VOLUME 2009 ISSUE NOVEMBER

http://www.jhuapl.edu/weather/education/ACONdata.html

ATLANTIC COAST OBSERVER NETWORK, MD / DE / DC CHAPTER

WITH DATA FROM NEARBY AREAS

MILD TEMPERATURES - STRONG NOR'EASTER FORMED FROM REMNANTS OF HURRICANE IDA

November was a milder than normal month with very few cold air intrusions. Subfreezing temperatures were few and far between. Precipitation amounts varied across the region. The northern and western portions saw below normal amounts while the southern and southeast portions saw above normal amounts.

The month's extreme temperatures occurred on two consecutive days, the 7th and 8th. The first hard freeze of the season occurred on the 7th. "Indian Summer" arrived quickly on the 8th when temperatures rose into the low 70's.

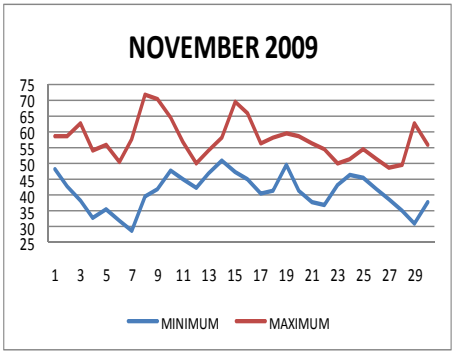
A strong nor'easter (Veterans Day Storm) pounded the coastline from the 11th to the 14th. The heaviest rains fell on the 11th & 12th. The heaviest rains fell south and east of Baltimore / Washington. **John Zyla** of **Ridge** reported 5.70" and **Floyd Abell** of **Hollywood** reported 5.68" from the 10th to the 14th. Rainfall amounts were less than an inch in extreme Northern Delaware and from Carroll County Maryland westwards. A record setting wave height of 26.7 feet was reported at the NOAA Delaware Bay Buoy 44009 (since deployed in 1984) 26 miles southeast of Cape May, NJ. Flooding and beach erosion occurred on the coast. The following was taken from the NWS Mt. Holly (Philadelphia) website:

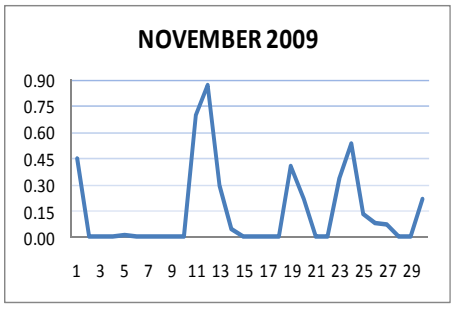
"*The remnants of Hurricane Ida made landfall as a tropical storm along the U.S. Gulf Coast (near the Alabama-Florida border) on Tuesday morning, November 10, 2009. Tropical Storm Ida weakened quickly after landfall and was soon absorbed by a frontal boundary advancing toward the southeast U.S. Coast. By Thursday morning* (12th) *the remnant low was located near the North Carolina coastal waters. The interaction between this low and a strong high pressure system located over eastern Canada produced an intense pressure gradient over the mid-Atlantic region, including New Jersey and Delaware* (also Maryland), *which persisted for several tide cycles, from Thursday morning through most of Saturday.*"

More details can be found at:
http://www.erh.noaa.gov/er/phi/storms/11112009.php

A cold front accompanied by some thunderstorms moved through the region the evening of the 19th and shortly after midnight in Delaware.

Thanksgiving week (23rd—27th) was wet. Rainfall amounts generally fell in the 3/4" to 1 1/3" range. Unstable conditions followed a strong cold front on the 27th. A strong upper vort lobe which moved down from the northwest mid day of the 27th was reported by ACON observers from Forest Glen southeast to Ridge. **Joe Terry** of **Forest Glen** reported light rain and a brief but very heavy shower of hail embedded which nearly covered the ground but melted quickly (could be defined as sleet). Conditions were nearly white-out for about 20 seconds. The hail was 0.2" in diameter and oblate and accompanied by wind gusts to 28mph. **Marty Brumback** of **White Plain 5.5 WNW** reported rice size ice and snow pellets and a PWG of 42 MPH between 12:40 & 12:45 PM. **John Zyla** of **Ridge** observed rice sized hail fall at 2:15pm for about 15 seconds. See Observer Comments for more details about this event and page 3 for vort lobe information supplied by Marty Brumback.





ACON MD/DE Network

Daily average temperatures and precipitation based on observation times, not calendar days.

EXTREMES REPORTED BY ACON OBSERVERS

MAXIMUM TEMPERATURE	
Glenmont 1 NNE	77
Forest Glen	77
Eagle Rock	76
MINIMUM TEMPERATURE	
Eagle Rock	22
Davis 3 SE WV	22
Bear 2 SW DE	24
Smithsburg 1.5 SSW	24
WARMEST AVG. TEMP.	
Baltimore 2 SE	52.1
Ridge	51.9
COLDEST AVG. TEMP.	
Davis 3 SE WV	41.2
Frostburg	44.0
Eagle Rock	45.1
MAXIMUM PRECIPITATION	
Ridge	9.24
Jug Bay Wetlands	8.18
MINIMUM PRECIPITATION	
Eagle Rock	1.32
Frostburg	1.42
MAXIMUM SNOWFALL	
Davis 3 SE WV	7.4
Eagle Rock	6.0
Frostburg	0.6

OBSERVER COMMENTS FOR NOVEMBER 2009

Gary Gallaher of Bear 2 SW, DE

3rd - Frozen morning dew on car. Deep blue AM sky, afternoon partly cloudy, evening clear.
11th—13th - Windy 30+ mph, periods of light rain - heaviest on the 12th.
20th - Thunderstorm ~ 1 AM.

Nate Mullins of LaVale

November was the fourth warmest in the area in 62 years.
8th—30th - 23 consecutive days with no sub-freezing temps.

Jeff Stoudt of Laurel 2 E

11th - Steady light rain, wind driven at times.
19th - Occasional light rain / drizzle till mid evening, then rain shower / thundershower.
30th - Frequent light rain daybreak till dusk.

Marty Sharrow of Owings Mills

1st - Overcast with AM rain, PM clouds and sun.
25th - Overcast, damp with periods of drizzle.

Joe Manfre of Baltimore 2SE

1st - Cloudy, mild, light rain in AM and late PM.
15th - Partly cloudy and warm.
19th - Cloudy, mild, drizzle, fog, then showers and thunderstorm.

Ralph Hartsock of Westminster 4 SSE

11th - Rainy, chilly - carryover high temperature.
16th - Sunny, nice.
19th - Foggy, heavy at night.

Bobby Miller of Millers 4 NE

4th - AM frost, killing freeze, afternoon clouds & virga.
7th - AM frost & clear skies, few afternoon cirrus, breezy.
19th - Visibility 1/8th mile at 8 AM.
24th - Steady AM rain then misty.

Ray Muller of Westminster City

I closed the climatic data on temperature since some of the maximums were estimated.
7th - 6 AM temperature 28°
12th - Winds gusting to 35 MPH, rain, fog.
26th - Dense fog visibility ¼ mile.

Marty Brumback of Bryans Road 2 ESE

19th - Thunder early afternoon, TRW 11:00 - 11:30 PM.
27th - Rice size ice & snow pellets & high winds (42 MPG from the WNW) between 12:40 and 12:45 PM. The air temp was 48.9, DP 34.8, and barometer 29.67 as the hail fell.

Eric Glass of Emmitsburg 2 SE

9th - Morning ground fog, clear sky, sunny, mild, pleasant.
17th - Lots of clouds, calm and pleasant.

Rob Cohen of Potomac 4 N

8th - 71° Tied daily record maximum temperature.
19th - Thunder with heavy shower 9 PM.
30th - Daytime temperatures in the upper 40's.

Rich Giannola of Olney 1 S

4th - Morning frost, first freeze of the season.
7th - Heavy morning frost.

Richard Holden of Clarksburg 2 ENE

27th - Light rain / light snow. AM min 39
30th - Moderate rain / AM min 48, Afternoon max 49.

Stan Rossen of Glenmont 1 NNE

19th - Dense fog. Thunderstorm ~ 9 PM.
26th - Dense early morning fog, visibility ¼ mile.

Kevin Shaw of Gaithersburg 2 WNW

Temperatures were well above normal - tied with 2001 for the third warmest November. Only 1985 and 1999 were warmer. There were only 3 days with freezing (or lower) minimum temperatures, a new record surpassing the old record of 4 set back in 1985.
28th - Sunny, wind abating as day wore on. Clear cold evening.

Joe Terry of Forest Glen

27th - Surprise convective cell was observed 1245 to 1300 with light rain and a brief but very heavy shower of hail embedded (could be defined as sleet). Conditions were nearly white-out for about 20 seconds. The hail was 0.2" in diameter and oblate and accompanied by wind gusts to 28mph. The hail nearly covered the ground but melted very quickly.

Brian Smith of Oxon Hill

7th - Heavy frost. The growing season has ended for 2009.
8th - Indian summer day.

Floyd Abell of Hollywood

12th - Flooding rains.
26th - Dense AM fog.

John Zyla of Ridge

Station record rainfall for November at 9.24" (broke old record from 1997 of 7.54"). I have had 16.36" of rain in the last 45 days (since Oct 15)!! Annual is at 53.60".
20th - Thunderstorm 12:33 AM to 1:45 AM.
27th - Also had my first Hail ever in November in 15 years. Rice sized hail fell at 2:15pm for about 15 seconds on Nov 27.

Max Hutto of Smithsburg 1.5 SW

9th - AM haze, partly sunny, not quite as warm as yesterday.
26th - AM fog, PM rain heavy at times, breezy.

Greg Keefer of Hagerstown 1 E

15th - Dense fog overnight and a good part of the morning. Sunny and warmer in the afternoon.
26th - Very dense fog overnight and this morning.

Jim Vaughn of Smithsburg 2 NE

13th - Minimum temperature of 46 ties the daily high minimum set back in 1964.

Lance Shaffer of Sterling 4 N VA

1st - Wet start to the month, some sun at times.

David Lesher of Davis 3 SE WV

28th - 5" snow depth, maximum depth for the month.

Compiled by Gary Gallaher, MD/DE ACON Data Collector and Report Writer, from data received from dedicated observers. Without your observations each month this report will not be possible.

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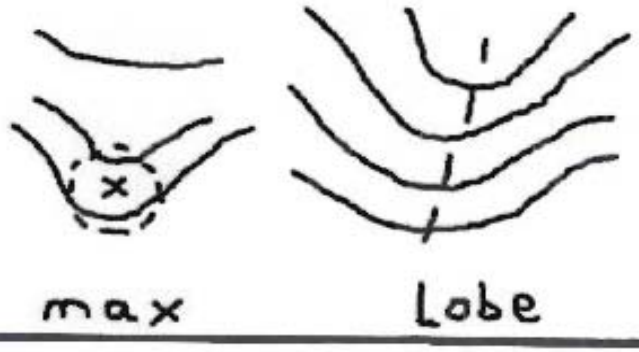
[–MAIN HOME–] [–ALL HABYHINTS–]

DEFINING A "VORT MAX" AND A "VORT LOBE"

METEOROLOGIST JEFF HABY

A vorticity max is the highest value of positive vorticity (point location) within a region of positive vorticity. A vorticity lobe is an axis of high positive vorticity values. You can think of a vorticity max as a "bullseye" and a vorticity lobe as an "elongated bullseye". Elongated regions of high positive vorticity that stretch over a large region are referred to as vort lobes. The amount of elongation of the vort lobe determines how large the region of PVA / NVA will be. If air flows through a vort lobe, ageostrophic circulations will promote uplift in the PVA region (downstream region) and sinking in the NVA region (upstream region). The PVA / NVA region with a vort max tends to be smaller but more intense. Vort lobes tend to occur with highly amplified synoptic troughs and a vort max tends to occur with shortwaves. Below is an example of a vort max and a vort lobe.



The above information was provided by Marty Brumback of White Plains 5.5 WNW.

This vort lobe was observed by ACON observers **Joe Terry** of **Forest Glen**, Montgomery County, **Marty Brumback** of **White Plains 5.5 WNW**, Charles County, and **John Zyla** of **Ridge**, St Marys County as it moved southeast from Montgomery County to St Marys County during the early afternoon of the 27th.