



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

ISABEL, HENRI, AND GRACE THREE NAMES TO REMEMBER

The following quote by **Bill Hudelson** of **South Bowie** sums up this month: "A month of misery, heartache, appreciation for the little things (electricity) in life and an awesome demonstration of the power of even a minimal hurricane."

September was a very active weather month. Numerous rain events produced record to near record rainfall across the region making this the wettest month in 2003 by exceeding June's regional average by over a half of an inch. Temperatures this month averaged out near normal despite the lack of heat extremes. The warmest day occurred on the 1st or 2nd while the coolest occurred on the 30th at most locations. There were only two observation days with 90 degree.

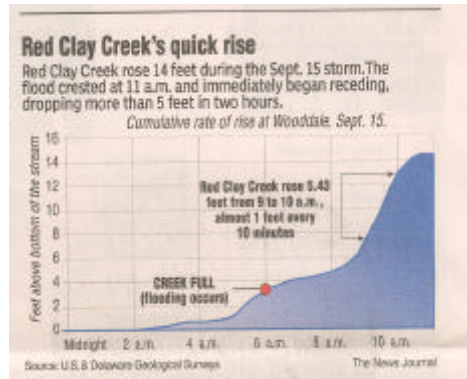
The first four days of the month were humid and cloudy. Showers and thundershowers were numerous. **Tropical Storm Grace** was absorbed into a stalled frontal system. As that frontal system moved through the region on the 3rd and 4th it dropped heavy rains totaling 2 inches or more over portions of Washington, Carroll, Baltimore and Harford Counties. **Greg Keefer** of **Hagerstown 1 E** reported 3.94", most of it falling on the 3rd, causing flash flooding. (See **Greg Keefer's** comments for the 3rd on the Observer Comments).

From the 5th through 11th very little rain fell. Temperatures were slightly below average while the humidity remained at comfortable levels for early September. Light showers fell on the 9th in areas of Western and Central Maryland.

Beginning on the 12th a tropical air mass moved into the region as the remnants of **Tropical Storm Henri** moved north from the North Carolina Outer Banks. This was a disorganized system which lingered across the region through the 15th. Most of the region received

less than an inch. Isolated locations received over an inch. **John Zyla** of **Ridge** recorded 2.29" on the 12th.

The heaviest rains fell during the morning of the 15th. The following amounts were reported by ACON observers: 3.60" by **Dan Leathers Delaware State Climatologist at Pearson Hall in Newark**, 2.55" by **Jim Canavan of Wilmington 4 NNE**, and 2.33" by **Gary Gallaher of Bear 2 SE DE**. The Wilmington NWS only reported 1.27". The heaviest showers "trained" in a band centered over the Red Clay Creek Valley in Northern Delaware and Southern Chester County Pennsylvania. Rain fell at hourly rates of over 2". An estimated 8 to 10 inches fell creating the worse flooding on record. Below is a chart from the *Wilmington Delaware New Journal* Newspaper detailing the rate of the rise of the flood waters at Wooddale DE:



ton Delaware New Journal Newspaper detailing the rate of the rise of the flood waters at Wooddale DE:

All roads in a 20 mile section from Kennett Square Pennsylvania southwards into Delaware were damaged and made impassable. The Wooddale Covered Bridge, which survived record floods of Hurricane Floyd in 1999, was washed away. The Wilmington and Western Railroad sustained an estimated 5 million dollars of damage. A picture of some damage is on page 2. Severe flooding occurred throughout the valley. The community of Glenville, which is lo-

EXTREMES REPORTED BY ACON OBSERVERS

MAXIMUM TEMPERATURE

Jug Bay Wetlands	90
Ridge	90
Fallston 2 NW	89
Forest Glen	89
Hollywood	89

MINIMUM TEMPERATURE

Davis 3 SE WV	36
Eagle Rock	38

WARMEST AVG. TEMP.

Ridge	74.1
Baltimore 2 SE	74.0

COLDEST AVG. TEMP.

Davis 3 SE WV	56.9
Eagle Rock	60.1
Frostburg	60.1

MAXIMUM PRECIPITATION

Hagerstown 1 E	11.45
Smithsburg 2 NE	11.35
Eagle Rock	10.48
Frederick 4 N	10.26

MINIMUM PRECIPITATION

UofD Harbeson DE	4.36
Millersville 1 SE	5.75
Jug Bay Wetlands	5.87

MAXIMUM SNOWFALL

Davis 3 SE WV	T
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MEMBER NEWS

Dave Lesh of **Davis 3 SE WV** joins us this month. He lives 22 miles SW of Eagle Rock in the Canaan Valley, a short distance south of the extreme southwestern corner of Maryland. Many of us already know Dave.

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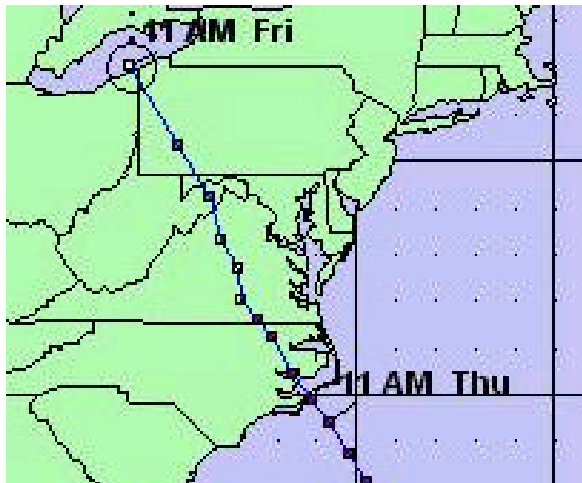
cated on the floodplain near the mouth of the Red Clay Creek, has requested a government buyout.



The picture above is from the *Wilmington Delaware New Journal* Newspaper:

As the flood waters of Henri receded, **Hurricane Isabel** was approaching the North Carolina coast. Isabel made land fall near Drum Inlet mid day of the 18th. Strong high pressure over New England and Southeast Canada prevented Isabel from taking the typical north to northeast track that parallels the east coast. Her path took her over central Virginia, extreme Western Maryland to central Lake Erie.

Isabel will be most remembered for widespread tree



and power line damages and for the major tidal flooding in parts of Annapolis, Baltimore, and Washington DC. The storm surge and constant east to southeast winds along with a high tide broke or tied levels set during the August 23, 1933 unnamed hurricane. At Baltimore the water continued to rise after the 2:07 AM high tide. It did not stop rising until 8:06 AM when it reach 8.15 feet above

above mean low water. This level was 7 feet above normal. The previous record high was 7.99 feet. In Annapolis the water rose to 7.20 feet tying the previous record. At Washington D.C. it peaked at 11.3 feet, breaking the record of 11.1 feet. This flooding was not caused by heavy rains, but by winds from Isabel, which passed west of the bay, pushing water northward and westward. The levels were 2 feet higher than predicted and surprised everyone. It proved that a strong hurricane is not needed to cause flooding of this magnitude. The high water damaged many marinas and flooded hundreds of homes.

Power outages, as result of Isabel, affected millions of people from North Carolina to Pennsylvania. In addition to power line and tree damage it damaged crops. In Pennsylvania where the winds and rains flattened corn fields the Amish received permission to use mechanized equipment to harvest the corn.

Ocean front dunes fared well during Isabel, but the Western Shore of the Chesapeake Bay took the worse of Isabel's pummeling. In Baltimore County about 3 million dollars worth of damage was caused by erosion. 11,500 feet of shoreline was damaged.

Chemistry and engineering labs at the Naval Academy were severely damaged by the tidal flooding. A three story 360 foot long barge that covers 3/4 of an acre and more than 20 trailers now serve as temporary classroom while repairs are being made.

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Picture at the left: The waterfront promenade at Tydings Park Marina in Havre de Grace. Photo from *The Baltimore Sun*



A worker prepares to remove a tree that fell on a house in the 4900 block of Upton Street NW. The tree damaged the house's roof and chimney when it toppled.

Picture on the left: One of the many trees which were uprooted. This one was on Upton Street NW DC. Photo from the *Washington Post*

Picture at center left: Many state and US flags were damaged as result of Isabel winds. These flags at the Washington Monument are being replaced. Photo from the *Washington Post*.

Picture at center: Alex Haley statue at Annapolis Statue at Annapolis City Dock. Photo from *The Baltimore Sun*



National Park Service worker Frank Lewis repairs U.S. flags surrounding the Washington Monument, part of storm recovery efforts in the District.



The Alex Haley statue in Annapolis is almost submerged as floodwaters cover City Dock in the capital's downtown.



Picture above: Delaware Bay at Bay View Delaware, Photo from *Wilmington DE News Journal*.

Photo at right: Annapolis City Dock Photo from the *AP*



Continued from page 2

The days following the passage of Isabel were quiet while the clean-up continued. A strong cold front moved through the region early on the 23rd. It brought with it heavy rain and thunderstorms and flooding in central Maryland. **Manuel Farfan of Frederick 4 N** reported that heavy rain began around 6 PM on the 22nd. By dawn of the next morning 4.07" had fallen creating a 110 foot sink hole near Interstate 70. Also nearly 60 roads were closed and people had to be rescued from automobiles as a result

of the flooding. Rainfall totals of over 2 inches fell in Frederick, Carroll, Baltimore, Harford, Anne Arundel, Montgomery, Prince Georges Counties. At most stations this was heavier than what fell during the passage of Hurricane Isabel. After the cold front exited Northern Delaware around daybreak it spawned 4 F1 tornados in the Philadelphia Metropolitan region.

The final cold front of the month moved through the region late on the 28th. It brought with it the coolest temperatures of the season. Morning temperatures on the 30th were generally in the lower 40's.

Hurricane Isabel as seen through the eyes of ACON Observers

<u>Observer</u>	<u>Station</u>	<u>Precip</u>	<u>Peak Wind</u>	<u>Low Barometer</u>
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Listed by the amount of Precipitation which fell on Sept 18 & 19th

Jeff Stoudt	Laurel 2 E	4.67		
Rebecca Harvey	Eagle Rock	4.21		
Greg Latta	Frostburg	3.74		
Jim Vaughn	Smithsburg 2 NE	3.66	68 SE	
Dave Leshner	Davis 3 SE	3.61		
Greg Keefer	Hagerstown 1E	2.89	63 SE	29.50
Rich Giannola	Olney 1S	2.65		
Dean Dey	UofD Research Center	2.56		
	Georgetown DE			
Rich Giannola	Laurel JHU/APL	2.53	44 NE	29.57
Brian Smith	Oxon Hill	2.41		
Nate Mullins	LaVale	2.36		
David Roth	Montgomery Village 1SW	2.30	50 SE	29.54
Dan Hanson	Millersville 1 SE	2.14	47 E	
Stan Rossen	Glenmont 1NNE	2.13		
Bill Hudelson	South Bowie	2.12	40 NE	
Joe Terry	Forest Glen	1.94	45 ENEe	29.56
Gary Gallaher	Bear 2 SE DE	1.93	53 ESE	29.73
Dave Bryant	St Margarets	1.91		29.61
Herb Close	Manchester 1SW	1.89	62	
Kevin Shaw	Gaithersburg 2WNW	1.88		
Manual Farfan	Frederick 4N	1.76		
Rob Cohen	Potomac 4N	1.73		
Karyn Molines	Jug Bay Wetlands	1.72		
Floyd Abell	Hollywood	1.68	51	
Ralph Hartsock	Westminster 4SSE	1.62	56 ESE	
Tony Scafide	Bethesda	1.49	58 SE	
Al Kreinik	Parkton 5SW	1.47	55e	29.58

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e= Estimated direction or speed

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<u>Observer</u>	<u>Station</u>	<u>Precip</u>	<u>Peak Wind</u>	<u>Low Barometer</u>
Greg Klein	Westminster 5 SSE	1.44		
John Zyla	Ridge	1.41	46 SE	29.44
Jim Canavan	Wilmington 4NNE	1.35		
Marty Sharrow	Owings Mills 2SE	1.26		
Bobby Miller	Millers 4NE	1.20	49 ENE	29.56
Joe Manfre	Baltimore 2SE	1.11		
Lynn Albright	Fallston 2NW	1.07	52	
Dean Dey	UofD Warrington Farms, Harbeson DE	0.96		

ISABEL AS SEEN THROUGH THE EYES OF ACON OBSERVERS

Floyd Abell of Hollywood - Isabel caused severe tidal flooding and damaging winds in St Marys County. Some locations estimated winds gusts were 70 to 80 MPH, at my station 51 MPH. Power was lost for over a week as some locations. Downed trees also did a lot of damage.

Lynn Albright of Fallston - We were without power for 2 days, and the next day power was intermittent. My husband's sister had 7 feet of water (Bowley's Quarters area) from storm surge in her home. They lost the entire contents of their first floor (the house is on stilts and the water still was over the top of the kitchen counters). They also lost both vehicles. Rescuers could not reach them until the water receded. At that point they wouldn't leave their property due to the fear of looting of what they do have left. Another relative lost their home to fire this weekend. Their power was out and had a generator running in a shed next to the house. The fumes/gases built up in the shed until an explosion happened and fire thereafter. All that was left was one wall of the house. Here at our home we were very fortunate. We were of course well prepared, and when the electric went it was no big deal, just a little inconvenient. Our home sustained no damage. We can't say the same for our neighbors.



Carrs Mill Road, Fallston
Photo by Lynn Albright

Tollgate Road, Fallston
Photo by Lynn Albright

Old Fallston Road, Fallston
Photo by Lynn Albright

David Bryant of St Margarets - Light showers began around 7:30 AM of the 18th. By 3 PM steady, light rain with estimated winds in the 30's mph. Some small mostly old dead oak and poplar limbs hitting the roof. Heavy rain squalls 6 to 7 PM. Worst part of the storm from 11PM of the 18th to 12:20 AM of the 19th.

Herb Close Jr. of Manchester 1 SW - The peak of the storm occurred after Midnight with heavy rains and high winds. I had a peak wind gust of 62 MPH at 12:22 AM and again between 1 AM - 6 AM. Winds were generally SE 30 - 45 MPH gusting 45 - 60 MPH. Moderate - heavy wind swept rains fell especially after 11 PM to early morning hours. With the visibility down to 1/16 to 1/8 th mile at times and rain blowing almost horizontal in sheets it looked like a blizzard outside. During the highest gusts the windows whistled in my weather office and that hasn't been observed since the Nor'easter of December 1992. I did not have power outage, but many brownouts and a few very brief blackouts for about 5 seconds. Here the next morning I saw 6 medium sized trees snapped off at the trunk about 3 to 6 feet off the ground and

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two trees were split. They were the flowering trees along Washington Way. I also has some minor roof damage. About a dozen shingles blew off. Also about 5 feet of metal angle at the very top of the roof lifted up the roofing nails and bent all the way back facing NW. There was a 1 " gap five feet long open to the attic.

Rob Cohen of Potomac 4 N - Minor tree damage in neighborhood, power out for only 2.5 hours. Frequent blue—green flashes of distant transformer arcing 10 - 11 PM during the strongest winds.

Manuel Fanfan of Fredrick 4N - Very windy overnight, especially around 2AM when I felt the townhouse moving like a very small earthquake. Not much rain but very windy indeed. Isabel's aftermath around my area: just a few broken branches, never lost power, and not a lot of rain. No incidents reported nearby

Gary Gallaher of Bear 2 SW DE - Increasing winds and rains. Hourly peak wind gusts increased from 20 mph at 4AM (18th), to the 30's by noon, 40's by 6 PM, and the 50's by 2 AM (19th). Afterwards they decreased to the 30's by 5 AM where they remained till 3 PM. Heavy tropical showers the evening of the 18th and early morning hours of the 19th. The strongest winds occurred during these showers. Some trees lost branches as well some uprooted. Power out for 11 hours here.



Up rooted tree in Caravel Farms, Bear DE Photo by Gary Gallaher



Flooding of Cypress Creek at the headwaters of the Magothy River, Severna Park, MD Photo by Jeff Gallaher

Rich Giannola of Olney 1 S - Rain began at 1:00 PM on the 18th and ended ~9:00 AM on the 19th. Power was lost for 25 hours, 11:30 PM on the 18th to 12:30 AM on the 20th.

Dan Hanson of Millersville 1 SE - Peak wind gust of 47 MPH. Because the station is in fairly heavily wood surroundings, the wind gusts is quite significant. Many small to large branches fell with a few whole trees down. Probably the most widespread effects were the power outages. The electricity was off from 9/18 2105 to 9/22 1000. The tidal flooding was the worst I had ever witnessed on the Severn River. At the head waters of the Severn, the tide rose nearly 7 feet which completely submerged most docks.

Ralph Hartsock of Westminster 4 NNE - Squalls arrive 2 PM. Heavy winds. Extensive tree damage, major power outages.

Bill Hudelson of South Bowie - Power off 1500 9/18 and back on 0015 9/21.

Greg Keefer of Hagerstown 1 E - Rains and wind begin in the afternoon around 2:30 PM on the 18th. Increasing wind and rain into the evening with heavy rain squalls and wind gusts to 50 MPH at times. 19th - Very strong wind and rain all night with many gusts from the east to 50+ mph and several gusts to 60 mph with a peak gusts of 63 MPH around 1 AM. Flooding not as serious as expected but some moderate flooding was reported. Winds did a good bit of damage to many trees and wires and some structural damage reported. Also a lot of power outages. Winds that strong and steady are very rare for my station location especially from the east. When the peaks gusts of 60+ came through I actually felt the house move. Wow!

Greg Klein of Westminster 5 SSE - Powerful winds from Isabel knocked down over a dozen medium to large trees in my woods behind my house.

Al Kreinik of Parkton 5 SW - Winds at midnight estimated 55 mph. Loss of power from 8:30 PM on the 18th to 4:00 PM on the 21st. Limbs torn from trees and corn crops damaged. Some trees uprooted.

Bobby Miller of Millers 4 NE - Periods of heavy showers as storm passed well to the west. Strong winds developed in evening and gusts estimated to 60 MPH around midnight (maximum observed 49 MPH). Much local damage due to branches and whole trees uprooted. Some nearby had no power for a week. Corn blown down. Power out for 91 hours from 8:34 PM on the 18th to 2:06 PM on the 22nd.

Nate Mullins of LaVale - Periods of rain began around 1 PM (18th) with increasing winds throughout the evening. ENE winds gusts to 35+ by late evening. Rain heaviest towards midnight. Cool but temperatures slowly rose into the 60's.

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Rain overnight moderate to heavy at times. Not as much as expected with no big downpours and only light winds even though the center of the storm passed very close. Rainfall was much heavier on the ridges to the west with nearly 4" reported in the Frostburg area. Some flooding and wind damage was reported in the area.

Stan Rossen of Glenmont 1 NNE - RA/SQ 1130-2007, 1.89"; -RA 2140-2315 .10; 19th -SHRA 0001, 0440, 1330-1435, 1535-1630.

Brian Smith of Oxon Hill - As of 18th 2030 hours - temp spiked up to 74, up 6 degrees in the last hour. Not raining now. Storm damage - One rotted tree toppled into the street in front of my house. It missed two cars including mine. The large sycamore in my back yard survived, at least 90%...it lost several branches. Two trees in front of the house at 723 Crawford lost their tops, which appeared to have been twisted off. Just before the power went out I was watching a small isolated cell go screaming W headed for OXNM2. Wonder if it contained a tornado? Interesting observation - Many people on my block saw a fabled green LTGIC (some red too) often reported with tropical cyclones. I saw it too; didn't hear thunder, but others did, and said it was a weird sound, like popping.

Jeff Stoudt of Laurel 2 E - Beside the widespread storm force wind gusts, radar imagery showed a narrow band of torrential rain which developed during the evening and persisted a couple of hours in the vicinity of the Howard, Anne Arundel, Price Georges County triple point which resulted in nearly doubled rainfall in this neighborhood and the great majority of the 4.67" storm total.

Joe Terry of Forest Glen - Increasing wind all day, the highest tended to occur in the rain bands. Peak wind of 45 MPH occurred at 2255 (Highest since station inception December 1994. Some large tree limbs down, but considerable small debris everywhere. Frequent blue and orange flashes from all directions much of the night due to transformers. Power out for 89 hours starting at 1650 on the 18th.

John Zyla of Ridge - Isabel left only 46 MPH wind gusts but massive destruction as far as trees down in Southern St Marys County. I lost power Thursday afternoon (18th) and got it back Tuesday afternoon (6 days or 133 hours.)

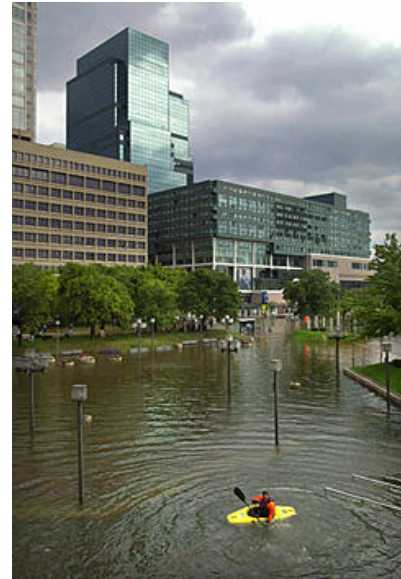


Photo at top left:
Downed power lines near Hampstead
Photo from *The Baltimore Sun*

Photo at top right:
Baltimore Inner Harbor
Photo from *The Baltimore Sun*

Photo at the left:
Baltimore Fells Point
Photo from *The Baltimore Sun*

OBSERVER COMMENTS FOR SEPTEMBER 2003

Gary Gallaher of Bear 2 SW, DE

Second wettest September on record and the third wettest month on record in 37 years of records. A new September record for number of days with $\geq 1"$ of 4 days was set. The old record was 3 days set in 1971 and tied in 1975, 1981, & 1995. A new September peak wind gust record (since 1990) of 53 MPH was set. Two daily precipitation records were set, 2.33" on the 15th and 2.65" on the 18th. The maximum temperature of 85 was the second lowest monthly maximum for September. The lowest September maximum temperature is 83 degrees set in 1980.

Nate Mullins of LaVale

Second wettest September on record (since 1992).

22nd - Rain began this afternoon and was steady through the evening. Heavy rains 10 PM to midnight ended around midnight 1.30" fell. This was the 3rd day in the last 5 that I have measured over an inch of rain.

27th - Thunderstorms briefly brushed by 2:30 - 3 PM with pea sized hail. Strong storms 4 - 6 PM with intense frequent lightning and very heavy downpours. Streams out of banks and lots of flooding reported in the county with 3 to 4 inches in some areas. Also reports of quarter sized hail and damaging wind.

Jeff Stoudt of Laurel 2 E

5th month this year and the 4th out of the last 5 with total precipitation of over 7 inches.

12th & 13th - Remnants of tropical storm Henri 12th PM and 13th AM. 1.46" of rain fell.

23rd - Period of heavy rain before dawn.

27th - Late evening thundershower.

Al Kreinik of Parkton 5 SW

4th - Heavy AM rain, much lightning and thunder.

23rd - Heavy period of rain causes streams to overflow their banks; pond overflows. Shelter in standing water for several hours.

Joe Manfre of Baltimore 2SE

23rd - Cloudy, heavy rain in AM.

24th - Sunny, mild, low humidity.

30th - Sunny, cool, low humidity.

Marty Sharrow of Owings Mills

4th - Overcast, humid with early heavy rains

5th - Partly sunny much less humid and cooler.

23rd - Torrential morning rain, then clearing.

Herb Close of Manchester 1 SW

September was a mild and very wet month. Rainfall was the second highest in 15 years of record behind the 9.29" set in September 1999. 9.05" fell at Finksburg 2 NW, my parents house and my old station.

Ralph Hartsock of Westminster 4 SSE

2nd - Heavy thunderstorm overnight - more daytime rain on and off.

3rd - Heavy AM rains, cloudy PM.

23rd - Heavy rains overnight—flooding some major.

30th - Cold start - Sunny and chilly.

Greg Klein of Westminster 5 SSE

Wettest month of the year.

Bobby Miller of Millers 4 NE

Only 4 days with maximum temperature ≥ 80 degrees. This month was the 3rd (third) wettest September of 22 on record.

3rd - Heavy rains in morning with frequent thunder. 0.90" fell in 30 minutes.

Manuel Farfan of Frederick 4 N

13th - Rain overnight and most of the morning.

Rich Giannola of JHU/APL OF Laurel

This months rainfall was the most to fall since June 2001 when 9.28" fell.

Rob Cohen of Potomac 4 N

23rd - Heavy rain overnight, ending about 7 AM.

Rich Giannola of Olney 1 S

12th - SHRA from remnants of TS Henri began late AM and ended early the afternoon of the 13th.

Kevin Shaw of Gaithersburg 2 WNW

A rather wet, uncomfortable month, with many significant rain events. Maximum temperatures were generally muted due to above normal cloudiness and rain.

Joe Terry of Forest Glen

3rd month this year with over 8 inches of precipitation.

23rd - AM deluge. Continuous rain from the evening of the 22nd to about dawn for a total of 3.01". 1.75" fell between 0410 and 0510 hours.

29th & 30th - Spectacular autumn weather. A pleasant end to such a tumultuous month of weather.

Bill Hudelson of South Bowie

4th - Mostly overcast, periods of rain, dense fog evening, flood watch.

23rd - Heavy rain during night, rain ended 0730 hours.

27th - Increasing evening clouds. Thunderstorm to west at 2330 hours.

Floyd Abell of Hollywood

1st - 4th - Thunder each day.

23rd - AM heavy rain with weak thunder then fair.

John Zyla of Ridge

20th & 21st - Heavy fog.

Greg Keefer of Hagerstown 1 E

Wettest September on record with 11.45" of rain. Old record was 10.54" set in 1996.

3rd - Some light rain drizzle and fog overnight. Hazy warm and very humid today. Intense thunderstorms this evening with very heavy rains between 7:30 PM - 10PM. Close to 3 inches fell at this station but areas in the south end of town got hit hard with reports of 4 to 6 inches or more in some spots. Much flash flooding reported. The storm were training over the same area. They also had very wicked and frequent lightning. A lot of water damage reported across the region.

4th - More storms and downpours overnight with thunderstorms moving in around 4 AM dropping another inch.

Jim Vaughn of Smithsburg 2 NE

This was the wettest September on record breaking the old record of 11.20" set in 1996. It was also the second wettest month behind June 1996 when 12.92" fell.

3rd - Remnants of tropical storm Grace. Flooding in Washington County just south of my station. Rainfall of 1.09" broke the daily record of 1.03" set in 1993.

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
SEPTEMBER 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
<u>New Castle, Delaware</u>																							
Canavan, Jim	Wilmington 4 NNE	76.6	59.9	68.3	84	20	41	30	0	0	0				9.10	2.55	15	<u>44.95</u>	10	4	0.0	0.0	2400
Gallaher, Gary	Bear 2 SW	77.0	59.0	68.0	85	1	41	30	0	0	0	53	ESE	19	9.82	2.33	15	47.57	13	4	0.0	0.0	2400
NWS Wilmington	New Castle Co. Apt.	76.9	60.1	68.5	82	19	46	30	0	0	0	53	ESE	19	7.39	1.35	18	42.64	13	3	0.0	0.0	2400
U of D DE Climatologist	Newark Pearson Hall	76.8	61.1	69.0	88	15	46	30	0	0	0	51	NE	19	8.45	3.60	15	<u>42.15</u>	14	3			2400
<u>Sussex, Delaware</u>																							
NWS Georgetown	Sussex Co. Airport	78.0	60.9	69.5	87	2	45	30	0	0	0	60	SE	19	6.12	1.74	18	38.92	12	3			2400
U of D Research & Ed Ctr	Georgetown	77.7	60.1	68.9	86	2	43	30	0	0	0				7.41	2.49	18	<u>45.52</u>	13	2			2400
U of D Warrington Farm	Harbeson	77.4	59.4	68.4	87	2	43	30	0	0	0				4.36	0.92	18	<u>35.60</u>	13	0			2400
<u>Allegany, Maryland</u>																							
Latta, Greg	Frostburg	68.1	52.1	60.1	78	2	39	30	0	0	0				9.02	3.60	19	45.33	16	3	0.0	0.0	0700
Mullins, Nate	LaVale	72.1	56.4	64.3	84	3	40	30	0	0	0				7.10	1.74	27	42.09	17	4	0.0	0.0	2400
<u>Anne Arundel, Maryland</u>																							
Bryant, Dave	St. Margarets	77.7	62.2	70.0	85	1+	48	30	0	0	0				6.26	1.87	18	48.23	10	2	0.0	0.0	2100-P 2400-T
Hanson, Dan	Millersville 1 SE	77.0	58.5	67.8	85	1+	40	30	0	0	0	47	E	18	5.75	2.10	18	51.98	13	1	0.0	0.0	2400
Jug Bay Wetlands	Lothian	79.7	59.7	69.7	90	2	41	30	1	0	0				5.87	1.71	19	49.42	18	3	0.0	0.0	0900
NWS Baltimore	BWI Airport	76.6	59.3	68.0	85	1	43	30	0	0	0	55	NE	18	7.47	2.13	18	47.27	14	2	0.0	0.0	2400
Stoudt, Jeff	Laurel 2 E	77.0	60.0	68.5	86	1	43	30	0	0	0				9.99	4.45	18	55.36	15	2	0.0	0.0	2400
<u>Baltimore, Maryland</u>																							
Kreinek, Al	Parkton 5 SW	75.3	56.5	65.9	83	1	39	30	0	0	0	55e		18	7.90	2.74	23	46.14	15	2	0.0	0.0	2200
Sharrow, Marty	Owings Mills 2 SE	75.3	57.9	66.6	86	1	41	30	0	0	0				7.31	2.33	4	43.96	13	2	0.0	0.0	2400
<u>Baltimore City, Maryland</u>																							
Manfre, Joe	Baltimore 2 SE	78.0	64.5	71.3	85	14	49	30	0	0	0				6.11	2.15	23	47.76	14	2	0.0	0.0	1800
Maryland Science Ctr	Baltimore Inner Harbor	78.3	63.7	71.0	88	1	49	30	0	0	0				6.44	2.05	23	44.49	13	2			2400
<u>Carroll, Maryland</u>																							
Close Jr, Herb	Manchester 1 SW	74.3	58.0	66.2	82	1	40	30	0	0	0	62		19	8.68	2.24	23	47.40	17	3	0.0	0.0	2300
Hartsock, Ralph	Westminster 4 SSE	75.2	57.4	66.3	87	1	40	30	0	0	0	56	ESE	19	8.31	2.58	23	44.47	15	3	0.0	0.0	2000
Klein, Greg	Westminster 5 SSE	71.7	56.5	64.1	83	1	40	30	0	0	0				8.54	2.42	23	44.47	13	3	0.0	0.0	2200
Miller, Bobby	Millers 4 NE	75.2	57.8	66.5	82	1	41	30	0	0	0	49	ENE	19	8.16	2.49	23	45.66	13	3	0.0	0.0	1800
<u>Frederick, Maryland</u>																							
Farfan, Manuel	Frederick 4 N	75.7	57.9	66.8	87	1	42	30	0	0	0				10.26	3.06	23	48.35	15	3	0.0	0.0	2400
<u>Garrett, Maryland</u>																							
Harvey, Rebecca	Eagle Rock	68.1	52.0	60.1	79	8	38	30	0	0	0				10.48	4.10	19	57.63	16	4	0.0	0.0	0800
<u>Harford, Maryland</u>																							
Albright, Lynn	Fallston 2 NW	76.8	56.4	66.6	89	1	42	30	0	0	0				9.83	2.47	23	52.09	13	3	0.0	0.0	2400
<u>Howard, Maryland</u>																							
Giannola, Rich	Laurel JHU / APL	74.6	57.7	66.2	85	1	43	30	0	0	0	44	NE	18	7.28	2.35	18	47.97	13	2	0.0	0.0	2400

ACON MD/DE/DC
SEPTEMBER 2003 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	SEA- SEASON
<i>Montgomery, Maryland</i>																									
Cohen, Rob	Potomac 4 N	75.2	61.1	68.2	84	1	43	30	0	0	0				6.97	2.32	23	48.92	14	2	0.0	0.0	2100		
Giannola, Rich	Olney 1 S	74.1	59.9	67.0	85	1	44	30	0	0	0				7.73	2.65	18-19	47.39	9	3	0.0	0.0	2400		
Roth, David	Montgomery Village 1SW	76.7	61.3	69.0	87	1	45	30	0	0	0	50	18		7.54	1.96	18	49.20	14	2	0.0	0.0	2400		
Rossen, Stan	Glenmont 1 NNE	76.7	58.8	67.8	87	1	43	30	0	0	0				7.82	2.42	23	49.92	13	2	0.0	0.0	2400		
Scafide, Tony	Bethesda	76.2	58.9	67.6	84	1	43	30	0	0	0	58	SE	19	6.92	2.24	23	<u>43.48</u>	16	2			2400		
Shaw, Kevin	Gaithersburg 2 WNW	74.4	57.8	66.1	85	1	40	30	0	0	0				7.73	2.14	23	47.37	13	2	0.0	0.0	2400		
Terry, Joe	Forest Glen	78.6	59.5	69.1	89	1	42	30	0	0	0	45	ENE	18	8.04	2.47	23	54.42	12	3	0.0	0.0	2400		
Wash Gas Light	Rockville 1 NE	<u>76.9</u>	<u>59.2</u>	<u>68.1</u>	<u>83</u>	20	44	30	0	0	0				6.29	1.86	23	<u>40.06</u>	14	2	0.0	0.0	2400		
<i>Prince Georges, Maryland</i>																									
Hudelson, Bill	South Bowie	77.1	60.4	68.8	86	1+	44	30	0	0	0	40	NE	18	7.26	2.07	18	56.32	12	2	0.0	0.0	2400		
Smith, Brian	Oxon Hill	78.2	61.4	69.8	88	1	44	30	0	0	0				7.85	2.25	18	52.92	13	2	0.0	0.0	2000		
<i>St. Marys, Maryland</i>																									
Abell, Floyd	Hollywood	78.7	61.3	70.0	89	2	44	30	0	0	0	51	18		7.97	1.92	12	48.04	12	3	0.0	0.0	2400		
Van Wie, Michael	Oraville																						2400		
Zyla, John	Ridge	78.5	64.2	71.4	90	2	49	29+	1	0	0	46	SE	18	8.46	2.29	12	48.14	10	4	0.0	0.0	2400		
<i>Washington, Maryland</i>																									
Keefer, Greg	Hagerstown 1 E	74.8	57.7	66.3	82	1	40	30	0	0	0	63	SE	19	11.45	2.89	3	51.08	15	4	0.0	0.0	2400		
Vaughn, Jim	Smithsburg 2 NE	76.1	57.3	66.7	84	15	41	30	0	0	0	68	SE	19	11.35	2.39	19	56.58	18	5	0.0	0.0	2000		
<i>Wicomico, Maryland</i>																									
NWS Salisbury	Wicomico Co. Apt	78.6	59.3	69.0	87	2	40	30	0	0	0	50	E	18	6.14	2.05	18	43.52	12	2	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	77.8	63.1	70.5	85	1+	49	30	0	0	0	58	SE	18	6.87	2.28	18	46.82	13	2	0.0	0.0	2400		
<i>Loudon, Virginia</i>																									
NWS Washington Dulles	Dulles Airport	76.3	57.9	67.1	86	1	40	30	0	0	0	48	E	18	7.27	1.76	18	50.23	14	2	0.0	0.0	2400		
<i>Tucker, West Virginia</i>																									
Leshner, Dave	Davis 3 SE WV	62.8	50.9	56.9	72	1	36	30	0	0	0				8.58	2.31	19	58.18	18	3	T	T	29	T	1900
SECTION AVERAGE		75.8	59.0	67.4											7.86								0.0		

NOTES:

M OR UNDERLINE= MISSING DATA
 > = INCLUDED IN NEXT DAYS DATA
 e = ESTIMATED

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 12/07/03

ACON MD / DE / DC
SEPTEMBER 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	78	78	75	80	75	76	80	82	78	76	79	69	77	83	77	75	77	68	81	84	75	78	72	73	82	81	80	79	68	62		76.6	2400																												
CANAVAN	68	66	62	70	66	55	55	56	60	55	55	61	65	70	70	56	53	60	63	61	59	63	61	51	54	61	64	66	51	41		59.9	EDT																												
BEAR 2 SW, DE	85	82	78	77	73	77	79	82	74	75	80	68	82	82	79	76	78	75	82	83	74	77	76	75	80	80	79	71	66	66		77.0	2400																												
GALLAHER	67	65	64	70	63	55	51	54	61	55	52	63	65	71	70	55	51	64	64	60	62	64	57	49	53	63	60	53	48	41		59.0	EDT																												
WILMINGTON, DE	81	81	76	76	77	78	79	82	75	77	80	69	81	81	80	78	78	76	82	81	75	78	76	72	79	78	79	70	66	65		76.9	2400																												
NWS NEW CASTLE CO APT	68	64	64	67	60	55	54	57	60	55	56	63	66	72	68	58	54	66	64	63	61	66	58	51	55	63	65	55	50	46		60.1	EST																												
U of D DE Climatologist	DAILY DATA NOT AVAILBLE																																																											76.8	2400
Newark Pearson Hall																																		61.1	EDT																										
GEORGETOWN, DE	84	87	81	80	78	76	79	80	73	72	75	71	81	82	80	79	77	75	83	84	77	80	76	77	80	83	83	74	67	65		78.0	2400																												
NWS SUSSEX CO APT	68	69	69	71	61	58	56	56	65	54	51	65	71	68	68	60	58	68	65	62	64	63	58	53	57	60	61	55	49	45		60.9	EST																												
GEORGETOWN, DE	84	86	82	79	77	75	80	70	73	78	75	71	82	83	80	77	76	77	83	85	78	80	76	77	80	82	82	73	67	65		77.7	2400																												
UofD RESEARCH & ED CTR	68	69	70	71	60	56	54	52	53	50	50	65	70	69	69	59	56	68	65	62	64	63	59	53	58	61	63	55	48	43		60.1	EST																												
HARBESON, DE	84	87	80	80	77	75	80	79	72	71	75	70	80	82	79	78	76	75	83	83	76	79	75	76	81	82	82	74	67	66		77.4	2400																												
UofD WARRINGTON FARM	68	68	69	70	61	56	53	53	65	52	48	65	69	67	68	58	53	67	64	60	62	60	57	51	54	58	59	56	48	43		59.4	EST																												
FROSTBURG	62	78	70	77	73	64	70	73	74	62	71	73	61	64	73	72	70	71	62	63	69	69	65	66	70	67	63	75	63	52		68.1	0700																												
LATTA	58	60	64	63	53	46	47	49	55	51	49	49	53	56	62	47	46	49	54	56	55	56	55	46	45	52	54	50	44	39		52.1	EDT																												
LAVALE	78	74	84	79	68	74	74	78	70	74	79	66	68	75	71	76	75	64	69	74	72	68	72	72	72	67	77	69	64	61		72.1	2400																												
MULLINS	62	65	68	68	57	52	53	58	58	56	48	54	58	62	68	52	49	51	62	60	60	63	54	47	50	56	58	55	49	40		56.4	EDT																												
ST MARGARETS	85	85	79	77	77	78	80	80	77	75	80	67	81	81	75	77	79	72	81	82	76	80	77	75	80	79	82	77	69	68		77.7	2400																												
BRYANT	69	70	69	70	61	59	59	62	64	61	58	61	64	68	67	60	59	65	66	64	65	65	60	56	59	63	65	60	50	48		62.2	EDT																												
MILLERSVILLE 1SE	85	82	77	76	76	74	79	80	74	75	79	66	81	82	78	78	74	78	85	76	77	78	75	82	80	81	72	66	65		77.0	2400																													
HANSON	69	69	68	67	57	59	52	56	59	55	51	60	65	64	55	50	62	66	61	62	63	54	49	53	59	62	55	47	40		58.5	EDT																													
LOTHIAN	89	90	89	81	77	79	78	80	82	76	74	79	71	82	81	81	80	76	77	80	86	71	82	79	77	82	83	84	76	70		79.7	0900																												
JUG BAY	70	72	72	72	59	53	54	56	62	54	50	56	62	67	65	56	51	64	66	60	64	63	63	51	55	59	62	64	47	41		59.7	EDT																												
BALTIMORE	85	82	77	76	76	77	80	80	75	75	79	67	79	79	77	78	77	75	77	82	74	77	76	74	80	79	81	72	65	67		76.6	2400																												
NWS BWI APT	69	69	68	67	57	53	55	57	63	55	53	60	65	65	64	56	53	64	64	59	64	65	55	50	59	63	63	55	47	43		59.3	EST																												
LAUREL 2 E	86	77	77	75	75	76	79	77	78	76	81	67	78	79	79	79	73	77	82	75	77	76	76	81	82	84	79	66	64		77.0	2400																													
STOUDT	68	68	68	69	60	55	54	58	57	53	56	60	64	68	66	56	55	64	66	61	62	63	57	57	55	63	65	62	46	43		60.0	EST																												
PARKTON 5SW	83	79	72	76	75	75	80	81	75	75	79	63	75	80	75	77	78	65	75	81	77	76	76	73	80	78	80	72	64	64		75.3	2200																												
KREINIK	64	63	64	65	58	53	49	55	57	49	52	57	61	64	64	54	49	55	63	58	60	61	55	46	50	61	64	58	47	39		56.5	EDT																												
OWINGS MILLS 2SE	86	77	74	73	72	75	78	83	77	75	82	66	74	79	76	77	80	66	74	80	72	76	74	75	81	77	81	71	64	63		75.3	2400																												
SHARROW	67	66	64	69	58	54	53	56	61	52	55	57	59	66	63	55	52	57	63	58	60	61	60	50	53	60	64	54	48	41		57.9	EDT																												
BALTIMORE 2SE	80	81	78	77	77	79	81	84	78	78	80	69	78	85	78	78	79	68	78	84	75	83	77	76	84	82	84	73	67	68		78.0	1800																												
MANFRE	66	75	66	73	66	61	62	65	67	62	64	61	66	71	70	62	63	64	70	65	67	68	64	58	60	66	67	64	54	49		64.5	EDT																												
BALT INNER HARBOR	88	81	79	77	76	78	82	84	77	77	82	68	78	84	79	78	79	76	78	84	75	82	78	76	84	81	83	72	66	67		78.3	2400																												
MD SCIENCE CENTER	70	68	67	71	64	60	62	64	63	60	64	61	66	71	69	62	64	65	68	65	67	68	63	57	60	66	67	58	53	49		63.7	EST																												
MANCHESTER 1SW	82	75	72	74	72	75	80	78	73	71	76	69	74	78	77	76	75	69	73	81	72	75	75	73	80	76	79	70	64	65		74.3	2300																												
CLOSE	66	63	63	66	56	54	56	58	58	54	55	58	60	66	65	53	59	60	65	62	60	63	54	49	55	59	65	54	45	40		58.0	EDT																												
WESTMINSTER 4 SSE	87	79	77	79	77	74	76	79	76	76	78	66	75	80	81	72	75	66	75	81	73	79	73	73	79	78	79	70	63	61		75.2	2000																												
HARTSOCK	66	67	64	68	56	52	51	54	63	50	54	57	58	67	62	54	50	59	61	58	59	62	61	48	53	60	64	57	48	40		57.4	EDT																												
WESTMINSTER 5 SSE	83	75	74	75	70	72	74	77	74	70	74	64	74	75	78	70	73	64	70	78	72	74	69	65	75	73	75	65	60	60		71.7	2200																												
KLEIN	65	63	62	65	56	52	54	56	57	50	55	56	58	64	62	54	54	56	62	58	58	60	55	49	53	57	61	56	46	40		56.5	EDT																												
MILLERS 4NE	82	81	72	74	73	75	80	80	75	74	79	75	76	79	77	75	77	71	72	78	74	74	74	74	72	79	76	79	74	66	62		75.2	1800																											
MILLER	65	70	63	68	58	54	52	56	61	51	54	59	59	67	62	56	50	57	62	60	59	60	62	47	55	58	64	57	47	41		57.8	EDT																												
FREDERICK 4 N	87	78	76	78	72	76	79	79	75	75	79	67	75	76	82	78	77	73	73	80	74	79	76	74	81	75	82	72	62	65		75.7	2400																												
FARFAN	68	65	65	69	57	51	53	56	58	51	50	60	61	66	64	55	51	62	64	61	63	65	56	50	52	60	61	56	47	42		57.9	EDT																												
EAGLE ROCK	69	76	68	78	70	62	72	79	76	62	70	76	59	62	79	66	70	72	62	62	68	74	64	62	62	66	72	76	60	50		68.1	0800																												
HARVEY	60	62	62	62	51	44	46	50	58	48	46	50	50	59	58	46	52	50	60	60	50	52	52	42	48	62	52	48	42	38		52.0	EDT																												

ACON MD / DE / DC
SEPTEMBER 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	89	82	76	77	77	72	80	82	75	75	79	68	78	81	75	76	78	72	77	84	75	78	78	74	80	81	82	72	66	66	76.8	2400		
ALBRIGHT	68	64	65	65	56	52	51	54	51	51	51	59	63	64	64	53	51	57	63	59	59	62	52	47	52	60	59	54	44	42	56.4	EDT		
LAUREL JHU / APL	85	78	76	74	71	74	78	79	72	73	77	64	79	76	79	73	75	70	73	80	74	77	75	74	80	78	80	68	62	64	74.6	2400		
GIANNOLA	67	66	67	66	57	53	52	57	56	51	55	56	61	65	64	55	53	59	64	59	61	63	56	50	53	60	62	53	48	43	57.7	EDT		
POTOMAC 4N	84	78	77	75	72	75	77	80	74	74	78	66	76	74	80	76	76	70	74	78	75	77	77	74	80	79	80	71	64	64	75.2	2100		
COHEN	72	72	71	71	62	55	56	56	65	56	54	60	62	70	67	58	54	62	66	61	64	66	62	52	56	64	66	60	50	43	61.1	EDT		
OLNEY 1 S	85	76	74	74	72	73	79	77	73	73	77	64	75	74	77	75	74	71	72	79	74	75	74	72	79	78	80	70	63	63	74.1	2400		
GIANNOLA	69	69	69	68	58	55	56	59	59	53	56	59	62	69	66	57	55	60	65	61	62	64	58	52	59	62	65	56	49	44	59.9	EDT		
MONTGOMERY VILLAGE	87	80	78	76	74	77	80	81	75	75	80	66	80	77	81	77	77	74	75	81	76	79	77	74	82	80	82	71	64	64	76.7	2400		
ROTH 1SW	71	71	71	69	60	55	56	60	62	55	55	61	65	70	68	59	55	62	67	62	65	67	60	52	59	64	68	58	50	45	61.3	EDT		
GLENMONT 1NNE	87	77	77	74	72	77	79	80	75	75	80	65	81	77	80	75	79	73	76	80	76	79	78	78	84	80	82	70	66	68	76.7	2400		
ROSSEN	69	70	70	66	57	54	54	57	57	53	53	59	64	67	65	56	52	59	64	60	63	66	56	50	54	62	62	55	47	43	58.8	EST		
BETHESDA	84	80	79	76	74	75	79	81	76	75	79	67	79	76	81	76	78	73	75	80	75	79	75	75	80	80	71	65	66	76.2	2400			
SCAFIDE	68	68	68	67	58	54	55	58	60	53	53	58	62	67	64	56	54	61	65	61	64	64	57	50	57	61	63	53	47	43	58.9	EDT		
GAITHERSBURG 2WNW	85	77	76	75	71	74	77	79	74	73	78	66	77	75	80	74	75	71	72	77	75	77	72	70	78	79	79	69	63	64	74.4	2400		
SHAW	69	68	69	66	57	52	53	55	58	50	51	57	62	67	65	55	50	59	63	57	61	65	56	49	53	60	65	55	47	40	57.8	EDT		
FOREST GLEN	89	82	79	77	76	79	82	82	77	78	82	66	83	78	82	80	81	74	77	83	78	80	79	77	83	83	84	73	67	67	78.6	2400		
TERRY	70	70	70	68	58	54	54	58	61	53	54	60	64	68	66	57	54	61	65	60	62	65	57	50	56	61	66	54	46	42	59.5	EDT		
ROCKVILLE 1NE	M	M	78	76	73	77	81	M	M	76	80	65	81	76	83	77	78	74	76	83	83	81	77	76	83	83	82	73	62	66	76.9	2400		
WASH GAS LIGHT	M	M	71	67	60	54	53	M	M	53	57	59	63	66	64	57	53	71	62	59	63	69	59	50	57	57	67	54	49	44	59.2	EDT		
SOUTH BOWIE	86	86	80	76	78	76	79	80	76	76	78	66	80	80	80	76	76	73	80	83	77	78	76	73	80	80	82	72	66	65	77.1	2400		
HUDELSON	69	62	71	70	62	56	55	58	60	56	54	61	64	66	65	58	54	65	66	60	65	64	56	52	56	61	64	59	49	44	60.4	EDT		
OXON HILL	88	84	81	76	77	77	80	79	76	75	79	68	81	77	82	80	78	75	78	84	79	80	79	76	82	83	83	74	66	68	78.2	2000		
SMITH	69	73	71	70	62	57	57	60	62	56	56	60	64	68	68	60	56	64	68	62	65	67	59	53	58	61	65	57	51	44	61.4	EDT		
HOLLYWOOD	87	89	75	77	78	76	80	81	75	74	79	68	80	82	82	79	78	77	83	86	81	81	78	77	82	82	82	75	68	68	78.7	2359		
ABELL	72	72	72	70	59	59	56	57	66	57	54	65	68	68	68	59	57	57	66	61	67	66	58	54	57	63	62	56	50	44	61.3	EDT		
ORAVILLE																																2400	EDT	
VAN WIE																																		
RIDGE	89	90	81	80	77	74	78	79	72	74	77	69	80	81	79	76	78	74	85	83	80	80	79	78	83	82	82	74	72	69	78.5	2400		
ZYLA	71	72	73	71	62	60	63	63	63	58	59	65	68	68	65	62	62	68	69	69	67	69	65	60	64	64	68	60	49	49	64.2	EDT		
HAGERSTOWN 1E	82	76	79	77	70	76	79	79	74	76	80	68	72	75	81	77	78	67	71	78	75	76	74	73	75	76	80	73	62	65	74.8	2400		
KEEFER	68	66	64	67	56	51	54	57	59	51	52	60	61	67	63	54	51	58	63	61	62	62	54	50	55	60	63	55	48	40	57.7	EDT		
SMITHSBURG 2 NE	83	78	80	80	73	79	81	82	73	74	79	70	74	77	84	75	79	67	74	81	76	76	76	74	78	78	80	74	61	66	76.1	2000		
VAUGHN	68	66	65	65	56	50	53	56	58	51	51	58	60	68	59	52	51	61	65	60	61	63	54	49	58	60	63	53	44	41	57.3	EDT		
SALISBURY	84	87	82	81	77	76	81	81	71	72	76	73	82	84	80	78	77	76	83	85	81	80	76	77	81	86	83	75	68	65	78.6	2400		
NWS WICOMICO CO APT	67	69	70	70	59	57	53	52	65	50	47	65	67	65	68	53	57	68	62	59	61	60	59	51	53	66	68	51	47	40	59.3	EST		
HANOVER 2 S, PA																																2100	EDT	
RICKELL																																		
WASH NATIONAL	85	84	81	77	76	77	78	81	76	75	79	68	82	77	84	78	78	77	79	85	79	80	79	74	79	80	81	72	67	66	77.8	2400		
NWS ASOS	70	73	72	70	62	58	60	63	62	59	59	62	66	70	69	63	58	66	67	64	66	68	61	56	61	65	65	56	53	49	63.1	EST		
WASH DULLES	86	80	81	76	72	74	78	80	75	74	80	67	76	75	82	77	78	73	77	80	78	77	77	73	81	80	81	73	64	65	76.3	2400		
NWS ASOS	68	71	69	67	56	52	53	59	60	54	52	55	62	66	64	55	54	61	60	58	64	64	54	49	52	60	59	54	46	40	57.9	EST		
DAVIS 3 SE WV	72	67	71	65	59	66	69	65	58	61	64	62	64	70	63	61	62	56	59	64	71	62	59	66	64	68	69	57	45	48	62.8	1900		
LESHER	63	62	61	59	49	45	48	53	54	49	46	49	52	59	53	43	49	49	54	54	57	58	49	40	53	52	55	41	38	36	50.9	EST		

ACON MD / DE / DC
SEPTEMBER 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	0.68		0.08	0.81								0.20	0.75	T	2.55			1.20	0.15				1.43				1.25					9.10 0.0	2400 EDT		
BEAR 2 SW, DE GALLAHER	0.47	0.02	0.05	1.21								0.26	0.87	0.46	2.33			1.80	0.13			0.07	1.25			T	T	0.90	T			9.82 0.0	2400 EDT		
WILMINGTON, DE NWS NEW CASTLE CO APT	0.44	T	0.16	0.97								0.38	0.62	0.26	1.27			1.35	0.11			0.07	1.11		T		0.57	0.08				7.39 0.0	2400 EST		
U of D DE Climatologist Newark Pearson Hall	DAILY DATA NOT AVAILBLE																																	8.45	2400
GEORGETOWN, DE NWS SUSSEX CO APT		0.08	0.31	1.23	0.01							0.74	0.07	0.26	0.20			1.74					1.15				0.29	0.04				6.12 -	2400 EST		
GEORGETOWN, DE UoID RESEARCH & ED CTR		0.11	0.44	1.06	0.01							0.82	0.43	0.01	0.87			2.49	0.07				0.95				0.02	0.13				7.41 0.0	2400 EST		
HARBESON, DE UoID WARRINGTON FARM		0.08	0.72	0.61								0.65	0.11	0.55	0.36			0.92	0.04				0.28	0.02	0.01	0.01						4.36 0.0	2400 EST		
FROSTBURG LATTA	0.02	0.55	0.13	0.08	0.30				T	0.08			0.32	0.27	0.02	T			3.60	0.14	0.06		1.26				0.03		2.10	0.06	T		9.02 0.0	0700 EDT	
LAVALE MULLINS	0.36	0.20	0.01	0.19					0.19	0.01		0.01	0.51	0.12	T			1.03	1.33	T		1.30	0.01			0.03	0.03	1.74	0.03			7.10 0.0	2400 EDT		
ST MARGARETS BRYANT		0.50	0.36	0.25								0.81	0.57		0.34			1.87	0.04			0.03	1.49									6.26 0.0	2100 EDT		
MILLERSVILLE 1SE HANSON	0.19	0.05	0.32	0.25								0.94	0.70		0.15		0.01	2.10	0.04			0.22	0.74						0.04			5.75 0.0	2400 EDT		
LOTHIAN JUG BAY	T	0.25	0.15	0.52	0.18		0.01		T				1.14	0.07	0.01	0.08	0.01		1.71	0.01			1.66	0.01	0.01		0.01	0.01	0.03			5.87 0.0	0900 EDT		
BWI NWS ASOS	0.19	0.04	0.32	0.25								0.69	0.66	0.01	0.12			2.13	0.08			0.58	1.82				0.54	0.04	T			7.47 0.0	2400 EST		
LAUREL 2 E STOUDT	0.29	0.07	0.35	0.13								0.87	0.59		0.50			4.45	0.22		0.01	0.70	1.59				0.15	0.01	0.06			9.99 0.0	2400 EST		
PARKTON 5SW KREINIK	0.04	0.63	0.22	0.75								0.06	0.93			0.12		0.02	1.45	0.04			2.74			0.15	0.53	0.13	0.09			7.90 0.0	2200 EDT		
OWINGS MILLS 2SE SHARROW	0.10	0.03	0.17	2.33								0.26	0.66	T	0.25			0.57	0.69				2.10		0.04			0.07	0.04			7.31 0.0	2400 EDT		
BALTIMORE 2SE MANFRE	0.14	0.02	0.31	0.35								0.52	0.59		0.17	0.01		1.01	0.10			0.44	2.15					0.29	0.01			6.11 0.0	1800 EDT		
BALT INNER HARBOR MD SCIENCE CENTER	0.20	0.01	0.29	0.49								0.50	0.48		0.08			1.33	0.06			0.51	2.05				0.40	0.04				6.44 -	2400 EST		
MANCHESTER 1SW CLOSE	0.69	0.18	1.16	0.71					T			0.21	0.49	0.02	0.11	0.01		0.80	1.09	0.01		0.50	2.24		0.27			0.16	0.03			8.68 0.0	2300 EDT		
WESTMINSTER 4 SSE HARTSOCK	0.02	0.97	0.52	1.23								0.29	0.38	T	0.19			0.39	1.23			0.01	2.58		0.04	0.32		0.11	0.03			8.31 0.0	2000 EDT		
WESTMINSTER 5 SSE KLEIN	1.04	0.20	0.43	1.21								0.31	0.43		0.21			0.82	0.62			0.27	2.42		0.39			0.19				8.54 0.0	2200 EDT		
MILLERS 4NE MILLER	0.06	0.60	0.23	1.95								0.15	0.84	T	T	0.23		0.14	1.06	T		T	2.49		T	0.27	T	0.09	0.05			8.16 0.0	1800 EDT		
FREDERICK 4 N FARFAN	0.21	0.50	0.73	0.91								0.16	0.75	0.05	0.21			1.30	0.46			1.01	3.06		0.11		0.70	0.10				10.26 0.0	2400 EDT		
EAGLE ROCK HARVEY	0.15	1.40	0.34	1.00	0.18								0.07	0.37		0.35			4.10	0.11			0.82			0.15	0.03	1.20	0.17	0.04		10.48 0.0	800 EDT		

ACON MD / DE / DC
SEPTEMBER 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	0.32	0.07	0.50	1.58								0.52	2.07		0.37			0.89	0.18			0.57	2.47		0.15		0.14					9.83 0.0	2400 EDT	
LAUREL JHU / APL GIANNOLA	0.14	0.03	0.34	0.27								0.64	0.62		0.34			2.35	0.18			0.58	1.74				0.04	0.01				7.28 0.0	2400 EDT	
POTOMAC 4N COHEN	0.22	0.11	0.15	0.72								0.60	0.51	0.05	0.35			1.35	0.38			0.10	2.32		T		0.06	0.05				6.97 0.0	2100 EDT	
OLNEY 1 S GIANNOLA	0.16	0.05	>	0.93								>	1.35	0.01	0.09			>	2.65			>	2.36			>	>	0.13				7.73 0.0	2400 EDT	
MONTGOMERY VILLAGE ROSS	0.34	0.04	0.35	0.39								0.39	0.47		0.55			1.96	0.34			0.33	1.90			0.37	0.06	0.05				7.54 0.0	2400 EDT	
GLENMONT 1NNE ROSSEN	0.15	0.07	0.31	0.28								0.79	0.60	T	0.43			1.99	0.14			0.53	2.42			0.01	0.10					7.82 0.0	2400 EST	
BETHESDA SCAFIDE	0.14	0.15	0.31	0.22								0.74	0.45	0.03	0.53	0.01		1.36	0.13			0.43	2.24			0.04	0.13	0.01				6.92 0.0	2400 EDT	
GAITHERSBURG 2WNW SHAW	0.33	0.04	0.41	0.66								0.65	0.62	T	0.43			1.77	0.11			0.26	2.14		T	0.20	0.11					7.73 0.0	2400 EDT	
FOREST GLEN TERRY	0.11	0.11	0.24	0.32								0.79	0.37		1.04			1.85	0.09			0.54	2.47			T	0.11					8.04 0.0	2400 EDT	
ROCKVILLE 1NE WASH GAS LIGHT	0.21	0.04	0.41	0.50				M	M			0.57	0.46	0.03	0.28			1.43	0.18			0.23	1.86		T	0.05	0.04					6.29 0.0	2400 EDT	
SOUTH BOWIE HUDELSON	0.20	0.18	0.39	0.28								0.90	0.50		0.48			2.07	0.05			0.29	1.88				T	0.04				7.26 0.0	2400 EDT	
OXON HILL SMITH	0.51	0.15	0.46	0.24								0.91	0.28	0.01	0.30			2.25	0.16			0.40	2.11				0.07					7.85 0.0	2000 EDT	
HOLLYWOOD ABELL	0.35	0.54	0.66	0.76								1.92	0.34		0.06			1.66	0.02			0.05	1.59			0.02	T					7.97 0.0	2359 EDT	
ORAVILLE VAN WIE																																		2400 EDT
RIDGE ZYLA		1.21	0.06	0.52								2.29	0.66		0.73			1.41					1.42				0.12	0.04					8.46 0.0	2400 EDT
HAGERSTOWN 1E KEEFER	0.71	0.25	2.89	1.05					0.09			0.06	0.75	T	0.45			1.61	1.28			0.43	0.86		0.04		0.94	0.04					11.45 0.0	2400 EDT
SMITHSBURG 2 NE VAUGHN	0.86	0.24	1.09	1.36				0.02	0.68			0.05	0.28	0.05	0.34	0.02		1.27	2.39			0.79	0.73		0.06		1.06	0.06					11.35 0.0	2000 EDT
SALISBURY NWS WICOMICO CO APT		0.18	1.00	0.89								0.78	0.07	0.02	0.23			2.05	0.03				0.67				0.18	0.04					6.14 0.0	2400 EST
HANOVER 2 S, PA RICKELL																																	0.00 0.0	2100 EDT
WASH NATIONAL NWS ASOS	0.19	0.17	0.32	0.12								0.85	0.26		0.08			2.28	0.03			0.78	1.67				0.10	0.02					6.87 0.0	2400 EST
WASH DULLES NWS ASOS	0.23	0.20	0.65	0.27								0.81	0.37	0.04	0.02			1.76	0.20			0.76	1.74		T		0.18	0.04					7.27 0.0	2400 EST
DAVIS 3 SE WV LESHER	0.03	0.67	0.12	1.15	0.24				T			0.01	0.04	0.06	0.56			1.30	2.31			0.45	0.49		0.09		0.67	0.31	0.07	0.01			8.58 T	1900 EST