

# 2009 Year in Review

<http://www.glenallenweather.com/upload/richmondclimate/richmond.htm>

Click the above link to see other Years

## General Summary

Compared to recent years in which warmer than normal conditions dominated much of the time, 2009 brought more of a mixed bag of temperatures where cooler than normal months (January, March, July) alternated with warmer than normal months (February, May, August, November). In the end, the year ended up very close to average in terms of temperature.

Precipitation-wise, the year started out rather dry (as in 2007 and 2008); February made the top ten driest list for both Richmond and Norfolk. However, a significant shift to wet conditions occurred from late summer through the remainder of the year. Typically, wet weather during the late summer and fall over the Carolinas, Virginia, and Maryland is associated with tropical systems; things were different this year as the heavy rain events resulted primarily from nor'easters and persistent easterly flow. The wet finish to the year was the most pronounced across Hampton Roads and northeast North Carolina, the August through December period being the wettest on record, making the year the 4<sup>th</sup> wettest on record at Norfolk.

By convention, snowfall is calculated by season rather than by calendar year, so the period of interest is the 2008-09 season (not including the December 2009 storm). As in the past several seasons, snowfall amounts came in below average (and median) at all of our major climate sites. It wasn't a total loss for snow enthusiasts however, as an early March 2009 snowstorm dumped over 6 inches of snow at Richmond, the biggest single storm snow total since 2000. This was later eclipsed by the December 18-19<sup>th</sup> storm, which will be discussed later this year at the conclusion of the 2009-2010 winter season.

## **Richmond, VA Records & Highlights - 14 Records** (Period of Record 113 yrs/1897-2009, (for precipitation 123 yrs))

**Record Highs:** 1

**March 9<sup>th</sup> 82 °F**

**Record Low Maximums:** 3

**October 15<sup>th</sup> 54 °F**

**October 16<sup>th</sup> 49 °F**

October 17<sup>th</sup> 48 °F

### **Record Lows: 2**

March 3<sup>rd</sup> 11 °F

March 4<sup>th</sup> 10 °F (This is a new daily record low for March.)

### **Record High Minimums: 5**

Mar. 8<sup>th</sup> 61 °F

Apr. 26<sup>th</sup> 67 °F

May 9<sup>th</sup> 68 °F

Aug. 19<sup>th</sup> 74 °F

Aug. 21<sup>st</sup> 76 °F

### **Daily Precipitation: 2**

Mar 1<sup>st</sup> 0.93 inches

Nov 12<sup>th</sup> 3.51 inches (This is a new daily record for November).

### **Daily Snowfall: 1**

Dec 18<sup>th</sup> 6.0inches

### **Other Highlights:**

The March 1-2 snowstorm (6.3") brought the seasonal total to 6.6" (2008-09 season), the snowiest in three years but still below average and median for the 6<sup>th</sup> consecutive season.

The December 18-19<sup>th</sup> snowstorm brought a storm total of 7.4", the largest single storm total since January of 2000.

The Fall season (Sep-Nov) ended up very wet, (15.65"); this did not qualify as a top 10 wet Fall, but in terms of number of days with measurable precipitation (35), this ties 1996 as the 3<sup>rd</sup> most. (only 1888 (38 days) and 1889 (41 days) had more during the Fall season.

Summer temperatures ended up very close to average overall, a change from the past 4 summers which were generally very warm. The number of days with temperatures of 90F or higher totaled 33, a bit less than average (42), and much less than each of the years 2005-2008 when more than 50 such days occurred.

# Norfolk, VA Records & Highlights- 12 Records

(Period of Record 136 yrs/1874-2009)

**Record Highs:** none

**Record Low Maximums:** 3

29 °F      Mar 3<sup>rd</sup>  
50 °F      Oct 17<sup>th</sup>  
53 °F      Oct 18<sup>th</sup>

**Record Lows:** None

**Record High Minimums:** 3

70 °F      May 9<sup>th</sup>  
77 °F      Aug. 20<sup>th</sup>  
69 °F      Oct 24<sup>th</sup>

**Daily Precipitation:** 6

1.21 inches      May 17<sup>th</sup>  
3.40 inches      Aug. 22<sup>nd</sup>  
3.54 inches      Sep. 8<sup>th</sup>  
1.62 inches      Oct. 15<sup>th</sup>  
2.31 inches      Nov. 11<sup>th</sup>  
4.90 inches      Nov. 12<sup>th</sup>

**Daily Snowfall:** None

**Other Highlights:**

1. The fall season (Sep-Nov) ended up very wet, (20.18"). 2009 was the sixth wettest on record.
2. It was also the wettest Aug-Dec period on record.
3. The fall had a total of 64.66 inches rain making 2009 as the fourth wettest year on record.
4. Eight days in 2009 had 2.00 inches or more of precipitation; the most on record. The previous record was 7 in 1937.
5. Summer temperatures ended up very close to average overall, a change from the past 3 summers which were generally very warm.
6. Only one day reached 95F or higher, well below the average of 9 days and much less than each of the years 2006-2008 when 13, 11, and 9 such days were recorded respectively.

## Tabular Summary of ANNUAL Data Richmond, Virginia

Richmond, VA 2009 Summary Data										
	TEMPERATURE				PRECIPITATION				Significance / Remarks	
	ACTUAL			Dep	Total (in)		# Days		Temperature	Precipitation
	Max	Min	Avg		Actual	Dep	.01"+	Dep		
Jan	44.5	26.0	35.2	-2.2	1.49	-1.62	8	-2		
Feb	53.9	30.4	42.2	2.3	0.74	-2.18	4	-5		5th driest
Mar	56.9	36.6	46.7	-0.9	4.26	0.50	11	1		
Apr	70.6	47.1	58.9	1.0	2.56	-0.51	11	1		
May	78.4	57.9	68.1	2.0	3.71	0.02	15	4		
Jun	85.0	66.0	75.5	1.3	4.32	0.55	10	0		
Jul	87.4	66.6	77.0	-1.4	3.39	-1.52	11	0		
Aug	89.5	70.3	79.9	2.9	4.04	-0.79	9	0	9th warmest	
Sep	79.6	60.3	69.9	-0.3	2.46	-1.32	9	1		
Oct	68.8	49.1	59.0	-0.1	3.59	0.25	13	6		
Nov	62.1	43.8	53.0	3.5	9.60	5.46	13	5		#1 wettest
Dec	47.9	30.8	39.4	-1.2	8.16	4.95	11	2		#1 wettest
<b>ANNUAL</b>	<b>68.7</b>	<b>48.7</b>	<b>58.7</b>	<b>0.6</b>	<b>48.32</b>	<b>4.62</b>	<b>125</b>	<b>12</b>		
*Winter	50.9	30.4	40.6	1.4	6.30	-2.94	22	-6		
Spring	68.6	47.2	57.9	0.7	10.53	0.01	37	6		
Summer	87.3	67.6	77.5	0.9	11.75	-1.75	30	0		
Fall	70.2	51.1	60.6	1.0	15.65	5.33	35	11		

- **“Dep”= Departure** from the 60 year averages (1950-2009). These values were used instead of the shorter period, 1971-2000 averages, to provide a longer period of record as all three main climate sites have been located at their present Airport locations since the late 1940s. Temperature departures are shaded orange for warmer than average and blue for cooler than average. Similarly, precipitation departures are shaded green for wetter than average and tan for drier than average.

\* By convention, meteorological winter is defined as Dec-Feb, as such, **“Winter”** values calculated here are for the 2008-09 season (Dec 2008, Jan 2009, Feb 2009).

