



Eastern New York and Western New England Winter Weather Awareness

Winter Weather Awareness Week
November 3-7, 2014

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National Weather Service
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Why do we need to be prepared for the upcoming winter?



The Northeast is vulnerable to big snow and ice storms and bitter cold.

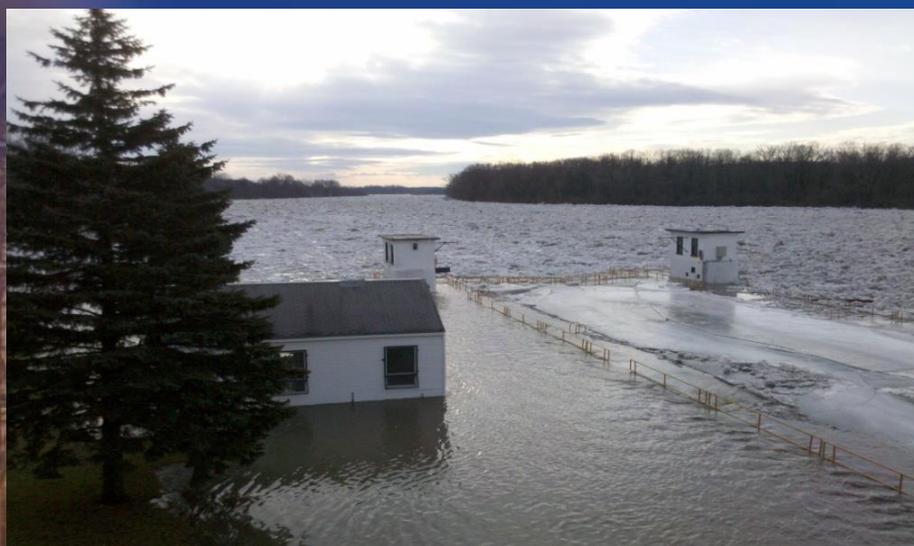
- Winter weather can be dangerous if you are not prepared.
- *U.S. Annual Fatalities:*
 - Annually 52 people are directly killed nationwide from winter storms and cold.
 - Hundreds more are killed in winter-related motor vehicle accidents. Many more are injured.
 - Approximately 70 percent of fatalities due to winter storms come from automobile accidents.
 - Approximately 25 percent of fatalities occur when people get caught out in a storm.



Winter Hazards



- Heavy Snow
- Freezing Rain
- Cold Outbreaks
- Ice Jams
- Flooding
- High Winds





Snowstorm Definitions

- **Heavy Snow:** 7 inches or more/12 hours or 9 inches or more/24 hours.
- **Blizzard:** the most severe winter storm. Wind or wind gusts exceeding 35 mph for 3 hours or more combined with blowing and/or falling snow. Visibilities near zero with widespread whiteout conditions. Blizzards are a serious life-threatening weather hazard!
- **Snow Squall:** Intense periods of snow with near blizzard or blizzard conditions at times.
- **Snow Shower:** Intermittent accumulating snow
- **Snow Flurries:** Very light snow with little or no accumulation.



Snow Squalls



- Often the cause of traffic pile ups.
- Often occur along an arctic cold front and have high winds.
- Quick transition from mild sunny weather to windy, snowy and cold conditions.
- Generally minor snow accumulations, but roads get covered and slippery in an instant.
- Rapid changes in visibility to white out conditions.



Heavy Snow Impacts

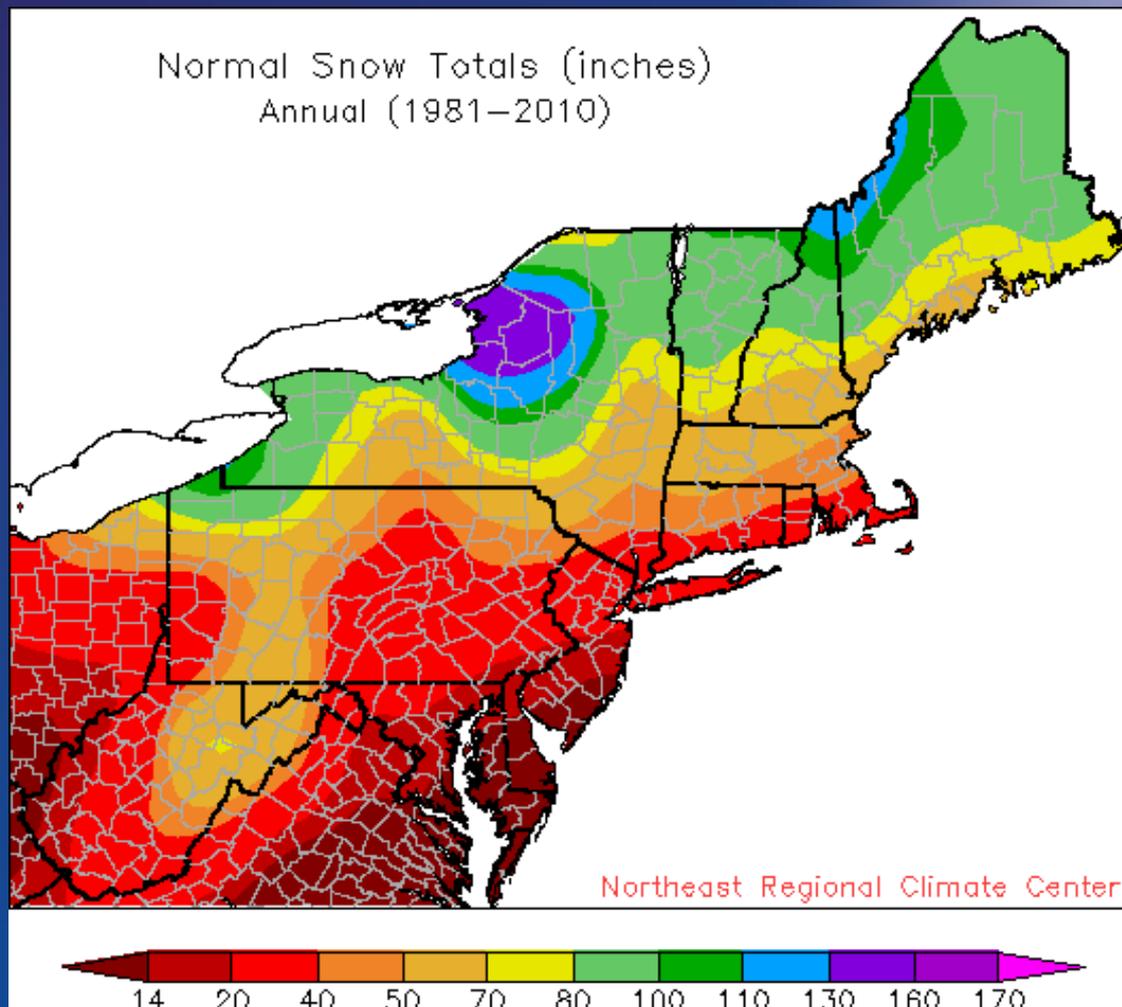


- **Collapsed Roofs**
- **Break Tree Limbs and Utility Lines – Power Outages**
- **Closed Schools**
- **Traffic Disruption**
- **(Oct 2011)**





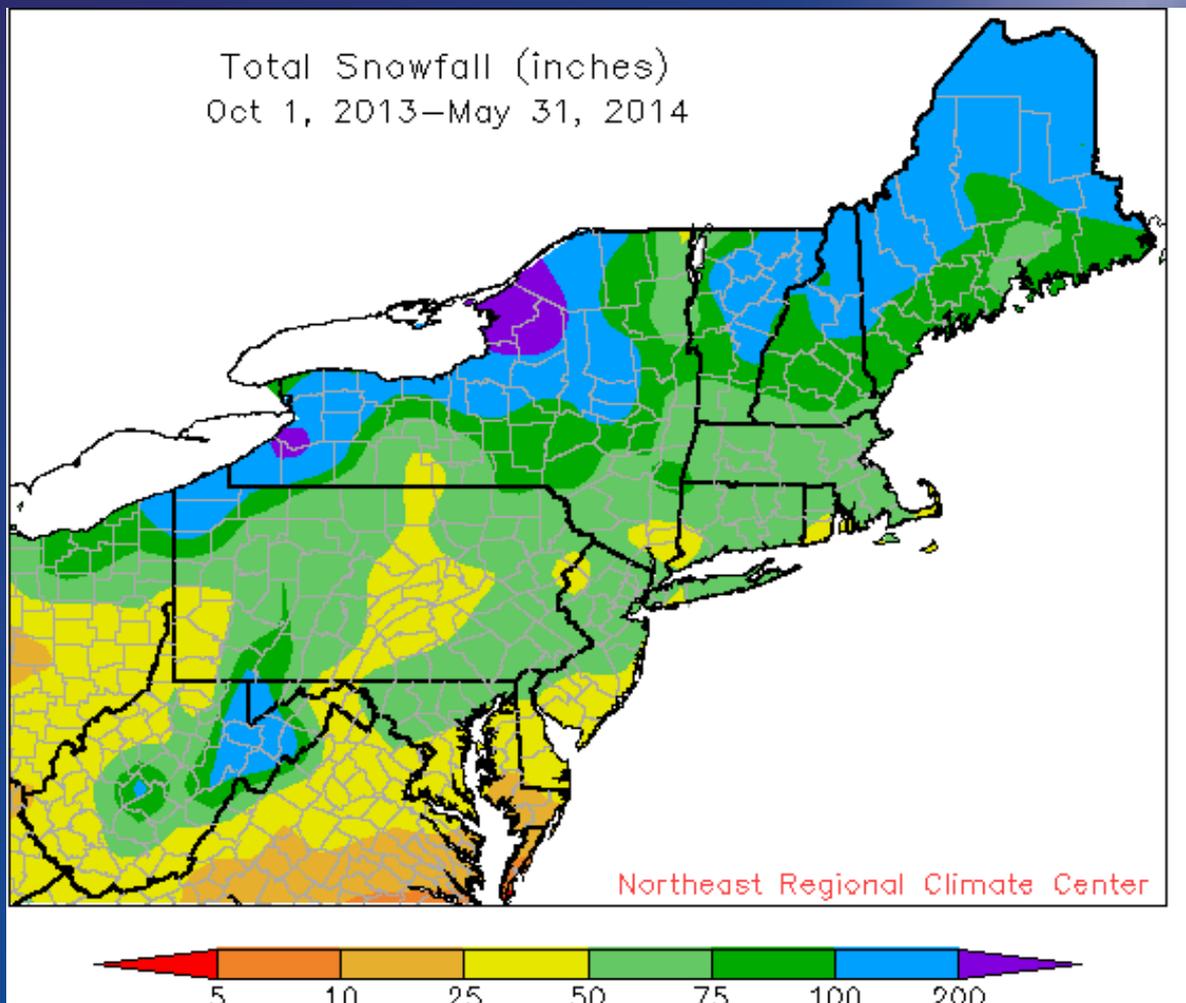
Average Annual Snow



1981-2010



Snowfall Last Winter



(2013-2104)



Ice Storms: Definitions

- **Freezing rain:** rain that freezes on contact with all exposed surfaces. Objects become encased in ice, can damage trees and power lines.
- **Sleet:** Frozen raindrops that bounce on impact with the ground. Does NOT glaze over or encase objects with ice.





Sleet vs. Freezing Rain



Wiwikimedia

Sleet



Freezing Rain



Winter Weather Safety - At Home



- *Flashlight and extra batteries.*
- *Battery-powered NOAA Weather Radio and portable radio to receive emergency information.*
- *Extra food and water – at least a 3 day supply.*
- *Extra medicine and baby items.*
- *First-aid supplies.*
- *Heating fuel.*
- *Emergency heating source, such as a fireplace,*
- *wood stove, space heater.*
- *Fire extinguisher and smoke detector.*
- *Generator*





Winter Storm Survival Kit - Automobiles



- Blankets/sleeping bags
- Flashlight with extra Batteries
- First-aid kit
- Knife/Multi-Purpose Tool
- High-calorie, nonperishable Food
- Extra clothing to keep dry
- A large empty can and plastic cover with tissues, paper towels and baby wipes for sanitary purposes
- A smaller can and water-proof matches to melt snow for drinking water
- Sack of sand (or cat litter)
- Shovel
- Windshield scraper and brush
- Cell Phone
- Tow rope/straps
- Booster cables
- Water container
- Compass and road maps or GPS



Automobile Safety in Winter Storms



- Plan your travel and check the latest weather reports to avoid the Storm if possible.
- Fully check and winterize your vehicle before the winter season begins.
- Keep your gas tank near full to avoid ice in the tank and fuel lines and to avoid running out if stuck in traffic.
- Try not to travel alone.
- Let someone know your timetable and primary and alternate routes.





Winter Weather: NWS Watches



Winter Storm Watch: Potential (50% chance or more) for a winter storm. A winter storm watch is used to cover all of the potential hazards from snow to ice to wind and extreme cold.

- Potential exists for 7 inches of snow or more in 12 hours or less.
- Potential exists for ½ inch or more of ice.
- NWS will issue a Winter Storm Watch 24 to 72 hours in advance of the event.

• ***Blizzard Watch:*** Potential (50% chance or more) exists for blizzard conditions 24 to 72 hours in advance.

• ***Lake Effect Snow Watch:*** Potential (50% chance or more) exists for 7 inches or more of lake effect snow possible in the next 24 to 72 hours.

• ***Wind Chill Watch:*** Potential (50% chance or more) exists for winds chills of -25°F or greater, with winds of ≥ 5 mph, lasting longer than one hour



Winter Weather Warnings

Winter Storm Warning (80% chance or more)

- 7 inches of snow or more in 12 hours or 9 inches of snow or more in 24 hours.
- Dangerous combination of snow, ice, low wind chill, and/or blowing/drifting snow.

Lake Effect Snow Warning (80% chance or more)

- 7 inches or more of lake effect snow in 12 hours
- Localized accumulations; not all areas will see heavy lake effect snow.

Ice Storm Warning (80% chance or more)

- 1/2 inch or more of glaze (freezing rain or freezing drizzle).

Blizzard Warning (80% chance or more)

- Blizzard conditions expected: Wind or wind gusts exceeding 35 mph for 3 hours or more combined with blowing and/or falling snow. Visibilities near zero. Widespread whiteout conditions.

Wind Chill Warning (80% chance or more)

- Wind Chills of -25F or less



Winter Weather Advisories



- **Winter Weather Advisory (80% chance or more) :**
 - **Hazardous combination of snow, ice, low wind chill, and/or blowing/drifting snow.**
- **Freezing Rain Advisory (80% chance or more):**
 - **Any accumulation of glaze**
- **Lake Effect Snow Advisory (80% chance or more):**
 - **4 to 6 inches of lake effect snow**
- **Wind Chill Advisory (80% chance or more):**
 - **Wind chills of -15°F to -24°F**





Wind Chill Chart



NWS Windchill Chart



		Temperature (°F)																	
		40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
Wind (mph)	Calm	40	35	30	25	20	15	10	5	0	-5	-10	-15	-20	-25	-30	-35	-40	-45
	5	36	31	25	19	13	7	1	-5	-11	-16	-22	-28	-34	-40	-46	-52	-57	-63
	10	34	27	21	15	9	3	-4	-10	-16	-22	-28	-35	-41	-47	-53	-59	-66	-72
	15	32	25	19	13	6	0	-7	-13	-19	-26	-32	-39	-45	-51	-58	-64	-71	-77
	20	30	24	17	11	4	-2	-9	-15	-22	-29	-35	-42	-48	-55	-61	-68	-74	-81
	25	29	23	16	9	3	-4	-11	-17	-24	-31	-37	-44	-51	-58	-64	-71	-78	-84
	30	28	22	15	8	1	-5	-12	-19	-26	-33	-39	-46	-53	-60	-67	-73	-80	-87
	35	28	21	14	7	0	-7	-14	-21	-27	-34	-41	-48	-55	-62	-69	-76	-82	-89
	40	27	20	13	6	-1	-8	-15	-22	-29	-36	-43	-50	-57	-64	-71	-78	-84	-91
	45	26	19	12	5	-2	-9	-16	-23	-30	-37	-44	-51	-58	-65	-72	-79	-86	-93
	50	26	19	12	4	-3	-10	-17	-24	-31	-38	-45	-52	-60	-67	-74	-81	-88	-95
55	25	18	11	4	-3	-11	-18	-25	-32	-39	-46	-54	-61	-68	-75	-82	-89	-97	
60	25	17	10	3	-4	-11	-19	-26	-33	-40	-48	-55	-62	-69	-76	-84	-91	-98	

Frostbite Times 30 minutes 10 minutes 5 minutes

$$\text{Wind Chill (°F)} = 35.74 + 0.6215T - 35.75(V^{0.16}) + 0.4275T(V^{0.16})$$

Where, T= Air Temperature (°F) V= Wind Speed (mph)

Effective 11/01/01



Ice Jams



Julie Stuart

Mohawk River Near Twin Bridges – March 2011



Ice Jams



Hudson River near Warrensburg, NY – Feb 6, 2013



Winter Flooding



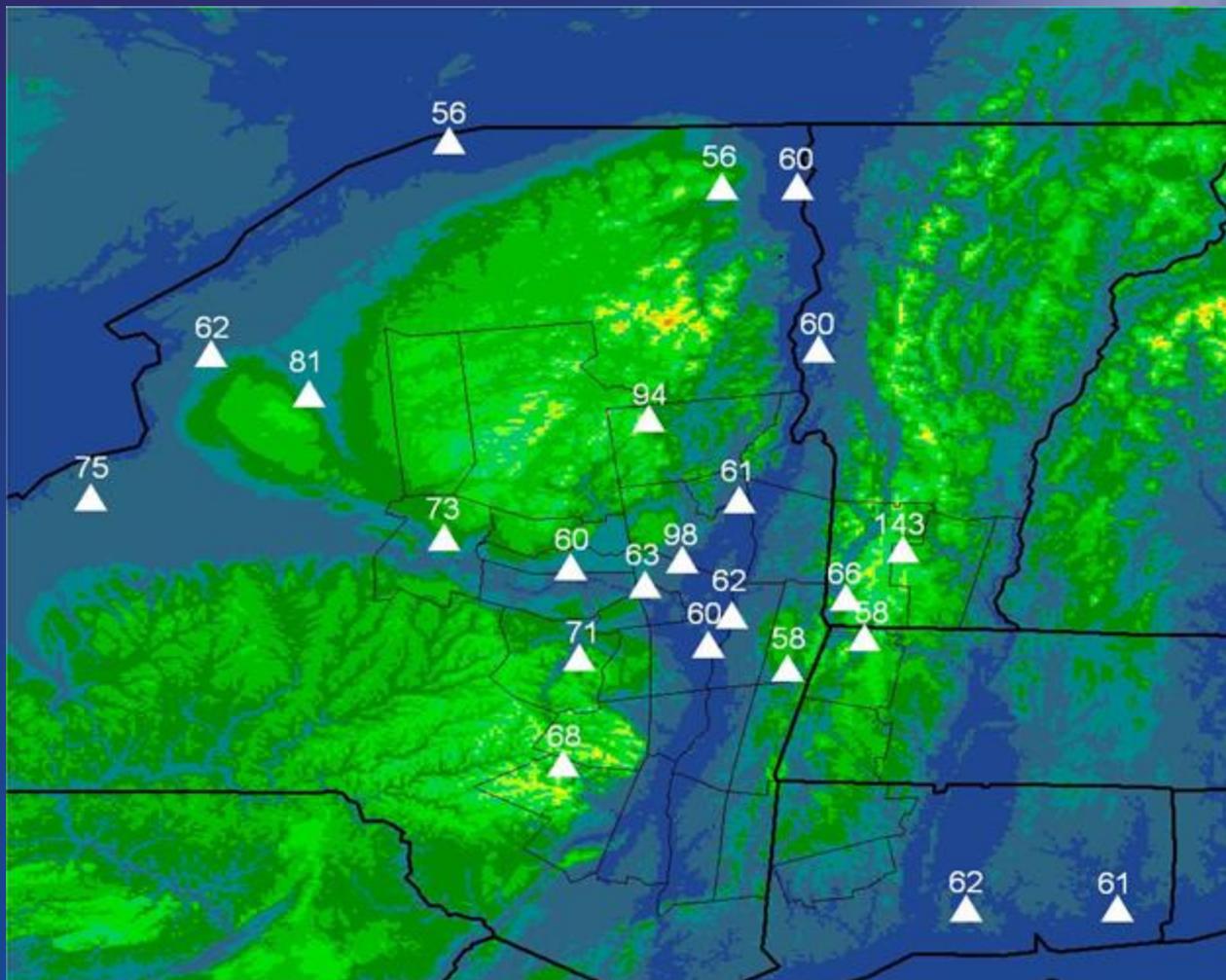
Mohawk River – March 2011

Julie Stuart

Rain, snowmelt, frozen ground and ice jams all contribute to winter flooding.



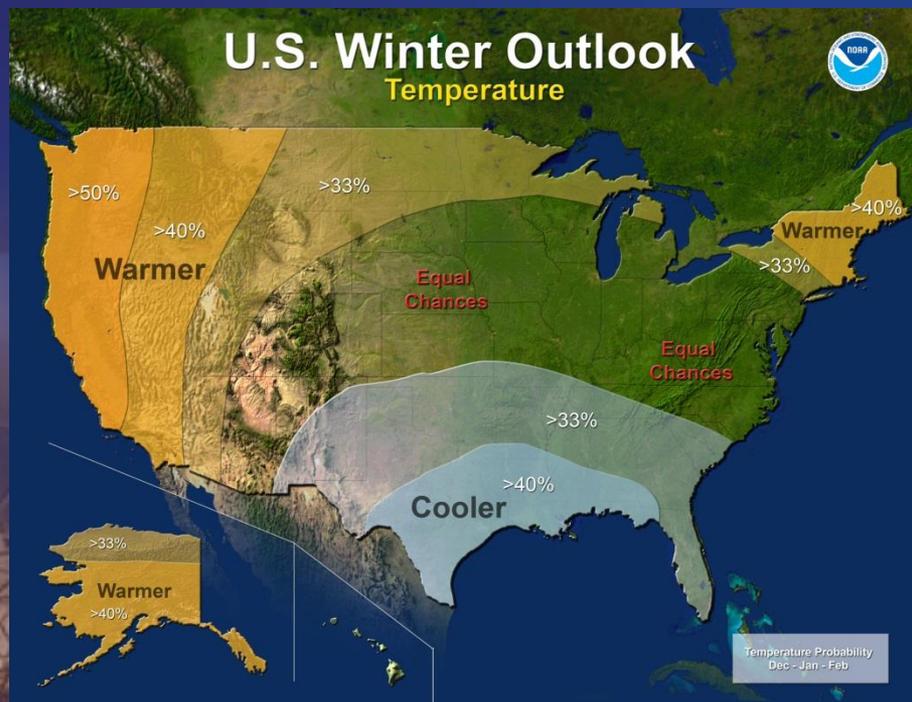
High Winds



Measured wind gusts associated with strong cold front of February 17, 2006. High winds snapped trees and poles leading to over 300,000 power outages.



2014-2015 Winter Outlook – Climate Prediction Center



Above normal temperatures and near to slightly above normal precipitation.



Weather Alerts on Mobile Device

- <http://inws.wrh.noaa.gov/> - (NWS iNWS)
- <http://www.ialertz.com/> - (New York iAlertz)
- <http://www.nyalert.gov/> - NY-ALERT
- <http://water.usgs.gov/wateralert/> - (USGS Water Alert)
- <http://mobile.weather.gov> – NWS Mobile Weather
- <http://vtalert.gov/> - VTAlert



Stay aware of all the latest watches, advisories and warnings on your mobile device.



NOAA Weather Radio



- <http://weather.gov/nwr>



Stay aware of all the latest watches, advisories and warnings on NOAA Weather Radio.



NWS Albany on Facebook and Twitter



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You are posting, commenting, and liking as US National Weather Service Albany NY — Change to Nws Albany

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Government Organization
This page is an experimental service provided by NWS to explore the use of Facebook to extend the reach of NWS information. Facebook posts do not always reflect the most current information. For current official info, visit: <http://www.erh.noaa.gov/aly>

About Photos Likes

Highlights

Status Photo / Video Offer, Event +

Write something...

US National Weather Service Albany NY shared a link.
5 hours ago

The official NOAA/NWS Winter Outlook has been issued! At this point, it's difficult to nail down exactly what the winter will bring

Recent Posts by Others

Juliana Northup
Anyone feel it?
Tuesday at 7:23pm

Lisa Muzzey
Did we just have an earthquake over in Vermont? Our hous...
Tuesday at 7:16pm

Jason Caterina Fox Albany
Heavens, why is it "office policy" to not issue a freeze warn...

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Albany, New York <http://www.weather.gov/albany>

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NWS Las Vegas @NWSVegas
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NWS Albany @NWSAlbany
6h
#Rain, heavy at times, will be impacting the morning commute into #albany today. Be prepared for some slowdowns. #518wx #nywx
Expand

NWS Albany @NWSAlbany
24h
Nice weather today, giving way to inclement conditions with heavy rain and a chance of thunderstorms tonight through Friday.
Expand

NWS Albany @NWSAlbany
16 Oct
The current #SKYWARN training is about Winter Weather & Hydrology. NWS ALY will be in Wilmington VT this evening. ow.ly/evJp5
Expand

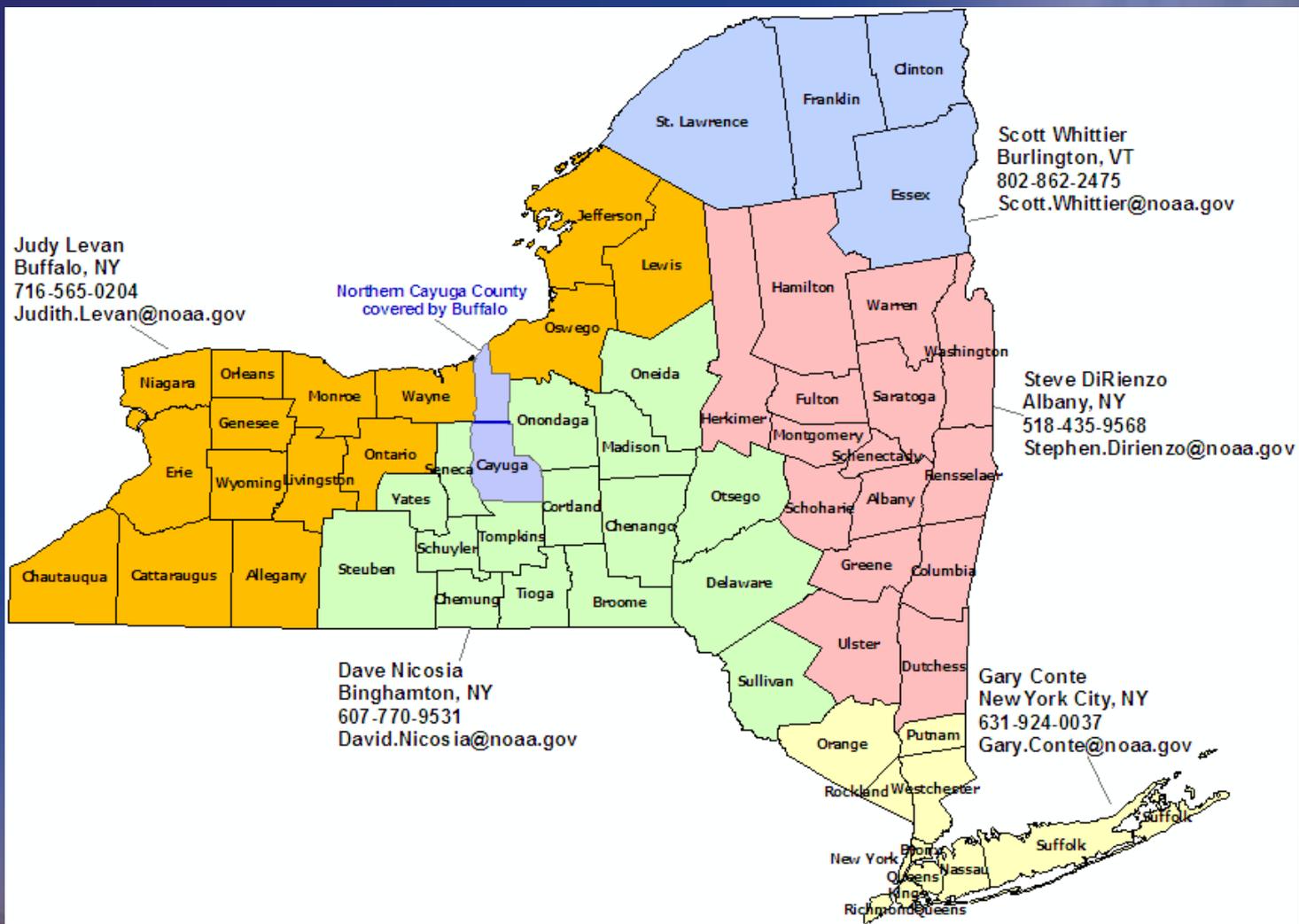
NWS Albany @NWSAlbany
15 Oct
NWS ALY's #SKYWARN spotter training sessions start tonight. Find one close to you: ow.ly/etQ4d
Expand

NWS Albany @NWSAlbany
14 Oct
Warm front moving northward, area will get in the warm sector. Above normal temps on the way. ow.ly/eyesGBY
Expand





NWS Contacts New York State



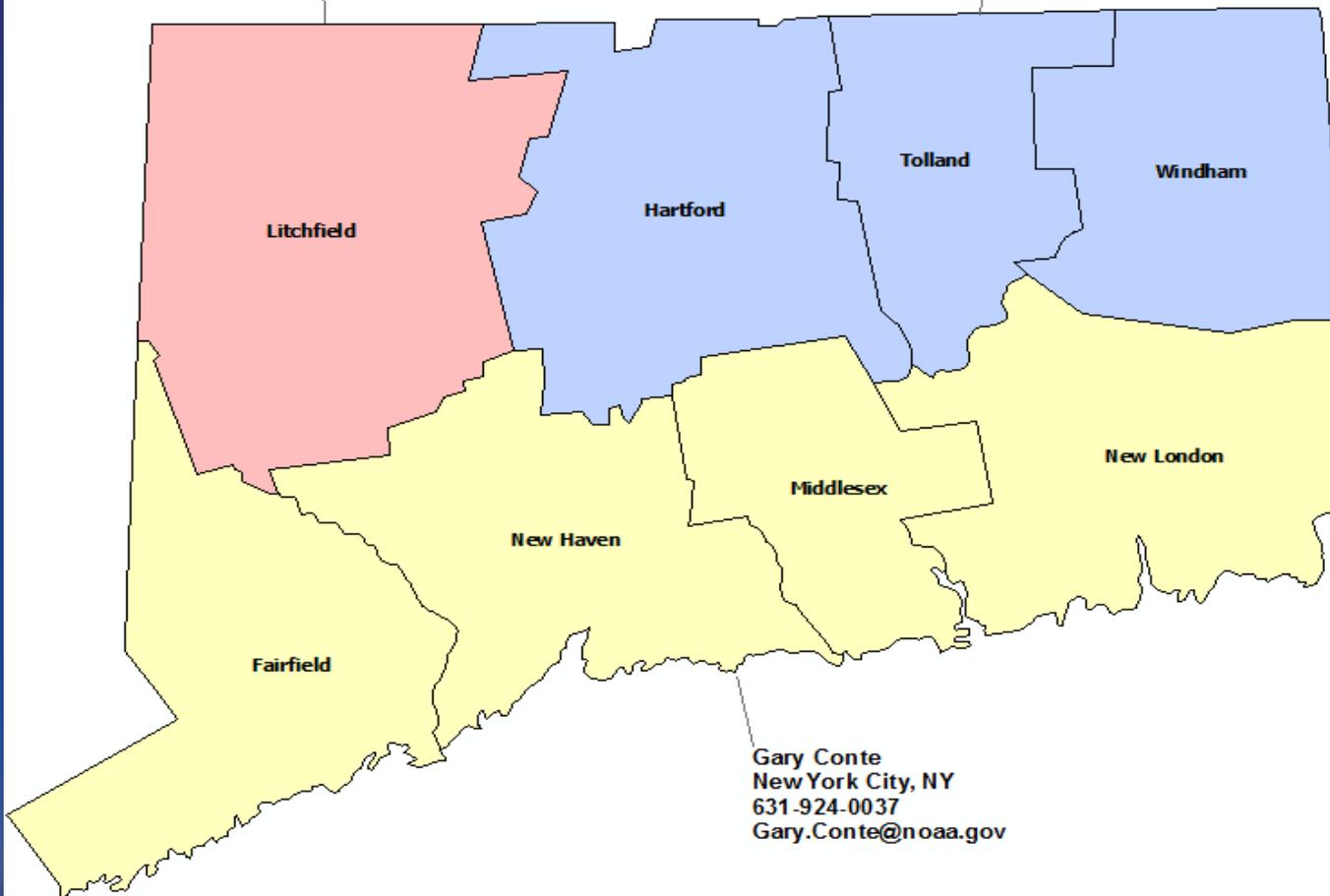


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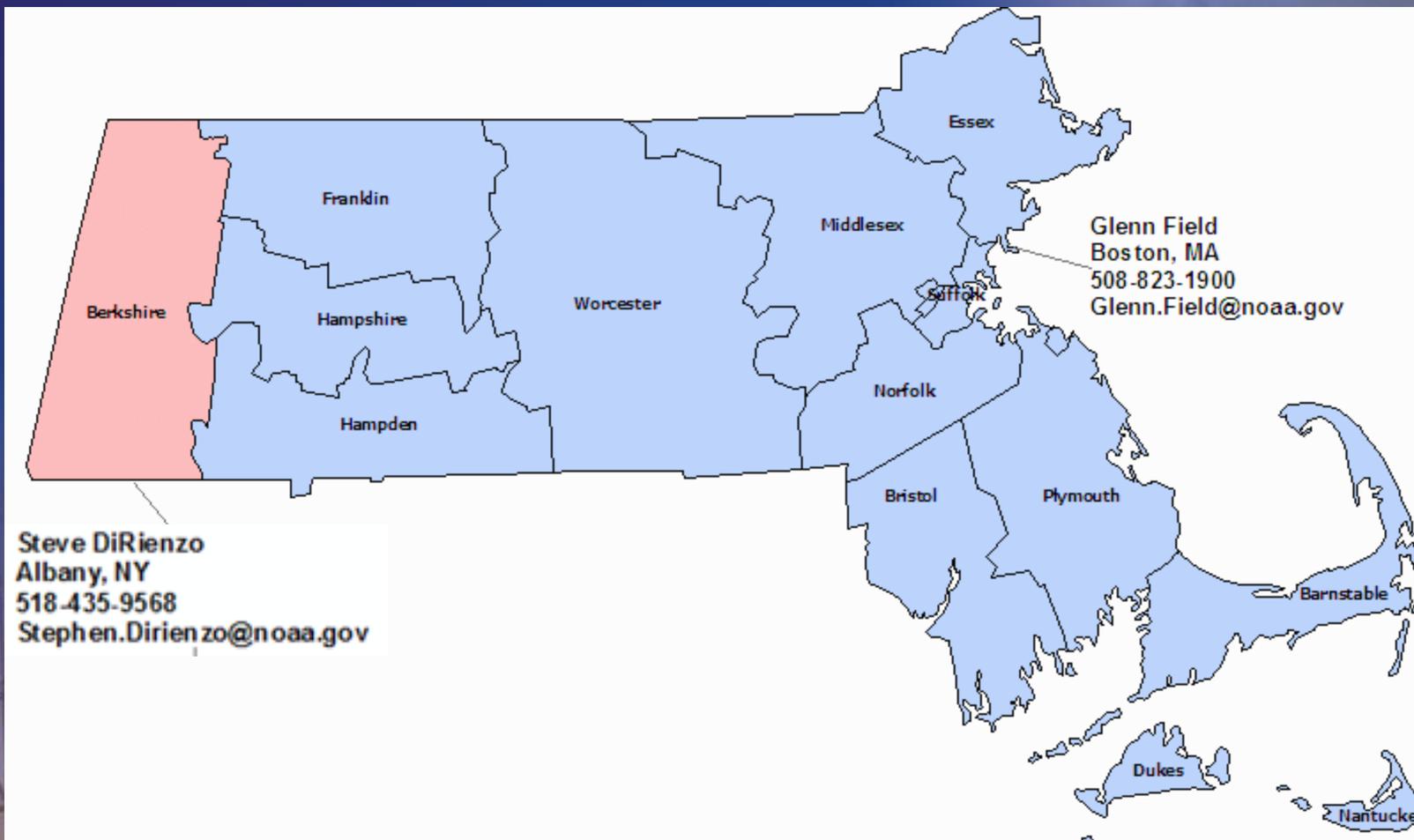
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NWS Contacts Vermont

