

NORTHEASTERN STORM BUSTER

Emergency Manager & Storm Spotter Magazine

Fall, 2008 - VOL. 13, NO. 4

Evan L. Heller, Editor

Raymond O'Keefe, Publisher

Ingrid Amberger, Webmaster



IN THIS ISSUE

FEATURES

1 The Warm, Wet And Stormy Summer Of 2008

The summer results, presented for the first time in tables.

/By Evan L. Heller

3 Tropical Update: 2008

An overview of the season thus far.

/By Brian Montgomery

3 WxCoder III Comes To WFO Albany

The new Cooperative Observer data entry system.

/By Timothy E. Scrom

4 NWS Albany Participates In Annual Adirondack Balloon Festival

A recap of this year's event.

/By John S. Quinlan

5 Know Your Winter Weather Terms

Become familiar with common cold weather season terminology.

/By Brian Montgomery

DEPARTMENTS

6 WCM Words

6 From the Editor's Desk

Northeastern StormBuster is a quarterly publication of the National Weather Service Forecast Office at Albany, New York. Original content may be reproduced only when the National Weather Service Forecast Office at Albany, and any applicable authorship, is credited as the source.

THE WARM, WET AND STORMY SUMMER OF 2008

Evan L. Heller

Climatologist, NWS Albany

This past summer will be remembered for the great number of thunderstorm days at Albany, most notably the first two months, June and July. These months were particularly above the norm for thunderstorms. Referring to tables 4a-c below, we can see there were twelve thunderstorm days in June...and this is just in Albany. This is more than double the 4.8 day normal for the month at Albany. July was a little less intense, with nine such days. This is also above normal, which for July, is 5.5 days. Things dampened down further for August. There were only six thunderstorm days, but this was still slightly above the normal 4.6 days for August. Hail accompanied thunderstorms on three days. It hailed two days in a row, on July 26th and 27th. The peak wind gust for the season, 43 mph, occurred on June 10th, and this was probably associated with a thunderstorm.

There was plenty of precipitation to go along with the thunderstorms. Table 1 shows that June, and July in particular, were well above normal for rainfall. Then August quieted down, and wound up being a little below normal. Days with measurable precipitation (Table 2) was also above normal for June and July, while August worked out to be right around normal. In fact, thirteen of the twenty trace or fewer days this month came in a string running from the 16th to the 28th, just one day shy of being able to call it a dry spell. Despite all the rain, there was only one day with record rainfall, July 23rd (table 3b). Table 1 confirms that this was also the wettest day of the season. There were a total of five days in the fall with an inch or more of

rainfall. July 2008 was tied for Albany's wettest July, and it was Albany's 28th wettest month.

Table 1 shows that temperatures were above normal in June and July, and slightly below normal in August. The season averaged 2.0° above normal. Only June proved warm enough to produce any daily high temperature records, with three different types being set on June 10th (Table 3a). July was tied with five other entries for being Albany's 40th warmest month on record, but as far as Julys go, it wasn't amongst the 10 warmest (Table 3b).

There were no seasonal records (Table 3d), although Albany came within an inch of cracking the Top Ten for Precipitation. Summarizing the season, according to Table 1, the average temperature was 70.8°, which is 2.0° above the seasonal normal, and the precipitation totaled 15.40", which was 4.48" above normal.

STATS

	JUNE	JULY	AUGUST	SEASON
				T
Avg. High/Dep. From Norm.	80.5°/+3.0°	83.0°/+0.8°	78.7°/-1.0°	80.7°/+0.9°
Avg. Low/Dep. From Norm.	60.3°/+5.3°	64.0°/+4.0°	58.2°/-0.1°	60.8°/+3.0°
Mean/Dep. From Norm.	70.4°/+4.1°	73.5°/+2.4°	68.5°/-0.5°	70.8°/+2.0
High Daily Mean/date	83.0°/9 th	80.0°/9 th	74.5°/6 th	
Low Daily Mean/date	59.5°/18 th	66.0°/11 th	60.5°/20 th	
Highest reading/date	96°/10 th	91°/18 th & 19 th	85°/18 th	
Lowest reading/date	49°/19 th	56°/11 th & 16 th	47°/20 th	
Lowest Max reading/date	67°/18 th	74°/23 rd	69°/11 th	
Highest Min reading/date	72°/9 th	73°/9 th	66°/6 th	
Ttl. precip./Dep Fm. Norm.	5.45"/+1.71"	6.94"/+3.44"	3.01"/-0.67"	15.40"/+4.48"
Ttl. snowfall/Dep. Fm.Norm.	-/-	-/-	-/-	-/-
Maximum Precip/date	1.81"/6 th	2.49"/23 rd	1.52"/11 th	
Maximum Snowfall/date	-/-	-/-	-/-	

Table 1

NORMALS

	JUNE	JULY	AUGUST	SEASON
High	77.5°	82.2°	79.7°	79.8°
Low	55.0°	60.0°	58.3°	57.8°
Mean	66.3°	71.1°	69.0°	68.8°
Precip	3.74"	3.50"	3.68"	10.92"
Snow	0	0	0	0
PRECIP DAYS				
Days T+	19	17	19	
Days 0.01+	15	13	11	
Days 0.10+	9	12	6	
Days 0.25+	5	7	3	
Days 0.50+	3	4	1	
Days 1"+	2	2	1	
1.00+ value/date	1.81"/6 th	2.49"/23 rd	1.52"/11 th	
1.00+ value/date	1.41/16 th	1.13/13 th	-	
3.5" snow values/date	-	-	-	
6.5" snow values/date	-	-	-	

Table 2

FALL ADVANCED SKYWARN TRAINING

Session information available at:

<http://cstar.cestm.albany.edu:7775/skywarn/Talks.htm>

RECORDS

ELEMENT	JUNE			
	1 st		2 nd	
High/Date/Prev Rec./Yr.	96°/10 th	92°/1974	/	/
Low/Date/Prev Rec./Yr.	/	/	/	/
Lo Max/Date/Prev Rec./Yr.	/	/	/	/
Hi Min/Date/Prev Rec./Yr.	72°/10 th	71°/1984	/	/
Hi Mean/Date/Prev Rec./Yr.	82.5°/10 th	81.0°/2005	/	/
Lo Mean/Date/Prev Rec./Yr.	/	/	/	/
Precipitation/Date/Prev Rec./Yr.	/	/	/	/
Snowfall/Date/Prev Rec./Yr.	/	/	/	/
Top 10 Warmest?				
Top 10 Coolest?				
Top 10 Warm Mean Max?				
Top 10 Cool Mean Max?				
Top 10 Cool Mean Min?				
Top 10 Warm Mean Min?				
Top 10 Precipitation?				
Top 10 Snowfall?				
100 All-Time Hottest?				
100 All Time Coldest?				
100 All-Time Wettest?				
100 All-Time Driest?				

Table 3a

ELEMENT	JULY			
	1 st		2 nd	
High/Date/Prev Rec./Yr.	/	/	/	/
Low/Date/Prev Rec./Yr.	/	/	/	/
Lo Max/Date/Prev Rec./Yr.	/	/	/	/
Hi Min/Date/Prev Rec./Yr.	/	/	/	/
Hi Mean/Date/Prev Rec./Yr.	/	/	/	/
Lo Mean/Date/Prev Rec./Yr.	/	/	/	/
Precipitation/Date/Prev Rec./Yr.	2.49"/23 rd	1.54"/2003	/	/
Snowfall/Date/Prev Rec./Yr.	/	/	/	/
Top 10 Warmest?				
Top 10 Coolest?				
Top 10 Warm Mean Max?				
Top 10 Cool Mean Max?				
Top 10 Cool Mean Min?				
Top 10 Warm Mean Min?				
Top 10 Precipitation?	6.94" (#10 (tie))			
Top 10 Snowfall?				
100 All-Time Hottest?	73.5° (#40 (6-way tie))			
100 All Time Coldest?				
100 All-Time Wettest?	6.94" (#28)			
100 All-Time Driest?				

Table 3b

ELEMENT	AUGUST			
	1 st		2 nd	
High/Date/Prev Rec./Yr.	/	/	/	/
Low/Date/Prev Rec./Yr.	/	/	/	/
Lo Max/Date/Prev Rec./Yr.	/	/	/	/
Hi Min/Date/Prev Rec./Yr.	/	/	/	/
Hi Mean/Date/Prev Rec./Yr.	/	/	/	/
Lo Mean/Date/Prev Rec./Yr.	/	/	/	/
Precipitation/Date/Prev Rec./Yr.	/	/	/	/
Snowfall/Date/Prev Rec./Yr.	/	/	/	/
Top 10 Warmest?				
Top 10 Coolest?				
Top 10 Warm Mean Max?				
Top 10 Cool Mean Max?				
Top 10 Cool Mean Min?				
Top 10 Warm Mean Min?				
Top 10 Precipitation?				
Top 10 Snowfall?				
100 All-Time Hottest?				
100 All Time Coldest?				
100 All-Time Wettest?				
100 All-Time Driest?				

Table 3c

ELEMENT	SEASON
Top 10 Warmest?	
Top 10 Coolest?	
Top 10 Precipitation?	

Table 3d

**MISCELLANEOUS
JUNE**

Avg. wind speed/Dep. Fm Norm.	5.7 mph/-2.0 mph
Peak wind/direction/date	4.3/WNW/10 th
Windiest day avg. value/date	10.4 mph/6 th
Calmmest day avg. value/date	1.7 mph/4 th
# clear days	19
# partly cloudy days	10
# cloudy days	1
Dense fog dates (2)	1 st , 9 th , 22 nd
Thunder dates (3)	5 th , 6 th , 8 th , 9 th , 10 th , 14 th , 16 th , 17 th , 18 th , 22 nd , 23 rd , 29 th
Sleet dates (4)	-
Hail dates (5)	16 th
Freezing rain dates (6)	-

Table 4a

JULY

Avg. wind speed/Dep. Fm Norm.	5.1 mph/-2.0 mph
Peak wind/direction/date	37/WNW/22 nd
Windiest day avg. value/date	11.0 mph/10 th
Calmmest day avg. value/date	1.4 mph/17 th
# clear days	21
# partly cloudy days	9
# cloudy days	1
Dense fog dates (2)	22 nd , 23 rd
Thunder dates (3)	8 th , 18 th , 19 th , 20 th , 22 nd , 23 rd , 26 th , 27 th , 28 th
Sleet dates (4)	-
Hail dates (5)	26 th , 27 th
Freezing rain dates (6)	-

Table 4b

AUGUST

Avg. wind speed/Dep. Fm Norm.	4.7 mph/-1.6 mph
Peak wind/direction/date	29/WNW/6 th & 29/N/19 th & 29/W/25 th
Windiest day avg. value/date	11.2 mph/6 th
Calmmest day avg. value/date	1.1 mph/21 st
# clear days	20
# partly cloudy days	10
# cloudy days	1
Dense fog dates (2)	5 th , 10 th , 11 th , 15 th , 16 th
Thunder dates (3)	2 nd , 3 rd , 7 th , 10 th , 11 th , 12 th
Sleet dates (4)	-
Hail dates (5)	-
Freezing rain dates (6)	-

Table 4c

TROPICAL UPDATE: 2008

*Brian Montgomery,
Senior Meteorologist, NWS Albany*

This year's tropical season has been active, with the greatest activity clustered primarily around the months of August and September. The peak of the Atlantic hurricane season is around September 10th. Thus far, through September 2008, we have had 6 hurricanes, and 6 other tropical storms which failed to become hurricanes. Seven of these tropical systems have made landfall in the United States, with Hanna

directly impacting eastern New York and adjacent western New England. For a review of tropical cyclones in the Atlantic basin through September 2008, please visit the National Hurricane Center web page at: <http://www.nhc.noaa.gov/archive/2008/tws/index.shtml>.

NOAA's Historical Hurricane Tracks web site was recently updated! This service gives users a quick picture of the coastal areas and inland locations with the greatest frequency of hurricanes and tropical storms — and this historical “snapshot” can help community members and local emergency managers develop better plans for storm preparation and recovery. It can be found at:

http://www.noaanews.noaa.gov/stories2008/20080908_hurricanetracks.html.

For those who enjoy utilizing the Google Earth application, tracks of previous tropical systems are available for review. View by year or decade! The file is located at:

<http://www.srh.noaa.gov/gis/kml/hurricanetrack/Atlantic%20Hurricanes.kmz>.

WxCoder III COMES TO WFO ALBANY

*Timothy E. Scrom
Observing Program Leader, NWS Albany*

Over the summer months, the Data Acquisition staff was busy preparing for the transition to Weather Coder 3 (WxCoder III). WxCoder III will replace all existing systems used by the National Weather Service to collect Cooperative Weather Observer data. WxCoder III will be the sole system used for collecting data from: NWS-supported Cooperative Observer networks; CoCoRaHS observers; unofficial Co-op observers, and; Marine Observer networks.

WxCoder III is a computer server which uses a shared database that collects input using either the internet or telephone. Observers can go to a special website and enter their daily observations into a computer, PDA or web-enabled cell phone. If an observer cannot access the internet, he or she can call a special 800 number and speak their observation into the phone, much like many automated phone menu systems, where you speak your credit card number or other information.

WxCoder III offers the observer increased flexibility of data entry. It's faster, provides improved error checking, and is more environmentally friendly,

eliminating the use of paper records and mailed monthly envelopes.

Typically, an observer sending in his or her data at 7 a.m. would start their computer, go outside and take the morning readings, come back in, and have a cup of coffee or tea while entering their data via their assigned website. Once the data is entered, the observer clicks "OK", and the computer starts to check the data against historical records from the observer's site. Within seconds, the computer either confirms the entered data is valid, or highlights the questionable data and asks the observer if the information is correct. The observer then has the option of either verifying the data is correct, or changing it. Then, the data is instantly sent to the WxCoder III computer and forwarded to the appropriate office.

Within 2 to 3 seconds after the observer hits the enter button, his or her data will show up on our computer screens. Then, within a minute or two, it will be plotted on a computer map of eastern New York and adjacent western New England, along with other reports that have already come in. From there, the data is evaluated by our staff of forecasters and hydrologists, where it eventually becomes part of the day's hydro-meteorological forecast packages.

Later on, around the 2nd or 3rd of the following month, our staff goes back into WxCoder III and retrieves an entire month's worth of data. Many observers know these forms as the B-91's. Once all the forms have been collected, they are re-checked, and packaged for mailing to the National Climatic Data Center (NCDC), where they are then used for: recreating the weather; supplying data for litigation, and; providing research data for climate change studies. They then become part of the national archive of weather data, right along with observations from people like Ben Franklin and Thomas Jefferson.

And, it's all done in 60 days or less, thanks to WxCoder III.

NWS ALBANY PARTICIPATES IN ANNUAL ADIRONDACK BALLOON FESTIVAL

John S. Quinlan
Senior Meteorologist, NWS Albany

For the 4th consecutive year, the National Weather Service in Albany operated a booth at the annual Adirondack Balloon Festival, held at Floyd D. Bennett-Warren County Airport, near the city of Glens Falls in the Town of Queensbury, New York. The weather for this 36th annual event was nearly perfect, with clear and calm conditions for the morning launch, and filtered sun and diminishing winds for the late afternoon launch.

Eighty-two balloons were launched during the morning run, and an estimated 70 balloons went up in the late afternoon. According to the *Glens Falls Post Star*, the morning event drew a near-record number of spectators for a morning launch, while the late afternoon run brought in even more people. Spectators who intended to arrive after 6 a.m. found themselves delayed in traffic for up to two hours, while many who intended to arrive for the 6 p.m. launch were turned away when the airport became full.

Event organizers estimated about 50,000 people showed up to watch the Saturday afternoon lift-off. The winds were calm during the morning launch, with south winds increasing from the late morning into the afternoon. As the winds increased throughout the late morning, numerous kite flyers took advantage of the ideal conditions, which persisted until late afternoon. The fastest 2-minute wind for the day was 13 mph from the south, which occurred at 3:33 p.m., while the peak wind gust for the day was 15 mph, which occurred at 5:09 p.m. Fortunately, the winds diminished just in time for the late afternoon launch, as the south winds decreased to 7 mph at 6 p.m., and 3 mph at 7 p.m.

The booth was staffed by myself, with assistance from NWS retiree Harry Timmis and New York State CoCoRaHS Coordinator Kathy Vreeland. A total of 506 people stopped by the booth to ask weather-related questions, and to pick up pamphlets and charts dealing with winter weather, flooding, hurricanes, thunderstorms, tornadoes, lightning and clouds. The cloud charts were the most popular item with visitors. A NOAA All-Hazards Weather Radio and Clear-Vu rain gage were also on display. Quite a few people inquired about becoming weather spotters, and were provided with information about CoCoRaHS. Our thanks go out

FALL ADVANCED SKYWARN

Sessions now available on-line

Go to:

<http://cstar.cestm.albany.edu:7775/skywarn/Talks.htm>

to all those who stopped by our booth, and we look forward to the 37th Annual Adirondack Balloon Festival. Pictures of the festival can be found on their website at:

<http://www.adirondackballoonfest.org/media.asp>.

KNOW YOUR WINTER WEATHER TERMS

Brian Montgomery
Senior Meteorologist, NWS Albany

The National Weather Service in Albany urges residents to keep abreast of local forecasts and warnings, and to familiarize themselves with the following key winter weather terminologies:

Winter Storm Warning: Issued when hazardous winter weather in the form of heavy snow, heavy freezing rain or heavy sleet is imminent or occurring. Winter Storm Warnings are usually issued 12 to 24 hours before the event is expected to begin.

Winter Storm Watch: Alerts the public to the possibility of a blizzard, heavy snow, heavy freezing rain or heavy sleet. Winter Storm Watches are usually issued 12 to 48 hours prior to the onset of a Winter Storm.

Hazardous Weather Outlook: Issued prior to hazardous winter weather (among other hazards). The Outlook is provided when NWS meteorologists believe winter storm conditions are possible. They are usually issued 3 to 5 days in advance of a winter storm.

Blizzard Warning: Issued for sustained or gusty winds of 35 mph or greater, and falling or blowing snow reducing visibilities to at or below ¼ mile, the conditions expected to persist for at least three hours.

Lake Effect Snow Warning: Issued when heavy lake-effect snow is imminent or occurring.

Lake Effect Snow Advisory: Issued when accumulation of lake-effect snow will cause significant inconvenience.

Wind Chill Warning: Issued when wind chill temperatures are expected to be hazardous to life within several minutes of exposure.

Wind Chill Advisory: Issued when wind chill temperatures are expected to be a significant inconvenience with prolonged exposure, and, if caution is not exercised, could have harmful or damaging effects.

Winter Weather Advisories: Issued for accumulations of snow, freezing rain, freezing drizzle or sleet, which will cause significant inconveniences and, if caution is not exercised, could lead to life-threatening situations.

Dense Fog Advisory: Issued when fog is expected to reduce visibilities to ¼ mile or less over a widespread area.

Snow Flurries: Light snow falling for short durations. No accumulation, or a light dusting is all that is expected.

Snow Showers: Snow falling at varying intensities for brief periods of time. Some accumulation is possible.

Snow Squalls: Brief, intense snow showers accompanied by strong, gusty winds. Accumulation may be significant. Snow squalls are common in the Great Lakes region of the U.S.

Blowing Snow: Wind-driven snow that reduces visibilities, and causes significant drifting. It may be from either snow that is falling, or loose snow on the ground, or both of these simultaneously.

Sleet: Rain drops that freeze into ice pellets before reaching the ground. Sleet usually bounces when hitting a surface, and does not stick to objects. However, it can accumulate like snow, posing a hazard to motorists.

Ice Storm Warning: Issued when rain falls onto a surface with a temperature below freezing, causing it to freeze. Surfaces such as trees, cars, and roads are most prone to significant ice accumulation. Untreated surfaces become extremely dangerous to travel upon, with the added hazard of falling trees and branches due to the weight of ice accretion.

Freezing Rain and Freezing Drizzle: Rain or drizzle that falls onto a surface with a temperature below freezing. This causes it to freeze to surfaces such as trees, cars and roads, forming a coating, or glaze, of ice.

Even small accretions of ice can pose a significant hazard.

WCM Words

Raymond G. O'Keefe

NWS Albany Warning Coordination Meteorologist

In this issue, Evan Heller takes a look back at the summer of '08 here in the northeast.

Brian Montgomery reviews the 2008 tropical season to date. As I write this, the "Mth" storm of the season – Tropical Storm Marco – is moving inland over Mexico.

With the first freeze of the autumn season here, a reminder that winter is not far behind. Brian Montgomery again offers a primer on winter weather terms.

One of the important – and fun – jobs we have here at the National Weather Service is the opportunity to get out and meet you at various venues. One such event is the Adirondack Balloon Festival. John Quinlan documents our day at the Festival.

Finally, Tim Scrom reviews automation tools for the Cooperative Observer program. Data from this network provides a foundation for climate studies across the United States.

From the Editor's Desk

Summer is finally over, or is it, given the thunderstorms we had on October 1st? Still, you can sense that fall is well underway, with the noticeably cooler temperatures. Speaking of fall, it's that time when we again offer our free advanced SKYWARN training. For more information on who may attend these sessions, and for a complete listing, please visit <http://cstar.cestm.albany.edu:7775/skywarn/Talks.htm>

We have five offerings in this issue. The opener is a recap of our wild summer climatology. For the first time, we present the data in table form, focusing on some of the highlights contained within. Then we have an update on our equally wild tropical season, with links to some neat stuff. After that, we introduce our Cooperative Observers to WxCoder III. Next up is a summary of our involvement in this year's Adirondack

Balloon Festival. And finally, we offer some helpful winter weather terminology you should be familiar with.

Autumn will be a busy one this year, with the fall color change, followed by Halloween, the presidential election, Thanksgiving, and holiday shopping, and who knows what weather surprises along the way. It'll sure seem to go by rather quickly. Before you know it, you'll be ready for our winter issue. Enjoy!



Mt. Katahdin, Maine