

# Red Flag Event 11 April 2023



2024 Fire Weather Users Meeting  
WFO BTV  
13 March 2024

Robert Frost Prescribed Burn April 2023



# Discussion Items

- Products and Services
- Meteorological Data
- Observation during the Red Flag Event
- Coordination/Collaboration
- Comments from our Fire Weather Users

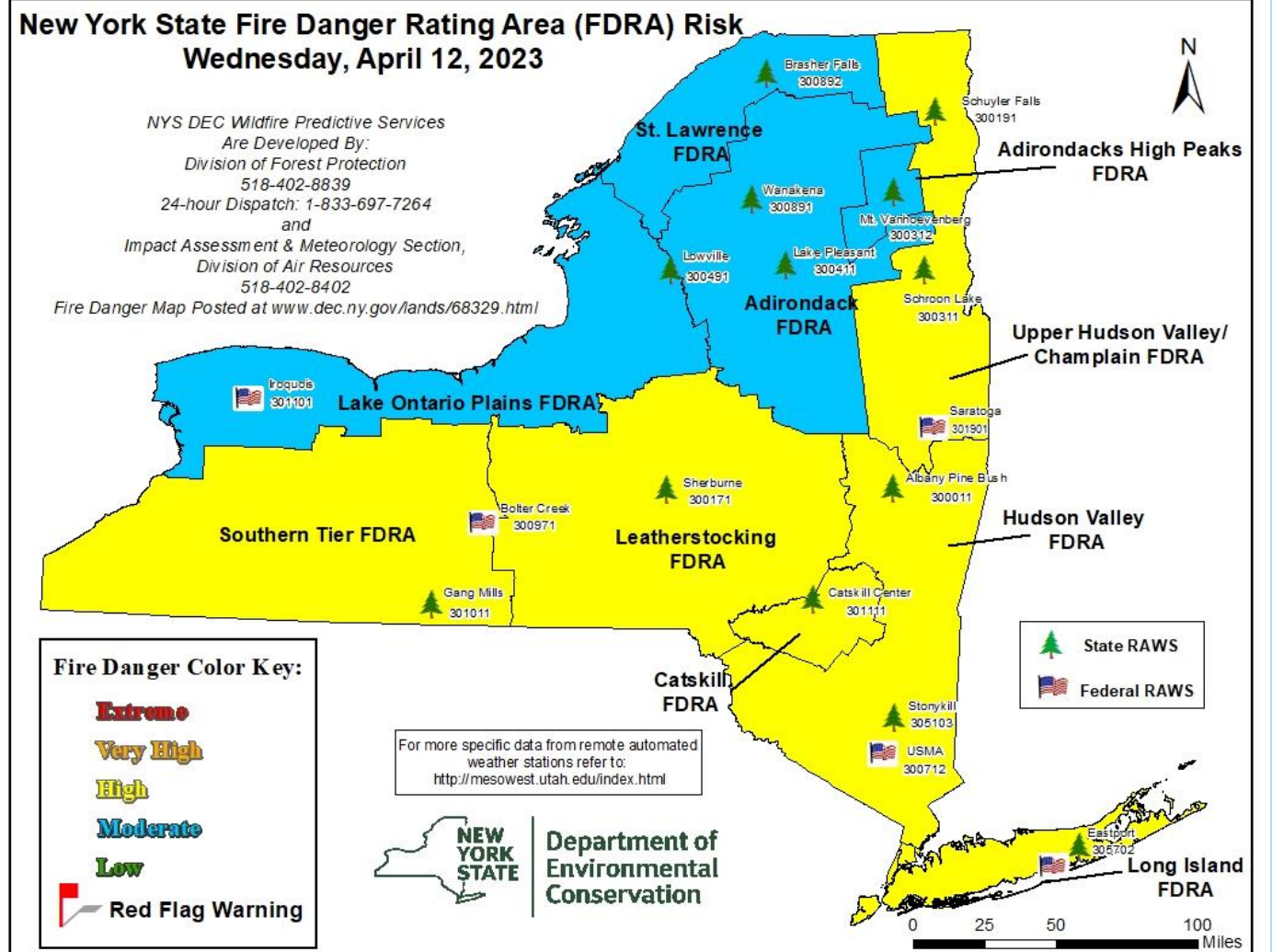
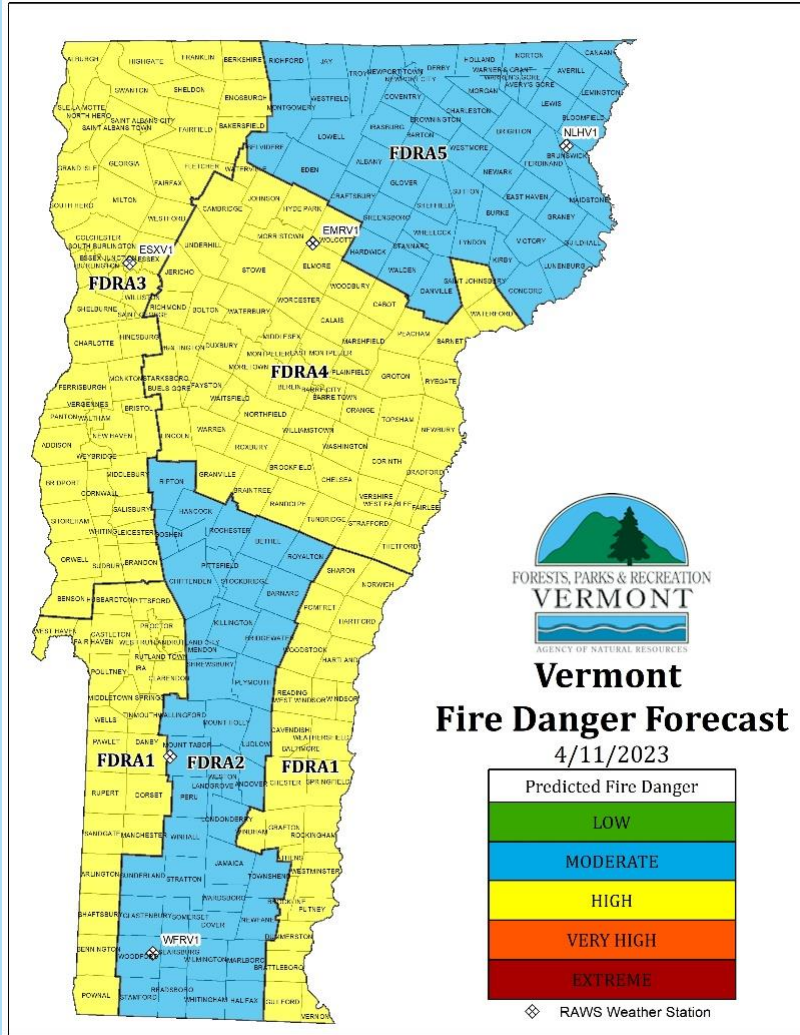




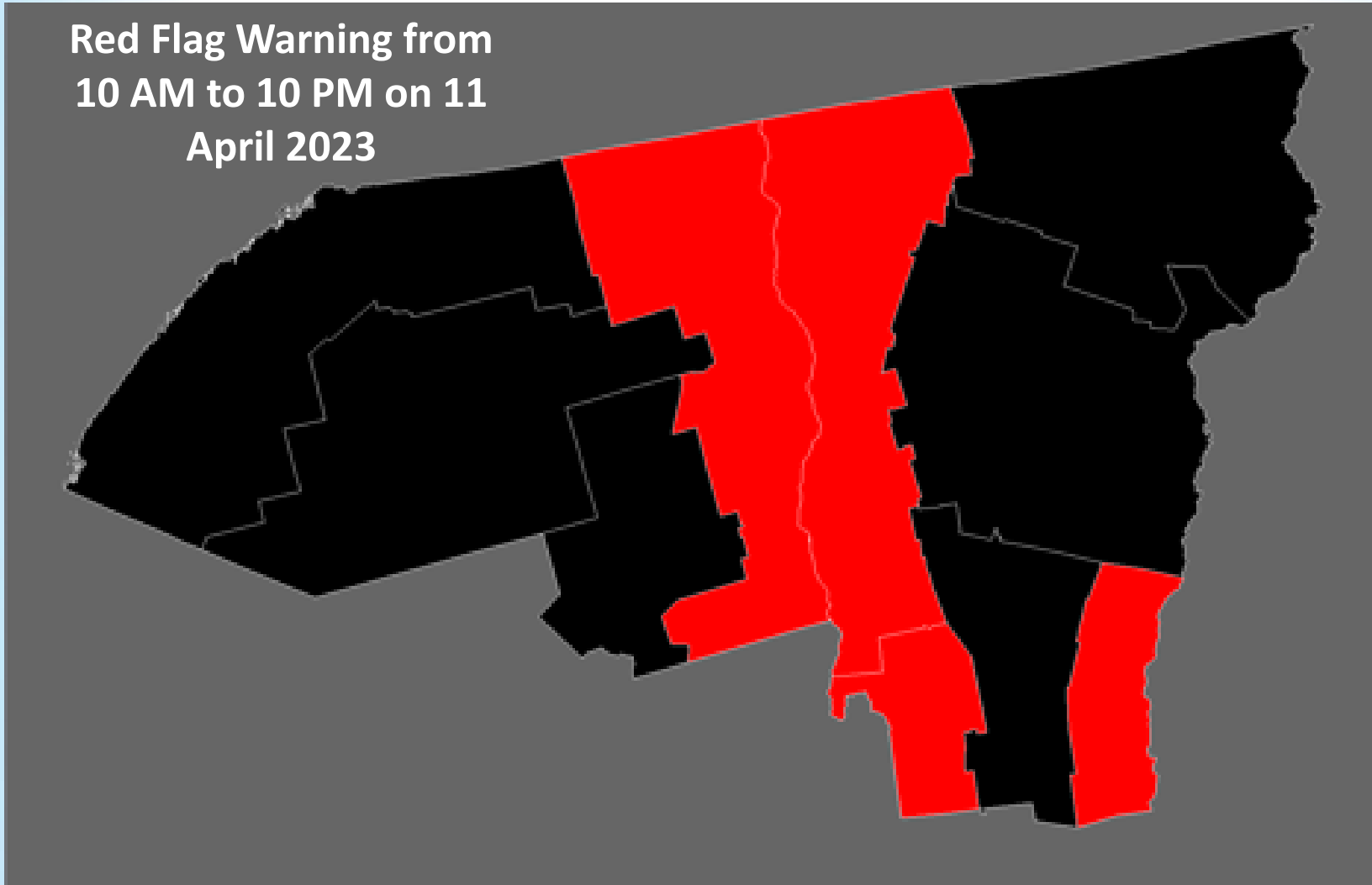
# Product Timeline

- First Fire Weather Watch/Red Flag Warning Since 5 April 2021.
- Fire Weather Watch issued at 1111 AM on 10 April 2023.
- Upgraded to Red Flag Warning at 208 AM on 11 April 2023.
- Special Weather Statement issued for St Lawrence Valley on 11 April 2023 for dry fine fuels, marginally low relative humidity, gusty winds and moderate fire danger.

## Fire Danger Rating for Vermont and New York on 11-12 April 2023



# Red Flag Warning for Champlain Valley and Lower Connecticut River Valley Fire Weather Zones from 10 AM to 10 PM



# Fire Weather Watch

NYZ202-VTZ030-033-035-110900-  
/O.NEW.KBTV.FW.A.0001.230411T1400Z-230412T0000Z/  
Champlain Valley of New York-Champlain Valley of Vermont-  
Northern Taconics-Lower Connecticut Valley North-  
1111 AM EDT Mon Apr 10 2023

...FIRE WEATHER WATCH IN EFFECT FROM TUESDAY MORNING THROUGH  
TUESDAY EVENING FOR GUSTY WINDS AND LOW RH FOR THE CHAMPLAIN  
VALLEY AND LOWER CONNECTICUT RIVER VALLEY...

The National Weather Service in Burlington has issued a Fire  
Weather Watch for gusty winds and low relative humidity, which is  
in effect from Tuesday morning through Tuesday evening.

\* AFFECTED AREA...In New York, Champlain Valley of New York. In  
Vermont, Champlain Valley of Vermont, Northern Taconics and  
Lower Connecticut Valley North.

\* Timing...Late Tuesday morning into Tuesday evening. Strongest  
winds and lowest relative humidity values will occur between  
noon and 5 PM Tuesday.

\* WINDS...Southwest 15 to 25 mph with gusts to around 40 mph.

\* RELATIVE HUMIDITY...20 to 35% percent.

\* TEMPERATURES...In the lower to mid 60s.

\* Impacts...Dry vegetation combined with gusty winds and low RH  
will promote the potential for rapid fire spread with any fires  
that may start.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A Fire Weather Watch means that critical fire weather conditions  
may occur. Listen for later forecasts and possible Red Flag  
Warnings.

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- **Fire Weather Watch:**
- **Wind gusts 15 to 25 mph, localized near 40 mph downslope areas of the eastern Dacks**
- **Minimum RH's 20 to 35%**
- **Temperatures in the lower to mid 60s**



## Red Flag Warning

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NYZ205-VTZ030-033-035-112100-  
/O.UPG.KBTV.FW.A.0002.230411T1400Z-230412T0000Z/  
/O.NEW.KBTV.FW.W.0001.230411T1400Z-230412T0200Z/  
Champlain Valley of New York-Champlain Valley of Vermont-  
Northern Taconics-Lower Connecticut Valley North-  
208 AM EDT Tue Apr 11 2023  
  
...RED FLAG WARNING IN EFFECT FROM 10 AM THIS MORNING TO 10 PM  
EDT THIS EVENING FOR GUSTY WINDS AND LOW RELATIVE HUMIDITY FOR  
THE CHAMPLAIN VALLEY AND LOWER CONNECTICUT RIVER VALLEY...  
  
The National Weather Service in Burlington has issued a Red Flag  
Warning, which is in effect from 10 AM this morning to 10 PM EDT  
this evening. The Fire Weather Watch is no longer in effect.  
  
* AFFECTED AREA...In New York, Champlain Valley of New York. In  
Vermont, Champlain Valley of Vermont, Northern Taconics and  
Lower Connecticut Valley North.  
  
* Timing...From 10 AM this morning until 10 PM this evening. The strongest  
winds and lowest relative humidity values will occur between 11  
AM and 5 PM Today.  
  
* WINDS...Southwest 15 to 25 mph with gusts up to 40 mph, with  
localized gusts up to 50 mph across western Clinton and eastern  
Essex Counties in New York.  
  
* RELATIVE HUMIDITY...20 to 30 percent with localized values near  
15 percent across the southern Champlain and lower Connecticut  
Valleys.  
  
* TEMPERATURES...In the mid 60s to lower 70s.  
  
* IMPACTS...Dry vegetation combined with gusty winds and low  
relative humidity will promote the potential for rapid fire  
spread with any fires that may start.  
  
* Additional information...A burn ban is in effect for all of  
New York through May 14th, which means no open burning is  
allowed. Those in Vermont should consult with your local fire  
warden regarding open burning.  
  
PRECAUTIONARY/PREPAREDNESS ACTIONS...  
  
A Red Flag Warning means that dangerous fire weather conditions  
are expected due to the combination of gusty winds, low relative  
humidities, and dry fuels. Any fires that develop may quickly get  
out of control and become difficult to contain.
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- **High end Red Flag Event with stronger winds and lower RH's:**
- **Wind gusts 30 to 40 mph, localized near 50 mph downslope areas of the eastern Dacks**
- **Minimum RH's 20 to 30%**
- **Very warm temperatures mid 60s to lower 70s**

# Special Weather Statement

Special Weather Statement

National Weather Service Burlington VT

601 AM EDT Tue Apr 11 2023

NYZ026-027-087-112100-

Northern St. Lawrence-Northern Franklin-Southwestern St. Lawrence-  
Including the cities of Massena, Norfolk, Fort Covington, Malone,  
Ogdensburg, Potsdam, and Gouverneur

601 AM EDT Tue Apr 11 2023

...Dry Fuels, Low Relative Humidity, and Gusty Winds will  
Increase Fire Weather Concerns This Afternoon...

- \* Fine fuels are near critically dry levels across the St. Lawrence Valley and locations along US Highway 11 towards Malone and Ellenburg Depot in northern New York according to the New York State Department of Environmental Conservation. The combination of low relative humidity values between 28 to 35 percent and gusty southwest winds of 30 to 45 mph, may lead to increase fire weather concerns late this morning into early this evening. The period of strongest winds and lowest relative humidity values are expected from noon and 5 PM. If any fires were to start, the weather and localized fuel conditions may result in rapid fire spread.
- \* For more information about the current fire danger rating, any burn restrictions, and wildfire prevention and education, please visit your state forestry or environmental protection website.
- \* Remember, a burn ban is in effect for all of New York through May 14th, which means no open burning is allowed.



# Wind Advisory

NYZ027-030-031-034-120300-  
/O.CON.KBTV.WI.Y.0005.000000T0000Z-230412T0300Z/  
Northern Franklin-Southern Franklin-Western Clinton-Western Essex-  
Including the cities of Fort Covington, Malone, Saranac Lake,  
Tupper Lake, Dannemora, Ellenburg, Lake Placid, and Newcomb  
313 PM EDT Tue Apr 11 2023

...WIND ADVISORY REMAINS IN EFFECT UNTIL 11 PM EDT THIS EVENING...

\* WHAT...Southwest winds 20 to 30 mph with gusts up to 50 mph  
expected.

\* WHERE...Franklin, Western Clinton and Western Essex Counties.

\* WHEN...Through 11 PM EDT this evening.

\* IMPACTS...Gusty winds could blow around unsecured objects.  
Tree limbs could be blown down and a few power outages may  
result.

\* ADDITIONAL DETAILS...The strongest winds are expected between  
4 PM and 8 PM this afternoon.

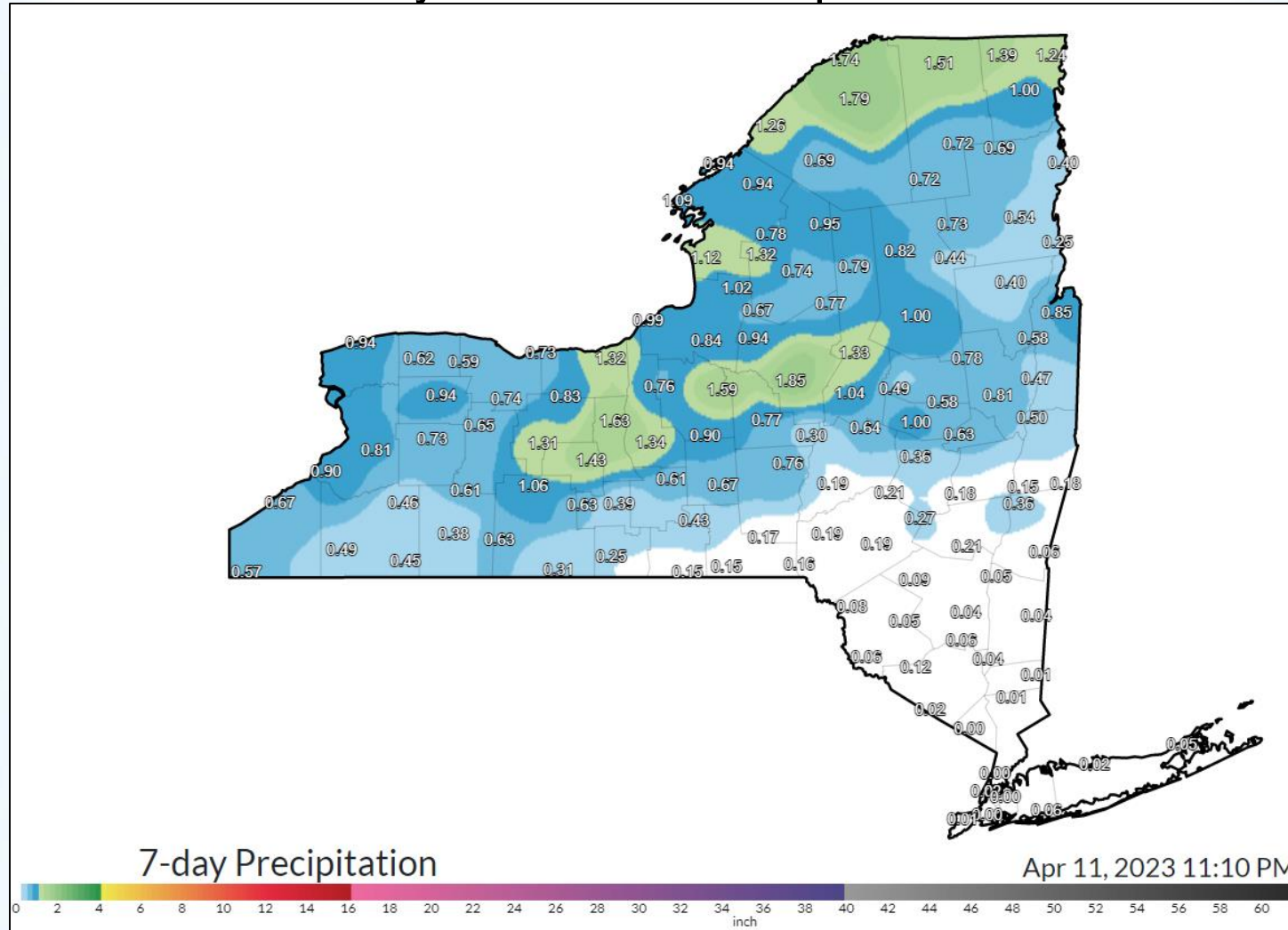
PRECAUTIONARY/PREPAREDNESS ACTIONS...

Use extra caution when driving, especially if operating a high  
profile vehicle. Secure outdoor objects.

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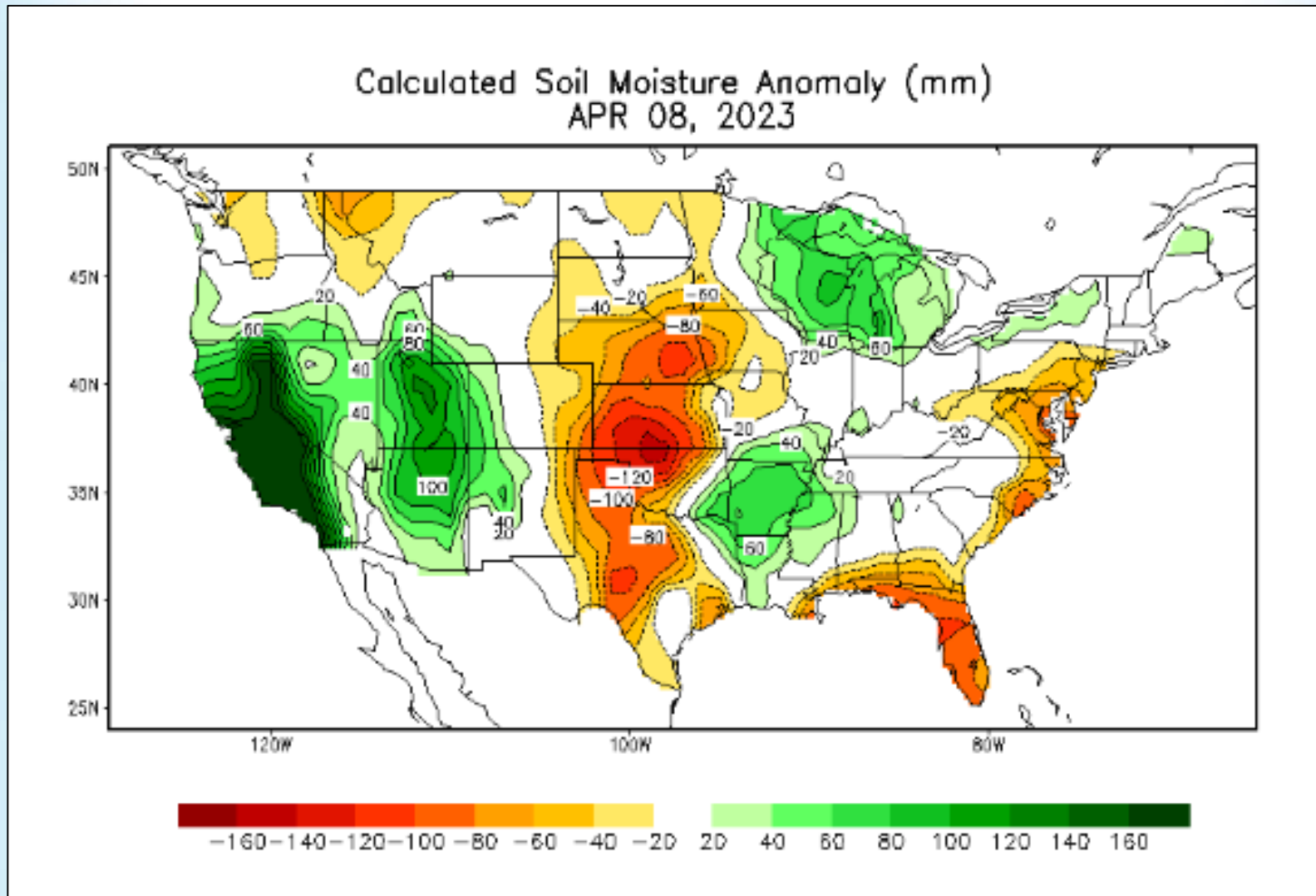
# Meteorological Conditions

## 7 Day Observed Precipitation

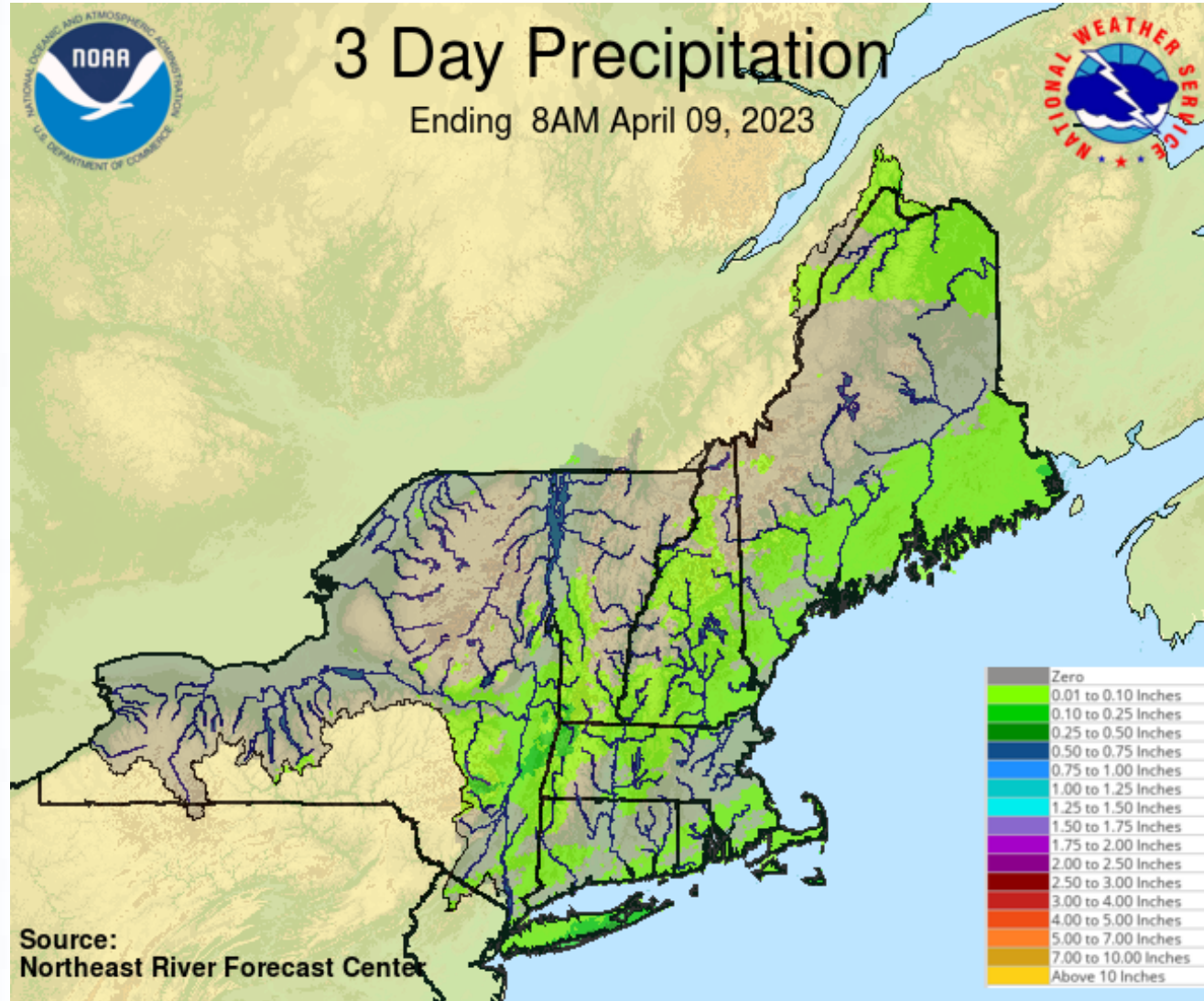




# Calculated Soil Moisture Anomaly for 8 April 2023

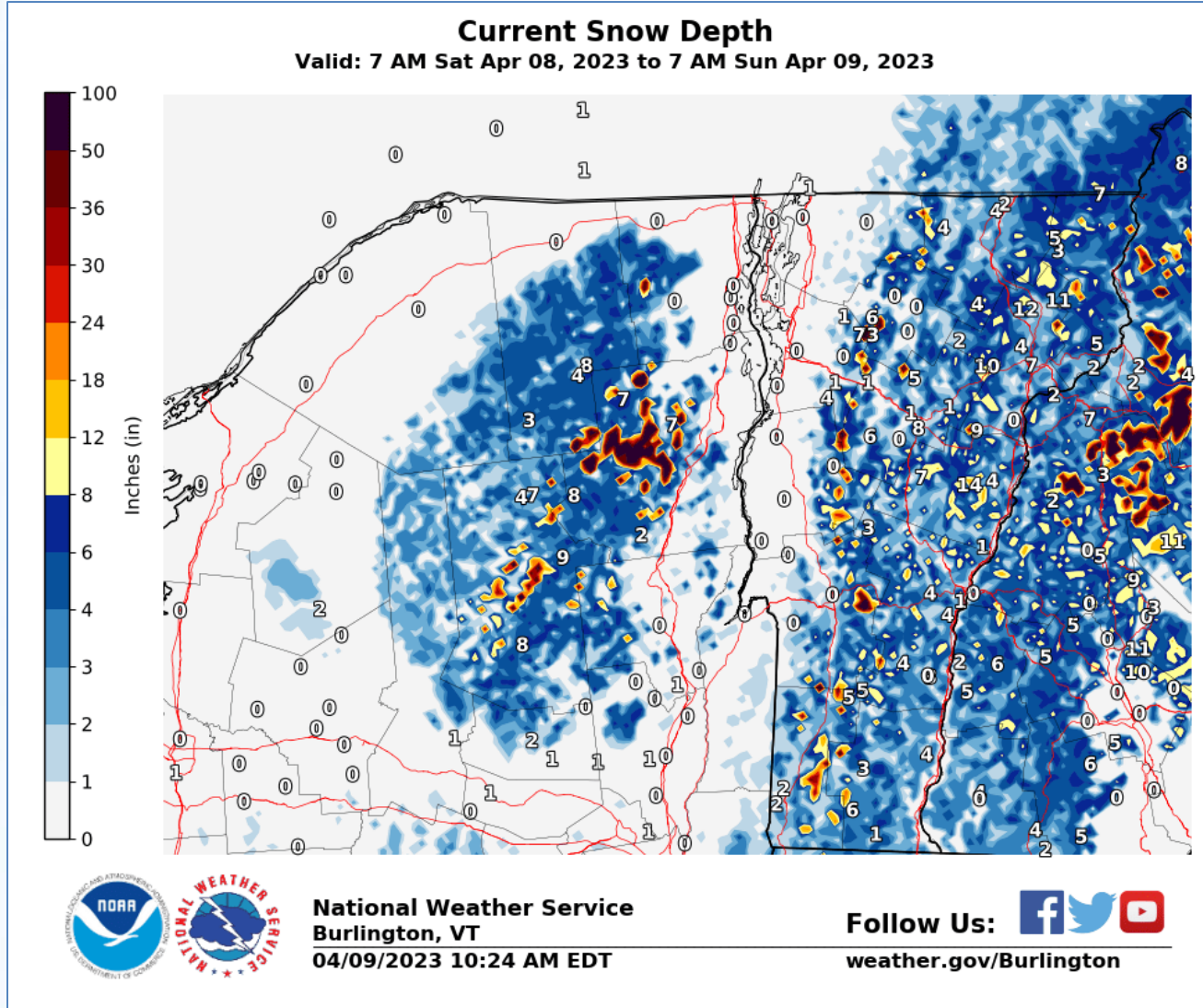


# 3 Day Precipitation Ending 8 AM on 9 April 2023

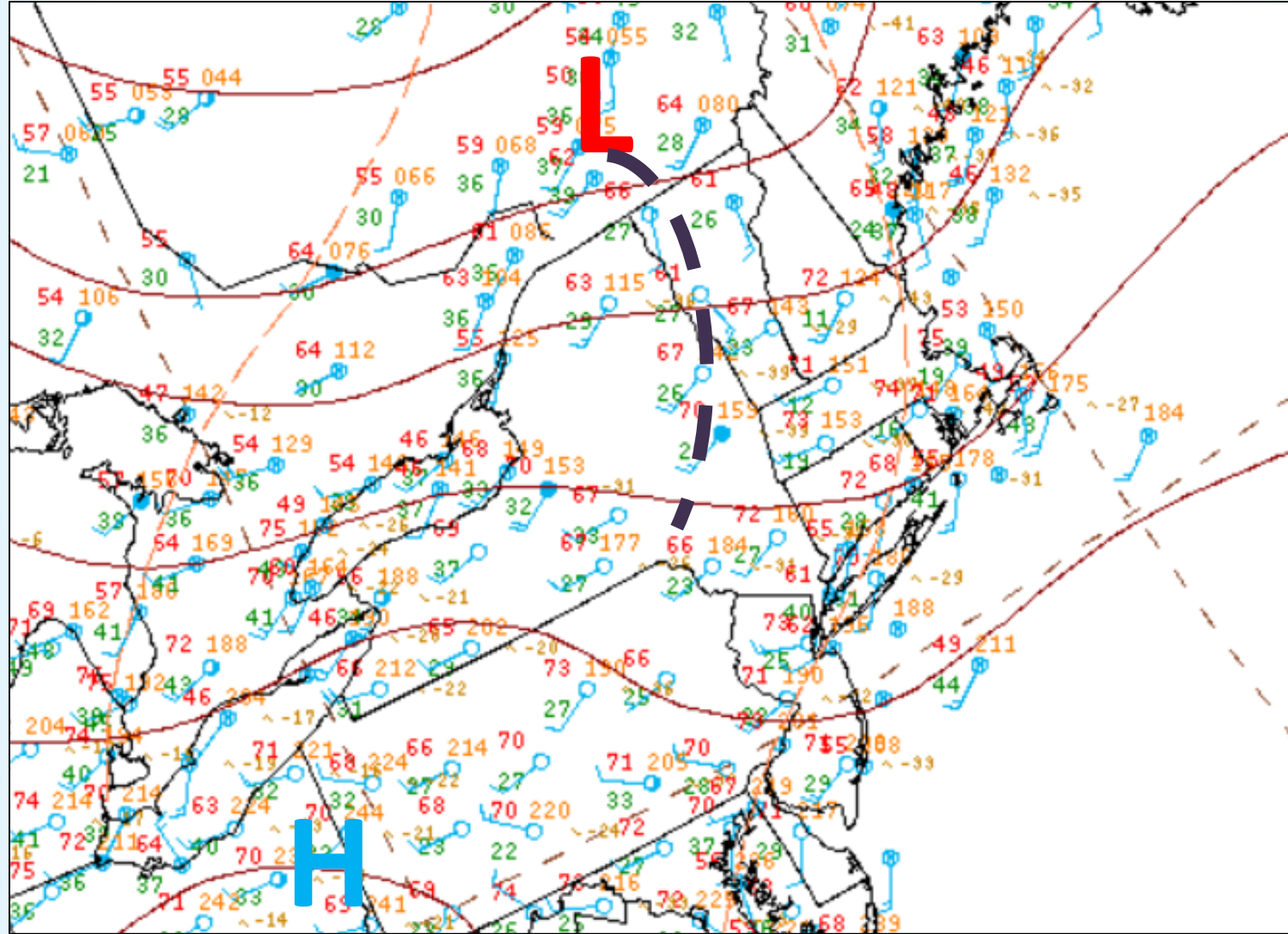




# Current Snow Depth as of 7 AM on 9 April 2023



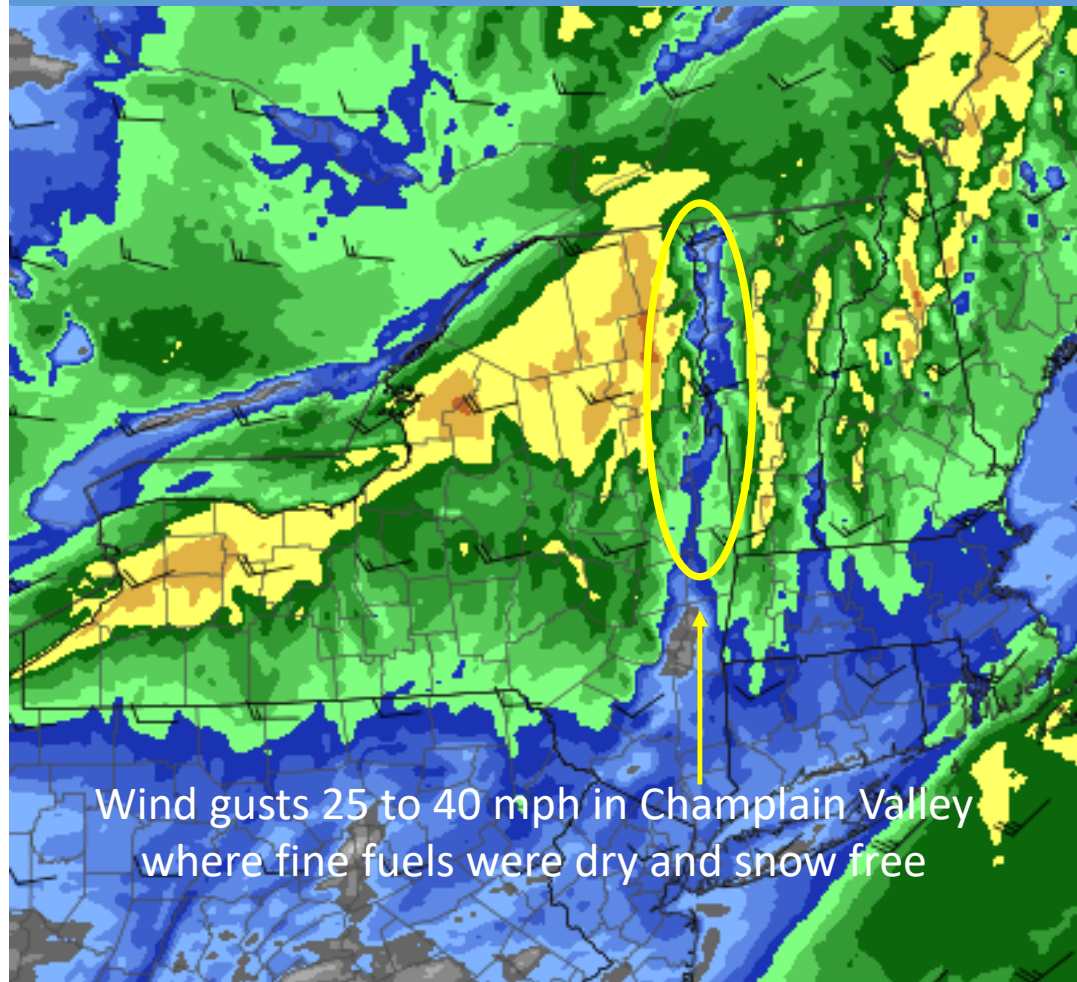
# Surface Analysis at 2 PM on 11 April 2023



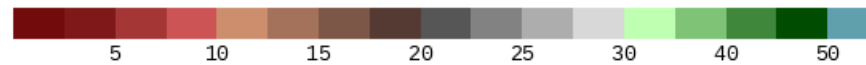
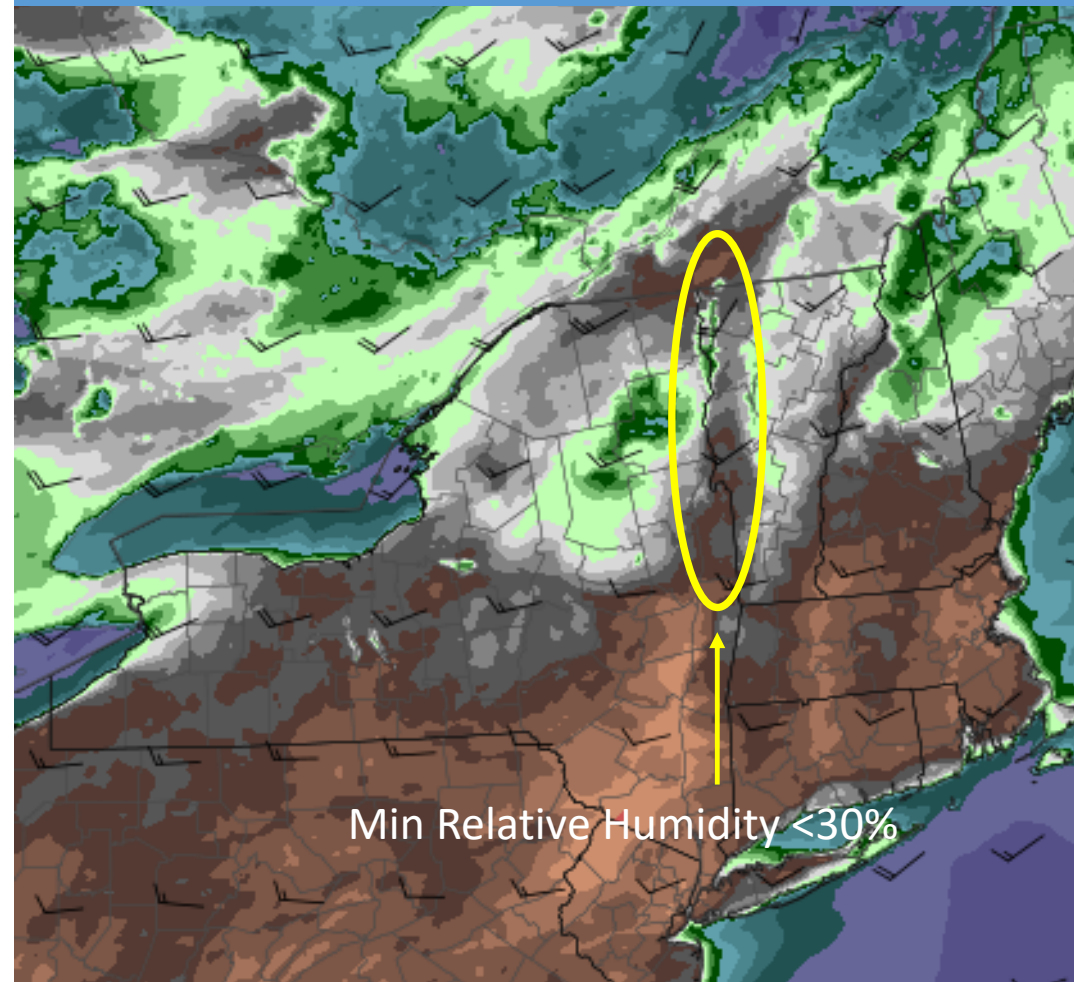


# HREF 10 Meter Wind Gust and Minimum Relative Humidity at 1 PM on 11 April 2023

HREF 10 Meter Wind Gust  
at 1 PM on 11 April 2023



HREF 2 Meter Min Relative Humidity  
at 1 PM on 11 April 2023



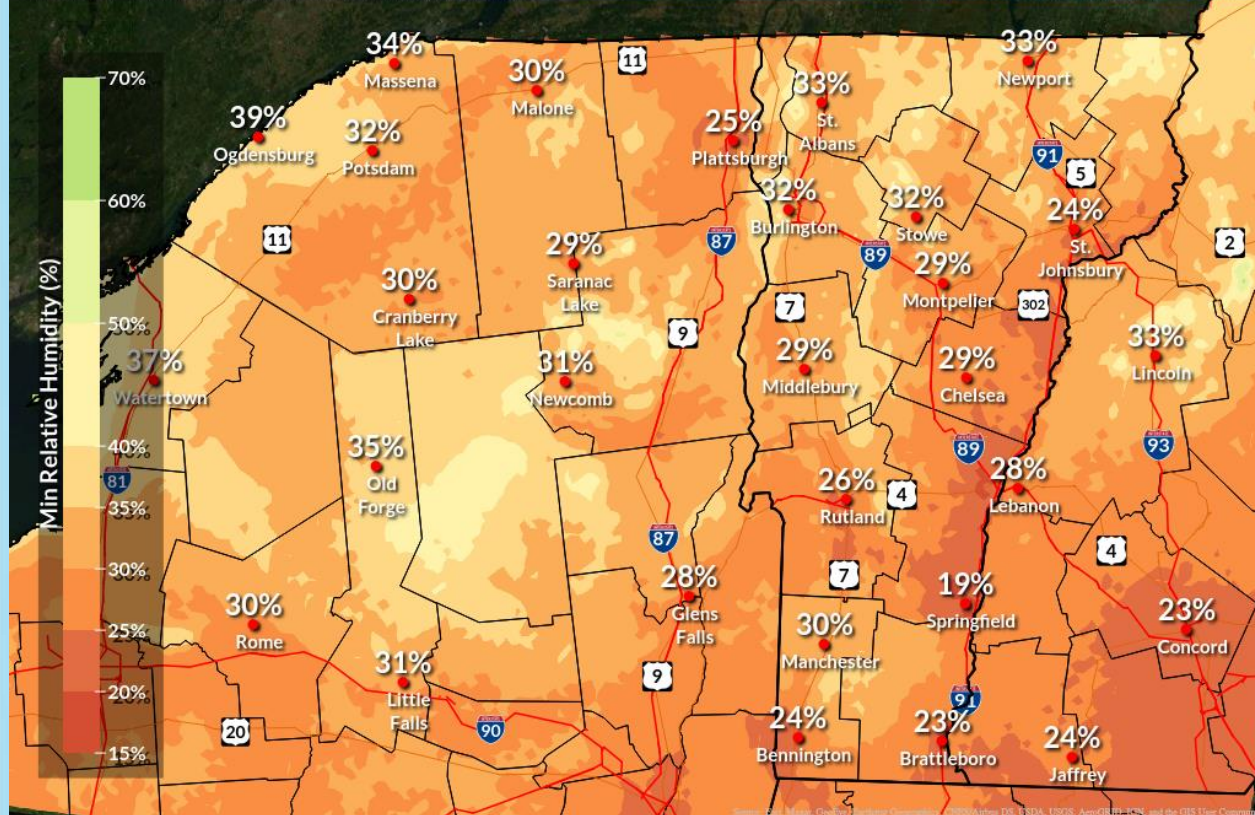


# Forecast Min RH and Max Wind Gust Tuesday

## Minimum Relative Humidity

Valid from 4 AM Tuesday to 10 PM Tuesday Evening

Weather Forecast Office  
Burlington, VT  
Issued Apr 10, 2023 3:55 AM EDT



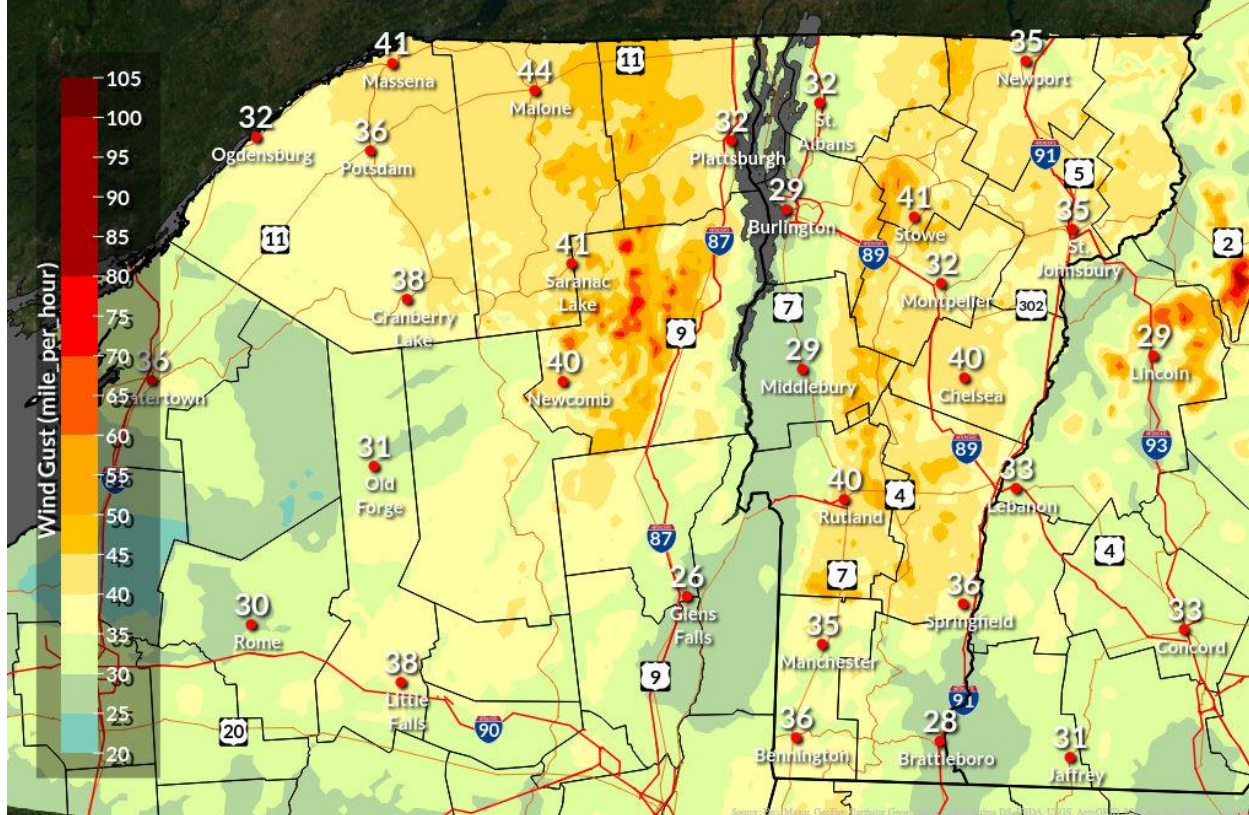
f NWSBurlington

weather.gov/btv

## Maximum Wind Gust Forecast

Valid Tuesday, April 11, 2023

Weather Forecast Office  
Burlington, VT  
Issued Apr 10, 2023 3:23 AM EDT



f NWSBurlington

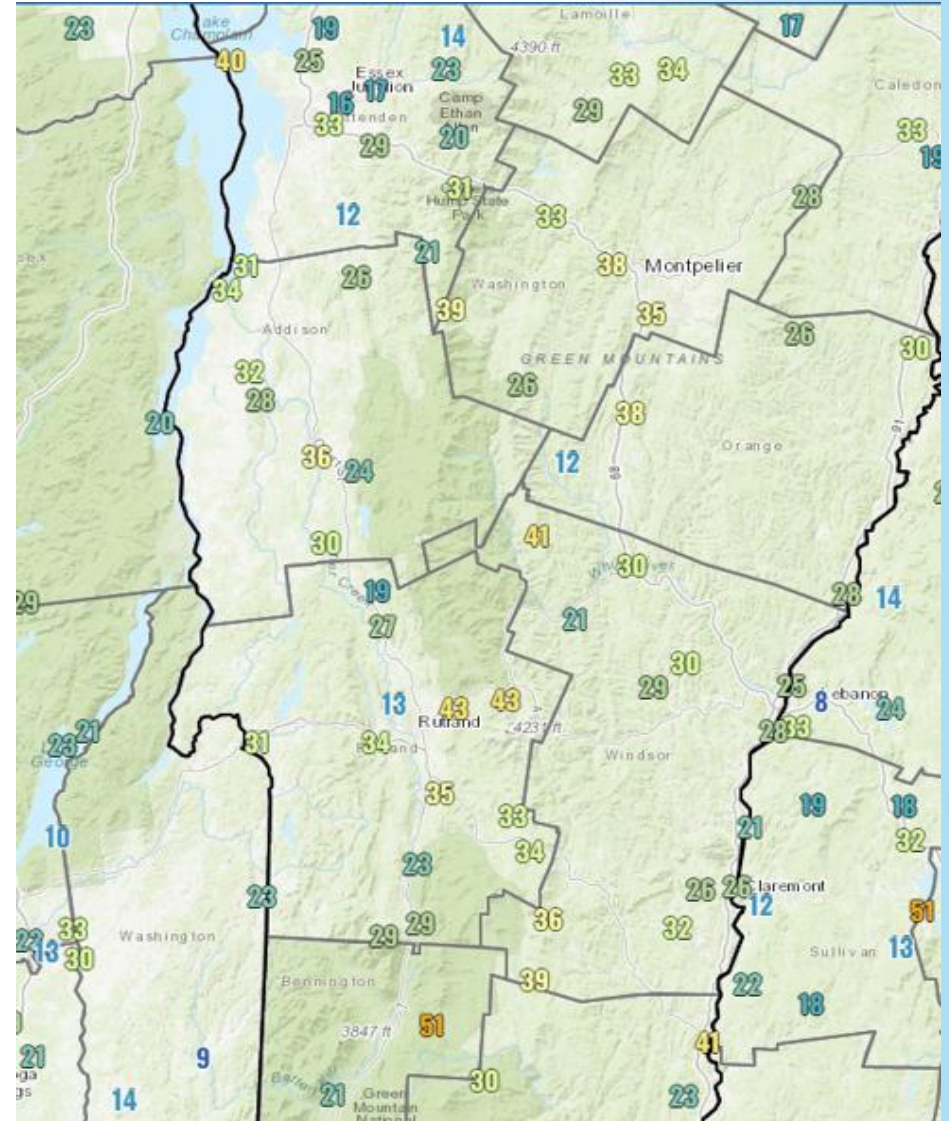
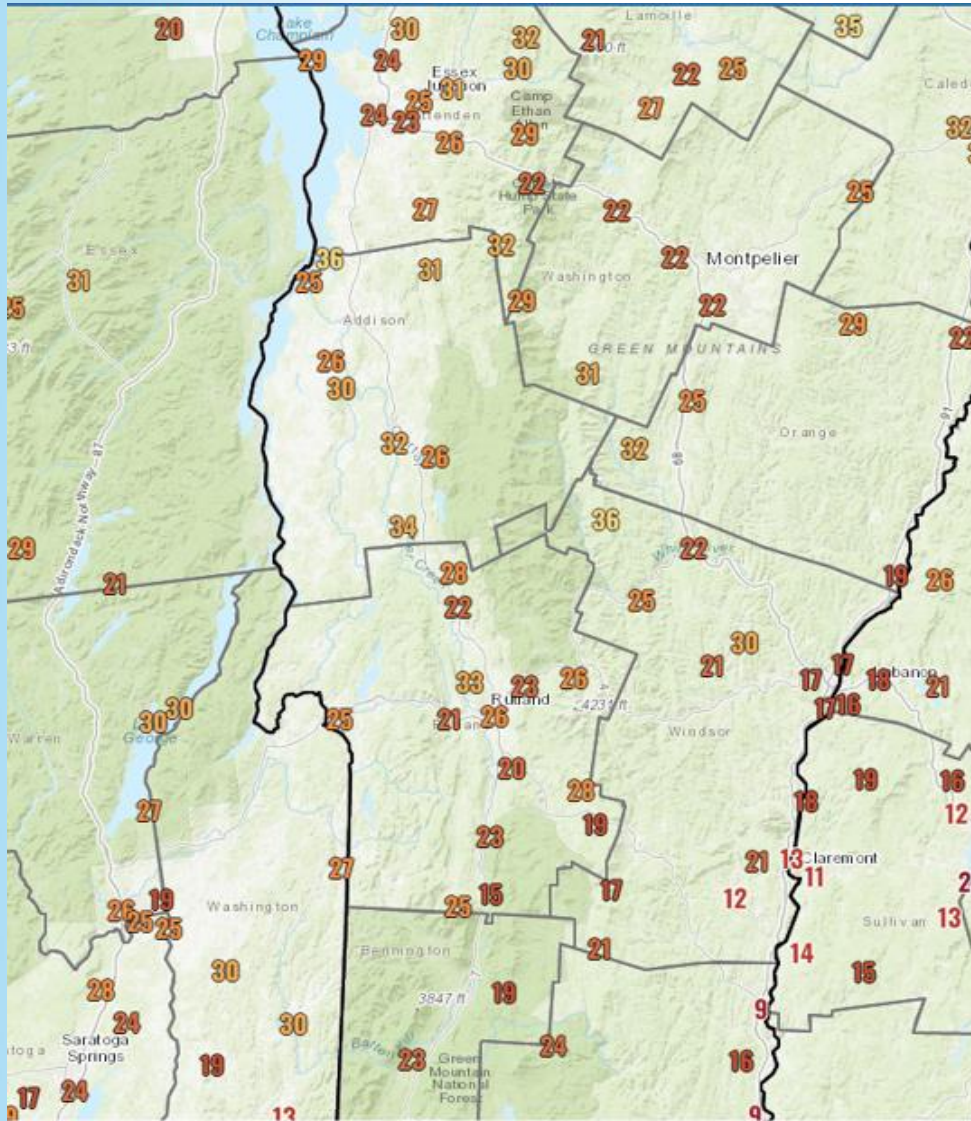
weather.gov/btv







# Observed Min RH and Peak Winds on 11 April 2023





# Notes on Coordination/Collaboration

Work log Entry on 10 April 2023 at 830 AM  
with regards to Fire Weather Watch

Coordinated with ALY(Ingrid), Dan Dilner, Lars Lund, and Lt Jackson on expected conditions/fire weather concerns for tomorrow.

Dan and Lars stated that fine fuels are dry and receptive while not all larger fuels are quite receptive; west slopes are driest and of largest concerns. Dan noted that FDRA 4 and 5 are lower concerns given the presence of snow, but the snow flag for FDRA 4 has been removed & may begin to transition this week.

All agreed that a Fire Weather Watch was warranted for tomorrow, and an upgrade to Red Flag Warning if expected wind/RH conditions for tomorrow remain the same. The Champlain Valley is the higher concern with the lower Connecticut River Valley a close second. Conditions will be marginal for RH in the St Lawrence Valley and Highway 11 corridor while winds may be strongest there; Lt Jackson agreed that an SPS would cover fire concerns.

# Additional Coordination on the Evening Shift of 10 April 2023

ALY spoke to Lt. Jackson regarding NY fuels and potential Red Flag Warnings for tomorrow. He said that fuels in the lower Hudson River Valley and Catskill regions were conducive to Red Flag Warnings, but all over areas are not quite ready and would just need SPS's

Emailed our VT fire weather partners to get their latest thoughts on whether they are leaning more towards a Red Flag Warning or Fire Weather SPS. We currently have Fire Weather Watches up for VTZ030, VTZ033 and VTZ035. NY DEC has informed us through NWS Albany that the fuels will likely not meet the Red Flag criteria for the adjacent Champlain Valley and Upper Hudson Valley zones.



# Additional Coordination Early Morning on 11 April 2023

Given several media reports of brush fires in the CPV yesterday and expected stronger winds across the downslope regions of the eastern dacks and lower rh's have upgraded fire weather watch to red flag warning. I will call Lt Jackson in the morning to convey my concerns with regards to conditions.

Spoke with Lt Jackson with regards to upgrading to warning, based on localized gusts to 40 to 50 mph, min rh's in the 20 to 25% range, and past 7 to 10 day qpf only in the 0.25 to 0.50 range and he had no issue. I did not want to send the wrong message with just a sps with regards to critical fire conditions. He had no issue and appreciated the update very much, especially with regards to the winds and poor rh recoveries overnight.

# Thoughts on Upgrade to Red Flag

- 7 to 10 Day Precipitation was 0.25 to 0.50 per NY State Meso-net.
- Media reports of brush fires on previous day in Champlain Valley.
- Poor RH recoveries occurred overnight into Red Flag Day
- Very gusty winds were anticipated, especially northern NY with critically dry humidities.
- Excellent overall coordination with our partners.
- Several fire reported caused by downed electrical lines across the area.