

# 2009 WEATHER SUMMARY

## Glen Allen – Springfield Park Weather Center

### Most Unusual Events of the Year

#### **The June 3 Severe Thunderstorm –**

The total precipitation was 2.13 inches. The maximum one hour rainfall was 2.13 inches between 1835-1930 hours and maximum five minute intensity was 0.48 inches. Pictures of storm damage on (18-21) and number 20 shows the hole that was made by lightning where it hit the irrigation sprinkler head. More information is below and see pictures at <http://www.glenallenweather.com/localphotos/18.htm>

#### **The December 18-19 Historic Snow Storm -**

Snowfall totals from 1 to 2 feet were commonplace in what will go down as one of the biggest snowstorms in history on the East Coast. Glen Allen - Springfield Park station got 8.7 inches on the 18th and 4.2 inches on the 19th for a total of 12.9 inches. A record 6 inch snowfall set a record for the date of the 18<sup>th</sup> at the Richmond International Airport. Philadelphia, Pennsylvania reported its second greatest daily snowfall total on record with 22.9 inches and the single biggest December snowfall on record. Roanoke, Virginia recorded 17.8 inches setting a record for the greatest 24-hour snowfall in December. Washington DC reported 16.4 inches of snow making 2009 the snowiest December on record, all in one storm. In New York, Upton on Long Island recorded 26.3 inches, the biggest snowstorm on record. Baltimore, Maryland recorded 21 inches making it the biggest December snowstorm on record and setting a record for the snowiest December.

### THUNDER – LIGHTNING

On June 3<sup>rd</sup>, the strongest thunderstorm of the year gave winds of only 28 mph but it was the lightning that made it so memorable. This storm caused two separate power outages. A nearby lightning strike damaged the transmitter on my wireless Davis Vantage Pro 2 between 1925 and 1930 hours and solar sensor and also hail damage to plants in family garden. The hail was dime to penny size and the largest was nickel size and fell in about a two to three minute period around 1850 +/- 5 minutes. The smaller hail fell first was flattened like platelets but the later hail was rounded and wasn't nearly as numerous as the platelets. Another neighbor reported that a lightning strike was observed to have split into two and hit two trees and the trees fell on a fence damaging it. Lightning blew this hole seen in image 20 in the link above in the neighbor's backyard. The energy of this lightning bolt followed his irrigation system to the control box and melted the control box to the wall. They were fortunate that the energy did not cause a fire but caused a total of more than \$6000 damage.

### TEMPERATURE

#### Year

The average mean temperature for 2009 was 58.28 °F.

The **highest** annual maximum temperature of 97 °F was recorded on August 10<sup>th</sup>. There were **31** days that the maximum temperature was equal to or greater than 90 °F.

The **lowest** annual minimum temperature was 4 °F on January 17<sup>th</sup> which is the lowest minimum temperature recorded at this station.

There were **77** days that were less than or equal to 32 °F for the minimum temperature.

## **Month**

The **highest** monthly mean temperature was 79.4 °F for the month of August. August also had the greatest number of days (14 days) with the maximum temperature equal to or greater than 90 °F.

The **lowest** monthly mean temperature was 34.5 °F for the month of January. January also had the greatest number of days (27 days) with the minimum temperature equal to or less than 32 °F.

## **Day**

Both January 16<sup>th</sup> and 17<sup>th</sup> tied for the **coldest day** of the year with a daily mean temperature of 16.5 °F. The lowest daily maximum temperature was 24 °F which also occurred on January 16<sup>th</sup> and the lowest dew point for 2009 was -12.7 °F on the 16<sup>th</sup> at 1659.

August 19<sup>th</sup> was the **hottest day** of the year with a daily mean temperature of 86.0 °F. But the highest daily maximum temperature for 2009 occurred on August 10<sup>th</sup> and was 97 °F. The highest minimum temperature for 2009 occurred on August 21<sup>st</sup> and was 77 °F.

## **Daily Range**

The **highest** daily temperature range was 42°F on February 7<sup>th</sup>.

The **lowest** daily temperature range was only 1 °F on March 1<sup>st</sup>.

## **Monthly Range**

The highest average monthly temperature range was 24.3 °F set in February. The lowest average monthly temperature range was 18.5 °F set in both January and December.

# **PRECIPITATION**

## **Year**

The total precipitation for 2009 measured 53.76 inches.

## **Month**

The **highest** monthly precipitation total was November's with 10.74 inches.

The **lowest** monthly precipitation total was February's with 0.67 inches. The Richmond International Airport total for February was 0.74 inches the driest since 1978 when only 0.48 inches which is the 112 record for the driest February on record.

## **Calendar Day**

The **highest** precipitation total in a calendar day for 2009 was 3.01 inches and was recorded on November 12<sup>th</sup>.

## **24-Hour Period**

The **greatest** rain in a 24-hour period was 3.08 inches recorded on November 11<sup>th</sup> and 12<sup>th</sup>. The second greatest was 2.26 inches in 24 hours on June 3<sup>rd</sup> that set a new 24 hour record for June.

## **Storm**

A four day storm total of 5.66 inches was measured with the 8 inch standard Weather Service rain gauge. The 4 inch clear plastic gauge read 5.45 inches. The difference was largely contributed to the fact that the rain was driven by wind during much of this period.

## **Hour**

The **highest** one-hour rainfall intensity was 2.13 inches on June 3<sup>rd</sup>.

## **Five-minute**

The greatest five-minute rainfall was 0.48 inches which also fell on June 3<sup>rd</sup>. The five-minute rainfall intensity record for Glen Allen – Springfield Park is 0.55 inches which occurred on November 15, 2008.

## **Drought**

No measurable precipitation occurred in Glen Allen – Springfield Park for more than 10 days during the following periods:

Jan. 12 <sup>th</sup> - Jan. 26 <sup>th</sup>	<b>15</b> day period	Sep. 13 <sup>th</sup> -Sep. 23 <sup>th</sup>	<b>11</b> day period
Feb. 04 <sup>th</sup> - Feb. 17 <sup>th</sup>	<b>14</b> day period		

The longest dry period without measurable precipitation occurred at the Richmond International Airport from **10-15-2001 to 11-19-2001 a period of 36 days.**

## **SNOW**

## **Year**

The total snowfall for 2009 was 24.1 inches.

## **Month**

The **greatest** monthly snowfall total for the year was the 12.9 inches of snow in December.

## **Storm**

The **greatest** snow storm of the year was 12.9 inches on December 18<sup>th</sup> and 19<sup>th</sup>. The March 1-2 snow storm was also a deep snow for the Richmond area.

See snow time lapse for **3- 01 & 02 -2009** at –

[http://www.glenallenweather.com/links/snows08-09/1040\\_3-1-2-2009](http://www.glenallenweather.com/links/snows08-09/1040_3-1-2-2009)

See snow time lapse for **12- 18 & 19 -2009** at –

[http://www.glenallenweather.com/links/snows09-10/1040\\_12-18-2009](http://www.glenallenweather.com/links/snows09-10/1040_12-18-2009)

## WIND

### Year

The maximum wind gust of 41 mph from the WSW was recorded on April 3<sup>rd</sup> at 1404 hours.

### Month

The windiest month was February with a total wind run of 1855.0 miles.

### Day

November 12<sup>th</sup> was the windiest day of 2009 with a wind run of 162.5 miles which is accompanied by a steady all day rain giving 3.01 inches and wind gust of 35 mph in a coastal Northeaster.

## BAROMETRIC PRESSURE

### Year

The **highest** barometer reading of the year was 30.64 inches on January 16<sup>th</sup>. This high pressure gave the lowest temperature reading of the year of 4 °F on the 17<sup>th</sup>.

The **lowest** barometric reading was 29.17 inches January 7<sup>th</sup>.

## RELATIVE HUMIDITY

The lowest relative humidity for 2009 was recorded on February 13 at 16%.

## SKY COVER

### Month

May was the cloudiest month of 2009 and February was the clearest month. It is unusual for February to be the clearest month as it is usually a summer month that it is clearest.

## SEASON RECORDS

**WINTER SEASON 2008-2009** Departures are compared to Ashland's averages which is 8.7 miles to our NNE as this station's data base is too short for averages yet.

7.01 inches total seasonal precipitation, a departure of -2.65 inches

40.1 °F seasonal mean temperature, a departure of + 2.0 °F

Total snowfall was 2.1 inches.

### **SPRING SEASON**

11.97 inches total seasonal precipitation, a departure of + 1.30 inches

57.8 °F seasonal mean temperature, a departure of + 1.8 °F

Total snowfall was 9.5 inches.

### **SUMMER SEASON**

13.53 inches total seasonal precipitation, a departure of + 1.62 inches

77.2 °F seasonal mean temperature, a departure of +2.6 °F

### **FALL SEASON**

17.20 inches total seasonal precipitation, a departure of + 6.72 inches

59.9 °F seasonal mean temperature, a departure of + 2.0 °F