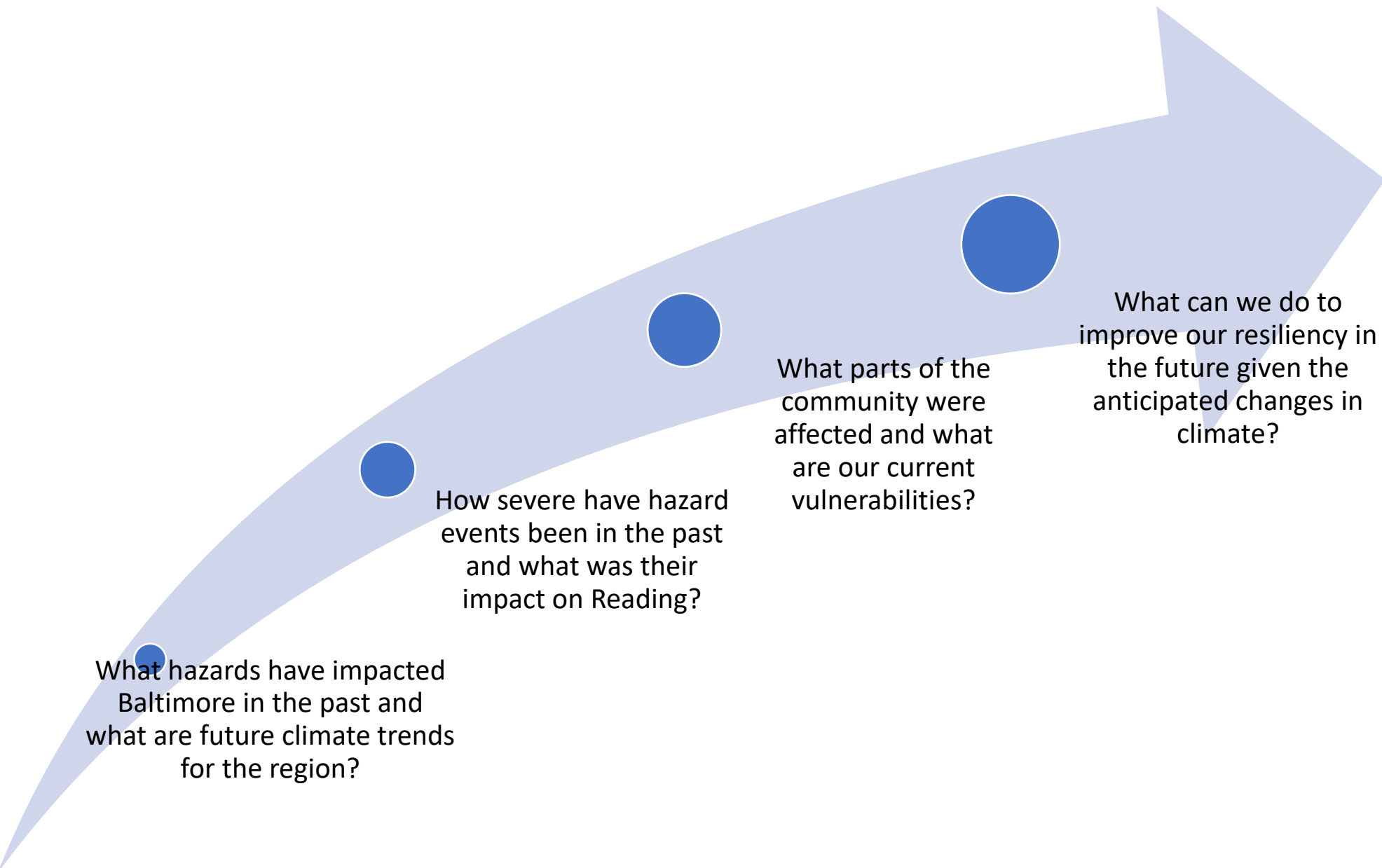


# Baltimore Local Hazard Mitigation Planning

Wednesday, August 16, 2023

6:30pm at the Town Office

# Hazard Mitigation Plan

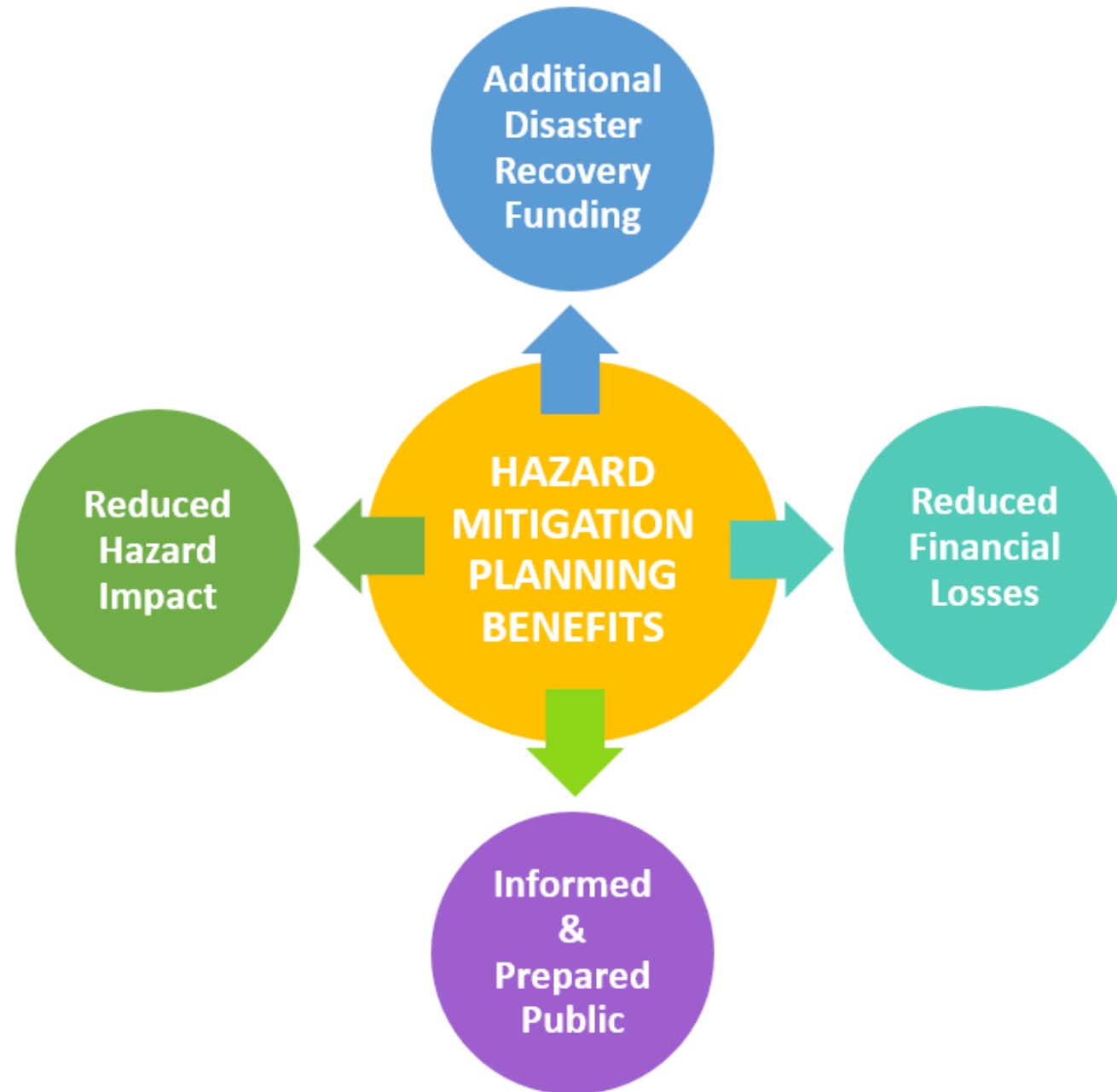


What hazards have impacted Baltimore in the past and what are future climate trends for the region?

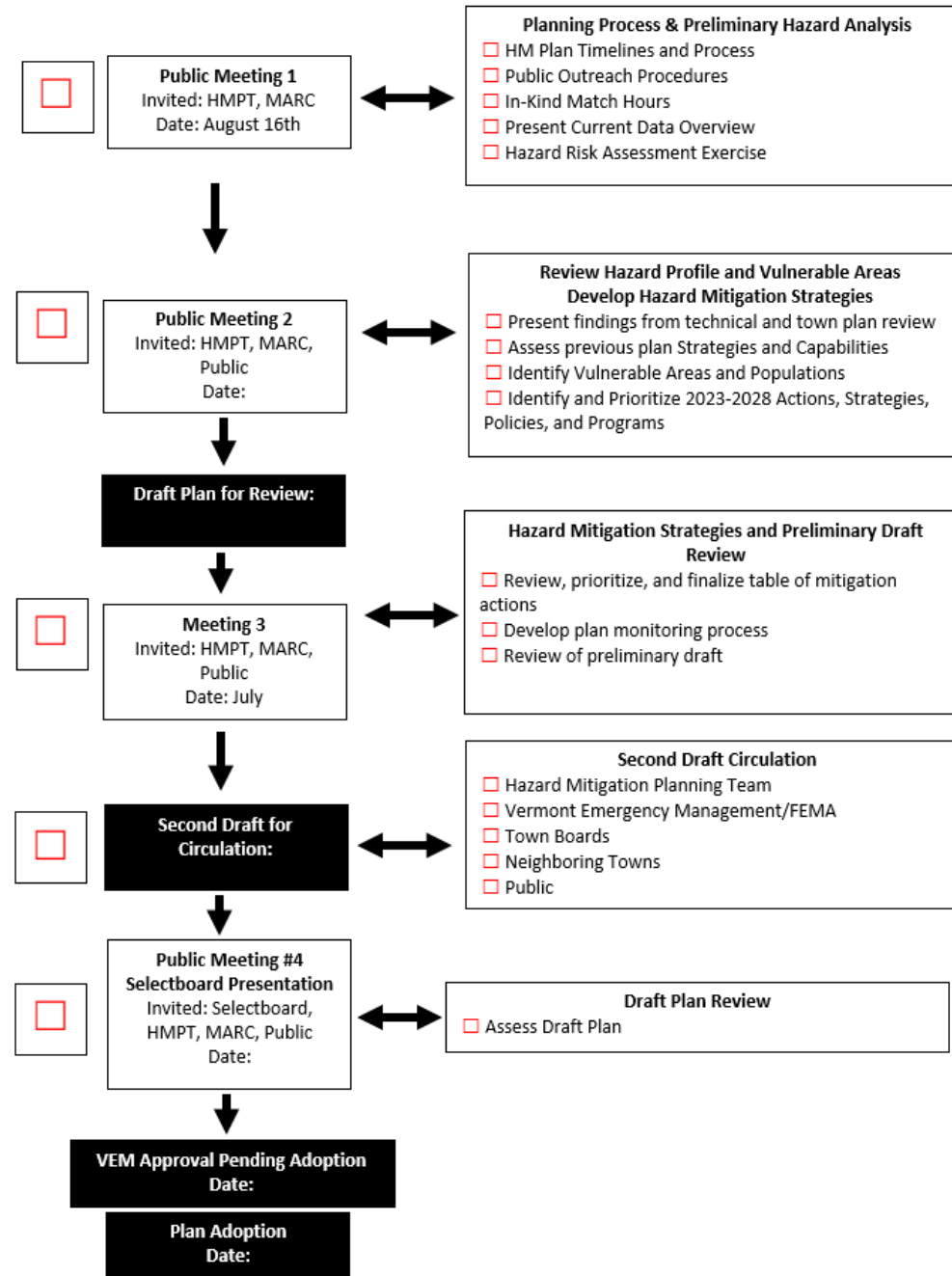
How severe have hazard events been in the past and what was their impact on Reading?

What parts of the community were affected and what are our current vulnerabilities?

What can we do to improve our resiliency in the future given the anticipated changes in climate?



# Planning Process



# FEMA Declared Disasters-Windsor County 1970 to Current

Federal Disaster Declarations: Windsor County 1970 – 2020(current)			
FEMA Disaster Number	Date of Declaration	Description	Date Occurred
4720-DR	July 14, 2023	Vermont Severe Storms, Flooding, Landslides, & Mudslides	July 7, 2023-July 17,2023
3595-EM	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
938	March 18, 1992	Flooding, Heavy Rain, Ice Jams	March 11, 1992





# Local Rain Events

- In July 2013, two to three inches of rain fell in two hours over eastern Windsor County. This followed a record spring rainfall and resulted in flash flooding (Estimated damage: \$25k).
- In July 2014, a stationary thunderstorm developed that dropped three inches of rain an hour resulted in significant damage to transportation infrastructure, residential and commercial properties, and agricultural areas (Estimated damage: \$1M).
- In April 2019, the towns of Ludlow and Cavendish endured a flooding event from heavy rain (Estimated damage: \$100K).

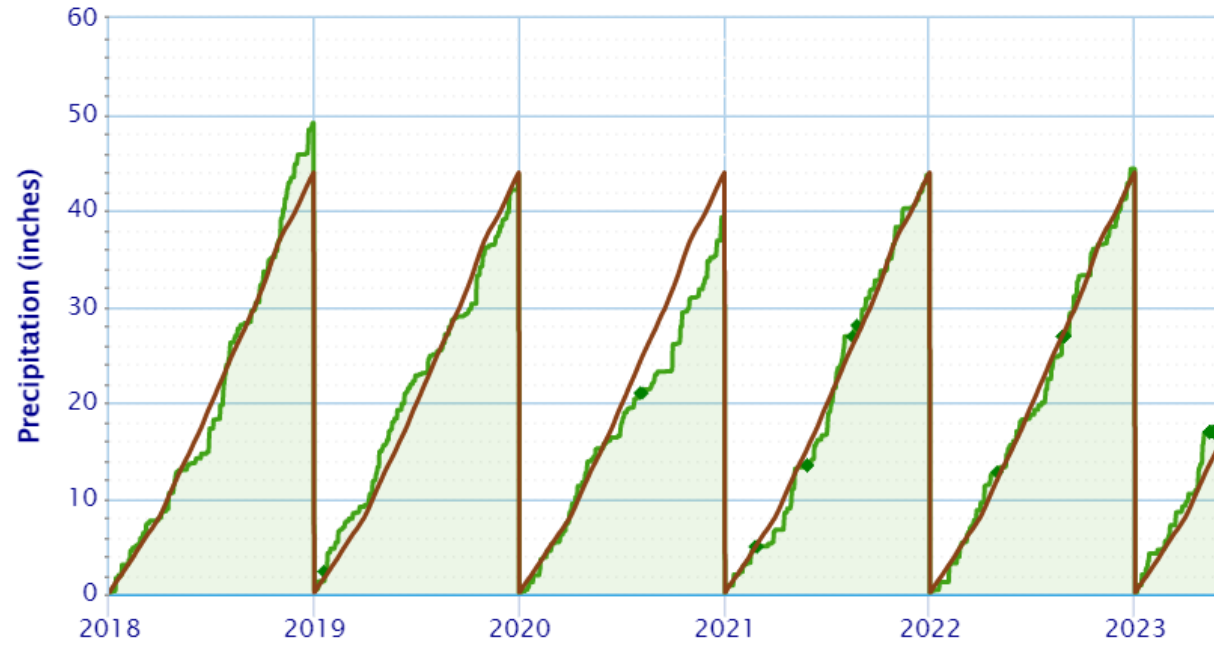


### Accumulated Precipitation – N SPRINGFIELD LAKE, VT

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

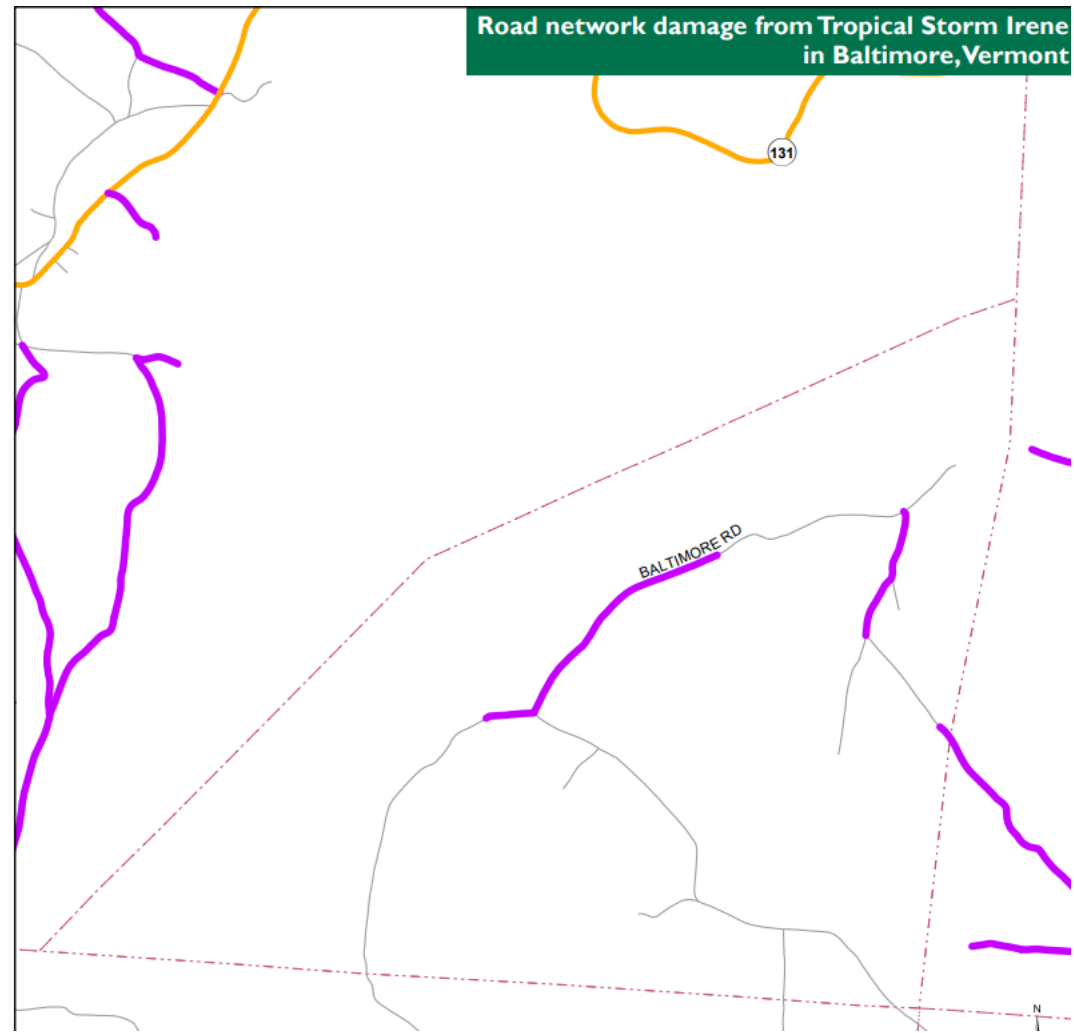
Zoom **1m** 3m 6m YTD 1y **All**

From 2018-01-01 To 2023-05-25



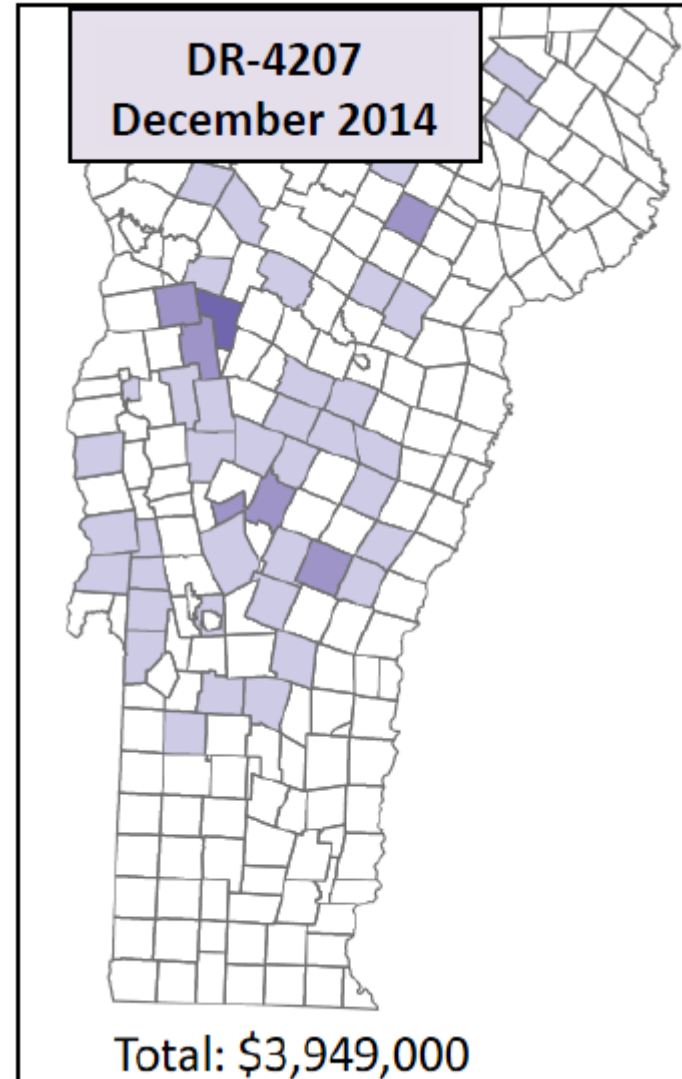
# Fluvial erosion

- Tropical Storm Irene:



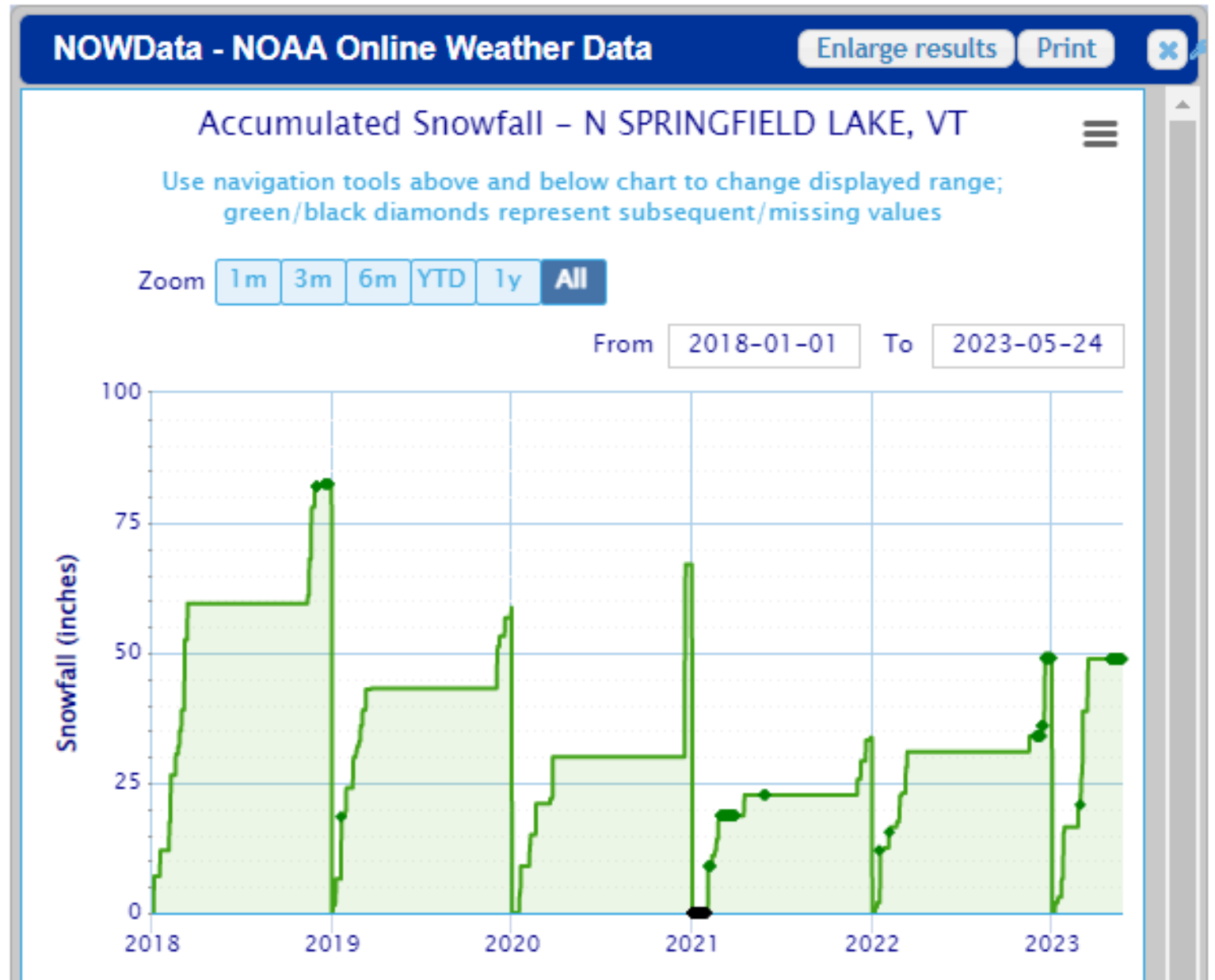
# Ice Storm

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

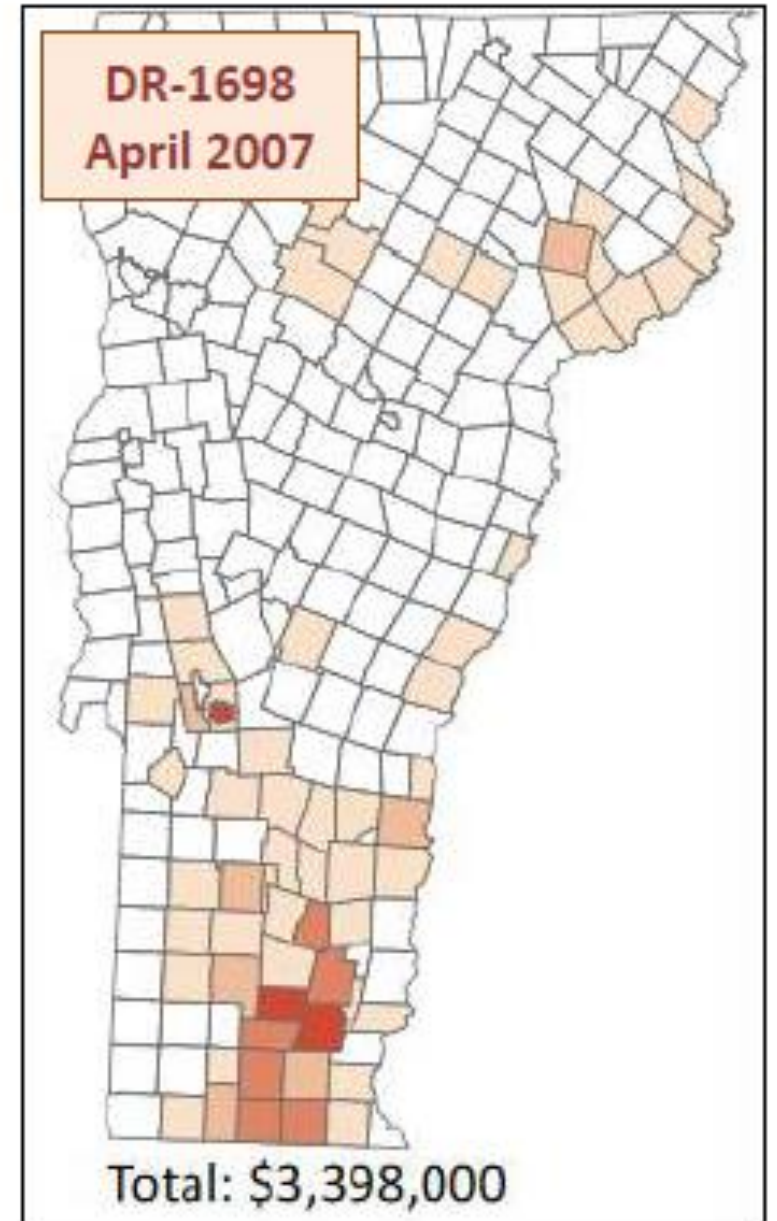


# Total Snowfall (2018-2023)

- Jan 10, 2019: 7 inches
- **Jan 20, 2019: 11 inches**
- Jan 29, 2019: 6 inches
- Jan 19, 2020: 6 inches
- **Dec 17, 2020: 32 inches**
- Feb 2, 2021: 8 inches
- April 16, 2021: 7 inches
- Dec 19, 2021: 7 inches
- **Jan 17, 2022: 9 inches**
- Feb 5, 2022: 6 inches
- Feb 26, 2022: 7 inches
- **Dec 17, 2022: 24 inches**
- Jan 23, 2023: 8 inches
- **Mar 4, 2023: 10 inches**
- **Mar 16, 2023: 9 inches**

# 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.



# 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 30<sup>th</sup> and July 5<sup>th</sup>
  - 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 18<sup>th</sup> and June 23<sup>rd</sup>
  - High temperatures exceeded 90 degrees for up to 6 consecutive days



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

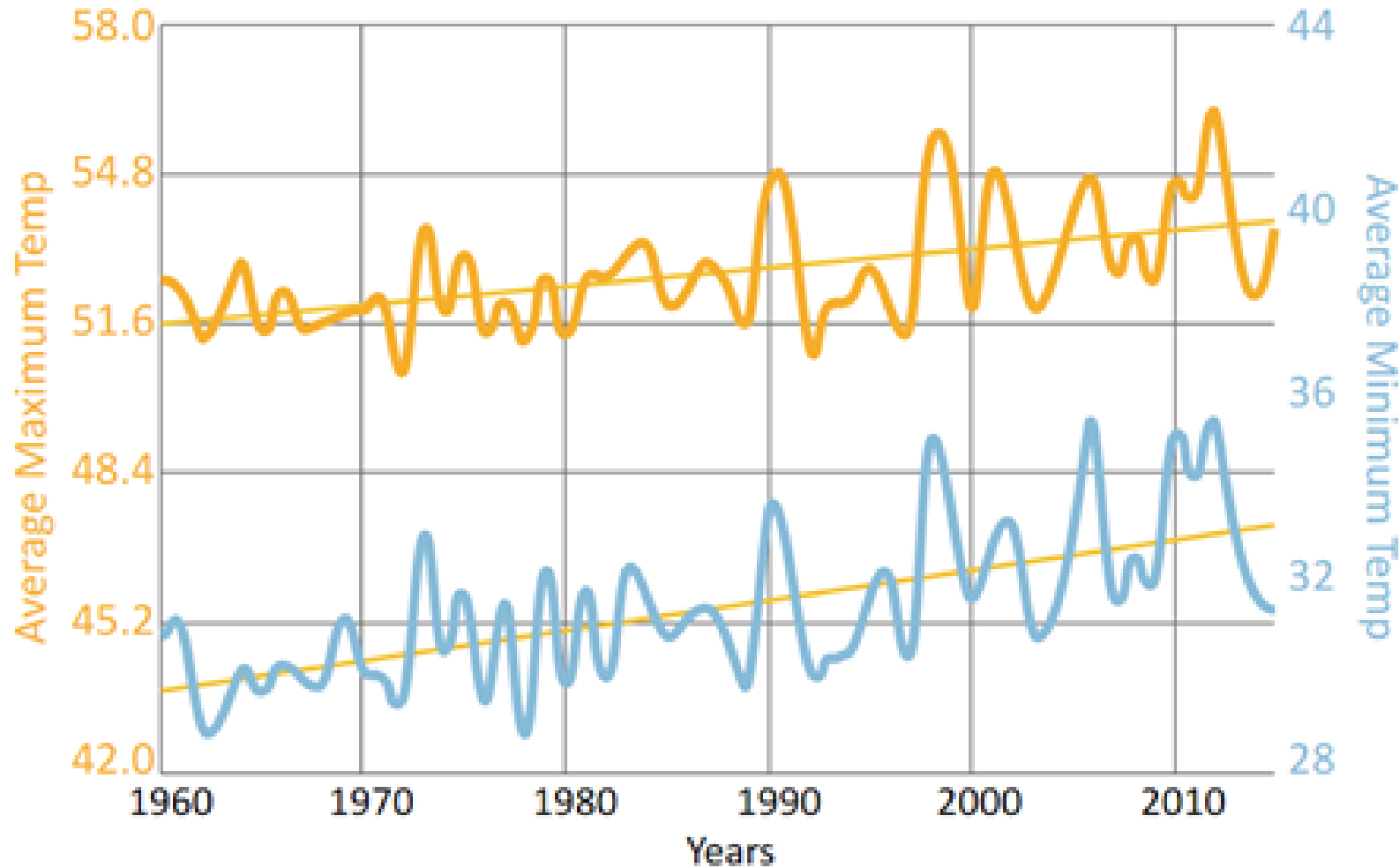
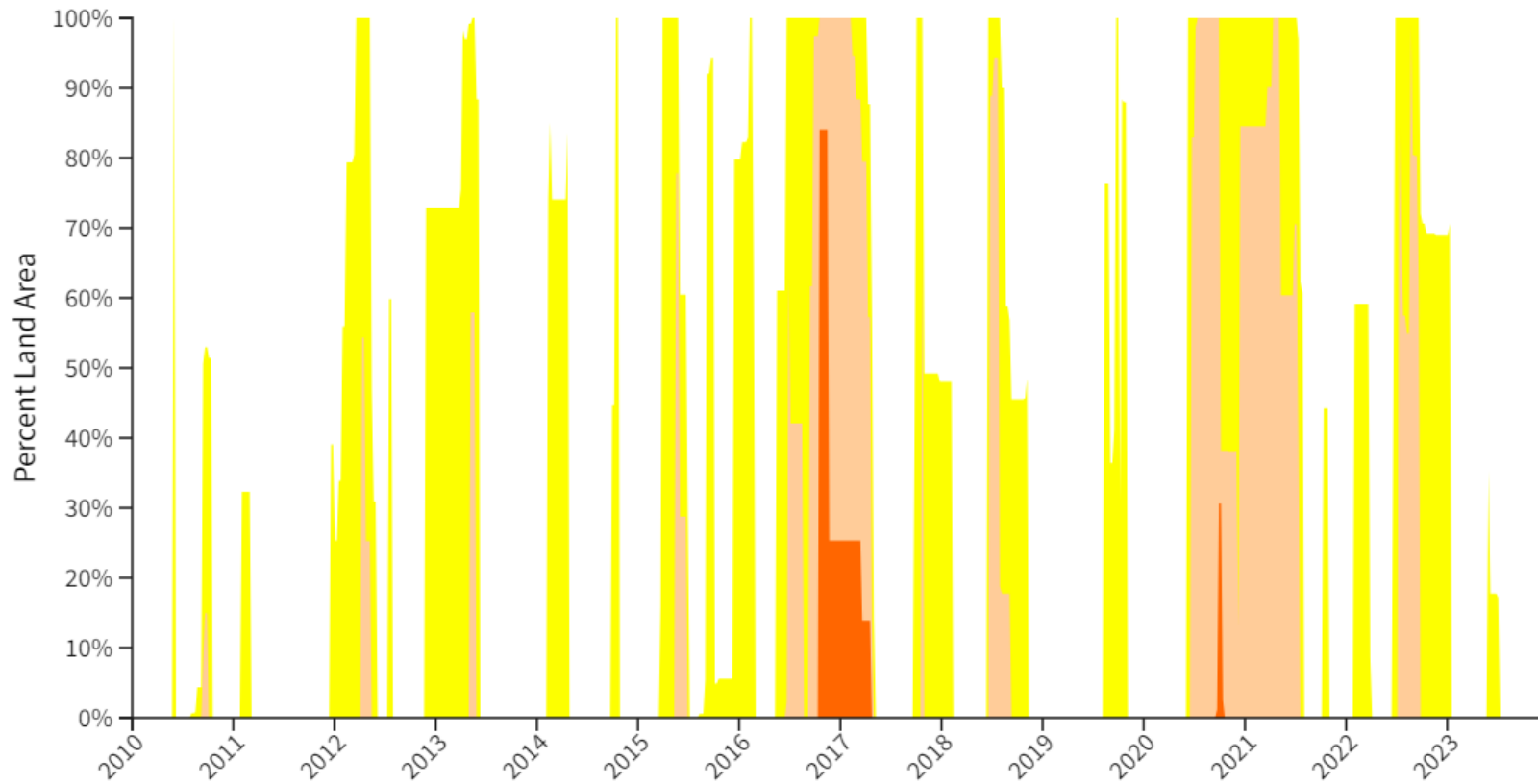


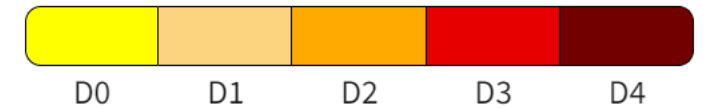
Figure 48: Vermont's average annual maximum & minimum temperatures (1960-2015)

Source: [climatechange.vermont.gov](http://climatechange.vermont.gov)

# Drought – Windsor County



## U.S. Drought Monitor



- D0 – Abnormally Dry
- D1 – Moderate Drought
- D2 – Severe Drought
- D3 – Extreme Drought
- D4 – Exceptional Drought

# Fires

<b>Fire-NFIRS Series 100</b>	<b>Vermont</b>	<b>Weathersfield</b>
2016	3,269	45
2017	2,458	36
2018 <sup>1</sup>	2,660	9
2019 <sup>1</sup>	2,274	17
2020 <sup>1</sup>	2,693	7
2021	2,376	15

<sup>1</sup>Vermont Fire Marshall Report

# Infectious Disease

- COVID cases are decreasing statewide
- 85% of Vermonters are fully vaccinated
- 64 cases in Weathersfield from March 2020 to Sept 2021

