

What types of products/headlines does the National Weather Service issue related to winter weather?

Ingrid Amberger

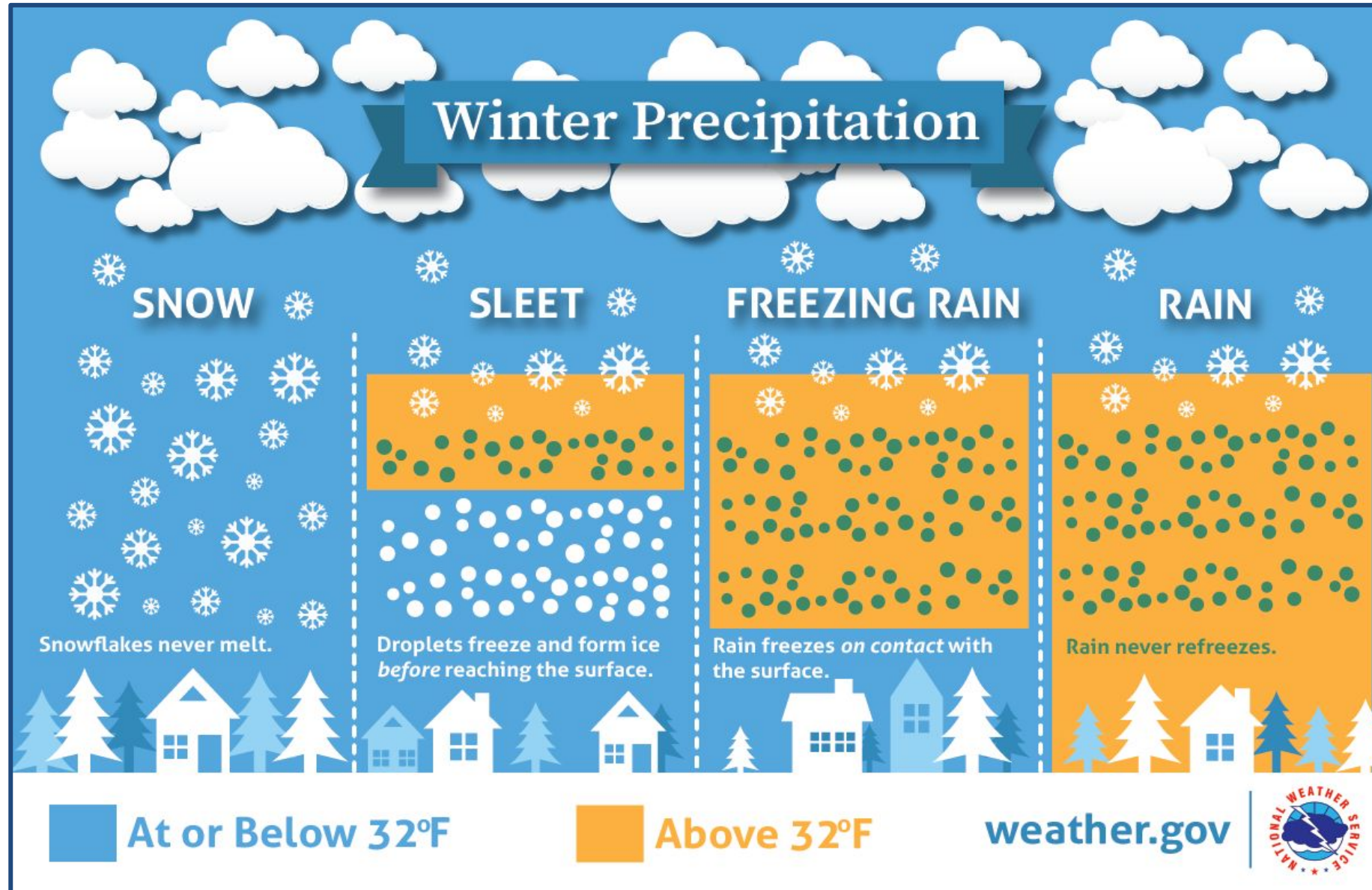
Meteorologist

National Weather Service

Winter Precipitation Types



Albany, NY
WEATHER FORECAST OFFICE



Winter Storm Watch:

- Issued when severe winter conditions are possible
 - Heavy Snow
 - Snow, Sleet and/or Freezing Rain
 - Lake Effect Snow
 - Potential Blizzard
- Used when the risk of hazardous weather has increased significantly, but its occurrence, location and timing is still uncertain.
- 50% or greater confidence



5 Things to Know
about Winter Weather Forecasts

1 Snow or ice totals can vary greatly over short distances
A heavy snow band may form, dropping more snow in one location while significantly less snow falls just a few miles away.
Example: Boston 24.6" vs New York City 9.8" (January 2015 Blizzard)

2 Winter forecasts can change frequently
Forecasts may change as new model data becomes available. Always check weather.gov for the latest information.

3 Focus more on the winter storm's impacts
Don't focus too much on exact numbers, and consider the full range of possibilities.

4 Know your winter weather terminology
If a Watch is issued, get prepared for hazardous weather. If a Warning or Advisory is issued, take action – hazardous weather is occurring or will occur soon.

5 Rely on a dependable source for weather info
Choose your information sources wisely, and follow a name or organization you know and trust.

Legend:
Warning (Pink)
Watch (Blue)
Advisory (Purple)

For more information on winter weather safety, visit: weather.gov/winter

Winter Weather Advisory: snow, sleet and/or freezing rain expected to cause significant inconvenience and may be hazardous especially on untreated surfaces

Snow and/or Sleet accumulations:

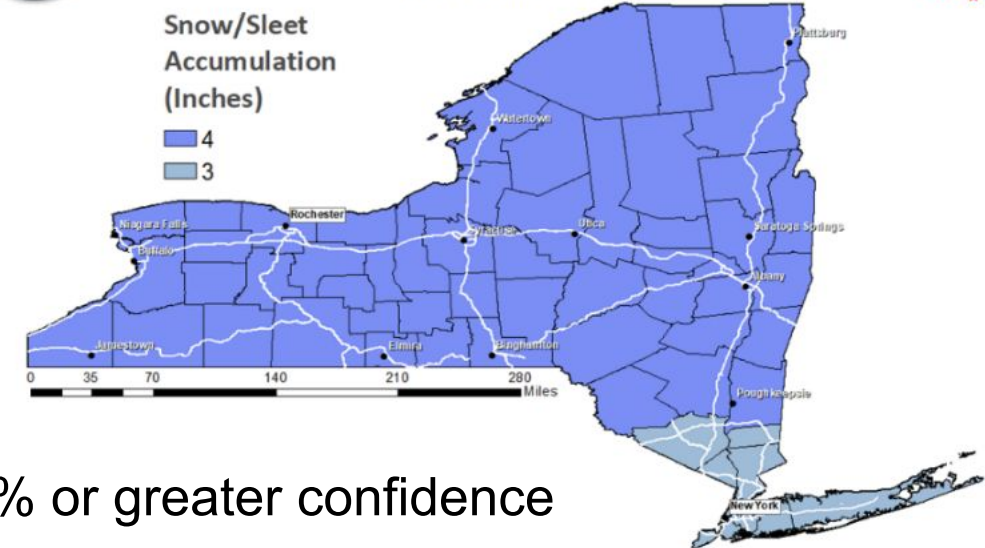
- 4-6 inches:
 - New York State excluding the Lower Hudson Valley, New York City & Long Island
- 3-5 inches:
 - Lower Hudson Valley
 - New York City
 - Long Island

Freezing Rain and Freezing Drizzle:

- any accumulation of ice



National Weather Service
Winter Weather Advisory Criteria
New York State



80% or greater confidence

Severe Winter Conditions

- Snow and/or sleet accumulations
 - 7+ inches:
 - western and central New York
 - North Country
 - Finger Lakes,
 - Southern Tier
 - Mohawk Valley
 - Capital District into the mid-Hudson Valley
 - 6+ inches:
 - Lower Hudson Valley
 - New York City and Long Island
- A warning may still be warranted if a storm is expected to exceed advisory level criteria, but fall short of warning level criteria if significant impacts to transit and/or utilities are expected.



80% or greater confidence

Ice Storm Warning





Albany, NY
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Ice Storm Warning:

Issued when ice accumulations of $\geq 0.20''$ radial ice or $\geq 0.5''$ flat ice are expected

Radial Ice vs. Flat Ice



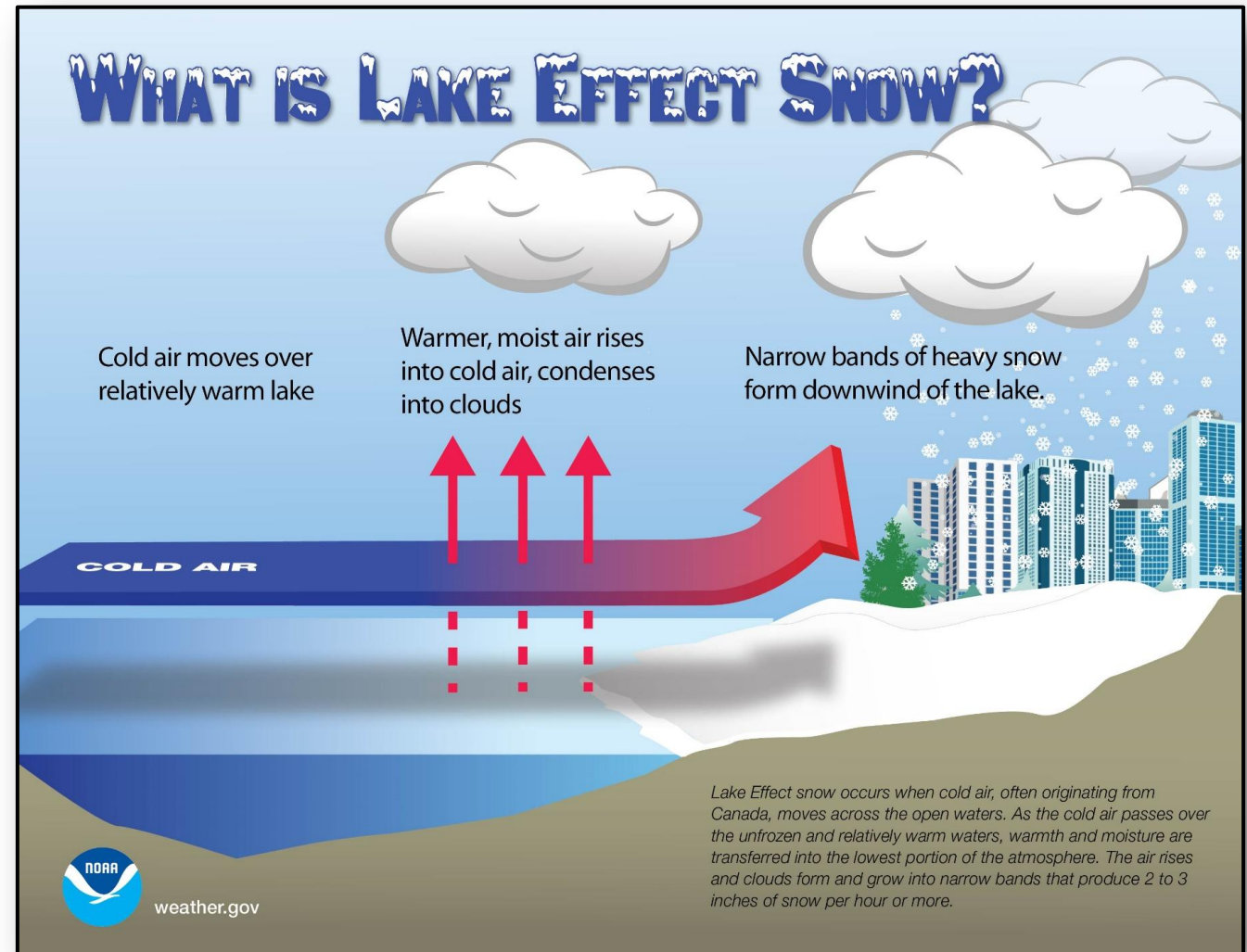
Radial Ice Measurement		Flat Ice Measurement	
Measure the ice thickness on both sides of the branch then add that up and divide by 2	0.04"	0.10"	Measure the ice thickness on a flat surface
	0.10"	0.25"	
	0.20"	0.50"	
	0.30"	0.75"	
	0.40"	1.00"	
	0.50"	1.25"	
	1.00"	2.50"	
Note: radial ice measurements are roughly 40% less than that of a flat ice measurement			

Lake Effect Snow Warning:

Issued when widespread or localized lake induced snow squalls or heavy showers are expected to produce significant snowfall accumulation.

Lake effect snow usually develops in narrow bands and impacts a limited area.

These bands can produce very heavy snow with sudden restrictions in visibility creating hazardous driving conditions.





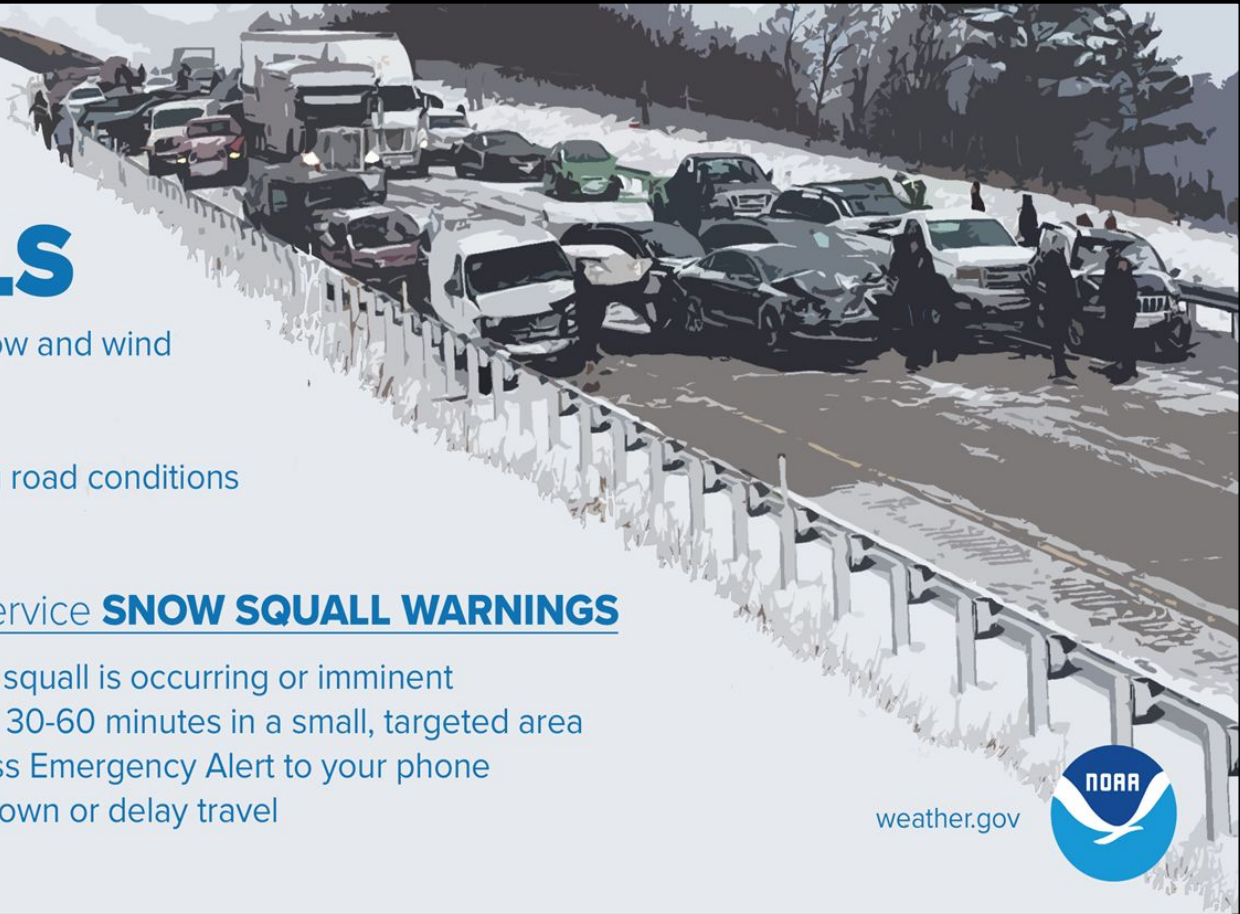
SNOW SQUALLS

- Intense bursts of snow and wind
- Short duration
- Whiteout visibility
- Rapidly deteriorating road conditions

National Weather Service **SNOW SQUALL WARNINGS**

- Issued when a snow squall is occurring or imminent
- Typically in effect for 30-60 minutes in a small, targeted area
- Can trigger a Wireless Emergency Alert to your phone
- When issued, slow down or delay travel

weather.gov



November 21, 2018
View from Corning Tower



Warning Type	Tag Selection Notes	Wireless Emergency Alert?
Snow Squall Warning with no tag	To be used frequently for snow squall conditions, but mitigating actions, combined with societal context, will reduce the threat to safe travel.	No
Snow Squall Warning with Significant tag	Used only when snow squalls pose a substantial threat to safe travel.	Yes

Special Weather Statements:

Issued to heighten awareness of high-impact, short duration events:

- Black ice
- Heavy snow bands
- Lake-effect snow bands
- During commute times
- Critical travel periods - holidays
- Post-storm weather related events such as downed trees and power lines in the wake of ice storms and wind storms

Character of the Snow (Wet or Dry)



Albany, NY
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Depends on:

- Amount of moisture available
- Temperatures

Warmer = Wetter and heavier snow

Colder = Drier and fluffier snow

Snow ratio vary:

- Throughout a storm: location and time
- Storm-to-storm

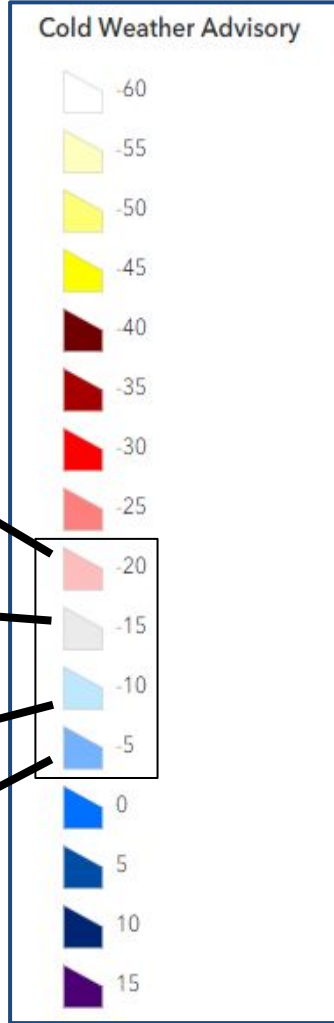
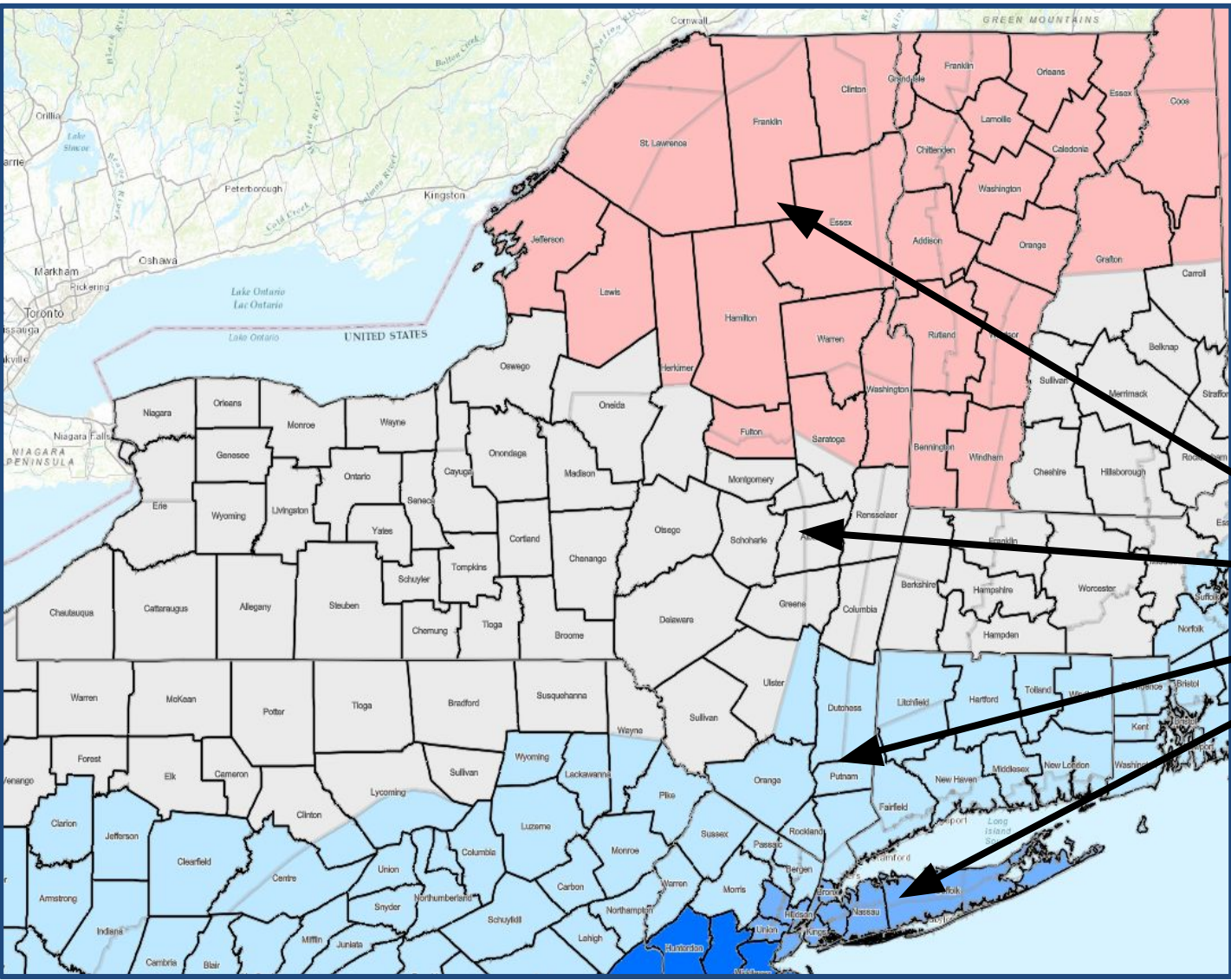


Extreme Cold Consolidation and Renaming



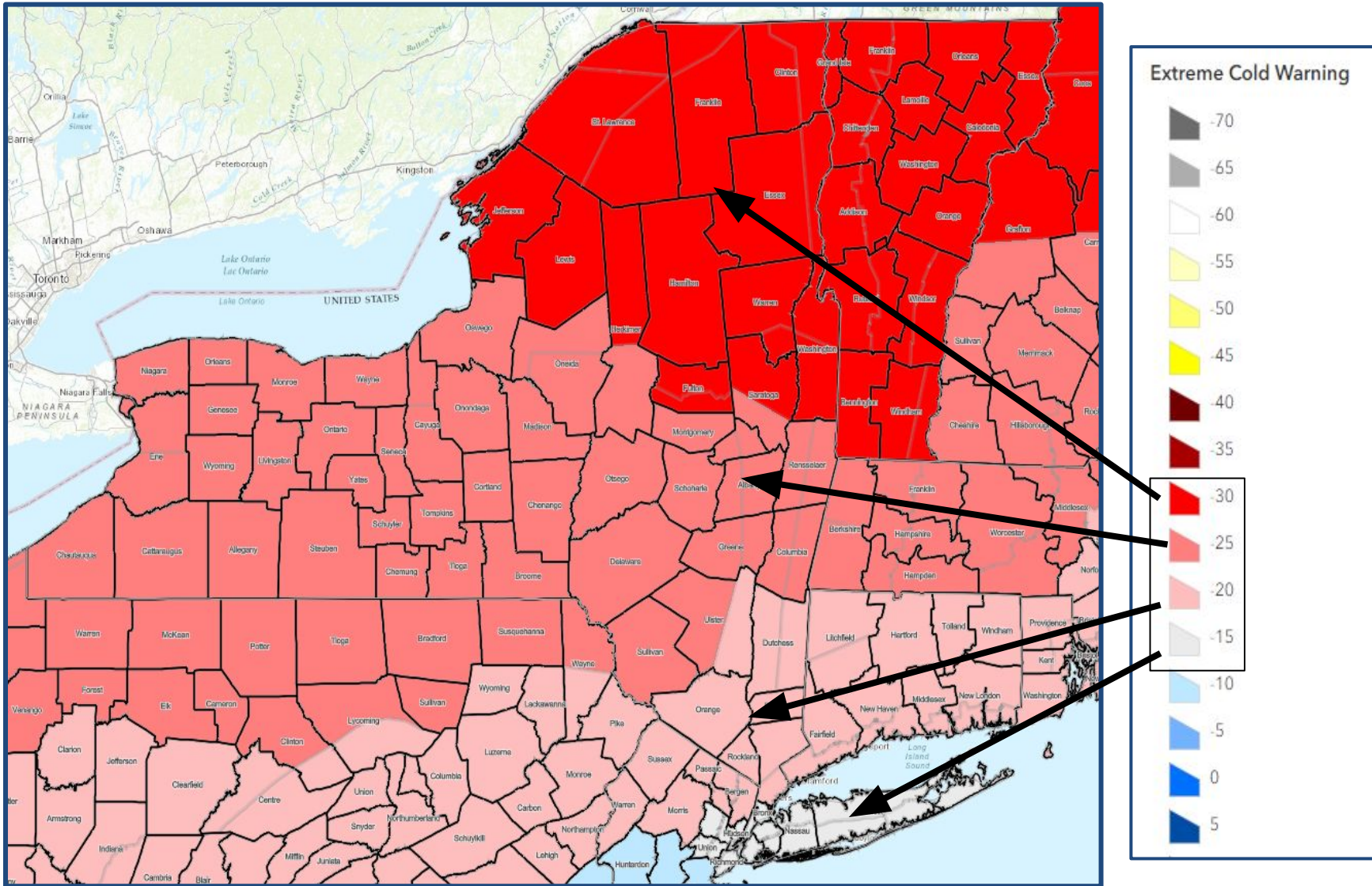
Allows the NWS to communicate that cold is dangerous with or without wind!
Temperature thresholds also updated; based on climatology.

Cold Weather Advisory: : Dangerously Cold Conditions



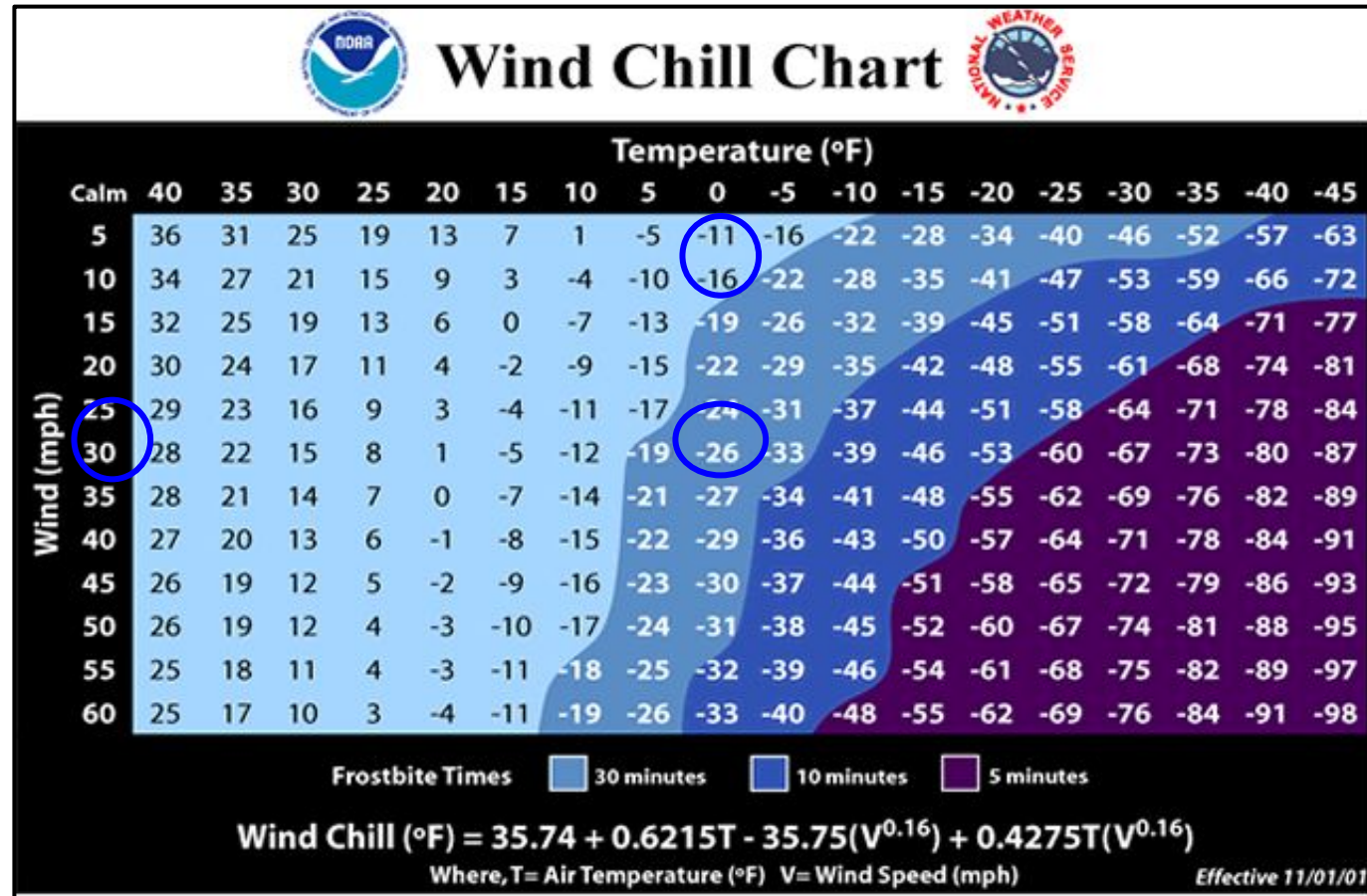
Cold Weather Advisory:
Issued when dangerously cold temperatures and/or wind chill readings are expected

Extreme Cold: Life-threatening Cold Conditions



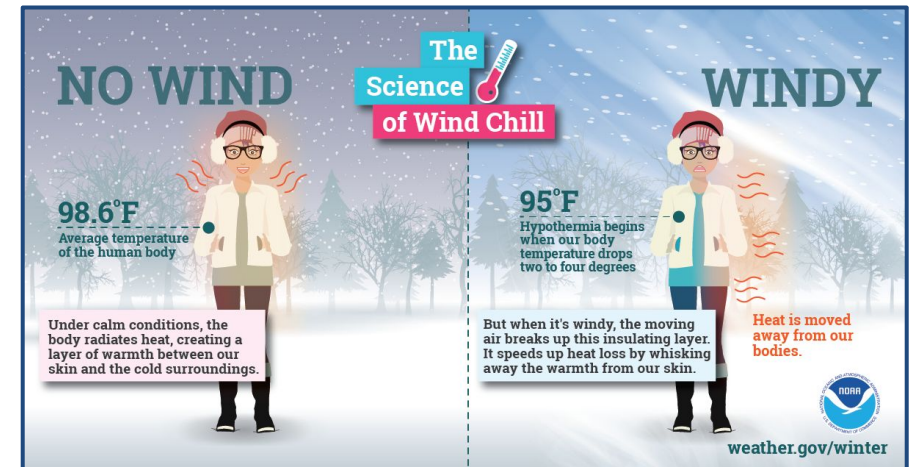
Extreme Cold Watch:
Issued when life-threatening cold temperatures and/or wind chill readings are possible

Extreme Cold Warning:
Issued when life-threatening cold temperatures and/or wind chill readings are expected



The chart above includes three shaded areas of frostbite danger. Each shaded area shows how long (30, 10 and 5 minutes) a person can be exposed before frostbite develops. Frostbite is an injury to the body caused by freezing body tissue.

Wind Chill is the temperature it “feels like” outside based on the rate of heat loss from exposed skin caused by the effects of wind and cold. As the wind increases, the body is cooled at a faster rate causing the skin temperature to drop.



Example, if the air temperature is 0°F and the wind speed is 20 mph, the Wind Chill is -22° F. Under these conditions, exposed skin can freeze in 30 minutes.