



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

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

ANOTHER JULY WITH EXCESSIVE HEAT

This was the third consecutive July with excessive heat and one of the hottest on record. Average temperatures of stations which appear of this report averaged 0.4° cooler than last year but it did not feel like it. Average max's were 1.3° cooler while average min's were 0.4° warmer. Temperatures at most stations failed to fall below 60 degrees.

Temperatures at NWS Washington National D.C. was the second hottest July and month in 141 years of records. 2010 & 1993 tied for the third hottest July. NWS Wilmington had its 3rd hottest in 119 years and NWS Baltimore tied 1934 and 1949 for its fifth hottest in 141 years.

Thunderstorms, many localized, brought varying amounts of rainfall. Total rainfall for the month varied greatly across the region, from less than 3/4 of an inch to over 6 inches. The lack of timely moisture and excessive heat severely stressed crops and yards in many areas especially east of the I-95 corridor.

The month started off hot and humid. Power was still being restored to some areas hit by the June 29th derecho.

90 degree plus temperatures were common from the 1st to the 8th. Many of the warmer locations observed triple digit temperatures from the 5th to the 8th. The hottest temperatures occurred from Baltimore City south to Washington D.C. and then eastwards through Charles County into the Delmarva peninsula. **Joe Manfre's** urban station of **Baltimore 2 SE** reported 100 degree temps seven of the first eight days. **Jug Bay Wetland of Lothian**, and **Marty Brumback** of **Bryans Road 4 SSE** each hit the 100 degree mark on four days. The heat peaked on the 7th with temperatures between 95° and 108°.

Thunderstorms on the 9th brought scattered heavy rains. **Richard Holden** of **Clarksburg 2 ENE** observed 3.29" while **Roy Lamberton** of **West Seaford** reported 2.34" for the 8th and 9th.

The extreme heat broke on the 10th and lasted through the 14th. Temperatures during this period were more typical for July.

Storms brought some rains from the 14th to the 16th. The only daily amount over 1" in Maryland/Delaware was reported by **Alexander McGinnis** of **Rockville 2 W** (2.05" on the 14th) and **Rich Giannola** of **Olney 1 S** (1.61" on the 14th).

The extreme heat returned on the 15th. Temperatures increased daily from the low to mid 90's on the 15th to upper 90's to 107° on the 18th.

The wettest period occurred from the 18th to the 21st. Rainfall during this period ranged from 3.62" at **Baltimore 2 SE** to 0.11" at **Hollywood 3 ENE**.

Temperatures on the 20th and 21st were uncharacteristic for this month. Maximums failed to rise out of the 60's or 70's across the region. These cool temperatures knocked the months average temperature down a few tenths of a degree.

Temperatures for the balance of the month were more typical for July. One reason was the moisture added to the soil the past week. Temperatures still managed to climb to the mid 90's to 100° in the southern areas. Storms on the 26th dumped 2.17" of rain at **Millers 4 NE**, 1.03" at **Manchester 1 SW** & 1.00" at **Bear 2 SW DE**.

EXTREMES REPORTED BY ACON OBSERVERS

MAXIMUM TEMPERATURE

Baltimore 2 SE	107
Pasadena 2 N	106

MINIMUM TEMPERATURE

Davis 3 SE WV	51
Emmitsburg 2 SE	52
Frostburg	56

WARMEST AVG. TEMP.

Baltimore 2 SE	86.3
Bryans Road 2 ESE	82.4

COLDEST AVG. TEMP.

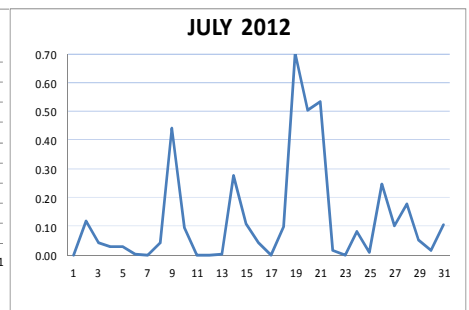
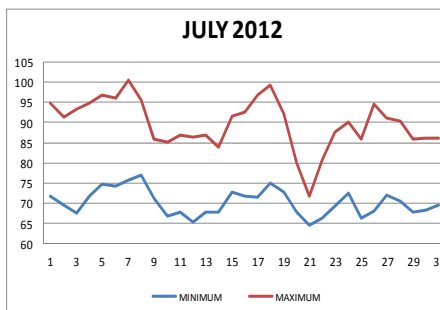
Davis 3 SE WV	68.6
Frostburg	72.4
Emmitsburg 2 SE	76.3

MAXIMUM PRECIPITATION

Davis 3 SE WV	7.66
Clarksburg 2 ENE	6.59
Rockville 2 W	5.73

MINIMUM PRECIPITATION

Hollywood 3 ENE	0.71
Bryans Road 2 ESE	1.63



ACON MD/DE Network

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

Below are links to updated 6/29/12 Derecho reports from:
NWS Mt Holly:
www.erh.noaa.gov/er/phi/Derecho-June29.html
NWS Sterling:
http://www.erh.noaa.gov/lwx/events/svrwx_20120629

OBSERVER COMMENTS FOR JULY 2012

Gary Gallaher of Bear 2 SW, DE

Of the 46 Julys of record here July was the 4th warmest due to the warm minimums (2nd warmest). The monthly minimum temperature of 63° was the warmest minimum temperature for any month of record. Old record was 60° set in July 1991, August 1967 and 1991. 100° on the 18th made it the first time 100° has occurred in three consecutive years in station history. Only 0.14" of rain fell during the last 14 days. Brown yards began to green-up after the rains of the 19th.

Greg Latta of Frostburg

Nine days with thunder.

14th - Fog with visibility less than 1/2 mile at obs. time.

Nate Mullins of LaVale

For the 3rd consecutive year, July was brutally hot. July was the 2nd hottest July and month on record just 0.3° cooler than 2011 and 0.2° warmer than 2010 which was the 3rd hottest. The mean minimum temperature was the warmest on record for July and any month. The old record of 67.3 was set in 2010 and tied in 2011. 60° monthly min is the highest ever.

7th - Record high of 102°.

Record high min's on **6th** 72°, & **8th** 75°.

26th - TS w/intense frequent lightning & heavy rain 7-8 AM. Also early evening TS with gusty winds and brief downpours.

Jeff Stoudt of Laurel 2 E

Very warm to downright hot weather prevailed all month long save for two days which interrupted the heat in a big way with rain cooled high of 69° on the 21st. The high heat sparked numerous thunderstorms in area throughout the month, but nearly all associated downpours were localized and were mostly miss. 7/10's of the months rain fell from the 19th to the 21st. The moistened ground blunted the returning heat from attaining its former glory.

Ray Muller of Reisterstown

Very hot month. No minimum temps below 60°. Wet month.

Marty Sharrow of Owings Mills

Temperatures were about 4° above normal while precipitation was slightly above normal.

Joe Manfre of Baltimore 2SE

HOT! 27 days with temps 90° or above at this urban station.

19th - Severe thunderstorm.

Ralph Hartsock of Westminster 4 SSE

4th to 7th & 18th - Sunny, very hot, humid.

19th - Late storms – overnight heavy storms.

Bobby Miller of Millers 4 NE

Thunder on 16 days.

20th - AM max 70°. PM temps in upper 60's.

26th - Heavy evening thunderstorm, 1.75" between 8 & 9 PM.

Marty Brumback of Bryans Road 2 ESE

Marty recorded a total of eight century mark days in July. He said that the high temperatures seemed primarily caused by a severe drought in southern Maryland, and the second warmest July in 141 years at DC NWS official weather station, where seven 100 days were recorded. 3.46" of rain has fallen during the last 60 days.

Rob Cohen of Potomac 4 N

Average max. temperature was 2 degrees cooler than last July but the average min. temperature was the same.

19th - Thunderstorm 9:30 PM - 10:30 PM 1.43" of rain.

21st - 69° max. Lowest July max. temperature on record.

Rich Giannola of Olney 1 S

14th - Morning +SHRA & +TSRA ending by 7 AM.

Richard Holden of Clarksburg 2 ENE

9th - 3.29" of rain - daily precipitation record.

Alexander McGinnis of Rockville 2 W

Oh yeah another record setting hot one! Couple of crazy storms (14th & 19th) kept the streak of above normal precipitation going for all Julys since 2009.

14th - 2.05" of rain—heaviest since 12/7/2011.

19th - ~1.50" of +TSRA 9:37 PM to 9:50 PM.

23rd - Dense AM fog dissipated by 7 AM.

Stan Rossen of Glenmont 1 NNE

18th to 22nd - 2.62" of rain fell these four days.

21st - Maximum temperature 68°.

Kevin Shaw of Gaithersburg 2 WNW

July was warm and dry, typical for most of the months during the present year. The average minimum temperature tied the warmest min. set last year. The average maximum temperature was below 90° for the first July since 2009. The month's minimum of 63° was the warmest ever for July.

7th - Tied max temperature of 99° set 1988, tied 2010.

21st - Record daily minimum max temp of 68°.

Joe Terry of Forest Glen

Temps averaged 4 degrees above normal, with the average min being the highest in station history (since 1995). This was the second warmest July.

19th - Strong thunderstorm late evening with intense lightning and very heavy rainfall. 0.53" fell in the 5-minute period ending at 2211 hours.

Wes Gleason of Hollywood 3 ENE

Temperature did not drop below 70°. Very dry with only 0.71" of rain. Two thunderstorms this month.

John Zyla of Ridge

10 Thunderstorms this month, with 5 isolated thunderstorms (7/10, 7/15, 7/16, 7/18 and 7/31) just over Ridge and nowhere else in St. Mary's County! No drought here.

Max Hutto of Smithsburg 1.5 SW

19th - Hot/humid, PM t/storms w/heavy rain.

28th - PM t/storm with heavy rain.

Greg Keefer of Hagerstown 1 E

4th hottest July. Hottest are 1999 & 2010, each 80.0°.

18th - A line of strong thunderstorms were moving in from the NW around 2:30 PM but once again began to fall apart just as they moved into this area but they did produce some strong winds for about 25 minutes between 2:40 to 3:05 PM with many gusts of 40+ mph. Very little rain fell. Some tree damage reported in the area.

Jim Vaughn of Smithsburg 2 NE

7th - 104° new daily max and tied for the 3rd hottest ever.

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.

**ACON MD / DE / DC
JULY 2012 SUMMARY**

OBSERVER	STATION COUNTY, STATE	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
<i>New Castle, Delaware</i>																								
Gallaher, Gary	Bear 2 SW	88.9	69.2	79.1	100	18	63	3+	14	0	0	31	ENE	26	3.36	1.40	19	20.97	10	2	0.0	0.0	0.0	2400
Legates, David	Middletown 6 N	88.7	69.8	79.3	99	18	64	3	14	0	0	20		20	2.24	0.53	26	20.84	13	0				2400
NWS Wilmington	New Castle Co. Apt.	90.2	70.5	80.4	101	7+	64	12	17	0	0	39	W+	15+	3.05	1.11	26	17.06	8	1	0.0	0.0	0.0	2400
UofDE AG FARM DEOS***	Newark	88.6	69.2	78.9	99	7+	62	12	14	0	0	25		15	2.31	0.86	26	17.80	8	0				2400
U of D REC DEOS***	Townsend 4 W	88.3	69.2	78.8	100	18	63	3	14	0	0	33		18	1.77	0.51	18	15.90	12	0				2400
<i>Sussex, Delaware</i>																								
Lamberton, Roy	West Seaford	92.7	71.1	81.9	103	7	66	13+	18	0	0	30	WSW	28	5.60	1.58	9	<u>9.32</u>	12	2	0.0	0.0	0.0	2400
NWS Georgetown	Sussex Co. Airport	91.4	71.9	81.7	103	7	66	6+	18	0	0	31	SW+	9+	3.29	1.11	9	14.29	9	1				2400
U of D REC DEOS***	Georgetown 5 SW	89.2	70.0	79.6	101	7	63	13	16	0	0	33		28	1.95	0.77	9	14.94	7	0				2400
U of D REC DEOS***	Harbeson 8 S	87.8	69.6	78.7	99	7	62	13	16	0	0	20		28	2.54	1.13	9	16.18	8	1				2400
U of D DEOS***	Rehoboth Beach Bwk	85.1	71.7	78.4	101	7	66	21+	8	0	0	27		20	2.32	0.71	9	16.94	8	0				2400
<i>Allegany, Maryland</i>																								
Latta, Greg	Frostburg	82.0	62.7	72.4	91	1+	56	25	2	0	0				4.61	0.86	15	24.90	12	0	0.0	0.0	0.0	0700
Mullins, Nate**	LaVale	88.7	67.3	78.0	102	7	60	30	15	0	0				4.33	0.86	14	21.16	12	0	0.0	0.0	0.0	2400
<i>Anne Arundel, Maryland</i>																								
Hanson, Dan	Pasadena 2 N	91.7	70.4	81.1	106	7	64	12	20	0	0	21	ENE	19	4.14	0.94	19	16.65	13	0	0.0	0.0	0.0	2400
Jug Bay Wetlands	Lothian	91.9	69.2	80.6	104	7+	64	12	17	0	0	37		28	5.06	1.81	28	19.08	11	2	0.0	0.0		2400
NWS Baltimore	BWI Airport	91.7	71.2	81.5	104	7+	64	12+	21	0	0	35	NW	26	3.27	1.24	21	16.65	10	1	0.0	0.0	0.0	2400
Stoudt, Jeff	Laurel 2 E	90.0	72.2	81.1	103	7	64	21	15	0	0				4.07	1.90	19-21	18.96	7	1	0.0	0.0	0.0	2400
<i>Baltimore, Maryland</i>																								
Muller, Ray	Reisterstown	89.4	70.9	80.2	100	7	62	20	18	0	0	35	NW	26	5.47	1.31	20	19.57	14	3	0.0	0.0	0.0	2100
Sharrow, Marty	Owings Mills 2 SE	88.7	68.4	78.6	99	18	61	21	15	0	0				4.03	1.22	21	17.88	8	1	0.0	0.0	0.0	2400
<i>Baltimore City, Maryland</i>																								
Manfre, Joe	Baltimore 2 SE	95.4	77.2	86.3	107	18	67	21	27	0	0				5.29	2.54	19	<u>12.15</u>	9	1	0.0	0.0	0.0	2400
Maryland Science Ctr	Baltimore Inner Harbor	95.2	77.3	86.3	108	7	67	21	27	0	0				5.98	3.02	19	17.86	10	1				2400
<i>Carroll, Maryland</i>																								
Close Jr, Herb	Manchester 1 SW	87.1	67.1	77.1	98	18	59	21	10	0	0				5.41	1.04	19	23.82	14	2	0.0	0.0	0.0	2300
Hartsock, Ralph	Westminster 4 SSE	92.7	69.8	81.3	104	7	62	12	24	0	0				5.19	1.70	20	24.39	9	3	0.0	0.0	0.0	1900
Miller, Bobby	Millers 4 NE	87.5	66.6	77.1	97	7	60	12	13	0	0				5.27	2.17	27	24.57	15	1	0.0	0.0	0.0	1800
<i>Charles, Maryland</i>																								
Brumback, Marty	Bryans Road 2 ESE	93.3	71.5	82.4	104	7+	67	12+	21	0	0				1.63	0.32	28	14.66	12	0	0.0	0.0	0.0	2359
<i>Frederick, Maryland</i>																								
Glass, Eric	Emmitsburg 2 SE	86.6	65.9	76.3	97	8	52	3	10	0	0				3.82	1.81	20	22.28	12	1	0.0	0.0	0.0	0700
<i>Howard, Maryland</i>																								
Giannola, Rich	Laurel JHU / APL	STATION CLOSED 2/1/2012															<u>1.83</u>						2400	

**ACON MD / DE / DC
JULY 2012 SUMMARY**

OBSERVER	STATION COUNTY, STATE	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
<i>Montgomery, Maryland</i>																								
Berger, Ron	Norbeck 1 SE	89.9	69.4	79.7	101	7	63	12+	16	0	0				4.92	1.71	21	20.99	13	2	0.0	0.0	0.0	2200
Cohen, Rob	Potomac 4 N	88.5	70.3	79.4	98	7+	64	21+	14	0	0				4.14	1.72	20	20.70	8	2	0.0	0.0	0.0	2100
Giannola, Rich	Olney 1 S	88.0	69.7	78.9	98	7	63	21	14	0	0				5.10	1.78	19-20	21.16	12	2	0.0	0.0	0.0	2400
Holden, Richard	Clarksburg 2 ENE	87.2	68.8	78.0	98	7	62	21	12	0	0	44	WSW	19	6.59	3.29	9	25.05	13	2	0.0	0.0	0.0	2400
McGinnis, Alex	Rockville 2 W	88.1	70.5	79.3	98	18	63	21	14	0	0				5.73	2.12	19	22.95	9	2	0.0	0.0	0.0	2400
Rossen, Stan	Glenmont 1 NNE	<i>Final Data Delayed</i>			101	7	64	21				16		21+	3.58	1.21	21	19.43		2	0.0	0.0	0.0	2400
Scafide, Tony	Bethesda	87.4	71.4	79.4	99	18	64	21	11	0	0				3.57	1.50	19	19.73	9	2				2400
Shaw, Kevin	Gaithersburg 2 WNW	88.6	69.8	79.2	99	7	63	21	14	0	0	23	ENE	18	3.04	1.13	19	20.36	13	1	0.0	0.0	0.0	2400
Terry, Joe	Forest Glen	92.0	70.5	81.3	102	7	64	21+	20	0	0	23	WNW	26	4.02	1.26	19	20.35	12	2	0.0	0.0	0.0	2400
<i>Prince Georges, Maryland</i>																								
Smith, Brian	Oxon Hill	91.5	71.9	81.7	103	8	65	21	18	0	0				2.96	1.23	20	17.97	9	1	0.0	0.0	0.0	0700
<i>St. Marys, Maryland</i>																								
Gleason, Wes	Hollywood 3 ENE	90.0	74.6	82.3	99	7	70	2+	17	0	0	36	W	2	0.71	0.27	2	14.46	8	0	0.0	0.0	0.0	2400/0700
Zyla, John	Ridge	91.2	73.2	82.2	102	7	68	13	17	0	0	23	SW	15	5.47	1.95	10	23.06	15	2	0.0	0.0	0.0	2400
<i>Washington, Maryland</i>																								
Hutto, Max	Smithsburg 1.5 SW	88.1	66.6	77.4	98	7	61	3+	14	0	0				4.74	1.60	19	27.38	17	1	0.0	0.0	0.0	2400
Keefer, Greg	Hagerstown 1 E	89.7	68.2	79.0	101	7	62	21	14	0	0	48	NW	18	4.40	1.55	19	24.35	16	2	0.0	0.0	0.0	2400
Vaughn, Jim	Smithsburg 3 NE	89.9	67.3	78.6	104	7	60	21	15	0	0	52	NW	18	3.58	0.84	20	24.17	17	0	0.0	0.0	0.0	2400
<i>Wicomico, Maryland</i>																								
NWS Salisbury	Wicomico Co. Apt	92.8	72.8	82.8	102	5+	65	13	19	0	0	52	W	2	2.34	0.88		18.25	12	0				2400
<i>Arlington, Virginia</i>																								
NWS Washington Nationz	National Airport	93.1	74.9	84.0	105	7	67	21	22	0	0	43	NW	26	2.81	0.69	8	15.93	12	0	0.0	0.0	0.0	2400
<i>Loudon, Virginia</i>																								
NWS Washington Dulles	Dulles Airport	91.4	69.8	80.6	101	8+	63	12	18	0	0	45	NW	19	2.43	1.02	19	17.03	10	1	0.0	0.0	0.0	2400
Shaffer, Lance	Sterling 4 N																	<u>4.39</u>						2400
<i>Tucker, West Virginia</i>																								
Leshner, Dave	Davis 3 SE WV	78.3	58.8	68.6	89	8	51	10+	0	0	0				7.66	2.51	21	31.56	14	3	0.0	0.0	0.0	0700
SECTION AVERAGE*		89.7	70.2	80.0											3.86		19.66			0.0		0.0		

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.

*SECTIONAL AVERAGE DOES NOT INCLUDE DATA FROM WEST VIRGINIA.

**OBSERVER FOR LAVALLE 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

**** DUAL TIME IN OBS TIME COLUMN = TEMPERATURE/PRECIPITATION

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 08/31/12

ACON MD / DE / DC
JULY 2012 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	94	88	92	92	96	95	98	91	87	85	87	87	88	81	91	93	97	100	87	75	76	83	88	94	86	92	89	91	85	84	84	88.9	2400
MIDDLETOWN 6 N DE LEGATES	93	88	91	92	95	93	98	90	87	85	86	86	88	81	92	92	96	99	87	75	76	84	89	93	86	94	89	92	85	84	84	88.7	2400
WILMINGTON , DE NWS NEW CASTLE CO APT	95	91	94	95	99	97	101	93	89	83	88	88	89	82	93	93	98	101	86	75	77	83	91	96	87	93	92	92	86	84	84	90.2	2400
NEWARK AG FARM, DE U OF DE DEOS	93	88	91	93	95	94	99	90	89	82	87	88	89	81	91	91	97	99	85	74	77	82	89	93	85	92	89	90	85	84	85	88.6	2400
TOWNSEND 4 W, DE U of D REC DEOS	92	88	90	92	95	93	98	91	78	M	86	86	88	84	91	91	97	100	88	74	74	82	88	93	84	94	89	92	84	84	85	88.3	2400
LAMBERTON, ROY WEST SEAFORD	99	M	98	96	100	95	103	101	86	89	87	87	92	86	91	M	99	101	97	83	76	86	91	95	90	97	98	M	M	89	90	92.7	2400
GEORGETOWN, DE NWS SUSSEX CO APT	99	94	97	96	100	98	103	96	83	87	85	85	89	87	92	93	97	100	93	84	76	83	91	95	87	97	96	93	86	85	85	91.4	2400
GEORGETOWN, DE U of D REC DEOS	96	91	94	93	99	96	101	96	81	85	83	83	87	84	89	91	96	97	92	82	73	82	89	93	85	94	94	91	85	83	83	89.2	2400
HARBESON 8 S, DE U of D REC DEOS	94	90	91	93	96	92	99	89	80	82	80	80	85	83	90	91	95	98	92	83	73	80	89	92	86	95	93	91	83	80	81	87.8	2400
REHOBOTH BEACH BWK U of D DEOS	85	88	84	93	94	83	101	88	76	79	78	78	82	81	92	85	94	100	87	82	71	77	88	95	83	94	87	85	77	76	75	85.1	2400
FROSTBURG LATTA	91	84	84	85	87	86	88	91	86	81	81	82	81	71	74	83	83	88	87	85	73	64	81	78	79	83	87	81	79	77	81	82.0	0700
LAVALA MULLINS**	92	90	92	95	94	96	102	94	92	90	86	84	83	78	88	93	97	97	90	78	73	86	86	85	85	92	88	86	85	88	84	88.7	2400
PASADENA 2 N HANSON	98	93	97	98	102	99	106	97	87	90	90	88	90	84	94	96	102	104	94	75	69	82	89	91	88	95	92	93	87	88	87	91.7	2400
LOTHIAN JUG BAY	98	95	98	100	100	99	104	101	85	88	87	87	89	86	97	97	102	104	96	82	70	83	89	92	90	81	95	96	86	88	86	91.9	2400
BALTIMORE NWS BWI APT	97	94	96	97	99	99	104	100	86	90	90	88	90	84	96	95	100	104	95	79	69	81	91	91	87	97	91	91	88	87	86	91.7	2400
LAUREL 2 E STOUDT	96	91	93	96	98	99	103	98	84	87	89	87	88	82	92	94	99	99	92	79	69	80	83	85	86	97	89	91	87	88	88	90.0	2400
REISTERSTOWN MULLER	93	90	93	93	96	97	100	92	90	90	92	87	85	84	92	91	96	98	92	77	70	80	90	88	86	95	88	86	87	86	86	89.4	2100
OWINGS MILLS 2SE SHARROW	93	90	93	95	95	95	98	95	84	89	87	87	86	83	89	92	96	99	91	73	68	78	86	90	86	96	89	90	86	85	88.7	2400	
BALTIMORE 2SE MANFRE	101	97	101	102	103	104	106	102	91	92	94	93	94	91	99	100	103	107	98	80	73	84	94	96	91	102	94	95	90	89	91	95.4	2400
BALT INNER HARBOR MD SCIENCE CENTER	101	96	100	100	103	103	108	99	92	93	95	93	95	90	99	99	103	107	97	79	73	84	95	97	90	101	95	96	89	90	90	95.2	2400
MANCHESTER 1SW CLOSE	93	89	93	93	95	93	97	91	86	87	83	85	87	79	89	88	95	98	89	71	65	77	88	89	83	91	86	87	83	85	84	87.1	2300
WESTMINSTER 4 SSE HARTSOCK	97	92	97	97	101	99	104	93	91	92	92	92	95	89	94	96	98	101	95	79	75	85	92	94	86	96	94	93	86	90	89	92.7	1900
MILLERS 4NE MILLER	92	91	91	93	94	92	97	93	87	84	84	85	85	80	89	90	93	95	88	82	70	78	87	89	82	92	91	86	85	84	84	87.5	1800
BRYANS ROAD 2 ESE BRUMBACK	100	94	98	98	100	100	104	104	84	89	90	88	90	90	98	96	100	102	97	82	71	84	90	94	89	101	96	97	89	89	89	93.3	2359
EMMITSBURG 2 SE GLASS	86	91	89	90	90	93	92	97	92	85	85	85	85	85	80	88	89	94	95	89	76	70	77	85	87	81	92	84	85	84	83	86.6	0700
	67	66	52	63	68	69	70	74	70	67	64	61	61	66	70	70	67	67	72	70	62	65	67	64	64	66	67	66	63	64	65.9	EDT	

**ACON MD / DE / DC
JULY 2012 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 GIANNOLA																																		2400 EDT
NORBECK 1 SE BERGER	93 71	92 68	95 67	95 70	97 73	98 74	101 74	99 80	84 69	89 66	90 68	87 63	87 68	83 66	92 73	93 70	97 70	99 73	94 74	77 68	68 63	83 66	86 69	86 72	86 64	95 66	89 71	90 71	86 67	87 67	88 69	89.4	2200 EDT	
POTOMAC 4N COHEN	93 72	89 71	92 69	94 71	95 72	95 75	98 75	97 78	82 71	87 68	87 69	85 65	84 69	80 67	91 73	91 71	96 71	98 76	92 75	85 69	69 64	77 64	83 70	85 71	84 65	96 67	91 73	89 71	85 69	87 68	88 71	88.5	2100 EDT	
OLNEY 1 S GIANNOLA	92 72	90 70	92 69	93 71	95 72	94 74	98 75	95 79	82 69	86 67	86 69	85 64	85 68	82 66	90 73	90 70	95 71	97 75	91 72	77 67	68 63	78 66	85 70	85 71	84 64	95 67	87 71	89 70	> >	> >	86 66	88.0	2400 EDT	
CLARKSBURG 2ENE HOLDEN	91 74	88 65	90 69	93 68	93 73	94 74	98 74	94 76	83 77	86 66	86 68	84 65	83 69	83 64	90 72	90 70	94 72	97 73	89 70	77 65	67 62	80 65	85 70	85 70	82 63	93 68	86 71	87 66	83 65	86 68	86 67	87.2	2400 EST	
ROCKVILLE 2 W McGINNIS	92 73	90 72	93 70	93 71	94 74	95 76	97 76	96 79	82 69	87 68	88 69	86 66	85 68	84 67	90 73	90 71	94 72	98 74	90 73	80 66	68 63	79 66	85 71	86 71	83 67	94 68	86 73	88 72	85 68	85 68	88 70	88.1	2400 EST	
GLENMONT 1NNE ROSSEN																																		2400 EST
BETHESDA SCAFIDE	94 75	98 76	97 79	94 83	M M	M M	M M	84 80	82 70	87 69	85 70	84 66	85 69	84 67	91 74	91 71	95 72	99 75	91 73	80 68	68 64	79 67	85 71	85 70	84 65	93 70	90 74	88 72	84 69	85 69	85 71	87.4	2400 EDT	
GAITHERSBURG 2WNW SHAW	94 72	91 71	93 69	95 70	95 72	96 74	99 75	95 78	85 69	87 67	86 67	86 64	84 68	83 67	91 73	91 70	96 71	97 74	92 72	78 68	68 63	81 67	86 71	86 71	85 66	95 67	87 73	89 70	84 67	86 67	86 70	88.6	2400 EDT	
FOREST GLEN TERRY	96 72	93 73	96 69	97 70	98 74	99 75	102 76	101 79	87 71	91 69	90 68	88 65	89 69	87 68	95 74	94 71	100 74	101 74	96 68	80 64	69 66	84 66	88 71	88 70	88 68	98 68	94 73	93 72	89 68	91 68	90 71	92.0	2400 EDT	
OXON HILL SMITH	95 71	97 74	92 71	96 71	97 75	98 79	98 77	103 80	100 73	85 72	88 72	87 69	86 70	88 70	87 70	95 73	93 73	99 74	101 76	96 74	80 65	69 66	84 67	89 72	90 71	88 70	98 71	91 73	93 70	88 70	87 71	91.5	700 EDT	
HOLLYWOOD 3 ENE GLEASON	95 74	91 71	92 73	94 77	97 78	96 80	99 78	98 75	84 76	85 76	84 73	85 72	86 71	85 74	92 77	92 76	98 75	98 79	92 78	83 72	73 70	83 70	88 73	91 75	85 75	97 75	93 77	92 73	88 73	86 73	87 74	90.0	2400 EDT	
RIDGE ZYLA	99 69	93 69	95 70	98 76	98 79	98 79	102 79	100 74	84 77	85 70	86 74	87 72	87 68	86 72	92 73	94 74	98 75	98 73	92 76	84 72	74 71	84 71	88 75	93 71	87 71	97 74	95 76	94 72	87 71	88 74	87 69	91.2	2400 EDT	
SMITHSBURG 1.5 SW HUTTO	93 67	90 66	91 61	93 67	93 67	96 68	98 72	92 73	88 65	88 64	87 61	88 66	83 66	82 66	91 71	91 69	95 64	96 72	91 70	75 65	72 62	81 66	85 65	85 71	84 63	95 63	86 70	85 67	85 63	87 62	86 68	88.1	2400 EDT	
HAGERSTOWN 1E KEEFER	95 69	90 68	93 64	96 67	96 70	98 71	101 75	93 77	88 73	89 68	89 66	88 63	84 68	84 66	93 73	93 69	98 67	98 72	91 71	77 65	72 62	83 66	87 67	87 71	84 63	98 68	87 71	88 69	86 65	89 63	87 68	89.7	2400 EDT	
SMITHSBURG 3 NE VAUGHN	95 68	87 65	91 64	99 67	97 70	99 71	104 72	94 75	88 72	91 66	86 66	88 65	81 68	84 65	92 72	93 70	98 67	100 69	93 70	78 64	71 60	81 65	87 67	91 70	82 62	101 66	88 70	87 66	84 64	88 63	88 67	89.9	2400 EDT	
SALISBURY NWS WICOMICO CO APT	98 77	94 72	94 67	95 78	102 81	99 77	102 75	100 76	84 75	87 72	85 70	85 68	89 65	86 67	95 77	94 77	99 78	100 76	97 73	87 71	77 68	86 73	92 71	98 69	89 70	98 74	100 74	97 71	93 67	87 72	87 72	92.8	2400 EST	
WASH NATIONAL NWS ASOS	99 77	95 79	98 75	99 75	100 80	100 81	105 82	102 77	87 74	90 72	89 73	88 72	90 75	88 71	96 76	96 77	100 80	101 75	95 70	82 67	71 70	82 70	90 75	93 74	89 72	100 74	95 77	97 74	90 72	89 75	90 74	93.1	2400 EST	
WASH DULLES NWS ASOS	96 71	92 73	95 68	96 70	98 71	98 76	101 75	101 76	85 71	89 67	89 67	87 63	86 69	87 68	95 73	96 69	99 69	101 73	94 73	83 67	69 65	84 67	89 69	90 71	86 69	98 68	90 72	92 70	89 69	89 65	90 70	91.4	2400 EST	
STERLING 4 N SHAFFER																																		2400 EDT
DAVIS 3 SE WV LESHER	81 59	83 54	78 57	82 58	83 60	84 64	86 66	89 68	84 62	76 51	76 53	77 57	75 60	63 56	79 62	77 55	78 63	83 64	82 58	81 60	72 58	71 58	78 60	76 64	75 51	77 51	82 61	76 61	73 58	74 55	76 59	78.3	0700 EDT	

**ACON MD / DE / DC
JULY 2012 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		0.01							0.09	0.01				0.01	0.02			T	1.40	0.43	T		T	0.03		1.00		T	0.36			3.36 0.0	2400 EDT					
MIDDLETOWN 6 N DE LEGATES		0.12		0.03					0.04					0.02	0.11				0.27	0.49				0.08		0.53	0.01		0.08	0.01	0.45	2.24 -	2400 EDT					
WILMINGTON, DE NWS NEW CASTLE CO APT				T					0.02	T				T	0.32	T		T	0.26	0.17	0.01		T	0.92		1.11		0.24	T			3.05 0.0	2400 EST					
NEWARK AG FARM, DE U OF DE DEOS														0.01	0.30				0.57	0.40	0.03					0.86	0.01		0.13			2.31 -	2400 EDT					
TOWNSEND 4 W, DE U of D REC DEOS	0.01	0.15		0.03					0.12	M				0.17				0.51	0.04	0.38	0.02					0.15			0.01	0.18			1.77 -	2400 EDT				
LAMBERTON, ROY WEST SEAFORD		0.74			0.05			0.76	1.58					M	0.33	0.33				0.43	0.13	0.06					0.01	1.16	0.02				5.60 0.0	2400 EDT				
GEORGETOWN, DE NWS SUSSEX CO APT		0.13		T	T			T	1.11					0.02	0.23	0.01		T	T	0.73	0.04		T					0.45	0.57				3.29 -	2400 EST				
GEORGETOWN, DE U of D REC DEOS		0.17						0.03	0.77					0.03																				1.95 -	2400 EDT			
HARBESON 8 S, DE U of D REC DEOS		0.06							1.13						0.01				0.63	0.20	0.02							0.34	0.15					2.54 -	2400 EDT			
REHOBOTH BEACH BWK U of DE DEOS		0.01	0.10						0.71					0.01		0.08			0.63	0.26									0.52					2.32 -	2400 EDT			
FROSTBURG LATTA	T			0.30	0.39									0.28	0.86	0.04			0.05	0.61	0.72	0.04				0.32	0.64	0.36						4.61 0.0	0700 EDT			
LAVALE MULLINS**			0.13	0.08									0.08	0.86	0.04			T	0.72	0.85	0.07			0.27	0.02	0.82	T				0.39			4.33 0.0	2400 EDT			
PASADENA 2N HANSON		0.17							0.58					0.10	0.06	0.01		0.03	0.94	0.77	0.88					0.29	0.01			0.29	0.01				4.14 0.0	2400 EDT		
LOTHIAN JUG BAY		0.02	0.02						0.70					0.01	0.02				1.51	0.65	0.30	0.01	0.01					1.81							5.06 0.0	2400 EDT		
BWI NWS ASOS		0.04	T						0.33				T	0.26	0.06	T		0.02	0.86	0.20	1.24		T	T		0.23				0.03					3.27 0.0	2400 EST		
LAUREL 2 E STOUDT		0.43							0.30	T			T	0.37	0.05	T		0.92	>	>	1.90		T	T		0.10		T			T				4.07 0.0	2400 EST		
REISTERSTOWN MULLER		0.34	0.04		0.03			T	0.50	0.03			T	0.04	0.02			T	0.09	1.31	1.03			1.02		0.34	0.52				0.16					5.47 0.0	2100 EDT	
OWINGS MILLS 2SE SHARROW		0.27	T		T			T	0.51					0.15	0.39			T	0.66	0.03	1.22	T				0.80					T					4.03 0.0	2400 EDT	
BALTIMORE 2SE MANFRE		0.36							0.31					0.50	0.02				2.54	0.24	0.84					0.28			0.20							5.29 0.0	2400 EDT	
BALT INNER HARBOR MD SCIENCE CENTER		0.36							0.33					0.56	0.02				3.02	0.30	0.92	0.01				0.45				0.01						5.98 -	2400 EST	
MANCHESTER 1SW CLOSE		0.04	0.03	0.07	0.68				T	0.91			T	0.22	0.21			0.35	1.04	0.17	0.64	0.01				1.03					0.01					5.41 0.0	2300 EDT	
WESTMINSTER 4 SSE HARTSOCK		0.10		0.08					0.66					0.19	T			0.13	0.21	1.70	1.09					T	1.03									5.19 0.0	1900 EDT	
MILLERS 4NE MILLER		0.22		0.09	T	0.12			T	0.24				0.43	0.29	0.12		0.21	0.03	0.89	0.26	0.01	T	0.16		0.03	2.17	T	T	T						5.27 0.0	1800 EDT	
BRYANS ROAD 2 ESE BRUMBACK		0.05						0.12	0.31						0.02	0.30			0.30	0.01	0.11	0.02				0.01		0.32				0.06					1.63 0.0	2359 EDT
EMMITSBURG 2 SE GLASS		0.01		0.04	0.07				0.20					0.27		0.30			0.08	1.81	0.65	0.18			0.07		0.14									3.82 0.0	0700 EDT	

**ACON MD / DE / DC
JULY 2012 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	
LAUREL JHU / APL GIANNOLA																																		2400 EDT
NORBECK 1 SE BERGER		0.22	0.02	T					0.35				T	0.69	0.04	0.02		0.01	0.40	1.28	1.71	T		0.04			0.01			0.13	4.92 0.0	2200 EDT		
POTOMAC 4N COHEN			0.10						0.28				T	0.77	0.02	0.04				1.72	1.19	T		0.02						T	4.14 0.0	2100 EDT		
OLNEY 1 S GIANNOLA			0.04	0.01					0.51				T	1.61	0.04	0.03		T	>	1.78	0.93	T		0.02		0.03		0.04		0.06	5.10 0.0	2400 EDT		
CLARKSBURG 2ENE HOLDEN		0.18	0.01	0.01				T	3.29	T			T	0.07	T	0.01		T	1.45	0.15	0.43	T		0.60		0.05		0.23		0.11	6.59 0.0	2400 EST		
ROCKVILLE 2 W McGINNIS		0.03	0.13	T					0.30					2.05	0.03	0.01			2.12	0.12	0.94	T	T	0.00		T		T	T	T	5.73 0.0	2400 EST		
GLENMONT 1NNE ROSSEN			DETAILED DATA DELAYED															0.30	1.03	0.05	1.24												3.58 0.0	2400 EST
BETHESDA SCAFIDE					M	M	M		0.26					0.14	0.02	0.02		0.14	1.50	0.11	1.37	0.01										3.57 0.0	2400 EDT	
GAITHERSBURG 2WNW SHAW		0.02	0.06	T				T	0.57				T	0.50	0.01	0.03			1.13	0.10	0.57	0.01		0.02		0.01				0.01	3.04 0.0	2400 EDT		
FOREST GLEN TERRY		T	0.11					T	0.27	0.16				0.40	0.02	0.02		0.22	1.26	0.31	1.07	T		T		0.01				0.17	4.02 0.0	2400 EDT		
OXON HILL SMITH				0.11					0.77	0.02				T	0.08	0.04				1.23	0.18	0.28			T		T	T	0.25		2.96 0.0	0700 EDT		
HOLLYWOOD 3 ENE GLEASON		0.27							0.21	0.01			T	T	T					0.04	0.05	0.02					0.07	0.04			0.71 0.0	0700 EDT		
RIDGE ZYLA		0.06	0.21					0.10	0.03	1.95				0.09	0.36	0.28		1.02		0.09	0.03						0.05	0.25	0.02	0.93	5.47 0.0	2400 EDT		
SMITHSBURG 1.5 SW HUTTO		0.06	0.17	0.15							0.01		0.01	0.16	0.09			0.08	1.60	0.24	0.34			0.04	0.01	0.54	0.01	0.61		0.62	4.74 0.0	2400 EDT		
HAGERSTOWN 1E KEEFER		0.08	0.03	0.12				0.02	0.01	T	0.01		T	0.15	0.27			0.14	1.55	0.15	0.21			T		0.52	0.02	0.09		1.03	4.40 0.0	2400 EDT		
SMITHSBURG 3 NE VAUGHN		0.07	0.30	0.07			0.06	0.04						0.16	0.09	0.02		0.03	0.84	0.26	0.18	0.02		0.23		0.51		0.48		0.22	3.58 0.0	2400 EDT		
SALISBURY NWS WICOMICO CO APT		0.27						0.01	0.88	T				0.11	T	0.07		0.08	0.02	0.08	0.15	T				T	0.05	0.60		0.02	2.34 -	2400 EST		
WASH NATIONAL NWS ASOS			0.02	T				0.69	0.26	0.60			T	0.08	0.02	0.02			0.42	0.19	0.21		T	T		T		0.27		0.03	2.81 0.0	2400 EST		
WASH DULLES NWS ASOS		T	0.23					T	0.24				T	0.10	0.06	0.01		0.06	1.02	0.57	0.13	T	T	T		T	T		0.01	2.43 0.0	2400 EST			
STERLING 4 N SHAFFER																																	2400 EDT	
DAVIS 3 SE WV LESHER		0.19		0.11	T				1.53				0.01	0.30	0.23	1.01		T	0.25	0.14	2.51	0.01		T	0.94		0.34	T		0.09	7.66 0.0	0700 EDT		

EVAPORTRANSPIRATION (PER MANUAL INSTRUMENT, NOT COMPUTER GENERATED)

BRYANS ROAD 2 ESE BRUMBACK	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	6.35	0700 EDT
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