



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

INDIAN SUMMER GIVES WAY TO TWO MONTGOMERY COUNTY TORNADOES

November 2003 was a warm and wet month. Maximum temperatures exceeded October's. Indian Summer which began on October 30th did not break until November 5th. According to a review of observations this month **Jeff Stoudt** of **Laurel 2 E** noted that the weekends were rain free except for the 16th when upwards of a few hundreds of an inch fell while Wednesdays was the wettest day.

November began on an unusual warm note. Temperatures were in the 70's and 80's at many locations the first five days of the month. **Gary Galaher** of **Bear 2 SW DE** reported that this was the first time in 37 years that he has observed 5 consecutive days of =>70 degrees in November.

The warm spell was broken on the afternoon of the 5th when a frontal system moved through the region. Some observers noted a very dark sky in advance of the storms. The worst storms hit Montgomery County. A severe thunderstorm, which produced two tornadoes in Eastern Loudoun County Virginia, crossed the Potomac and entered Montgomery County Maryland just after 3 PM. A F0 tornado crossed the Potomac River south of Whites Ferry and dissipated southwest of Poolesville. Its path was estimated to be 4 miles long with a width of 75 yards. A second tornado touched down 2 miles west of Poolesville and traveled 10 miles to Germantown. This tornado's maximum rating was F1 (with winds 70 to 90 MPH) and its path was 75 to 100 yards wide. The two tornadoes knocked down trees, and utility poles and damaged buildings and left 8,700 people without power. Damage amounted to more than 2 million dollars. Hundreds of rush hour commuters were stranded

on stalled MARC trains. **Kevin Shaw** of **Gaithersburg 2 WNW** was one of those commuters. Thanks to **Rich Giannola** of **Olney 1 S** who sent me a newspaper article and the NWS Public Information Statement on the tornado. Rainfall amounts from the frontal passage varied from 2.69" at University of Del **Education and Research Center in Georgetown DE** to 0.37" at **University of DE Pearson Hall in Newark DE**.

Temperatures fell daily beginning on the 6th until the maximum temperature bottomed out in the 40's on the 9th. This was some 30 degrees colder than a week earlier. The next morning saw minimum temperatures in the upper teens to middle 20's across much of the region. The coldest reading, 12 degrees, was recorded by **Rebecca Harvey** of **Eagle Rock**. **John Zyla** of **Ridge** was the only ACON observer whose temperature failed to fall to freezing.

A deep storm system moved northeast west of the region on the 12th. It brought heavy rains in excess of 1" west of Carroll County but it will be remembered by the high damaging winds the entire region received on the 13th. Many observers reported that the winds were stronger than Hurricane Isabel's. The strongest gust reported was the 72 MPH observed by **Ralph Hartsock** of **Westminster 4 SSE**. Two other observers reported wind gusts exceeding 60 MPH - **Jim Vaughn** of **Smithsburg 2 NE** 63 MPH and **Greg Keefer** of **Hagerstown 1 E** 61 MPH.

Joe Terry of **Forest Glen** reported the temperature dropped 20 degrees in 45 minutes on the 24th with the passage of a cold front.

Thanksgiving (the 27th) saw in-

EXTREMES REPORTED BY

ACON OBSERVERS

MAXIMUM TEMPERATURE

Jug Bay Wetlands	85
Wash Gas Light Rockville	84
4 Stations	83

MINIMUM TEMPERATURE

Eagle Rock	12
Davis 3 SE WV	17
Parkton	18

WARMEST AVG. TEMP.

Ridge	54.0
Baltimore 2 SE	53.5
Hollywood	53.1

COLDEST AVG. TEMP.

Davis 3 SE	42.4
Eagle Rock	43.8
Frostburg	44.1

MAXIMUM PRECIPITATION

Potomac 4 N	6.90
Davis 3 SE WV	6.69
Eagle Rock	5.89

MINIMUM PRECIPITATION

Wilmington 4 NNE DE	3.48
U of D Newark DE	3.60
Bear 2 SW DE	3.67

MAXIMUM SNOWFALL

Davis 3 SE WV	10.8
Eagle Rock	7.0
LaVale	2.0

creasing clouds with seasonal temperatures and light winds. A cold front brought windy and colder conditions on the 29th.

Snowfall was limited to a "Trace" at scattered locations east of Allegany County. Allegany County received upwards of 2" while heavier amounts fell in Garrett County.

OBSERVER COMMENTS FOR NOVEMBER 2003

Gary Gallaher of Bear 2 SW, DE

1st to 5th - 70 degrees each day. First time in station history with 5 consecutive days with temps =>70 degrees in Nov.

10th - 19 degrees. Earliest in fall with a sub 20 degree temp.

13th - 53 MPH wind gust set a November record. Old record was 51 MPH set on 11/11/95.

Nate Mullins of LaVale

2nd & 3rd - Ample sunshine both days.

12th - Persistent dense fog all day.

13th - Some heavy cloud cover at times with numerous snow squalls throughout the day. Snow melted in between squalls and never reached more than about 0.5" on the ground but a total of about 1" fell.

29th - Light snow and gusty winds over night.

Dave Bryant of St Margarets

First week very mild - more like May.

5th - 5:30 PM sky very black as storm approached. Torrential rain for 10 minutes.

Dan Hanson of Millersville 1 SE

13th - The peak gust of 55 MPH ties the second highest measured wind at station since 1983. The daily mean wind speed of 11.4 MPH was the fifth highest since 1989.

Jeff Stoudt of Laurel 2 E

5th - Late afternoon thunderstorm and evening showers, some heavy.

19th - Rain with embedded heavy showers PM.

Al Kreinik of Parkton 5 SW

Fall 2003:

Avg Max 66.0 (+1.3), Avg Min 45.3 (+2.1), Avg Temp 55.7 (+1.7), Precip 18.53 (+6.88)

5th - Overcast, AM fog. Very dark in NW @ 4 PM.

Joe Manfre of Baltimore 2SE

21st - Sunny and very mild.

29th - Sunny, very windy, cool.

Marty Sharrow of Owings Mills

5th - Cloudy, humid, afternoon showers and storms.

9th - Azure blue skies and cold. Killing freeze.

Ralph Hartsock of Westminster 4 SSE

5th - Showers, fog, drizzle early - PM showers and thunder-showers.

13th - Very windy and colder with flurries. Lost power.

14th - Windy early - much calmer in PM.

24th - Late PM rain - moderate sleet late.

Greg Klein of Westminster 5 SSE

10th - Very cold early November morning of 21 degrees.

Bobby Miller of Millers 4 NE

Fall 2003:

Avg Max 65.8 (+1.4), Avg Min 47.0 (+1.1), Avg Temp 56.4 (+1.3), Precip 18.38 (+7.19) New record - Old 18.37 in 1987.

4th - 82 degrees set a new November maximum temperature record. Old record 80 set on 11/2/82.

13th - 58 mph wind gust set a new November record. Old record was 57 mph on 11/26/97.

24th - Rain changed to snow after 8 PM, and mixed with sleet 9 PM.

Manuel Farfan of Frederick 4 N

10th - Heavy frost.

13th - Very windy, with snow flurries starting at noon. Cold with temperatures going down throughout the day.

24th - Some sleet mixed with rain after 8 PM and a coating of ice pellets around 9 PM.

Rob Cohen of Potomac 4 N

1st, 3rd, 4th, 5th - Record max temp each day.

2nd, 21st, 22nd - Tied record max temp each day.

10th - Record min temperature.

Rich Giannola of Olney 1 S

4th - AM ground fog.

Kevin Shaw of Gaithersburg 2 WNW

A mild, wet month, mostly due to an early month warm spell. The wet month was not due to persistent, numerous damp days, but rather a few with significant rains. Unfortunately no snow fell.

Joe Terry of Forest Glen

3rd & 4th - Warmest in memory so late in the season, even had to turn on AC.

13th - Extremely windy day. Highest wind gusts since station inception. Dew point plummeted from 60 to 30 between midnight and 0800. Power out for 3 hours (9th time this year)

19th - 7th 2"+ calendar day precipitation for the year.

Bill Hudelson of South Bowie

10th - Heavy frost 0800. Lunar halo 2200.

19th - Overcast, rain 1330 - 2330. Severe thunderstorm, tornado, and flash flood watches.

Floyd Abell of Hollywood

5th - Evening thunderstorm.

22nd & 23rd - AM fog then fair each day.

John Zyla of Ridge

24th - Temperature dropped 19 degrees in 52 minutes (63 to 44 from 9:00 to 9:52 PM). Peak wind gust of 52 MPH the highest since 10/8/96 - Tropical Storm Josephine

Greg Keefer of Hagerstown 1 E

3rd - Record high of 80 breaking the old record of 78 set in 1990.

4th - Another rare 80 degree November day, but not a record.

13th - High winds began around 2 AM from the west with many gusts past 40 MPH and a peak gust of 60 MPH at 6:18 AM. High winds continued all day with many gusts of 50 MPH and several gusts to 60 MPH peaking at 61 MPH. It's rare for this location to see 60 MPH winds but this has happened 3 times since September. Tree and power line damage reported and some slight structural damage in the area.

Jim Vaughn of Smithsburg 2 NE

Tied 1985 for the warmest November.

3rd, 4th, 5th, 12th - A daily record max temp each day.

19th - 66 MPH wind gust set a new November record.

ACON MD / DE / DC
NOVEMBER 2003 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	SEA- SON
<i>New Castle, Delaware</i>																									
Canavan, Jim	Wilmington 4 NNE	57.3	40.9	49.1	77	1	22	10	0	0	6				3.48	1.25	19	<u>54.20</u>	7	1	0.0	0.0	0.0	2400	
Gallaher, Gary	Bear 2 SW	59.3	39.0	49.2	79	1+	19	10	0	0	6	53	WSW	13	3.67	1.05	19	56.03	11	1	0.0	0.0	0.0	2400	
NWS Wilmington	New Castle Co. Apt.	58.2	40.4	49.3	78	1+	22	10	0	0	5	59	W	13	3.37	1.05	19	50.40	9	1	0.0	0.0	0.0	2400	
U of D DE Climatologist	Newark Pearson Hall <i>Sussex, Delaware</i>	59.1	42.7	50.9	80	1	25	10	0	0	4	50		13	3.60	1.49	19	<u>49.87</u>	7	1				2400	
NWS Georgetown	Sussex Co. Airport	62.0	41.7	51.9	82	5	26	10	0	0	5	48	WNW	13	5.52	2.08	6	47.90	10	2				2400	
U of D Research & Ed Ct	Georgetown	61.5	40.3	50.9	83	5	22	10	0	0	6				5.88	2.67	6	<u>54.37</u>	14	2				2400	
U of D Warrington Farm	Harbeson <i>Allegany, Maryland</i>	62.0	41.7	51.9	81	1+	24	10	0	0	4				5.00	1.97	6	<u>41.90</u>	9	2				2400	
Latta, Greg	Frostburg	53.5	34.6	44.1	80	5	20	9+	0	1	13				4.33	1.52	12	52.03	12	2	1.6	1.1	29	1.6	0700
Mullins, Nate	LaVale	53.5	37.6	45.6	79	3	20	10	0	0	11				4.76	2.02	19	49.39	11	2	2.0	1.0	13+	2.0	2400
<i>Anne Arundel, Maryland</i>																									
Bryant, Dave	St. Margarets	59.7	42.6	51.2	77	5	29	10	0	0	4				4.33	0.85	5	57.74	13	0	0.0	0.0	0.0	2100-P 2400-T	
Hanson, Dan	Millersville 1 SE	59.8	38.1	49.0	81	5	19	10	0	0	9	55	WNW	13	5.36	1.83	19	61.01	12	1	0.0	0.0	0.0	2400	
Jug Bay Wetlands	Lothian	64.2	41.2	52.7	85	5	22	10	0	0	7				3.83	1.09	20	58.16	12	1	0.0	0.0	0.0	0900	
NWS Baltimore	BWI Airport	60.6	40.5	50.6	81	1	24	10	0	0	5	59	W	13	4.86	1.50	19	57.95	7	2	0.0	0.0	0.0	2400	
Stoudt, Jeff	Laurel 2 E	60.6	40.3	50.5	80	1+	20	10	0	0	5				5.54	1.66	19	67.06	6	2	0.0	0.0	0.0	2400	
<i>Baltimore, Maryland</i>																									
Kreinek, Al	Parkton 5 SW	59.3	38.6	49.0	83	3	18	10	0	0	8	60	NW	13	4.44	1.37	19	56.78	11	1	T	T	13	T	2200
Sharrow, Marty	Owings Mills 2 SE	57.0	38.3	47.7	76	3	21	10	0	0	11				3.95	1.69	19	52.07	8	2	T	T	13	T	2400
<i>Baltimore City, Maryland</i>																									
Manfre, Joe	Baltimore 2 SE	61.4	45.6	53.5	81	3+	30	10	0	0	2				4.10	1.52	19	57.85	7	1	0.0	0.0	0.0	1800	
Maryland Science Ctr	Baltimore Inner Harbor	61.1	45.9	53.5	80	3	32	9+	0	0	2				4.44	1.61	19	54.63	7	2				2400	
<i>Carroll, Maryland</i>																									
Close Jr, Herb	Manchester 1 SW	58.5	41.4	50.0	83	3	23	9	0	0	7	55		13	4.40	1.54	19	57.55	10	2	T	T	13+	T	2300
Hartsock, Ralph	Westminster 4 SSE	57.0	39.1	48.1	77	3	21	10	0	0	10	72		13	3.88	1.23	19	53.63	11	1	T	T	13	T	2100
Klein, Greg	Westminster 5 SSE	54.9	38.4	46.7	74	3	21	10	0	0	10				4.28	1.51	19	54.12	8	2	0.0	0.0	0.0	2200	
Miller, Bobby	Millers 4 NE	58.6	40.5	49.6	82	4	20	10	0	0	9	58	W	13	4.69	1.29	19	55.88	11	1	T	T	13+	T	1800
<i>Frederick, Maryland</i>																									
Farfan, Manuel	Frederick 4 N	59.0	40.1	49.6	80	3	20	10	0	0	6				3.74	1.36	19	56.61	10	1	T	T	13+	T	2400
<i>Garrett, Maryland</i>																									
Harvey, Rebecca	Eagle Rock	53.8	33.7	43.8	80	5	12	9	0	2	14				5.89	1.83	12	66.31	11	2	7.0	4.0	29	8.0	0800
<i>Harford, Maryland</i>																									
Albright, Lynn	Fallston 2 NW	60.0	37.7	48.9	79	1+	19	10	0	0	9				4.66	1.83	19	63.19	9	2	T	T	13+	T	2400
<i>Howard, Maryland</i>																									
Giannola, Rich	Laurel JHU / APL	58.8	39.8	49.3	80	3	22	10	0	0	7	55	WNW	13	4.42	1.63	19	56.72	7	1	0.0	0.0	0.0	2400	

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NOVEMBER 2003 SUMMARY

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		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
<i>Montgomery, Maryland</i>																									
Cohen, Rob	Potomac 4 N	60.9	41.6	51.3	80		24		0	0	5				6.90	2.31		60.56	7	2	0.0	0.0	0.0	2100	
Giannola, Rich	Oney 1 S	60.6	40.9	50.8	80	3+	24	10	0	0	6				4.72	1.90	19	58.57	6	2	0.0	0.0	0.0	2400	
Roth, David	Montgomery Village 1SW	60.7	42.3	51.5	80	3	24	10	0	0	3	26	13		4.58	1.88	19	58.90	9	2	0.0	0.0	0.0	2400	
Rossen, Stan	Glenmont 1 NNE	61.6	40.1	50.9	83	3	23	10	0	0	5	39	13		5.56	1.94	19	60.10	6	2	0.0	0.0	0.0	2400	
Scafide, Tony	Bethesda	62.0	40.2	51.1	80	3	23	10	0	0	6	39	13		4.82	1.83	19	<u>51.09</u>	7	1				2400	
Shaw, Kevin	Gaithersburg 2 WNW	59.7	37.9	48.8	79		20		0	0	11				5.82	2.29		58.54	6	2	0.0	0.0	0.0	2400	
Terry, Joe	Forest Glen	62.3	41.7	52.0	82	3+	25	10	0	0	5	48	WSW	13	5.52	2.17	19	64.81	6	2	T	T		T	2400
Wash Gas Light	Rockville 1 NE	60.8	39.8	50.3	84	4+	25	10	0	0	5				<u>4.68</u>	1.62	19	<u>48.83</u>	7	2	T	T	13	T	2400
<i>Prince Georges, Maryland</i>																									
Hudelson, Bill	South Bowie	59.2	41.6	50.4	81	5	24	10	0	0	4	47	WNW	13	4.80	1.51	19	65.62	8	1	0.0	0.0	0.0	2400	
Smith, Brian	Oxon Hill	<u>63.0</u>	<u>44.5</u>	<u>53.8</u>	82	5	27	10	0	0	3				5.24	1.65	19	61.69	10	1	0.0	0.0	0.0	2000	
<i>St. Marys, Maryland</i>																									
Abell, Floyd	Hollywood	62.9	43.3	53.1	82	1+	27	10	0	0	4	43		13	4.89	1.41	6	56.93	8	1	0.0	0.0	0.0	2400	
Van Wie, Michael	Oraville																							2400	
Zyla, John	Ridge	61.9	46.0	54.0	80	5	33	10	0	0	0	52	NW	24	4.35	1.87	6	55.46	9	2	0.0	0.0	0.0	2400	
<i>Washington, Maryland</i>																									
Keefer, Greg	Hagerstown 1 E	58.5	38.9	48.7	81	4	20	10	0	0	8	61	W	13	4.64	1.43	19	59.33	9	2	T	T	13+	T	2400
Vaughn, Jim	Smithsburg 2 NE	60.1	41.1	50.6	81	3+	23	9+	0	0	6	66	S	19	5.46	1.76	19	66.51	8	2	T	T	13	T	2000
<i>Wicomico, Maryland</i>																									
NWS Salisbury	Wicomico Co. Apt	62.5	39.0	50.8	81	5	24	10+	0	0	8	51	W	13	5.08	2.44	6	52.75	9	2	0.0	0.0	0.0	2400	
<i>York, Pennsylvania</i>																									
Rickell, Robert	Hanover 2 S, PA																	<u>20.80</u>							2100
<i>Arlington, Virginia</i>																									
NWS Washington Nation	National Airport	61.6	44.6	53.1	81	1+	31	10	0	0	1	54	N	13	4.23	1.47	19	54.98	7	1	0.0	0.0	0.0	2400	
<i>Loudon, Virginia</i>																									
NWS Washington Dulles	Dulles Airport	60.7	39.3	50.0	81	1+	21	10	0	0	8	52	WNW	13	5.20	1.93	19	60.06	7	2	0.0	0.0	0.0	2400	
<i>Tucker, West Virginia</i>																									
Leshner, Dave	Davis 3 SE WV	50.7	34.0	42.4	72	4	17	9+	0	2	13				6.69	2.37	12	68.35	14	2	10.8	8.2	29	126.0	1900
SECTION AVERAGE		59.6	40.4	50.2											4.76						0.8				

NOTES:
M OR UNDERLINE= MISSING DATA
> = INCLUDED IN NEXT DAYS DATA

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 1/13/04

ACON MD / DE / DC
NOVEMBER 2003 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
WILMINGTON 4NNE CANAVAN	77 49	73 53	76 53	69 58	69 57	63 59	56 51	47 38	42 25	46 22	55 29	55 46	58 54	44 34	52 39	54 36	59 46	55 38	65 53	52 45	62 36	61 37	61 46	61 29	42 27	49 31	50 33	60 33	58 33	49 33	-	57.3 40.9	2400 EST
BEAR 2 SW, DE GALLAHER	79 43	77 51	79 50	77 50	72 60	68 58	58 44	48 35	46 24	49 19	57 28	57 52	61 40	48 37	55 34	60 37	58 38	66 36	66 54	64 37	58 34	64 36	62 38	43 29	48 26	56 32	64 41	43 35	48 35	-	59.3 39.0	2400 EST	
WILMINGTON, DE NWS NEW CASTLE CO APT	78 46	72 52	78 51	72 55	70 58	66 57	59 48	49 35	44 26	48 22	56 30	55 51	60 39	47 36	54 37	54 39	60 40	56 51	67 38	54 39	67 40	62 37	57 38	61 38	43 32	48 28	53 33	60 42	45 36	50 36	-	58.2 40.4	2400 EST
U of D DE Climatologist Newark Pearson Hall	80 49	75 56	78 53	73 57	69 59	66 57	58 50	50 45	45 29	49 25	56 49	58 51	61 39	48 37	54 39	55 40	60 42	56 40	64 51	54 42	69 M	65 M	58 M	43 M	43 M	53 M	64 M	44 M	51 M	-	59.1 42.7	2400 EST	
GEORGETOWN, DE NWS SUSSEX CO APT	79 47	76 53	79 51	80 58	82 65	68 59	60 50	51 37	46 29	52 26	63 33	60 54	63 40	48 37	54 36	57 40	62 41	60 38	71 57	58 41	73 40	63 41	63 38	68 39	46 29	51 29	58 34	72 44	47 33	51 32	-	62.0 41.7	2400 EST
GEORGETOWN, DE UofD RESEARCH & ED CTR	80 46	75 51	78 50	81 56	81 64	83 58	69 47	59 37	51 25	45 22	63 30	61 54	63 39	47 36	54 34	58 38	63 39	59 37	69 59	58 39	68 41	61 38	60 37	66 27	45 27	51 27	58 33	71 43	46 33	51 31	-	61.5 40.3	2400 EST
HARBESON, DE UofD WARRINGTON FARM	81 50	78 52	79 52	81 59	81 66	81 59	69 50	59 34	52 27	46 24	53 33	63 55	60 40	63 36	47 36	54 39	62 41	59 39	68 58	64 43	63 39	68 39	68 42	45 28	52 28	57 33	71 44	46 33	50 33	-	62.0 41.7	2400 EST	
FROSTBURG LATTA	75 50	75 50	74 53	76 51	80 55	64 38	58 29	49 20	38 20	38 20	44 20	54 33	59 32	34 24	38 24	44 33	49 40	52 36	52 40	58 39	50 38	63 41	64 38	55 38	53 22	37 22	44 28	45 28	53 23	31 23	-	53.5 34.6	0700 EST
LAVALLE MULLINS	71 47	75 52	79 50	72 46	66 54	58 48	56 42	42 32	25 20	28 32	49 32	49 32	49 39	38 40	48 31	51 42	56 42	49 42	57 49	52 42	63 35	61 36	56 37	56 37	41 27	42 28	50 32	53 36	41 29	48 29	-	53.5 37.6	2400 EST
ST MARGARETS BRYANT	74 51	75 57	74 55	76 56	77 62	67 59	62 49	54 39	45 31	51 29	60 37	59 52	55 37	49 34	54 38	58 42	61 43	55 41	67 53	57 40	67 38	62 45	61 43	64 40	45 32	51 33	55 37	60 40	46 32	50 33	-	59.7 42.6	2400 EST
MILLERSVILLE 1SE HANSON	80 44	75 50	79 50	76 49	81 60	66 58	60 45	51 36	43 22	50 19	59 29	59 50	61 37	48 34	55 36	56 38	64 38	55 50	67 35	56 32	72 22	62 57	64 37	44 28	50 27	53 30	60 40	43 31	48 32	-	59.8 38.1	2400 EST	
LOTHIAN JUG BAY	74 44	83 50	81 53	83 55	85 64	84 65	68 57	62 35	56 25	46 22	61 32	62 46	51 49	51 36	57 38	57 39	61 43	65 35	72 45	59 47	73 33	69 36	61 45	71 32	50 27	51 32	58 48	66 35	46 32	-	64.2 41.2	0900 EST	
BALTIMORE NWS BWI APT	81 46	78 52	80 53	80 49	80 62	67 60	61 47	51 37	44 25	51 24	57 32	60 52	62 38	49 35	56 40	55 40	63 41	54 37	68 53	56 38	71 35	64 39	56 37	68 39	45 31	51 29	55 34	61 42	45 35	49 34	-	60.6 40.5	2400 EST
LAUREL 2 E STOUDT	80 47	79 53	79 52	80 48	80 62	67 61	61 50	50 33	43 23	55 20	60 30	60 49	54 36	48 48	53 38	63 39	54 41	70 37	57 51	72 42	68 37	60 42	69 39	45 38	52 31	56 29	61 35	44 34	49 34	-	60.6 40.3	2400 EST	
PARKTON 5SW KREINIK	80 46	82 53	83 52	81 47	69 61	64 58	48 48	45 30	50 22	55 18	57 29	60 49	48 39	54 33	54 36	63 37	50 40	67 34	54 50	70 38	68 32	59 39	63 36	41 37	50 30	54 25	59 30	45 42	48 34	-	59.3 38.6	2200 EST	
OWINGS MILLS 2SE SHARROW	75 46	74 53	76 53	75 49	72 61	65 57	59 43	48 32	41 23	48 21	53 31	55 48	58 33	46 32	51 36	54 38	58 43	52 36	66 50	66 40	66 35	60 40	58 36	60 29	41 26	48 32	51 30	59 31	41 30	-	57.0 38.3	2400 EST	
BALTIMORE 2SE MANFRE	80 48	79 58	81 61	80 58	81 63	69 62	61 51	53 38	47 32	52 30	59 41	57 52	63 42	49 36	58 46	64 46	52 50	69 46	57 55	71 42	64 48	58 47	66 50	41 36	M 36	M 34	62 35	45 35	50 35	-	61.4 45.6	1800 EST	
BALT INNER HARBOR MD SCIENCE CENTER	79 52	77 58	80 58	77 56	75 62	68 61	61 52	53 38	47 32	51 40	58 53	59 40	63 37	49 44	56 46	57 46	63 49	55 46	69 54	57 42	71 49	64 46	58 40	66 36	41 M	M M	62 43	45 36	50 36	-	61.1 45.9	2400 EST	
MANCHESTER 1SW CLOSE	78 53	79 58	83 62	81 58	70 60	64 58	48 46	45 33	23 23	28 35	48 49	52 35	57 31	46 38	54 41	56 44	62 42	51 48	64 39	64 49	54 44	69 39	65 49	59 44	60 28	42 30	50 36	53 38	41 31	-	58.5 41.4	2300 EST	
WESTMINSTER 4 SSE HARTSOCK	75 50	74 53	77 54	75 50	74 60	65 53	58 48	48 30	40 24	45 21	54 31	56 48	58 35	43 31	50 37	57 38	60 44	49 37	67 48	51 43	64 36	60 42	58 39	63 37	39 28	49 26	53 31	60 38	42 31	-	57.0 39.1	2100 EST	
WESTMINSTER 5 SSE KLEIN	72 48	72 55	74 56	73 50	73 59	63 56	56 43	47 32	38 22	43 21	51 31	54 47	56 33	42 30	48 34	54 38	50 42	64 39	49 67	62 49	59 37	56 45	60 33	37 27	46 24	51 31	57 37	45 29	49 29	-	54.9 38.4	2200 EST	
MILLERS 4NE MILLER	76 48	78 55	81 56	82 52	69 60	64 59	59 47	49 33	44 23	49 20	52 32	55 49	58 36	46 32	53 39	55 37	59 42	65 37	55 51	67 44	66 35	59 41	61 42	46 45	49 29	53 29	59 32	49 47	49 32	-	58.6 40.5	1800 EST	
FREDERICK 4 N FARFAN	78 45	77 51	80 53	79 48	69 63	65 59	60 50	41 36	49 24	54 20	58 31	60 50	48 37	53 35	53 39	59 41	52 37	68 34	55 42	71 46	65 37	60 36	65 38	42 31	47 27	54 32	64 42	43 34	51 32	-	59.0 40.1	2400 EST	
EAGLE ROCK HARVEY	74 38	70 54	74 60	76 54	80 54	66 58	60 36	48 24	40 12	44 14	56 22	52 50	52 18	30 20	38 20	42 30	46 38	50 34	56 38	59 42	44 36	60 42	62 40	52 40	60 18	39 18	42 32	52 40	59 20	-	53.8 33.7	0800 EST	

ACON MD / DE / DC
NOVEMBER 2003 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	
FALLSTON 2 NW	79	75	79	72	73	66	73	50	44	49	57	58	59	48	55	54	62	54	68	55	68	63	58	63	42	50	56	60	60	50	-	60.0	2400	
ALBRIGHT	45	52	50	47	60	59	44	33	21	19	29	50	37	34	35	36	36	34	49	34	32	39	35	37	25	30	39	32	32	-	37.7	EST		
LAUREL JHU / APL	78	77	80	79	78	64	58	48	43	49	55	59	60	46	53	54	60	53	66	53	69	65	59	65	41	49	54	60	40	49	-	58.8	2400	
GIANNOLA	46	55	55	52	61	57	47	34	25	22	33	49	34	32	40	40	40	36	50	41	37	43	38	35	29	29	34	38	32	31	-	39.8	EST	
POTOMAC 4N	78	78	80	80	79	67	62	50	45	51	52	60	60	49	54	54	62	54	69	57	72	70	64	66	45	52	57	63	44	52	-	60.9	2100	
COHEN	46	52	53	52	66	62	48	37	27	24	35	52	38	35	38	43	44	38	53	41	34	40	40	38	32	30	44	41	34	30	-	41.6	EST	
OLNEY 1 S	79	77	80	80	77	65	60	50	44	50	56	59	59	48	55	56	62	53	68	55	69	66	60	65	42	51	>	>	61	50	-	60.6	2400	
GIANNOLA	48	55	55	53	63	60	46	35	27	24	37	51	37	33	37	42	42	37	51	38	36	41	41	37	30	29	>	>	31	30	-	40.9	EST	
MONTGOMERY VILLAGE	78	78	80	80	79	68	64	51	43	49	58	62	63	45	55	55	61	57	69	56	70	66	61	66	42	50	56	65	44	51	-	60.7	2400	
ROTH 1SW	49	55	55	52	66	64	51	37	28	24	37	54	37	35	39	43	42	39	53	39	37	41	41	38	33	31	37	42	34	33	-	42.3	EST	
GLENMONT 1NNE	81	79	83	82	80	67	61	51	47	53	57	60	61	50	57	55	62	55	70	57	72	68	63	67	44	52	56	62	45	51	-	61.6	2400	
ROSSEN	46	52	51	49	64	61	46	36	27	23	33	51	37	35	38	42	39	36	52	37	34	38	37	38	31	29	34	41	32	33	-	40.1	EST	
BETHESDA	79	78	80	80	80	68	63	52	48	54	59	61	62	51	55	57	64	56	71	58	73	67	63	66	45	52	57	64	46	52	-	62.0	2400	
SCAFIDE	47	53	54	53	63	59	45	36	26	23	36	50	36	33	38	41	43	39	49	38	36	40	40	36	30	29	36	39	31	30	-	40.2	EST	
GAITHERSBURG 2WNW	76	75	79	78	77	66	60	50	46	50	55	59	58	50	56	55	61	55	68	56	70	66	60	64	43	49	55	62	43	49	-	59.7	2400	
SHAW	44	51	50	48	64	58	44	32	24	20	30	50	36	31	34	40	40	35	50	36	32	36	35	36	29	25	32	40	29	27	-	37.9	EST	
FOREST GLEN	81	79	82	82	80	67	62	54	48	52	58	61	62	51	56	56	65	55	70	59	74	69	63	67	46	52	58	63	45	51	-	62.3	2400	
TERRY	47	54	54	53	64	61	46	37	27	25	38	52	37	35	41	42	43	40	52	38	36	41	42	38	32	31	37	42	33	32	-	41.7	EST	
ROCKVILLE 1NE	82	80	84	84	84	M	61	50	47	52	56	61	42	50	54	55	62	56	58	M	72	72	62	66	44	53	56	63	43	52	-	60.8	2400	
WASH GAS LIGHT	45	52	63	50	50	M	47	36	26	25	37	50	36	42	38	38	41	37	52	M	37	40	37	37	30	30	35	38	33	31	-	39.8	EST	
SOUTH BOWIE	77	76	78	78	81	68	60	50	43	48	58	58	60	46	52	56	60	54	68	55	68	61	61	65	43	49	53	61	43	47	-	59.2	2400	
HUDELSON	46	54	54	54	64	60	49	37	28	24	35	52	48	35	41	41	42	38	52	38	36	38	39	40	30	30	34	42	33	35	-	41.6	EST	
OXON HILL	80	79	80	81	82	68	62	53	46	52	59	61	62	51	54	55	64	59	71	M	M	M	M	M	M	M	M	74	45	49	-	63.0	2000	
SMITH	47	55	55	55	67	61	51	38	29	27	39	53	39	36	43	43	46	41	52	M	M	M	M	M	M	M	M	31	35	35	-	44.5	EST	
HOLLYWOOD	82	80	80	82	81	68	63	53	47	54	62	61	64	52	56	54	63	57	70	59	73	68	65	70	46	52	57	68	48	51	-	62.9	2359	
ABELL	50	54	56	58	67	62	47	40	29	27	37	56	44	36	42	41	41	41	52	48	37	42	43	40	30	30	37	42	35	35	-	43.3	EST	
ORAVILLE																																-		2400
VAN WIE																																-		EST
RIDGE	75	75	77	79	80	67	63	53	47	52	65	64	58	53	57	54	62	60	68	61	73	62	61	67	47	52	57	66	49	53	-	61.9	2400	
ZYLA	54	59	58	60	66	62	49	38	36	33	45	57	38	35	46	44	47	52	51	46	41	51	50	41	35	35	37	42	35	38	-	46.0	EST	
HAGERSTOWN 1E	75	78	80	81	70	64	58	48	43	48	50	57	58	48	51	52	58	54	66	54	71	66	59	61	51	47	52	62	41	51	-	58.5	2400	
KEEFER	46	52	51	48	62	58	48	34	25	20	32	46	36	34	39	41	37	43	49	38	33	35	37	35	30	28	32	39	31	29	-	38.9	EST	
SMITHSBURG 2 NE	76	79	81	81	78	65	58	47	40	52	49	61	61	46	53	58	62	56	67	55	70	72	63	64	45	52	59	64	40	50	-	60.1	2000	
VAUGHN	52	55	56	54	62	58	47	36	23	23	40	48	35	31	37	41	38	47	51	44	39	41	46	33	28	34	34	40	30	30	-	41.1	EST	
SALISBURY	79	78	79	80	81	73	59	53	47	53	63	62	65	48	54	57	63	59	71	58	69	66	63	68	46	52	59	71	48	51	-	62.5	2400	
NWS WICOMICO CO APT	43	48	46	50	66	59	46	34	28	24	31	57	39	36	34	37	37	34	58	34	36	37	37	36	25	24	32	45	28	29	-	39.0	EST	
HANOVER 2 S, PA																																-		2100
RICKELL																																-		EST
WASH NATIONAL	81	77	76	78	81	68	63	53	46	50	59	61	63	51	55	54	64	58	70	59	74	66	65	66	45	50	56	63	46	50	-	61.6	2400	
NWS ASOS	51	55	57	57	65	62	52	39	33	31	42	53	39	36	42	44	47	44	54	43	40	45	44	40	33	36	41	43	34	36	-	44.6	EST	
WASH DULLES	81	78	80	81	80	67	61	51	43	50	57	60	61	49	53	54	63	57	68	57	73	67	62	65	43	49	55	64	43	50	-	60.7	2400	
NWS ASOS	44	51	52	49	65	61	50	35	26	21	32	50	37	34	41	41	37	35	52	35	31	36	35	37	29	28	34	42	29	29	-	39.3	EST	
DAVIS 3 SE WV	66	70	69	72	62	58	50	35	38	47	51	54	53	30	39	45	49	54	56	40	56	60	64	56	33	40	58	53	27	37	-	50.7	1900	
LESHER	50	52	50	49	54	50	35	23	17	24	33	49	20	17	27	35	39	40	39	32	36	39	42	25	17	30	36	27	17	17	-	34.0	EST	

**ACON MD / DE / DC
NOVEMBER 2003 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
WILMINGTON 4NNE CANAVAN				0.05	0.05	0.39					T	0.71	T			T	T		1.25					0.20			T	0.83			-	3.48	2400
BEAR 2 SW, DE GALLAHER				0.01	0.22	0.32					T	0.91	0.02			0.01			1.05	0.09				0.13			0.05	0.86			-	3.67	2400
WILMINGTON, DE NWS NEW CASTLE CO APT				0.02	0.17	0.31	T				T	0.82	0.02					T	1.05	0.08				0.14	T		T	0.76			-	3.37	2400
U of D DE Climatologist Newark Pearson Hall					0.15	0.22						0.73							1.49	0.06				0.14				0.81			-	3.60	2400
GEORGETOWN, DE NWS SUSSEX CO APT				T	0.51	2.08						0.69	0.01	T		0.03			1.51	0.20				0.06	0.04			0.39			-	5.52	2400
GEORGETOWN, DE UoD RESEARCH & ED CTR	0.06	0.04	0.02	0.09	0.02	2.67						0.66				0.03			1.62	0.33			0.01	0.02	0.03			0.28			-	5.88	2400
HARBESON, DE UoD WARRINGTON FARM					0.35	1.97						0.62				0.02			1.34	0.22				0.09	0.03			0.36			-	5.00	2400
FROSTBURG LATTA		T				0.45	0.19					1.52	0.05	0.05		0.01	0.05		0.57	1.22					0.10			0.05	0.07	T	-	4.33	0700
LAVALE MULLINS					0.50	0.21					0.13	1.25	0.08			0.04		0.01	2.02					0.20			T	0.28	0.04		-	4.76	2400
ST MARGARETS BRYANT				0.03	0.85	0.69	0.13				T	0.58	0.05			0.03	T	0.02	0.64	0.27				0.33	0.13			0.58			-	4.33	2100
MILLERSVILLE 1SE HANSON					0.83	0.51	0.26	0.02				0.63	0.11	0.03		0.01			1.83					0.29				0.68	0.16		-	5.36	2400
LOTHIAN JUG BAY					0.01	0.53	0.60					0.08	0.63				0.05	0.01		1.09					0.28	0.01	T	0.02	0.52		-	3.83	0900
BWI NWS ASOS				T	1.04	0.47	T				0.01	0.76	T			T			1.50					0.19			T	0.89			-	4.86	2400
LAUREL 2 E STOUDT					1.16	0.78	T				T	0.90	T			T		T	1.66				T	0.21			T	0.83			-	5.54	2400
PARKTON 5SW KREINIK					0.08	0.35	0.12				T	0.75	0.03					T	1.37	0.29				0.05	0.26				0.36	0.78	-	4.44	2200
OWINGS MILLS 2SE SHARROW					0.32	0.22					0.03	0.49	0.01			T			1.69					0.18				1.01			-	3.95	2400
BALTIMORE 2SE MANFRE					0.78	0.40					0.01	0.53	T			T			1.52					0.16			T	0.70			-	4.10	1800
BALT INNER HARBOR MD SCIENCE CENTER					1.06	0.37					0.02	0.51							1.61					0.15		M	M	0.72			-	4.44	2400
MANCHESTER 1SW CLOSE					0.30	0.17	0.01				0.03	0.68	0.07			T		0.01	1.54					0.46				1.13			-	4.40	2300
WESTMINSTER 4 SSE HARTSOCK					0.33	0.17					0.06	0.59	0.01			T		T	1.23	0.15				0.28	0.09			0.93	0.04		-	3.88	2100
WESTMINSTER 5 SSE KLEIN					0.37	0.16					0.06	0.62				0.01			1.51					0.48				1.07			-	4.28	2200
MILLERS 4NE MILLER					0.32	0.18	0.02				T	0.81	0.30	T		T	T	T	1.29	0.32				0.09	0.30			0.75	0.31		-	4.69	1800
FREDERICK 4 N FARFAN					0.31	0.20	0.02				0.05	0.62	0.02			T	0.02		1.36					0.38				0.76			-	3.74	2400
EAGLE ROCK HARVEY		T				0.67	0.35					1.83	0.03	0.10		T			0.54	0.85					0.20			0.07	1.00	0.25	-	5.89	800
												1.0	T												T			4.0	2.0	-	7.0	EST	

**ACON MD / DE / DC
NOVEMBER 2003 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
FALLSTON 2 NW ALBRIGHT					0.34	0.37	0.02					0.75	T			T		0.02	1.83	0.01				0.22			T	1.10		-	4.66	2400	
LAUREL JHU / APL GIANNOLA					0.96	0.35	0.01				T	0.52	T						1.63					0.20				0.75		-	4.42	2400	
POTOMAC 4N COHEN					2.31	0.39					T	0.79	0.05			T			2.20					0.26	T		0.90		-	6.90	2100		
OLNEY 1 S GIANNOLA					>	1.10					0.01	0.71				T			1.90					0.20			0.80		-	4.72	2400		
MONTGOMERY VILLAGE ROTH 1SW					1.02	0.31	0.01				0.02	0.55						1.88						0.20			0.55	0.04	-	4.58	2400		
GLENMONT 1NNE ROSSEN				T	1.41	0.46					T	0.68			T	T		T	1.94					0.27			0.80		-	5.56	2400		
BETHESDA SCAFIDE					0.84	0.48						0.59							1.83					0.34			0.73	0.01	-	4.82	2400		
GAITHERSBURG 2WNW SHAW					1.50	0.30					T	0.54	T			T		T	2.29					0.28			0.91		-	5.82	2400		
FOREST GLEN TERRY					1.18	0.42					T	0.60			T	T			2.17					0.30			0.85	T	-	5.52	2400		
ROCKVILLE 1NE WASH GAS LIGHT					1.20	0.30						0.85	T						1.62	M	M			0.15			0.55	0.01	-	4.68	2400		
SOUTH BOWIE HUDELSON					0.79	0.65	0.05				T	0.60				0.05			1.51					0.34			T	0.81		-	4.80	2400	
OXON HILL SMITH					0.84	0.70	0.01				T	0.73	0.01		T	0.04		T	1.65					0.35	0.01		0.90		-	5.24	2000		
HOLLYWOOD ABELL					0.77	1.41	0.04				T	0.96	T			0.02			0.92					0.29			0.48		-	4.89	2359		
ORAVILLE VAN WIE																													-		2400		
RIDGE ZYLA					0.03	1.87						0.17				0.05	0.08		1.67	0.02			0.11				0.35		-	4.35	2400		
HAGERSTOWN 1E KEEFER					0.36	0.16					0.14	1.13	0.02			T			1.43	0.01				0.62			0.77	T	-	4.64	2400		
SMITHSBURG 2 NE VAUGHN					0.48	0.16	0.02				0.48	0.92	T					T	1.76					0.49			T	1.15		-	5.46	2000	
SALISBURY NWS WICOMICO CO APT						2.44	0.01					0.22	T	T	T	0.02		0.01	1.93	0.25				0.01	T		0.19		-	5.08	2400		
HANOVER 2 S, PA RICKELL																													-		2100		
WASH NATIONAL NWS ASOS					0.53	0.47					T	0.57				0.04			1.47					0.32			T	0.83		-	4.23	2400	
WASH DULLES NWS ASOS					1.60	0.25					0.01	0.48	T		T	T		T	1.93					0.27			0.66		-	5.20	2400		
DAVIS 3 SE WV LESHER					0.69	0.25	0.28				0.17	2.37	0.05	0.06	T	0.06	0.02		1.58					0.15	T		0.01	0.71	0.29	T	6.69	1900	
												0.8	0.8	T	T									0.4	T		0.6	8.2	T	10.8	EST		