

2012 WEATHER SUMMARY

West Henrico Co. - Glen Allen VA.

MOST UNUSUAL RECORDS

Violent Thunderstorm

The most damaging weather event in Glen Allen occurred on June 25th between 1430 and 1508. The thunderstorm gave 1.11 inches of precipitation with an intense rainfall burst of 0.47 inches rainfall within five minutes. This was the most intense precipitation since June 3, 2009 when 0.48 inches fell within five minutes. This thunderstorm was small but very severe with hail of 0.25 to 0.33 inches which lasted only about one minute but was frightening as tornado warnings were out and at one point visibility was cut to around 10 feet or less. The 47 mph gust from the NNW was recorded at 1444 and was the highest for 2012. The strongest wind was from the only direction where woods may reduce the anemometer's reading. There were at least a dozen trees uprooted or snapped off by the storm in our local neighborhood. There were also shutters removed from two homes. Many of the trees were broken halfway up and not uprooted like they were in hurricane Irene in the previous year. From the damage done I assume the wind speeds were at least 60 mph in places in the neighborhood. The location of maximum damage was about 1000 feet north of my station.

Hurricane Sandy

Hurricane Sandy made landfall just south of Atlantic City, New Jersey leaving tremendous damage to New York and the New Jersey coast. This storm was much less severe than what was expected in Glen Allen area. The maximum wind gust here was only 32 mph from the south southwest occurring on the 29th at 2316. Sandy set a new record low barometer pressure reading for Glen Allen of 28.96 inches of mercury. The Glen Allen station recorded 1.94 inches of rain on the 29th and another 0.79 inches on the 30th and Richmond received only minor damage.

Hottest July

The mean temperature for July was 82.7 °F which was the highest mean temperature ever recorded at Glen Allen. (Records since July 2008). This mean temperature was 0.7° warmer than our previous record set in July 2010. There were 26 hot July nights that the minimum temperature was 70° or greater and in July 2010 only 23 days were recorded. The Richmond International Airport reported 29 nights that the minimum temperature never dropped below 70°F. This has never occurred before for any month in their 115 years of records. There were 21 daily records set at the Airport in 2012 and 16 of these were for high temperature readings. July itself set 7 records.

TEMPERATURE

YEAR The average temperature for 2012 at Glen Allen was 60.5 °F which was +1.3° above the average and was the warmest year at Glen Allen. The year 2012 was also the warmest on record at Richmond International Airport. So were most locations in the NWS Eastern Region which goes from Maine to South Carolina and west to Ohio. However 2012 at Glen Allen there were only 47 days that the maximum temperature was 90° or higher. In 2012 the maximum temperature never dropped below 32° for the high temperature. There were 63 days the minimum temperature was 32 °F or lower. Last year there were 76 days that the minimum temperature was 32 °F or lower with 2 days with the maximum temperature freezing or less. The lowest temperature of 2012 at Glen Allen was 15°F recorded on January 4th. The Richmond Airport recorded 17 °F on the same date. Our highest temperature occurred on July 8 with the reading of 105 °F; the airport's highest reading was 104°F. On July 6th Glen Allen recorded its highest minimum temperature of 80 °F.

MONTH The coldest month for 2012 was January with a mean temperature of 34.9 °F. January also had the greatest number of days (18 days) with the minimum temperature equal to or less than 32 °F. March had the greatest positive departure from normal and January had the second greatest positive departure. November had the greatest negative departure from normal. July had the greatest number of days (22 days) with the maximum temperature equal to or greater than 90 °F.

DAY The hottest day of 2012 was July 8th with the daily mean temperature of 91.5 °F. The coldest day of the year occurred on January 3 with the daily mean temperature of 26.5 °F.

RANGE The greatest temperature range was 39 °F for the year which occurred on November 23rd with a maximum of 68 °F and a minimum of temperature of 29 °F. The least temperature range for the year occurred on January 22nd with a high temperature of 33 °F and a low temperature of 30 degrees F during a light precipitation event.

WIND

YEAR The highest wind gust for the year was 47 mph from the NNW that occurred on June 25 at 1444 hours.

MONTH The windiest month was January with a wind run of 2644.7 miles.

DAY The windiest day for 2012 was on January 17th with a wind run of 247.0 miles. The record wind run for Glen Allen during a calendar day was 284.1miles set during Hurricane Irene on August 27th 2011.

PRECIPITATION

YEAR The total number of days this year with measurable precipitation at Glen Allen was 129 days and the total precipitation for 2012 was 34.12 inches. The average annual precipitation for Glen Allen is 47.00 inches.

MONTH May had 15 days with measurable precipitation which was the most of any of the months of 2012. November had the least with only two days. August had 4.88 inches which was the greatest monthly precipitation recorded in 2012. February had the least monthly total precipitation with only 0.46 inches. This set a new record for Glen Allen; the lowest monthly precipitation previous to this record was February 2009 with 0.67 inches.

CALENDAR The most precipitation recorded in a day occurred on October 29 with 1.94 inches. The record for Glen Allen is 3.75 inches that occurred on August 27, 2011 during Hurricane Irene.

24-HOUR PERIOD The maximum precipitation in a 24-hour period for the year was 2.21 inches on October 29th and 30th from Hurricane Sandy. The record for Glen Allen is 3.83 inches that occurred on August 27 and 28th of 2011 during Hurricane Irene.

HOUR The maximum one hour rainfall intensity was 1.35 inches that occurred on August 2nd. The record one hour precipitation intensity for the Glen Allen weather station was 2.13 inches in one hour on June 3, 2009.

FIVE-MINUTES The greatest five-minute precipitation rate for 2012 was 0.47 inches which fell on June 25 during a severe thunderstorm. The record for the most intense five-minute precipitation for Glen Allen was 0.55 inches that occurred on November 15, 2008.

DROUGHT The driest month was November with 0.46 inches of precipitation. April had the longest period without measurable precipitation for 2012 from April 1st to April 17 a period of 17 days. There was also a dry period in November from November 13 to November 26th, a 13 day period.

SNOW

YEAR The 2012 Glen Allen total snowfall was only 7.4 inches. There were only 4 days during 2012 that Glen Allen had measurable snowfall and all were very light but one. The most snow in one storm was only 5.1 inches in February. January 2012 had but a trace of snow. There were only two days in the year with more than a trace of snow on the ground both occurring in February.

MONTH The greatest monthly snowfall total for Glen Allen was only 5.7 inches in the month of February.

STORM The most snow to fall in any one storm was 5.1 inches that occurred on February 19th.

BAROMETRIC PRESSURE

YEAR The highest barometric pressure recorded for the year was 30.71 inches of mercury recorded on March 8th. The lowest barometric pressure for the year was 28.96 inches of mercury recorded on October 29th with the passing of Hurricane Sandy.

MONTH November had the highest average barometer pressure of 30.18 inches for the month. April had the lowest average barometer reading of 29.94 inches.

RELATIVE HUMIDITY

YEAR April's average relative humidity of 61.5 percent was the lowest for any month of 2012. The highest relative humidity was recorded in the month of October with an average relative humidity of 74.0 percent. The lowest daily relative humidity for the year was 13 percent recorded on April 10th.

SKY COVER

MONTH December was the cloudiest month of 2012 and August took second place. The clearest month was June with January and September being nearly as clear.

SEASON RECORDS

WINTER – DEC. 2011 to FEB. 2012

December was the 6th warmest in the past 114 years in Richmond. Glen Allen had 6 days with temperatures ≥ 65 °F. December didn't even have a trace of snow and was drier than average. This absence of snow has happened only 12 times in Richmond since snow records were started in 1898. The only stormy weather was a thunderstorm on December 7th that had winds to 64 mph at the Richmond International Airport. January was also very warm with a 7.2 °F departure from normal at Glen Allen and continued drier than average. The end of winter was also mild as February was 3.7 °F warmer than average. The winter season was 5.7 °F above the norm. Glen Allen had an -1.20 inch departure of precipitation and an -10.2 inch departure of snow based on the past four years.

SPRING MAR. to MAY 2012

The spring season was much warmer and drier than average. The total precipitation at the Glen Allen station for the spring season was 8.97 inches and the average is 11.34 inches. The most unusual weather in March was the exceedingly warm temperatures with almost a +10 °F departure on the mean. For the whole of the spring season Glen Allen had a +6.4 °F departure. 1945 in Richmond was the only other March warmer in the past 115 years and this March missed the record by only 0.2 °F. April was much cooler but was still a +0.3° departure at the Richmond International Airport and was the 42nd warmest April since 1880. Precipitation continued below average with a May departure of -1.33 inches. The Airport also continued the warmth with the mean average of 70.5, the eighth warmest May on record at the airport. May was the 27th driest in the last 125 years. At Glen Allen the temperature for the spring season was +6.4 °F above average and the precipitation had a departure of -2.37 inches.

SUMMER – JUN. to AUG. 2012

The most severe thunderstorm of the year occurred at Glen Allen on June 25 with hail up to 0.33 inches and wind gust estimated to be around 60 mph based on damage done in the neighborhood even though the maximum gust recorded on the anemometer was 47 mph. There was a little lightning but tornado warnings were issued for the storm. On the night of the 29th , only four days later, a derecho moved through the Virginia area giving 80 mph winds at the Roanoke Airport and high winds of 60 to 90 mph caused extensive damage in the Washington DC area. The mean temperature of 82.7 °F for July at Glen Allen was the highest ever recorded at the station. The Richmond Airport also had a record of 29 days the temperature never fell below 70° in the month of July.

FALL – SEP. to NOV. 2012

September was cooler and much drier than average as the monthly mean temperature was 71.7 °F, a -1.5°F departure from the four year average. September was the second clearest month of the year. Hurricane Sandy moved up the coast in late October. Sandy was the latest major storm that I can remember hitting the East Coast. Sandy set a record low barometric pressure at Glen Allen of 28.96 inches. The Glen Allen fall season averaged a negative 1.8°F cooler than the norm based on a four year average. The precipitation deficit for the fall season was -5.99 inches with an extremely dry November with only 0.46 inches. November also had the greatest deficit in temperature of the twelve months with a departure of -5.0 °F. There was no measurable snow for the fall season.