

2010 WEATHER SUMMARY

West Henrico Co. - Glen Allen VA.

MOST UNUSUAL RECORDS

The hottest of all summers and one of the snowiest winters

This summer was the hottest summer Richmond has ever experienced. The summer season average was 1.7 °F hotter than the previous summer season record of 79.6°F set in the year 1900. The summer was also dry as Richmond received only 3.52 inches of rain for the whole summer season making it the third driest in the past 113 years of records. The total snowfall for the year was 28.0 inches. This was the most snowfall in Richmond since the year 1980 when Richmond had 38.8 inches which was the third snowiest year. Every month of 2010 was above the average temperature except for three months: January, February, December. December was the sixth coldest December on record at the Airport in the past 113 years which kept the year from being the hottest on record. However, 2010 was still the eighth hottest year in the last 113 years.

LIGHTNING - THUNDER

YEAR The most severe thunderstorm of the year occurred on July 29 and was noted mainly for high winds. This caused a power outage at our station for 15.5 hours. Winds were estimated to be around 40 mph here but reports of 60 mph winds were recorded in the Richmond area. One other thunderstorm should be mentioned that occurred on October 27 which gave Glen Allen 2.06 inches of rainfall and 1.01 inches in an hour and a wind gust of 29 mph. This storm is mentioned as it generated a tornado near Cold Harbor Road in Hanover County. The worst of this storm passed to the south of the Glen Allen station. Thunder was observed on 37 days during the year 2010.

TEMPERATURE

YEAR The average mean temperature for 2010 at Glen Allen was 59.26 °F which was + 2.5 °F above average when compared to the average at Ashland, Virginia. The Richmond International Airport had a yearly average temperature that made 2010 the eighth warmest year and would've ranked higher if it had not been for the cold December. December at the Airport was the sixth coldest in the last 113 years. Glen Allen's highest annual maximum temperature was 103 °F which occurred on July 24th. The lowest annual minimum temperature was only 7 °F on January 17th. There were 72 days that were equal to or greater than 90 °F for the maximum temperature in 2010 and there were 93 days that were less than or equal to 32 °F for the minimum temperature.

MONTH December, with a mean temperature of 32.70 °F, was the coldest month of the year being just a little colder than January and about 3.5 °F colder than February. December also had the greatest number of days (30 days) with the minimum temperature equal to or less than 32 °F in 2010. June and July had the greatest positive departure from normal and December had the greatest negative departure from average. The coldest day of the year was January 30 when the mean temperature for the day was 21°F. The highest temperature for the year occurred on July 24 and 25th with a daily average temperature of 90.5°F.

DAY January 30th was the coldest day of the year with a daily average temperature of 21 °F.

The lowest daily maximum temperature for 2010 was 26 °F which also occurred on January 30. December 14 had the lowest wind chill for 2010 of - 1.4 °F at 1940 hours. July 24 and 25th were the hottest days of the year with a daily mean temperature of 90.5 °F. The highest daily maximum temperature for 2010 also occurred on July 24th and was 103 °F.

RANGE The 39 °F temperature range on March 9 was the greatest daily temperature range for the year. The lowest daily temperature range was 3 °F that occurred in three separate months January, February, and December. December had the lowest average monthly temperature range of 18.4 °F.

PRECIPITATION

YEAR The total number of days this year with measurable precipitation was 114 days. The total precipitation for 2010 measured 42.09 inches which was a departure of -0.61 inches when compared to Ashland Virginia average.

MONTH March had 13 days with measurable precipitation which was the most for any month of 2010. March's 5.72 inches was the greatest monthly precipitation for the year. June had the least monthly total rainfall with only 1.11 inches.

CALENDAR The precipitation total on September 30 was 3.39 inches, a new maximum precipitation record for a day. The old record was only 3.01 inches recorded on November 12, 2009.

24-HOUR PERIOD The maximum rainfall in a 24-hour period was also 3.39 inches on September 30 which is currently the record for the Glen Allen station.

HOURLY The maximum one-hour rainfall intensity was 1.01 inches on October 27. The record one hour precipitation intensity for the Glen Allen station was 2.13 inches on June 3, 2009.

FIVE-MINUTE The greatest five-minute rainfall was 0.35 inches, which fell on July 29 during one of the most intense thunderstorms of the summer. The record for the most intense five-minute precipitation was 0.55 inches that occurred on November 15, 2008.

DROUGHT The driest month was June with 1.11 inches of precipitation. The second longest period without measurable rainfall was from April 26 to May 10 a period of 14 days. The driest period occurred in September from August 27 to September 11 a 15 day period with no rain. This was followed by another long period of 13 days with no rain from September 13 to September 25.

SNOW

YEAR The 2010 Glen Allen total snowfall was 36.7 inches. There were 16 days during 2010 that had measurable snowfalls. Because of my limited data base I use Richmond International Airport to check for older records. The Airport had a total of 28 inches which was the most recorded there since 1980 when 38.8 inches occurred.

MONTH The 16.1 inches of snow in February was the greatest monthly snowfall total for the year. January was in second place with 12.6 inches and December 3rd with 7.6 inches.

STORM The largest snowstorm of the year was 12.1 inches on January 30th and 31st. The greatest calendar day snowfall was 11.4 inches observed on January 30. The greatest snow cover on the ground was 12.4 inches on February 6, 2010 See snow time lapse at the following address-<http://www.glenallenweather.com/links/snows09-10/feb5th-6th2010.avi>

WIND

YEAR The high wind gust of 44 mph from the south occurred on March 27 at 2028.

MONTH The windiest month was September with the wind run of 1762.5 miles. However, the anemometer was moved to a higher position in July of 2010 and may have affected that wind run reading for this year.

DAY The windiest day in 2010 on October 25 when a wind run of 148.9 miles was recorded.

BAROMETRIC PRESSURE

MONTH April 14th had the year's highest barometric pressure reading of 30.57 inches. The year's lowest barometric pressure reading of 29.18 inches on April 26th.

RELATIVE HUMIDITY

YEAR April with an average relative humidity of 59.8% was the lowest for any month of 2010. The highest relative humidity was recorded for the month of August with an average relative humidity of 73%. The lowest relative humidity recorded on any one day was 14% on March 7 and March 8. This was the lowest relative humidity ever recorded at this station since it was set up in August of 2008. Unusually dry air was over the Richmond area on March 8th. The Richmond International Airport had a minimum relative humidity of 7% and a low dew point of 4° F.

SKY COVER

MONTH March was the cloudiest month of 2010 but February and May were also almost as cloudy. Both September and November were unusually clear and the average sky cover made it the clearest months of 2010.

SEASON RECORDS

WINTER SEASON - DECEMBER 2009 to FEBRUARY 2010

This winter an unusual amount of snow with a total of 41.6 inches was recorded at the Glen Allen station. The Airport had much less with a total of only 27.6 inches but this was still the most on their records since the winter of 1982 – 83 when 29.4 inches was recorded. The total winter liquid precipitation recorded at the Glen Allen station was 16.52 inches and the Airport recorded 14.58 inches which made it their wettest winter season since 1997 – 98. It was also cooler than average as the Glen Allen station recorded 38.1° average for the winter

season which was -2.2° below the average at the Ashland, Virginia station.

SPRING SEASON - MARCH to MAY 2010

The mean temperature for Glen Allen was 60.7° for the spring season which was +4.7° above Ashland, Virginia and was a new record for the season. The Richmond International Airport reported the warmest spring season.

The total precipitation at Glen Allen was 10.22 inches which was 0.45 inches less than the average when compared to Ashland, Virginia.

SUMMER SEASON - MAY to JULY 2010

The Glen Allen average temperature for the summer season was 80.5 °F, a +5.9 °F departure that was the warmest on record. The Richmond International Airport had 81.3 for their summer season average. This was the hottest summer Richmond has ever experienced. The summer season average at the Airport was 1.7° hotter than the previous summer season record of 79.6 which was set back in the summer of 1900. The summer season rainfall total was 9.45 inches at Glen Allen which was a -2.46 inch departure when compared to Ashland, Virginia averages. The Airport was even drier with only 5.93 inches which made it to third driest summer season in the last 113 years. So between the record high temperatures and near record low rainfall farmers' crops suffered tremendously particularly corn.

FALL SEASON - SEPTEMBER to NOVEMBER 2010

The mean temperature for the fall season at Glen Allen was 57.9° F; this was +3.7°F above the Ashland, Virginia average for the season. The total rainfall was 11.32 inches which was +0.84 inches above the Ashland, Virginia average.