



**Atlantic Coast Observers Network
 MARYLAND / DELAWARE CHAPTER
 With Data from Nearby Areas**



DROUGHT BREAKING TROPICAL RAINS

MINIMUM PRECIPITATION FIRST DENNIS

Hurricane Dennis, which spent a week off the North Carolina coast pounding the Outer Banks with on-shore winds which caused extensive damage to dunes and properties made landfall on the 4th on the Outer Banks near Cape Fear as a Tropical Storm. The storm's remnants drifted slowly northwards through central Maryland during the next 3 days. Rainfall was the heaviest in Central Maryland. The humid tropical air which the storm pulled into the area was pushed out with a cold frontal passage on the 10th.

THEN HURRICANE FLOYD

Hurricane Floyd made landfall near Cape Fear North Carolina during the pre dawn hours of the 16th. Floyd, unlike Dennis which drifted northwestwards inland, accelerated northeastwards and followed the coastline from Norfolk VA till it crossed central Long Island. Very heavy rain fell west of the path. A northeast to southwest trough set up 100 miles west of Floyd's path. Along this trough very heavy flooding rains fell. The heaviest rains reported by ACON observers came from **John Zyla of Ridge** (11.11"). Wilmington DE NWS ASOS set an all-time record 24 hour rainfall of 8.64". More rain fell during this 24 hour period than in any other entire month of September except for 1960 since records began in 1894. Severe localized flooding occurred as a result of the heavy rains. In northern Delaware the Christiana River and White Clay Creek crested at record levels, which were classified as 500 year levels.

The strongest winds came with and just after the passage of the storm. Wind gusts in the 40's were common across the area.

Joe Terry sent in this observation: "While at the Goddard Space Center in Greenbelt, several colleagues of mine and I emerged from our building in time to observe the effects a very narrow (~50 meter wide) violent gust of wind to our north. A patch of tall trees (up to 2' in diameter), about 7 in all, were snapped near their bases, this was heard from a distance of nearly a quarter mile. We estimated winds at 60-70 MPH. No twisting in the damage pattern or condensation cloud were evident which ruled out a tornado. In the highly sheared and unstable environments in Hurricane Floyd with no nearby thunderstorms present, the conclusion was that high speed winds aloft were transported to the ground in a narrow swath by boundary layer rolls, believed to be a common feature in landfalling hurricanes."

Along with the heavy rains and gusty winds came power outages. In central Maryland some customers were without power for upwards of a week. Some of our observers lost power.

EXTREMES REPORTED BY ACON OBSERVERS

MAXIMUM TEMPERATURE

Hagerstown 1 E	90
Hollywood	90

MINIMUM TEMPERATURE

Eagle Rock	30
Smithsburg 3 NE	40
Gaithersburg 2 WNW	40

WARMEST AVG. TEMP.

Baltimore 2 SE	71.6
duPont Circle NW DC	71.6
Ridge	70.2

COLDEST AVG. TEMP.

Eagle Rock	61.1
Hanover 2 S	64.1
Westminster 4 SSE	64.2

MAXIMUM PRECIPITATION

Wilmington 4 NNE	14.99
Forest Glen	13.76
Ridge	12.90

MINIMUM PRECIPITATION

Eagle Rock	4.71
Smithsburg 3 NE	7.58
Hanover 2 S PA	8.74

MINIMUM DAILY PRECIP

Wilmington 4 NNE	9.62
Ridge	9.57

MORE RAINS

Two other rain events occurred after Hurricane Floyd came at weekly intervals. The first one was associated with a frontal passage of the 20th - 22nd. Storm totals of over an inch were reported by many observers. **Gary Gallaher of Bear 2 SW DE** reported 2.20". Wilmington NWS ASOS reported 2.33".

The final rainfall event of the month occurred 27th - 30th. Rainfall amounts of over 1" occurred west of the Chesapeake Bay. **Greg Keefer of Hagerstown 1E** reported 2.48".

MODERATE TEMPS

Across the two state region and DC **Greg Keefer of Hagerstown 1E** (2nd) and **Floyd Abell of Hollywood** (8th) observed the only 90 degree readings. **Rebecca Harvey of Eagle Rock** observed the only sub-freezing temperature (30 degrees 22nd).

FOR MORE INFORMATION
ABOUT ACON CONTACT:

KEVIN SHAW
ACON MD/DE COORDINATOR
E-MAIL ADDRESS
Kevin_D_Shaw@compuserve.com

OBSERVER COMMENTS FOR SEPTEMBER 1999

Dan Hanson of Millersville 1 SE

Second rainiest month in station record (since 1983)

Al Kreinik of Parkton 5 SW

Third wettest September (13.28" 1975, 11.12 1979)

20th-22nd - Period of light rain with heavier rain showers.

Marty Sharrow of Owings Mills

Significant rainfall finally returned to the area.

25th - Sunshine and continued rather warm.

Herb Close of Manchester 1 S

16th - Record Sept daily precip set 3.07". Record 24 hour precipitation of 4.64" on the 15-16th (11 years of records)

Bobby Miller of Millers 4 NE

Second wettest September, third wettest month on record.

30th - Strong FROPA 1 AM, heavy rain, strong SSW winds. Peak wind gust of 53 MPH sets a Sept record.

Ralph Hartsock of Westminster 4 SSE

17th - Sunny and breezy, cool and fall-like.

Marty Brumback of Bryans Road 2 SE

Precipitation fell on 1/3 of the days. Eight (8) days saw 0.25" or more.

Rebecca Harvey of Eagle Rock

22nd - Heavy frost

Rich Giannola of JHU/APL

16th - 3.53" of rain the heaviest single day since 11/8/96.

30th - Cold frontal passage between 12:24 - 1:00 AM. Temperature drops 6 deg, wind shift from ESE to WSW, 024", pressure rises 0.05" all in 15 minutes.

Rich Giannola of Olney

Wettest month on since records began in 1986.

30th - Cold front moved through quickly, clearing by dawn.

Rob Cohen of Potomac 4 N

Wettest month on record (21 years) Previous 10.25" in 1979 when station located in Gaithersburg.

16th - Heaviest rain 9 AM - 2 PM.

30th - Very gusty rain squall 12:30 AM. Minor tree damage in neighborhood.

Kevin Shaw of Gaithersburg 2 WNW

11.54" Wettest month on record. (10.05" May 1998, 10.04" June 1996). No 90 degrees temps this month. Last one (so far) for the year was on August 18.

Joe Terry of Forest Glen

Huge pattern change, from 0.79" in July to 13.76" in Sept. Five (5) multi-day rain events each totaling >1". September total nearly equals the combined rainfall of 6 previous months. Cool, no 90 deg days.

30th - Strong cold front around 0045 caused brief very heavy rain (0.25" in 5 minutes) and a 36 MPH wind gust, highest of the month. A large tree branch was downed and power was briefly interrupted.

**Compiled by Gary Gallaher, MD/DE ACON
Data Collector and Report Writer, from data
received from observers.**

Gary Gallaher of Bear 2 SW, DE

Wettest September on record (since 1962). Old record 7.90" in 1966. Second wettest month in station history (wettest 13.53" in August 1967)

16th - Hurricane Floyd brought with it a day of steady unabated heavy wind driven rains that resulted in severe local, urban, and stream flooding, the worst the area has ever seen. Three girls playing in a flooded drainage ditch nearby were swept into a 1500 foot pipe. Only one survived.

Bill Hudelson of South Bowie

Although a month with a lot of rain, I was fortunate in that I suffered no flooding and when my neighbors and many others in the area lost power for days beginning Sept 16 from the effects of Floyd. I had only several momentary interruptions.

Floyd Abell of Hollywood

16th - Hurricane Floyd (not a relative- editorial comment) produced the worst wind and rain combo I've observed since Hazel 10/15/54) - some gusts in St Marys Co. near 70

Clinton Bubb of Morganza

No power for 48 hours as result of Hurricane Floyd.

Marlene Walchli of California 3 NW

4th - Cloudy, gray, muggy day. Brief light rain/drizzle sprinkles off / on all day.

7th - Thin fog 7 AM. Mostly cloudy, filter sunshine on / off. Mostly clear 9 PM.

15-16th - Hurricane Floyd deposited 9.75" of precipitation at this station in a 22 hour period. No major wind damage occurred here - lots of small branches, twigs, and leaf litter scattered into every nook and cranny. Power was off in this community for 40 hours and 15 minutes, with no obvious cause for this outage locally.

John Zyla of Ridge

Wettest September, month, & 24 hour precip on record. 29.13" also lowest barometer on record.

Greg Keefer of Hagerstown 1 E

Third wettest September (10.54" 1996, 10.09" 1975)

2nd - Hot high of 90, but low humidity.

23rd-26th - Four beautiful days in a row with bright sunshine and pleasant temperatures.

Jim Vaughn of Smithsburg 3 NE

Wettest month since November 1997 (7.61")

30th - Thunderstorms part of a strong cold front. 60 MPH winds. The roof was ripped off my front porch and fence posts snapped off at bases (second time this year that has happened. I need to buy better fencing!)

Washington National NWS

10.27" Fourth wettest September on record (17.45" 1934, 12.36" 1975, 10.81" 1876)

Rob Rickell of Hanover 2 S PA

16th - Rains from Hurricane Floyd minor flooding locally, Minor wind damage.

RAINFALL AMOUNTS FROM DENNIS AND FLOYD

DENNIS

SEPT 4 -5 -6 -7

Clarksburg 2 ENE (2)	5.59"
Glenmont 1 NNE	4.50"
Gaithersburg 2 WNW	4.41"
Kemp Hill	4.40"
Rockville Mont. College	4.38"
Olney	4.22"
Forest Glen	4.10"
Rockville Wash Gas/Lgt	3.84"
Laurel JHU/APL	3.77"
Eagle Rock	3.24"
Owings Mills 2 SE	3.07"
Dawsonville	3.04"
Potomac 4 N	2.96"
BWI NWS ASOS	2.52"
duPont Circle NW DC	2.51"
Baltimore 2 SE	2.37"
Wash Nat ASOS NWS	2.31"
Bryans Road 2 SE	2.22"
Westminster 4 SSE	2.14"
Hagerstown 1 E	2.06"
Finksburg (3)	1.93"
Millers 4 NE	1.90"
Smithsburg 3 NE	1.84"
Wilmington 4 NNE DE	1.84"
Wash Dulles ASOS NWS	1.80"
Jug Bay Wetlands	1.77"
Hanover 2 S PA	1.65"
South Bowie	1.65"
Manchester 1 S	1.40"
Parkton 5 SW	1.38"
Balt Inner Harbor ASOS	1.27"
Orville	1.22"
Bear 2 SW DE	1.04"
Wilm NWS ASOS DE	0.90"
Morganza	0.73"
California 3 NW	0.63"
Hollywood	0.62"
Millersville 1 SE	0.51"
Ridge	0.13"

(2) Rainfall amount supplied by Stan Rossen

(3) Rainfall amount supplied by Herb Close

FLOYD

SEPT 15-16

Chestertown (1)	14.00"	Potomac 4 N	4.41"
Chestertown (1)	12.59"	Laurel JHU/APL	4.40"
Veron DE (1)	12.36"	Baltimore 2 SE	4.38"
Millington (1)	11.77"	Finksburg (3)	4.30"
Federalsburg (1)	11.20"	Forest Glen	4.29"
Ridge	11.11"	duPont Circle NW DC	3.99"
Greenwood DE (1)	10.58"	Westminster 4 SSE	3.93"
American Corners (1)	10.20"	Hanover 2 S PA	3.83"
Wilmington 4 NNE DE	10.14"	Olney	3.79"
California 3 NW	9.76"	Glenmont 1 NNE	3.46"
Wilm Porter Res. DE (1)	9.75"	Gaithersburg 2 WNW	3.30"
Newark DE (1)	9.70"	Kemp Hill	3.16"
Hollywood	9.67"	Rockville Mont. College	3.12"
Newark DE (1)	9.49"	Clarksburg 2 ENE (2)	3.03"
Newark DE (1)	9.28"	Rockville Wash Gas/Lgt	2.74"
Wilmington DE (1)	9.18"	Dawsonville	2.64"
Royal Oaks (1)	9.16"	Hagerstown 1 E	2.59"
Northeast (1)	9.00"	Smithsburg 3 NE	2.52"
Newark Univ. of Del (1)	8.92"	Wash Dulles ASOS NWS	2.38"
Bear 2 SW DE	8.84"	Eagle Rock	0.49"
Wilm NWS ASOS DE	8.64"		
Jug Bay Wetlands	8.07"		
Dover DE (1)	8.01"		
South Bowie	7.78"		
Bridgeville DE (1)	7.27"	(1) Rainfall amount from Public Information Statement issued by NWS Mount Holly (Philadelphia) 9/17/99	
Millersville 1 SE	7.25"		
Easton (1)	7.06"		
Morganza	6.83"		
Conowingo Dam (1)	6.57"	(2) Rainfall amount supplied by Stan Rossen	
Dover AFB DE (1)	6.45"		
Viola DE	6.30"		
Georgetown DE (1)	6.11"	(3) Rainfall amount supplied by Herb Close	
Milford DE (1)	5.91"		
St Michaels	5.80"		
BWI NWS ASOS	5.78"		
Long Neck DE (1)	5.40"		
Bryans Road 2 SE	5.26"		
Parkton 5 SW	5.25"		
Balt Inner Harbor ASOS	5.19"		
Orville	5.18"		
Millers 4 NE	5.10"		
Owings Mills 2 SE	4.94"		
Manchester 1 S	4.62"		
Wash Nat ASOS NWS	4.57"		