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ATLANTIC COAST OBSERVER NETWORK, MD / DE / DC CHAPTER WITH DATA FROM NEARBY AREAS

HEAT, HUMIDITY, SCATTERED HEAVY THUNDERSTORMS

July will be remembered for its heat and oppressive humidity. All three of the National Weather Services sites in the Baltimore - Washington, D.C. region set new July monthly highest mean average temperature records. Washington, D.C.'s previous record was 83.1° set in 1993 tied in 2010. Baltimore's previous record was 81.5° set in 1872, tied in 1995 and 2010. Dulles's previous record was 79.7° set in 1993. The NWS station at Wilmington, DE had its second warmest July behind 81.2° which was set in 1955. Showers and thunderstorms accounted for July's rainfall. There were no tropical storms this month. Precipitation averaged slightly below normal. The wettest area was in New Castle County Delaware where over 5 inches fell and the driest Allegany County Maryland where less than an inch fell. Thunderstorms, some severe, accounted for a majority of the precipitation.

The month began with pleasant temperatures. The coolest temperatures of the month occurred on the 1st and 2nd across a majority portions of the region when temperatures fell into the upper 50's and lower 60's. Heavy rains on the 3rd from thunderstorms brought over an inch of rain to many locations around Washington. **Tony Scafide of Bethesda** reported 2.08". The Fourth of July holiday was a typical summer day and a few evening light showers.

July's wettest day was the 8th. Rainfall amounts of over an inch were common from Carroll County eastward. The heaviest amounts fell in New Castle County DE where **Townsend 4 W DEOS** reported 3.06", and **David Legates of Middletown 6 N** 3.03".

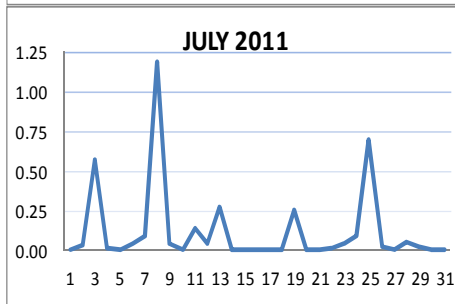
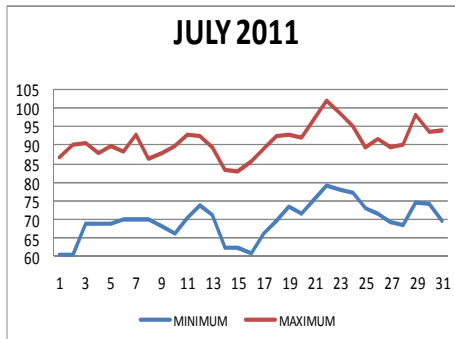
The second and last period of pleasant temperatures occurred mid month. Except for the Baltimore City stations temperatures failed to hit 90° from the 14th and 16th.

The heat and humidity began to return on the 17th. **Wes Gleason of Holly-**

wood 3 ENE reported a severe thunderstorm with straight line wind damage and 1.27" of rain on the 19th. The heat and oppressive humidity peaked on the 22nd and 23rd when maximum temperatures rose to the 100 degree plus mark while minimums failed to fall below the upper 70's to lower 80's. **Joe Manfre of Baltimore 2 SE** reported a minimum temperature of 88° on the 22nd. The hottest temperatures reported by ACON observers on the 22nd were:

- 108° **Jim Vaughn of Smithsburg 3 NE**
- 107° **Joe Manfre of Baltimore 2 SE**
- 105° **Ralph Hartsock of Westminster 4 SSE**
- 104° **Jug Bay Wetlands of Lothian**
- 104° **Jeff Stoudt of Laurel 2 E**
- 104° **Joe Terry of Forest Glen**

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ACON MD/DE Network

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

EXTREMES REPORTED BY

ACON OBSERVERS

MAXIMUM TEMPERATURE

Smithsburg 3 NE	108
Baltimore 2 SE	107
Westminster 4 SSE	105

MINIMUM TEMPERATURE

Davis 3 SE WV	50
Smithsburg 1.5 SW	53
Frostburg	54
LaVale	54

WARMEST AVG. TEMP.

Baltimore 2 SE	87.2
Ridge	82.3
Forest Glen	82.1

COLDEST AVG. TEMP.

Davis 3 SE WV	68.4
Frostburg	73.1
Emmitsburg 2 SE	77.1
Smithsburg 1.5 SW	77.5

MAXIMUM PRECIPITATION

Middletown 6N DE	6.55
Hollywood 3 ENE	6.48
DEOS Townsend 4W DE	6.16

MINIMUM PRECIPITATION

LaVale	0.67
Frostburg	0.96
DEOS Newark DE	1.56

Don't forget Herb Close's Annual Fall Weather Gathering on Saturday, November 5th, 2 PM till ?? All are welcome. Contact Herb if you need directions.

OBSERVER COMMENTS FOR JULY 2011

Gary Gallaher of Bear 2 SW, DE

Tied 1994 for the second warmest month behind July 1999 when the temperature averaged 80.0°. No high winds this month. Monthly peak wind gust and average wind speed both set July record minimums (Wind records began in 1991).

22nd & 23rd - Back to back 100° days for only the fourth time in 45 years of records (Others 7/1966, 8/2002, & 7/2010).

22nd - Minimum of 79° tied station record warmest minimum set in 7/25/1965, tied 7/15/1995 & 8/8/2007.

25th - Heavy evening thunderstorm. 1.61" fell in 20 minutes ending at 9:40 PM.

Nate Mullins of LaVale

Hottest July on record. Old record was just set last year. 10 daily record maximums were set. Average maximum 2nd hottest - hottest 90.5° in 1999. Average minimum tied 2010 for the hottest. 21 days with maximum ≥ 90° tied 1955 & 1999 records. Driest July and summer month on record.

21st - 100° first in 12 years.

22nd - 103° second hottest ever and hottest since 105° on 7/16/1988. Hottest day on record average 91.5°. Old record was 89.0° set 7/24/2010.

Jeff Stoudt of Laurel 2 E

The long trend of above normal temperatures which began during late winter continued. Of course above normal temperatures in July means intense heat.

25th - +++++TSRA 1345 - 1430. 2.74" of rain.

Ray Muller of Reisterstown

25th - ++TSRA with frequent cloud to cloud and cloud to ground lightning. 1.61" of rain.

Marty Sharrow of Owings Mills

21st - Searing sunshine, hot and humid.

25th - Torrential downpour. 2.79" fell between 1320 and 1515 hours. At times the rainfall rate was over 4" / hour. Much of it ran off and was of very little benefit to agriculturists.

Joe Manfre of Baltimore 2SE

One word describes July— *HOT!*

7th - Hot, humid, evening thunderstorms.

14th - Partly cloudy, warm, low humidity. Only day this month when the temperature failed to rise to 90° or above.

31st - Partly cloudy, very hot, low humidity.

Herb Close of Manchester 1 SW

23rd - Set station all-time record maximum temperature of 102°. The old record of 101° set last July. This is only the second time the temp has hit 100° in 23 years of records.

Ralph Hartsock of Westminster 4 SSE

2nd - Cool start, hot afternoon. Overnight storms.

11th - Severe evening storms.

22nd - Sun, boiling hot. 105° All time temperature record.

25th - Heavy mid-day storms.

Bobby Miller of Millers 4 NE

Warmest month on record.

22nd - All-time hottest maximum and hottest minimum temperatures. Afternoon thunder to the NE.

23rd - Evening rainbow.

28th - End of 10 consecutive ≥90° days.

Eric Glass of Emmitsburg 2 SE

3rd - Nice pre-dawn rain, 1.75".

22nd - Low haze at obs time. Sunny, hot, humid, dry.

Rich Giannola of Laurel JHU-APL

Maximum barometric pressure 30.22 on 17th

Minimum barometric pressure 29.74 on 26th

Highest monthly cooling degree days total (504) in 15 years of records.

Rob Cohen of Potomac 4 N

No surprise this was the warmest month on record for me. Also set record for station maximum (100), most days 90 or higher (20), and ending August 2nd, most consecutive days at or above 90 (16). Rainfall was a bit above normal, though you wouldn't know it looking at the yard. Most of the precip came early, I missed out on any heavier storms during the heat wave.

Rich Giannola of Olney 1 S

First 13 days of July precipitation (3.48") exceeded all of May and June precipitation combined (3.20").

Richard Holden of Clarksburg 2 ENE

Daily record maximum temps on the 20th (Tied), 22nd, & 28th.

Daily record minimum temps on the 12th, 19th (Tied), 22nd, & 24th.

Stan Rossen of Glenmont 1 NNE

8th - 1.68" of rain fell during an afternoon thunderstorm. This was the greatest daily amount since 2.02" on 3/2.

21st - The average temperature of 87.5° (99%76°) ties 7/6/99 (101%74°) & 7/24/10 (99%76°) for the warmest July day here in over 34 years of record.

22nd - Today was the hottest day on record here since daily records began on 6/26/77. The maximum of 103° ties 7/31/99 for the hottest temperature ever recorded here. The minimum temperature of 78° set an all-time record here breaking the old record of 77° from 7/19/91, 9/3/93, 8/3/06, & 8/8/07. That means that the daily average temperature of 90.5° broke the old July record of 87.5° from 7/6/99 (101%74°), 7/24/10 (99%76°), & 7/21/11 (99%76°), and busted the old all-time record of 89.0° from 8/8/07 (101%77°) making this the first day here to average 90°.

Kevin Shaw of Gaithersburg 2 WNW

Hottest month ever in 33 year station history. Average mean and minimum both surpassed the previous records set in 2010. It was also the first month with an average temperature ≥ 80°. The average maximum was the second hottest, only surpassed by 91.4° set in 1999. 20 days with temperatures ≥ 90° tied 2002 & 2010 for second behind the 22 days in 1999.

Joe Terry of Forest Glen

Hottest July and month in 17 year station history. Also all time record high maximum (104°) and minimum (80°) temperatures were both set on the 22nd.

Observer Comments Continued on Page 3

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.

July 2011 MD / DC / DE Report

Observer Comments Continued From Page 2

Joe Terry of Forest Glen (Continued)

3rd - Long intense series of thunderstorm cells moved through during a 3 hour period from pre-dawn to just after dawn. Thunder activity made it impossible to sleep through. Lightning count was rather low indicating much of the activity was in-cloud.

Brian Smith of Oxon Hill

3rd - +TSRA 0400-0700, 0.46"; +TSRA 1930-2200, 0.32".
8th - +TSRA 1600-1800 not severe.

Wes Gleason of Hollywood 3 ENE

19th - Major storm, trees down, straight line winds, Microburst.

John Zyla of Ridge

July's temperatures were the second highest averages for any month:

Average temperature 82.3°. Record 82.6° set 7/2010

Average maximum temp 91.3°. Record 93.1° set 7/1999.

Average minimum temp 73.2°. Record 73.3° set 7/2010.

23 days with temps ≥ 90°. Record is 25 days set 7/1999

25th - All time highest daily minimum temperature of 82.5°. Old record was 81.6° set 7/24/2010.

Max Hutto of Smithsburg 1.5 SW

3rd - Overnight thunderstorm, Hot, Humid, Overcast, PM thunderstorm (1.20" daily total), Breezy.

15th - Partly cloudy, not as warm, Breezy, Pleasant

22nd - Hazy, very hot, humid, PM nearby thunderstorm (0.14") dropped temperature to 73°, Windy

Greg Keefer of Hagerstown 1 E

Second hottest July on record with the average temperature of 79.9°. Record hottest is 80.0° that was set in 1999 and tied in 2010.

9th - Dense fog at sunrise.

11th - Heat index averaged around 103° during the afternoon peaking at 106°.

22nd - Tied daily record maximum of 102° set in 1926. Rare low of 80° this morning was erased by afternoon thunderstorm. Heat index before storm hit were averaging around 116° and officially peaked at 121°. Have not seen a reading like this since the 1980's. Severe thunderstorms between 2:30 & 3:30 PM dropped temperatures rapidly into the 70's produced damaging winds up to 59 mph from the west with power outages and trees down. A huge light tower was blown over at the local Hagerstown Suns Municipal Stadium baseball field.

28th - Dense overnight fog. 100° temperature tied the daily record set in 1930.

Jim Vaughn of Smithsburg 2 NE

July average temperature of 79.9° was the third warmest behind 1988 (80.2°) and 1987 & 1993 (80.0°).

Daily record high minimums were set on 12th (73°), 21st (75°), 22nd (78°). Daily record high maximums were set on 11th (94°), 21st (102°), 22nd (108°), & 29th (102°).

22nd - 108° new station record maximum temperature. Old record was 105° set 7/24/2010 followed by 104° on 7/16/1988.

Monthly Summary Continued From Page 1

Thunderstorms, some with heavy downpours, occurred on the 24th and 25th. On the 25th **Wes Gleason of Hollywood 3 ENE** reported 3.50", **Marty Sharrow of Owings Mills 2.79"**, and **Jeff Stoudt of Laurel 2 E** reported 2.74". The last rains of the month fell on the 28th and 29th in New Castle County Delaware and from Carroll County Maryland westward.

100 degree temperatures returned for the 29th. The excessive heat was not as widespread as it was on the 22nd & 23rd. NWS Washington National recorded 104°, its hottest day of the month. Below are the hottest temperatures reported by ACON observers:

104 **Joe Manfre of Baltimore 2 SE**
102 **Dan Hanson of Pasadena 2 N**
102 **Jug Bay Wetlands of Lothian**
102 **Marty Brumback of Bryans Road 2 ESE**
102 **Jim Vaughn of Smithsburg 3 NE**

The last two days of the month saw lower humidity but maximum temperatures remained in the 90's.



Picture by Marty Sharrow of Owings Mills

I captured a picture of a storm that rumbled across Upperco, MD (northern MD, along the Baltimore/Carroll County line) last evening, July 11. This cloud looked strange and later when I got home, I saw that a tornado warning had been issued for Harford County. You can see a small appendage hanging from the wall cloud.