

An unusual October storm dumped wet heavy snow across much of the Northeast US over the weekend, as much as 32 inches (81 centimeters) in some areas.

Nicknamed "Snowtober," the storm left as many as 3 million people without power at the snowstorm's peak, and was blamed for the deaths of at least 10 people.

In this images from the Moderate Resolution Imaging Spectroradiometer (MODIS) on NASA's Terra satellite, a swath of snow sweeps from West Virginia northeastward to Maine, as seen on Oct. 30, 2011.

Clouds hover east and west of the snow, blocking the satellite sensor's view of western Pennsylvania and parts of the Atlantic Ocean.

The storm broke snowfall-total records in many cities, with strong winds and heavy tree damage as the heavy snow easily clung to trees which still had their leaves, snapping branches and power lines.

Hidi-ho good neighbors. Greetings from the winter wonderland of the Mid Atlantic.

Flurries are still falling at homestead in the hills so my station my receive a tenth or two more before it is said and done.

But as of 6 PM my station has received 7.3 inches of snow. More snow if you head up the mountain, less as you move into the valley.

Not only is this a daily high for snowfall in October, it is also the new monthly high.

Not only is it a new October monthly high snow total, it is nearly 7 times larger than the old record (complete records go back to 1953).

I did go on that brief road trip to the Catocin Mtns about 30 miles to my north up to about 1500 feet in elevation to find deeper snow.

I certainly found it, along with my friend Rick H, who measured 5 inches at the highest point on Gambrills Park Road.

I have sent most of you under separate cover pictures I took on the trip to help capture this historic early season/very rare October snow.

Saturday's precipitation: 1.10" (LR) 0.98" (VP2) 0.38" (Max rain rate) @ 1015

October total precipitation: 5.42"

2011 Year to Date (YTD) precipitation total: 47.50"

Saturday's snowfall: 0.8"

October and season snowfall: 0.8"

Snow on ground at obs: 1"

Rob,

Here in Taunton, MA 'only' 2.3" fell. Rain changed to snow around 11 PM Saturday evening when the wind shifted to north and the temperature dropped quickly from 38 to 33 degrees.

Total precipitation for the storm was 1.81". Peak wind gust 38 ENE at 2119 EDT.

From the local storm reports, Jaffrey, NH was the winner with 31.4" of snow.

And Barnstable, MA (Cape Cod) had the highest gust of 69 mph.

The strongest winds were confined to the Cape.

All,

I was able to be at the Reading 4 SW homestead this weekend to witness and measure the fantastically unprecedented late October major snowstorm there.

At Reading 4 SW, a total of 5.5" of slush accumulated on the "best" elevated surface with no more than 5.2 at any instant.

This came from a storm total rainfall equivalent of 1.73" of which approx a quarter inch was actually rain.

Accumulations on ground-based surfaces were somewhat to much less, 1 to 4 inches.

Light rain fell from shortly before dawn till 8 AM at which I measured 0.08 to report in CoCoRaHS.

Rain became heavier and began mixing with snow shortly before 9 AM and became all snow (at least almost all) by 10 AM.

Accumulation did not begin till 11AM, and it began to accumulate on all exposed surfaces at nearly the same time; that is, there was little difference between pavements, lawns, and elevated surfaces.

Mostly heavy to very heavy snow fell reducing visibilities to 3/8 mile down to 1/10 mile at times between 10 AM and 3 PM.

Most of the accumulations occurred between noontime and 3 PM.

Snow had a few lulls between 3 PM and 6 PM during which it mixed with sleet and perhaps rain and with minor additional accumulation.

After 6 PM, it tapered to light rain with slush except for a late burst of moderate snow which brought 0.4" additional.

Precipitation ended completely toward midnight.

The coolest wet-bulb temperature during the storm was 34 which accounted for very dense melt ratios of 1.5:1 (close to the maximum possible density) to 3.5:1. There was little wind throughout.

Tree damage was very severe and probably to unprecedented proportions.

The key to precipitation type was the intense rate of fall.

This snowfall would have been 15" if it was a more typical 10:1 melt ratio.

Indeed higher elevations had 9 to 14 inches.

Historical perspective: Reading area October snowfall combined since 1898 combined was only 3.8" before Saturday.

Saturday's fall was much more than that 114-year's worth.

This very extreme event could be in the same league as 80 degrees in January or even 100 in October.

Jeff

Folks,

I forgot a key point near the end pertaining to the precipitation intensity being key.

It is: Ironically, precipitation was snow when the atmospheric column was supposedly near its warmest, and was rain when the column was supposedly near its coolest.

The extreme fall rates of large clumps of wet snow trumped the relatively warm layer through which it fell so that they could survive to the ground at least still partly frozen.

The cooler column still had enough above-freezing depth to allow light small-flake snow falling slowly to largely or completely melt before reaching the ground.

A colder column producing mainly rain than a column which produced snow is one oddity which makes meteorology interesting.

Jeff

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Dan

From: Rob Rickell

Sent: Sunday, October 30, 2011 6:37 AM

Happy Early Winter To All!!!

6.1 inches of total snowfall here at my location in the hills 2 miles south of Hanover, PA, in southwestern York County. Amounts varied greatly in the local area, some of the higher elevations near the PA/MD border just a few miles southeast of my location, reported 7+inches and the lower valleys and downtown Hanover only received 3-4 inches. The temperature here dipped

to 32 degrees around 7am and remained there until late evening when it fell to around 30 degrees at 10pm as the storm ended and skies became partly cloudy.

The storm was destructive to trees, at one point Saturday afternoon you could hear limbs and trees breaking about every minute or two in my neighborhood. I lost a few large limbs here on my property. Roads became slushy and slippery for awhile, and during the height of the storm they plowed the slush off the roads and salted, impressive for October!

Rob

Sent: Saturday, October 29, 2011 5:32 PM

Subject: Historic Snow Storm Smithsburg, MD. 3 NE

Hidi-ho good neighbors. Greetings from the winter wonderland of the Mid Atlantic. Flurries are still falling at homestead in the hills so my station my receive a tenth or two more before it is said and done. But as of 6 PM my station has received 7.3 inches of snow. More snow if you head up the mountain, less as you move into the valley. Not only is this a daily high for snowfall in October, it is also the new monthly high. Not only is it a new October monthly high snow total, it is nearly 7 times larger than the old record (complete records go back to 1953).

Snowfall Today: 7.3 inches

Old October daily high: 1.1 inches - October 10, 1979

Old Monthly Record: 1.2 inches - October 1979

There is wide spread tree damage in the area and portions of Smithsburg are still without power.

Interesting side notes.....

This is the heaviest snowfall this early in the season since 9.1 inches fell on November 30, 1967.

Snowfall just for today would be the 6th highest MONTHLY snowfall total for the month of November.

Until later.....

Jim