

2020 WEATHER SUMMARY

West Henrico Co. –
Springfield Park, Glen Allen,
VA

2nd Wettest Year for Springfield Park

Springfield Park's total precipitation for the year was 60.46 inches, the second wettest year record for the station. (Records for 12-years) Summer was the wettest on record and autumn was the 3rd wettest on record. August was the wettest month on record for this station. The year wettest year for Richmond was 1889 with 72.02 inches, 2018 was the 2nd wettest on record with 63.73 inches and 2020 was 3rd with 63.52 inches.



Hurricane Isaias

August 3rd was Henrico's day to deal with Isaias. The storm tracked its way north up the east coast and regained hurricane strength in the evening of August 3rd with maximum sustained winds of 75 mph. Strong winds and heavy rainfall were forecast from the eastern Carolinas to the Mid-Atlantic Monday night through Tuesday. The NWS had issued a tropical storm warning for most of Northern VA. Much of the Interstate 95 corridor, including VA & D.C., was forecast to experience heavy downpours and powerful winds. Eastern VA & NC had wind gusts to 60 mph and a few tornadoes. More than

500,000 customers in VA & NC experienced outages as a result of the fast-moving storm. Western Henrico wasn't nearly as bad as predicted. We expected some power outages but Springfield Park had winds only to 29 mph and no damage in western Henrico. There was flooding to our south in Chesterfield but here we had 3.52 inches of rain but some places in Chesterfield had nearly a foot of rain and flood damage. Other tropical storms that affected the area were Sally, Beta, and Zeta all of which added to the rain totals making this a very wet year but did little harm to the local area.

2020 Very Little Snow

Springfield Park had only a trace of sleet on January 18, 2020 and a trace of snow on Feb. 20, 2020 and 0.2 inches of snow on December 7, 2020. This is Springfield Park's lowest annual snow total. The Richmond International Airport has had an annual total of 1.5 inches, their lowest total since 2008 when the annual total was 0.8 inches.

Thunderstorms

The only local strong thunderstorm was on August 2, 2020 and rated as a 4 because it wasn't severe over a large area but would have been rated as a 5 for the local area, our neighborhood. The first lightning strike at 2105 hit a house 600 yards from us and the second at 2109 was to the north and I didn't have time to count even to one. The third strike at 2110 was to the east and both strike 2 and 3 were thought to be within 1000 feet. It was scary as I can never remember any more close strikes in a 5-minute period. The damage done by the first strike at 2105 took out the electric power and the electromagnetic pulse burned out a cordless phone and threw circuit breakers in our house and two of the neighbors' homes and took out the Internet. It damaged both the Sensor Transmitter 6362 and the Leaf Wetness and Soil Moisture Temperature Station 6345, the solar sensor and a leaf wetness sensor or about \$600.00 of weather equipment.

Thunder was heard on 32 days in 2020 at Springfield Park. The average is 35 days per year. July had 9 thunder days which was the greatest for one month in 2020 but only 2 were rated 4 and none were rated 5 for 2020. Most were weak as 24 of the 32 were rated as category one the weakest. Cat. 1 may have had only one thunder heard. The July 21, 2020 storm was rated 4 because of much lightning for a long period over the area.

24 (Cat. 1) 4 (Cat. 2) 2 (Cat. 3) 2 (Cat. 4) 0 (Cat. 5)

Temperature

YEAR- The mean temperature for 2020 at Springfield Park was 60.6°F which was a 1.2°F departure; the average is 59.4°F. 2020 was the hottest year on record at the Springfield Park station. It was 0.1°F warmer than the previous record in 2012 with a mean average of 60.5°F. The Richmond International Airport had a mean of 60.7°F which making 2020 the 6th hottest year for Richmond. Springfield Park had 56 days that the maximum temperature was 90°F or more and the average is 43.3 days, only 2012 and 2016 had more. Springfield Park had 60 night-time minimums which stayed 70°F or above; the average is 47. The maximum temperature at Springfield Park did not have one day with less than or equal to 32°F for the high temperature. Springfield Park had 69 days when the minimum temperature was $\leq 32^\circ\text{F}$; the average is 78.2 days. The lowest minimum temperature of 2020 was 18.2°F on January 21st. The warmest minimum temperature for the year was 77°F on July 20th.

SEASONS-

Spring was dry with only 9.17 inches of precipitation and the 3rd driest on record and 7th coolest on record with a temp. departure of -0.3°F. Note: Spring was the only season that was cooler than average.

Summer was the wettest on record with 21.54 inches and 2nd hottest on record with a temp. depart. of 1.3°F and July was the hottest July on record.

Autumn was the 3rd wettest on record with 16.61 inches and 2nd warmest on record with a temp. departure of 1.4°F. November was the warmest on record.

Winter of 2019-2020 was the 6th wettest on record and the 3rd warmest on record with a temperature departure of 3.2°F. This was because Jan was the warmest on record and Feb. was the 4th warmest on record.

MONTH-

Positive departures- Warm Months

Mar had the greatest positive departure from normal **+7.1°F**.

Nov had the 2nd greatest positive departure of **+6.1°F**.

Jan. had the 3rd greatest positive departure of **+5.4°F**.

July had the 4th greatest positive departure of **+3.2°F**.

Feb had the 5th greatest positive departure of **+3.0°F**.

Negative departures- Cold Months

May had the greatest negative departure from normal **-5.3°F**.

Sep had the 2nd greatest positive departure of **-3.0°F**.

Apr had the 3rd greatest positive departure of **-2.7°F**

Monthly Record Temperatures- (12 Years of Records)

Maximum temperature Average-

July set a new **high** record of 94.1°F.

Nov set a new **high** record of 66.8°F.

May tied with 2016 for a new **low** record of 73.8°F.

Sep set a new **low** record of 78.4°F

Minimum Temperature Average –

July set a new **high** record of 72.3°F.

May set a new **low** record of 53.6°

Mean Temperature Average –

Jan set a new **high** record of 42.7°F. The previous record was 42.1°F set in 2012.

July set a new **high** record of 83.2°F. The previous record was 82.7°F set in 2012.

Nov set a new **high** record of 54.7°F. The previous record was 53.23°F set in 2011.

May set a new **low** record of 63.7°F. The previous record was 64.9°F set in 2016.

Record High and Low Temperatures

May had a new record **min.** 30.8 on the 9th & 10th; previous record was 36.0 set in 2013.

Sep had a new record **min.** 40.5 on the 22nd; previous record was 44.0 set in 2013.

Mar had a new record **max.** 87.8 on the 20th; previous record was 85.0 set in 2012.

DAY-

The hottest temperature of 2020 at Springfield Park was 101.2°F that occurred July 21st.

The average highest annual maximum temperature for this station is 99.4°F. The lowest

minimum temperature for 2020 at Springfield Park was 18.2°F recorded on January 21,

2020. The hottest day was July 21st with a daily mean of 88.7°F and the coldest day of

the year occurred on January 21st with the daily mean temperature of 27.7°F.

RANGE-

The **greatest** temperature range for the year at Springfield Park was 38°F, which occurred on

February 23rd with a high of 63.5°F and a low of 25.1°F. The **smallest** temp.

range for the year at Springfield Park was 5.2°F, which occurred on Jan 14, 2020 with a high

temperature of 52.3°F and a low temperature of 47.1°F. The **maximum monthly range** was

67°F for March 2020. Spring had the highest average temperature range of 21.5°F and the

summer had the lowest temperature range of 19.7°F. Nov. had the highest average range of

24.3°F and August had the lowest average range of only 17.4°F.

PRECIPITATION**YEAR-**

The total number of days this year with measurable precipitation at Springfield Park was 147 days; the

record is 149 in 2018 and the average is 128.1 days. Springfield Park's total precipitation was 60.47

inches. The twelve-year average annual precipitation for Springfield Park is 47.84 inches or a positive

departure of 12.63 inches. The total precipitation for 2020 at the Airport was 63.52 inches. The average

annual precipitation for Richmond is 43.60 inches or a positive departure of 19.92 inches.

Season-

The Spring season was the 3rd driest on record with 9.17 inches; previous record was 8.92 inches in 2015 and the average is 12.15 inches.

The Summer season was the wettest on record with 21.54 inches; the previous record was 19.75 inches in 2013.

The Autumn season was the 3rd wettest on record with 16.61 inches; the average is 11.69 inches.

The Winter season of **2019-20** was the 6th wettest on record with 10.48 inches; the average is 9.87 inches.

MONTH-**Max. Precipitation Days**

Aug had 21 days with measurable precipitation, which is not only a new record for Aug but is a new record for all months at Springfield Park.

Apr with 17 days with measurable precipitation was the 2nd most of any of the months of 2020.

Feb with 14 days with measurable precipitation was the 3rd most of any of the months of 2020

There were 147 days with a measurable precipitation amount.

There were 87 days with a daily precipitation amount greater than or equal to 0.10 inches.

There were 19 days with daily precipitation amount greater than or equal ≥ 1.00 inch.

There were 4 days with more than 2.00 inches; the record was 5 days in 2018.

Only August 2020 set new precipitation records for the month.

Aug was the wettest month in 2020 with 10.96 inches and is the 2nd wettest of all months for Springfield Park. The wettest month is May 2018 with 11.82 inches.

CALENDAR-

The most precip. recorded in a calendar day in 2020 was 2.95 inches on July 01, 2020 and is a new record for the month of July; the previous record was 2.42 inches in 2013.

The record for all months is 5.09 inches which was on record for May 2018.

24-HOUR PERIOD-

The maximum precipitation in a 24-hour period for 2020 was 3.27 inches on August 15th & 16th however the August record for Springfield Park is 3.83 inches that occurred in 2011. The 24-hour period record for Springfield Park for all the months is 6.10 inches in 2018 on May 17th and 18th.

HOUR-

The greatest one-hour rainfall intensity during 2020 was 2.66 inches on July 1st; the previous July record was 1.40 inches in 2015. The 2.66 inches in one-hour is now the record for all of the months. The second greatest one-hour rainfall intensity was June 2, 2018 with 2.63 inches on June 2nd.

Five-Minutes-

The greatest five- minute rain in 2020 was 0.45 inches on June 11th; the June record was 0.53 inches in 2018. April's greatest five-minute rain in 2020 was 0.24 inches setting a new record for the month on April 7th; the previous April record was only 0.20 inches in 2018. The 5-minute record for Springfield Park is 0.67 inches set on August 10, 2013.

DROUGHT-

There was no real drought, only some dry periods during 2020. The longest dry period of 2020 without measurable rain was 15 days from Feb.27th to Mar 12th, but the lack of precip. wasn't felt outside of the growing season with low temps. There was one 9-day period with no precip. from Nov.2nd to Nov.10th. The monthly precipitation has been above average for 9 months in 2020.

WIND

YEAR-

The highest wind gust for the year was 50 mph from the SSE that occurred on February 7, 2020 at 0811 hours in a strong thunderstorm. This was the highest wind at Springfield Park since 8-11-2011 when a 51-mph gust occurred in tropical storm Irene. The total wind run for the year was 25,318 miles, a new record for Springfield Park.

MONTH-

The windiest month in 2020 was March with a wind run of 3131.3 miles. This was the 2nd windiest of all months on record at the Springfield Park Station. Sep. was the month with the least wind of 1605.5 miles. March also had the highest daily wind run for a month with 101 miles. April had the 2nd highest average with 86.0 miles. The highest average maximum wind gust for 2020 was 23.2 mph in April and the next highest month was March with 20.2 mph.

DAY-

The windiest day for 2020 was on March 10th with a wind run of 202.4 miles. This was also the highest daily wind run recorded at Springfield Park since March of 2019 when 214.1 miles was recorded. The record wind run for Springfield Park during a calendar day was 284.1 miles set during Hurricane Irene on August 27, 2011.

SNOW

YEAR-

The 2020 Springfield Park total snowfall was 0.2 inches and the total for the winter (2019- 2020) was 0.4 inches with 0.3 inches occurring in November and 0.1 inches in Dec 2019. But technically the 0.3 inches was in the fall and only 0.1 inches fell in the winter of 2019- 2020. There was only 1 snow day during the winter (2019- 2020) and the average is 9.8 days. During 2020 the Springfield Park station has had 1 measurable snowfall that occurred on December 7, 2020. This was largest and only snowfall to occur in one calendar day at the Springfield Park Station. The maximum snow on the ground at sunset during 2020 was 0 inches.

MONTH-

The greatest monthly snowfall total for Springfield Park in 2020 was 0.2 inches in the month of December that occurred on the 7th; the average is 2.9 inches for December and 16.0 inches for the year.

STORM-

The most snow to fall in any one storm was 0.2 inches that occurred on December 7th. The greatest snow in a calendar day in 2020 was also 0.2 inches in the same snow.

BAROMETRIC PRESSURE

YEAR-

The highest barometric pressure recorded for the year was 30.78 inches of mercury on January 9, 2020. The lowest barometric pressure for the year was 29.06 inches of mercury which was recorded on February 7, 2020. This was the lowest barometric pressure since October 29-30, 2012 when the remnants of tropical storm Sandy moved up the east coast giving a reading of 28.96 inches of mercury.

MONTH-

November had the highest monthly mean barometric pressure of any month in 2020 of 30.20 inches and is the highest since 2015 for Nov. (records since August 2008). April had the lowest monthly mean barometer reading of any month at 29.90 inches.

RELATIVE HUMIDITY

YEAR-

The highest average relative humidity was recorded in October with a monthly average relative humidity of 80.5%. March had the lowest average relative humidity with an average monthly humidity of 67.7%. The lowest daily relative humidity for the year was 18% recorded on February 23, 2020. Jan, Mar, Aug, and Oct. all set new record high relative humidity averages for the month. It was a very humid and wet year because of all the precipitation. The average for 2020 was 74%. The annual average is 70.2% giving a departure of 3.8%. The record high average was 75.5% in 2018.

SKY COVER

The cloudiness average value is based on (0 as clear), (1 as partly cloudy), and (2 as cloudy).

MONTH-

2020 average sky cover was 1.13 units. March with (1.53) was the cloudiest month of 2020 and was the 3rd cloudiest month on record at Springfield Park. May was also very cloudy and averaged 1.37 units and February was 3rd. July with (0.69 units) was the clearest month since Sep. 2013. The cloudiest season was the winter of 2019-2020 with the average 1.21; the normal is 1.10. Spring was the clearest 1.36 with a normal of 1.12 units. Summer was 1.00 with a normal of 1.04. The fall season was 0.98 with the normal of 1.02.

SEASON RECORDS

Springfield Park Winter – Dec. 2019 to February 2020

The winter of **2019-2020** was the third warmest and 6th wettest on record for Springfield Park. January was the warmest winter month with a +5.4°F departure and February also had a positive +3.0 departure. The total snowfall was only 0.4 inches during the winter months. November 2019 had 0.3 inches and December 2019 had 0.1 inches of snow, January 18, 2020 and February 20, 2020 both had only a trace of frozen precipitation. Springfield Park Station had its lowest winter snowfall. January though warm still had the greatest number of days (21) with the minimum temperature less than or equal to 32°F.

Springfield Park Spring – March 2020 to May 2020

Spring had a -0.3°F departure from average, a little cooler than average, and had the greatest negative departure for the four seasons. March had a very warm +7.1°F departure and our 2nd warmest March which hide the fact April and May were so cold. It was so warm in March I had one neighbor ask if they could plant their tomatoes. Both April and May were well below average and April was our 2nd coolest April. May was also the 2nd cloudiest May on record, the coldest May on record and the lowest average ground temp. ever recorded in the past 12 years. It was a rough start for tomatoes. I planted the smallest tomatoes and the latest in the month of May after the two frosts of May 9th and 10th.

This was the first time Springfield Park has ever had a frost in May and we had 2 frosts in May. Spring was the 10th driest season on record with only 9.17 inches.

Springfield Park Summer – June 2020 to August 2020

The summer was very warm and took 2nd place for the warmest summer and had a +1.3°F temp. departure and was the wettest on record. The summer had 53 days of the year's 56 day of 90°F or warmer. Springfield Park had 21.54 inches of precipitation for the summer and August which had 10.96 inches was the wettest August on record. Isaias gave 3.91 inches to add to the August total. July was the hottest we have ever had on record. It was the highest mean ever recorded for Richmond since 1880. Too hot for tomato plant blossoms to set. Then August was the wettest on record helping the fungus to grow on, not just the plants, but also on the tomatoes themselves.

Springfield Park Autumn – September 2020 to November 2020

Autumn was the 2nd warmest on record with a 1.4°F departure as November was the warmest on record. It was the 3rd wettest fall on record with 16.61 inches of precipitation. The remnants of two hurricanes Sally and Beta in September and Zeta in October all added precip to the fall total.

The Richmond International Airport's average mean temperature was 54.6°F for the month of November with a departure of +4.2°F making November the 4th warmest November since 1897.

Annual Records

2020 was the 2nd wettest year on record at Springfield Park with a total of **60.47** inches, a **12.63** inch departure based on the 12-year average of 47.84 inches.

2020 was the 3rd wettest year on record for Richmond as the Richmond International Airport had **63.52** inches which was a **19.92** inch departure based on the 30-year average of 43.60 inches.

Springfield Park's 2020 annual temperature average was 60.6°F which was a +1.2°F departure from the 11-year average and was the hottest year on record at the Springfield Park station. It was 0.1°F warmer than the previous record in 2012 with a mean average of 60.5°F. The Richmond International Airport's 2020 annual temperature average was 60.7°F with a +1.8°F departure based on the 30-year average of 58.9°F. This was the 6th hottest year for Richmond in the past 140 years or since 1880.

In 2020 Springfield Park had the least snowfall on record with 0.2 inches. The 11-year average is 16.0 inches or a departure of -15.8 inches. The largest yearly total was 36.7 inches in 2010.

The Richmond International Airport had 1.5 inches which was the least since 2008 when 0.8 inches was recorded.

Springfield Park in 2020 had a wind run of 25,318 miles, the windiest year in the past 12 years. The average annual wind run at Springfield Park is 19,638 miles.

During the Year 2020 at Springfield Park there was a total of:

1 Days with Glaze

0 Days with Hail

2 Days with Sleet

1 Day with Measurable Snow

4 Days with a Trace or more of snow

31 Days with Fog

32 Days with Thunder

47 Days with Frost

156 Days with Dew

147 Days with Measurable Precipitation