



# National Weather Service Burlington Weather Forecast Office

**Snow and Ice Storm Review**  
*March 29-30 2025*



National Oceanic and  
Atmospheric Administration  
U.S. Department of Commerce

Burlington Weather Forecast Office



# Outline

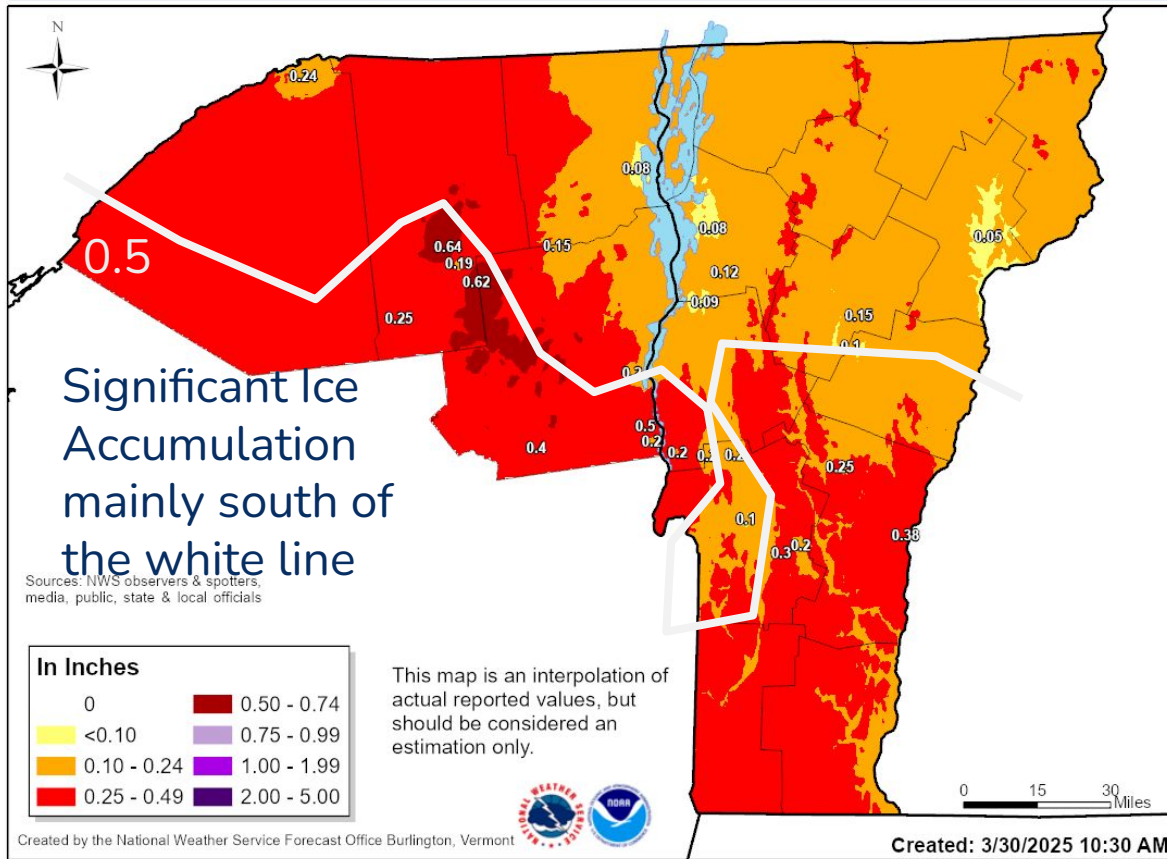
- What happened?
  - Meteorological review
  - Impacts
- How unique?





# Swath of Significant Ice Accretion on Tree Limbs and Powerlines

North Country & Vermont Storm Total Ice Accumulation Ending March 30, 2025



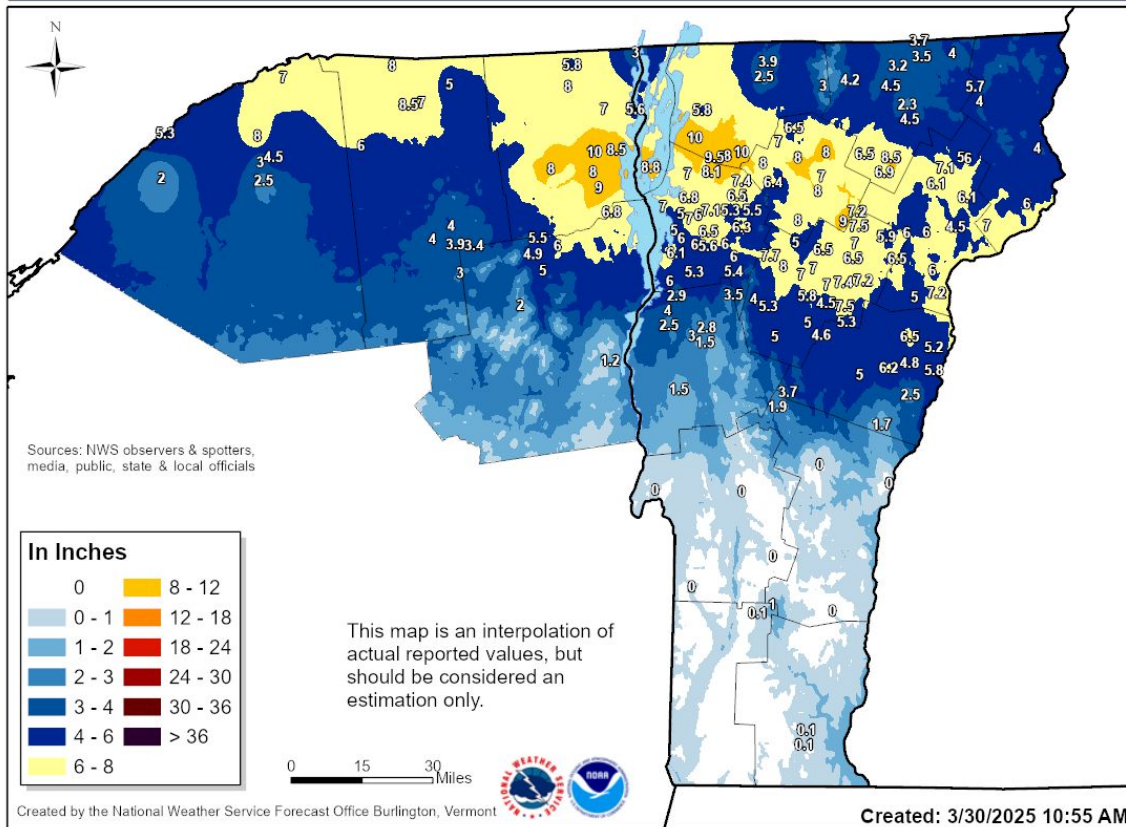
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# Narrow Swath of Snow north of the ice

## North Country & Vermont Storm Total Snowfall Ending March 30, 2025

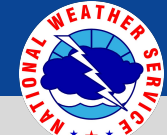




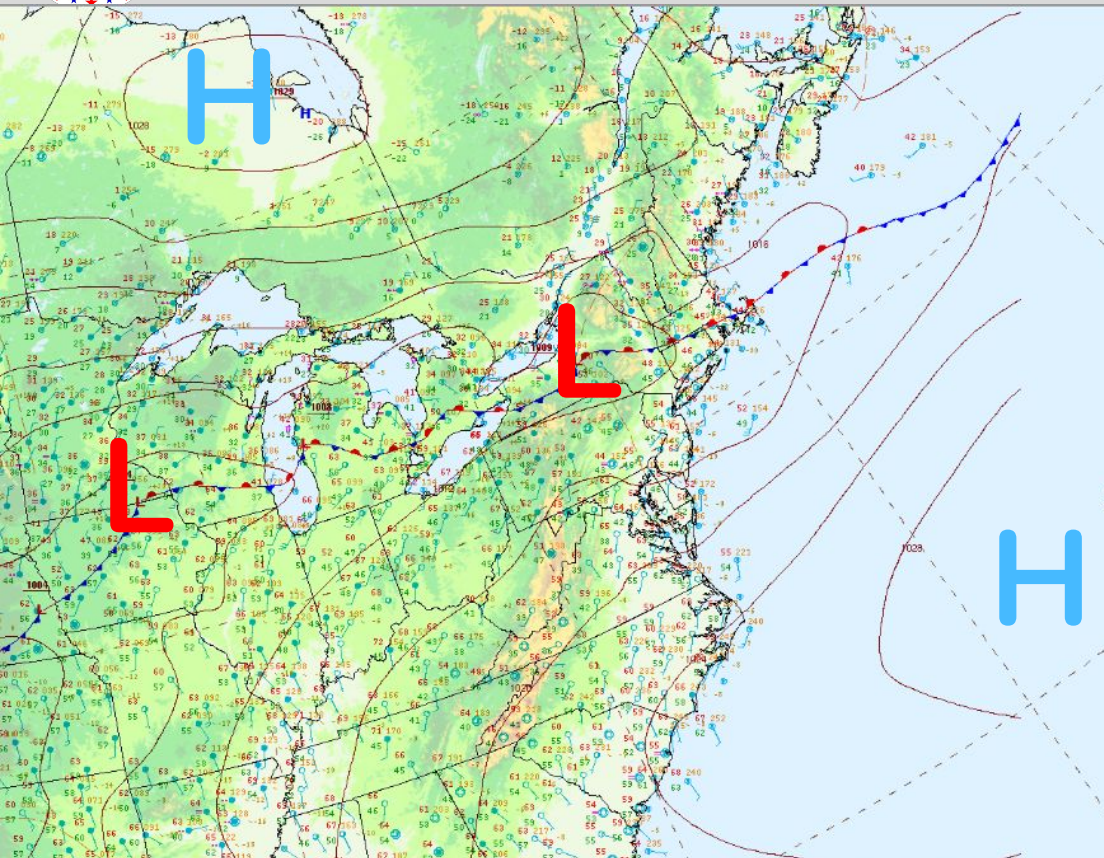


# How did we get an ice storm in late March?

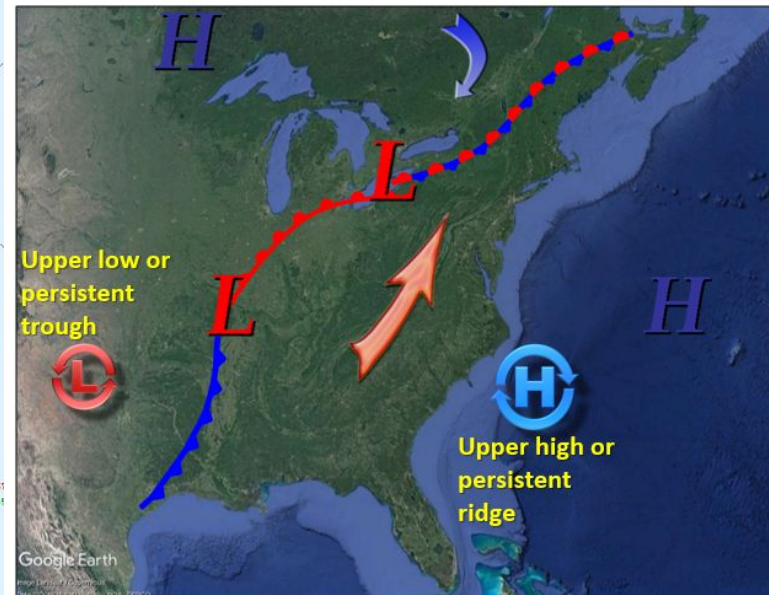




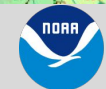
# Large Scale Weather Pattern as the storm began



## Quasi-Stationary Thermal Gradient



Positioning of a high over central Canada and a Bermuda-like high can result in a stationary thermal gradient. If there are a series of systems tracking along the boundary with a tap of moisture from the Gulf of Mexico, then a prolonged stint of freezing rain is possible. Case – January 7-9<sup>th</sup>, 1998

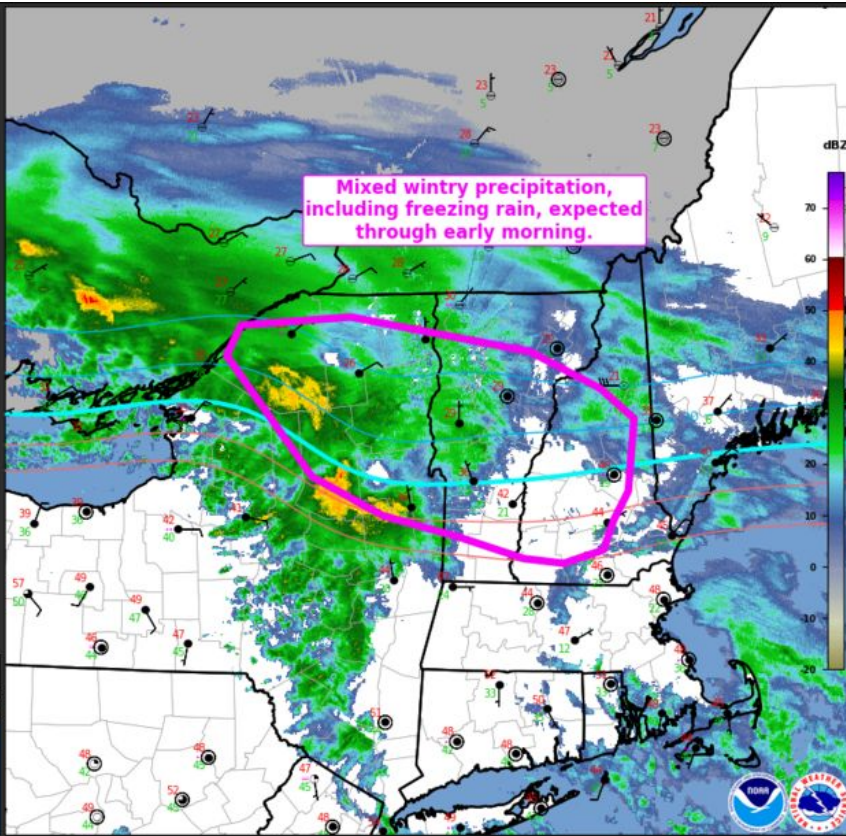




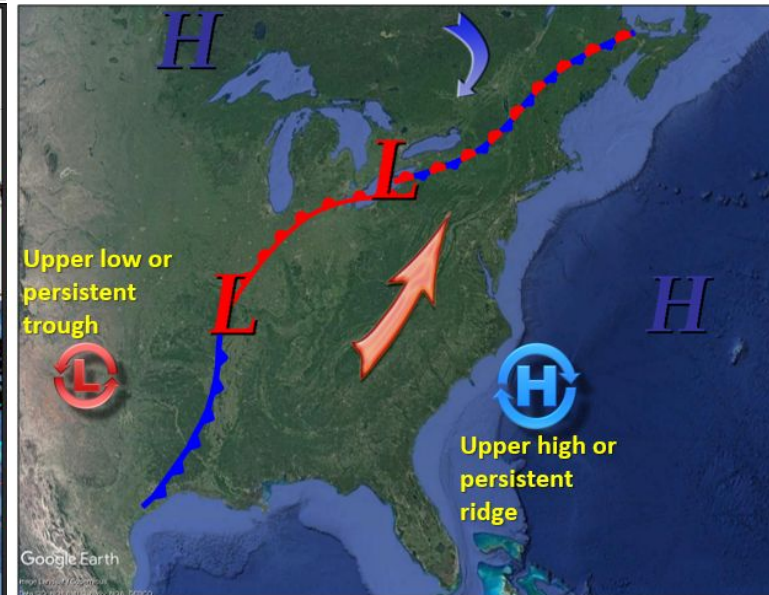


# Surface Analysis 2 AM Saturday March 29th

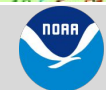
**Mesoscale Discussion #281**  
Valid Until:  
03/29/25 8:00 AM EDT  
Concerning:  
Winter Mixed Precipitation



## Quasi-Stationary Thermal Gradient



Positioning of a high over central Canada and a Bermuda-like high can result in a stationary thermal gradient. If there are a series of systems tracking along the boundary with a tap of moisture from the Gulf of Mexico, then a prolonged stint of freezing rain is possible. Case – January 7-9<sup>th</sup>, 1998



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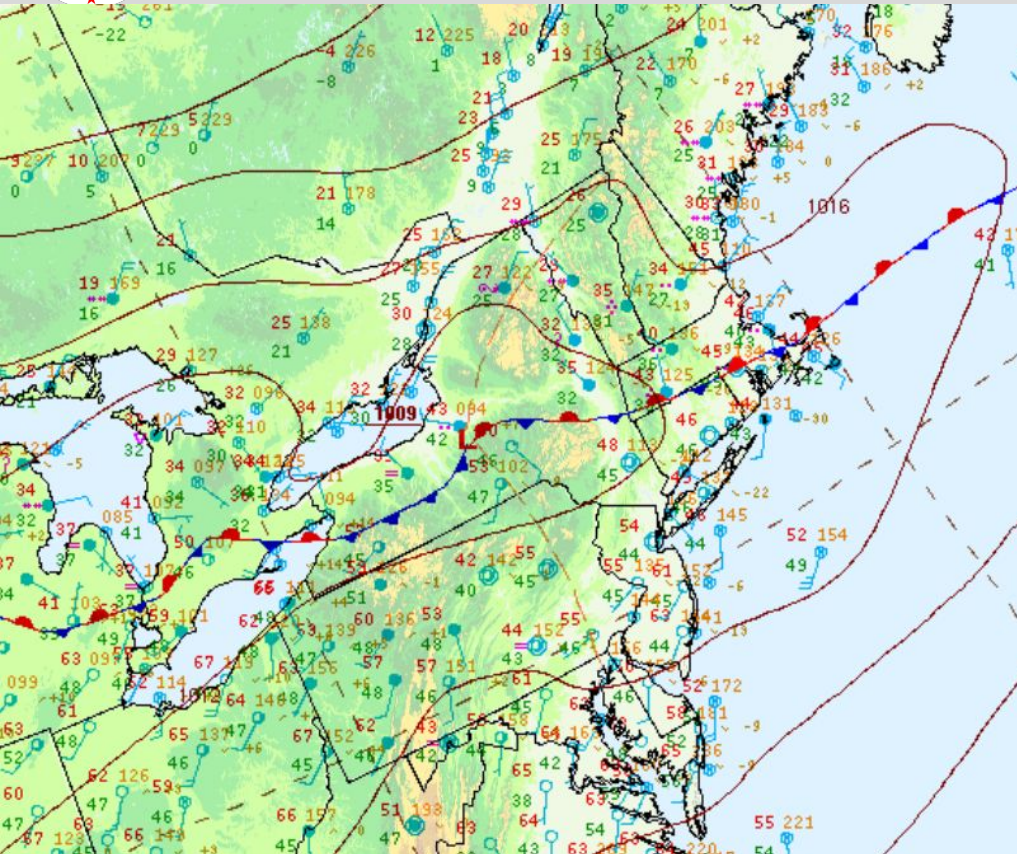
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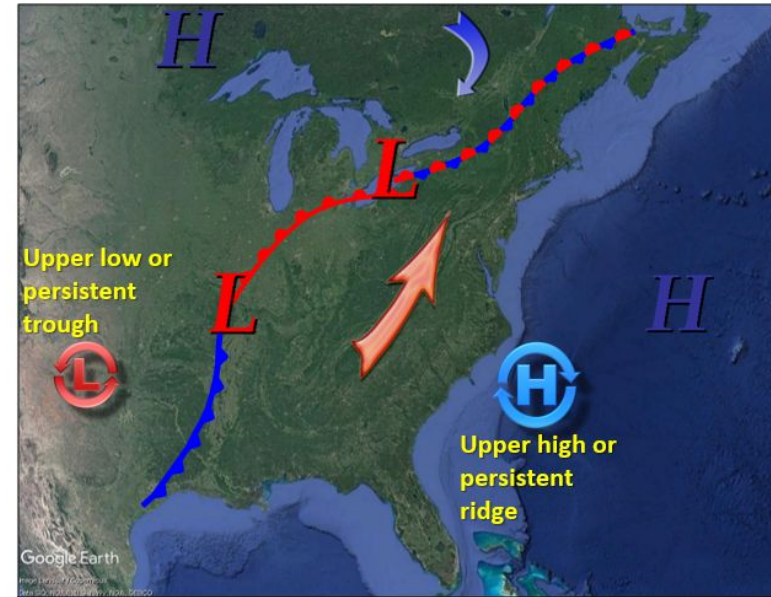




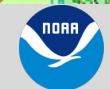
# Surface Analysis 5 AM Saturday March 29th



## Quasi-Stationary Thermal Gradient



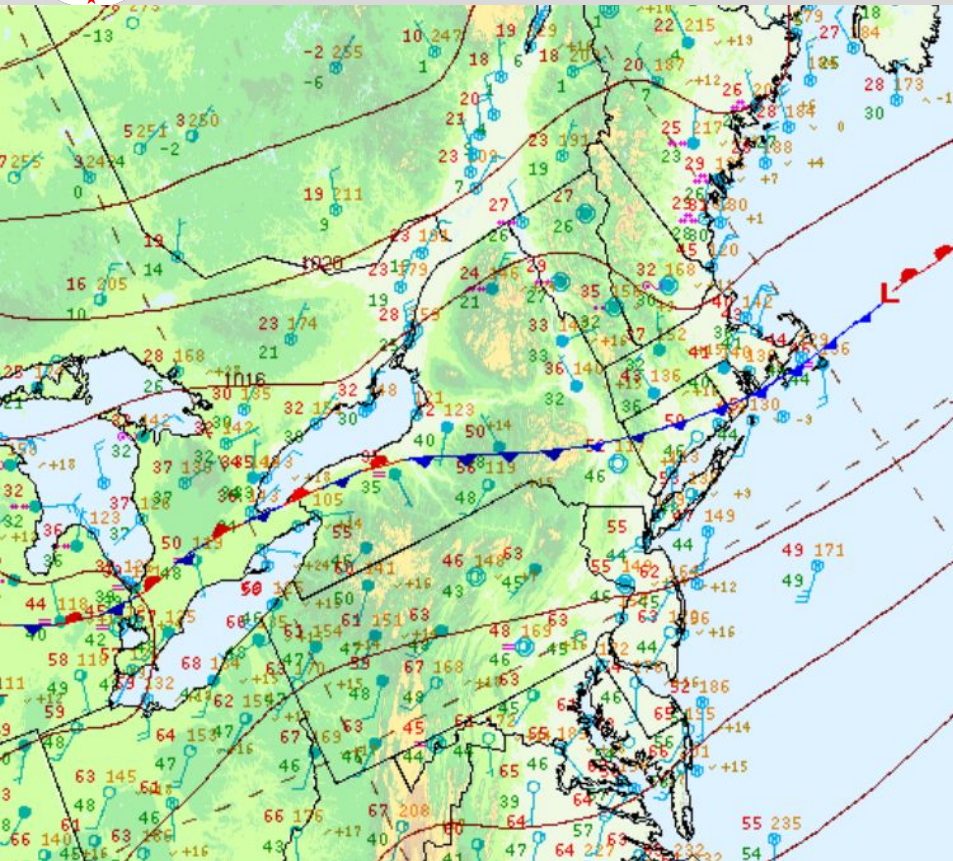
Positioning of a high over central Canada and a Bermuda-like high can result in a stationary thermal gradient. If there are a series of systems tracking along the boundary with a tap of moisture from the Gulf of Mexico, then a prolonged stint of freezing rain is possible. Case – January 7-9<sup>th</sup>, 1998



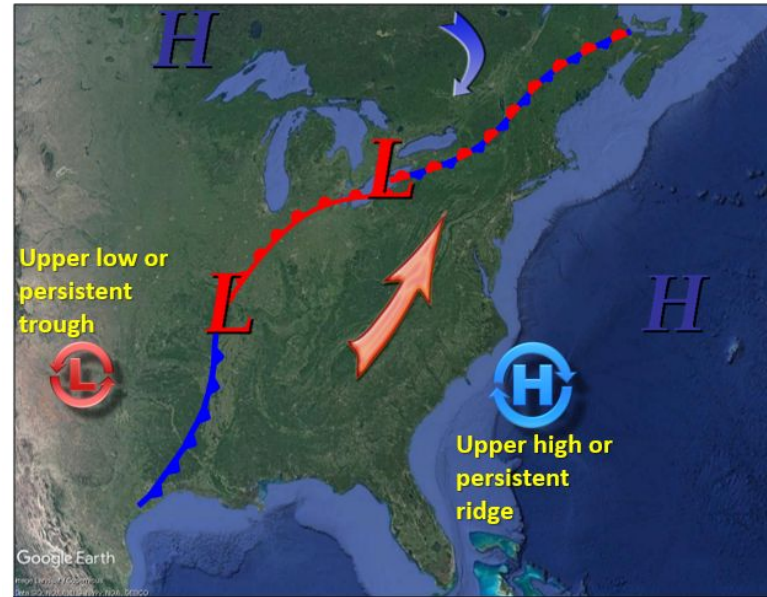




# Surface Analysis 8 AM Saturday March 29th



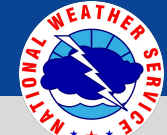
## Quasi-Stationary Thermal Gradient



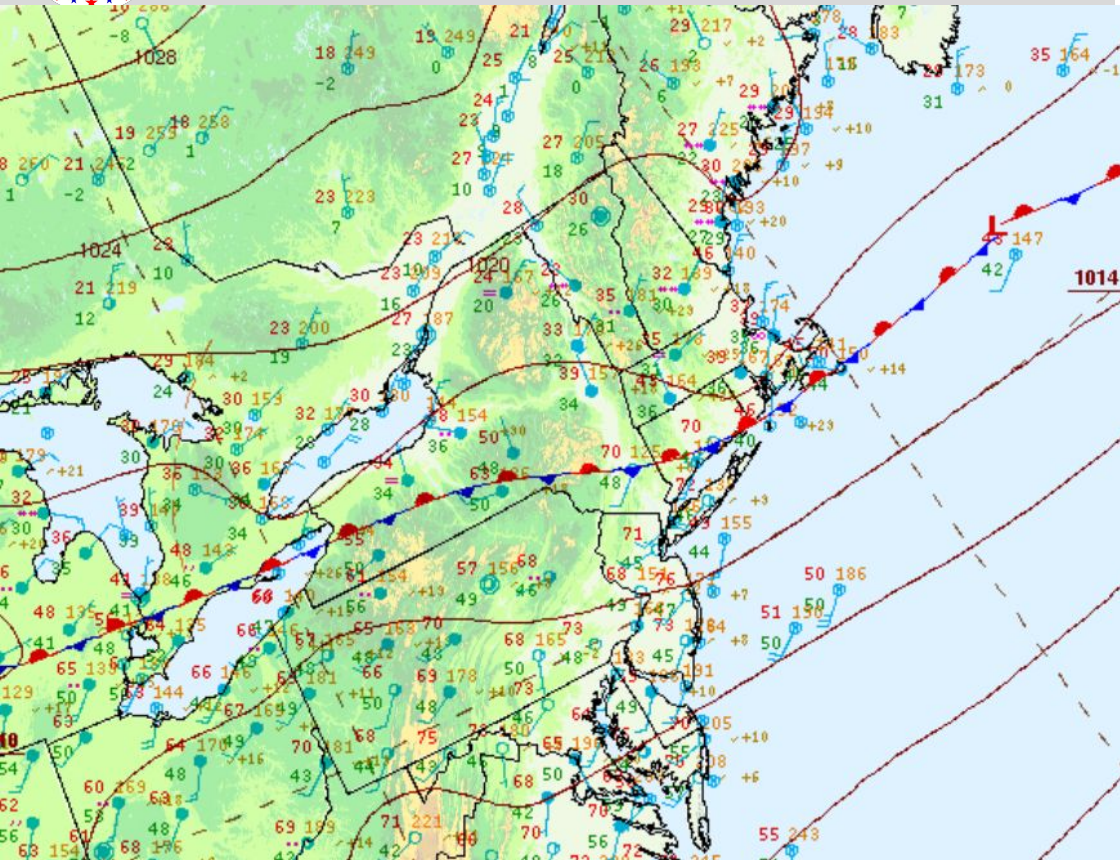
Positioning of a high over central Canada and a Bermuda-like high can result in a stationary thermal gradient. If there are a series of systems tracking along the boundary with a tap of moisture from the Gulf of Mexico, then a prolonged stint of freezing rain is possible. Case – January 7-9<sup>th</sup>, 1998



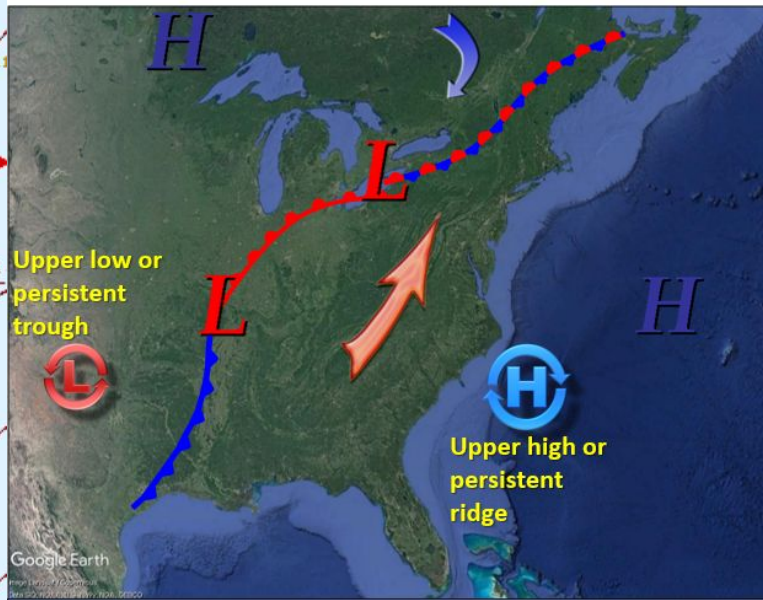




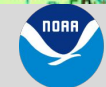
# Surface Analysis 11 AM Saturday March 29th



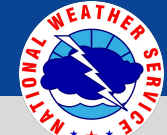
## Quasi-Stationary Thermal Gradient



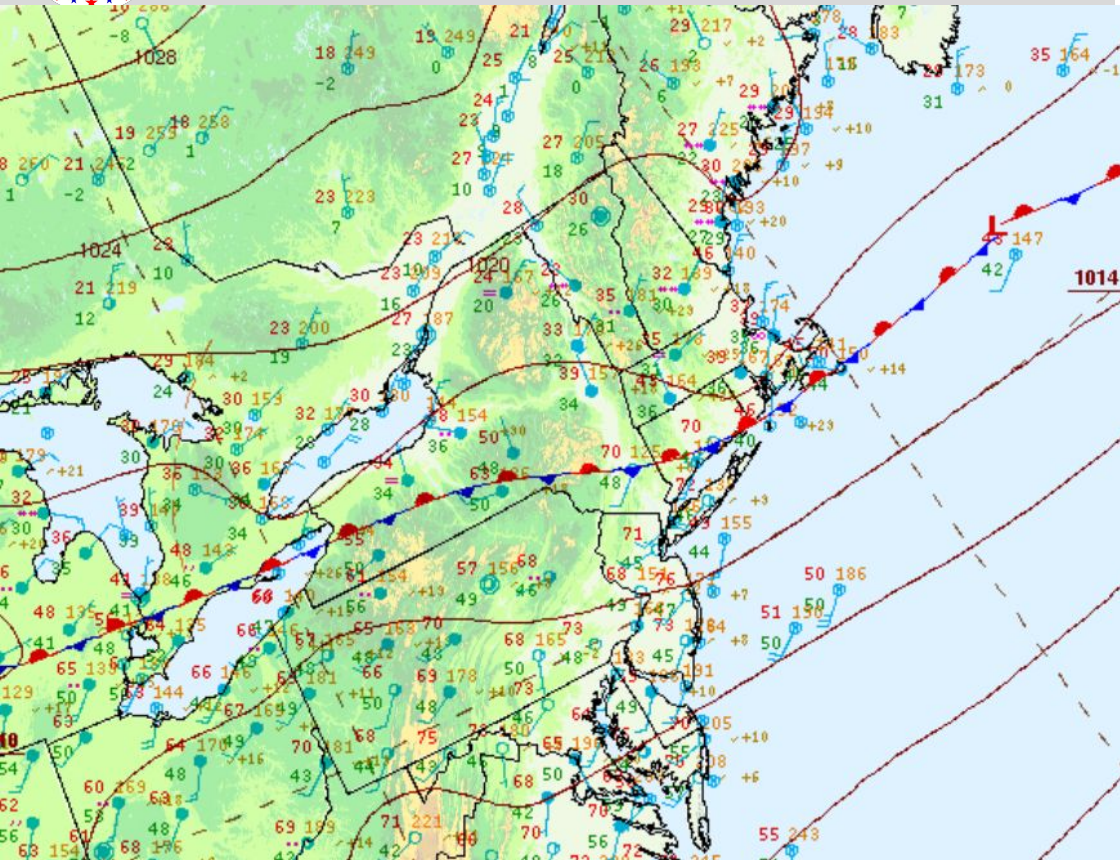
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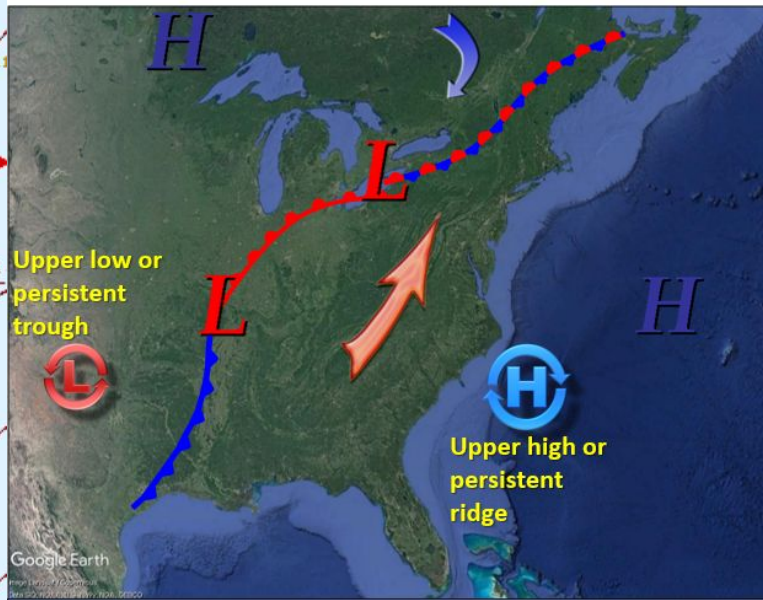




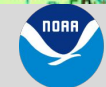
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## Quasi-Stationary Thermal Gradient



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# Radar estimated **radial ice** amounts through 11 AM Saturday

1/4 to 1/2 inch FLAT (0.1 to 0.2 inch Radial)	Hazardous, icy road conditions and some weighted tree limbs. Isolated power outages possible near 1/2" FLAT.
1/2 to 1 inch FLAT (0.2 to 0.4 inch Radial)	Dangerous road conditions, hanging limbs. Isolated (1/2" FLAT) to Numerous power outages (1" FLAT) possible.
1 to 2 inches FLAT (0.4 to 0.8 inch Radial)	Numerous (1" FLAT) to Widespread (2" FLAT) power outages likely, possibly lasting a few days. Downed tree limbs/branches and utility lines possibly causing structural or vehicle damage. Very Dangerous road conditions.



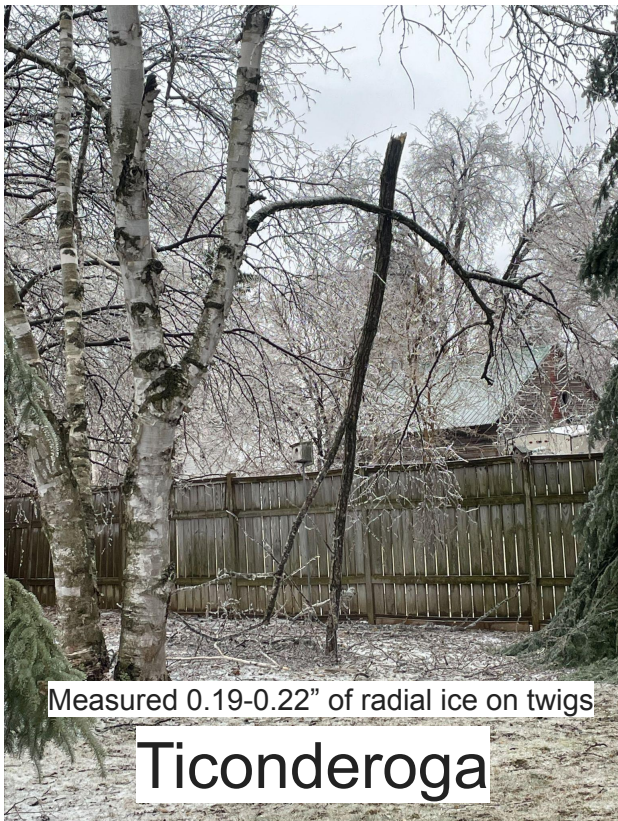
Anything in the darker red can signal significant impacts







# Northern New York observations through midday Saturday



Some other towns with significant ice:

Moriah  
Saranac Lake  
Tupper Lake  
Hammond



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# Vermont observations through midday Saturday



Fair Haven

Some other towns with significant ice:

Barnard  
Orwell  
Rochester  
Sudbury







# Radar estimated ice amounts midday Saturday through Sunday

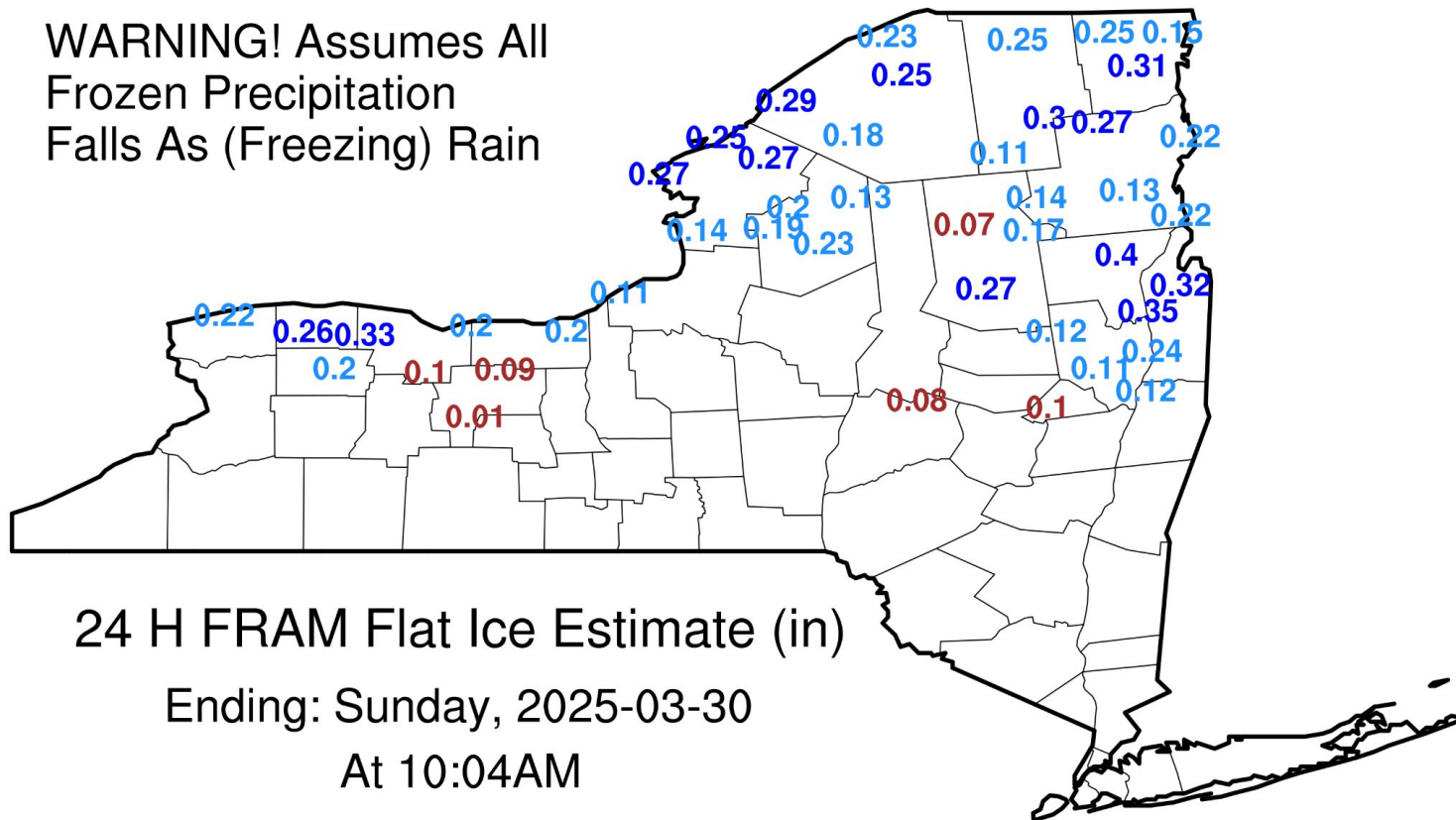




# Radar and gauge estimated ice amounts in northern New York - Part 2

(Saturday daytime through Sunday morning)

WARNING! Assumes All  
Frozen Precipitation  
Falls As (Freezing) Rain



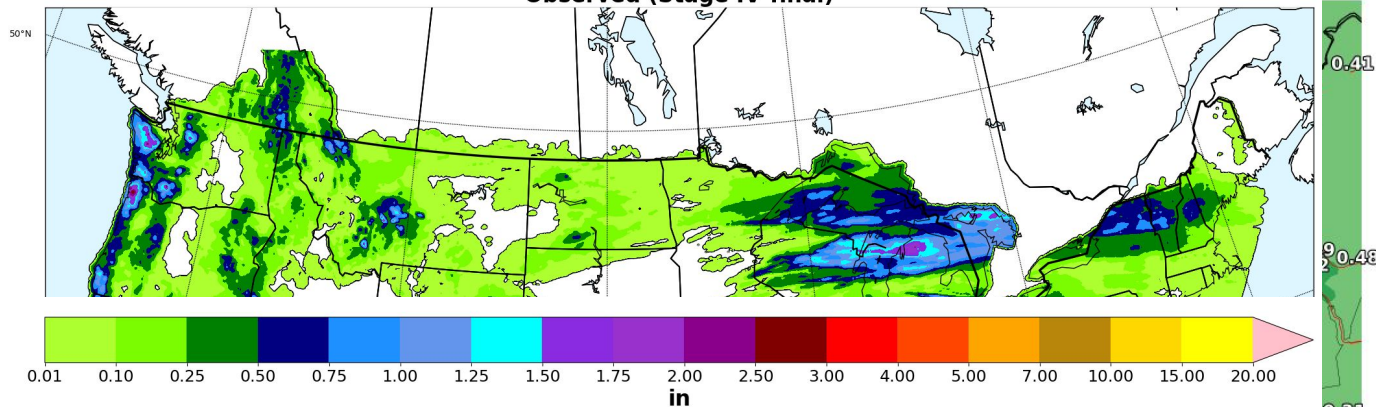


# Precipitation Map - Day 1

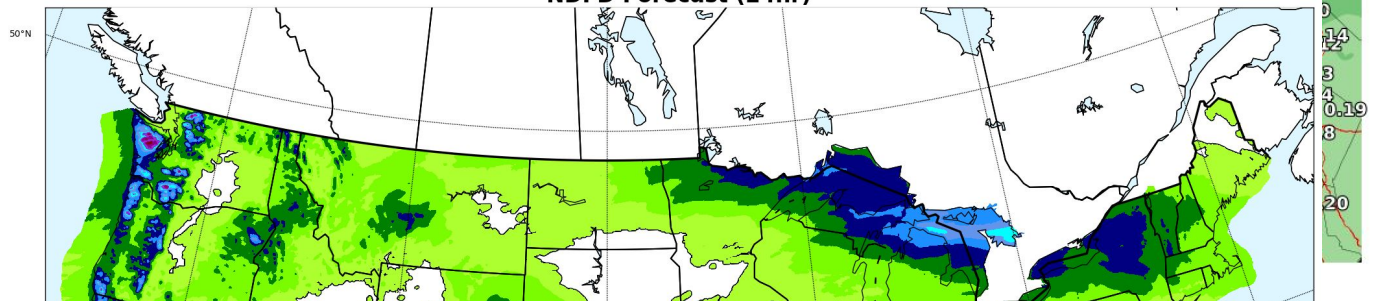
## 24-hr Precipitation Totals

Valid: 7 AM Fri Mar 28, 2025 to 7 AM Sat Mar 29, 2025

Observed (Stage IV-final)



## NDFD Forecast (24hr)



Swath of 0.5 - 1" of precipitation



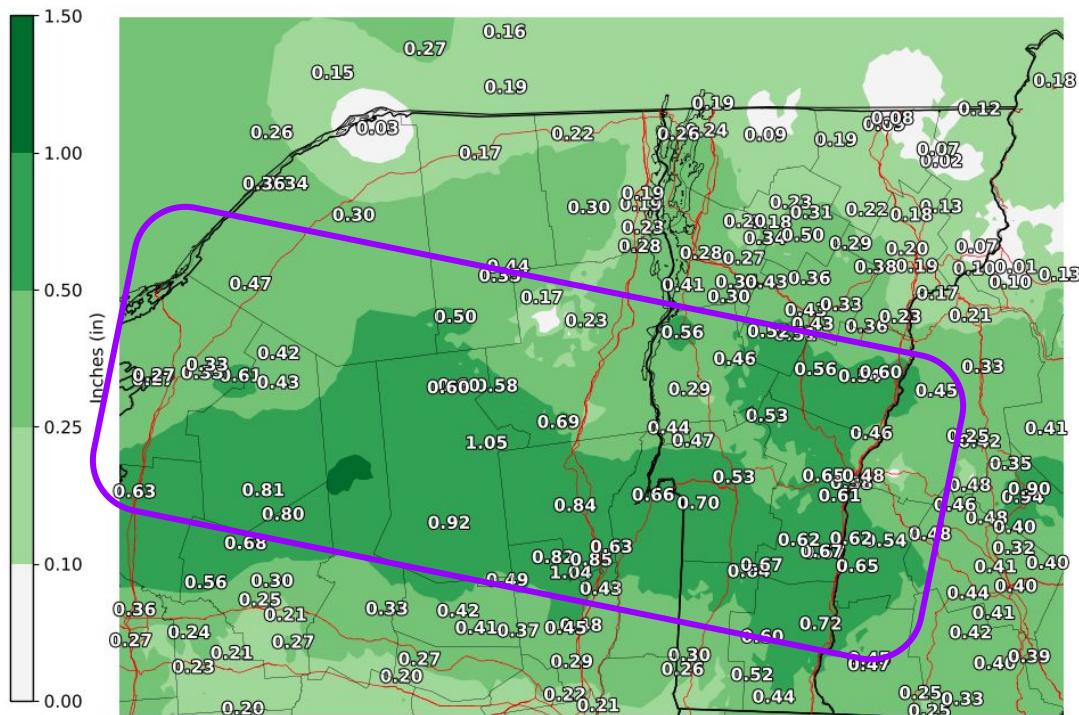




# Precipitation Map - Day 2

## 24-hr Precipitation Totals

Valid: 7 AM Sat Mar 29, 2025 to 7 AM Sun Mar 30, 2025



Another swath of 0.5 - 0.75" of precipitation in some of the same areas that saw heaviest precipitation in the first part of the event





# Forecast hazards (Snow & Ice)







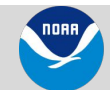
# Initial Hazard Issuance - Thursday Afternoon



## Winter Watches & Warnings

March 27, 2025  
4:26 PM

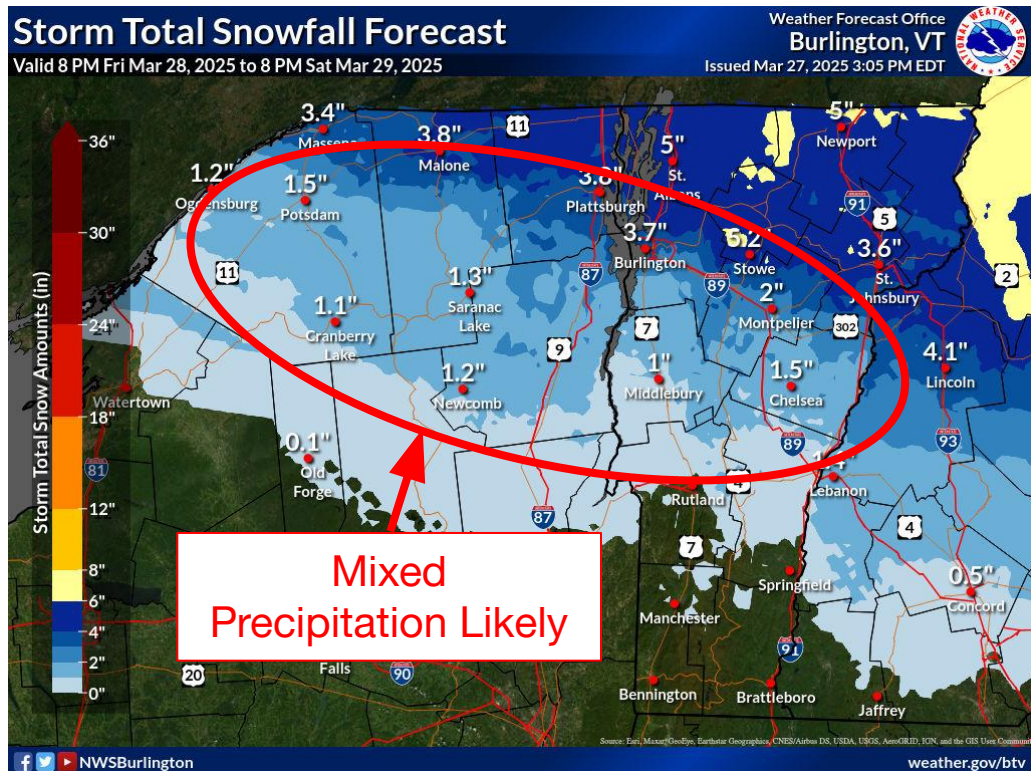
- **Winter Weather Advisory** for northern New York into central and northern Vermont from 8 PM Friday until 2 PM Sunday.





# Initial Snowfall Forecast - Thursday Afternoon

March 27, 2025  
4:26 PM



- 3 to 7 inches of snow is expected in a swath of northern New York and Vermont, with lesser amounts south where a wintry mix and rain will fall
- Placement of the narrow band of higher snowfall is somewhat uncertain



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# Initial Snowfall Forecast - Thursday Afternoon

March 27, 2025  
4:26 PM

Range of possible snowfall amounts

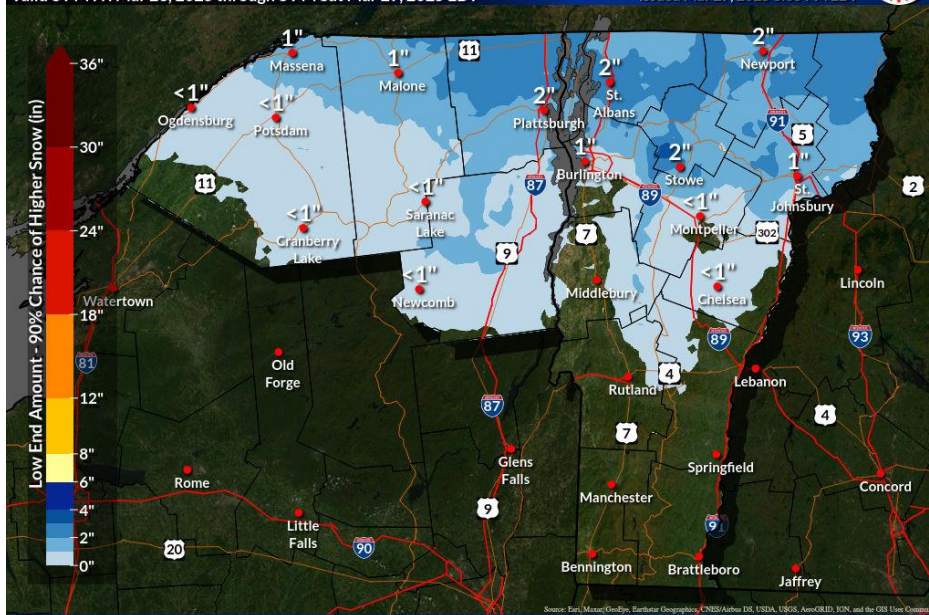
Low End Amount - 9 in 10 Chance (90%) Of Higher Snowfall

Valid 8 PM Fri Mar 28, 2025 through 8 PM Sat Mar 29, 2025 EDT

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Burlington, VT

Issued Mar 27, 2025 3:05 PM EDT



Reasonable low end snowfall (More ice and rain)

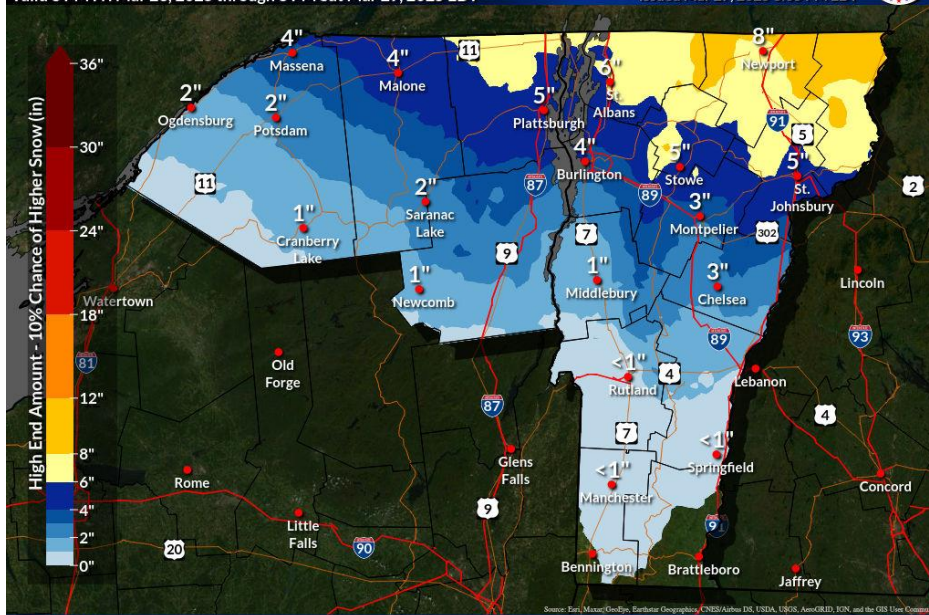
High End Amount - 1 in 10 Chance (10%) Of Higher Snowfall

Valid 8 PM Fri Mar 28, 2025 through 8 PM Sat Mar 29, 2025 EDT

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Burlington, VT

Issued Mar 27, 2025 3:05 PM EDT



Reasonable high end snowfall (Less ice and rain)



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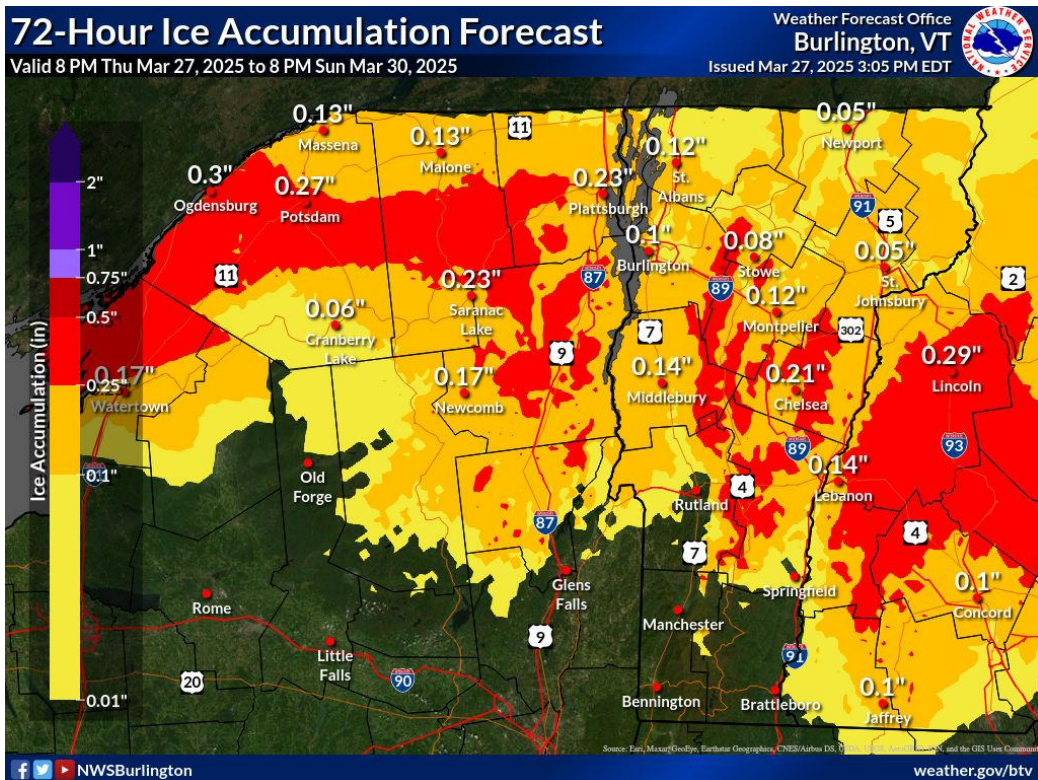
National Weather Service  
Burlington, VT





# Flat Ice - through Sunday Morning

March 27, 2025  
4:26 PM



- Widespread ice accumulation will occur Friday night into Saturday
  - Heaviest ice potential across portions of the Adirondacks eastward into central Vermont
- Ice amounts of a tenth to three tenths are possible
  - Slippery travel and isolated power outages may occur



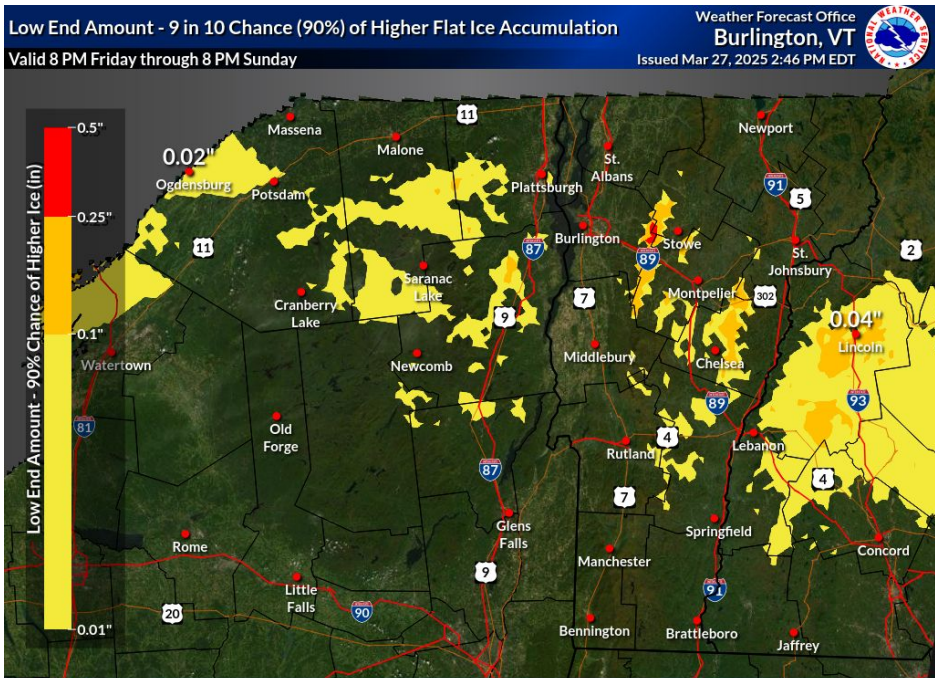


# Storm Total Ice - Probabilities

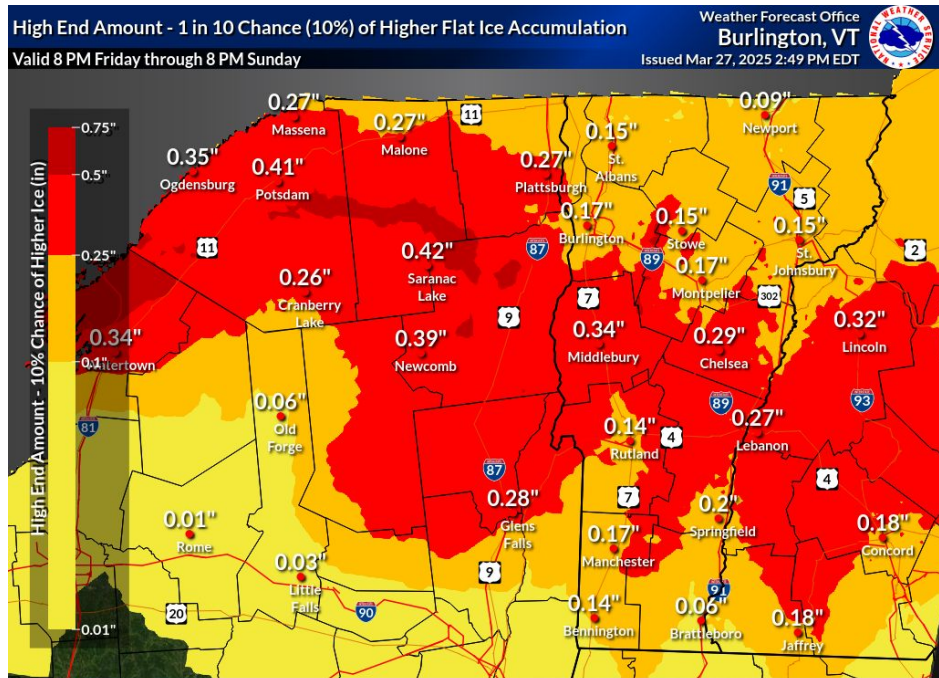
March 27, 2025

4:26 PM

Range of possible ice amounts



Reasonable low end ice (More Sleet/Rain)



Reasonable high end ice (More Freezing Rain)







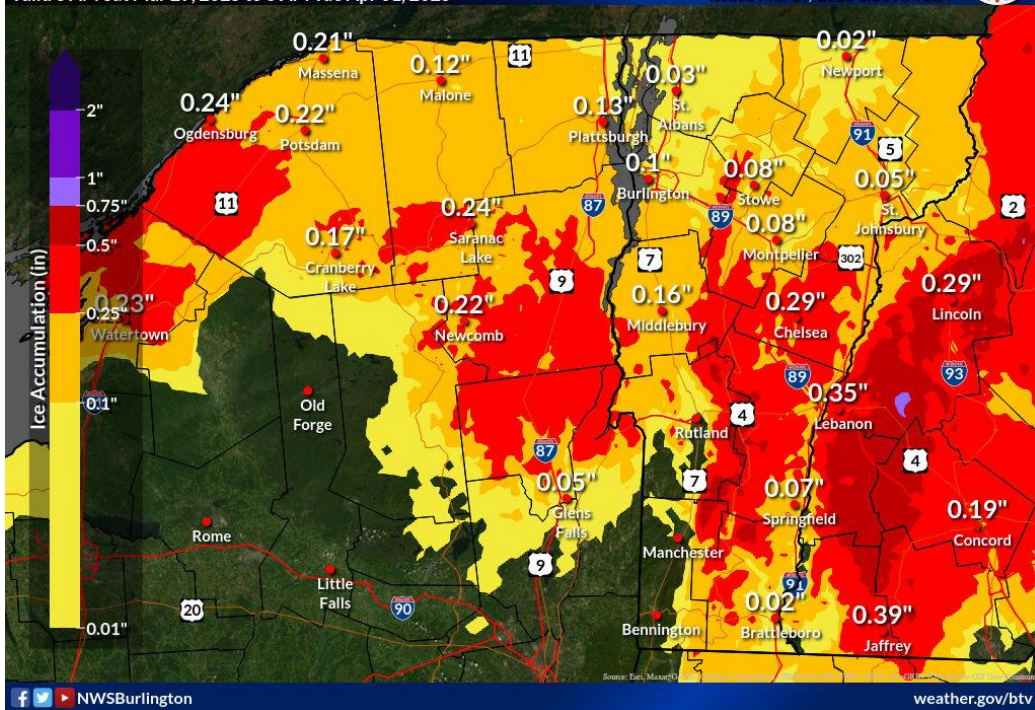
# Flat Ice - through Sunday Morning

March 29, 2025  
4:00 AM

## 72-Hour Ice Accumulation Forecast

Valid 8 AM Sat Mar 29, 2025 to 8 AM Tue Apr 01, 2025

Weather Forecast Office  
Burlington, VT  
Issued Mar 29, 2025 3:36 AM EDT



- Widespread ice accumulation will occur today into Sunday.
  - Heaviest ice potential across portions of the Adirondacks eastward into central Vermont.
- Ice accumulations of a tenth to three tenths are possible, with some locally higher amounts up to half an inch possible.
  - Slippery travel and isolated to scattered power outages may occur.



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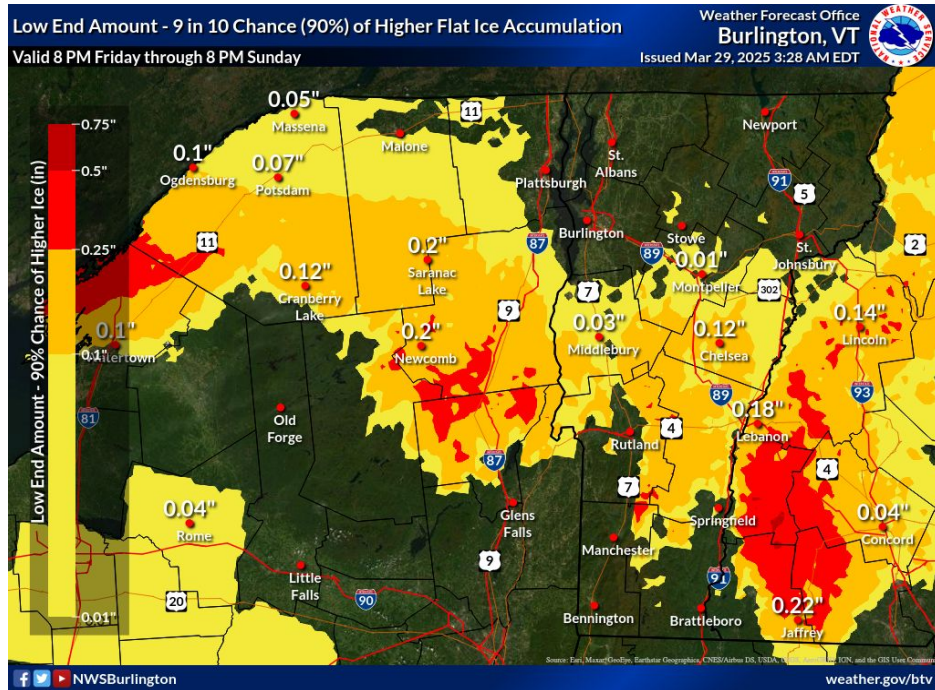


# Storm Total Ice - Probabilities

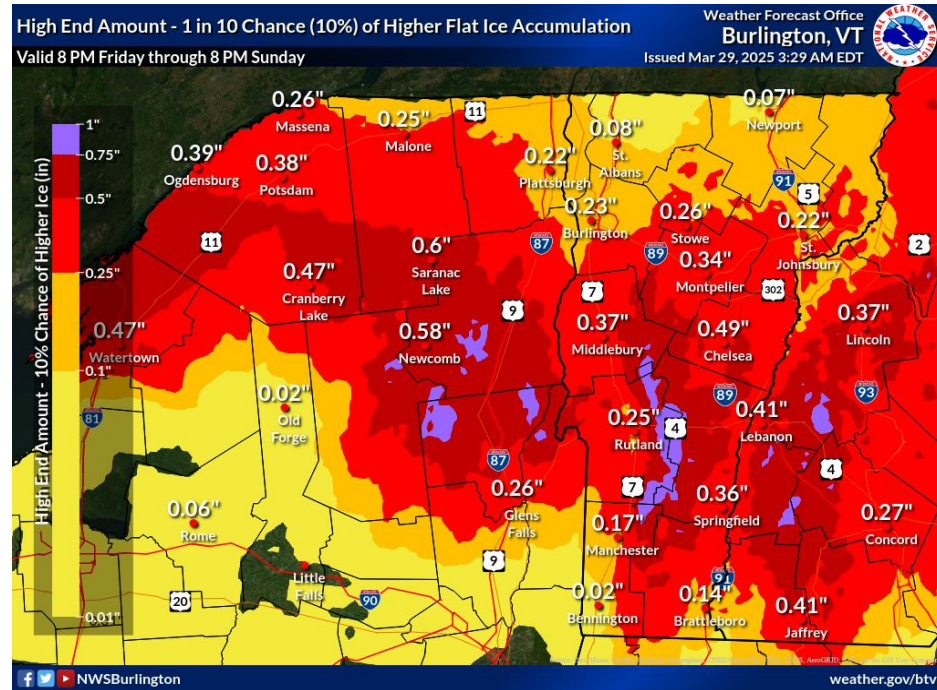
March 29, 2025

4:00 AM

Range of possible ice amounts



Reasonable low end ice (More Sleet/Rain)



Reasonable high end ice (More Freezing Rain)



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Burlington, VT





**March 30, 2025**  
**4:00 AM**

- **Ice Storm Warnings** remain in effect for portions of northern New York and Vermont until 8 PM this evening.
  - **Ice Storm Warnings** for Bennington and western Windham in effect until 11 AM this morning.
- **Winter Storm Warnings** in effect for eastern Chittenden, Orleans, Lamoille, Washington, and Caledonia Counties in Vermont and western Clinton County of New York until 8 PM this evening.
- **Winter Weather Advisories** in effect for the remainder of northern New York and Vermont until 8 PM this evening.
  - **Winter Weather Advisory** for eastern Windham in effect until 11 AM this morning.





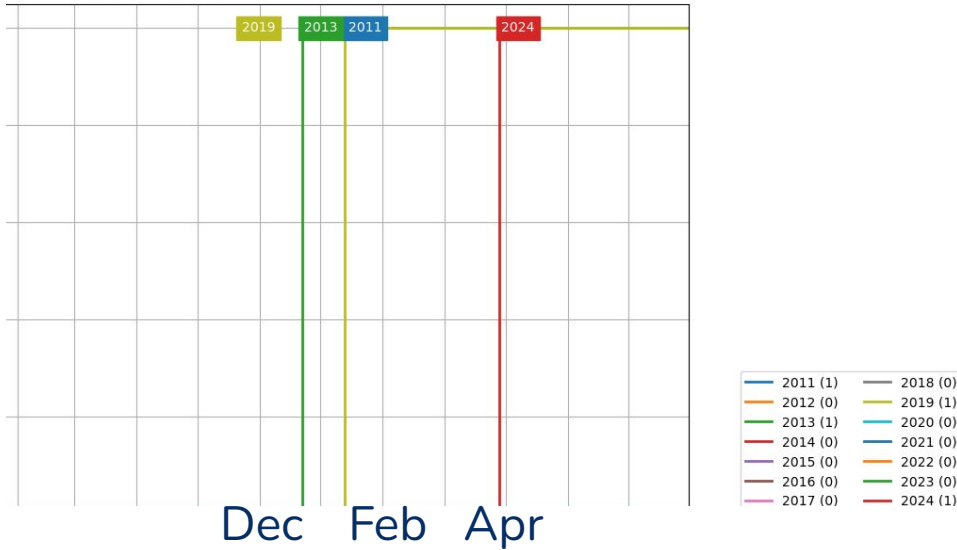
# Summary





# Ice Storms in Recent History

NWS WFO: Burlington (BTV)  
Ice Storm Warning Count

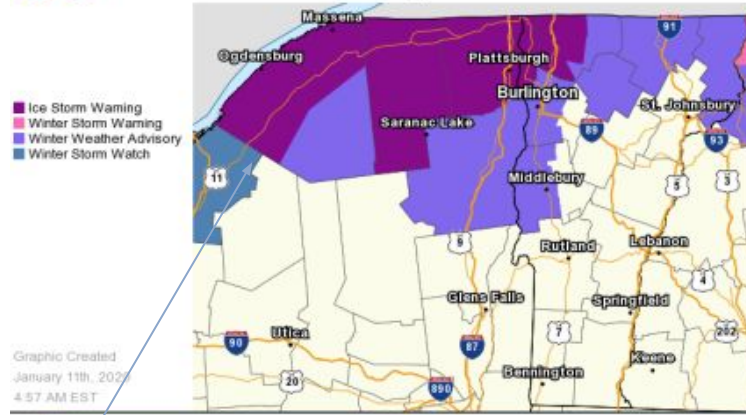


These were our first Ice Storm Warnings issued since January 10th, 2020

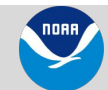
- That event affected mainly northernmost portions of New York and northwestern Vermont



## Winter Watches Warnings and Advisories



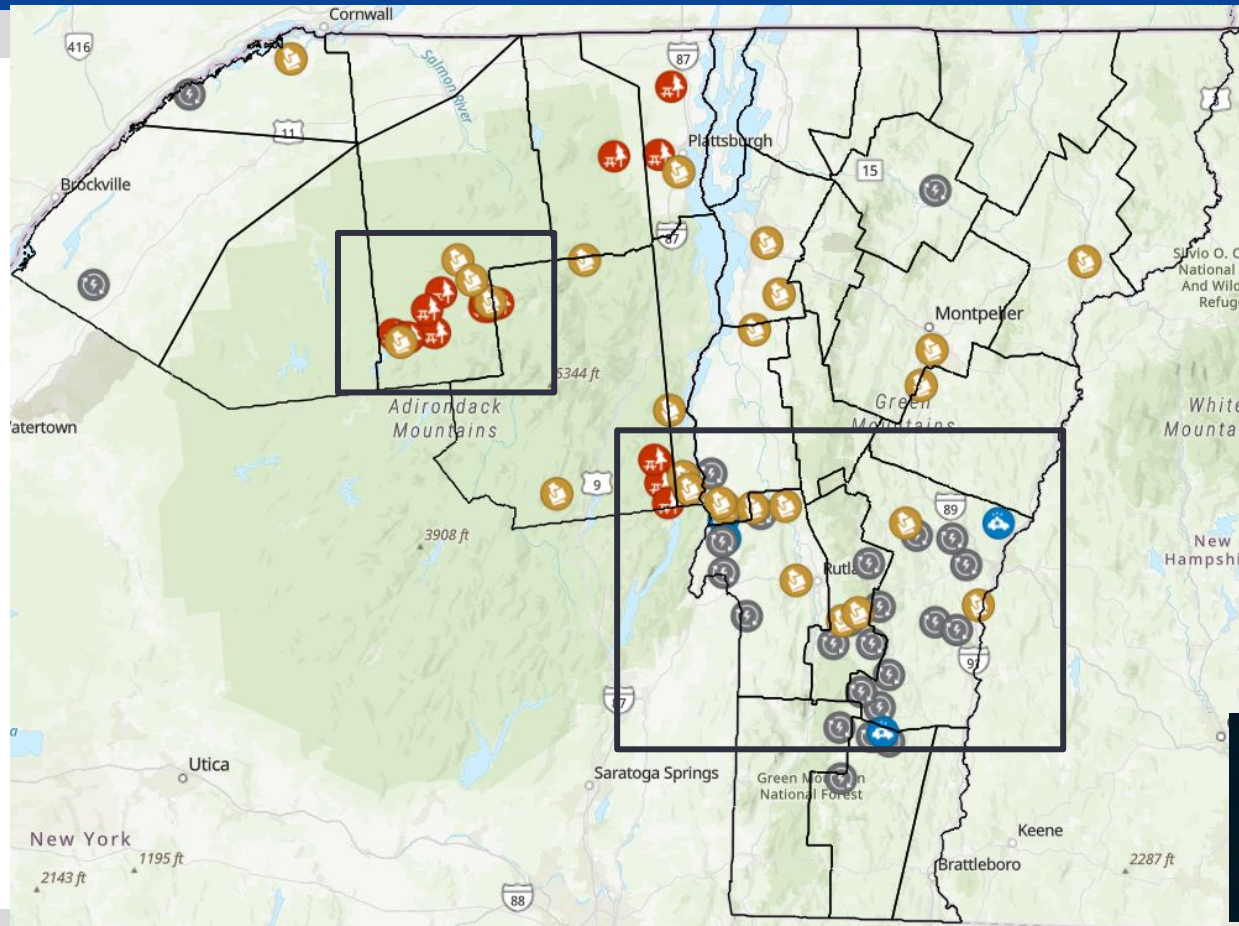
- ✓ An **Ice Storm Warning** is in effect from 7 PM Saturday until 1PM Sunday across portions of northern New York and northwestern Vermont.
- ✓ A **Winter Weather Advisory** is in effect from 7 PM Saturday until 1PM Sunday across portions of the northern Adirondacks in New York and northern Vermont, including the Champlain Valley.







# Probable Impacts due to Ice Accumulation during the Event



- NWS Storm Report
- Green Mountain Power
- CAD Paging
- Vermont AOT



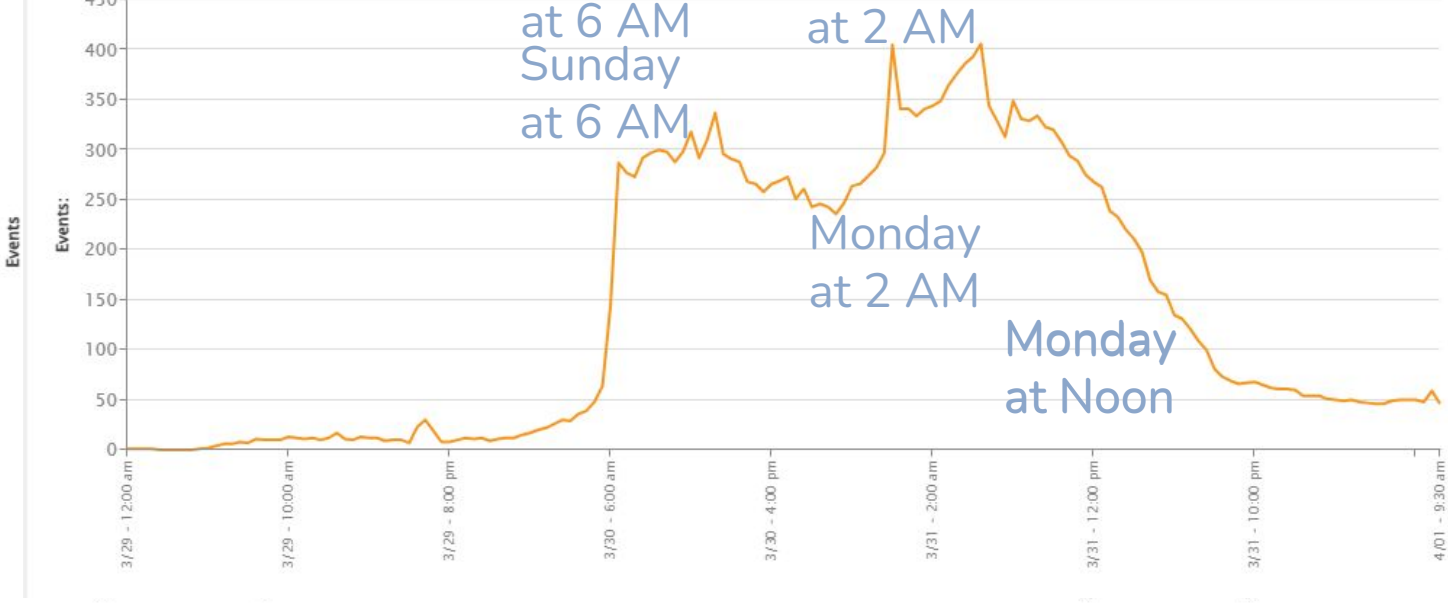


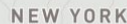
# Power Outages over Time in Vermont

## Events: All Utilities

From: 3/29 - 12:00 am to: 4/01 - 9:30 am

Utility	Addison	Bennington	Caledonia	Chittenden	Essex	Franklin	Grand Isle	Lamoille	Orange	Orleans	Rutland	Washington	Windham	Windsor	Total
Total	0	22	0	0	0	0	0	0	15	48	28	48	28	361	550





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Thanks for your attendance!



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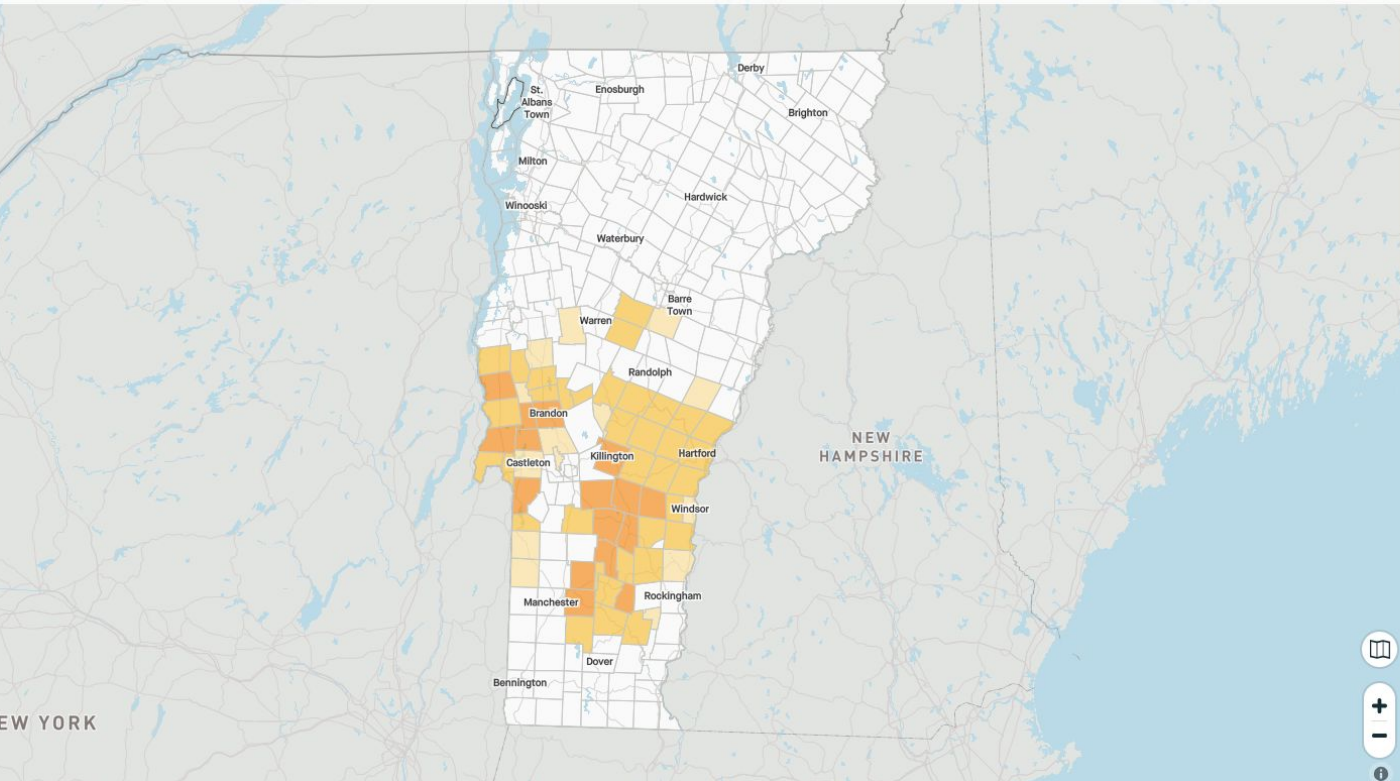
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# OUTAGES

## VT'S POWER OUTAGE RESOURCE

Reported data from utilities. For the most updated information for your location, please check with your utility.



**284**  
Events

**10371**  
Customers Affected

COUNTY

TOWN

UTILITY

NAME	CUSTOMERS
Plymouth	691
Brandon	614
Benson	588
Poultney	480
Mount Holly	452
Hubbardton	446
Killington	441
Peru	408
Shoreham	401
Weston	375
Windham	368
Shrewsbury	353
Sudbury	323
Ludlow	304
Reading	289
Winhall	282
Woodstock	248

Data

Help

Dark

Login

