



VOLUME 2012

ISSUE AUGUST

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

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

EXTREME HEAT ABATES SCATTERED STRONG STORMS

August temperatures averaged above normal, but the heat was more typical for a warm August. As with July, the minimum temperatures rarely dropped below the 60° mark. Showers and thunderstorms brought ample amounts of rain to many but not all locations. There were numerous daily amounts over one inch. Rainfall totals ranged from less than three inches to over ten inches. No tropical storms affected the region this month.

The hottest period was the first nine days. Maximum temperatures were generally in the upper 80's to mid 90's with the highest temperatures in the southern areas. Temperatures during this period peaked around the 5th in the mid ninety's. The only 100° occurred on the 5th at **Joe Manfre's** urban **Baltimore 2 SE** station.

Following are some notable storm events which occurred during the first 9 days. An intense thunderstorm, which may had been a downburst, occurred at **Jeff Stoudt's Laurel 2 E** station on the 2nd. The only strong thunderstorms in New Castle County DE this month occurred on the 5th. The greatest amount of 1.39" was reported by **David Legates** of **Middletown 6 N DE**. **Ron Berger** of **Norbeck 1 SE** had a thunderstorm on the 9th with 12 minutes of hail. The largest stone was 7/8" in diameter. Pictures on page 4.

Numerous thunderstorms on the 10th brought one inch plus amounts to many stations. **Marty Brumback** of **Bryans Road 2 ESE**, reported 2.39", **Roy Lamberton** of **West Seaford DE**, 2.06", and **Greg Keefer** of **Hagerstown 1 E** 1.97".

"More seasonable" temperatures occurred from 11th to the 30th. This allowed **John Zyla** of **Ridge** to turn off his air conditioner and open his windows from the 19th to the 26th.

Evening thunderstorms occurred on the 14th. **Marty Sharrof** of **Owings Mills 2 SE** reported 2.51" and **Ray Muller** of **Reisterstown** 1.19". A possible Ball

Lightning sighting was reported near Finksburg. See page 3 for more details.

The coolest maximum temperatures occurred from the 18th to the 21st. Upper 70's to low 80's were common. The first sub 60° minimum temperatures since June occurred on the 19th at some stations in the northern half of the region.

Training rain events on the 25th and 26th brought heavy flash flooding rains to two regions. The first one occurred the night of the 25th and morning of the 26th in eastern Sussex County DE southwards along the coast to Virginia. **U of D DEOS Harbeson 8 S DE** reported 6.83" of rain with 1.17", 1.58", & 1.95" falling in three consecutive pre-dawn hours of the 26th. **U of D DEOS Rehoboth Beach** reported 6.10" with 1.54" & 1.92" falling during two consecu-

EXTREMES REPORTED BY ACON OBSERVERS

MAXIMUM TEMPERATURE

Baltimore 2 SE	101
West Seaford DE	97
Bryans Road 2 ESE	97

MINIMUM TEMPERATURE

Davis 3 SE WV	46
Frostburg	51
LaVale	54

WARMEST AVG. TEMP.

Baltimore 2 SE	82.8
Ridge	79.1
West Seaford DE	78.9

COLDEST AVG. TEMP.

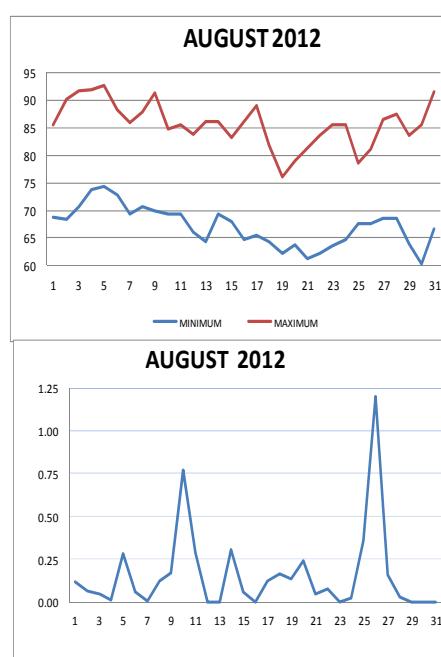
Davis 3 SE WV	64.5
Frostburg	68.1
LaVale	73.0

MAXIMUM PRECIPITATION

UofD DEOS Harbeson 8S DE	10.61
UofD DEOS Rehoboth Bch DE	9.35
Owings Mills 2 SE	9.07

MINIMUM PRECIPITATION

Davis 3 SE WV	2.15
Frostburg	2.43
Forest Glen	2.78



ACON MD/DE Network

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

tive hours on the 25th. The other heavy training rain occurred along the Chesapeake Bay north to the MD/PA line. ACON observers **Marty Sharrof** of **Owings Mills** reported 4.21", **John Zyla** of **Ridge** 3.05", **Dan Hanson** of **Pasadena 2 N** 2.86", and **Jug Bay Wetlands** of **Lothian** 2.62". A waterspout was reported on the Potomac River near Cobb Island, Charles County.

The month ended hot with temperatures ranging from near 90 in the extreme north to the mid 90's in the southern areas on the 31st.

OBSERVER COMMENTS FOR AUGUST 2012

Gary Gallaher of Bear 2 SW, DE

Summer 2012 average temp 75.1°, 15th hottest of 46. Precip 14.70", 11th wettest of 44.

Typical August humidity without extreme heat. Winds were the lightest since 2009.

5th - Strong thunderstorm.

31st - Dense fog with visibility reduced to a few hundred feet around sunrise,

David Legates of Middletown 6N, DE

At least we got some rain this month but is too late for Kent and Sussex County farmers.

Nate Mullins of LaVale

The stifling heat from July finally faded in August. Temperatures were slightly above normal for the 10th consecutive month.

9th - Severe thunderstorm blew up directly overhead around 1:30 PM. Heavy downpours, frequent lightning, some hail and high winds also reported. Quarter size hail and flash flooding reported 2 to 3 miles NE around Corriganville.

26th - Daily record rainfall of 1.97". Old record 0.54" in 2003.

Jeff Stoudt of Laurel 2 E

This August provided favorably distributed rainfall which totaled slightly above normal. The frequent rains contributed toward blunting the heat of July, but it was still a very warm and muggy August. Thunderstorms were numerous.

2nd - Intense thunderstorm 1415-1500. Had 20 minutes of torrential rain and winds which rivaled the 29 June derecho in velocity and only caused minor damage in the immediate vicinity. This high wind event in all likelihood was a microburst.

Marty Sharroff of Owings Mills

3rd - Hazy sun giving way to billowing clouds.

14th - Warm & humid. Pounding evening storms 2.51" of rain.

26th - Very unsettled, frequent training storms, heavy rains, 4.21" of rain, flooding occurred in nearby Jones Falls.

Joe Manfre of Baltimore 2SE

5th - Very hot, humid, light afternoon & evening t'storms.

11th - Strong evening thunderstorm. 1.61" of rain today.

Ralph Hartsock of Westminster 4 SSE

4th - Gusty PM thunderstorm, 49 mph wind gust.

14th - Late evening heavy thunderstorms.

Bobby Miller of Millers 4 NE

28th - Morning shower, PM scattered CU - beautiful!

Marty Brumback of Bryans Road 2 ESE

The heat continues but starts to abate. Had ten 90° days. The only sign that cooler weather is to come was the 63° minimum on the 30th.

Eric Glass of Emmitsburg 2 SE

Fog of different visibilities occurred at obs times on 11 days: 2nd, 3rd, 4th, 9th, 15th, 17th, 18th, 21st, 23rd, 25th, & 31st.

Ron Berger of Norbeck 1 SE

9th - Hail storm 7:15 PM to 7:27 PM. The largest stone was 7/8" in diameter. Most stones were around 1/2" in diameter.

Rob Cohen of Potomac 4 N

Temperatures 1.2° above normal, rain 2.03" above normal. Several days with thunder but no strong storms. Four days with over 1" of rain.

8th - Heavy rain 9 - 10 AM.

22nd - Heavy rain 6 - 7:30 PM.

Rich Giannola of Olney 1 S

9th - Evening thunderstorms. Pea size hail 7:32 - 7:36PM.

Richard Holden of Clarksburg 2 ENE

Thunder reported on eight days: 1st, 5th, 8th, 9th, 14th, 19th, 20th, & 26th.

Alexander McGinnis of Rockville 2 W

16th - FROPA yields beautiful sunny day.

21st - Light fog at sunrise, particularly in low lying areas.

Kevin Shaw of Gaithersburg 2 WNW

A bit of a different pattern this month: 1.) wetter than normal (7th wettest of 34) and 2.) the average maximum temp was 0.6° below normal. Minimum temps 3.0°above average. This was the first August in 34 years of records with no minimums below 60°. 15 days with measurable rain set a record for August.

Joe Terry of Forest Glen

There was a noticeable cool-down between the first and second halves of the month. There were no minimums in the 70's after the 14th.

31st - Last day of meteorological summer. Hottest day of the month, however moderate humidity made the day tolerable.

Brian Smith of Oxon Hill

5th - Dissipating -TSRA.

26th - +TSRA 1600-1630 0.52". +SHRA 1810-1820 0.14".

Wes Gleason of Hollywood 3 ENE

13th - 69°, 1st time below 70° since June 28th.

John Zyla of Ridge

2nd - Clear and pleasant. A massive TS sat over the Potomac River off Pt. Lookout this afternoon for hours, never moving with lots of thunder heard, but no rain.

26th - Four t'storms between 2:35 AM & 8:10 PM with some additional light rain after 8:10 PM. Total rain 3.05".

Max Hutto of Smithsburg 1.5 SW

3rd to 5th - Hot, humid, heat index 102° to 104°.

10th - Overnight TS, sunny, humid, windy PM TS. 1.97" day rain total.

31st - Sunny, hot, breezy.

Greg Keefer of Hagerstown 1 E

Summer of 2012 average temp 74.7°, 12th hottest since 1898. Hottest is 77.7 set in 2010.

10th - Intense TS between 5:30 PM & 6:0 PM began with ominous dark clouds and sharp close lightning and strong winds gusting to 35 MPH, Very heavy rain with over an inch falling in 20 minutes. 0.45" fell in 5 minutes.

Jim Vaughn of Smithsburg 2 NE

2nd to 5th - Heat index 100° to 104°.

4th - Record max min temp of 75°.

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.

AUGUST 2012 MD/DE/DC ACON REPORT

Possible Ball Lightning Sighted near Finksburg, MD August 14th

ACON member **Herb Close** of **Manchester 1 SW** reported that his Mother may have seen ball lightning. Below is an excerpt from his email and a newspaper article:

Last night around 9:00pm, Tuesday night August 14, 2012 during very intense thunderstorms occurring at Finksburg 2 NW in east central Carroll County, Maryland, my mom was looking out at the large bay window in the living room of her house. Mom told me that she saw lots of sheet lighting, then as she looked up in the sky she saw a large white translucent ball or sphere about 8 feet in diameter go horizontally across the NW sky from SW to N just above the roofs. For a second she had to stop and think if she really saw something. But then she realized that she did see something that she had never seen before. She had no idea what it was, but she knows she saw it. Mom said that the storms last night were the worst and most intense she had seen in a long time. Some of the most intense storms she had ever seen. The lightning she said was almost continuous.

LOCAL/STATE Saturday, August 18, 2012 Page A3

Ball lightning possibly spotted

Rare weather phenomenon reportedly sighted during thunderstorm

By BRANDON OLAND
TIMES STAFF WRITER

This was a new one, even for an experienced weather observer like Herb Close. He's reported gusty winds, hail, rain and snow many times before. But never ball lightning. Yet that's exactly what may have happened when a severe thunderstorm pushed through the county Tuesday evening. Close's mother Mabel was watching the thunderstorm approach through a large bay window at her Finksburg home. She saw sheet lightning, and lots of it. Then a large, 8-foot white ball shot across the sky.

"I had never seen anything like it," she said. It wasn't a transformer exploding. She's seen that before during a previous thunderstorm. It wasn't a cloud-to-ground lightning bolt. It was simply a sphere that raced along the sky before quickly disappearing. There's no way to know for sure what it was, but Herb said he believes it was likely ball lightning, which occurs during particularly intense thunderstorms.

"It is real, and it does happen sometimes," Herb said. "It's rare, and scientists have debated what they think it is, but it just doesn't last that long. It only lasts for a few seconds and nobody has been really able to study it that well."

How ball lightning develops and why is largely unexplained, Herb said. Jesse Ferrell, the editor of AccuWeather.com's WeatherMatrix blog, said he believes in the phenomenon but that it can sometimes be confused with other, more traditional, lightning forms.

Mabel said she is planning to do some research and study pictures to figure out what she saw during a storm that eventually prompted a tornado warning to be issued by the National Weather Service in Baltimore County. As of Friday evening, the National Weather Service has not reported any confirmed tornadoes touching down during that storm.

Herb said he wishes he could have seen the bizarre spherical flash. "It's just one of those strange phenomenons that occur," he said, "and scientists really have to go off eyewitness reports."

Reach staff writer Brandon Oland at 410-857-7862 or brandon.oland@carrollcountytimes.com.

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August 26th flash flooding in Western Baltimore County

Below are two pictures **Herb Close** of **Manchester 1 SW** took of the flooding.



Black Rock Road, Maryland Route 88, between Hampstead and Butler, MD.



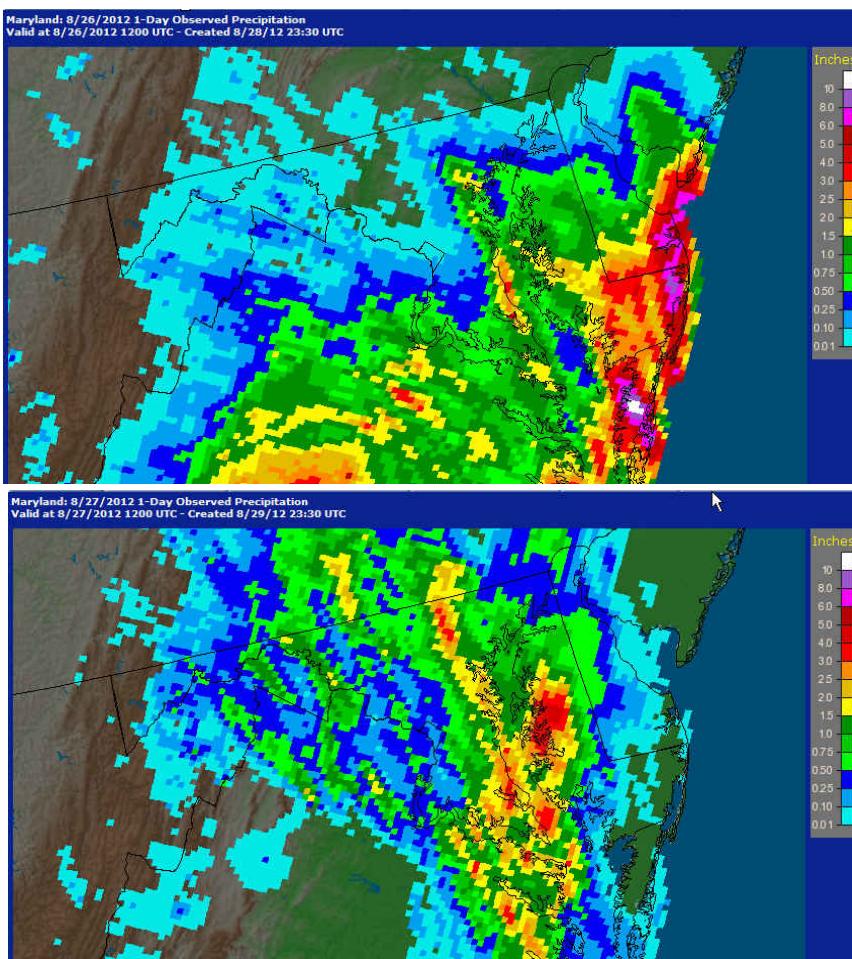
Mt Zion Road southeast of Hampstead, MD

AUGUST 2012 MD/DE/DC ACON REPORT



August 9th hail stones which fell during an evening thunderstorm. The largest stone was 7/8" in diameter. Most stones were around 1/2" in diameter.

The four pictures to the left were submitted by **Ron Berger of Norbeck**



To the left are two radar estimations of precipitation which fell over Maryland and Delaware August 25th - 27th.

The top picture is for the 24 hours ending 8/26/12 at 1200 UTC (8 AM EDT). Upwards of 8 inches fell in eastern Sussex County DE and upwards of 10 inches fell west of Ocean City, MD. Also shown is the beginnings of the heavy rains which fell along the western shore of the Chesapeake Bay to north of Baltimore.

The bottom picture is for the 24 hours ending 8/27/12 at 1200 UTC (8 AM EDT). It shows the heavy rains which fell along the western shore of the Chesapeake Bay northwards into PA. Heavy rains also fell on Maryland's Eastern Shore east of Annapolis.

ACON MD /DE / DC
AUGUST 2012 SUMMARY

OBSERVER <i>COUNTY, STATE</i>	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	Season		
<i>New Castle, Delaware</i>																								
Gallaher, Gary	Bear 2 SW	85.0	66.0	75.5	93	5	58	30	3	0	0	40	WNW	5	4.10	1.21	5	25.07	12	1	0.0	0.0	0.0	2400
Legates, David	Middleton 6 N	85.5	66.8	76.2	93	5	59	30	4	0	0	24		5	4.03	1.39	5	24.87	14	1				2400
NWS Wilmington	New Castle Co. Apt.	85.5	67.3	76.4	94	5	59	30	5	0	0	36	W	14	2.81	0.75	5	19.87	11	0	0.0	0.0	0.0	2400
UofDE AG FARM DEOS**	Newark	84.8	66.2	75.5	92	5	59	19	4	0	0	21		5	4.89	1.02	14	22.69	12	1				2400
U of D REC DEOS***	Townsend 4 W	84.6	66.1	75.4	94	3	59	19+	5	0	0	47		3	5.71	1.52	3	21.61	14	1				2400
<i>Sussex, Delaware</i>																								
Lamberton, Roy	West Seaford	88.8	68.9	78.9	97	9	57	17	15	0	0	40		10	5.53	2.06	10	14.85	11	2				2400
NWS Georgetown	Sussex Co. Airport	86.2	69.3	77.8	93	3	63	19	7	0	0	36	W	10	6.30	1.66	10	20.59	12	3				2400
U of D REC DEOS***	Georgetown 5 SW	84.5	67.2	75.9	93	3	59	19	4	0	0	32		10	4.93	1.77	10	19.87	9	3				2400
U of D REC DEOS***	Harbeson 8 S	83.9	66.6	75.3	92	5	59	19	3	0	0	24		9	10.61	4.83	26	26.79	10	4				2400
U of D DEOS***	Rehoboth Beach Bwk	M	M	<u>92</u>	31	M						25		25	9.35	5.32	25	26.29	13	2				2400
<i>Allegany, Maryland</i>																								
Latta, Greg	Frostburg	78.4	57.7	68.1	86	4	51	21+	0	0	0				2.43	0.75	10	27.33	12	0	0.0	0.0	0.0	0700
Mullins, Nate**	LaVale	83.5	62.5	73.0	92	31	54	30	3	0	0				4.93	1.97	26	26.09	11	1	0.0	0.0	0.0	2400
<i>Anne Arundel, Maryland</i>																								
Hanson, Dan	Pasadena 2 N	87.1	67.3	77.2	95	5	60	22	8	0	0	30	W	5	4.69	2.86	26	21.34	16	1	0.0	0.0	0.0	2400
Jug Bay Wetlands	Lothian	87.8	66.4	77.1	96	31	60	22	11	0	0	17		2	4.25	2.62	26	23.33	14	1	0.0	0.0	0.0	2400
NWS Baltimore	BWI Airport	87.0	67.6	77.3	96	5	61	21+	8	0	0	44	W	5	5.82	3.36	26	22.47	13	1	0.0	0.0	0.0	2400
Stoudt, Jeff	Laurel 2 E	85.2	69.1	77.2	93	31	62	21	6	0	0				4.47	1.36	2	23.43	14	1	0.0	0.0	0.0	2400
<i>Baltimore, Maryland</i>																								
Muller, Ray	Reisterstown	84.9	67.5	76.2	93	4+	59	21	5	0	0	29	WSW+	5+	4.77	1.65	26	24.34	9	2	0.0	0.0	0.0	2100
Sharrows, Marty	Owings Mills 2 SE	85.3	65.6	75.5	94	9	59	19+	7	0	0				9.07	4.21	26	26.95	9	2	0.0	0.0	0.0	2400
<i>Baltimore City, Maryland</i>																								
Manfre, Joe	Baltimore 2 SE	90.8	74.8	82.8	101	5	68	21	22	0	0				6.36	3.41	26	18.51	12	2	0.0	0.0	<u>0.0</u>	2400
Maryland Science Ctr	Baltimore Inner Harbor	90.1	74.5	82.3	99	5	67	21	19	0	0				5.89	3.37	26	23.75	12	2				2400
<i>Carroll, Maryland</i>																								
Close Jr, Herb	Manchester 1 SW	84.3	65.3	74.8	91	3+	56	21	4	0	0				3.09	0.78	26	26.91	13	0	0.0	0.0	0.0	2300
Hartsock, Ralph	Westminster 4 SSE	86.5	66.1	76.3	96	2	59	21	4	0	0	49		4	3.86	1.16	15	28.25	9	2	0.0	0.0	0.0	1900
Miller, Bobby	Millers 4 NE	83.5	62.9	73.2	91	3	55	19	2	0	0	41	WSW	5	5.03	1.92	26	29.60	15	1	0.0	0.0	0.0	1800
<i>Charles, Maryland</i>																								
Brumback, Marty	Bryans Road 2 ESE	88.3	68.4	78.4	97	9	63	22+	10	0	0	26	SSW	5	3.29	2.39	10	17.95	11	1	0.0	0.0	0.0	2359
<i>Frederick, Maryland</i>																								
Glass, Eric	Emmitsburg 2 SE	82.4	62.9	72.7	90	4	57	19+	1	0	0				4.05	0.92	11	26.33	15	0	0.0	0.0	0.0	0700
<i>Howard, Maryland</i>																								
Giannola, Rich	Laurel JHU / APL																			1.83			2400	
STATION CLOSED 2/1/2012																								

ACON MD /DE / DC
AUGUST 2012 SUMMARY

OBSERVER <i>COUNTY, STATE</i>	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	Season			
<i>Montgomery, Maryland</i>																									
Berger, Ron	Norbeck 1 SE	85.5	66.4	76.0	93	31	59	21	6	0	0					4.59	1.16	9	25.58	14	1	0.0	0.0	0.0	2200
Cohen, Rob	Potomac 4 N	85.0	67.6	76.3	94	4	61	21	6	0	0					5.70	1.13	11	26.40	13	4	0.0	0.0	0.0	2100
Giannola, Rich	Olney 1 S	85.0	67.7	76.4	92	4+	60	21	6	0	0					3.51	0.82	10	24.67	13	0	0.0	0.0	0.0	2400
Holden, Richard	Clarksburg 2 ENE	83.9	65.6	74.8	91	5+	59	21	5	0	0	29	SE	5		4.71	1.58	9	29.76	15	1	0.0	0.0	0.0	2400
McGinnis, Alex	Rockville 2 W	84.5	67.8	76.2	92	4+	61	21	6	0	0					4.59	1.22	10	27.54	12	1	0.0	0.0	0.0	2400
Rossen, Stan	Glenmont 1 NNE																		12.54					2400	
Scafide, Tony	Bethesda																		19.73					2400	
Shaw, Kevin	Gaithersburg 2 WNW	84.3	67.1	75.7	93	5	61	21	6	0	0	17	SW	5		5.24	1.16	26	25.60	15	1	0.0	0.0	0.0	2400
Terry, Joe	Forest Glen	89.1	67.6	78.4	96	31	60	21	17	0	0	23	WSW	5		2.78	0.58	19	23.13	12	0	0.0	0.0	0.0	2400
<i>Prince Georges, Maryland</i>																									
Smith, Brian	Oxon Hill	87.7	68.8	78.3	96	4	63	21+	8	0	0					2.87	1.12	10	20.84	11	1	0.0	0.0	0.0	2300
<i>St. Marys, Maryland</i>																									
Gleason, Wes	Hollywood 3 ENE	85.0	71.8	78.4	92	5	67	21+	6	0	0	29	N	11		6.61	2.87	27	21.07	12	3	0.0	0.0	0.0	2400/0700
Zyla, John	Ridge	86.6	71.6	79.1	93	5+	66	21	10	0	0	25	SW	26		5.39	3.05	26	28.45	10	1	0.0	0.0	0.0	2400
<i>Washington, Maryland</i>																									
Hutto, Max	Smithsburg 1.5 SW	83.5	62.8	73.2	91	4+	56	16+	4	0	0	29		10		6.22	1.97	10	33.60	13	1	0.0	0.0	0.0	2400
Keefer, Greg	Hagerstown 1 E	84.9	64.0	74.5	93	4	58	29+	7	0	0	38	W	9		6.15	1.84	10	30.50	12	2	0.0	0.0	0.0	2400
Vaughn, Jim	Smithsburg 3 NE	85.1	64.2	74.7	95	3	58	21+	7	0	0	36	W	10		4.90	1.13	10	29.07	12	1	0.0	0.0	0.0	2400
<i>Wicomico, Maryland</i>																									
NWS Salisbury	Wicomico Co. Apt	88.2	69.4	78.8	95	5+	61	19	13	0	0	33	N	26		4.31	1.96	25	22.56	15	2				2400
<i>Arlington, Virginia</i>																									
NWS Washington National Airport	National Airport	89.5	72.4	81.0	98	5	66	21	15	0	0	37	NE	22		2.78	0.59	10	18.71	13	0	0.0	0.0	0.0	2400
<i>Loudon, Virginia</i>																									
NWS Washington Dulles	Dulles Airport	87.4	66.8	77.1	95	31	60	21	8	0	0	38	WSW	5		3.02	0.56	1	20.05	13	0	0.0	0.0	0.0	2400
Shaffer, Lance	Sterling 4 N	85.6	68.4	77.0	93	17	62	21	7	0	0					2.68	0.75	10	17.48	14	0	0.0	0.0	0.0	2400
<i>Tucker, West Virginia</i>																									
Lesher, Dave	Davis 3 SE WV	74.6	54.4	64.5	82	5	46	21+	0	0	0					2.15	0.91	1	33.71	11	0	0.0	0.0	0.0	0700

SECTION AVERAGE*

85.7 67.2 76.4

4.91

24.57

0.0

0.0

NOTES:

M OR = 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 LAVALE IS SCOTT LOHR. DATA COMPILED BY NATE MULLINS.

*** DATA FROM DEOS (DELAWARE ENVIRONMENTAL 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 09/30/12

ACON MD / DE / DC
AUGUST 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	82	88	92	89	93	88	84	87	89	83	86	84	85	85	83	85	88	81	76	79	81	84	85	86	79	84	86	87	83	84	90	85.0	2400 EDT	
MIDDLETOWN 6 N DE LEGATES	69	65	70	70	73	72	66	68	69	70	73	66	61	70	70	65	64	62	59	65	61	60	62	68	70	68	66	61	58	63	66.0			
WILMINGTON , DE NWS NEW CASTLE CO APT	83	89	91	89	93	88	84	87	90	84	87	85	86	84	83	86	89	82	76	79	82	86	87	86	79	83	87	88	83	85	91	85.5	2400 EDT	
NEWARK AG FARM, DE U OF DE DEOS	81	90	91	89	92	87	85	87	89	83	85	86	83	84	85	83	82	84	87	81	75	79	82	85	85	87	79	84	86	88	84	90	84.8	2400 EST
TOWNSEND 4 W, DE U of D REC DEOS	82	91	94	89	92	87	84	85	90	84	85	83	85	82	82	84	88	80	76	79	80	83	84	84	77	82	87	86	81	84	90	84.6	2400 EDT	
LAMBERTON, ROY WEST SEAIRD	85	95	95	96	94	91	87	92	97	88	87	89	91	90	89	92	93	86	83	83	86	88	86	67	83	90	88	90	90	95	88.8	2400 EDT		
GEOGETOWN, DE NWS SUSSEX CO APT	85	90	93	92	92	88	86	89	92	86	86	87	86	86	86	88	90	80	82	78	82	84	85	84	78	82	86	88	83	87	92	86.2	2400 EST	
GEOGETOWN, DE U of D REC DEOS	81	89	93	90	90	86	86	87	90	84	83	83	87	85	85	86	88	79	80	77	81	83	83	82	75	81	85	86	82	85	89	84.5	2400 EDT	
HARBESON 8 S, DE U of D REC DEOS	83	86	91	90	92	87	85	85	88	82	83	83	84	86	85	86	88	77	79	76	81	80	81	77	80	85	87	80	85	89	83.9	2400 EDT		
REHOBOTH BEACH BWK U of D DEOS	82	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	78	81	92	M	2400 EDT	
FROSTBURG LATTA	77	80	84	86	83	81	79	81	84	83	79	74	74	78	79	73	79	76	74	75	72	75	76	80	80	77	73	83	78	76	81	78.4	0700 EDT	
LAVALE MULLINS**	85	88	90	90	87	85	86	88	89	81	80	79	84	83	79	85	80	79	75	76	75	80	86	84	87	78	85	87	81	83	92	83.5	2400 EDT	
PASADENA 2 N HANSON	86	91	91	91	95	90	87	89	92	87	87	87	86	87	86	89	92	84	76	80	83	85	88	88	81	82	89	89	84	86	93	87.1	2400 EDT	
LOTHIAN JUG BAY	88	90	92	94	95	91	85	89	95	87	89	88	87	89	88	91	91	87	77	80	84	84	87	87	80	78	90	92	84	89	96	87.8	2400 EDT	
BALTIMORE NWS BWI APT	88	90	92	93	96	92	87	89	92	86	87	85	88	86	85	88	92	84	76	80	83	84	86	86	87	80	79	87	89	86	87	93	87.0	2400 EST
LAUREL 2 E STOUDT	88	88	90	91	92	87	87	88	91	82	87	83	85	85	83	87	90	82	75	80	78	84	85	86	78	78	83	86	83	86	93	85.2	2400 EST	
REISTERSTOWN MULLER	88	88	90	93	93	86	86	88	90	85	85	85	86	85	79	83	86	84	70	82	79	84	86	86	76	77	85	87	84	85	90	84.9	2100 EDT	
OWINGS MILLS 2SE SHARROW	87	92	92	90	93	88	86	90	94	83	84	83	86	87	79	85	88	81	74	80	82	84	85	86	77	75	86	86	83	86	91	85.3	2400 EDT	
BALTIMORE 2SE MANFRE	90	93	95	96	101	94	90	93	95	91	92	91	92	91	88	91	96	86	80	85	85	89	90	92	85	79	94	93	89	91	97	90.8	2400 EDT	
BALT INNER HARBOR MD SCIENCE CENTER	89	93	95	97	99	93	90	92	94	90	92	89	90	90	87	91	96	86	79	84	85	88	89	91	84	83	92	92	88	90	96	90.1	2400 EST	
MANCHESTER 1SW CLOSE	83	90	91	88	91	87	86	88	90	80	84	83	87	85	79	84	89	81	72	80	79	83	86	84	76	78	86	86	82	85	89	84.3	2300 EDT	
WESTMINSTER 4 SSE HARTSOCK	89	96	89	88	90	88	86	89	90	84	86	86	87	90	85	86	89	82	80	83	82	88	89	81	82	89	87	84	84	88	86.5	1900 EDT		
MILLERS 4NE MILLER	83	87	91	88	90	85	84	86	89	85	83	82	83	84	80	83	86	79	76	78	80	81	85	84	79	79	84	84	82	88	83.5	1800 EDT		
BRYANS ROAD 2 ESE BRUMBACK	92	95	94	96	96	90	87	88	97	88	88	87	89	89	86	89	90	86	76	81	85	85	88	87	77	82	89	91	86	89	95	88.3	2359 EDT	
EMMITSBURG 2 SE GLASS	84	82	87	90	88	89	85	83	86	86	82	82	79	82	84	79	69	76	78	81	83	84	84	79	83	84	84	82	82	84.4	0700 EDT			

ACON MD / DE / DC
AUGUST 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	86	91	92	92	92	88	87	87	92	85	86	83	86	87	82	86	89	81	74	78	81	84	85	85	77	82	87	86	82	85	93	85.5	2200 EDT	
POTOMAC 4 N COHEN	87	91	93	94	93	88	87	80	90	81	85	80	85	86	82	87	88	82	74	76	82	84	80	83	75	81	87	88	86	88	93	85.0	2100 EDT	
OLNEY 1 S GIANNOLA	87	91	91	92	92	86	85	86	91	82	85	82	86	86	80	86	89	81	73	77	79	83	86	85	76	81	87	87	83	87	92	85.0	2400 EDT	
CLARKSBURG 2 ENE HOLDEN	84	89	90	90	91	86	84	86	91	82	85	81	84	85	80	83	86	79	74	78	79	82	85	85	76	82	85	84	81	83	90	83.9	2400 EST	
ROCKVILLE 2 W McGINNIS	85	90	91	92	92	88	87	86	90	83	85	82	85	87	80	83	87	80	74	77	80	83	84	85	77	81	85	85	82	84	90	84.5	2400 EST	
GLENMONT 1 NNE ROSSEN																															2400 EST			
BETHESDA SCAFIDE																															2400 EDT			
GAITHERSBURG 2 NW SHAW	86	90	91	92	93	87	87	87	90	82	85	81	85	85	80	84	87	81	75	77	80	83	83	84	77	79	84	85	81	84	90	84.3	2400 EDT	
FOREST GLEN TERRY	91	93	95	95	95	91	89	91	95	87	90	87	91	91	86	90	92	85	75	82	85	89	88	89	81	84	90	91	89	90	96	89.1	2400 EDT	
OXON HILL SMITH	89	93	94	96	95	91	86	89	95	87	88	86	89	89	84	88	92	83	75	81	84	83	86	86	79	82	89	89	87	88	95	87.7	2300 EDT	
HOLLYWOOD 3 ENE GLEASON	86	90	90	91	92	88	82	85	90	85	84	83	85	87	84	87	89	83	78	78	80	82	84	83	77	80	86	88	83	84	91	85.0	2400 EDT	
RIDGE ZYLA	87	90	92	91	93	87	85	88	91	87	85	86	88	91	85	91	92	83	78	80	82	82	87	81	75	81	89	91	85	88	93	86.6	2400 EDT	
SMITHSBURG 1.5 SW HUTTO	86	88	90	91	91	86	85	88	89	82	82	80	82	83	80	83	86	79	71	77	79	81	85	84	80	80	85	84	81	82	90	83.5	2400 EDT	
HAGERSTOWN 1 E KEEFER	86	91	92	93	92	88	86	91	91	84	84	83	84	84	80	84	84	87	81	70	78	80	83	86	84	80	80	86	85	82	84	92	84.9	2400 EDT
SMITHSBURG 3 NE VAUGHN	88	93	95	94	93	87	86	91	92	84	83	80	85	86	80	84	86	78	70	78	80	85	88	85	79	80	87	84	81	83	92	85.1	2400 EDT	
SALISBURY NWS WICOMICO CO APT	85	92	94	95	95	90	87	90	95	91	86	87	90	88	89	91	92	85	84	81	85	86	87	86	75	85	87	90	87	88	92	88.2	2400 EDT	
WASH NATIONAL NWS ASOS	91	96	96	96	98	93	90	91	95	88	89	88	90	90	86	91	94	86	78	82	86	86	89	88	82	84	88	91	87	89	97	89.5	2400 EDT	
WASH DULLES NWS ASOS	88	92	91	94	94	90	89	89	94	86	88	85	88	88	84	87	93	84	76	80	83	85	87	87	79	82	88	89	85	89	95	87.4	2400 EDT	
STERLING 4 N SHAFFER	81	85	89	91	92	86	84	87	90	82	84	80	89	86	84	87	93	81	78	80	81	82	85	86	82	90	87	90	85	86	90	85.6	2400 EDT	
DAVIS 3 SE WV LESHER	76	79	80	81	82	75	75	75	79	79	74	69	70	75	74	69	74	72	69	69	73	74	76	75	72	73	79	75	72	79	74.6	0700 EDT		

ACON MD / DE / DC
AUGUST 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	0.04			0.07	1.21	0.03				0.78	T			0.69			0.11	0.48	T	0.07					T	0.18	0.36	0.08			4.10 0.0	2400 EDT	
MIDDLETOWN 6 N DE LEGATES	0.04		0.01	0.06	1.39	0.10				0.85				0.16			0.51	0.47		0.04	0.01					0.09	0.22	0.08			4.03 -	2400 EDT	
WILMINGTON , DE NWS NEW CASTLE CO APT	0.10		T		0.75	0.04				0.55	T			0.54	T		0.16	0.21	T	0.02				T	0.19	0.16	0.09			2.81 0.0	2400 EST		
NEWARK AG FARM, DE U OF DE DEOS	0.86			0.32	0.30				0.54				1.02	0.02		0.12	0.49		0.05						0.35	0.73	0.09			4.89 -	2400 EDT		
TOWNSEND 4 W, DE U of D REC DEOS	0.12		1.52	0.07	0.50	0.72				0.61				0.65			0.08	0.67		0.02				0.05	0.51	0.16	0.03			5.71 -	2400 EDT		
LAMBERTON, ROY WEST SEAFORD	0.09	0.01		0.51					2.06	0.09			0.02			0.84	0.01	0.01						1.88		0.01				5.53 0.0	2400 EDT		
GEORGETOWN, DE NWS SUSSEX CO APT	0.02	0.75	0.08		T	T		T		1.66	0.13			0.44			T	0.26	0.04	0.01					1.40	1.36	0.15				6.30 -	2400 EST	
GEORGETOWN, DE U of D REC DEOS	0.06		0.38					0.01		1.77	0.13						0.31	0.05						1.22	1.00					4.93 -	2400 EDT		
HARBESON 8 S, DE U of D REC DEOS	0.58	0.11							1.30	1.00	0.02						0.24	0.07						2.00	4.83	0.46				10.61 -	2400 EDT		
REHOBOTH BEACH BWK U of DE DEOS	0.48	0.09			0.05		1.10	0.01	0.71	0.09				0.25			0.19	0.02						5.32	0.78	0.26				9.35 -	2400 EDT		
FROSTBURG LATTA	0.13			0.44	0.17				0.75	0.02			0.03	0.08			0.06			0.17	0.18				0.04	0.36					2.43 0.0	0700 EDT	
LAVALE MULLINS**	0.32			0.16	0.09	0.01			0.89	0.38				0.12			0.06			0.62	0.31				1.97						4.93 0.0	2400 EDT	
PASADENA 2N HANSON	0.01			0.19	0.01				0.45	0.29			0.04		0.01	0.26	0.21	0.06	0.18	0.01				0.07	2.86	0.01	0.03				4.69 0.0	2400 EDT	
LOTHIAN JUG BAY	0.01	0.01				0.01			0.43	0.56						0.13	0.02	0.22	0.05	0.01				0.15	2.62		0.02		0.01	4.25 0.0	2400 EDT		
BWI NWS ASOS		T	0.06			T	0.01		0.19	0.29	0.71			0.16			0.18	0.08	0.03	0.71				0.01	3.36		0.03			5.82 0.0	2400 EST		
LAUREL 2 E STOUDT	0.01	1.36		0.05	0.12				T	0.36	0.80			0.07			0.17	0.17	0.02	0.48	T				0.05	0.78		0.03			4.47 0.0	2400 EST	
REISTERSTOWN MULLER				T	0.19				T	0.63	0.07			1.16			0.05	0.05	0.90					T	1.65		0.07				4.77 0.0	2100 EDT	
OWINGS MILLS 2SE SHARROW				T	0.73	0.05			T	0.86	0.18			2.51	T		0.07	0.11	T	0.35				T	4.21						9.07 0.0	2400 EDT	
BALTIMORE 2SE MANFRE	0.02	0.10			0.04				0.01	0.28	1.61			0.02			0.13	0.10	T	0.62					3.41		0.02				6.36 0.0	2400 EDT	
BALT INNER HARBOR MD SCIENCE CENTER	0.09	0.17			0.04				0.01	0.28	1.05			0.02			0.09	0.12		0.63					3.37		0.02				5.89 -	2400 EST	
MANCHESTER 1SW CLOSE					0.40	0.02			0.06	0.33	0.01			0.63	0.01		0.04	0.05	0.01	0.69				T	0.78		0.06				3.09 0.0	2300 EDT	
WESTMINSTER 4 SSE HARTSOCK					0.16					0.66				0.18	1.16			0.14	0.04	0.47					1.00		0.05				3.86 0.0	1900 EDT	
MILLERS 4NE MILLER	0.22	T		0.01	0.12	0.16		0.01		0.33	0.42			0.21	0.67		T	0.11	T	0.14	0.57				T	1.92	0.04	0.10				5.03 0.0	1800 EDT
BRYANS ROAD 2 ESE BRUMBACK					0.02	0.01				2.39	0.05			0.02			0.03	0.03	0.29					0.30	0.14	0.01	T			3.29 0.0	2359 EDT		
EMMITSBURG 2 SE GLASS	0.07	0.01	0.01		0.23	0.62				0.10	0.92			0.24	0.32			0.22		0.12	0.38				T	0.04	0.71	0.06				4.05 0.0	0700 EDT

ACON MD / DE / DC
AUGUST 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				0.59		0.34	1.16	0.88	0.14	0.04		0.06		0.06	0.23	0.06	0.46		0.14		T	0.40		0.03						4.59 0.0	2200 EDT		
POTOMAC 4 N COHEN	0.02			0.16	0.02	1.09	0.02	1.08	1.13			0.08		T	0.15	0.37	0.09		1.10		T	0.39								5.70 0.0	2100 EDT		
OLNEY 1 S GIANNOLA	0.03			0.42	0.07		0.71	0.82	0.31			0.05		0.19		0.08	0.38		0.06		T	0.36		0.03						3.51 0.0	2400 EDT		
CLARKSBURG 2ENE HOLDEN	0.03			0.41	0.01	0.34	1.58	0.37	0.07			0.21		0.02	0.01	0.40	0.31		T		T	0.85	0.01	0.09					4.71 0.0	2400 EST			
ROCKVILLE 2 W McGINNIS	0.02			0.13	T	0.81	T	1.22	0.96			0.07		0.11		0.42	0.06		0.46		T	0.30		0.03						4.59 0.0	2400 EST		
GLENMONT 1NNE ROSSEN																															2400 EST		
BETHESDA SCAFIDE																															2400 EDT		
GAITHERSBURG 2WNW SHAW				0.21	0.01	0.13	0.79	0.59	0.28			0.16		0.08	0.01	0.55	0.55	0.01	0.66		T	1.16	T	0.05						5.24 0.0	2400 EDT		
FOREST GLEN TERRY				0.50		T	0.23	0.23	0.11			0.10		0.20	0.11	0.58	0.38		0.01		T	0.27		0.06						2.78 0.0	2400 EDT		
OXON HILL SMITH	0.01			0.05	T			1.12	0.16			0.36		T	0.10	0.23	0.02				0.15	0.66	0.01	T						2.87 0.0	2300 EDT		
HOLLYWOOD 3 ENE GLEASON	0.09					0.01	1.27	0.01	0.46	0.04					0.06		0.01	0.01	0.08			1.70	2.87							6.61 0.0	0700 EDT		
RIDGE ZYLA	0.73					0.33			0.04	0.54						0.17	0.01	0.02				0.44	3.05	0.06							5.39 0.0	2400 EDT	
SMITHSBURG 1.5 SW HUTTO	0.01			0.62	0.01		0.01	1.97				0.97		0.96	0.01	0.57	0.50		0.01			0.53		0.05				6.22 0.0	2400 EDT				
HAGERSTOWN 1E KEEFER				0.48				0.02	1.84			0.45			0.61		0.24	0.42	0.01	0.11		1.06	T	0.87		0.04				6.15 0.0	2400 EDT		
SMITHSBURG 3 NE VAUGHN			0.07	0.76				0.08	1.13			0.80		0.02	0.49	0.02	0.53	0.27	0.03				0.70					4.90 0.0	2400 EDT				
SALISBURY NWS WICOMICO CO APT	0.10				T	T	0.09	0.01	0.31	0.21	0.01		0.13	0.01		0.33	0.03	0.05				1.96	1.02	0.04	0.01				4.31 -	2400 EST			
WASH NATIONAL NWS ASOS	T			0.03	0.02	T	T		0.59	0.10		T	0.20		0.01	0.16	0.36	T	0.59	0.35			0.06	0.28		0.03			2.78 0.0	2400 EST			
WASH DULLES NWS ASOS	0.56	T		0.15	T		0.01	0.07	0.55	0.26			0.13		0.32	T	0.32	0.20				0.12	0.32		0.01				3.02 0.0	2400 EST			
STERLING 4 N SHAFFER	0.21			0.17		0.02	T	0.10	0.75	0.22			0.26		0.04	0.41	0.02		0.14			0.02	0.30		0.02				2.68 0.0	2400 EDT			
DAVIS 3 SE WV LESHER	0.91			T		0.34			0.55	0.02			0.01	T	T		0.15		0.02	T					0.04	0.04	0.06	0.01		2.15 0.0	0700 EDT		

EVAPORTRANSPERSION (PER MANUAL INSTRUMENT, NOT COMPUTER GENERATED)

BRYANS ROAD 2 ESE BRUMBACK	0.10	0.30	0.15	0.25	0.40	0.10	0.10	0.10	0.20	0.22	0.18	0.10	0.25	0.15	0.20	0.18	0.22	0.20	0.20	0.02	0.08	0.26	0.04	0.22	0.13	0.05	0.02	0.18	0.20	0.18	0.17	5.15	0700 EDT
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