## PAGE \#1

West Henrico Co. - Glen Allen Weather Center $37.65537^{\circ} \mathrm{N} .77 .56929^{\circ}$ W. - Koontz


July
2020

TEMPERATURE |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| AX. | Time | MIN. | Time | RANGE |  |



## PAGE \#2

$+2$

## REMARKS FOR THE MONTH

July - 2020
TS RATED $3-2-5$ HEAVIEST RAIN SINCE JUNE 7,2019 WHEN 3.81 INS. WAS OBSERVED
CLEAR UNTIL 1130 THEN A FEW FAIR WEATHER CUMULUS THAT BECAME NUMEROUS BY 1300 UNTIL 1615 THEN CLEAR AGAIN
A CLEAR SKY WITH HIGH TEMPS. AND ONLY $0.3^{\circ} \mathrm{F}$ FROM HOTTEST DAY IN 2020
HEAVY DEW ON GRASS ONLY-VERY CLEAR AM WITH CUMULUS COMING IN AT NOON AND PM WAS ABOUT 30\% CLOUDY
VEIL OF CIRRUS AND CIRROSTRATUS STO NOON THEN CLEARING WITH SCATTERED CUMULUS THEN CIRRUS, CIRROSTRATUS AND ALTOSTRATUS CAME IN AT 1615
TODAY WAS HOTTEST DAY OF 2020 BY $0.1^{\circ} \mathrm{F}$ - AM WAS ALMOST CLEAR-PM WAS ABOUT $45-55 \%$ CLOUDY
CLEAR AM AND CUMULUS CAME IN AT 1300 BUT ONLY A FEW FAIR WEATHER CUMULUS AND CLEAR AGAIN BY 1445 THEN CIRRUS AFTER 1830
CUMULUS CLOUDS CAME IN AT 0850 GIVING A PC AM AND PM
LIGHT FOG AT 0645-TODAY WAS BREEZY AFTER 0915-AM WAS MOSTLY CLOUDY AND PM CLOUDS DECREASED AT 1445
TWO THUNDERS HEARD THE 1st AT 2209 -TS RATED 1-1-2-MANY HIGH DEFINITION CUMULUS CLOUDS AGAINST A DEEP BLUE SKY-HOT \& HUMID DAY-AM EST. 45-55\% CLOUDY \& PM EST. 35-40\% CLOUDY
DEEP BLUE SKY AGAIN TODAY WITH CUMULUS CLOUDS FROM 1230-1400 OTHERWISE A VERY CLEAR DAY WITH LOW HUMIDITY
VERY CLEAR AM WITH FIRST CLOUDS ARRIVING AROUND NOON AND MOSTLY CLO. FROM 1230-1530-LOW PM REL. HUMIDITY-PM EST. 45-55\% CLOUDY
FULL RAINBOW ENDING AT 0648 FIRST MORNING RAINBOW I REMEMBER SINCE MOVING TO RICHMOND 12 YRS AGO-CLOUDS CLEARED BY 0850 THEN THIN CIRRUS TO 1115 AND CUMULUS AFTER 1245 AM WAS VERY CLEAR THEN CUMULUS CAME IN AT 1230-SCATTERED CUMULUS UNTIL 1730-PM EST. $\mathbf{3 0} \%$ CLOUDY
CLEAR TO 1145 THEN CUMULUS CAME IN AND WAS MOSTLY CLOUDY TO 1515 THEN CLEARING AGAIN
AM WAS MAINLY CLOUDY EXCEPT FOR PD. 0915-1005 AND PM WAS PC BUT THEN CLEARED AFTER 1815
HOTTEST DAY OF 2020 AND HOTTEST SINCE OCT. 3,2019 WHEN IT WAS $98.4^{\circ} \mathrm{F}$ - ALSO HIGH REL. HUMIDITY TODAY
VERY CLEAR AM UNTIL 1110 THEN CUMULUS CAME IN - MOSTLY CLO. WITH CUMULUS FROM NOON TO 1530 THEN MOSTLY CLEAR-A DEW POINT FRONT PASSED AROUND 1000 HOTTEST DAY OF 2020 AND HOTTEST SINCE JULY 21, 2019 WHEN IT WAS $102.3^{\circ} \mathrm{F}$
ABOUT 45 MINS. OF POWER OUTAGE AT 0200-HOTTEST DAY OF 2020-ABOUT 55-65\% CLO. ALL DAY
TS RATED 4-2-2 THE TS HAD MUCH LIGHTNING BUT MANY STRIKES IN THE AREA NEAR SPRINGFIELD PARK - AGAIN HOTTEST OF 2020 AND HOTTEST SINCE JULY 21,2019 WHEN IT WAS $102.3^{\circ} \mathrm{F}$
TS RATED 1-1-2 WITH 0.39 INCHES RAIN AND A 2ND TS WAS ALSO WEAK RATED 1-1-1 WITH 4 THUNDERS 1901, 1905, 1909, 1920 \& 0.09 RAIN \& A 11 MPH MAX. WIND
TS RATED 1-3-1 RAIN PD. 2051-2335 TS PASSED TO OUR W AND NW
CLOUDS MADE FOR A LITTLE COOLER DAY BUT IT WAS MORE HUMID WITH 9 PDS OF VERY LIGHT SPRINKLES
VERY CLEAR FROM 0820-1030 WHEN CUMULUS CAME IN AND PC TO 1800 THEN CLEAR AGAIN UNTIL DARK
A VERY CLEAR DAY AND HOT BUT WITH LOWER HUMIDITY THAN IS USUAL
A VERY CLEAR HOT DAY WITH LOW HUMIDITY AND A BREEZY AFTERNOON
A VERY HOT CLEAR DAY WITH CLOUDS AFTER 1730 AND A TS PASSED TO NW OF US-ONE THUNDER HEARD AT 1803
NOT AS HOT BUT MORE CLOUDS AND MORE HUMIDITY WITH A BREEZY AFTERNOON]
TS RATED 1-1-3 A PM TS THAT PASSED TO OUR WEST WAS RATED 1-1-1 WITH SOME HEAVY RAIN TO OUR WEST - HOT BUT WITH MORE HUMIDITY WITH AM CIRRUS AND A CLOUDY PM
TS RATED 1-1-2 - THUNDER 1725, 1728, 1731, AND CLOUDY AND HUMID MOST OF THE DAY - THE 3RD PERIOD OF PRECIP. 1000 TO 1005 AND A 4TH PERIOD WITH A WEAK TS 1635-1830
EXTENSION OF LENGTHY DAILY REMARKS
TS RATED 1-1-1 AS ONE DISTANT THUNDER HEARD WHILE LOOKING AT THE MORNING RAINBOW
ON THE 23 THE SECOND WIND GUST OF 23 MPH OCCURRED FROM THE WSW
NOTE 2 TS ON THE 22 SO INSTEAD OF 8 TS FOR THE MONTH THERE ARE 9 TS
ALL DEW POINTS THIS MONTH AND THE SUMMER ARE REDUCED BY 2-3 DEGREES F AS THE DAVIS INSTRUMENT OVERRATES DEW POINTS.

The daily records for the month are listed on page \# 4 and not found in the remarks.
The link below explains how observations are taken at the Glen Allen Weather Station - Note the Numbers match the column numbers on the Observation Sheet
Rules for making Observations in 2020

West Henrico Co. - Glen Allen Weather Center $37.65537^{\circ}$ N. $77.56929^{\circ}$ W. - Koontz DAILY RECORDS FOR THE MONTH

The Glen Allen Station had 12 Records or Record Ties in July 2020
The daily precipitation on the 1st was 2.95 inches, a new 12 year HIGH daily precipitation record for the date - the old record was 0.73 inches in 2013.

The daily precipitation on the 31st was 0.60 inches, a new 12-year HIGH daily precipitation record for the date - the old record was 0.57 inches in 2016 .

## July 2020 <br> Springfield Park, Glen Allen, Virginia

July was the hottest on record and tied for the second greatest precipitation total with very clear skies. Only July 2011 had clearer skies in the past 12 years.

The July mean temperature here was $83.2^{\circ} \mathrm{F}$ a $+3.2^{\circ} \mathrm{F}$ departure. July had 30 days with $90^{\circ} \mathrm{F}$ or above temperatures and the maximum temperature for July was $101.2^{\circ} \mathrm{F}$ recorded on July $21^{\text {st }}$ which is the highest maximum temperature here since July 21, 2019 when $102.3^{\circ} \mathrm{F}$ was recorded. The highest minimum temperature here for July was $76.9^{\circ} \mathrm{F}$ on the $20^{\text {th }}$. On 25 nights the minimum temperature was $70^{\circ} \mathrm{F}$ or higher. Springfield Park had 29 consecutive days of $\geq 90^{\circ} \mathrm{F}$ from July $3^{\text {rd }}$ to the $31^{\text {st }}$ which was a new record. The average maximum temperature $94.1^{\circ} \mathrm{F}$ set a new record for July. The lowest minimum temperature was $65.8^{\circ} \mathrm{F}$ on the $12^{\text {th }}$ which was the $2^{\text {nd }}$ highest on record for July; only 2012 had a higher reading. The high temperature range for July was $27^{\circ} \mathrm{F}$ on the $3^{\text {rd }}$ and the lowest monthly daily temperature range was $16.6^{\circ} \mathrm{F}$ on the $7^{\text {th }}$. The average temperature range for July was $21.8^{\circ} \mathrm{F}$ which was the $4^{\text {th }}$ highest in the past 12 years.

Springfield Park had 2.95 inches of precip. on the $1^{\text {st }}$ of July which was 51 percent of the month's total and had only ten days with measurable precipitation. The 2.95 inches was the most rain in a calendar day and also broke the record for the most rain in a 24 -hour period and the most in one hour. Springfield Park had 5.79 inches of precip. for July and only July 2013 had more precip. This was the wettest July since 2016 which also recorded 5.79 inches. The 0.38 inches of rain that occurred in five minutes on the $1^{\text {st }}$ was the $3^{\text {rd }}$ most intense rain on record for July. The Richmond International Airport had 2.99 inches less rain for the month than Springfield Park

This July's highest wind gust of 23 mph on the $22^{\text {nd }}$ and $23^{\text {rd }}$ is tied for the $2^{\text {nd }}$ lowest on record for July. We had 9 thunderstorms and all were weak in terms of wind.

## Richmond International Airport

July was extremely hot and the Richmond International Airport had a mean monthly average of $82.9^{\circ}$ F. July was the hottest on record for Richmond in the past 139 years or since 1880. The previous record was $82.8^{\circ} \mathrm{F}$ in 2010 at the Airport. July also tied Richmond's hottest month which was August 1900 with a mean temperature of $82.9^{\circ}$ F. Also, a point of interest. The early temperature records of Richmond are rooftop readings which have a warm bias and we are now exceeding these observations.

The Richmond International Airport's average mean temperature was $82.9^{\circ} \mathrm{F}$ was a departure of $3.6^{\circ} \mathrm{F}$. The lowest max temp was $88^{\circ} \mathrm{F}$ on July $1^{\text {st }}$ which was the highest on record for the 123 -year period and was $5^{\circ} \mathrm{F}$ more than the previous record. There were no real breaks from the heat during this July; it was continuous! The graph shows very few negative departures. The average maximum temperature was $93.6^{\circ} \mathrm{F}$, a $3.9^{\circ} \mathrm{F}$ departure and is the $3^{\text {rd }}$ warmest since 1897 . The average minimum was $72.2^{\circ} \mathrm{F}$ which was a $3.3^{\circ} \mathrm{F}$ departure and is the $3^{\text {rd }}$ warmest since 1897 . The highest min. temp. was $78^{\circ} \mathrm{F}$ and only 6 years were warmer. The Airport had 22 consecutive days of $\geq 90^{\circ} \mathrm{F}$ from the $10^{\text {th }}$ to the $31^{\text {st }}$ and for the month they had 26 days of $\geq 90^{\circ} \mathrm{F}$ heat. the Airport record ties the 26 days set in 1993 and 1894 checking records back to 1880. July also had 27 nights the low temperature was $70^{\circ} \mathrm{F}$ or higher; the average is 14.4 for the 123 -year period. The lowest temp recorded during July was $66^{\circ} \mathrm{F}$ and only 1994 with $67^{\circ} \mathrm{F}$ was warmer. The lowest daily mean temp. was $77.5^{\circ} \mathrm{F}$ which is the highest ever recorded for Richmond; the previous record was $77.0^{\circ} \mathrm{F}$ in 1994.

The Airport had only 2.80 inches as rainfall amounts varied greatly because of thunderstorms. July was the 32nd driest in the past 133 years with a departure of -1.71 inches.

## The Richmond International Airport had 5 daily records set in July.

Record High Maximums Jul $19^{\text {th }} 101^{\circ} \mathrm{F}$ Tied the record set in 1942
Record High Minimums
Jul $20^{\text {th }} 78^{\circ} \mathrm{F}$ Tied the record set in 2013
Jul $28^{\text {th }} 76^{\circ} \mathrm{F}$ New record - the old record was $75^{\circ} \mathrm{F}$ in 2006, 1958, 1949, 1919
Record High Daily Mean Jul $19^{\text {th }} 88.0^{\circ} \mathrm{F}$ Tied the record set in 1942

Jul $28^{\text {th }} 88.5^{\circ} \mathrm{F}$ New Record - The old record was $87.5^{\circ} \mathrm{F}$ in $1941,1952$.

## ACON - VA/NC/SC

The Atlantic Coast Observer Network: Virginia, North Carolina, South Carolina
July 2020

## Station summary of Climatological Data

Observer: Lowell L. Koontz

West Henrico - Glen Allen, VA

Observation Times: Temps Recorded 2400 Precipitation Recorded 2400

| A | MEAN MAXIMUM | 94.10 |
| :---: | :---: | :---: |
| B | MEAN MINIMUM | 72.34 |
| c | MEAN MONTHLY | 83.22 |
| C1 | MEAN TEMP DEP. | 3.2 |
| D | MAXIMUM | 101.2 |
| E | DATE(s) OF MAX. | Jul-21 |
| F | MINIMUM | 65.8 |
| G | DATE(s) OF MIN. | Jul-12 |
| H | \# DAYS MAX. > = 90 ${ }^{\circ}$ | 30 |
| 1 | \# MAX. < = 32 ${ }^{\circ}$ | 0 |
| J | MIN. < = 32 ${ }^{\circ}$ | 0 |
| K | MIN. $>=70^{\circ}$ | 25 |
| K1 | AVE RELATIVE HUMIDITY | 71.9 |
| WIND MPH |  |  |
| L | MAX. GUST | 23 |
| m | DIRECT. OF GUST | WNW \& WSW |
| N | DATE | Jul 22 \& Jul 23 |
|  | TIME | 1710 \& 2029 |



| T | MONTH TOTAL | 5.79 |
| :---: | :---: | :---: |
| $u$ | CALENDAR DAY MAX. | 2.95 |
| 1 | date of max. | Jul-01 |
| $v$ | 24-HR. PERIOD MAX. | 2.95 |
| V1 | DATE(s) OF MAX. PD. | Jul-01 |
| w | \# DAYS > = 0.01" | 10 |
| x | \# DAYS > = 1.00" | 1 |
| Y | YR. TO DATE TOT. | 26.91 |
|  | MAX. 1 HR. PRECIP. | 2.66 |
|  | MAX. 5 MIN PRECIP. | 0.38 |

SNOWFALL INCHES

| z | DAILY MAXIMUM | 0.0 |
| :---: | :---: | :---: |
| 1 | DATE OF MAX. |  |
| 2 | DAYS $=>$ TRACE | 0.0 |
| 3 | DAYS > = 1.0" | 0.0 |
| 4 | MONTHLY TOTAL | 0.0 |
| 5 | 2019-2020 SEASON'S TOT. | 0.4 |

BAROMETER

| 6 | MAXIMUM | 30.23 |
| :---: | :--- | :---: |
| 6A | DATE | Jul-16 |
| 7 | MINIMUM | 29.72 |
| 7 FA | DATE | Jul-11 |
| 8 | AVE. MONTHLY PRESSURE | 29.96 |
| CWA | NWS COUNTY WARNING AREA | Henrico |
|  |  |  |

## SPRINGFIELD PARK'S JULY TEMPERATURE \& WIND GRAPH



