



# Winter Weather Awareness Week October 21st to October 27th, 2012

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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 62 people are directly killed nationwide from winter storms and cold.
  - Thousands 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.



# U.S.

## Economic Impacts of Winter Storms

- Cost of snow removal exceeds \$2 billion annually.
- Eight million tons of salt at a cost of \$250 million dollars.
- Tens of thousands of traffic accidents.
- Personal fall accidents which claim lives and generate hundreds of millions in medical expenses.



# Winter Hazards

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





# 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 frontal boundary and have high winds.
- Generally minor snow accumulations, but roads get covered in an instant.
- Rapid changes in visibility to white out conditions.



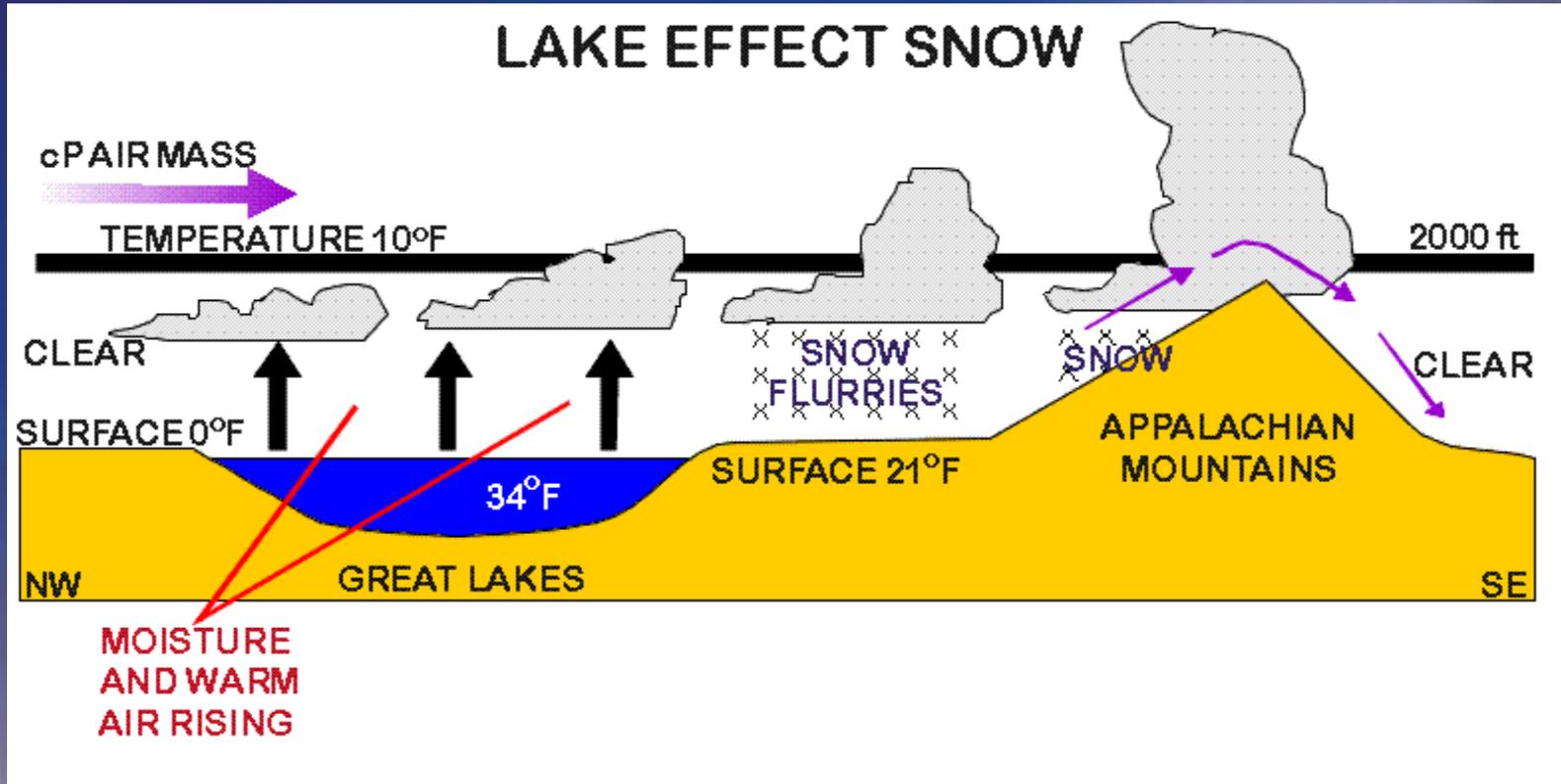
# Heavy Snow Impacts

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



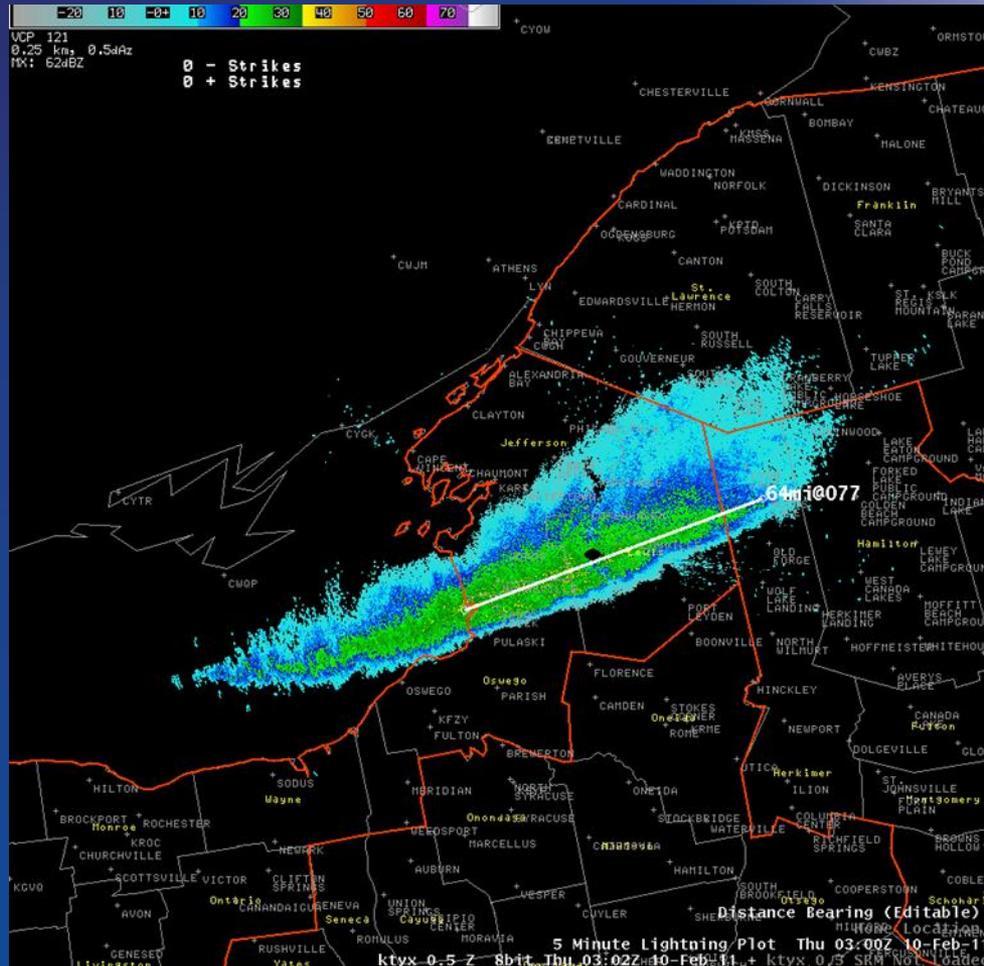


# Lake Effect Snow – Why it Happens





# Lake Effect Snow



Lake Effect Snow often in narrow bands or plumes.



# 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



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, etc.*
- *Fire extinguisher and smoke detector.*



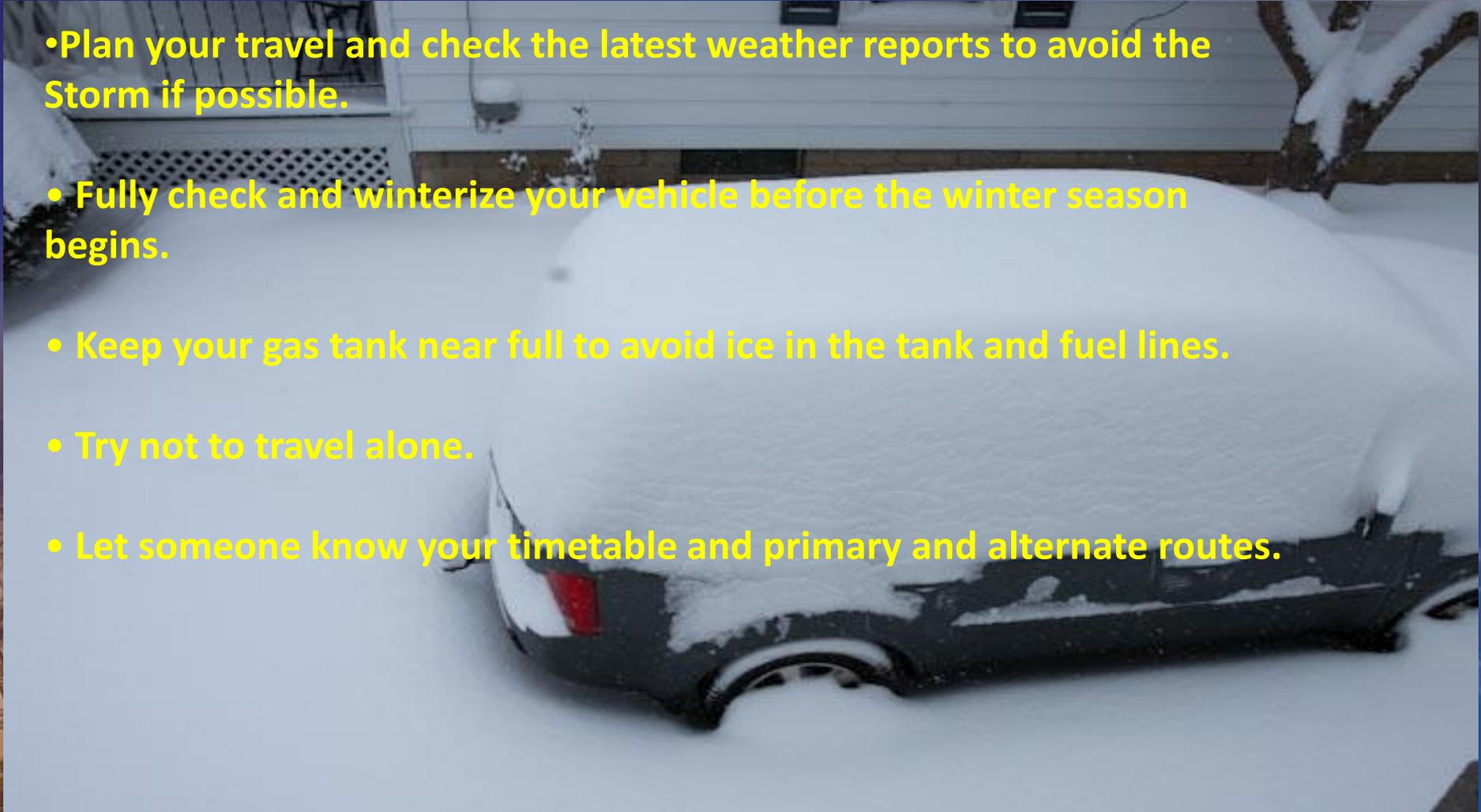
# Winter Storm Survival Kit- Automobiles

- Blankets/sleeping bags
  - Flashlight with extra Batteries
  - First-aid kit
  - Knife
  - High-calorie, nonperishable Food
  - Extra clothing to keep dry
  - A large empty can and plastic cover with tissues and paper towels 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
  - Tool kit
  - Tow rope
  - 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.
- 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 exists for blizzard conditions 24 to 72 hours in advance.
- ***Lake Effect Snow Watch:*** 7 inches or more of lake effect snow possible in the next 24 to 72 hours.
- ***Wind Chill Watch:*** Potential exists for winds chills of -25°F or greater, with winds of ≥ 5 mph, lasting longer than one hour



# Winter Weather: NWS Warnings

## Winter Storm Warning

- *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

- *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

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

## • Blizzard Warning

- *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

- *Wind Chills of -25F or less*



# Winter Weather Advisories

- **Winter Weather Advisory:**

- *Hazardous combination of snow, ice, low wind chill, and/or blowing/drifting snow.*

- **Freezing Rain Advisory**

- *Any accumulation of ice*

- **Lake Effect Snow Advisory**

- *4 to 6 inches of lake effect snow*

- **Wind Chill Advisory:**

- *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



Looking NW at the North Creek Bridge, Hudson River. (March 2011)

Photo courtesy of Warren County Emergency Management



# Winter Flooding



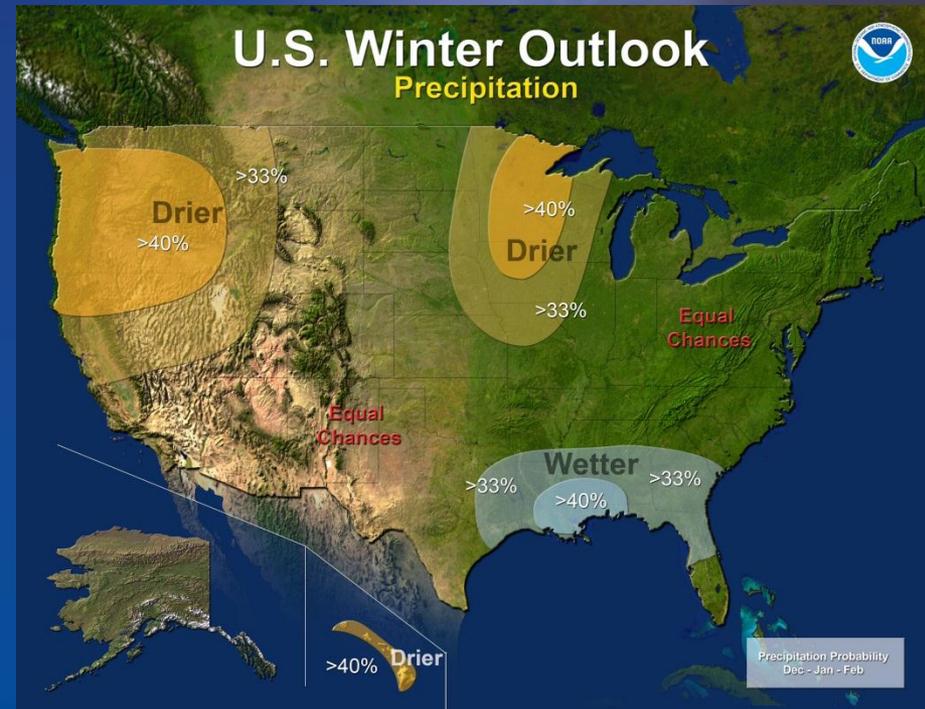
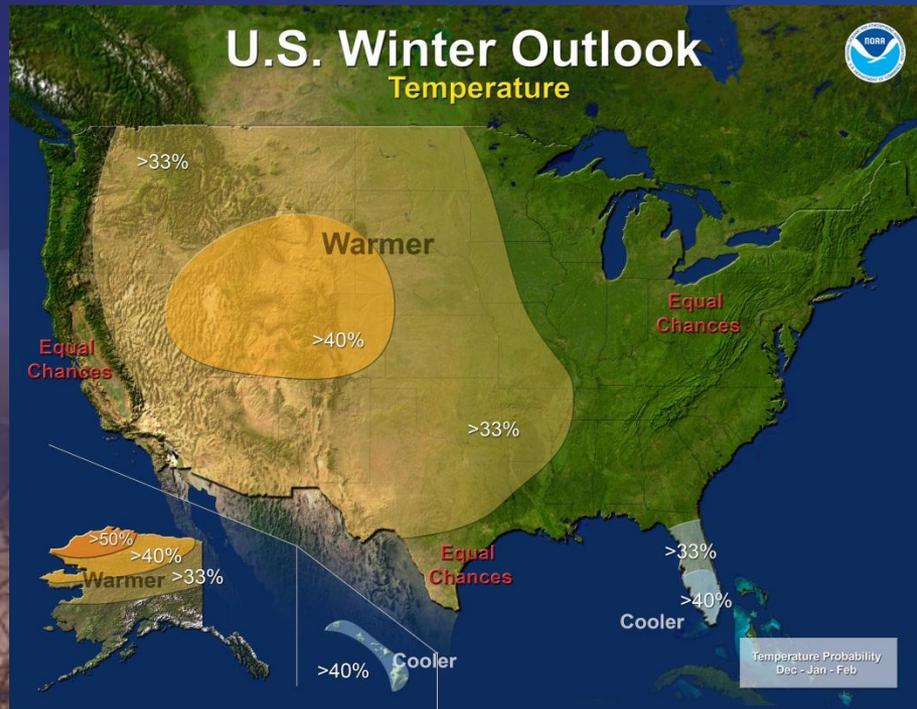
Mohawk River – March 2011

Julie Stuart

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



# 2012-2013 Winter Outlook – Near Normal Climate Prediction Center





# NWS Albany Web Page

National Weather Service Forecast Office  
**Albany, NY**

[Home](#)    [News](#)    [Organization](#)

Local Forecast by  
"City, St" or ZIP code

**Top News of the Day:** [\(Additional News\)](#)

- [Winter Weather Awareness Week October 21-27 2012](#)
- [Fall 2012 SKYWARN™ Spotter Training: Winter Weather & Hydrology](#)
- [NWS Service Assessment - Hurricane Irene August 21-30, 2011](#)
- [StormBuster: Emergency Manager & Storm Spotter Magazine](#)
- [Self-Briefing Pages: Severe, Winter and Flooding](#)

**Quick Glimpse at the Weather**
**Albany, NY**

**Point and Click Forecasts**
**Map Changes / Map FAQ's**

Click on the map below for the latest forecast.

Read watches, warnings & advisories

Coastal Flood Advisory

Small Craft Advisory

Special Weather Statement

Hazardous Weather Outlook

Short Term Forecast

Last map update: Fri, Oct. 19, 2012 at 9:35:03 am EDT

Choose from the options below for other ways to view your NWS forecast

**Text Forecasts**

**Hourly Weather Forecast Graph**

**Quick Forecast**

**Graphical Forecast Images**

**Current Hazards**

- Local Outlook
- National
- NOAA Watch
- Hazard Assessment
- U.S. Drought Portal
- Precipitation (HPC)
- Severe (SPC)
- Tropical (NHC)
- Submit Mobile Report
- Submit Storm Report

**Current Conditions**

- Observations
- Lakes & Rivers AHPS
- Mesonet Obs
- Rain/Snow Reports
- Hourly Surface Data
- Surface Analysis

**Radar & Satellite**

- Albany, NY
- Montague, NY
- Northeast Sector
- National Mosaic
- Satellite

**Forecasts**

- Activity Planner
- Area Discussions
- HPC Discussions
- Local Products
- Forecast Images
- Quick Forecast
- Hourly Forecast
- Interactive
- National - NDFD
- Air Quality



# Weather Alerts on Mobile Device

- <http://inws.wrh.noaa.gov/> (NWS iNWS)
- <http://www.ialertz.com/> (New York iAlertz)
- NY-ALERT
- <http://water.usgs.gov/wateralert/> (USGS Water Alert)
- Private Vendor Apps



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.



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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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3,722 likes · 196 talking about this

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

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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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This is an experimental service to explore Twitter use to extend the reach of NWS information. Visit <http://goo.gl/C9g6i> for details and to provide comments.  
Albany, New York <http://www.weather.gov/albany>

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**Tweets**

**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](http://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](http://ow.ly/etQ4d) Expand

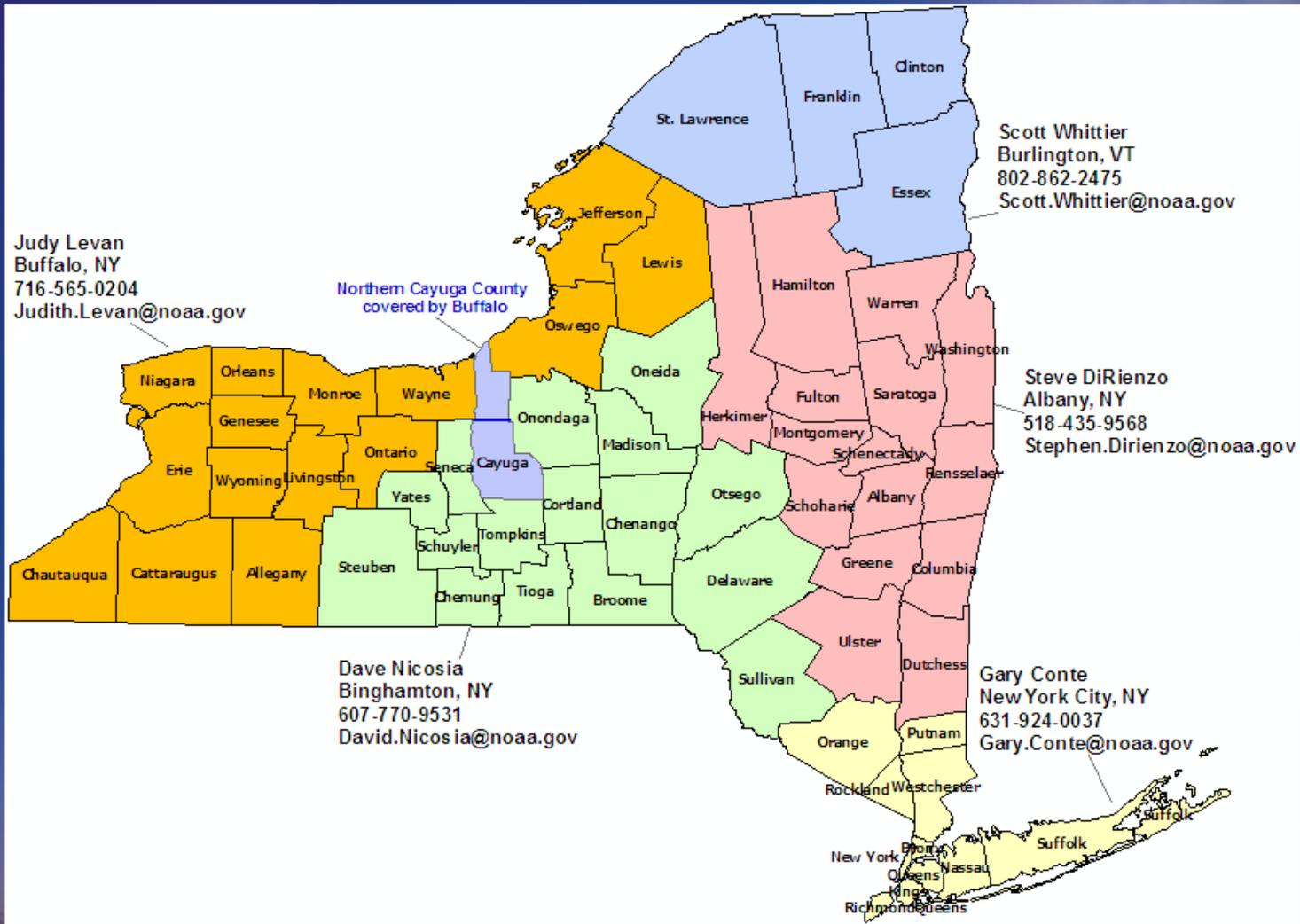
**NWS Albany** @NWSAlbany 14 Oct  
Warm front moving northward, area will get in the warm sector. Above normal temps on the way. [ow.ly/yesGBY](http://ow.ly/yesGBY) Expand





# NWS Contacts

## New York State

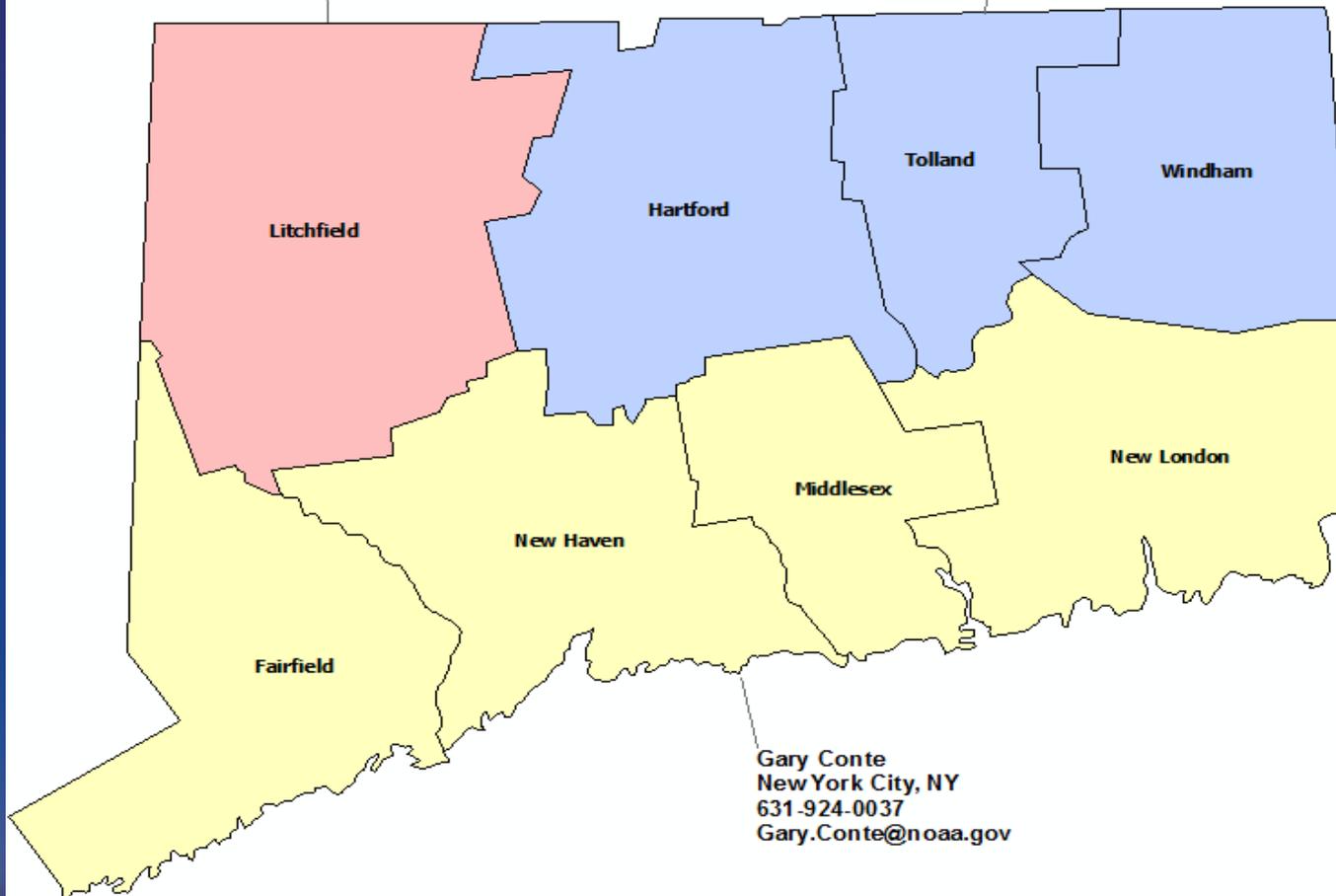




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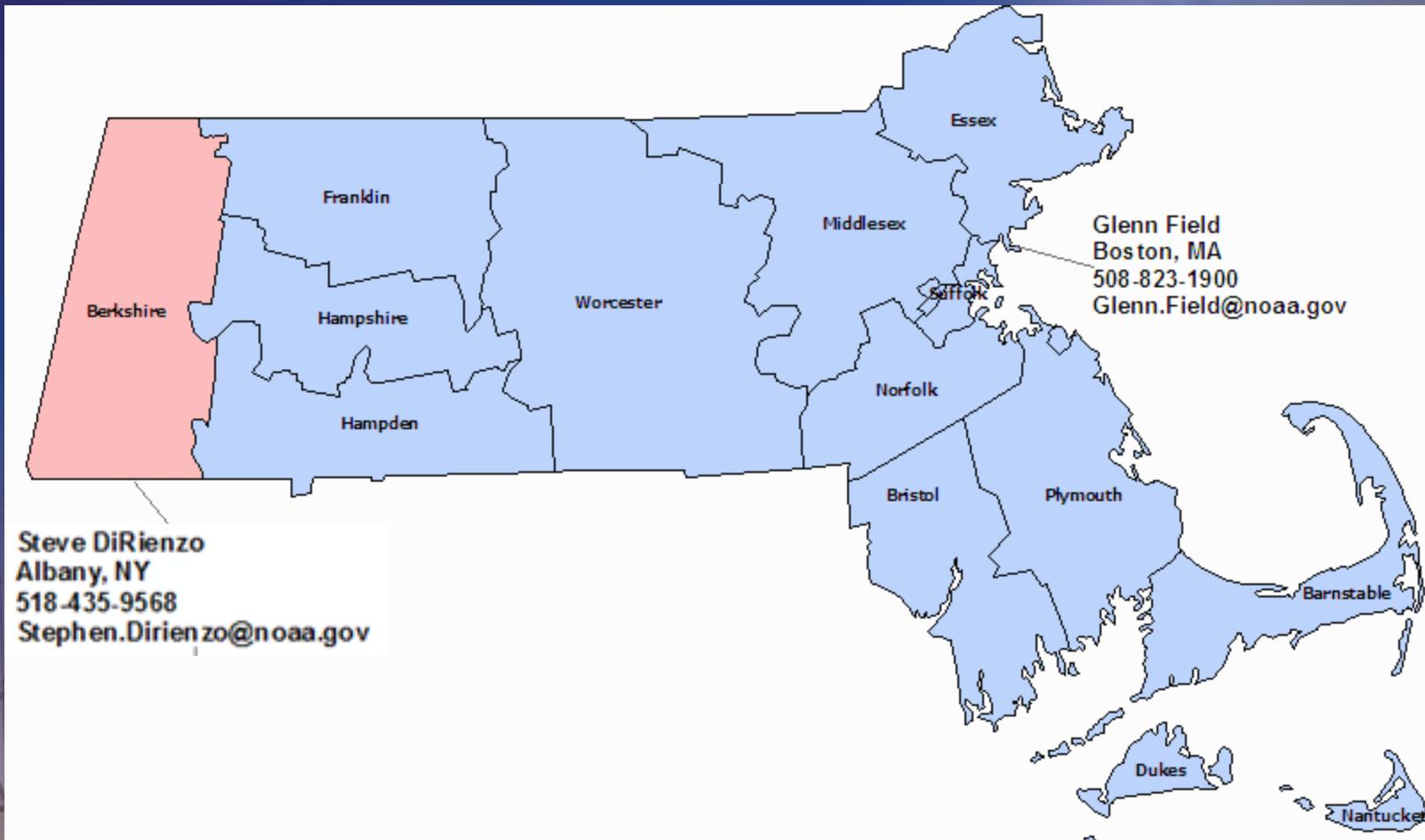
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# NWS Contacts Massachusetts





# NWS Contacts Vermont

