



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

# HEAT INTENSIFIES DROUGHT CONDITIONS SMOKE FROM CANADIAN FOREST FIRES

Summer's heat and humidity hit with full force this month. This was in sharp contrast to July 2000 and 2001 when cool conditions persisted. Scattered heavy thunderstorms failed to curtail the drought as it intensified in many areas especially east and north of Baltimore / Washington, DC region. Dry northerly winds of the 6th through the 8th not only brought refreshing dry Canadian air into the area but smoke from forest fires in Quebec near James Bay. They were started by lightning a few days earlier. On the 29th an Amtrak passenger train derailed at Kensington, Maryland. Temperatures in the high 90's buckled a section of welded track. Two people were critically injured.

### TEMPERATURE

The month began and ended on a hot note. 90 degree temperatures were common this month. Most stations saw the temperature rise to 90 or above on half of the days this month. A few stations broke the 100 degree mark.

The hottest period occurred around the Fourth of July holiday at many stations. Temperatures rose to the 100 degree mark at the following ACON locations: **Jim Vaughn** of **Smithsburg 2 NE** (103 & 101), **Joe Manfre** of **Baltimore 2 SE** (102 & 101), **Dan Hanson** of **Millersville 1 SE** (102 & 101), **Bill Hudelson** of **South Bowie** (102 & 100), **Jug Bay Wetlands** (101 twice), **Tony Scafide** of **Bethesda** (100), **Kevin Shaw** of **Gaithersburg 2 WNW** (100), and **Floyd Abell** of **Hollywood** (100). The only 100 degree temperature which was not recorded around the 4th of July holiday was reported by **Joe Manfre** of **Baltimore 2 SE** on the 23rd.

The heat was broken a few times by quite cool temperatures, well for July that is. Maximum temperatures from the 10th through the 14th generally ranged in the 75 to 85 degree range.

Another refreshing cool period occurred from the 24th to the 27th. Maximum temperature just broke the 70 degree mark on the 26th at some ACON stations.

The monthly minimum temperature occurred on the 12th at a majority of stations. The coldest temperature was 42 degrees at the Salisbury NWS ASOS Wicomico County Airport.

### PRECIPITATION

Heavy summer thunderstorms were scattered across the region this month. Twenty ACON locations reported daily amounts over 1.00". Three ACON stations received daily amounts of over two inches: **Rob Cohen** of **Potomac 4 N** 2.40" on the 23rd, **John Zyla** of **Ridge** 2.23" on the 24th, and **Rebecca Harvey** of **Eagle Rock** 2.05" on the 27th. **John Zyla** of **Ridge** reported that 4.16" fell in less than 48 hours on the 23rd & 24th.

There were three periods of rain this month. The first period was the 9th & 10th. **Jeff Stoudt** of **Laurel 2 E** reported 1.75", **Ralph Hartsock** of **Westminster 4 SSE** reported 1.54". Soaking rains of 1 to 1 1/2" fell on the 14th at ACON locations in Montgomery, Howard, and far western Anne Arundel Counties in Maryland and at NWS Dulles and National Airports. Lesser amounts fell elsewhere. Delaware and Northern Maryland received the least. The third and final "rainy" period was from the 23rd to the 28th. The heaviest amounts reported by ACON stations are noted in the first paragraph in the Precipitation section. Other heavy amounts were reported by **Jug Bay Wetlands**, 1.82" on the 23rd, **Jeff Stoudt** of **Laurel 2 E**, 1.78" on the 24th, and **Rich Giannola** of **Laurel JHU / APL**, 1.49" also on the 23rd. Northern Delaware reported the least.

Hail was reported by the following ACON observers: **Rob Cohen** of **Potomac 4 N**—Pea size hail on the 23rd which lasted for 5 minutes between 6 & 7 PM, and **Jim Vaughn** of **Smithsburg 2 NE**—1/8" hail on both the 9th and 23rd.

### EXTREMES REPORTED BY

#### ACON OBSERVERS

##### MAXIMUM TEMPERATURE

Smithsburg 2 NE	103
Millersville 2 SE	102
South Bowie	102

##### MINIMUM TEMPERATURE

Eagle Rock	46
Hanover 2 S	47
Jug Bay Wetlands	48
Parkton 5 SW	48

##### WARMEST AVG. TEMP.

Baltimore 2 SE	82.1
Ridge	81.1

##### COLDEST AVG. TEMP.

Eagle Rock	70.5
Hanover 2 S	73.9

##### MAXIMUM PRECIPITATION

Potomac 4 N	5.77
Ridge	5.39
Eagle Rock	4.81

##### MINIMUM PRECIPITATION

Newark Pearson Hall, DE	1.33
South Bowie	1.43
Owings Mills 2 SE	1.44

**Jim Vaughn** of **Smithsburg 2 NE** also reported the following wind gusts in thunderstorms: 61 MPH on the 9th (new station record for July) and 54 MPH on the 24th.

### MEMBER NEWS

**Gary Gallaher** is at home recovering from surgery on August 15. He wishes to thank everyone who sent cards, e-mails, or phoned.

This month I have included data from **Dan Leathers**, Delaware State Climatologist. He has set up a Vantage station at University of Delaware's Pearson Hall in Newark Delaware.

# OBSERVER COMMENTS FOR JULY 2002

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## **Gary Gallaher of Bear 2 SW, DE**

Hot, dry month. Less haze than normal due to the lower humidity and lack of rainfall. Average temperature of 77.6 tied 1983 and 1991 for the 9th warmest July. Six of the eleven warmest Julys (33 Julys of record) have occurred in the past 12 years.

## **Dan Hanson of Millersville 1 SE**

July was a hot month. Precipitation was near average for the month due to several beneficial thunderstorms.

**9th** — Record July wind gust of 39 MPH.

**24th** — 1.82" of rain in about 2 hours.

## **Jeff Stoudt of Laurel 2 E**

**9th** — Thunder, 1.75" of rain; very little rain as close as 1/2 mile to the south.

## **Al Kreinik of Parkton 5 SW**

**14th** — Overcast with heavy AM fog.

## **Marty Sharrow of Owings Mills**

**4th** — Blazing sunshine, hot, and bone dry.

**14th** — Overcast and damp; AM rain; cooler 73 deg max

## **Joe Manfre of Baltimore 2SE**

Another month with below normal precipitation and above normal temperatures.

**9th** — Hot, humid, strong PM thunderstorms.

## **Herb Close of Manchester 1 S**

Third warmest July in 14 years of records. There were 14 90 degree plus days, second highest. Record is 15 days set in 1999. This was the fourth driest July. Some corn fields are only 2 to 3 feet tall with ears! It is so dry the weeds are not growing!

**26th** — Temperatures stayed in the 60's all day. 0.62" fell making it the wettest day of the month.

## **Ralph Hartsock of Westminster 4 SSE**

**9th** — Very hot—very heavy PM thunderstorm.

## **Bobby Miller of Millers 4 NE**

14 days with the maximum temperature 90 or higher—second highest. Twelve month precipitation 28.54", 14.79" below average.

## **Rich Giannola of JHU/APL of Laurel**

**23rd** — TS began ~6:10 PM. TSHRA began 6:35 PM. Mainly SHRA with some TSHRA continuing in evening, ending ~10:00 PM.

**26th** — SHRA/TSHRA began ~7:15 AM. Mainly SHRA rest of day, ending in afternoon = 0.63". Late evening DZ and SHRA brought 0.02" more.

## **Rob Cohen of Potomac 4 N**

**23rd** — Severe thunderstorm 6—7 PM. Intense lightning—house struck 2 blocks away. Pea size hail for 5 minutes.

## **Kevin Shaw of Gaithersburg 2 WNW**

Amazing hot spell to start the month—4 record highs in a row. As is in the summer, significant rains only fell on three (3) days, 9th, 14th, & 26th when 2.76" fell which

was 93.5% of the months total.

## **Joe Terry of Forest Glen**

**11th** — Unusually dry—minimum dew point only 43 degrees. Numerous sun dogs and pastel colors in the high clouds during the afternoon and early evening.

**14th** — Good soaker. 6 1/2 hours of continuous moderate to heavy rain.

**26th** — Pleasant respite from the heat. Unusually cool daytime maximum temperature of 70 degrees.

**28th** — Worse combination of heat and humidity so far this year. Maximum heat index 107 degrees.

## **Bill Hudelson of South Bowie**

**1st to 4th** — Hazy, hot

## **Brian Smith of Oxon Hill**

**5th** — AM low 81 degrees.

**23rd** — I watch the LWX radar as a TS complex NW of me shot out an outflow boundary that spread SE and choked off any TS development. Got just sprinkles in rain-cooled air as temp went from 98 to 82.

## **Floyd Abell of Hollywood**

**4th** — Hottest Fourth of July on record - 100 degrees

**27th** — Late day storm with vivid lightning.

**29th** — Fair, hot. Heat index 112 around 3 PM.

## **Mike Van Wie of Oraville**

**27th** — Lost power. Lightning within 1/4 mile.

## **John Zyla of Ridge**

**23rd** — Thunderstorm dumps 2.08" of rain in 2 hours 10:45 PM—12:45 AM.

**24th** — Another storm dumps another 2.08" during the evening! 4.16" in less than 48 hours and after all of that there were no puddles!

## **Greg Keefer of Hagerstown 1 E**

**2nd** — Hazy, very hot and very humid today high of 96. Heat index averaged 103 this afternoon and peaked at 106.

**4th** — Very hot again today high of 98. Heat index averaged 103 peaked at 107.

**7th** — Very hazy smoky skies and reduced visibility from Canadian forest fires.

**12th** — Very chilly morning with a low of 49. That's rare in July.

**28th** — Hot and very oppressive high 94 with dew points briefly in the upper 70's at one point and heat indices averaging 105 peaking at 109 this afternoon.

## **Jim Vaughn of Smithsburg 2 NE**

Fifth warmest July. Year to date precipitation 0.36" below 2001.

**4th** — 103 degrees ties highest July temp and highest temperature overall on record.

**9th** — July record wind gust of 61 MPH with 1/8" hail in thunderstorm. Old July record peak gust was 60 MPH set on July 25, 1999.

**23rd** — Wind gust of 54 MPH and 1/8" hail in t-storm.