NORTHEASTERN STORM BUSTER

Emergency Manager & Storm Spotter Magazine

Summer, 2012 *- VOL. 17, NO. 3*
Evan L. Heller, Editor
Steve DiRienzo, WCM/Contributor
Ingrid Amberger, Webmistress

FEATURES

DEPARTMENTS

SPRING 2012: WARMEST SINCE BEFORE THE CIVIL WAR

Evan L. Heller
Climatologist, NWS Albany

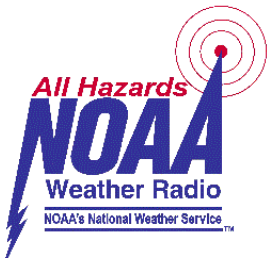
If you go back only to when National Weather Service records began for Albany in 1874, then we just got through our warmest spring on record. But since we have records going even further back, we know more specifically that this was the warmest spring since before the start of the U.S. Civil War. The mean temperature was 52.4°, which was 5.4° above normal (Table 1). The mean of the warmest season on record was only a tenth of a degree higher, and occurred in 1859 (Table 3d).

It all began in March when Albany, New York registered a mean temperature for the month of 45.9°, an astounding 10.9° above normal (Table 1). This made it the warmest March ever recorded, taking into account continuous data dating all the way back to 1820 (Table 3a)! This past March was also the first time since January of 1932 that we recorded a warmest month. A special thanks goes out to one of our meteorologists, Hugh Johnson, for pointing this out. In fact, all but two of our warmest months are from 1900 or before. Albany's other post-1900 warmest month is from November, and it was in 1931. With the record warmth of March came an astonishing number of daily temperature records. These totaled 19: 7 maximums; 5 high minimums, and; 7 high means (Table 3a). The most profound of these daily records was a high minimum from the 21st, of 56°, which eclipsed a 99-year-old record by a full 10 degrees. The warmest reading recorded for the month was 81°, on the 22nd (Table 1), while a below normal 13° was recorded as the month's low reading, on the 6th. The last measureable snowfall, 0.3", was recorded on the 9th. But a far greater measureable snowfall of 4.8" occurred on the 1st (Table 2b). The last flurry fell on the 31st. Other records for March (Table 3a) included: #1 Warmest Mean Minimum

March (for the first time since 1903), and; #2 Warmest Mean Maximum March…plus there were two different wind records.

The month of April was much closer to normal for temperatures. The 48.1° mean was a mere 0.3° above normal. Even so, a daily record was set for the month's warmest maximum temperature of 91° on the 16th, as well as for the high mean for the date. Both replaced records from just 10 years prior (Table 3b). There were also 2 daily maximum wind speed records set. The 16th was indeed an outlier with its 91° high. No other day during the month of April reached even 80°, and April 16th became the earliest calendar date Albany had ever reached 90 degrees or above (Thanks again, Hugh!). Previously, the earliest occurrence had been the very next calendar day…having been set in 2002. The season's last freeze occurred April 30th…with a low of 29°. There was more rain in April than in March in Albany, being just below the normal for the period. The first daily inch or more of rain for the year occurred on the 21st, and two more inch-plus days followed in May, as wetness further increased (Table 2b). April was also very tranquil in regards to both severe and wintry weather. There was no wintry precipitation or dense fog of any kind recorded at Albany International Airport during the entire month, and there were also no thunderstorms (Table 4b).

May rounded out the season with a return to above-normal temperatures, but only about half above normal as March. The 5.8° above normal monthly mean low temperature contributed to the only temperature record for the month (Table 1), as May came in 7th for Top 10 Warmest Mean Minimum March (Table 3c). Another 91° high was achieved on the 29th, a day with severe weather in Albany. The first thunderstorm of the season had occurred on the 4th (Table 4c). May 2012 was wet (Table 2a), and the 6.03" total placed it at #122 for All-Time Wettest Months in Albany. But with March being as dry as it was, Spring 2012's 10.54" total just could not crack Albany's Top 10 Wettest Springs list.



STATS

	MAR	APR	MAY	SEASON
Avg. High/Dep. From Norm.	55.7°/+11.3°	59.6°/+1.3°	73.4°/+4.0°	62.9°/+5.5°
Avg. Low/Dep. From Norm.	36.0°/+10.3°	36.5°/-0.8°	52.9°/+5.8°	41.8°/+5.1°
Mean/ Dep. From Norm.	45.9°/+10.9°	48.1°/+0.3°	63.1°/+4.8°	52.4°/+5.4°
High Daily Mean/date	66.0°/21st	71.5°/16th	79.0°/29th	
Low Daily Mean/date	22.5°/5th	40.5°/5th	51.0°/1st	
Highest reading/date	81°/22nd	91°/16th	91°/29th	
Lowest reading/date	13°/6th	29°/30th	37°/12th	
Lowest Max reading/date	28°/5th	44°/22nd	56°/1st	
Highest Min reading/date	56°/21st & 23rd	54°/15th	67°/29th	
Ttl. Precip./Dep. Fm. Norm.	1.54"/-1.67"	2.97"/-0.20"	6.03"/+2.42"	10.54"/+0.55"
Ttl. Snowfall/Dep. Fm.Norm.	5.1"/-5.1"	0.0"/-2.3"	0.0"/-0.1"	5.1"/-7.5"
Maximum Precip./date	0.77"/1st	1.17"/21st	1.40"/29th	
Maximum Snowfall/date	4.8"/1st	-	-	

Table 1

NORMALS, OBSERVED DAYS & DATES

NORMALS & OBS. DAYS	MAR	APR	MAY	SEASON
NORMALS				
High	44.4°	58.3°	69.4°	57.4°
Low	25.7°	37.3°	47.1°	36.7°
Mean	35.0°	47.8°	58.3°	47.0°
Precipitation	3.21"	3.17"	3.61"	9.99"
Snow	10.2"	2.3"	0.1"	12.6"
OBS TEMP. DAYS				
High 90° or above	0	1	1	2/92
Low 70° or above	0	0	0	0/92
High 32° or below	1	0	0	1/92
Low 32° or below	12	11	0	23/92
Low 0° or below	0	0	0	0/92
OBS. PRECIP DAYS				
Days T+	20	15	20	55/92/60%
Days 0.01"+	11	7	16	34/92/37%
Days 0.10"+	4	4	12	20/92/22%
Days 0.25"+	2	3	6	11/92/12%
Days 0.50"+	1	3	4	8/92/9%
Days 1.00"+	0	1	2	3/92/3%

Table 2a

NOTABLE PRECIP & SNOW DATES	MAR	APR	MAY
90° Event Value/Date | Remarks		91°/16th	91°/29th
1.00"+ value/date	-	1.17"/21st	1.39"/8th
1.00"+ value/date	-	-	1.40/29th
3.5"+ snow value/date	4.8"/1st	-	-

Table 2b

RECORDS

ELEMENT	MARCH	
Daily Maximum Temperature/Date | Previous Record/Year	68°/8th	66°/2000
Daily Maximum Temperature/Date | Previous Record/Year	69°/12th	67°/1890
Daily Maximum Temperature/Date | Previous Record/Year	70°/13th	70°/1946
Daily Maximum Temperature/Date | Previous Record/Year	69°/18th	65°/1966
Daily Maximum Temperature/Date | Previous Record/Year	78°/19th	75°/1894
Daily Maximum Temperature/Date | Previous Record/Year	78°/20th	74°/1903
Daily Maximum Temperature/Date | Previous Record/Year	81°/22nd	80°/1938
Daily High Minimum Temperature/Date | Previous Record/Year	48°/19th	48°/1983
Daily High Minimum Temperature/Date | Previous Record/Year	51°/20th	49°/1903
Daily High Minimum Temperature/Date | Previous Record/Year	56°/21st	46°/1913
Daily High Minimum Temperature/Date | Previous Record/Year	49°/22nd	44°/1949
Daily High Minimum Temperature/Date | Previous Record/Year	56°/23rd	53°/1938
Daily High Mean Temperature/Date | Previous Record/Year	53.0°/8th	50.5°/1942
Daily High Mean Temperature/Date | Previous Record/Year	57.5°/13th	53.5°/1946
Daily High Mean Temperature/Date | Previous Record/Year	57.0°/18th	55.5°/1927
Daily High Mean Temperature/Date | Previous Record/Year	63.0°/19th	61.5°/1894
Daily High Mean Temperature/Date | Previous Record/Year	64.5°/20th	61.5°/1903
Daily High Mean Temperature/Date | Previous Record/Year	66.0°/21st	58.5°/1921
Daily High Mean Temperature/Date | Previous Record/Year	65.0°/22nd	58.5°/1938
Top Ten Warmest Marches Value/Rank | Remarks	45.9°/#1	Warmest since 1859
Top Ten Warmest Mean Maximum Marches Value/Rank | Rmks.	55.7°/#2	-
Top Ten Warmest Mean Minimum Marches Value/Rank | Rmks.	36.0°/#1	Warmest since 1903
Daily Maximum Wind Speed/Direction/Date/ | Prev. Record/Year	46 mph/8th	45 mph/2005
200 All-Time Windiest Dates Average Value/Date | Rank/Rmks.	20.0 mph/26th	#136/10-way tie

Table 3a

ELEMENT	APRIL	
Daily Maximum Temperature/Date | Previous Record/Year	91°/16th	89°/2002
Daily High Mean Temperature/Date | Previous Record/Year	71.5°/16th	71.0°/2002
Daily Maximum Wind Speed/Direction/Date/ | Prev. Record/Year	45 mph/9th	43 mph/2000
Daily Maximum Wind Speed/Direction/Date/ | Prev. Record/Year	43 mph/27th	39 mph/1996

Table 3b

ELEMENT	MAY	
Top Ten Warmest Mean Minimum Marches Value/Date | Remarks	52.9°/#7	-
200 All-Time Wettest Months Average Value/Rank | Remarks	6.03"/#122	-
Daily Maximum Wind Speed/Direction/Date | Prev. Record/Year	45 mph/16th	44 mph/1997

Table 3c

ELEMENT	SPRING	
Top Ten Warmest Springs Average Value/Rank | Remarks	52.4° /#2	Warmest spring since 1859

Table 3d

MISCELLANEOUS

MARCH

Avg. wind speed/Dep. Fm. Norm.	8.0 mph/-1.7 mph
Peak wind/direction/date	46 mph/WNW/8th
Windiest day avg. value/date	20.0 mph/26th
Calmest day avg. value/date	1.7 mph/1st
# Clear days	6
# Partly Cloudy days	18
# Cloudy days	7
Dense fog dates (code 2)	1st
Thunder dates (code 3)	None
Sleet dates (code 4)	1st, 2nd & 3rd
Hail dates (code 5)	None
Freezing rain dates (code 6)	1st

Table 4a

APRIL

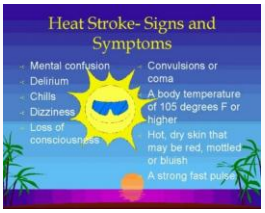
Avg. wind speed/Dep. Fm Norm.	9.5 mph/+0.3 mph
Peak wind/direction/date	45 mph/W/9th
Windiest day avg. value/date	18.5 mph/27th
Calmest day avg. value/date	3.3 mph/1st
# Clear days	3
# Partly Cloudy days	21
# Cloudy days	6
Dense fog dates (code 2)	None
Thunder dates (code 3)	None
Sleet dates (code 4)	None
Hail dates (code 5)	None
Freezing rain dates (code 6)	None

Table 4b

MAY

Avg. wind speed/Dep. Fm Norm.	6.3 mph/-1.7 mph
Peak wind/direction/date	45 mph/NW/16th
Windiest day avg. value/date	14.0 mph/10th
Calmest day avg. value/date	1.3 mph/18th
# Clear days	5
# Partly Cloudy days	15
# Cloudy days	11
Dense fog dates (code 2)	None
Thunder dates (code 3)	4th, 16th, 24th, 29th & 30th
Sleet dates (code 4)	None
Hail dates (code 5)	16th
Freezing rain dates (code 6)	None

Table 4c□



Courtesy of NOAA

THE NOAA/NWS 2012 HURRICANE OUTLOOK

Kevin S. Lipton
Meteorologist, NWS Albany

On May 24, 2012, the NOAA/National Weather Service's Climate Prediction Center issued its 2012 hurricane outlook for the Atlantic Basin, which includes the Caribbean Sea and Gulf of Mexico. They are expecting a "near normal" season. A "normal" hurricane season in the Atlantic Basin, based on normals data from the period 1981-2010, spawns 12 named storms (6 tropical storms and 6 hurricanes), with 3 of the hurricanes potentially attaining "major" status, i.e., those reaching Category 3 or higher on the Saffir-Simpson Scale of hurricane intensity. The Climate Prediction Center's forecast is for the number of named storms for 2012 to range from 9 to 15, with the expectation that 4 to 8 of them will reach "hurricane" status, and that 1 to 3 will reach "major hurricane" status. For reference, the 2011 Atlantic hurricane season experienced an above-normal season, with 19 named storms, 7 of them hurricanes, of which 4 had reached "major" status.

The premise for this year's forecast is heavily weighted on three main theories. The first involves the expectation of favorable upper-level winds across the eastern tropical Atlantic Ocean in combination with an active African monsoon season. Many of the tropical cyclones which develop over the Atlantic Ocean begin as atmospheric disturbances which form into clusters of thunderstorms across northern Africa – as part of the African monsoon. So – if the African monsoon season is unusually active, and winds across the eastern tropical Atlantic Ocean are favorable – there will be more opportunity for these clusters of thunderstorms to organize into tropical cyclones. This enhanced African monsoon activity, which is expected to occur this season, is believed to be part of a longer-term active cycle which started back in 1995, and has been associated with more active Atlantic hurricane seasons.

The second main factor considered for this year's forecast, which would favor a near- to slightly-below-normal hurricane season, is the presence of near- to slightly-below-normal sea- surface temperatures across the tropical Atlantic Ocean – from off the west coast of Africa westward to out over the Caribbean Sea. Tropical cyclones need warm ocean temperatures to gather strength – normally water temperatures above 80 degrees Fahrenheit. The initial atmospheric disturbances

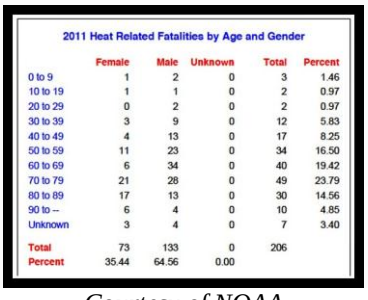
that can eventually transform into tropical cyclones pass across the tropical Atlantic Ocean on their long journey toward the western Atlantic Ocean. If water temperatures remain warmer than normal (above 80º F), these initial disturbances can organize and develop a circulation, potentially reaching tropical storm, or even hurricane, strength. Thus far in 2012, sea-surface temperatures across this region have been averaging near to slightly cooler than normal, unlike in 2011 when they were warmer than normal. Assuming these tropical Atlantic water temperatures remain near to slightly below normal through the season, then either typical or slightly-reduced tropical cyclone development across the Atlantic Basin would be expected to occur, rather than there being a more active season.

The third main factor considered in this year's forecast, which is the most uncertain factor at this time, is the possibility of warmer than normal sea-surface temperatures developing across the eastern and central tropical Pacific Ocean during the height of the hurricane season – August and September. What do Pacific Ocean water temperatures have to do with hurricanes in the Atlantic Ocean? Well, typical conditions across the tropical Pacific Ocean involve warmer water across the far western tropical Pacific Ocean, along with associated thunderstorm development, while the waters of the central and eastern tropical Pacific normally remain relatively cool, with limited thunderstorm activity. The opposite is true when an El Niño is present – the warmer waters and associated thunderstorm development then shift much further eastward in the Pacific Ocean. When this occurs, winds within the upper levels of the atmosphere strengthen across the eastern tropical Pacific Ocean, and even stretch across the tropical Atlantic Ocean. These strong winds tend to rip apart thunderstorms across the Atlantic Ocean, limiting the potential for them to organize into tropical cyclones. Therefore, when an El Niño is present, as in 2009, tropical cyclone activity is usually less than normal in the Atlantic Basin. On the other hand, when a La Niña is present, thunderstorms across the eastern Pacific Ocean are even less than normal as upper-level winds become weaker than normal from the tropical Pacific Ocean into the tropical Atlantic Ocean, reducing the potential for thunderstorms to become ripped apart. This creates conditions more favorable for thunderstorms to organize into tropical cyclones, which can lead to an active Atlantic hurricane season – such as in 2011. For the 2012 Atlantic hurricane season, the expectation is for the near-normal sea-surface temperatures to gradually warm during August and September as a weak El Niño develops. Assuming this occurs, the upper atmospheric conditions may become less favorable for tropical cyclone development in the Atlantic Basin during the brunt of the hurricane season, potentially reducing the chance for an active season this year. However, if the sea-surface temperatures across the central and eastern tropical Pacific Ocean fail to warm, or even cool to less than normal, then this could create more favorable conditions in the upper atmosphere across the tropical Atlantic Ocean, resulting in greater tropical cyclone activity.

It should be noted that in May of 2011, the NOAA/NWS Climate Prediction Center forecasted an "active" season for the Atlantic Basin, with a prediction of 12-18 named storms, 6-10 reaching "hurricane" strength, with 3-6 of these attaining "major hurricane" status. As noted above, the actual result for 2011 was 19 named storms, 7 of them hurricanes, with 4 reaching "major" status – close to the forecasted ranges.

So – the official forecast for the 2012 Atlantic hurricane season issued by the NOAA/NWS Climate Prediction Center favors a "near-normal" season, based on these three main factors. Of course, any changes to these factors could easily alter this year's outcome. And this forecast does not provide any clues as to *where* storms may strike – just whether there might be more or less than the normal number forming in the Atlantic Basin. The Climate Prediction Center will issue an updated forecast in August 2012, taking into account these and other factors, and will adjust the forecast accordingly.

	2012 Forecast	**Normal Season (1981-2010 Avg.)**
Tropical Storms	9-15	12
Hurricanes	4-8	6
Major Hurricanes	1-3	3



2011 Heat Related Fatalities by Age and Gender

	Female	Male	Unknown	Total	Percent
0 to 9	1	2	0	3	1.46
10 to 19	1	1	0	2	0.97
20 to 29	0	2	0	2	0.97
30 to 39	3	9	0	12	5.83
40 to 49	4	13	0	17	8.25
50 to 59	11	23	0	34	16.50
60 to 69	6	34	0	40	19.42
70 to 79	21	28	0	49	23.79
80 to 89	17	13	0	30	14.56
90 to --	6	4	0	10	4.85
Unknown	3	4	0	7	3.40
Total	73	133	0	206	
Percent	35.44	64.56	0.00		

Courtesy of NOAA

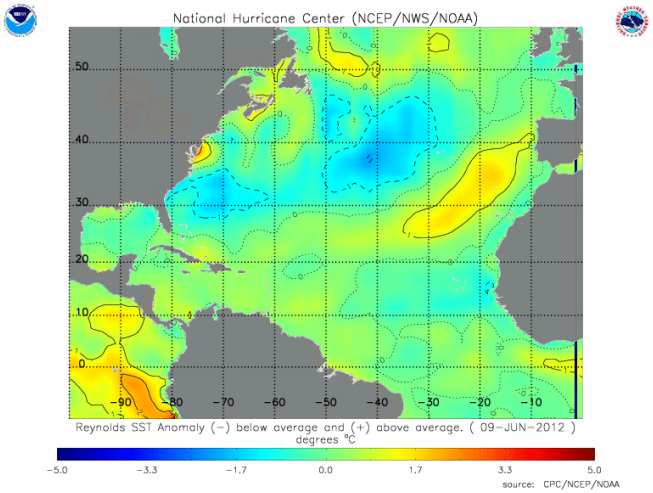


Figure 1. Anomalies of sea-surface temperatures in the Atlantic Ocean, as depicted on June 9, 2012. The green and, more so, blue colors denote cooler sea-surface temperatures compared to normal, which could potentially reduce tropical cyclone development across the tropical Atlantic Ocean. Image from the NOAA/NWS Climate Prediction Center/National Hurricane Center.□

SUMMER SAFETY TIPS FOR PETS

Joseph Villani
Meteorologist, NWS Albany

During the warm summer months - most of us spend a substantial amount of time outdoors. We are all prone to various hazards such as sun exposure and heat exhaustion. While people certainly need to adhere to summer safety, we must be aware that our pets also are vulnerable to certain dangers. Even the healthiest pets can suffer from dehydration, heat stroke and sunburn if overexposed. Heat stroke can be fatal if not treated promptly. Here are some safety tips from the ASPCA to help prevent your pet from overheating so that you and your pets can have an enjoyable and safe summer.

Pets can get dehydrated quickly, so give them plenty of fresh, clean water when it's hot outdoors. Make sure your pets have a shady place to go to get out of the sun. Be careful to not over-exercise them, and keep them indoors when it's extremely hot. Symptoms of over-heating in pets include excessive panting or difficulty breathing, increased heart and respiratory rate, drooling, mild weakness, stupor, or even collapse. They can also experience seizures, bloody diarrhea and vomiting, as well as elevated body temperatures to over 104 degrees. Animals with flat faces, like Pugs and Persian cats, are more susceptible to heat stroke since they cannot pant as effectively. These pets should be kept cool in air-conditioned rooms as much as possible. If you suspect your pet is suffering from heat stroke, get help from your veterinarian immediately.

Never leave your animals alone in a parked vehicle, not even for a brief moment. On a hot day, a parked car can become like a hot furnace in a very short amount of time. This can occur even with the windows open, and could lead to fatal heat stroke. Leaving pets unattended in cars in extreme weather is also illegal in several states. When the temperature is very high, don't let your dog linger on hot asphalt. Being so close to the ground, your dog's body can heat up quickly, and sensitive paw pads can burn. Keep walks during these times to a minimum.

Giving your dog a lightweight summer haircut can help prevent overheating. Shave down to a one-inch length, never to the skin, so that your dog still has some protection from the sun. As far as skin care, be sure that any sunscreen or insect repellent product you use on your pets is labeled specifically for use on animals.

A visit to the veterinarian for a late spring or early summer check-up is a must. Make sure your pets get tested for heartworm if they aren't on a year-round preventive medication. If you plan to have your pet outdoors a lot, ask your veterinarian to recommend a safe flea and tick control program.

Hopefully these simple summer tips will help you and your pets have an enjoyable and safe summer. I recently took my Australian Cattle Dog on his first hike in the Adirondacks up Hadley Mountain in northwest Saratoga County. I made sure he had his tick and flea prevention well beforehand, and gave him plenty of

water during the hike. I have found that having a portable water bowl for a dog is very useful, especially to bring on a hike. We had a safe and fun day!□

WIRELESS EMERGENCY ALERTS

Brian Montgomery
Senior Meteorologist, NWS Albany

Imagine this: You're driving down the interstate enjoying your favorite tunes when your cell phone suddenly makes a strange noise. To investigate, you safely pull over to the side of the road and check the screen. Good thing you did…your phone just alerted you to a tornado just a few miles away in the county you're about to drive into. Sound plausible? It is! This year, America's wireless industry is rolling out a new nationwide text emergency alert system called **W**ireless **E**mergency **A**lerts (WEA), which will warn you when dangerous weather threatens.

The text alert service is free and automatic – there's no need to sign up or download an app. As long as your cell phone has the capability of receiving WEA's, you'll get wireless alerts for the most dangerous types of weather from NOAA's National Weather Service, no matter where you are, just as soon as the new service is available in your area. Check the wireless carrier's links below to see if your phone is capable of receiving WEAs:

AT&T:
Wireless Emergency Alerts Information

Bluegrass Cellular:
Wireless Emergency Alerts Information

Cellcom:
WEA Main Page

Sprint Nextel Corporation:
Wireless Emergency Alerts Information

T-Mobile USA:
Wireless Emergency Alerts Information

U.S. Cellular:
Wireless Emergency Alerts | U.S. Cellular

Verizon Wireless:
Wireless Emergency Alerts Information

You will not be charged for receiving these text-like alerts, and you are automatically enrolled to receive them. There are three different kinds of alerts:

1. Presidential Alerts – Alerts issued by the President or a designee;
2. Imminent Threat Alerts – Alerts that include severe man-made or natural disasters, such as hurricanes, earthquakes, tornadoes, etc., where an imminent threat to life or property exists, and;
3. AMBER Alerts – Alerts that meet the U.S. Department of Justice's criteria to help law enforcement search for and locate an abducted child.

While these alerts will appear similar to a text message on a person's mobile device, Wireless Emergency Alerts are not text messages. Instead, WEAs use a different kind of technology to ensure they are delivered immediately and are not subjected to potential congestion (or delays) on wireless networks. Below is a list of NWS warnings that will be transmitted to WEA-capable phones:

Warning Type	CMAS Message
Tsunami Warning	Tsunami Warning in this area. Avoid coastal areas. Check local media. –NWS
Tornado Warning	Tornado Warning in this area til hh:mm tzT. Take shelter now. – NWS
Extreme Wind Warning	Extreme Wind Warning this area til hh:mm tzT ddd. Take shelter. – NWS
Flash Flood Warning	Flash Flood Warning this area til hh:mm tzT. Avoid flooded areas. Check local media. -NWS
Hurricane Warning	Hurricane Warning this area til hh:mm tzT ddd. Check local media and authorities. -NWS
Typhoon Warning	Typhoon Warning this area til hh:mm tzT ddd. Check local media and authorities. -NWS
Blizzard Warning	Blizzard Warning this area til hh:mm tzT ddd. Prepare. Avoid Travel. Check media. -NWS
Ice Storm Warning	Ice Storm Warning this area til hh:mm tzT ddd. Prepare. Avoid Travel. Check media. -NWS
Lake Effect Snow Warning	Lake Effect Snow Warning this area til hh:mm tzT ddd. Avoid travel. Check media. –NWS
Dust Storm Warning	Dust Storm Warning in this area til hh:mm tzT ddd. Avoid travel. Check local media. -NWS

NOAA/NWS

The Wireless Emergency Alert system relies on "best-effort" networks, so the delivery of alerts at a given place and time is not guaranteed. The new alert system is not a replacement for other alert systems, and you should not rely on it as a sole source of emergency information. A weather alert sent through WEA is intended to notify you that a warning has been issued and that you should seek additional information. Remember…not all phones are capable of receiving Wireless Emergency Alerts.□

ARCTIC SEA ICE EXTENT: WINTER MAXIMUM

George J. Maglaras
Senior Meteorologist, NWS Albany

Trends in Arctic sea ice extent are frequently used as a measure of climate change, especially the summer minimum extent. While changes in weather patterns and ocean currents from one season to the next can cause large variations from year to year, a multi-year trend of increasing sea ice extent is seen as evidence of a cooling climate, while a trend of decreasing sea ice extent is taken as evidence of a warming climate. This article will present the latest maximum Arctic sea ice extent statistics for this past winter, as provided by the National Snow and Ice Data Center. Although winter ice extent variations over the past decade have not been as dramatic as summer ice extent variations, the maximum winter ice extent can provide clues as to what will occur in the summer. For example, the record low maximum ice extents during the 2005-06 and 2006-07 winter seasons eventually led to the record low minimum ice extent during the summer of 2007. After that, winter maximum ice extent increased during the 2007-08 and 2008-09 winter seasons, but then reached near record lows again during the 2010-11 winter season.

Arctic sea ice extent is defined as an area of sea water where ice covers 15 percent or more of that area. Thus, for any square mile of sea water to be included in the ice extent total, at least 15 percent of that square mile must be covered with ice.

The maximum Arctic sea ice extent during the 2011-12 winter season was reached on March 18, 2012, and was about two weeks later than the average date of the maximum extent. The maximum ice extent on that day was 5.86 million square miles, which was 237,000 square miles below the 1979 to 2000 average, and the ninth-lowest since the satellite record began in 1979.

After a near-record low during the 2010-11 winter season, winter ice this year increased by 210,000 square miles. Cold weather across much of the Arctic during March resulted in the peak winter ice occurring later than normal this year, and the colder than normal weather persisted into April. As a result, the Arctic sea ice was slow to begin melting, and the average ice extent for April 2012 was only slightly below normal, and the highest it has been for the month of April since 2001.□

From the Editor's Desk

We've just recorded our highest temperature of the year as I write this, and the summer solstice is just hours away. Our special emphasis with this issue is HEAT, and we open with a recap on a spring which is the warmest ever experienced in Albany in our lifetimes. We also have contributions concerning the tropical weather season and pet safety, which also deal with heat. Then we have information about Wireless Alerts, and we cool off a little with an update on the Arctic Ice cover. Thanks to all our contributors for providing so much great information! Keep cool this summer. Shade, cold water and air conditioning can be your best friends on hot summer days. Enjoy the season!□

WCM Words

Steve DiRienzo
Warning Coordination Meteorologist, NWS Albany

Although severe weather season in the U.S. started early this year with a tornado outbreak on March 2 in the Southeast, things have calmed down across the country. As a matter of fact, May 2012 was the first May without a tornado related fatality in 60 years. Also, as of June 21, the number of reported tornadoes across the U.S. was below the normal for this point in the year.

After the horrific tornadoes and the devastating flooding of 2011, let's hope that the weather remains tranquil for a while.

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 StormBuster, or any of the operations of the National Weather Service, please let me know at Stephen.Dirienzo@noaa.gov.□