



# **NORTHEASTERN STORM ⚡ BUSTER**



*Spring, 2016 - VOL. 21, NO. 2*

*Evan L. Heller, Editor/Publisher*

*Steve DiRienzo, WCM/Contributor*

*Ingrid Amberger, Webmistress*

## **FEATURES**

***2 Winter 2015-16: Warmest on Record  
with Record Low Snowfall!***

*By Evan Heller & Ingrid Amberger*

***9 Lightning: Statistics, Myths & Facts***

*By Ingrid Amberger*

***12 Weather-Ready Nation Ambassador***

*By Brian Montgomery*

***13 The "Ice Man" Retireth!***

***13 Skywarn™ Spring Spotter Training Sessions***

## **DEPARTMENTS**

***14 Kevin S. Lipton's WEATHER ESSENTIALS  
Weather vs. Climate***

***17 From the Editor's Desk***

***18 WCM Words***

*Northeastern StormBuster* is a quarterly publication of the National Weather Service Forecast Office in Albany, New York, serving the weather spotter, emergency manager, cooperative observer, ham radio, scientific and academic communities, and weather enthusiasts, all of whom have a special interest or expertise in the fields of meteorology, hydrology and/or climatology. Original content contained herein may be reproduced only when the National Weather Service Forecast Office at Albany, and any applicable authorship, is credited as the source.

## **WINTER 2015-16: WARMEST ON RECORD WITH RECORD LOW SNOWFALL!**

*Evan L. Heller  
Climatologist, NWS Albany*

*Ingrid Amberger  
Climatologist, NWS Albany*

We just wrapped up our mildest winter of record in Albany. The mean temperature was 33.4°, a whopping 7.8 degrees above the 25.6° normal (Table 1)! The month of December was the biggest contributor to the warmth...with the average mean, high and low temperatures all at least 13 degrees above normal, and each ranking at the top of the list for warmest Decembers (Table 3a). But both January and February were about 5 degrees above normal themselves, and for February, this resulted in a #5 ranking for the Warmest Mean Maximum Februaries (Table 3c).

With the extreme winter warmth came numerous daily temperature records...2 daily maximums, 3 daily high means and 3 daily high minimums in December alone (Table 3a). January 10<sup>th</sup> stood out from the rest of the month, with a record maximum, record high minimum and record high mean temperature (Table 3b). There were no other daily temperature records for the month.

Even with the record warmth, there was actually a record low temperature established in February, when the temperature plummeted to -13° on Valentine's Day (Table 3c). A low mean record was also established. This brief cold snap produced a three-day cold wave from the 13<sup>th</sup> to the 15<sup>th</sup> where the temperature dropped to below zero each day (Table 2b). More daily records for warmth also occurred in February...a maximum, high min and high mean for the 3<sup>rd</sup>-4<sup>th</sup>, helping February become one of the warmest on record, missing the Top 10 by barely more than a degree (Table 3c). But high temperatures were more impressive during the month, which is what led to the #5 ranking for Warmest Mean Maximum Februaries.

Precipitation varied month-to-month, but most of it was in the form of liquid. The total snow for the 3-month period was just 10.3" (Table 1), less than one-quarter the normal value, and a record low amount for Albany going all the way back to the beginning of records in 1885! The 10.3" total includes October and November. Amazingly, we still managed to muster a daily record snowfall in October, albeit only a trace.

January was a rather dry month; the 1.24" total ranked it as the 190<sup>th</sup>-driest month of all-time (Table 3b). Despite this, there was a daily maximum precipitation record set on the 10<sup>th</sup>, 0.87", which means that 70 percent of the month's 1.24" precipitation fell on this

one date alone. But an even bigger daily record was broken on February 24<sup>th</sup> when exactly 2.00" fell; it ranks as Albany's 105<sup>th</sup>-wettest date (Table 3c).

Several daily wind speed records were also set this past winter (Tables 3a-c)...one in December, two in January and three in February. Unseasonable thunder was heard on three days from January through February. The winter of 2016 was highly unusual and will not soon be forgotten.

STATS				
	DEC	JAN	FEB	SEASON
Average High Temperature/Departure from Normal	49.3°/+13.5°	36.0°/+5.4°	40.6°/+6.0°	42.0°/+8.4°
Average Low Temperature/Departure from Normal	34.3°/+13.1°	19.5°/+5.0°	20.6°/+3.3°	24.8°/+7.1°
Mean Temperature/ Departure From Normal	41.8°/+13.3°	27.7°/+5.1°	30.6°/+4.7°	33.4°/+7.8°
High Daily Mean Temperature/Date	57.5/24 <sup>th</sup>	46.0°/10 <sup>th</sup>	48.5°/20 <sup>th</sup>	
Low Daily Mean Temperature /Date	29.0°/28 <sup>th</sup>	10.5°/5 <sup>th</sup>	-2.5°/14 <sup>th</sup>	
Highest Temperature reading/Date	72°/24 <sup>th</sup>	55°/10 <sup>th</sup>	62°/20 <sup>th</sup>	
Lowest Temperature reading/Date	22°/28 <sup>th</sup>	2°/5 <sup>th</sup>	-13°/14 <sup>th</sup>	
Lowest Maximum Temperature reading/Date	35°/25 <sup>th</sup>	19°/5 <sup>th</sup>	8°/14 <sup>th</sup>	
Highest Minimum Temperature reading/Date	46°/22 <sup>nd</sup>	38°/9 <sup>th</sup>	36°/4 <sup>th</sup>	
Total Precipitation/Departure from Normal	3.67"/+0.74"	1.24"/-1.35"	4.07"/+1.87"	8.98"/+1.26"
Total Snowfall/Departure from Normal	2.2"/-11.5"	3.3"/-14.3"	4.8"/-7.6"	10.3"/-33.4"
Maximum Precipitation/Date	0.90"/29 <sup>th</sup>	0.87"/10 <sup>th</sup>	2.00"/24 <sup>th</sup>	
Maximum Snowfall/Date	1.3"/29 <sup>th</sup>	1.1"/18 <sup>th</sup>	1.5"/9 <sup>th</sup> & 15 <sup>th</sup>	

Table 1

NORMALS, OBSERVED DAYS & DATES				
NORMALS & OBS. DAYS	DEC	JAN	FEB	SEASON
<b>NORMALS</b>				
High	35.8°	30.6°	34.6°	33.6°
Low	21.2°	14.5°	17.3°	17.7°
Mean	28.5°	22.6°	25.9°	25.6°
Precipitation	2.93"	2.59"	2.20"	7.72"
Snow	13.7"	17.6"	12.4"	43.7"
<b>OBS TEMP. DAYS</b>				
High 90° or above	0	0	0	0/91
Low 70° or above	0	0	0	0/91
High 32° or below	0	12	7	19/91
Low 32° or below	10	28	25	63/91
Low 0° or below	0	0	3	3/91
<b>OBS. PRECIP DAYS</b>				
Days T+	24	16	23	63/91/69%
Days 0.01"+	13	7	10	30/91/33%
Days 0.10"+	9	2	6	17/91/19%
Days 0.25"+	7	2	4	13/91/14%
Days 0.50"+	1	1	2	4/91/4%
Days 1.00"+	0	0	1	1/91/1%

Table 2a

NOTABLE TEMP, PRECIP & SNOW DATES	DEC	JAN	FEB
Cold Wave (3 or more consec. days with lows zero or below °F)	-	-	13 <sup>th</sup> -15 <sup>th</sup> (3 days)
-10°F event (low temperature)/date	-	-	-13°/14 <sup>th</sup>
1.50"+ event/date	-	-	2.00"/24 <sup>th</sup>

Table 2b

SKYWARN™ SPOTTER TRAINING SESSIONS...NOW AVAILABLE!:  
<http://cstar.cestm.albany.edu/skywarn/Talks.htm>

### RECORDS

ELEMENT	DECEMBER	
Daily Maximum Temperature Value/Date   Previous Record/Year	61°/15 <sup>th</sup>	61°/1901
Daily Maximum Temperature Value/Date   Previous Record/Year	72°/24 <sup>th</sup>	57°/1941
Daily High Mean Temperature   Previous Record/Year	51.5°/15 <sup>th</sup>	47.0°/2008
Daily High Mean Temperature   Previous Record/Year	48.0°/17 <sup>th</sup>	47.0°/1928
Daily High Mean Temperature   Previous Record/Year	57.5°/24 <sup>th</sup>	47.5°/1931
Daily High Minimum Temperature   Previous Record/Year	42°/15 <sup>th</sup>	41°/2011
Daily High Minimum Temperature   Previous Record/Year	44°/17 <sup>th</sup>	41°/1888
Daily High Minimum Temperature   Previous Record/Year	43°/24 <sup>th</sup>	43°/1931
Daily Maximum Wind Speed Value/Direction/Date   Previous Record/Direction/Year	40 mph/W/19 <sup>th</sup>	36 mph/NW/1996
Top 10 Warmest Decembers Value/Rank   Remarks	41.8°/#1	-
Top 10 Warmest Mean Maximum Decembers Value/Rank   Remarks	49.3°/#1	-
Top 10 Warmest Mean Minimum Decembers Value/Rank   Remarks	34.3°/#1	-

Table 3a

ELEMENT	JANUARY	
Daily Maximum Temperature Value/Date   Previous Record/Year	55°/10 <sup>th</sup>	53°/1939
Daily High Mean Temperature   Previous Record/Year	46.0°/10 <sup>th</sup>	46.0°/1939
Daily Maximum Precipitation Value/Date   Previous Record/Year	0.87"/10 <sup>th</sup>	0.68/1977
Daily Maximum Wind Speed Value/Direction/Date   Previous Record/Direction/Year	52 mph/W/19 <sup>th</sup>	49 mph/W/1990
Daily Maximum Wind Speed Value/Direction/Date   Previous Record/Direction/Year	43 mph/NW/27 <sup>th</sup>	43 mph/S/1996
Top 200 All-Time Driest Months Value/Rank   Remarks	1.24"/#190	7-way tie

Table 3b

ELEMENT	FEBRUARY	
Daily Maximum Temperature Value/Date   Previous Record/Year	57°/3 <sup>rd</sup>	56°/2006
Daily Minimum Temperature Value/Date   Previous Record/Year	-13°/14 <sup>th</sup>	-10°/1987
Daily High Mean Temperature   Previous Record/Year	46.5°/4 <sup>th</sup>	44.0°/1991
Daily Low Mean Temperature   Previous Record/Year	-2.5°/14 <sup>th</sup>	-1.0°/1916
Daily High Minimum Temperature   Previous Record/Year	36°/4 <sup>th</sup>	36°/1952
Daily Maximum Precipitation Value/Date   Previous Record/Year	2.00"/24 <sup>th</sup>	1.46"/1975
Daily Maximum Wind Speed Value/Direction/Date   Previous Record/Direction/Year	41 mph/S/3 <sup>rd</sup>	41 mph/W/1994
Daily Maximum Wind Speed Value/Direction/Date   Previous Record/Direction/Year	45 mph/13 <sup>th</sup>	44 mph/W/1988
Daily Maximum Wind Speed Value/Direction/Date   Previous Record/Direction/Year	47 mph/26 <sup>th</sup>	39 mph/W/1999
Top 10 Warmest Mean Maximum Februaries Value/Rank   Remarks	40.6°/#5	-
Top 200 All-Time Wettest Dates Value/Rank/Date   Remarks	2.00"/#105/24 <sup>th</sup>	tie

Table 3c

ELEMENT	WINTER	
Top 10 Warmest Winters Value/Rank   Remarks	33.4°/#1	-

Table 3d

### MISCELLANEOUS

#### DECEMBER

Average Wind Speed/Departure from Normal	7.6 mph/-0.9 mph
Peak Wind/Direction/Date	41 mph/W/15 <sup>th</sup>
Windiest Day Average Value/Date	14.5 mph/19 <sup>th</sup>
Calmmest Day Average Value/Date	1.2 mph/6 <sup>th</sup>
# Clear Days	0
# Partly Cloudy Days	13
# Cloudy Days	18
Dense Fog Dates (code 2)	6 <sup>th</sup> , 7 <sup>th</sup> , 22 <sup>nd</sup> & 23 <sup>rd</sup>
Thunder Dates (code 3)	none
Sleet Dates (code 4)	2 <sup>nd</sup> , 5 <sup>th</sup> , 6 <sup>th</sup> , 9 <sup>th</sup> , 28 <sup>th</sup> & 29 <sup>th</sup>
Hail Dates (code 5)	none
Freezing Rain Dates (code 6)	1 <sup>st</sup> , 28 <sup>th</sup> & 29 <sup>th</sup>

Table 4a

**JANUARY**

Average Wind Speed/Departure from Normal	8.6 mph/-0.1 mph
Peak Wind/Direction/Date	52 mph/WNW/19 <sup>th</sup>
Windiest Day Average Value/Date	18.7 mph/19 <sup>th</sup>
Calmmest Day Average Value/Date	0.5 mph/7 <sup>th</sup>
# Clear Days	3
# Partly Cloudy Days	13
# Cloudy Days	15
Dense Fog Dates (code 2)	none
Thunder Dates (code 3)	10 <sup>th</sup>
Sleet Dates (code 4)	none
Hail Dates (code 5)	none
Freezing Rain Dates (code 6)	16 <sup>th</sup>

**Table 4b**

**FEBRUARY**

Average Wind Speed/Departure from Normal	9.4 mph/+0.3 mph
Peak Wind/Direction/Date	48 mph/S/20 <sup>th</sup>
Windiest Day Average Value/Date	18.8 mph/26 <sup>th</sup>
Calmmest Day Average Value/Date	2.2 mph/9 <sup>th</sup>
# Clear Days	2
# Partly Cloudy Days	18
# Cloudy Days	9
Dense Fog Dates (code 2)	25 <sup>th</sup>
Thunder Dates (code 3)	24 <sup>th</sup> & 25 <sup>th</sup>
Sleet Dates (code 4)	15 <sup>th</sup> , 16 <sup>th</sup> , 19 <sup>th</sup> , 20 <sup>th</sup> & 23 <sup>rd</sup>
Hail Dates (code 5)	none
Freezing Rain Dates (code 6)	15 <sup>th</sup> , 16 <sup>th</sup> , 20 <sup>th</sup> & 24 <sup>th</sup>

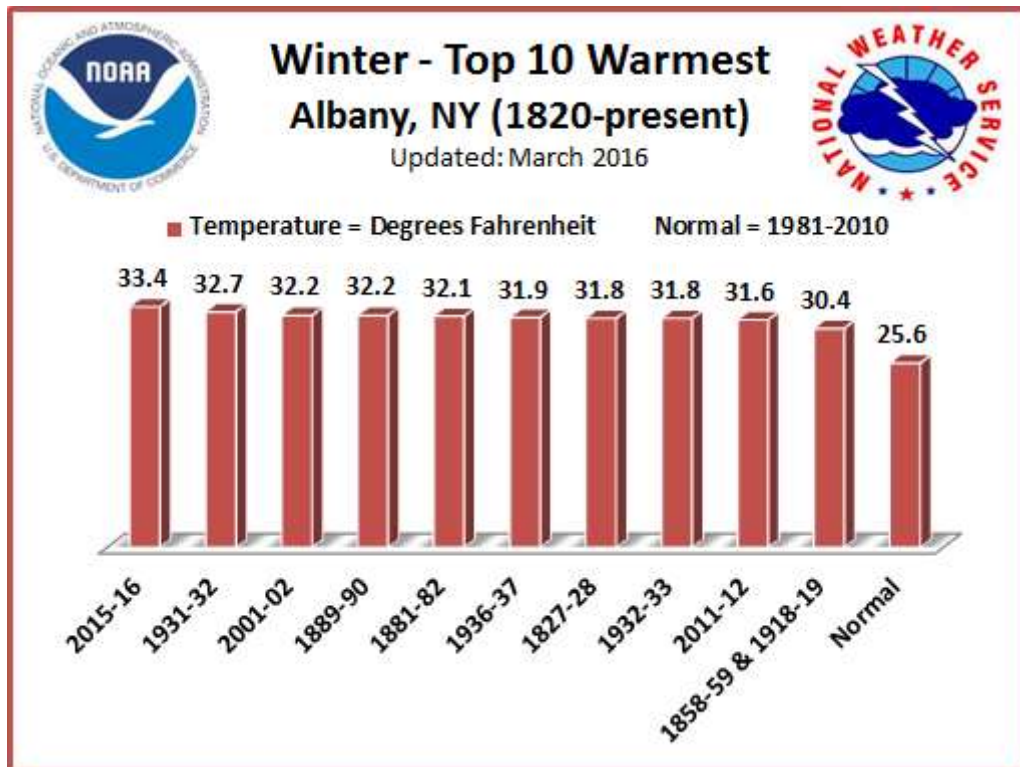
**Table 4c**

The following Top 10 charts and graphs were researched and compiled by Ingrid Amberger, our Climate Services Focal Point. They show an array of interesting temperature and snow statistics for Albany, Poughkeepsie and Glens Falls, and how the past winter ranked amongst the Top 10; as you can see, the #1 spot comes up a lot.

<b>Rank</b>	<b>Meteorological Winter</b>	<b>Snowfall (inches)</b>
<b>1</b>	<b>Dec 1 2015 – Feb 29 2016</b>	<b>10.3</b>
<b>2</b>	Dec 1 1936 – Feb 28 1937	10.9
<b>3</b>	Dec 1 1912 – Feb 28 1913	11.7
<b>4</b>	Dec 1 2011 – Feb 29 2012	12.8
<b>5</b>	Dec 1 1911 – Feb 29 1912	13.8
<b>6</b>	Dec 1 1988 – Feb 28 1989	14.2
<b>7</b>	Dec 1 1931 – Feb 29 1932	16.3
<b>8</b>	Dec 1 1979 – Feb 29 1980	16.6
<b>9</b>	Dec 1 1954 – Feb 28 1955	17.0
<b>10</b>	Dec 1 1918 – Feb 28 1919	17.1
-	Dec 1 1889 – Feb 28 1890	17.1
<i>Albany Snowfall Records date back to the 1884-85 Winter</i>		

Rank	Meteorological Winter	Average Temperature (degrees Fahrenheit)
1	Dec 1 2015 – Feb 29 2016	33.4
2	Dec 1 1931 – Feb 29 1932	32.7
3	Dec 1 2001 – Feb 28 2002	32.3
4	Dec 1 1889 – Feb 28 1890	32.2
5	Dec 1 1881 – Feb 28 1882	32.1
6	Dec 1 1936 – Feb 28 1937	31.9
7	Dec 1 1827 – Feb 29 1828	31.8
-	Dec 1 1932 – Feb 28 1933	31.8
9	Dec 1 2011 – Feb 29 2012	31.6
10	Dec 1 1858 – Feb 28 1859	30.4
-	Dec 1 1918 – Feb 28 1919	30.4

*Albany Monthly Temperature Records date to 1820*



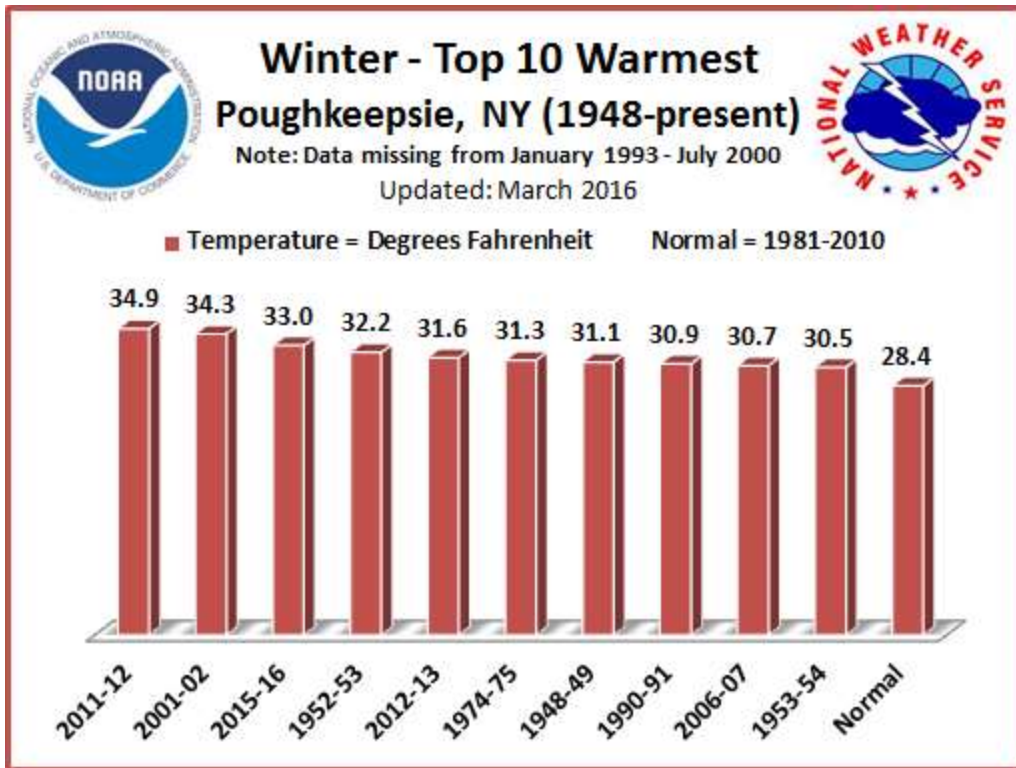
<b>Albany NY - Number of Days with Maximum Temperature &gt;= 50</b>				
<b>WINTER</b>	<b>DEC</b>	<b>JAN</b>	<b>FEB</b>	<b>Total</b>
<b>2015-16</b>	<b>14</b>	<b>2</b>	<b>8</b>	<b>24</b>
2001-02	8	5	4	17
1975-76	4	1	10	15
1982-83	11	1	2	14
1980-81	3	0	11	14
1891-92	12	2	0	14
2005-06	0	7	6	13
1953-54	7	0	6	13
1936-37	6	4	3	13
1889-90	6	4	3	13
<i>Daily Temperature Records date back to 1874</i>				

<b>Poughkeepsie NY - Number of Days with Maximum Temperature &gt;= 50</b>				
<b>WINTER</b>	<b>DEC</b>	<b>JAN</b>	<b>FEB</b>	<b>Total</b>
<b>2015-2016</b>	<b>22</b>	<b>3</b>	<b>12</b>	<b>37</b>
2011-2012	12	6	6	24
2001-2002	10	5	9	24
1953-1954	11	1	10	22
2006-2007	13	8	0	21
1948-1949	8	6	7	21
1990-1991	11	0	7	18
1975-1976	4	2	12	18
1982-1983	12	2	3	17
1989-1990	0	6	10	16
<i>Records date back to 1949, however data is missing from January 1993 - July 2000</i>				

***BECOME A SKYWARN SPOTTER!***

Register for a Spring Session at:

**<http://cstar.cestm.albany.edu/skywarn/Talks.htm>**



Glens Falls NY - Number of Days with Maximum Temperature >= 50				
WINTER	DEC	JAN	FEB	Total
2015-2016 *	10	0	6	16
1980-1981	3	0	10	13
2001-2002	7	2	3	12
1982-1983	11	0	0	11
1953-1954	5	0	4	9
1949-1950	4	5	0	9
1998-1999	6	1	1	8
2005-2006	0	4	3	7

*Records date back to 1949*

**\*Note:** Temperature data is missing from January 27 through February 3 due to equipment issues.

For more climate data and records, please visit our climate page at:  
[www.weather.gov/albany/Climate](http://www.weather.gov/albany/Climate).



# LIGHTNING: STATISTICS, MYTHS & FACTS

Ingrid Amberger  
Meteorologist, NWS Albany

Lightning activity occurs throughout the year with a peak during the summer months. From 2006 through 2015, 313 people were struck and killed by lightning in the United States, with more than 70% of the deaths occurring during June, July and August (Figure 1). Lightning deaths occurred on all days of the week; however, the most were on Saturday and Sunday (Figure 2).

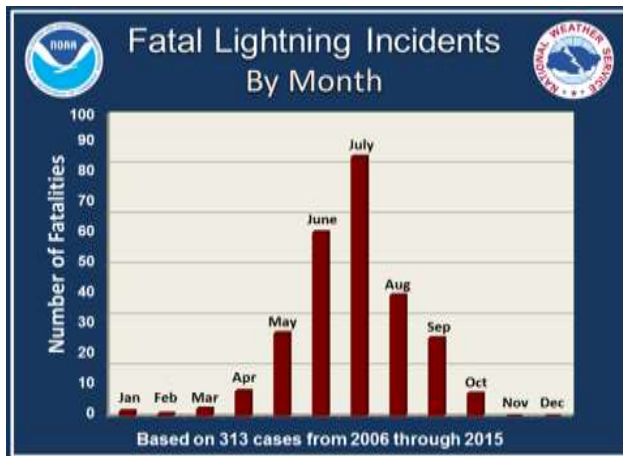


Figure 1

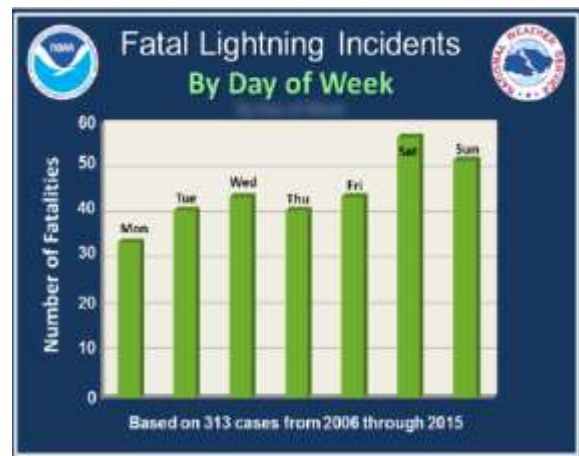


Figure 2

Males constituted about 79% of the lightning deaths (Figure 3) from 2006 through 2015. This has been fairly consistent from year to year through this period, with a low of 62% in 2007, and high of 89% in 2012. Looking at age and gender, the most lightning deaths occurred with males in their 20s (Figure 4).

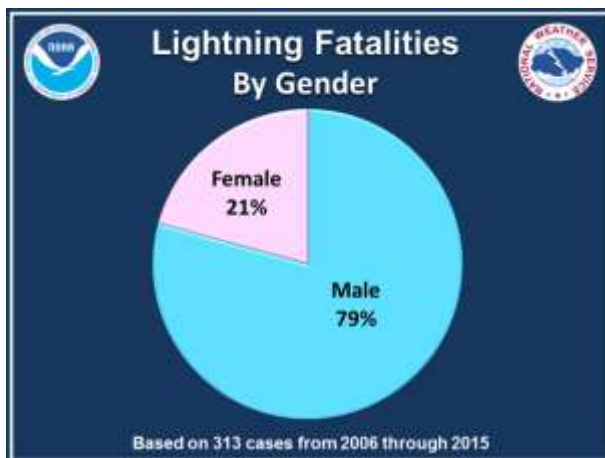


Figure 3

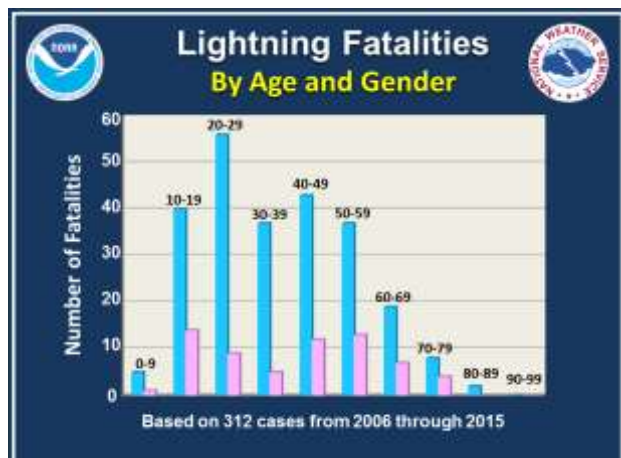


Figure 4

Leisure activities accounted for 64% of the overall deaths from 2006 through 2015. Leisure activities included water-related and sports-related activities, camping, riding, social gatherings, walking, playing, and relaxing outside the home. Of the leisure activities, 35% of the deaths occurred with the water-related activities (Figure 5), such as fishing, boating, swimming, or just relaxing at a beach or lake, with almost half of those being fishing-related (Figure 6).



Figure 5

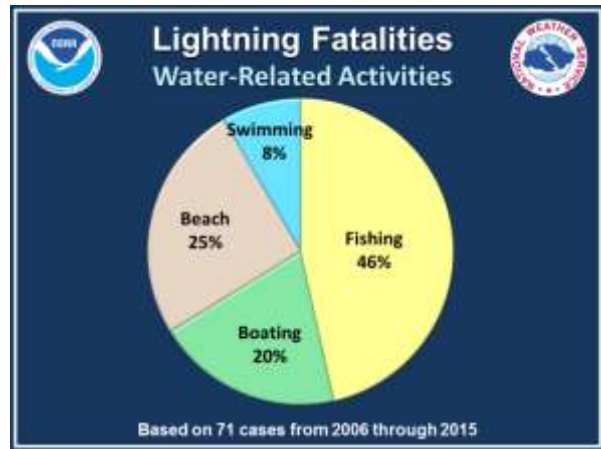


Figure 6

Activities that would be considered routine contributed 16% to the overall lightning fatalities, with over a third of those involving people who were either heading to or from, or waiting for, a vehicle, or walking to or from home (Figure 7). Females accounted for just over a third of Daily Routine type deaths (Figure 8).

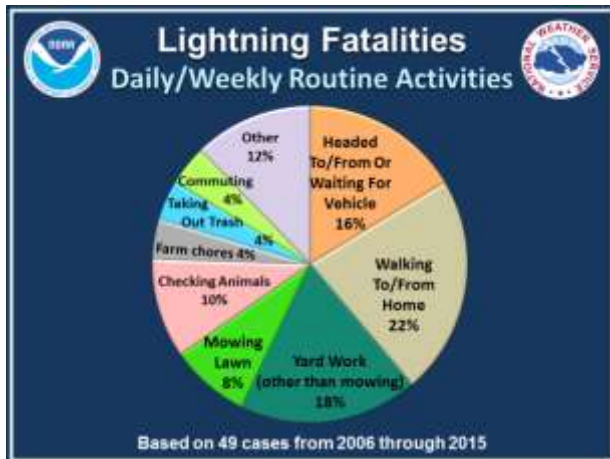


Figure 7

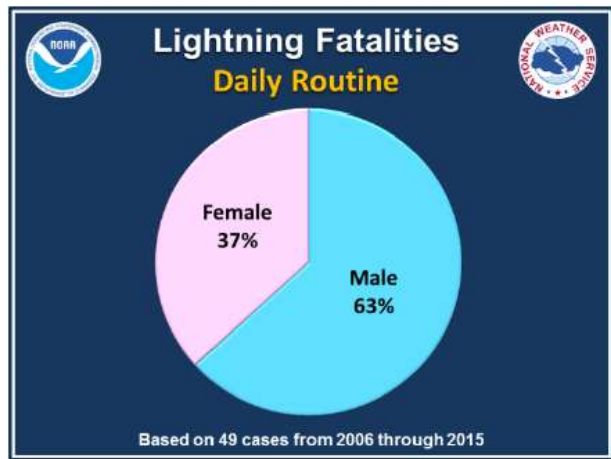


Figure 8

Work-related activities accounted for 15% of the overall lightning deaths, with about a third of them being people who were either farming or ranching (Figure 9). Males accounted for just over 90% of work-related deaths (Figure 10).

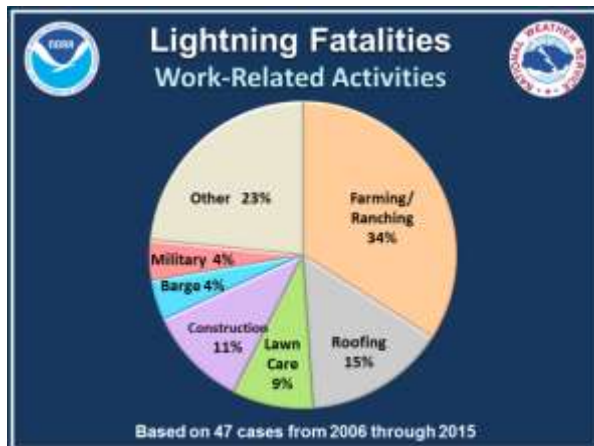


Figure 9

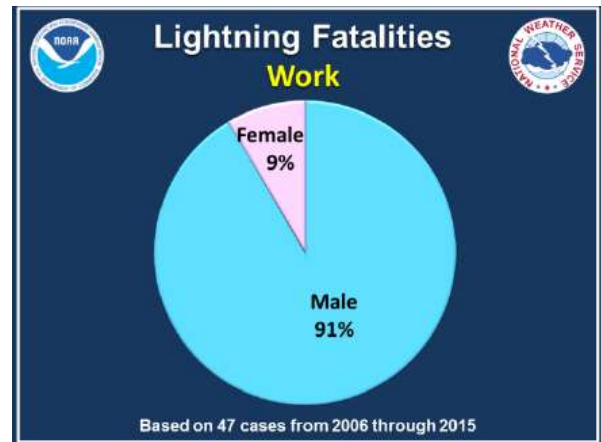


Figure 10

The following factors affect lightning deaths and injuries: the willingness to cancel or postpone activities; being aware of an approaching and/or developing storm; being aware of the vulnerability an activity puts you at, and; the ability and/or willingness to get to a safe place quickly. To reduce the number of deaths due to lightning, it is vital to make people aware of its dangers and why it is so important to act quickly.

Here are some lightning myths and facts that everyone should be aware of:

**Myth:** If it is not raining or there are no clouds overhead, you are safe from lightning.

**Fact:** Lightning often strikes more than 3 miles from a thunderstorm; far away from the rain. Some bolts of lightning can strike 10 to 15 miles from a thunderstorm.

**Myth:** If outside, you should seek shelter under a tree to stay dry.

**Fact:** Being underneath a tree is the second leading cause of lightning fatalities.

**Myth:** If a thunderstorm threatens while you are outside playing a game, it is okay to finish it before seeking shelter.

**Fact:** Many lightning casualties occur because people do not seek shelter soon enough. Seek safe shelter immediately if you hear thunder.

**Myth:** If you are caught outside during a thunderstorm, you should crouch down to reduce your risk of being struck.

**Fact:** Crouching does not make you any safer outdoors. If you are caught outside in a thunderstorm, get to a safe shelter (a substantial building or hard-topped vehicle) as quickly as possible.

Article Sources:

- *A Detailed Analysis of Lightning Deaths in the United States from 2006 through 2015* by John S. Jensenius, Jr., Lightning Safety Specialist/National Weather Service, Gray, Maine
- National Weather Service Lightning Safety Page: [www.lightningsafety.noaa.gov](http://www.lightningsafety.noaa.gov)

## **WEATHER-READY NATION AMBASSADOR**

*Brian Montgomery  
Senior Meteorologist, NWS Albany*

Do you love weather? Do you want to represent your group or team to promote weather safety? Want to work more closely with your National Weather Service? The Weather-Ready Nation Ambassador program is a partnership toward working together against extreme weather events. Promoting our safety messages (*Turn Around, Don't Drown; When Thunder Roars, Head Indoors*, etc.), collaborating with our professional staff, sharing success stories of outreach and education, and promoting your enthusiasm concerning weather safety are a few of the key elements that make you a Weather-Ready Nation Ambassador!

As an ambassador, not only can you use the Weather-Ready Nation logo, but it opens doors to a multitude of opportunities, including assisting us with [StormReady](#). Want to learn more about this key initiative? Please apply at:  
<http://www.nws.noaa.gov/com/weatherreadynation/ambassadors.html>

Better yet, reach out to us here in Albany, where we can work together to promote safety and save lives. Email [alb.stormreport@noaa.gov](mailto:alb.stormreport@noaa.gov) or our Warning Coordination Meteorologist, [Steve DiRienzo](#).



The **SKYWARN** Spring Spotter Training sessions have been scheduled! You may sign up at...

<http://cstar.cestm.albany.edu/skywarn/Talks.htm>

## ***THE "ICE MAN" RETIRETH!***

*By Evan L. Heller*

We said a fond farewell to George Maglaras, who retired at the end of last year after 35 years of Federal Service with the National Weather Service. George is best known to Northeastern StormBuster readers over the past several years for his articles on Arctic sea ice extent, which included regular updates throughout the seasons. Having grown up in Astoria, Queens, New York City, George came to Albany in 1988 as a Lead Forecaster after working his first 8 years in the Washington D.C. area.

During his career in Albany, he worked diligently, and often very extended hours, during some of our more classic weather events, such as the Superstorm of 1993 and the Christmas Day Snowstorm of 2002. He was well-known for putting service above self regularly, and was the recipient of a number of NWS awards and honors.

His retirement party was held at the Albany Shaker Ridge Country Club in January, and was packed with co-workers, family, friends, special dedications...and great food. Everyone liked working with George; his presence in the office will be missed by us all as he begins his well-earned new life of retirement. Congratulations, George, and all the best!

### ***SKYWARN™ SPRING SPOTTER TRAINING SESSIONS***



The poster features the National Weather Service logo on the left and the NOAA logo on the right. The main title is "FREE Spring Weather Skywarn™ Spotter Training Sessions" for "east central New York & western New England". A central table lists training dates and locations. To the right of the table is a large graphic of a red eye with a black pupil and the word "SKYWARN™" below it. At the bottom, a text box explains the Skywarn network, and social media links for NWSAlbany are provided.

Mar 29	Poughkeepsie NY - Dutchess County @ 7 pm
Apr 11	Winsted CT - Litchfield County @ 6:30 pm
Apr 12	Townshend VT - Windham County @ 6:30 pm
Apr 13	German Flatts NY - Herkimer County @ 6:30 pm
Apr 14	Pittsfield MA - Berkshire County @ 7 pm
Apr 20	Johnstown NY - Fulton County @ 7 pm
Apr 25	Clifton Park NY - Saratoga County @ 6:30 pm
Apr 27	Bennington VT - Bennington County @ 7 pm
May 3	Clarksville NY - Albany County @ 7:30 pm
May 4	Lake George NY - Warren County @ 1 pm
May 10	Cobleskill NY - Schoharie County @ 7 pm
May 16	Lake Pleasant NY - Hamilton County @ 7 pm
Jun 9	Advanced Session via Webinar @ 7 pm

SKYWARN™ is a nationwide network of volunteer weather spotters who report to and are trained by the National Weather Service. Spotters report many forms of significant and severe weather such as severe thunderstorms, tornadoes, hail, snow, sleet, freezing rain, ice jams & flooding. Spotters act as our eyes and ears helping us provide better services.

www.weather.gov/albany | NWSAlbany | @NWSAlbany | YouTube NWSAlbany

**Register at:**

**<http://cstar.cestm.albany.edu/skywarn/Register.htm>**

## ***WEATHER VS. CLIMATE***

You may hear the terms “weather” and “climate” used frequently. However, just what is the difference, if any, between these two terms? Actually, there is a distinct difference – mainly related to time. *Weather* refers to the state of the atmosphere at a particular location over a relatively short duration of mainly minutes, hours or days. It is described in terms of variables such as temperature, humidity, wind, precipitation and clouds. *Climate*, on the other hand, refers to the *average* weather conditions at a given location over a longer period of time, often months, seasons or years, but sometimes decades or centuries. Climate can be thought of as the typical weather, or the long-term weather pattern, that can be expected for a given location.

We are all quite familiar with the descriptions of weather variables, such as “raining” or “snowing”, “cloudy” or “sunny”, “warm or cold”, etc. Basically, they describe the present state of the atmosphere at a given location and time. The description of climate variables, on the other hand, is a bit more complex. Some of these variables may include how rainy or snowy a given year or season is *relative to a normal year*, or *relative to other years*, or how cold or hot it is *relative to normal*, etc.

Usually, the length of record which determines climate for a given location is 30 years. These climate “normals” are computed once every 10 years, which helps to smooth out year-to-year variations. For example, the normals were calculated from the actual weather data that occurred during the 30-year period from 1981-2010. So, for example, when you hear what the normal high and low temperature is for your location, this information comes from these 30-year averages.

Some aspects of climate include average temperature or precipitation for a given month, average snowfall for a location over a given winter season, departures from long-term averages, and extremes in weather. For instance, for Albany, New York, the average monthly temperature for April is 47.8° F. This temperature is the average of each daily high and low temperature, over the course of the 30 days in April during the 30-consecutive-year period of 1981-2010. The average high temperature for April in Albany is 58.3°, calculated by averaging just the daily high temperature for all of the 30 days in April over the same 30-year period. On April 1, for example, it happens to be 52°. This is calculated by averaging all the daily high temperatures for April 1, from the years 1981-2010. If the actual high temperature for that day was 60 degrees, then the daily high temperature would be 8 degrees above the normal high for April 1.

There are many sources of climate data available on the web. To access it on our NWS Albany webpage at <http://www.weather.gov/aly>, click on the “Climate Icon” (see Figure 1). This will take you to our “climate page”. Then if, for example, you want to check out the normal high and low temperatures for a given day in April, select the “Records, Extremes, Holidays, Frost/Freeze & More” link under the orange Albany, New York (ALB) header as indicated in Figure 2. Finally (see Figure 3), under “Daily/Monthly Normals & Records for Temperature, Precipitation, Snowfall, and Wind”, select “April,” and you will see the climate normals for each day.

Another great source for climate data is NOAA’s National Centers for Environmental Information (NCEI - <http://www.ncdc.noaa.gov/>), formerly known as the National Climatic Data Center (NCDC). Through this site, you can view past storms and weather extremes, and also connect to other NCEI partners such as Climate.Gov.

So, as you can see, there is quite a difference between “weather” and “climate,” with one referring to a more instantaneous state of the atmosphere, and the other referring to a longer-running average of atmospheric conditions for a given location.

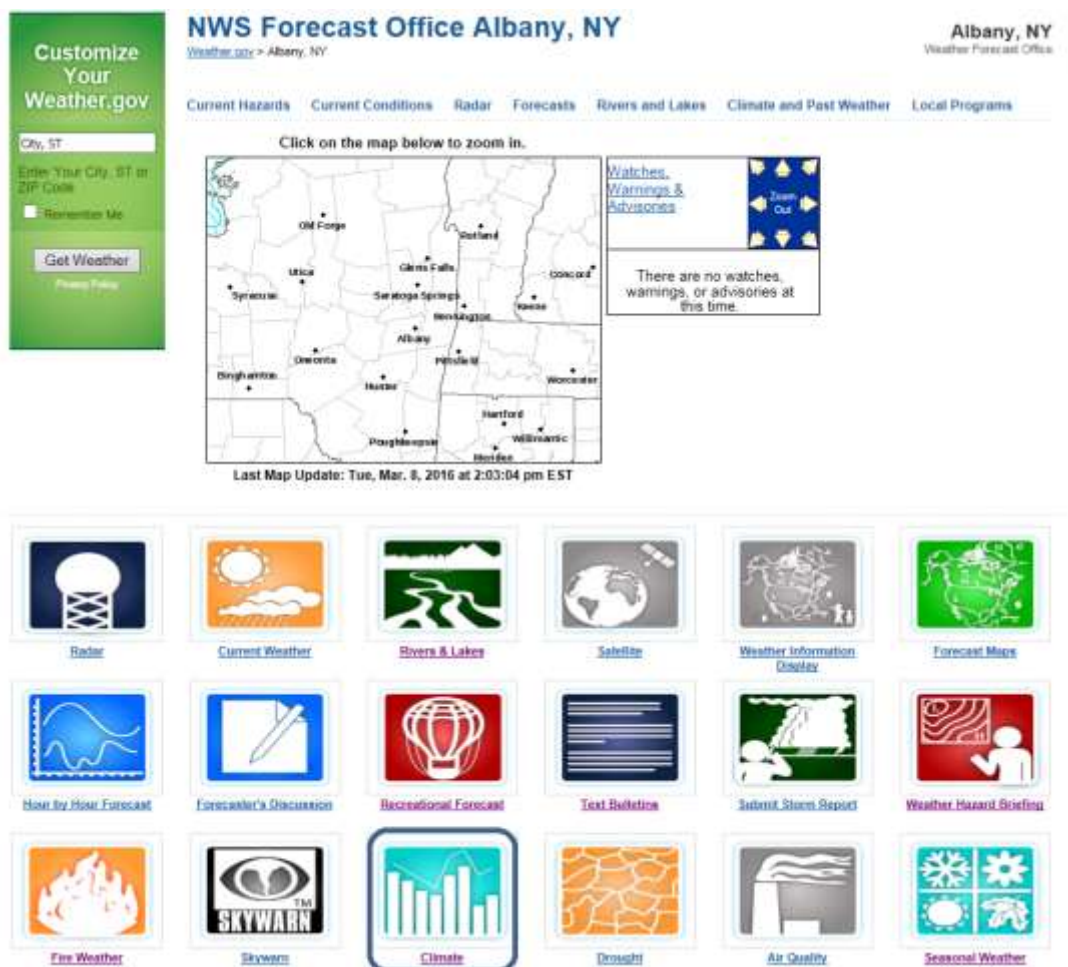


Figure 1. NWS Albany website, Climate icon. Image courtesy of Ingrid Amberger, NWS Albany.

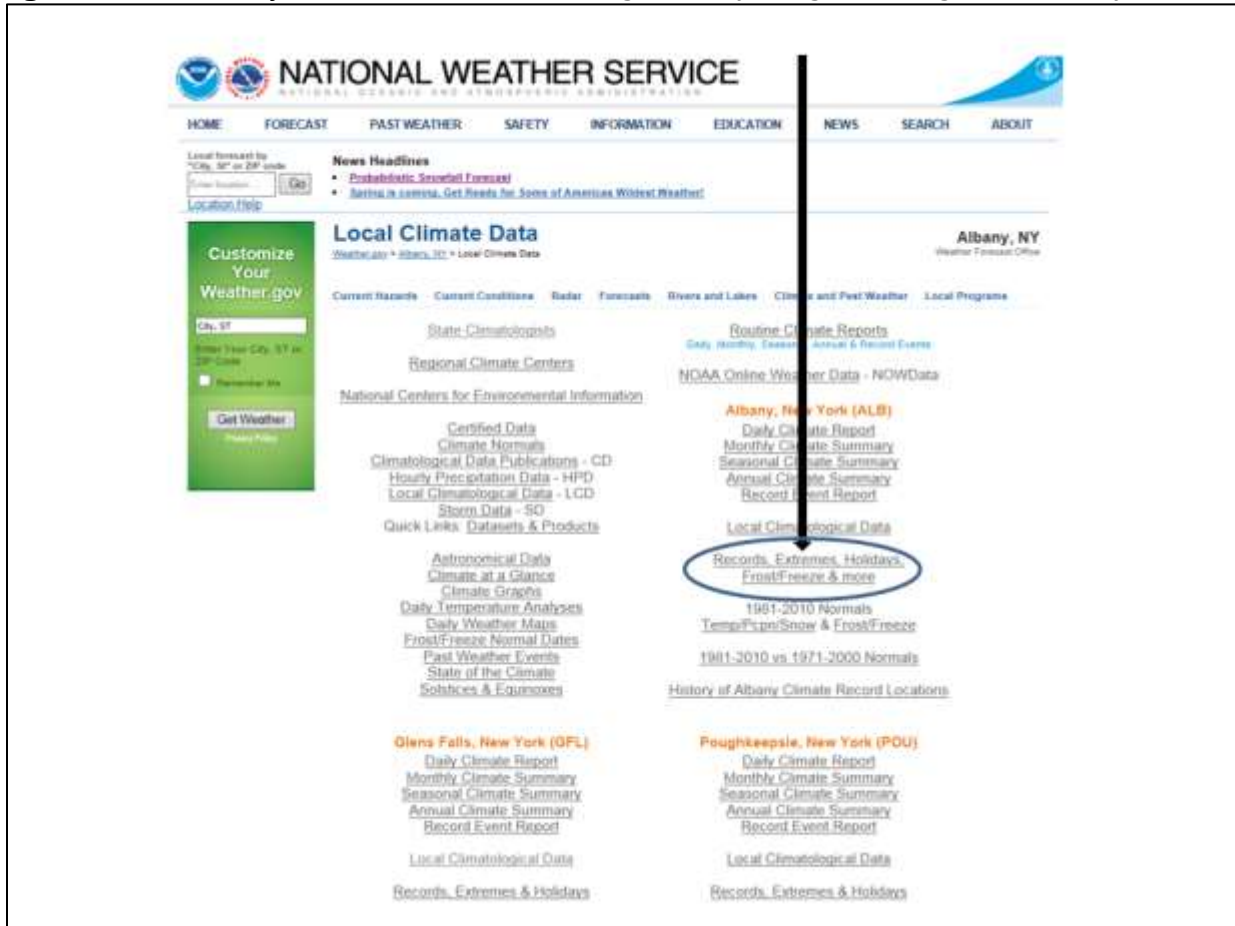


Figure 2. NWS Albany webpage, Local Climate Data page.



The screenshot shows the National Weather Service website for Albany, NY. The main heading is "Albany NY: Records, Extremes, Holidays & more". A vertical arrow points to the "APR" link in the "Daily / Monthly Normals & Records for Temperature, Precipitation, Snowfall & Wind" section. The page includes sections for "Extremes", "Frost-Freeze / Growing Season", and "Precipitation".

Figure 3. NWS Albany Local Climate Data page, monthly information.

### *From the Editor's Desk*

The Vernal Equinox arrived the day of this writing, and this past winter season was one for the record books. It was Albany's warmest winter of the past 142 years, and our least snowiest of the past 131 years...in both cases, all-time records since the beginning of record-keeping. Our opener deals with the statistics, plus we have included some special tables, incorporating data for Glens Falls and Poughkeepsie as well. As we approach severe weather season, lightning safety becomes a concern. Our second article contains some interesting stats and facts about lightning deaths. With our final feature article, see how you can get involved with promoting overall weather safety by becoming a Weather-Ready Nation Ambassador. Plus...The SKYWARN™ training sessions are ready for registration. We've also included a special dedication to one of our frequent Northeastern StormBuster contributors who has decided to call it a career. This season's Weather Essentials differentiates between "weather" and "climate". We hope you enjoy our offerings, and the pleasant and plentiful spring weather on our doorstep.

## ***WCM Words***

*Steve DiRienzo*

*Warning Coordination Meteorologist, NWS Albany*

As the Warning Coordination Meteorologist here at the National Weather Service Office in Albany, New York, part of my responsibility is to ensure that people across our forecast area are prepared for hazardous weather. Along with the return of spring, comes the return of the threat of severe weather. Now is the time to start preparing to face the challenges that severe weather can bring.

Local severe summer weather includes tornadoes, damaging winds and large hail from thunderstorms, and flash flooding from downpours. The National Weather Service Forecast Office in Albany, New York issues, on average, 131 severe thunderstorm warnings, 4 tornado warnings, and 30 flash flood warnings per year. Lightning is another danger from thunderstorms. All thunderstorms contain lightning. More information on lightning safety is included in an article in this issue.

Nationally, on average, severe weather kills 264 people per year, including 110 from tornadoes, 71 from flooding, 52 from wind and 31 from lightning. Don't be a statistic. Understand severe weather terminology. Know how to receive severe weather information and warnings. Have a plan that includes a place to shelter before severe weather arrives.

Severe Weather Awareness Week (SWAW) is scheduled for April 24 through April 30, 2016. During SWAW, we will be issuing daily public information statements to help educate everyone about severe weather terminology, National Weather Service severe weather and flash flood warnings, and severe weather and lightning safety. Please help us spread the word by sharing this information with everyone you know. Be a Weather Ready Nation Ambassador!

Here at the National Weather Service, we strive to be the source of unbiased, reliable and consistent weather information. We're here to answer your weather and water questions 24 hours a day, 7 days a week. If you have concerns, please call us. If you have comments on Northeastern StormBuster, or any of the operations of the National Weather Service, please let me know at [Stephen.Dirienzo@noaa.gov](mailto:Stephen.Dirienzo@noaa.gov).