

# Richmond, Virginia Climate Records

## LOCATION

City Office or Chimborazo Park 1897- 1929  
 Richmond International Airport 1930 - 2018  
 Summary of Climatological Data for  
 January 1, 1897 to January 31, 2018  
 Lat. N 37 ° 31 ' Long. W 77 ° 19 '  
 Altitude: 167 feet or 50 Meters

## TEMPERATURE

High = 61.10°F **Warmest Year** 2012 based on 137 years  
 Mean = 58.90°F **Average Year** based on 30 years (Normal 1981-2010)  
 Mean = 58.18°F **Average Year** based on 120 years  
 Mean = 57.33°F **Average Year** based on 137 years  
 Low = 54.06°F **Coolest Year** 1940 based on 137 years

## SEASONAL AVERAGES

	<b>139 Yr.- Maximum</b>	139Yr.- Minimum	<b>30-Yr. Average</b>
Spring	62.4°F - 2012	53.0°F - 1931	57.7°F
Summer	81.3°F - 2010	72.2°F - 1927	77.4°F
Autumn	65.8°F - 1881	54.8°F - 1917	60.2°F
Winter	49.9°F - 1889-90	31.8°F - 1935-36	39.9°F

## TEMPERATURE EXTREMES

**Hottest Day Highest Maximum** daily temp. = 107° on August 6, 1918

**2<sup>nd</sup> Hottest Day Highest Maximum** daily temp. = 106° on August 7, 1918

**Warmest Night Highest Minimum** daily temp. = 81° July 12, 2011

**Coldest Day Lowest Maximum** daily temp. = 11°F on February 11 & 12, 1899

**Coldest Night Lowest Minimum** daily temp. = -13°F on January 16, 1893  
 (January 16, 1893 Ashland, VA station reported -16°F)

**2<sup>nd</sup> Coldest Night Lowest Minimum** daily temp. = -12° on January 29, 1940

**3<sup>rd</sup> Coldest Night Lowest Minimum** daily temp. = -11° on January 26, 1940

**Warmest month** August 1900 mean temperature was 82.9 °F.

**Coldest month** January 1940 mean temperature was 24.2 °F.

**Warmest day** July 24 and 25<sup>th</sup> 2010 mean temperature was 92.0 °F.

**Coldest day** February 11, 1899 mean temperature was 4.5 °F and January 21, 1985 the mean temperature was also 4.5 °F

## 100°F Maximum Days

Earliest 100°F day was May 28, 1941

**Most** 100°F days in a year 10-days in 2010

2nd Most 100°F days in a year 9-days in 1954

**Most** 100°F days in a month 7-days in July 2010

Most consecutive days of 100°F was 5 days in 1953 from Aug. 29th to Sep. 2nd

Latest 100°F day in a year was September 11, 1983

## 90°F Maximum Days

Earliest  $\geq 90^\circ\text{F}$  day was March 17, 1945 when the high temperature was  $91^\circ\text{F}$ .

Latest  $\geq 90^\circ\text{F}$  day was July 2, 1972 when the high temperature was  $90^\circ\text{F}$ .

Latest  $\geq 90^\circ\text{F}$  day was October 16th, 1897 when the high was  $90^\circ\text{F}$ .

**Most**  $\geq 90^\circ\text{F}$  days in a month was 26 days in July 1993.

**Most** consecutive days of  $\geq 90^\circ\text{F}$  was 27 days in 1995 from July 11<sup>th</sup> to August 6<sup>th</sup>.

The **120-year average** number of  $\geq 90^\circ\text{F}$  days in a year is 40.3 days.

The **30-year average** number of  $\geq 90^\circ\text{F}$  days in a year is 42 days. (ave.1981-2010)

**Most**  $\geq 90^\circ\text{F}$  days in a year was 78 days in 2010 and 2nd most 70 days in 1977.

Least  $\geq 90^\circ\text{F}$  days in a year was 14 days in 1971, 1927, 1917 and 15 days in 1922.

## 70°F Maximum Days

**Most**  $\geq 70^\circ\text{F}$  days in a winter season (Dec-Jan-Feb) was 13 days in 1975-76.

The **120-year average** number of  $\geq 70^\circ\text{F}$  days in a winter season was 4 days.

The **30-year average** number of  $\geq 70^\circ\text{F}$  days in a winter season was 4 days.

**Most** consecutive days of  $\geq 70^\circ\text{F}$  days in a winter season was 6 days in 1998 from December 3rd to 8th.

**Most**  $\geq 70^\circ\text{F}$  days in a winter was 13 in 1975-76 and 12 in 2016-17.

**Most**  $\geq 70^\circ\text{F}$  days in a winter month was 10 in Feb-1976 and Feb-2017.

Least  $\geq 70^\circ\text{F}$  days in a winter was 0 days in 18 winters.

**Most**  $\geq 70^\circ\text{F}$  days in a year was 219 days in 1977.

The **average**  $\geq 70^\circ\text{F}$  days in a year was 192 days.

Least  $\geq 70^\circ\text{F}$  days in a year was 162 days in 1917.

## 32°F Maximum Temperature Days

**Most**  $\leq 32^{\circ}\text{F}$  days in a winter season (Dec-Jan-Feb) was 29 days in 1917-1918.

The **average** number of  $\leq 32^{\circ}\text{F}$  days in a winter season was 6.5 days.

**Most** consecutive days of  $\leq 32^{\circ}\text{F}$  days in a winter season was 12 days from January 23, 1936 to February 3, 1936.

2nd most consecutive days of  $\leq 32^{\circ}\text{F}$  days in a winter season was 8 days from February 7, 1899 to February 14, 1899. (Tied)

2nd most consecutive days of  $\leq 32^{\circ}\text{F}$  days in a winter season was 8 days from December 29, 1917 to January 5, 1918. (Tied)

**Most**  $\leq 32^{\circ}\text{F}$  days in a winter was 29 in 1917 - 1918.

The least  $\leq 32^{\circ}\text{F}$  days in a winter was zero days in 7 winters.

(1931-32, 1938-39, 1949-50, 1952-53, 1997-98, 2007-08, 2011-12)

**Most**  $\leq 32^{\circ}\text{F}$  days in a year was 20 in 1917.

The least  $\leq 32^{\circ}\text{F}$  or below days in a year was zero days in six years.

(1939, 1949, 1956, 1974, 1990, 2012)

## 70°F Minimum Days

Earliest minimum temperature of  $\geq 70^{\circ}\text{F}$  in the year was April 29, 2017 when the high minimum or first warm night of the year was  $73^{\circ}\text{F}$ .

Latest minimum temperature of  $\geq 70^{\circ}\text{F}$  in the year was November 2, 1971 when the high minimum or last warm night of the year was  $70^{\circ}\text{F}$ .

**Most**  $\geq 70^{\circ}\text{F}$  nights in a month was 29 days in July 2012.

**Most**  $\geq 70^{\circ}\text{F}$  nights in a summer (Jun-Jul-Aug) was 62 nights in 2005.

Least  $\geq 70^{\circ}\text{F}$  nights in a summer (Jun-Jul-Aug) was 7 nights in 1974.

The most  $\geq 70^{\circ}\text{F}$  nights in a year was 67 nights in 2005.

The least  $\geq 70^{\circ}\text{F}$  nights in a year was 7 nights in 1974.

## 32°F Minimum Temperature Days

Least  $\leq 32^{\circ}\text{F}$  minimums from January 11th to January 27th a period of 17 days the temperature stayed above freezing in the past 120 years of January records this is a first.

**Most**  $\leq 32^{\circ}\text{F}$  nights in a month was 31 days in Jan 1977 & Dec. 1960.

2nd most  $\leq 32^{\circ}\text{F}$  nights in a month was 30 days in Jan. 1918, Dec. 1963 & Dec. 2000.

**Most**  $\leq 32^{\circ}\text{F}$  minimums in a year was 114 days in 1941.

Least  $\leq 32^{\circ}\text{F}$  minimums in a year was 51 days in 1990.

## 0°F Minimum Temperature Days

Earliest  $\leq 0^{\circ}\text{F}$  min. in the winter was Dec. 21, 1942 when the low temp. was  $-1^{\circ}\text{F}$ .

**Most**  $\leq 0^{\circ}\text{F}$  days in a winter season was 7 days in winter of 1939-1940.

Latest  $\leq 0^{\circ}\text{F}$  days in a winter season was Feb. 28, 1934 when the low temp. was  $-1^{\circ}\text{F}$ .

**Most**  $\leq 0^{\circ}\text{F}$  days in succession was 6 from January 25 to January 30, 1940.

**Most**  $\leq 0^{\circ}\text{F}$  days in a month was 7 days January 1940.

**Most**  $\leq 0^{\circ}\text{F}$  days in a year was 7 days in 1940.

## First and Last Freezing Days

Earliest last freezing day in the spring was Mar. 11, 2012 when the temp. was  $30^{\circ}\text{F}$ .

Latest last freezing day in the spring was May 11, 1966 when the temp. was  $32^{\circ}\text{F}$ .

The **average** last freezing day in the spring was Apr. 8<sup>th</sup>. (xmACIS2 DATA)

Only 2 other nights in May with  $\leq 32^{\circ}\text{F}$  (May 4, 1986  $32^{\circ}\text{F}$ ) & (May 9, 1956  $31^{\circ}\text{F}$ )

Earliest first freezing day in the autumn was Oct. 3rd, 1974 - the temp. was  $31^{\circ}\text{F}$ .

The **average** last freezing day in the autumn is October 30<sup>th</sup>. (xmACIS2 DATA)

Latest last freezing day in the autumn was Dec. 2nd, 1985 when the temp. was  $30^{\circ}\text{F}$ . A close second was Dec. 1, 2009 which was also  $30^{\circ}\text{F}$

## Growing Season

(xmACIS2 DATA 1930 to 2017)

Longest growing season with temperature  $>32^{\circ}\text{F}$  was 250 days in 2009.

Average growing season with temperature  $>32^{\circ}\text{F}$  is 204 days.

Shortest growing season with temperature  $>32^{\circ}\text{F}$  was 170 days in 1934.

## PRECIPITATION

(Total from January 1, 1872 to December 31, 2017 is 6256.21 inches.)

(January 1, 1897 to Dec 31, 2017 is 5,696.37 inches.)

**Maximum** annual = 72.02 Inches in 1889 a departure  $+28.42$  based on 30-year ave.

**Average** annual = 42.85 inches was for a 145-year average.

**Average** annual = 43.48 inches was for a 130-year average.

**Average** annual = 43.60 inches was for a 30-year average. (1981 to 2010 average)

**Minimum** annual = 22.91 inches in 1941 or a departure  $-20.69$  based on 30-year ave.

**Average** wettest month was Jul. = 4.81 inches 145-year average

**Average** wettest month was Aug. = 4.66 inches 30-year average (1981 to 2010 ave.)

**Average** driest month was Nov. = 2.73 inches 145-year average.

**Average** driest month was Feb. = 2.76 inches 30-year average (1981 to 2010 ave.)

**Most** precipitation in a month was 18.87 inches in July 1945.

**Most** precipitation in a day was 8.79 inches on August 12, 1955. (Hurricane Connie)

Least precipitation in a month was 0.01 inches in Oct. 2000

Total measurable precipitation days from January 1, 1887 to December 31, 2017 was 15,382 days of a total of 47,847 days or 32.1%.

**Most** precip. days with measurable precip. in a year was 151 days in 1889.

**Most** precip. days with measurable precip. in a month was 23 days in May 2003.

130-year **average** measurable precipitation days in a year was 117.3 days.

30-year **average** measurable precip. days in a year was 114 days. (1981 to 2010 ave.)

Least measurable precipitation days in a year was 86 days in 1941.

Least measurable precipitation days in a month was 1 day in Oct. 2000 & Oct 1974.

## Seasonal Averages Precipitation

130-year averages and 30-year (1981 to 2010 ave.)

	Spring	Summer	Autumn	Winter
130-years	10.76 inches	13.66 inches	9.63 inches	9.39 inches
130-years	2.4 days $\geq 1.00$	3.7 days $\geq 1.00$	2.7 days $\geq 1.00$	2.0 days $\geq 1.00$
30-years	11.09 inches	13.10 inches	10.35 inches	9.06 inches
30- years	2.5 days $\geq 1.00$	3.7 days $\geq 1.00$	3.0 days $\geq 1.00$	1.9 days $\geq 1.00$

## Snowfall

The last white Christmas was 2010 with 2.2 inches starting at 2:30PM & 1.1 inches on the 26<sup>th</sup>.

Snowfall from January 1, 1897 to January 31, 2018 is 1568.9 inches including sleet.

**Maximum** annual snowfall = 47.0 inches in 1962

120-Year **average** annual snowfall = 13.0 inches

30-Year **average** annual snowfall = 10.3inches (1981 to 2010 average)

Minimum annual snowfall was a trace in 1951

**Maximum** monthly snowfall = 28.5 inches in January 1940

Largest storm total = 21.6 inches on January 23-24th, 1940

Largest snowfall in one day = 19.9 inches on January 24, 1940

**Greatest** snow depth = 22 inches on January 24, 1940.

**Greatest** (seasonal) snowfall total = 35.6 inches winter of 1966-1967

2nd **greatest** (seasonal) snowfall = 35.2 inches winter of 1917-1918

3rd **greatest** (seasonal) snowfall = 31.7 inches winter of 1939-1940

**Most** annual measurable snow days was 16 days in 1962, 1914, and 1904 .

**The 2<sup>nd</sup> most** annual measurable snow days was 15 days in 1966 and 1912.

Month with the **maximum** number of snow days was 7 days in Jan. 1918, 1966, 1977 and February 1899, 1907, 1967, 2003.

The latest measurable snowfall in spring was 0.2 inches on April 21, 1953.

The earliest trace of snowfall in autumn was on October 10, 1979.

The earliest measurable snowfall in autumn was 0.9 inches on November 5, 1962.

The latest trace of snowfall in spring was on April 28, 1898 and May 4, 1774 might have had a trace of snow.

May 4, 1774: Snow was reported in the Williamsburg Gazette to have fallen in Dumfries, VA. George Washington at Mount Vernon, logged in his diary a cold day with spits of snow and a hard wind from the northwest. Thomas Jefferson near Charlottesville observed the Blue Ridge Mountains covered with snow. The late-season snow and frost killed most of the fruit crop in the northern part of the state.

## Seasonal Average Snowfall

	Spring	Autumn	Winter
120 Year Ave.	2.2 inches	0.3 inches	10.4 inches
30-years Ave.	0.7 inches	0.2 inches	09.4 inches

## Barometric Pressure at Mean Sea Level

**Highest** barometer = 1051mb or 31.04 inches Feb 13, 1981

Lowest barometer = 965 mb or 28.54" on March 13, 1993 Great Snowstorm

**Highest Barometer since 1898**  
Jan-02-1899      31.00 inches

Feb-13-1981      31.04 inches

Mar-10-1996      30.94 inches

Apr-01-1923      30.73 inches

May-22-1936      30.59 inches

**Highest Barometer since 1898**  
Jan-06-1931      28.86 inches

Feb-25-1965      28.99 inches

Mar-13-1993      28.54 inches Snowstorm

Apr-13-1961      29.10 inches

May-02-1929      29.15 inches

<b>Jun-27-1965</b>	<b>30.51 inches</b>	<b>Jun-21-1972</b>	<b>29.14 inches</b>
<b>Jul-02-1923</b>	<b>30.86 inches</b>	<b>Jul-20-1963</b>	<b>29.43 inches</b>
<b>Aug-19-1940</b>	<b>30.57 inches</b>	<b>Aug-23-1933</b>	<b>28.93 inches</b> 1933 Hurr.
<b>Sep-19-1959</b>	<b>30.59 inches</b>	<b>Sep-18-2003</b>	<b>29.21 inches</b> Isabel
<b>Oct-22-1974</b>	<b>30.71 inches</b>	<b>Oct-15-1954</b>	<b>28.75 inches</b> Hazel
<b>Nov-29-1930</b>	<b>30.88 inches</b>	<b>Nov-29-1963</b>	<b>29.04 inches</b>
<b>Dec-25-1949</b>	<b>30.92 inches</b>	<b>Dec-02-1942</b>	<b>29.01 inches</b>

## Highest Winds

**Maximum** wind gust was 79 mph on October 15, 1954. (Hurricane Hazel)

**Maximum** sustained wind from the SE at 68 mph October 15, 1954 mph. (Hazel)

**Maximum** wind gust was 73 mph on September 18, 2003. (Hurricane Isabel)

**Maximum** sustained winds were 38 mph on September 18, 2003 mph

Hurricane Isabel gave Richmond received 4.32 inches of rain.

**Highest wind speed for each month since 1986** CF=Cold Front TS= Thunderstorm

<b>Jan-30-2013</b>	<b>54 mph CF</b>	<b>Jul-04-2016</b>	<b>58 mph</b>
<b>Feb-10-2008</b>	<b>63 mph CF</b>	<b>Aug-27-2011</b>	<b>70 mph Irene</b>
<b>Mar-18-1989</b>	<b>67 mph CF</b>	<b>Sep-18-2003</b>	<b>72 mph Isabel</b>
<b>Apr-05-2011</b>	<b>58 mph TS</b>	<b>Oct-15-1954</b>	<b>79 mph Hazel</b>
<b>May-06-1989</b>	<b>79 mph TS</b>	<b>Nov-05-1988</b>	<b>54 mph TS</b>
<b>Jun-25-2015</b>	<b>70 mph TS</b>	<b>Dec-07-2011</b>	<b>64 mph TS</b>