



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

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".

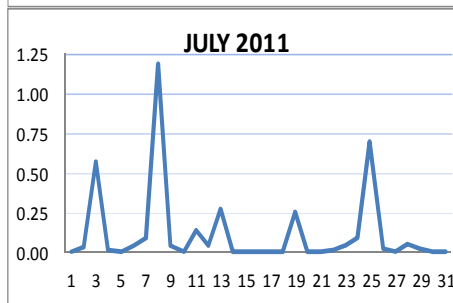
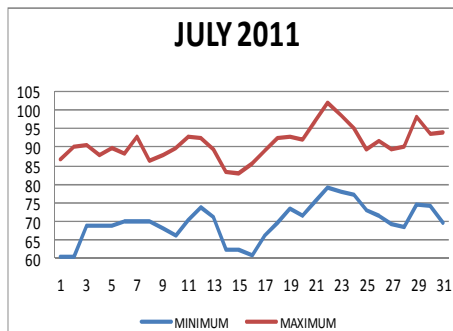
The second and last period of pleasant temperatures occurred mid month. Except for the Baltimore City stations temperatures failed to hit 90° from the 14th and 16th.

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**

Continued on page 3



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.

ACON MD /DE / DC
JULY 2011 SUMMARY

OBSERVER	STATION	TEMPERATURE									PEAK WIND			PRECIPITATION					SNOWFALL				OBS TIME		
		AVG MAX	AVG MIN	MEAN	MAX	DAY	MIN	DAY	MAX >=90	MAX <=32	MIN <=32	GUST	DIR	DAY	TOTAL	MAX DAY	DATE	YEAR	DAYS >=.01"	DAYS >=1"	TOTAL	MAX DAY		DATE	SEA- SON
<u>New Castle, Delaware</u>																									
Gallaher, Gary	Bear 2 SW	90.4	68.4	79.4	100	22+	57	1	15	0	0	24	NNE	25	5.48	2.95	8	27.78	7	2	0.0	0.0		0.0	2400
Legates, David	Middletown 6 N	89.8	69.0	79.4	101	22	58	1	17	0	0	33		20	6.55	3.03	8	24.03	12	3					2400
NWS Wilmington	New Castle Co. Apt.	91.2	70.4	80.8	102	22	59	1	18	0	0	38	S	8	3.73	2.48	8	24.33	5	1	0.0	0.0		0.0	2400
UofDE AG FARM DEOS***	Newark	90.0	68.9	79.5	102	22	59	1+	14	0	0	16		11	1.56	0.86	8	<u>17.01</u>	7	0					2400
U of D REC DEOS***	Townsend 4 W	89.6	68.5	79.1	100	22	58	1	14	0	0	27		25	6.16	3.06	8	<u>23.35</u>	7	1					2400
<u>Sussex, Delaware</u>																									
NWS Georgetown	Sussex Co. Airport	92.3	70.4	81.4	104	22+	58	1+	22	0	0	38	NW	8	2.95	1.52	8	18.07	8	1					2400
U of D REC DEOS***	Georgetown 5 SW	90.1	68.6	79.4	101	22	56	16	17	0	0	22		8	2.50	1.25	8	17.70	8	1					2400
U of D REC DEOS***	Harbeson 8 S	89.7	69.0	79.4	100	22	57	1+	17	0	0	25		19	3.10	1.00	24	16.90	12	1					2400
U of D DEOS***	Rehoboth Beach Bwk	85.6	72.2	78.9	98	23	63	15	7	0	0	19		11	3.37	2.60	8	17.04	11	1					2400
<u>Allegany, Maryland</u>																									
Latta, Greg	Frostburg	84.2	62.0	73.1	95	23	54	2	5	0	0				0.96	0.43	9	31.23	8	0	0.0	0.0		0.0	0700
Mullins, Nate**	LaVale	90.1	66.5	78.3	103	22	54	2+	21	0	0				0.67	0.53	8	27.36	6	0	0.0	0.0		0.0	2400
<u>Anne Arundel, Maryland</u>																									
Hanson, Dan	Pasadena 2 N	92.5	69.5	81.0	103	22	58	1+	24	0	0	33	SE	8	2.88	1.63	8	21.92	10	1	0.0	0.0		0.0	2400
Jug Bay Wetlands	Lothian	93.1	68.1	80.6	104	22	57	1+	26	0	0				4.75	2.64	8	26.37	9	2	0.0	0.0		0.0	2400
NWS Baltimore	BWI Airport	92.9	70.4	81.7	106	22	58	2	24	0	0	39	N	7	2.77	0.83	8	22.56	8	0	0.0	0.0		0.0	2400
Stoudt, Jeff	Laurel 2 E	91.5	72.2	81.9	104	22	62	2	21	0	0				5.35	2.74	25	22.74	6	3	0.0	0.0		0.0	2400
<u>Baltimore, Maryland</u>																									
Muller, Ray	Reisterstown	91.8	70.9	81.4	102	22	59	1	24	0	0	42	NNE	7	4.36	1.61	25	24.83	6	2	0.0	0.0		0.0	2200
Sharrow, Marty	Owings Mills 2 SE	91.5	68.7	80.1	102	22	59	1+	21	0	0				4.11	2.79	25	25.16	6	1	0.0	0.0		0.0	2400
<u>Baltimore City, Maryland</u>																									
Manfre, Joe	Baltimore 2 SE	96.2	78.1	87.2	107	22	72	2+	30	0	0				3.43	1.23	19	21.37	7	1	0.0	0.0		0.0	2400
Maryland Science Ctr	Baltimore Inner Harbor	96.3	78.0	87.2	108	22	72	14+	30	0	0				4.06	1.52	7	21.21	7	2					2400
<u>Carroll, Maryland</u>																									
Close Jr, Herb	Manchester 1 SW	90.0	66.6	78.3	102	22	58	14	17	0	0				3.52	1.63	8	26.71	8	1	0.0	0.0		0.0	2300
Hartsock, Ralph	Westminster 4 SSE	93.0	69.2	81.1	105	22	59	2	23	0	0	35	WSW	12	3.82	1.16	25	25.64	8	2	0.0	0.0		0.0	1900
Miller, Bobby	Millers 4 NE	90.0	66.5	78.3	102	22	55	2	14	0	0	46	WSW	11	1.99	0.74	8	28.37	7	0	0.0	0.0		0.0	1800
<u>Charles, Maryland</u>																									
Brumback, Marty	Bryans Road 2 ESE	91.5	70.3	80.9	102	29	60	2+	21	0	0				5.40	2.09	13	<u>10.37</u>	9	2	0.0	0.0		0.0	2400
<u>Frederick, Maryland</u>																									
Glass, Eric	Emmitsburg 2 SE	88.0	66.1	77.1	99	23	55	1	12	0	0				3.98	1.75	3	27.53	6	1	0.0	0.0		0.0	0700

ACON MD /DE / DC
JULY 2011 SUMMARY

OBSERVER	STATION	TEMPERATURE									PEAK WIND			PRECIPITATION					SNOWFALL				OBS TIME	
		AVG MAX	AVG MIN	MEAN	MAX	DAY	MIN	DAY	MAX >=90	MAX <=32	MIN <=32	GUST	DIR	DAY	TOTAL	MAX DAY	DATE	YEAR	DAYS >=.01"	DAYS >=1"	TOTAL	MAX DAY		DATE
<u>Howard, Maryland</u>																								
Giannola, Rich	Laurel JHU / APL	91.1	70.4	80.8	103	22	59	16	19	0	0	38	WSW	11	2.82	0.96	25	20.41	6	0	0.0	0.0	0.0	2400
<u>Montgomery, Maryland</u>																								
Berger, Ron	Norbeck 1 SE	91.3	69.3	80.3	101	22	59	2+	22	0	0				4.34	1.73	8	21.81	6	2	0.0	0.0	0.0	2200
Cohen, Rob	Potomac 4 N	90.6	70.3	80.5	100	22	60	2	20	0	0				3.95	1.69	3	24.23	7	2	0.0	0.0	0.0	2100
Giannola, Rich	Olney 1 S	89.8	69.5	79.7	102	22	60	14	14	0	0				3.99	1.75	3	21.32	9	1	0.0	0.0	0.0	2400
Holden, Richard	Clarksburg 2 ENE	90.1	69.4	79.8	99	22	61	14	18	0	0	46	WSW	11	3.49	0.89	3	26.61	7	0	0.0	0.0	0.0	2400
Roth, David	Montgomery Village 1SW																	12.02						2400
Rossen, Stan	Glenmont 1 NNE	91.9	69.7	80.8	103	22	60	1+	21	0	0	14		3	3.75	1.68	8	21.51	7	2	0.0	0.0	0.0	2400
Scafide, Tony	Bethesda	88.5	70.8	79.7	98	22	62	14+	13	0	0				4.00	2.08	3	17.73	7	2				2400
Shaw, Kevin	Gaithersburg 2 WNW	90.8	69.8	80.3	100	22	60	2	20	0	0	21	SW	11	4.35	1.28	13	24.27	9	1	0.0	0.0	0.0	2400
Terry, Joe	Forest Glen	93.8	70.3	82.1	104	22	60	1+	26	0	0	26	W	11	3.45	1.46	3	23.07	6	2	0.0	0.0	0.0	2400
<u>Prince Georges, Maryland</u>																								
Smith, Brian	Oxon Hill	91.8	71.2	81.5	101	22+	61	16	22	0	0				3.50	1.14	8	24.11	7	1	0.0	0.0	0.0	2300
<u>St. Marys, Maryland</u>																								
Gleason, Wes	Hollywood 3 ENE	88.8	73.5	81.2	98	22+	66	1+	11	0	0	42	W	19	6.48	3.50	25	26.59	10	3	0.0	0.0	0.0	2400
Zyla, John	Ridge	91.3	73.2	82.3	101	22+	65	15	21	0	0	18	SW	3	1.96	0.51	25	21.87	9	0	0.0	0.0	0.0	2400
<u>Washington, Maryland</u>																								
Hutto, Max	Smithsburg 1.5 SW	89.9	65.0	77.5	99	22	53	1+	17	0	0	30		29	3.11	1.20	3	29.35	17	1	0.0	0.0	0.0	2400
Keefer, Greg	Hagerstown 1 E	91.5	68.3	79.9	102	22	56	1	21	0	0	59	W	22	3.68	0.73	3	27.38	12	0	0.0	0.0	0.0	2400
Vaughn, Jim	Smithsburg 3 NE	91.8	67.9	79.9	108	22	57	1	22	0	0	57	NW	2	1.59	0.54	2	26.37	10	0	0.0	0.0	0.0	2400
<u>Wicomico, Maryland</u>																								
NWS Salisbury	Wicomico Co. Apt	92.5	70.4	81.5	103	23	57	15	27	0	0	36	N	19	3.79	1.08	8	16.61	10	1	0.0	0.0	0.0	2400
<u>Arlington, Virginia</u>																								
NWS Washington National	National Airport	93.6	75.4	84.5	104	29	67	16	25	0	0	52	NNW	3	3.03	1.05	13	18.38	6	1	0.0	0.0	0.0	2400
<u>Loudon, Virginia</u>																								
NWS Washington Dulles	Dulles Airport	92.8	69.1	81.0	105	22	56	2	24	0	0	39	NNE	13	2.58	1.27	8	21.62	6	1	0.0	0.0	0.0	2400
Shaffer, Lance	Sterling 4 N																	17.75						2400
<u>Tucker, West Virginia</u>																								
Lesher, Dave	Davis 3 SE WV	78.1	58.7	68.4	88	23	50	1	0	0	0				5.60	1.21	14	49.62	13	1	0.0	0.0	0.0	0700
SECTION AVERAGE*		91.0	69.8	80.4											3.60			23.81						

*SECTIONAL AVERAGE DOES NOT INCLUDE DATA FROM WEST VIRGINIA.

**OBSERVER FOR LAVALE IS SCOTT LOHR. DATA COMPILED BY NATE MULLINS.

*** DATA FROM DEOS (DELAWARE ENVIROMENTAL OBSERVING SYSTEM) PERMISSION GRANTED FOR USE OF DATA

*** REC= UNIVERSITY of DELAWARE RESEARCH AND EDUCATION CENTER

NOTES:

M OR UNDERLINE= MISSING DATA

> = INCLUDED IN NEXT DAYS DATA

ITALIC = ESTIMATED DATA

+ = FIRST OF SEVERAL OCCURANCES

WINTER TYPE PRECIPITATION FROM STATIONS WITH

TIPPING BUCKET RAIN GAUGE MAY SHOW UNDER CATCH.

ALSO AMOUNTS CAUGHT MAY BE NOTED IN THE FOLLOWING
DAYS AS IT MELTS.

National Weather Service station data listed herein is preliminary and may be subject to change. The data has not been certified and cannot be used in legal actions.

Only reports certified by the National Climatic Data Center in Asheville, NC may be used for these purposes.

Accuracy of Data from ACON Observers not guaranteed.

GARY GALLAHER 1/27/12 REV 1

ACON MD / DE / DC
JULY 2011 DAILY TEMPERATURES

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVG	OBS TIME
BEAR 2 SW, DE GALLAHER	84	87	87	88	91	89	94	86	89	89	91	92	88	85	85	86	88	92	92	90	97	100	100	98	87	90	88	88	95	92	93	90.4	2400
	57	59	71	69	68	69	70	71	67	63	69	74	72	60	59	60	65	70	71	68	73	79	77	76	73	71	64	66	73	71	66	68.4	EDT
MIDDLETOWN 6 N LEGATES	85	90	89	89	93	91	96	87	89	91	92	92	89	85	85	86	89	93	93	90	96	101	69	94	86	91	87	89	96	91	93	89.8	2400
	58	60	71	70	69	70	70	71	68	64	69	74	73	60	60	61	66	70	71	69	74	79	77	76	73	72	67	66	73	71	69	69.0	EDT
WILMINGTON , DE NWS NEW CASTLE CO APT	86	89	88	91	93	92	94	88	90	90	91	92	88	87	86	87	89	93	92	89	97	102	100	98	86	91	89	87	95	93	94	91.2	2400
	59	61	72	70	70	71	72	71	68	64	71	75	72	62	63	64	67	72	72	70	76	82	80	77	74	73	67	69	75	73	69	70.4	EST
NEWARK AG FARM, DE U OF DE DEOS	83	87	86	88	90	89	93	86	87	89	90	91	87	84	85	85	88	92	94	89	96	102	100	96	85	91	88	89	95	92	94	90.0	2400
	59	61	70	70	68	69	70	71	68	63	67	74	74	60	59	62	65	72	71	68	73	81	79	75	73	72	65	66	73	71	68	68.9	EDT
TOWNSEND 4 W, DE U of D REC DEOS	84	89	88	88	90	89	95	87	87	90	91	91	88	83	84	85	88	92	91	89	95	100	97	94	87	89	85	88	95	90	92	89.6	2400
	58	59	71	70	68	70	69	70	68	64	69	73	70	62	60	60	67	70	70	68	74	79	79	75	71	70	67	66	72	69	67	68.5	EDT
GEORGETOWN, DE NWS SUSSEX CO APT	86	89	89	90	90	87	96	92	89	91	93	95	93	83	85	87	90	94	95	90	99	104	104	99	88	92	90	92	99	95	95	92.3	2400
	58	58	70	71	71	67	69	70	72	67	69	77	73	63	60	59	66	69	74	72	76	79	84	74	75	76	73	68	78	73	70	70.4	EST
GEORGETOWN, DE U of D REC DEOS	86	89	89	90	90	86	93	88	87	90	90	91	90	80	82	83	87	89	93	89	95	101	101	96	87	91	88	91	97	92	93	90.1	2400
	58	58	70	71	71	67	69	70	70	64	67	75	70	62	57	56	64	67	73	70	72	78	82	73	73	73	70	65	74	71	67	68.6	EDT
HARBESON 8 S, DE U of D REC DEOS	84	87	91	89	89	90	92	89	87	89	91	91	91	79	83	86	90	92	92	84	94	100	99	96	84	90	85	89	95	91	92	89.7	2400
	57	58	72	70	72	68	70	71	71	65	68	76	72	62	57	57	62	68	69	69	75	78	81	74	74	73	69	66	77	70	67	69.0	EDT
REHOBOTH BEACH BWK U of D DEOS	78	79	88	86	83	80	86	89	87	84	90	93	86	76	82	81	85	91	89	78	83	97	98	94	81	86	80	80	91	89	88	85.6	2400
	66	68	72	74	74	70	73	71	71	71	74	78	75	68	63	67	70	72	71	68	72	81	80	74	73	72	75	72	74	79	72	72.2	EDT
FROSTBURG LATTA	74	81	84	84	78	82	84	85	72	81	85	88	84	81	79	80	83	87	87	83	90	93	95	89	85	82	86	83	90	91	85	84.2	0700
	54	54	55	63	61	59	60	63	62	58	60	65	65	58	58	57	59	62	67	68	67	67	67	72	68	64	61	60	60	69	60	62.0	EDT
LAVALE MULLINS**	87	91	90	80	86	90	90	75	88	90	95	91	86	81	80	87	90	92	92	95	100	103	97	94	85	91	90	93	97	93	94	90.1	2400
	56	54	70	66	64	64	68	68	65	61	67	75	68	56	55	54	62	70	75	70	70	80	75	78	71	69	63	64	68	74	63	66.5	EDT
PASADENA 2 N HANSON	88	91	90	90	92	89	94	88	90	90	93	94	93	86	84	85	89	93	94	93	95	103	101	98	91	93	92	91	102	97	98	92.5	2400
	58	58	69	68	70	71	69	70	67	66	71	73	70	67	62	61	68	70	74	70	76	78	76	76	74	71	69	67	77	71	67	69.5	EDT
LOTHIAN JUG BAY	88	92	94	90	94	88	94	90	91	91	94	95	92	83	83	87	90	94	95	92	99	104	103	98	91	94	93	94	102	96	96	93.1	2400
	57	57	68	68	69	70	69	71	67	65	67	72	69	58	61	57	63	67	72	71	74	77	76	75	74	72	67	65	74	72	69	68.1	EDT
BALTIMORE NWS BWI APT	89	93	93	89	93	89	95	87	90	90	93	93	92	83	83	87	91	95	95	93	100	106	102	98	91	95	90	91	101	96	98	92.9	2400
	60	58	69	70	69	71	70	71	68	68	72	74	72	66	64	60	68	70	74	72	77	81	78	78	73	72	71	68	77	73	68	70.4	EST
LAUREL 2 E STOUDT	88	92	91	87	92	90	93	86	87	89	94	92	90	83	83	86	91	94	93	94	99	104	101	97	90	90	88	89	99	93	93	91.5	2400
	64	62	69	71	70	71	73	70	68	70	74	76	69	63	66	63	70	73	79	74	79	84	82	81	73	72	73	72	78	78	72	72.2	EST
REISTERSTOWN MULLER	86	90	90	89	91	91	92	86	88	90	93	90	91	85	84	87	92	93	96	95	98	102	100	93	91	93	92	91	100	93	94	91.8	2200
	60	62	65	66	69	72	70	68	67	69	72	74	72	65	65	65	73	78	78	72	78	81	79	76	76	70	68	70	75	75	69	70.9	EDT
OWINGS MILLS 2SE SHARROW	94	92	90	86	89	90	96	86	88	91	95	92	89	85	86	87	91	94	92	93	98	102	99	94	90	90	87	88	97	93	94	91.5	2400
	59	59	69	69	68	70	70	68	66	66	70	71	72	61	62	60	65	69	74	70	76	79	74	78	72	70	67	66	73	69	67	68.7	EDT
BALTIMORE 2SE MANFRE	92	94	98	93	95	95	98	91	92	94	96	97	94	89	90	90	94	100	98	95	103	107	104	101	94	99	93	94	104	97	100	96.2	2400
	74	72	74	76	78	79	73	76	76	78	78	81	78	72	72	73	74	77	80	78	83	88	86	86	78	80	79	78	82	82	79	78.1	EDT
BALT INNER HARBOR MD SCIENCE CENTER	92	94	98	94	96	95	98	90	93	96	98	98	96	88	90	91	95	99	97	95	103	108	103	100	93	98	93	94	104	97	99	96.3	2400
	74	73	73	76	77	79	73	76	75	78	78	81	78	72	72	72	74	77	80	78	83	88	86	86	78	79	79	79	82	83	79	78.0	EST
MANCHESTER 1SW CLOSE	84	90	88	86	90	90	93	87	85	89	93	89	88	81	83	85	90	92	94	94	97	102	98	92	91	89	85	86	95	91	92	90.0	2300
	59	62	65	65	65	70	67	64	63	66	68	68	67	58	59	60	62	66	72	68	74	77	71	75	69	66	64	66	71	70	69	66.6	EDT
WESTMINSTER 4 SSE HARTSOCK	86	93	94	88	92	90	92	90	88	89	96	94	91	86	83																		

ACON MD / DE / DC
JULY 2011 DAILY TEMPERATURES

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AVG	OBS TIME
LAUREL JHU / APL	86	92	92	88	90	89	95	86	87	90	94	91	89	84	81	85	89	92	93	94	98	103	98	93	90	93	88	90	99	92	92	91.1	2400
GIANNOLA	63	60	68	69	68	71	71	70	68	66	73	74	71	63	64	59	67	71	76	72	77	82	79	80	71	72	71	68	76	75	70	70.4	EDT
NORBECK 1 SE	90	94	90	86	90	88	94	86	88	90	94	93	89	82	81	85	89	92	92	94	98	101	97	94	92	91	90	91	98	94	96	91.3	2200
BERGER	60	59	69	67	67	69	70	69	67	66	71	71	71	61	61	59	67	69	73	73	77	78	76	78	73	70	69	68	76	75	70	69.3	EDT
POTOMAC 4N	86	91	91	86	89	87	92	86	88	90	94	93	89	83	81	85	88	91	91	94	97	100	96	92	90	92	90	91	99	94	94	90.6	2100
COHEN	61	60	69	68	68	70	72	71	68	67	70	72	72	62	65	60	66	68	74	74	77	78	77	79	75	71	70	69	76	77	73	70.3	EDT
OLNEY 1 S	87	91	88	83	89	88	92	85	85	89	93	92	88	82	81	85	89	92	92	93	>	>	102	94	89	92	89	90	100	92	93	89.8	2400
GIANNOLA	62	62	67	67	67	71	71	70	67	67	72	71	72	60	65	61	69	70	74	72	>	>	77	78	74	70	68	69	76	75	72	69.5	EDT
CLARKSBURG 2ENE	87	91	91	86	88	87	92	86	86	88	92	91	88	82	79	84	88	90	90	95	97	99	97	93	90	92	88	90	98	93	95	90.1	2400
HOLDEN	63	66	67	67	66	71	69	68	67	66	70	72	70	61	63	62	66	68	74	71	76	80	78	77	71	70	67	70	71	73	70	69.4	EST
MONTGOMERY VILLAGE																																	2400
ROTH 1SW																																	EDT
GLENMONT 1NNE	88	93	93	85	89	89	95	86	86	92	95	90	86	85	83	88	91	93	93	94	99	103	99	95	90	95	91	91	101	95	97	91.9	2400
ROSSEN	60	60	69	68	68	70	72	70	68	67	70	73	69	60	64	60	66	69	75	73	76	78	76	78	73	72	69	68	76	74	71	69.7	EST
BETHESDA	85	89	89	85	87	84	90	84	86	88	90	90	87	81	78	82	85	90	88	92	95	98	94	91	89	90	87	89	97	92	92	88.5	2400
SCAFIDE	63	63	68	68	69	72	72	70	68	68	72	72	67	62	65	62	68	70	75	74	77	79	78	79	72	72	72	72	76	77	74	70.8	EDT
GAITHERSBURG 2WNW	89	92	92	87	90	88	93	85	90	90	93	91	88	83	82	85	89	92	92	95	98	100	96	92	89	93	89	90	98	94	93	90.8	2400
SHAW	61	60	69	68	67	70	71	70	68	66	72	71	70	61	65	61	67	69	74	73	77	78	76	78	73	71	69	68	75	76	71	69.8	EDT
FOREST GLEN	90	94	95	90	93	89	95	87	91	93	96	95	92	88	83	88	91	95	93	98	99	104	100	96	93	95	93	95	101	97	99	93.8	2400
TERRY	60	60	68	68	68	71	71	70	67	67	73	73	71	60	65	60	67	69	75	74	77	80	78	79	73	71	69	70	77	76	72	70.3	EDT
OXON HILL	89	93	91	88	90	86	94	86	90	91	93	95	89	82	81	86	89	92	94	94	97	101	100	94	90	93	91	93	101	96	98	91.8	2300
SMITH	63	63	68	69	70	72	71	71	70	67	71	75	71	63	63	61	66	69	74	73	76	79	80	78	75	73	76	72	76	79	74	71.2	EDT
HOLLYWOOD 3 ENE	85	87	88	86	87	83	90	86	88	88	90	92	88	83	80	83	86	89	91	90	94	98	98	94	87	89	88	89	95	92	88	88.8	2400
GLEASON	66	68	72	70	73	73	71	73	72	71	74	81	73	71	68	66	72	73	73	73	76	82	82	80	73	75	74	73	78	77	76	73.5	EDT
RIDGE	86	89	91	87	90	83	92	89	86	89	92	94	92	84	85	87	90	93	93	91	96	101	101	96	90	92	92	92	100	95	94	91.3	2400
ZYLA	66	69	72	71	73	73	70	73	70	71	74	79	74	67	65	67	72	72	73	72	77	82	83	78	75	73	73	74	79	79	76	73.2	EDT
SMITHSBURG 1.5 SW	88	89	90	84	88	91	90	79	89	89	92	89	86	85	82	85	90	91	91	93	97	99	94	91	89	92	90	89	98	93	93	89.9	2400
HUTTO	53	53	69	66	62	65	67	68	65	60	66	70	64	60	59	55	60	64	72	70	73	73	71	74	71	65	61	61	71	68	60	65.0	EDT
HAGERSTOWN 1E	88	91	92	86	89	92	93	81	89	91	95	92	88	85	83	86	91	94	93	94	99	102	97	92	88	95	91	90	100	94	94	91.5	2400
KEEFER	56	57	71	67	66	69	71	69	66	63	70	74	70	62	63	58	64	70	74	72	76	75	74	78	73	67	68	65	72	73	63	68.3	EDT
SMITHSBURG 3 NE	85	90	92	91	90	91	91	81	86	90	98	91	86	85	80	83	89	94	96	99	102	108	101	95	91	94	88	92	102	92	92	91.8	2400
VAUGHN	57	59	70	67	63	67	68	68	64	64	70	73	69	62	63	60	64	69	74	71	75	78	74	77	72	68	65	67	70	72	64	67.9	EDT
SALISBURY	90	93	92	92	90	89	95	91	90	91	92	95	94	83	84	87	91	93	94	91	97	102	103	98	90	92	90	92	98	95	95	92.5	2400
NWS WICOMICO CO APT	59	61	71	72	73	70	71	72	70	66	67	77	73	62	57	58	65	69	73	73	75	80	82	76	75	74	71	67	79	74	70	70.4	EST
WASH NATIONAL	91	95	94	91	91	86	95	87	92	92	95	97	93	85	82	86	89	93	97	94	99	102	102	97	93	95	93	95	104	97	99	93.6	2400
NWS ASOS	69	68	70	73	74	76	73	75	72	73	76	77	74	68	69	67	72	73	79	77	80	83	84	84	78	76	78	78	80	81	80	75.4	EST
WASH DULLES	89	93	95	90	92	88	96	87	90	90	94	96	91	84	82	86	89	93	93	94	100	105	99	94	91	95	92	93	103	96	97	92.8	2400
NWS ASOS	58	56	69	68	67	69	71	68	68	63	71	71	71	60	64	59	63	68	73	75	75	76	76	77	73	73	71	68	72	76	73	69.1	EST
STERLING 4 N																																	2400
SHAFFER																																	EDT
DAVIS 3 SE WV	71	76	77	80	71	77	77	81	71	79	83	80	77	75	71	76	77	76	79	76	82	85	88	82	79	78	80	77	81	82	77	78.1	0700
LESHER	50	52	57	58	56	55	57	59	57	57	63	61	63	53	53	55	56	58	63	65	61	65	63	64	63	62	56	58	60	64	56	58.7	EDT

ACON MD / DE / DC
JULY 2011 DAILY PRECIPITATION

STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL	OBS TIME	
BEAR 2 SW, DE GALLAHER			0.02				0.01	2.95			T		T						0.06						1.74			0.52	0.18			5.48 0.0	2400 EDT	
MIDDLETOWN 6 N LEGATES			0.02				0.11	3.03	0.06										1.46	0.01			0.03	0.06	1.18	0.01		0.49	0.09			6.55 0.0	2400 EDT	
WILMINGTON , DE NWS NEW CASTLE CO APT			0.02				T	2.48			T		T						0.35				T		0.63			0.25	T			3.73 0.0	2400 EST	
NEWARK AG FARM, DE U OF DE DEOS								0.86			0.04								0.13	0.01					0.06			0.44	0.02			1.56 0.0	2400 EDT	
TOWNSEND 4 W, DE U of D REC DEOS								3.06			0.77								0.61						0.65	0.66		0.32	0.09			6.16 0.0	2400 EDT	
GEORGETOWN, DE NWS SUSSEX CO APT			T		0.01	0.08		1.52	0.01				0.05						0.27					0.93	0.08			T				2.95 -	2400 EST	
GEORGETOWN, DE U of D REC DEOS			0.01		0.02			1.25	0.02				0.06						0.17					0.57	0.40							2.50 0.0	2400 EDT	
HARBESON 8 S, DE U of D REC DEOS				0.02	0.02	0.33	0.17	0.22	0.60	0.09			0.04						0.37	0.20				1.00	0.04							3.10 0.0	2400 EDT	
REHOBOTH BEACH BWK U of DE DEOS			0.12		0.02	0.32		2.60	0.01				0.03						0.09	0.01				0.08	0.08	0.01						3.37 0.0	2400 EDT	
FROSTBURG LATTA			0.03	T	0.02			0.02	0.43			0.03							0.07	0.01			0.35		T					T		0.96 0.0	0700 EDT	
LAVALE MULLINS**				T				0.53			0.02								0.06			0.01						0.04	0.01			0.67 0.0	2400 EDT	
PASADENA 2N HANSON			0.46				0.03	1.63			0.16	0.01	0.18						0.24	0.01					0.15	0.01							2.88 0.0	2400 EDT
LOTHIAN JUG BAY			1.23		0.02			2.64			0.11		0.27	0.01					0.02						0.43	0.02							4.75 0.0	2400 EDT
BWI NWS ASOS			0.55	T		T	0.10	0.83			0.17		0.26						0.16				0.06		0.64			T					2.77 0.0	2400 EST
LAUREL 2 E STOUDT			0.50	T		T	T	1.03			0.04		1.03						0.01						2.74								5.35 0.0	2400 EST
REISTERSTOWN MULLER		T	0.28					1.52			T	0.09	T						0.18				0.68		1.61								4.36 0.0	2200 EDT
OWINGS MILLS 2SE SHARROW			0.27	T			0.07	0.47			0.43		T						0.08						2.79			T					4.11 0.0	2400 EDT
BALTIMORE 2SE MANFRE			0.21	T			0.97	0.28			0.12		0.27						1.23				T		0.35								3.43 0.0	2400 EDT
BALT INNER HARBOR MD SCIENCE CENTER			0.23				1.52	0.29			0.06		0.28						1.30						0.38								4.06 -	2400 EST
MANCHESTER 1SW CLOSE			0.51				0.06	1.63			0.27		T						T				0.09		0.91			0.04	0.01			3.52 0.0	2300 EDT	
WESTMINSTER 4 SSE HARTSOCK			0.68					0.55				1.10							0.05				0.05	0.21	1.16	0.02							3.82 0.0	1900 EDT
MILLERS 4NE MILLER			0.21				0.06	0.74				0.19	T					T					T	0.07	0.66				0.06			1.99 0.0	1800 EDT	
BRYANS ROAD 2 ESE BRUMBACK			0.67	0.05	0.01	0.01		2.01			0.45		2.09							0.01					0.10								5.40 0.0	2400 EDT
EMMITSBURG 2 SE GLASS			1.75					0.23	0.52			0.43													0.96				0.09				3.98 0.0	0630 EDT

ACON MD / DE / DC
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STATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL	OBS TIME
LAUREL JHU / APL GIANNOLA			0.42			T		0.45			0.19		0.72						0.08						0.96							2.82 0.0	2400 EDT
NORBECK 1 SE BERGER			1.20		T	0.01		1.73			0.26		0.40						T					T	0.74							4.34 0.0	2200 EDT
POTOMAC 4N COHEN			1.69			0.03		1.35			0.36		0.07						0.03			T			0.42							3.95 0.0	2100 EDT
OLNEY 1 S GIANNOLA			1.75	0.01		0.01		0.98			0.15		0.58						0.02					0.02	0.47							3.99 0.0	2400 EDT
CLARKSBURG 2ENE HOLDEN		T	0.89	0.03			0.11	0.82			0.72		0.28												0.64							3.49 0.0	2400 EST
MONTGOMERY VILLAGE ROTH 1SW																																	2400 EDT
GLENMONT 1NNE ROSSEN			1.07	T		0.01	T	1.68			0.42		0.25						0.01					T	0.31							3.75 0.0	2400 EST
BETHESDA SCAFIDE			2.08	0.01		0.01		1.41			0.23		0.13												0.13							4.00 -	2400 EDT
GAITHERSBURG 2WNW SHAW			0.88	0.02		0.03	0.05	0.82			0.36		1.28						0.21						0.70							4.35 0.0	2400 EDT
FOREST GLEN TERRY			1.46	T		0.01		1.10			0.23		0.05						T						0.60							3.45 0.0	2400 EDT
OXON HILL SMITH			0.78	0.01	T	0.04		1.14			T		0.98										0.41		0.14							3.50 0.0	2300 EDT
HOLLYWOOD 3 ENE GLEASON		0.02	0.20		0.01	0.37		1.01		0.02		0.01		0.07					1.27						3.50							6.48 0.0	2400 EDT
RIDGE ZYLA			0.06	0.03		0.28		0.38	0.06				0.18						0.28						0.51		0.18				T	1.96 0.0	2400 EDT
SMITHSBURG 1.5 SW HUTTO		0.55	1.20	0.04	0.01		0.04	0.69	0.01		0.02		0.02						0.11	0.01		0.14			0.02	0.01		0.02	0.21	0.01		3.11 0.0	2400 EDT
HAGERSTOWN 1E KEEFER		0.05	0.73	0.02			0.35	0.40			0.29		0.04						0.70			0.44			0.55			0.02	0.09			3.68 0.0	2400 EDT
SMITHSBURG 3 NE VAUGHN		0.54	0.38	0.12				0.38											0.03			0.03			0.03	0.02		0.04	0.02			1.59 0.0	2400 EDT
SALISBURY NWS WICOMICO CO APT			0.17		0.01	0.18		1.08	0.05		T		0.09						0.52					0.73	0.95	0.01						3.79 0.0	2400 EST
WASH NATIONAL NWS ASOS			0.87	T	T	0.07		0.60					1.05						0.24			T			0.20							3.03 0.0	2400 EST
WASH DULLES NWS ASOS			0.14	T		0.10		1.27			0.01		0.69												0.37							2.58 0.0	2400 EST
STERLING 4 N SHAFFER																																	2400 EDT
DAVIS 3 SE WV LESHER			T	0.93	0.19				0.74			0.11		1.21			T	T	0.03	0.19			0.66	0.07	0.75	0.22	0.42			0.08		5.60 0.0	0700 EDT