remaining 25% must be covered by local match (including in-kind hours).

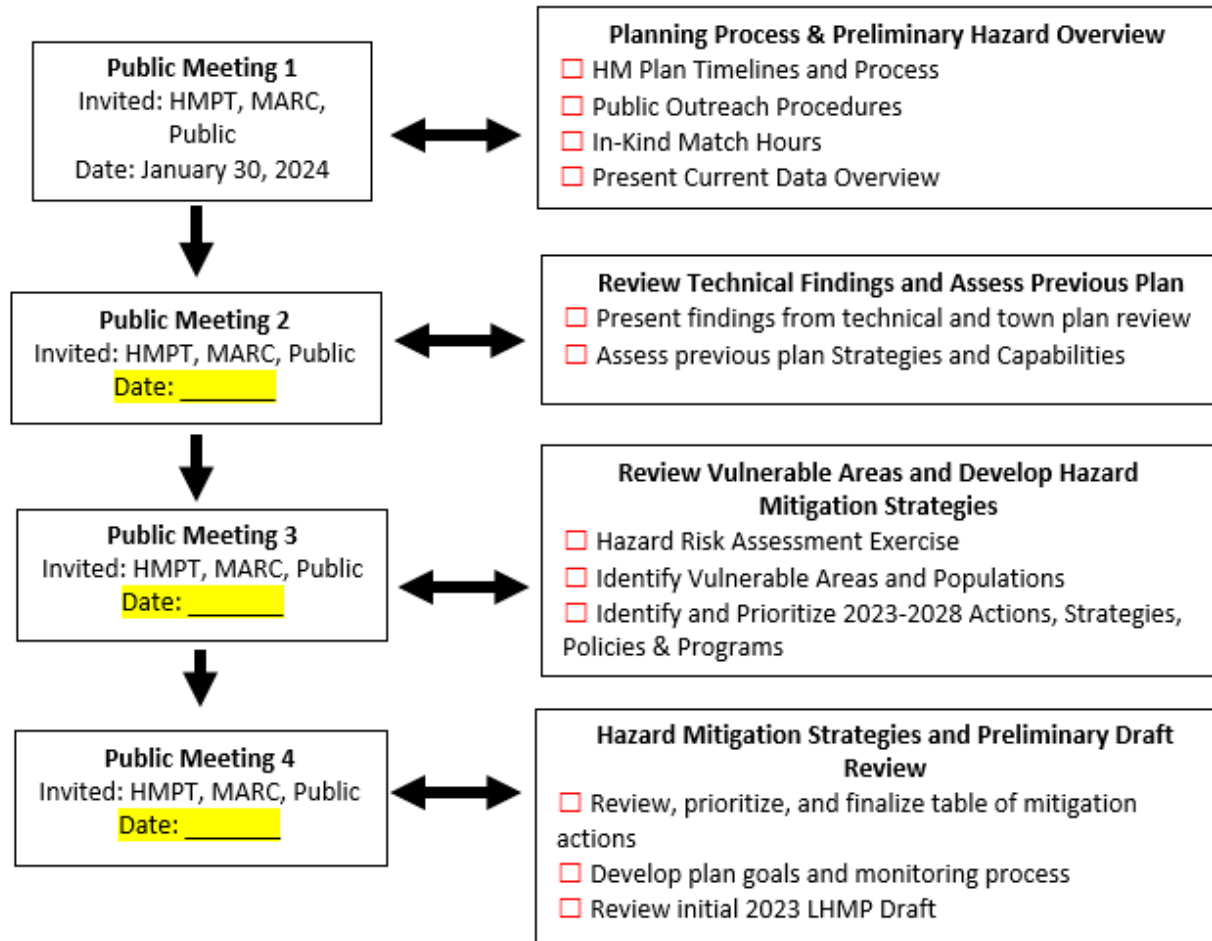
Thank you to our hard-working volunteers!

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Timeline and Process



Timeline and Process Cont'd

Draft Plan Submitted to Vermont Emergency Management for review.

Once VEM comments are received, the draft is revised.

Then, the draft is presented to the Ludlow Selectboard for review.

After any final revisions, the plan can be adopted by the Selectboard.

Current Data Overview

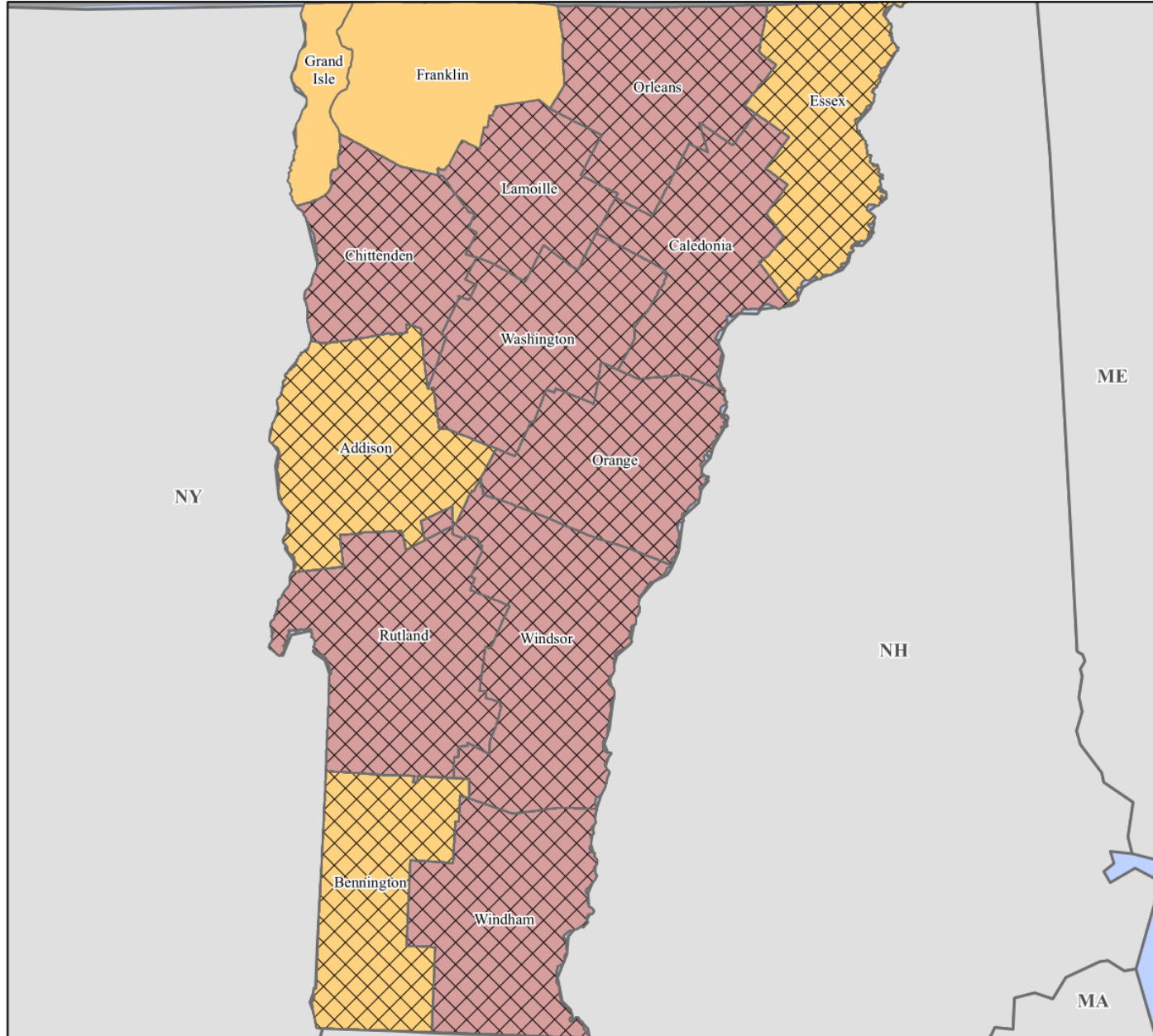
FEMA Declared Disasters-Windsor County 1996 to Current

FEMA Disaster Number	Date of Declaration	Description	Date Occurred
4744-DR-VT	October 6, 2023	Vermont Severe Storms and Flooding	Aug 3, 2023-Aug 5, 2023
4720-DR-VT	July 14, 2023	Vermont Severe Storms, Flooding, Landslides, & Mudslides	July 7, 2023-July 17,2023
3595-EM-VT	July 10, 2023	Vermont Flooding	July 9, 2023
3567-EM-VT	August 22, 2021	Tropical Storm Henri	August 22, 2021
DR-4532-VT	April 8, 2020	Vermont COVID-19	January 20, 2020
3437-EM	March 13, 2020	Vermont COVID-19	January 20, 2020
DR-4445-VT	June 14, 2019	Severe Storms and Flooding	April 15, 2019
4330	August 16, 2017	Severe Storms and Flooding	June 29, 2012
4207	February 3, 2015	Severe Winter Storm	December 9-12, 2014
4140	August 2, 2013	Severe Storms and Flooding	June 25-July 11, 2013
4022	September 1, 2011	Tropical Storm Irene	August 27-September 2, 2011
1790	September 12, 2008	Severe Storms and Flooding	July 21-August 12, 2008
1715	August 3, 2007	Severe Storms and Flooding	July 9-11, 2007
1698	May 4, 2007	Severe Storms and Flooding	April 15-21, 2007
1488	September 12, 2003	Severe Storms and Flooding	July 21-August18, 2003
1336	July 27, 2000	Severe Storms and Flooding	July 14-18, 2000
1307	November 10, 1999	Tropical Storm Floyd	September 16-21, 1999
1228	June 30, 1998	Severe Storms and Flooding	June 17-August 17, 1998
1101	February 13, 1996	Storms and Flooding	January 19-February 2, 1996

FEMA-4720-DR, Vermont Disaster Declaration as of 09/08/2023



FEMA






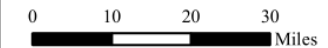
Data Layer/Map Description:
The types of assistance that have been designated for selected areas in the State of Vermont.

All counties in the State of Vermont are eligible to apply for assistance under the Hazard Mitigation Grant Program.

Additional designations may be made at a later date if requested by the state and warranted by the results of further damage assessments.

Designated Counties

-  Public Assistance (Category B)
-  Individual Assistance and Public Assistance (Categories A - G)
-  Public Assistance (Categories A - G)

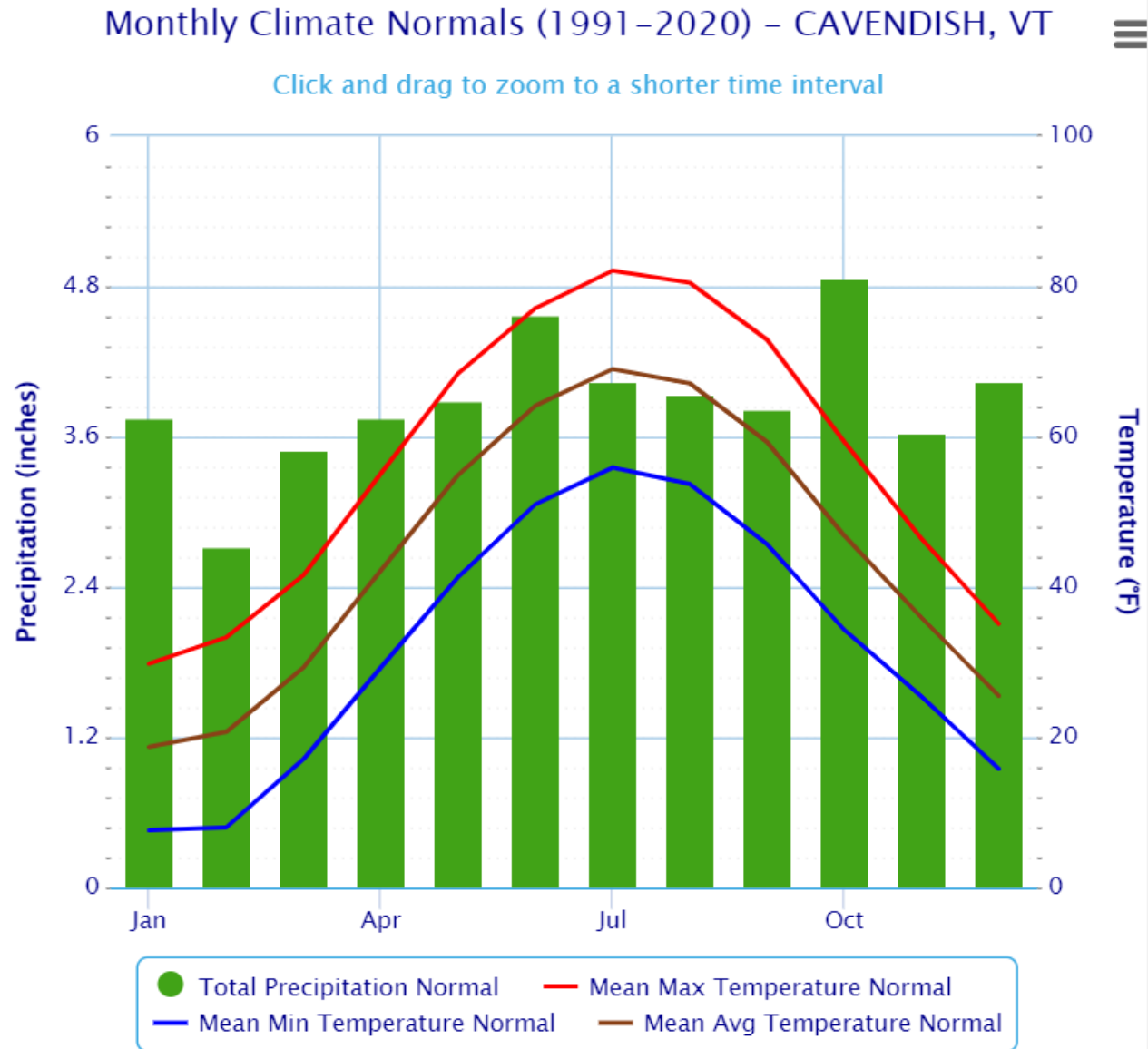


Data Sources:
FEMA, ESRI;
Initial Declaration: 07/14/2023
Disaster Federal Registry Notice:
Amendment #8: 09/08/2023
Datum: North American 1983
Projection: Transverse Mercator

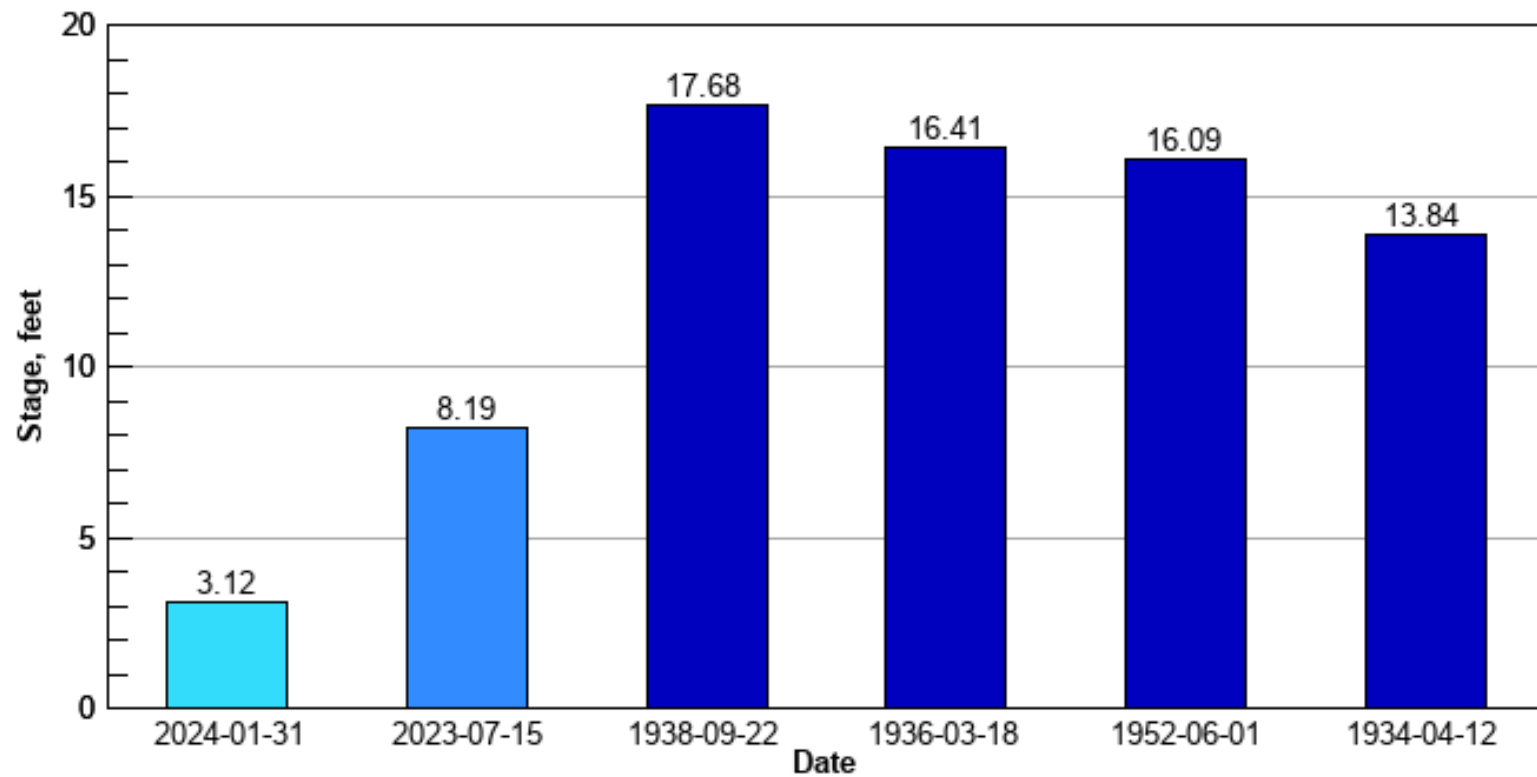




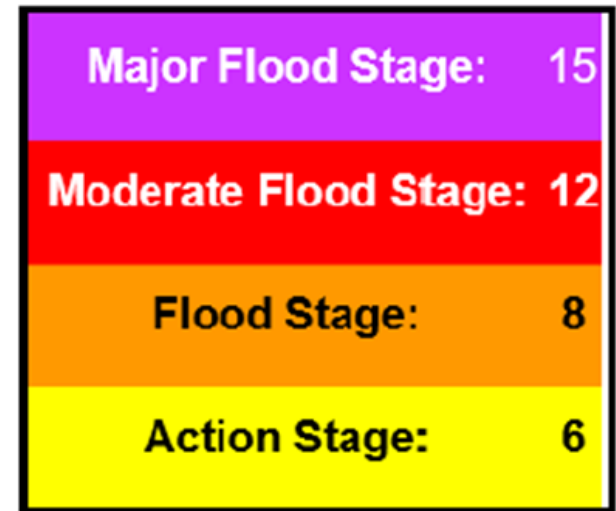
Precipitation



USGS 01153000 BLACK RIVER AT NORTH SPRINGFIELD, VT



- Current Stage 3.12 feet on 2024-01-31 13:30:00 (provisional)
- Recent Maximum Stage (previous 365 days) 8.19 feet on 2023-07-15 (provisional)
- Highest Recorded Peak Stages at Current Datum

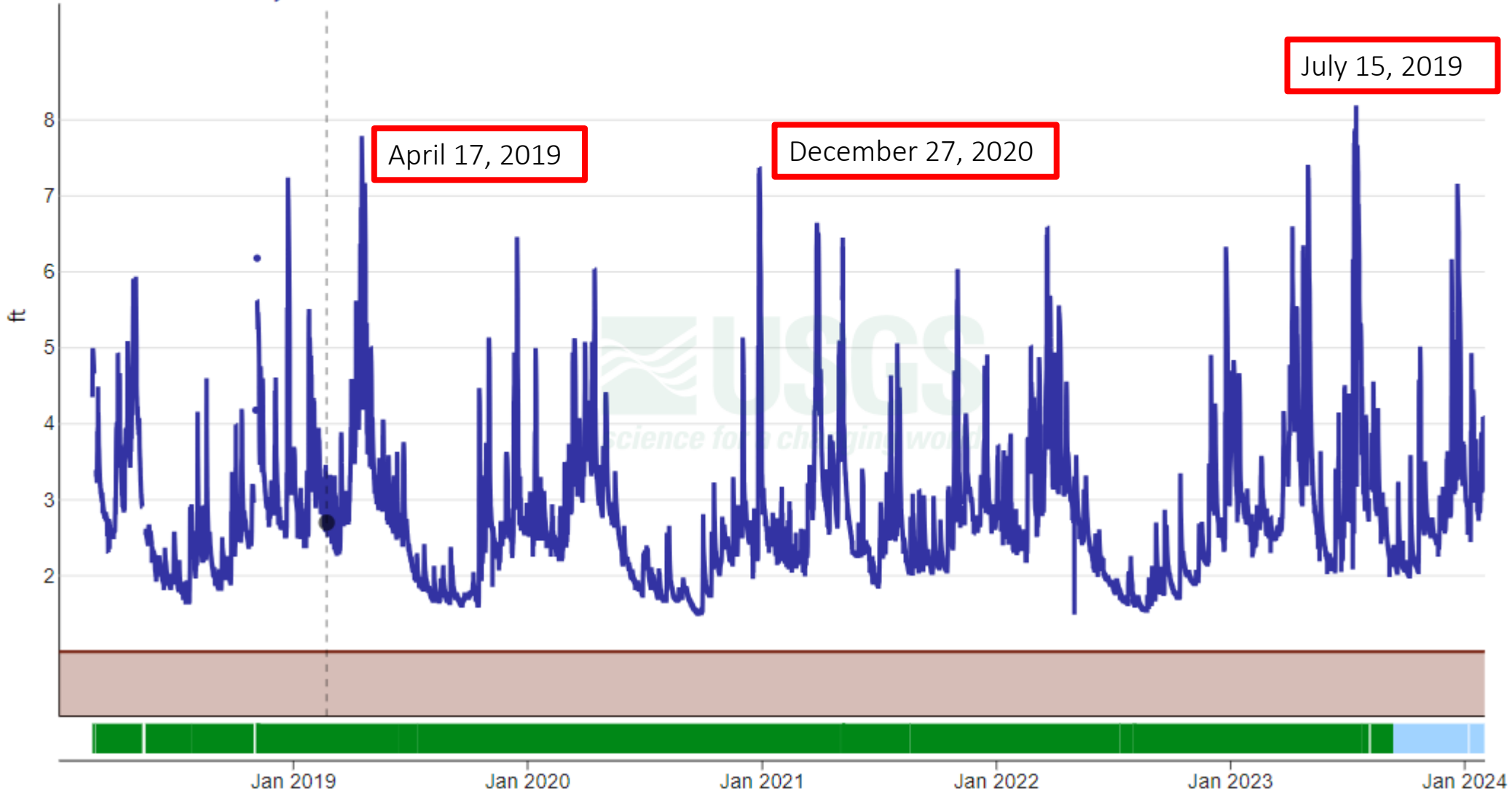


Black River at North Springfield, VT - 01153000

January 1, 2018 - January 31, 2024

Gage height, feet

2.70 ft - Feb 21, 2019 06:30:00 PM EST

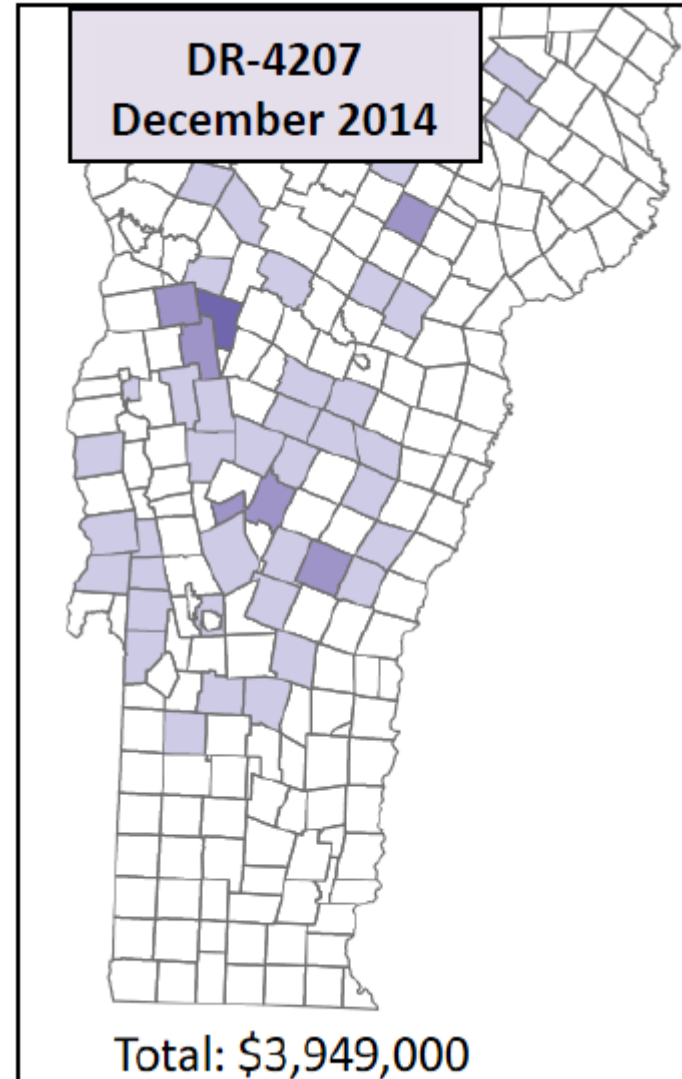


Other Storm Events

- Hurricane Irene – August 2011: Town cut off with isolated residents
- Hurricane Sandy – October 2012: Phones cut off
- April 15, 2019 –
 - Rt. 103 closed due to flood waters
 - Flash flooding, 1.5 inches
 - Community Center operated as a shelter for 2 days

Ice Storm

- DR-4207 occurred over a four-day period in mid-December 2014 when heavy, wet snow and ice resulted in more than 175,000 power outages in Windsor County.



Snow

Trend:
Less snowfall
each year



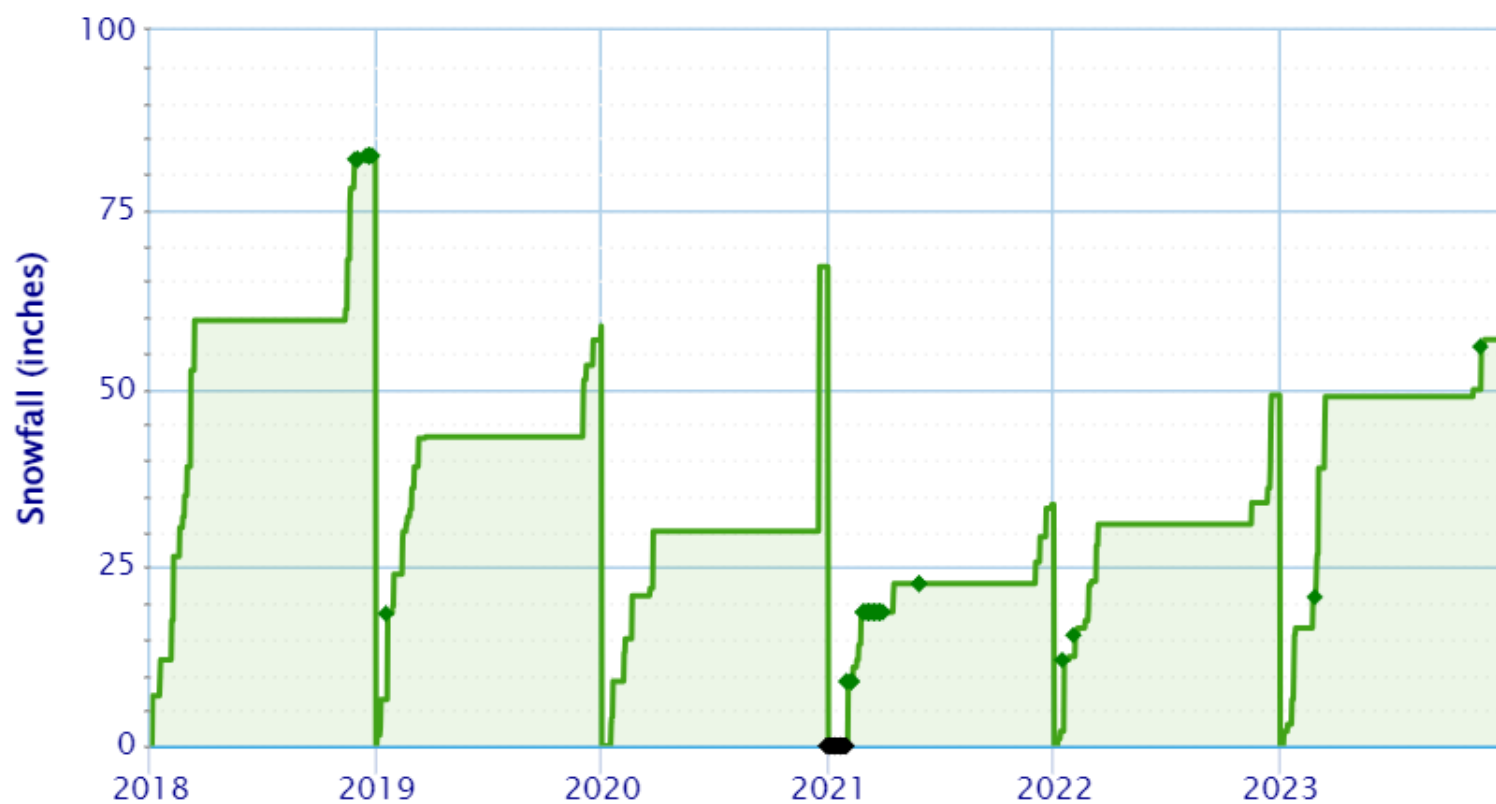
Accumulated Snowfall – N SPRINGFIELD LAKE, VT



Use navigation tools above and below chart to change displayed range; green/black diamonds represent subsequent/missing values

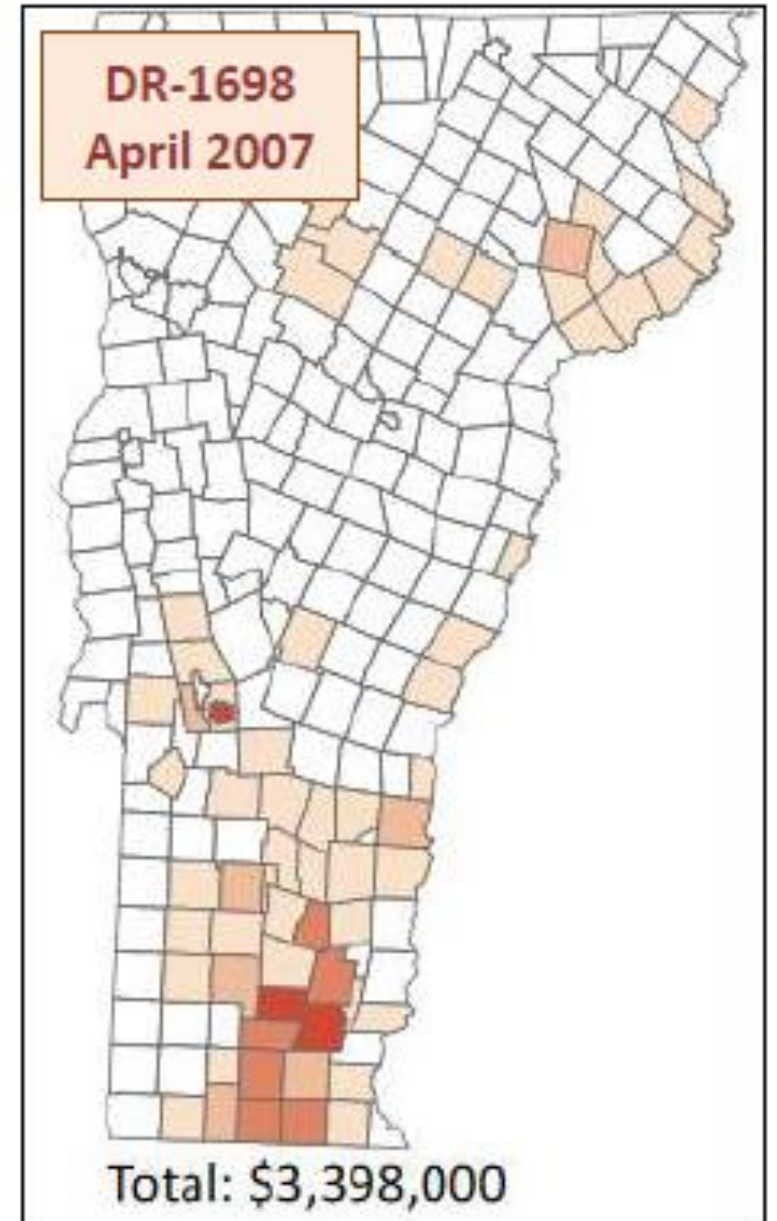
Zoom

From To



High Winds

- High winds during this April storm resulted in many trees down and damage to some private homes and public infrastructure, primarily in Southern Vermont. The Town of Windsor received assistance for this declaration.
- December 23, 2022
- December 11, 2021



Extreme Cold

- January 14-15, 2022
 - Dangerously cold wind chills of 25 to 35 below zero were observed across the region with actual air temperatures of 10 to 15 below zero Friday evening through midday Saturday.
 - Overnight minimum temperatures Saturday night-Sunday morning were 10 to 20 below zero with calm/light winds.
- January 7-8, 2015
 - Temperatures by early evening of January 7th were zero to 10 above zero with winds of 15 to 30 mph that created wind chills colder than 20 to 30 below zero through the overnight into the morning hours of January 8th.
 - Actual morning low temperatures on January 8th were 10 below to 20 below zero in Windsor county
- January 2009: 29 below in Windsor County
- March 2007: 17 below in Windsor County
- January 2007: 11 below in Windsor County

Extreme Heat

- July 2018 – Heat wave between June 30th and July 5th
 - High temperatures exceeded 90 degrees for at least 5 of the six days
 - In many locations, temperatures were above 85 degrees for 7 days.
 - Increased hospitalization visits, 4 deaths (regionally)
- June 2020 – Heat wave between June 18th and June 23rd
 - High temperatures exceeded 90 degrees for up to 6 consecutive days

Vermont's Average Annual Maximum & Minimum Temperatures (1960-2015)

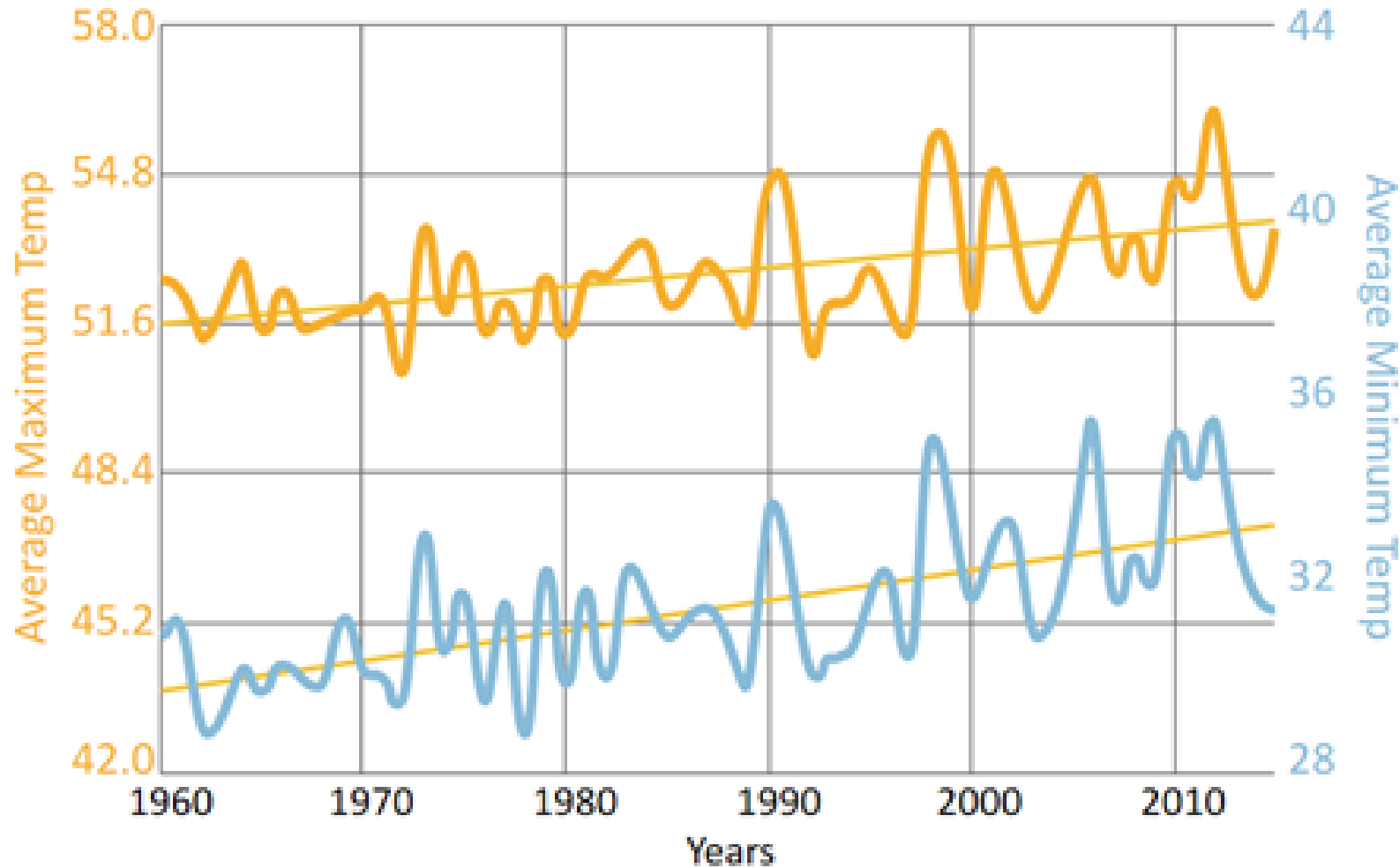
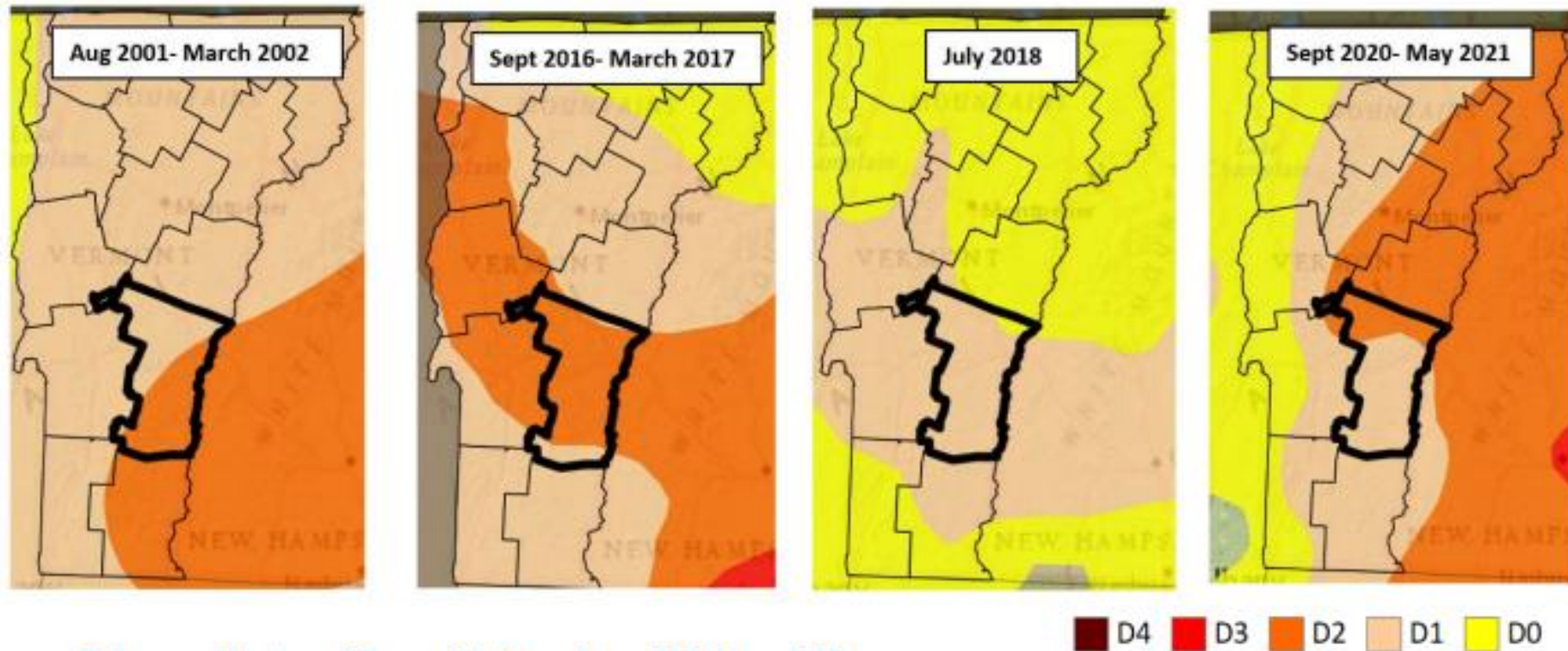


Figure 48: Vermont's average annual maximum & minimum temperatures (1960-2015)

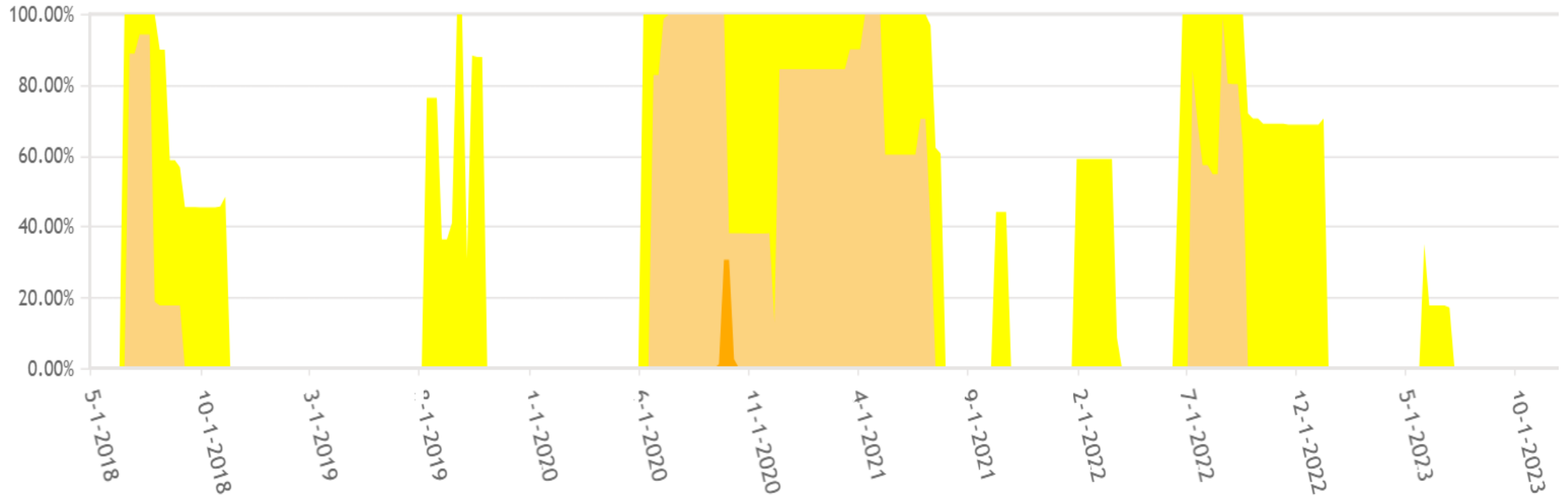
Source: climatechange.vermont.gov

Drought

Since 2000, there have been four distinct periods of Severe to Moderate Drought in Vermont.



Windsor County (VT) Percent Area in U.S. Drought Monitor Categories



None
D0 (Abnormally Dry)

D1 (Moderate Drought)
D2 (Severe Drought)

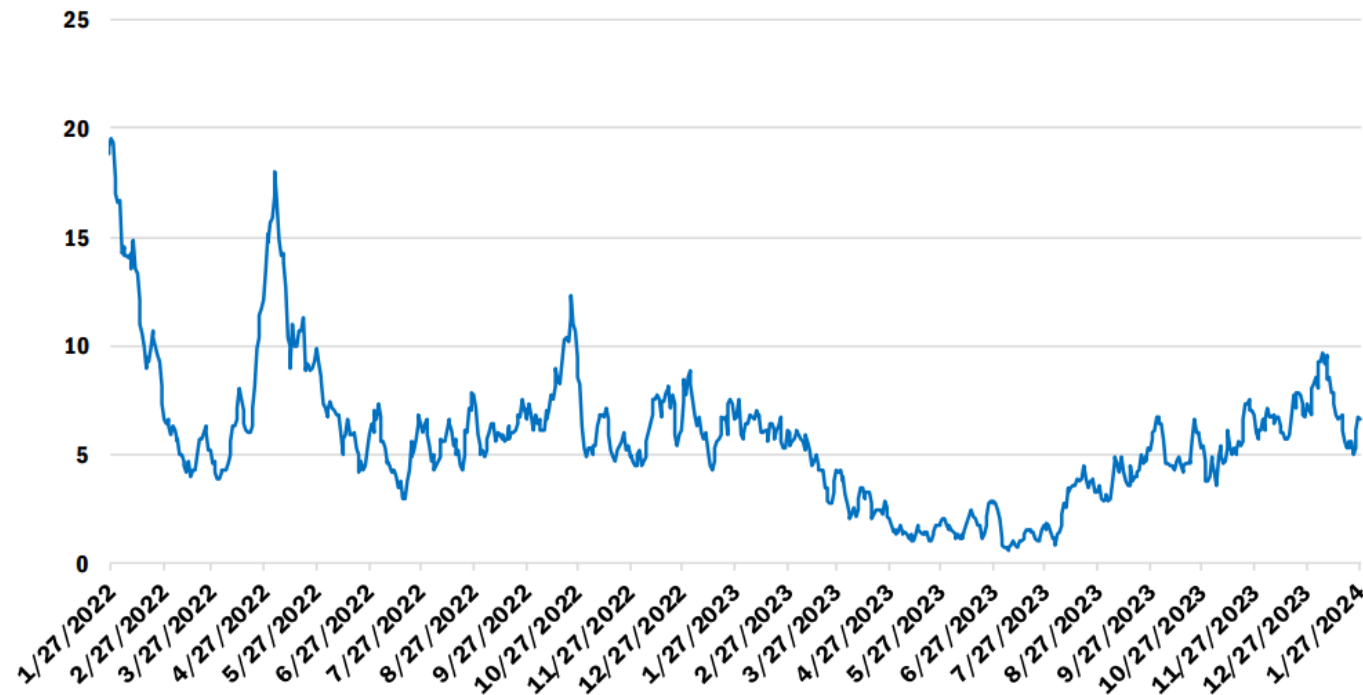
Fires

Year	State	Ludlow
2021	2,376	8
2020	2,693	14
2019	2,274	22
2018	2,660	18

Infectious Disease

COVID cases are decreasing statewide

**Daily Hospitalizations With COVID-19 Diagnosis
Seven-Day Rolling Average**



Source: U.S. Department of Health and Human Services HHS Protect

MARC Contact Info

If you have any questions, comments, or concerns, please contact me at:

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