



WeatherWorks



THE WEATHER TRACKER

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February - January snow departures



Boston, MA	- 17.5
Worcester, MA	- 17.0
Mount Pocono, PA	- 10.6
Hartford, CT	- 9.0
Newark, NJ	- 6.0
Islip, NY	- 5.6
Allentown, PA	- 5.5
New York, NY	- 4.7
Trenton, NJ	- 1.9
Washington, DC	- 1.8
Baltimore, MD	- 1.5
Philadelphia, PA	+ 4.3

* Thru Feb. 27

A Quieter February across the Northeast and Mid-Atlantic



Woodbury Heights, NJ on February 4

Even though the first half of the 2008-2009 winter did not bring any widespread or staggering snow totals, there were certainly a fair amount of snow and ice threats. As we entered February, temperatures warmed up and the pattern saw a noticeable decrease in wintry activity area wide. This may have to do with the transition to a weak La Nina pattern (see side bar page 2).

Precipitation was below normal across most sites, indicating that there were not many opportunities for snowfall. Temperatures

also rebounded with a lot of the month featuring highs warmer than freezing. There were even a few 50 and 60 degree days. As the sun angle increased during the month, it was difficult to get back into an arctic pattern, as evidenced by some very cold air that

moved in late in the month, but did not translate to a brutal arctic blast at the surface.

Snowfall was below normal in most spots, however the February 3rd storm brought a decent snowfall to the region. This storm also was responsible for a highly localized band of snow that brought over 8 inches of snow to the Airport in Philadelphia. There were several mechanisms at play to create this unique, but not unusual banding during the evening. What was unusual

was the stationary, lake effect - like band of snow that set up over Lancaster County during the evening. This separate band produced 12 inches North of Lancaster, while just to the South barely an inch fell.

We Were Not Alone In February

The frequent snow threats not only relaxed in our neck of the woods, but have also quieted down across most of the country as well. Above average snowfall for February was very hard to find. Warmer air took over most of the country. Even some of the snow belts of the Great Lakes did not see as much snow. Buffalo only picked up 11 inches in February.

New Product: Long Range Outlook

On February 26th, WeatherWorks unveiled a new forecast product: The Long Range Outlook. Based in large part on requests and discussions with clients, this product was developed to provide an overview of expected temperature and precip trends for the following 2 weeks.

The long range forecast will discuss ongoing large scale patterns and their trends. Some features likely to be mentioned from time to time include El Nino/La Nina, atmospheric blocking, various oscillations of pressure or whatever phenomenon happens to be

influencing weather patterns at the time. Most importantly, the outlook will discuss how these features are likely to evolve and ultimately how they impact the weather in the Northeastern United States.

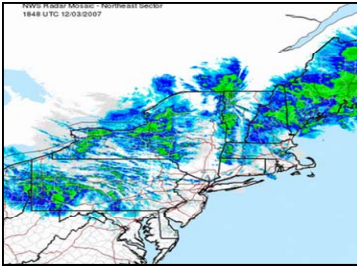
While these forecasts can not be as specific as daily forecasts, they should prove to be a useful guide of what to expect down the road. Obviously, this is particularly crucial this time of year as operations begin to shift from winter snow and ice removal to summer projects.

Note that the Long Range Outlook will be sent only to Forecast & Alert Clients by e-mail. The only exception is for clients that do not receive forecast or alert products by e-mail, instead they will receive the forecast by fax. Typically, the product will be sent out every other week.



**La Nina:
It's Back!**

Why Precipitation Struggles to Cross the Mountains



Will these snow showers make it into the big cities?

Often times during the Winter season, you may look at the above radar image and think, "Whoa, we have snow showers coming". For those that have been in the industry for a long time, you may recognize the above set-up and think that pre-

cip won't be able to cross the Mountains. So why does some precipitation tend to die out?

In order for precipitation to form, you need air parcels to "lift". This can happen a number of ways, the most common is from low pressure or instability. When air approaches a land blocking feature, like highlands or mountains, it gets lifted and aids in producing precip. However, on the downslope side, the air is sinking and this is unfavorable for maintaining or creating precip. Snow showers and t-storms are two types of precipitation that usually weaken or fall apart

while making the journey over the mountains. This is because they are mainly driven by instability and another source of lift (like an upper-level disturbance) is typically needed to keep the activity going. Low pressure systems moving over the mountains usually have enough lift to allow for the precip to hold together.

Since winds typically come from the West or Northwest during snow shower events, the East sides of the Appalachians, Poconos, Catskills and Berkshires struggle to see the snow showers survive the trip.

Characteristics of Spring Snow & Ice Events

As spring begins this month, and focus starts to shift to warm season work, it's important not to forget that Old Man Winter is still very much alive. However, storms begin to behave differently as the winter season comes to a close.

The most important thing to keep in mind is that the ground is probably colder than you think. It's been a long, cold win-

ter and the air warms up more quickly than the ground does. Even if temperatures are in the 60's one day, snow can accumulate the next day, especially if the snow is of moderate or heavy intensity. In fact, the day before the March 2007 sleet storm, temperatures were in the 60's. Additionally, as the month continues, look for increased variability in ground coverings based on surface type and

exposure to the sunshine.

The other main difference this time of year becomes timing. By March 31, the days are over 12 hours long, and the sun is much higher in the sky. Particularly for marginal events, the precip needs to come at night. The indirect sunlight difference between 6 and 8 AM alone can often mean the difference between clear pavements and black ice.

MARCH AVERAGES (30 year averages: 1971-2000)						
	Boston, MA (BOS)		Newark, NJ (EWR)		Baltimore, MD (BWI)	
	<i>Mar. 1</i>	<i>Mar 31</i>	<i>Mar. 1</i>	<i>Mar 31</i>	<i>Mar. 1</i>	<i>Mar 31</i>
High Temp	42	51	45	55	49	59
Low Temp	27	36	30	39	29	38
Precip (Mo. Total)	3.85"		4.21"		3.93"	
Snowfall (Mo. Total)	8.1"		4.3"		2.4"	
Sunrise	6:19 AM	6:28 AM	6:30 AM	6:42 AM	6:39 AM	6:52 AM
Sunset	5:35 PM	7:09 PM	5:48 PM	7:21 PM	5:59 PM	7:30 PM

March 2009 Temperature Outlook

There are no strong signs of very warm or very cold air for the month. Based on slightly lower pressures across the Atlantic Ocean, if anything temperatures may average out slightly below normal.

March 2009 Precipitation Outlook

Precipitation should be near to average during the month. With a weak La Nina in place, expect weak systems to move from west to east across the eastern US, bringing a few snow/ice threats.

After a few months of being neutral, La Nina has returned to the Pacific Ocean over the last month or so. And likely not coincidentally, the Northeast US has seen weaker storm systems and moderating temperatures, especially since the end of January.

This pattern is highly reminiscent of the last winter. This reduces the chance of a strong coastal low in the next 4-6 weeks. For more on the extended outlook, see our new product.

WEBSITE OF THE MONTH



<http://www.youtube.com/watch?v=eGIR5GFWrxo>

Here is video evidence of the 12 inches of snow that fell in parts of Lancaster County, PA on February 3rd, 2009. Those poor meteorology students only saw an inch of snow 10 miles further to the South in Millersville University.

UPCOMING EVENTS

- March 8 Turn The Clocks Ahead One Hour
- March 20 First Day of Spring
- March 26 SIMA Build a Bid Workshop
Somerset, NJ