

20		21		22		23		24		25		26		27		28		29		30		31		32		33		34		35		36		37		38	
Oct 2021	2nd PERIOD		WIND			REL. HUMIDITY		BAROMETRIC PRESSURE					GLAZE	SLEET	SNOW	FOG	R	DEW	FROST																		
	START	END	RUN	MAX.	TIME	MAX.	MIN.	MAX.	MIN.	AVE.	CHANGE																										
Oct-01			26.3	10	9:52	97	51	30.31	30.22	30.27	0.09																						4				
Oct-02			50.3	14	13:56	98	57	30.26	30.09	30.18	-0.09																						4				
Oct-03			73.4	18	17:12	98	57	30.09	29.94	30.02	-0.16																						5				
Oct-04	1547	1625	66.3	23	15:45	98	58	30.05	29.93	29.99	-0.02																			3		2					
Oct-05			25.1	10	15:38	100	63	30.25	30.05	30.15	0.16																						5				
Oct-06	1735	1750	58.1	12	20:32	98	88	30.33	30.24	30.29	0.13																						1				
Oct-07			36.4	10	8:39	98	79	30.33	30.18	30.26	-0.03																						P				
Oct-08			19.8	8	12:16	98	68	30.18	30.09	30.14	-0.12																						3				
Oct-09	1650	1655	68.6	13	11:41	97	81	30.12	30.07	30.10	-0.04																						3				
Oct-10	1300	1330	112.0	16	4:00	97	80	30.07	29.99	30.03	-0.06																						P				
Oct-11	0650	0655	85.7	15	5:38	97	84	30.09	29.99	30.04	0.01																						P				
Oct-12	0130	0445	41.5	10	10:49	99	83	30.12	30.04	30.08	0.04																						P				
Oct-13			11.2	8	17:31	100	71	30.10	30.00	30.05	-0.03																					4		P			
Oct-14			25.0	13	15:31	100	52	30.04	29.95	30.00	-0.06																					3		5			
Oct-15			40.4	11	21:56	99	56	30.00	29.89	29.95	-0.05																							4			
Oct-16			68.7	30	15:11	97	62	29.96	29.66	29.81	-0.13																							3			
Oct-17			27.0	17	13:22	98	45	30.06	29.95	30.01	0.19																							P			
Oct-18			39.2	16	13:46	95	37	30.11	29.98	30.05	0.04																							3			
Oct-19			33.9	14	15:15	98	38	30.23	30.11	30.17	0.13																							4			
Oct-20			30.2	10	12:43	98	38	30.23	30.12	30.18	0.00																							4			
Oct-21			70.4	20	21:35	97	43	30.12	29.92	30.02	-0.15																							4			
Oct-22	0235	0255	52.6	14	2:03	95	66	29.97	29.89	29.93	-0.09																							1			
Oct-23			24.5	12	14:16	98	52	30.09	29.94	30.02	0.09																							4			
Oct-24			59.4	15	13:22	96	53	30.20	30.06	30.13	0.11																							1			
Oct-25	2015	2400	94.1	24	15:13	98	68	30.07	29.57	29.82	-0.31																					2		2			
Oct-26			59.6	25	17:04	98	47	29.72	29.57	29.65	-0.18																							P			
Oct-27			58.6	19	13:38	93	55	29.90	29.70	29.80	0.15																							1			
Oct-28			68.3	15	17:13	98	62	29.96	29.78	29.87	0.07																							4			
Oct-29	1920	2015	83.0	26	11:16	99	73	29.78	29.42	29.60	-0.27																							P			
Oct-30			74.4	18	0:28	97	66	29.63	29.53	29.58	-0.02																							3			
Oct-31			36.0	13	12:12	99	56	30.00	29.59	29.80	0.22																							5			
TOTAL	Column 23		1620.0	479		3028	1889	932.37	927.46	929.92	TOTAL	0	0	0	2	2	23	0																			
NUMBER	Mar. Wind Run		31	31	31	31	31	31	31	31	NORMAL	0.0	0.1	0.0	2.1	1.2	19.3	2.2																			
AVERAGE	Total	1620.0	52.3	15.45	13:12	97.7	60.9	30.08	29.92	30.00	DEPART.	0.0	-0.1	0.0	-0.1	0.8	3.7	-2.2																			
NORMAL	Miles	1646.3	52.7	16.8		95.5	54.4	29.97	29.83	30.06	Rating ▶	0	0	0	7	5	75	0																			
Departures	Miles	-26.3	-0.4	-1.3		2.2	-6.5	0.11	0.09	-0.06	Intensity	GLAZE	SLEET	SNOW	FOG	R	Dew	Frost																			
MAXIMUM		Dates	112.0	30	SSW	100	88	30.33	30.24	30.29	0.22	GLAZE	SLEET	SNOW	FOG	R	Dew	Frost																			
DATES		1	Oct-10	Oct-16	15:11	Oct-05	Oct-06	Oct-06	Oct-06	Oct-06	Oct-31																										
		2				Oct-13		Oct-07																													
		3				Oct-14																															
		4			Ave. Max.																																
Min. Temps. >= 70°F		Dates	11.2	8	31.1	93	37	29.63	29.42	29.58	-0.31	5. Very Heavy						N- None No Dew Obs.																			
2021		0	Oct-13	Oct-08	Dep.	Oct-27	Oct-18	Oct-30	Oct-29	Oct-30	Oct-25	4. Heavy-Unusual						P- Precip. prevent obs.																			
Ave.		0.5	1	Oct-13	-1.1							3. Moderate - Ave.																									
Departure		-0.5	2									2. Light - >= Ave.																									
Days Min. <=32 °F		0	MIN.		<=75	<=70	<=65	<=60	<=55	<=50	<=45	<=40	<=35	<=32	<=30	<=25																					
Days Min >=70°F		0	DAYS		31	31	28	19	16	13	4	1	0	0	0	0																					

39

40

REMARKS FOR THE MONTH

October - 2021

Oct

2021

Oct-01	VERY FEW CLOUDS WITH A DEEP BLUE SKY AND LOW RH-LIGHT WIND TODAY
Oct-02	CIRRUS CLOUDS INCREASED AT 1040 & COVERED MOST OF SKY BY NOON - AFTER 1245 MAINLY FAIR WEATHER CUMULUS & CIRRUS CAME BACK IN AT 1415
Oct-03	AM WAS MOSTLY CLEAR BUT SOME CIRROSTRATUS CAME IN AT 1315 & WAS ALMOST COMPLETELY OVERCAST BY 1430-1600 BUT SOME SUNLIGHT PASSED THROUGH OVERCAST-THEN
Oct-04	TS RATED 3-3-2 - 3RD PD. OF PRECIP. 0920-0950-RAINBOW IN WEST TO NW FROM 0720-0732, 4TH PD. OF RAIN 1650-1715 & THUNDER FROM 1539-1800-LONG PD. OF THUNDER REASON FOR
Oct-05	TODAY WAS WARM AND HUMID FOR OCT. - MAX. DEW POINT WAS 72 degrees F AT 1250
Oct-06	TODAY WAS CLOUDY WITH A SKY SHOWING A THREAT OF RAIN BUT NO PRECIP. OCCURRED
Oct-07	ANOTHER CLOUDY DAY BUT WITH PLEASANT TEMPS.
Oct-08	CLOUDS GAVE A THREAT OF PRECIP. BUT NO PRECIP. OCCURRED
Oct-09	CLOUDY BUT A PLEASANT DAY TEMP. WISE
Oct-10	RAINBOW FROM 1635-1643, SHOWER 1630-1645, 4TH PD. OF SPRINKLES 1525-1530, SPRINKLES 5TH PD. 2125-2245, 6TH PD. 2335-2340-LP OFF NC COAST
Oct-11	6 PDS. OF DRIZZLE TODAY INCLUDING THE 2 PDS. RECORDED-A DAMP COOL DAY WITH A NORTH BREEZE
Oct-12	3RD PD. OF DRIZZLE 1155-NOON, 4TH PD. OF DRIZZLE 1615-1635, 5TH PD. SHOWER 1705-1905-GLOOMY IN TIMES OF DRIZZLE
Oct-13	HEAVY FOG HEAVIEST AT 0645 THAT CLEARED BY 0745
Oct-14	FOG CAME IN AT 1815 AND WAS HEAVIEST AT 1845 AND CLEARED BY 0925-PC AM - PM PARTLY CLOUDY BECAUSE OF CIRRUS
Oct-15	WARM FOR OCT. CURRENTLY AT MID-MONTH SPRINGFIELD PARK IS RUNNING 9 degrees F ABOVE THE 13 YR. AVERAGE
Oct-16	MAX. WIND WITH COLD FRONT WAS 30 MPH FROM SSW AT 1511 AND COLD FRONT PASSED AT 1500
Oct-17	COLDEST SINCE MAY 15, 2021 WHEN IT WAS 42.3 degrees F -A VERY CLEAR AM BUT CLOUDS CAME IN AT 1235-PM WAS PC
Oct-18	COLDEST SINCE MAY 14, 2021 WHEN IT WAS 40.2 degrees F - VERY CLEAR ALL DAY
Oct-19	COLDEST SINCE MAY 14, 2021 WHEN IT WAS ALSO 40.2 degrees F - VERY CLEAR ALL DAY
Oct-20	A VERY CLEAR SUNNY DAY WITH A 30.9 degrees F TEMP. RANGE
Oct-21	A VERY CLEAR SUNNY DAY AND BREEZY WITH A MAX. GUST OF 20 MPH AT 2135
Oct-22	AM WAS MOSTLY CLOUDY AND PM WAS TOTALLY CLOUDY
Oct-23	CLOUDY EARLY AND CLEARED AT 1015 THEN CLOUDS AGAIN FROM 1100-1145-A PARTLY CLOUDY PM WITH CUMULUS CLOUDS
Oct-24	AM HAD A 0830-0835 SPRINKLE AND CLOUDY WITH A SHARP CLEARING AT NOON
Oct-25	AM WAS 50-60% CLOUDY AND PM WAS CLOUDY-COLD FRONT TO PASS TONIGHT AND A TS TODAY RATED 2-1-3
Oct-26	TODAY WAS PC IN AM AND PM WAS CLOUDY AND WINDY WITH MAX. WIND GUST OF 25 MPH AT 1704
Oct-27	A VERY CLEAR BREEZY DAY WITH MAX. WIND GUST OF 19 MPH AT 1338
Oct-28	CIRRUS AND CIRROSTRATUS STARTED COMING IN AT 0745 & BY 0845 MOST OF SKY WAS COVERED BY THIN CIRROSTRATUS-LITTLE PM SUN
Oct-29	A 3RD PD. SPRINKLE 2325-2330-AM WAS A RAINY ONE AND PM WAS CLOUDY WITH A CLEAR TO PARTLY CLOUDY PD. FROM 1400-1515
Oct-30	AM WAS ABOUT 35-40% CLOUDY WITH ALTOCUMULUS AND PM HAD HEAVY DARK STRATOCUMULUS CLOUDS THAT THREATENED SPRINKLES BUT NONE OCCURRED
Oct-31	AM WAS CLEAR WITH A DEEP BLUE SKY UNTIL CUMULUS CLOUDS CAME IN AT 1130 THAT BECAME DARKER AND THICKIER TO STRATOCUMULUS THEN THE SKY CLEARED AGAIN BY 1630

DATE

EXTENSION OF LENGTHY DAILY REMARKS

Oct-03	A BROKEN OVERCAST
Oct-04	THE HIGHER TS RATING-PM WAS EST. 50-60% CLOUDY

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 2021](#)

DAILY RECORDS FOR THE MONTH

41

Oct

2021

The Glen Allen Station had 15 Records or Record Ties for October 2021

1

The daily temperature range on the 2nd was 30.4°F, a new 13-year HIGH daily temperature range record for the date - the old record was 30.3°F in 2017.

3

4

The minimum temperature on the 4th was 66.8°F, a new 13-year warm daily minimum temperature record for the date - the old record was 65.8°F in 2018.

5

The minimum temperature on the 5th was 66.4°F, a new 13-year warm daily minimum temperature record for the date - the old record was 66.2°F in 2018.

The daily precipitation on the 5th was T, a new 13 year HIGH daily precipitation record for the date - the old record was 0 inches.

6

The daily temperature range on the 6th was 6°F, a new 13-year LOW daily temperature range record for the date - the old record was 11.8°F in 2019.

The daily precipitation on the 6th was 0.17 inches, a new 13 year HIGH daily precipitation record for the date - the old record was 0.01 inches in 2016.

The minimum temperature on the 6th was 69.2°F, a new 13-year warm daily minimum temperature record for the date - the old record was 65.1°F in 2018.

7

The daily temperature range on the 7th was 9.9°F, a new 13-year LOW daily temperature range record for the date - the old record was 11°F in 2012.

8

9

10

11

12

13

14

15

The maximum temperature on the 15th was 83.5°F, a new 13-year daily HIGH maximum temperature record for the date - the old record was 83°F in 2008.

16

The daily temperature range on the 16th was 33.5°F, a new 13-year HIGH daily temperature range record for the date - the old record was 28°F in 2011.

17

18

19

The daily temperature range on the 19th was 34.1°F, a new 13-year HIGH daily temperature range record for the date - the old record was 32.9°F in 2017.

20

21

22

23

24

25

The minimum temperature on the 25th was 61.3°F, a new 13-year warm daily minimum temperature record for the date - the old record was 61°F in 2010.

The daily precipitation on the 25th was 0.88 inches, a new 13 year HIGH daily precipitation record for the date - the old record was 0.54 inches in 2020.

26

27

28

29

The minimum temperature on the 29th was 56.9°F, a new 13-year warm daily minimum temperature record for the date - the old record was 53.3°F in 2020.

The daily precipitation on the 30th was 1.78 inches, a new 13 year HIGH daily precipitation record for the date - the old record was 0.79 inches in 2012.

30

31

October 2021

Springfield Park, Glen Allen, VA

The October graph shows the first half of October had really small temp. ranges as it was cloudy and the second half was much clearer as shown by the larger temperature ranges. The low temperature ranges of the first part of the month and the high range of the second have balanced each other and for the month the temp. range was near average. The graph also shows almost all of the month was above average in temp. for both the max. and min. temps. and it was the warmest October on record at the Springfield Park Station. The mean temp. was 65.2 degrees F, a departure of +4.5 degrees. Both the lowest maximum temperature with a 9.5 deg. departure and the lowest minimum with a 6.0 deg. departure set new record highs for October. The average maximum temperature of 75.6 and the ave. minimum temperature of 54.8 both set new record highs. The highest temperature for the month was 86.5 on the 5^h and the lowest was only 40.2 degrees on the 19th.

Oct. had 10 days with measurable precip. and was the 4th driest October on record with only 3.50 inches and a -1.06 inch departure.

The average relative humidity was 79.2% ,the 2nd highest on record for October, and a departure of 4.1%. October was the 2nd cloudiest on record for October and the average dew point was 58.4 degrees which set a new record high for the month

The maximum wind gust of 30 mph for October was from the SSW on October 16th which was associated with an approaching cold front.

Richmond International Airport

The Richmond International Airport's average mean temperature was 65.9°F, a departure of 5.9 degrees, **the 4th warmest October since 1897 and 5 warmest October since 1880.** The average maximum was 75.6 degrees, a 4.7 deg. departure, and the average minimum was 56.3 degrees which was a 7.3 deg. departure and was the 3rd warmest since 1897. October's highest temperature was 86 degrees on the 3rd. The warmest day was the 4th with a daily mean of 75.5 degrees. The lowest maximum temperature for October was only 64 degrees on the 30th. **This is the warmest low maximum temp. ever recorded for October since 1897; the previous record was 63 degrees for October in 1995.** The lowest monthly minimum temp. was only 43°F on the 19th. **This is the highest minimum temp. ever recorded for October since 1897; the previous record was 41 degrees for October in 1897,1919 and 1971.**

The Richmond International Airport had no daily records for the month. (Records since 1897).

The Airport had 5.61 inches of precipitation, a departure of 2.22 inches, with 9 days of measurable precipitation. This October was the 20th wettest on record at the Airport since 1887. The 2.14 inches of rain on the 6th was the Airport's wettest day and was the 17th largest calendar day precip. on record for October since 1897.

ACON - VA/NC/SC

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

October 2021

Station summary of Climatological Data

Observer: Lowell L. Koontz West Henrico - Glen Allen, VA

Observation Times: Temps Recorded 2400 Precipitation Recorded 2400

TEMPERATURE °F

A	MEAN MAXIMUM	75.58
B	MEAN MINIMUM	54.75
C	MEAN MONTHLY	65.16
C1	MEAN TEMP DEP.	4.55
D	MAXIMUM	86.5
E	DATE(s) OF MAX.	Oct-05
F	MINIMUM	40.2
G	DATE(s) OF MIN.	Oct-19
H	# DAYS MAX. > = 90°	0
I	# MAX. < = 32°	0
J	MIN. < = 32°	0
K	MIN. < = 0°	0
K1	AVE RELATIVE HUMIDITY	79.3

WIND MPH

L	MAX. GUST	30
M	DIRECT. OF GUST	ssw
N	DATE	Oct-16
	TIME	15:11

NUMBER DAYS WITH -

O	THUNDER	2
P	HAIL	0
Q	GLAZE	0
R	ICE PELLETS (SLEET)	0
R1	DENSE FOG < = 1/4 MILE	2

PRECIPITATION INCHES

T	MONTH TOTAL	3.50
U	CALENDAR DAY MAX.	1.78
U1	DATE OF MAX.	Oct-29
V	24-HR. PERIOD MAX.	1.80
V1	DATE(s) OF MAX. PD.	28 th & 29 th
W	# DAYS > = 0.01"	10
X	# DAYS > = 1.00"	1
Y	YR. TO DATE TOT.	42.01
	MAX. 1 HR. PRECIP.	0.63
	MAX. 5 MIN PRECIP.	0.18

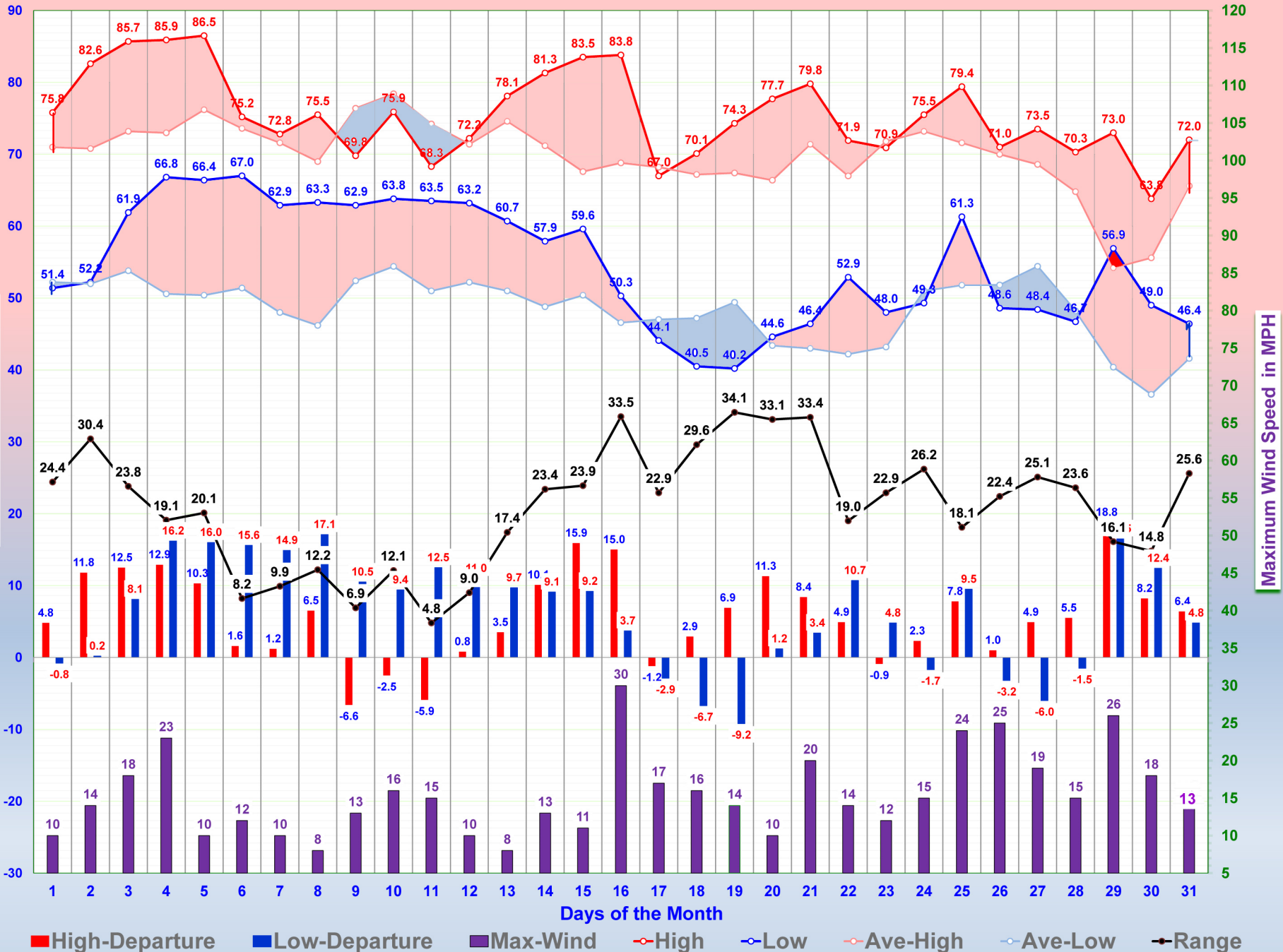
SNOWFALL INCHES

Z	DAILY MAXIMUM	0.0
1	DATE OF MAX.	
2	DAYS= > TRACE	0
3	DAYS > = 1.0"	0
4	MONTHLY TOTAL	0.0
5	2021 - 2022 SEASON'S TOT.	0.0

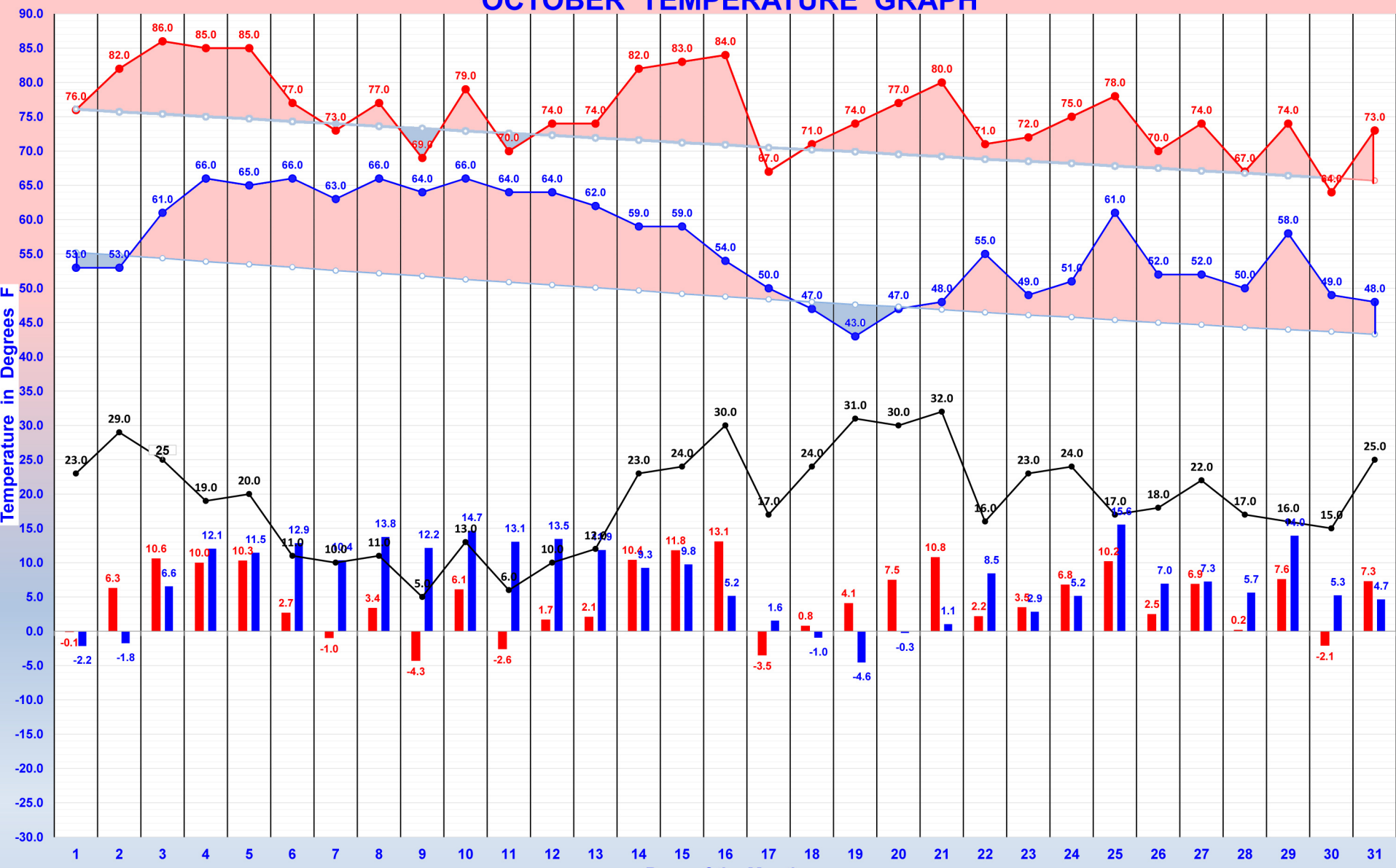
BAROMETER

6	MAXIMUM	30.33
6A	DATE	6 th & 7 th
7	MINIMUM	29.42
7A	DATE	Oct-29
8	AVE. MONTHLY PRESSURE	30.00
CWA	NWS COUNTY WARNING AREA	Henrico

SPRINGFIELD PARK'S OCTOBER TEMPERATURE & WIND GRAPH



The Richmond International Airport OCTOBER TEMPERATURE GRAPH



■ High-Departure
 ■ Low-Departure
 ● High
 ● Low
 ○ Ave-High
 ○ Ave-Low
 ● Range

STATION (Climatological) Springfield Park		(River Station, if different)		MONTH Oct	2021
STATE VA	COUNTY Henrico	RIVER			
TIME (local) OF OBSERVATION	TEMPERATURE MID	PRECIPITATION MID	STANDARD TIME IN USE		
TYPE OF RIVER GAGE	ELEVATION OF RIVER GAGE ZERO	FLOOD STAGE	NORMAL POOL STAGE		

WS FORM B-91
(03-09)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

RECORD OF RIVER AND CLIMATOLOGICAL OBSERVATIONS

DATE	TEMPERATURE			PRECIPITATION			WEATHER (Observation Day)						RIVER STAGE		REMARKS (SPECIAL OBSERVATIONS, ETC.)																							
	24 HRS ENDING AT OBSERVATION		AT OBSN	24 HR AMOUNTS		AT OB	Mark 'X' for all types occurring each day						Condition	Gage reading at — AM		Tendency																						
	MAX	MIN		Rain, melted snow, etc. (in and hundredths)	Snow, ice pellets, hail (in and tenths)		Draw a straight line (—) through hours precipitation was observed, and a wavy line (~~~~) through hours precipitation probably occurred unobserved																															
							A.M.		NOON		P.M.																											
						1	2	3	4	5	6	7	8	9	10	11	1	2	3	4	5	6	7	8	9	10	11	Fog	Ice pellets	Glaze	Thunder	Hail	Damaging winds	Time of occurrence if different from above	Condition	Gage reading at — AM	Tendency	
1	76	51	55	0.00	0.0	0																															Very few clouds today with a deep blue sky and 1	
2	83	52	65	0.00	0.0	0																															Cirrus clouds increase after 1040 and cover much	
3	86	62	72	0.00	0.0	0																															The AM was mostly clear but cirrostratus clouds	
4	86	67	68	0.18	0.0	0																															Rare morning rainbow in the W and NW from 0720 t	
5	87	66	70	T	0.0	0																															Today was warm and humid for Oct. with a high de	
6	75	67	67	0.17	0.0	0																															Slow moving rain cells yielded large differences	
7	73	63	65	0.00	0.0	0																															Today was cloudy with a sky showing a threat of	
8	76	63	63	0.00	0.0	0																															Cloudy again today with pleasant temperatures.	
9	70	63	64	0.05	0.0	0																															A cloudy day with light showers in the afternoon	
10	76	64	65	0.02	0.0	0																															Rainbow from 1635 to 1643 with more sprinkles 15	
11	68	64	64	T	0.0	0																															6 periods of drizzle today- damp and cool day wi	
12	72	63	64	0.10	0.0	0																															Cloudy with 5 periods of drizzle and gloomy dur	
13	78	61	62	0.00	0.0	0																															Heavy fog with lowest visibility at 0645 that cl	
14	81	58	62	0.00	0.0	0																															Fog came in at 0815 and was the heaviest at 0845	
15	84	60	69	0.00	0.0	0																															The 83.5 degrees F max today was a 13-year recor	
16	84	50	50	0.29	0.0	0																															Max. wind gust was 30 mph from the SSW at 1511 a	
17	67	44	47	0.00	0.0	0																															The minimum temperature today was the lowest sin	
18	70	41	47	0.00	0.0	0																															The minimum temperature today was 40.5 degrees F	
19	74	40	50	0.00	0.0	0																															The minimum temperature today was 40.2 degrees F	
20	78	45	53	0.00	0.0	0																															Today was a very clear sunny day with a 30.9 deg	
21	80	46	66	0.00	0.0	0																															Today was another very clear day but breezy with	
22	72	53	53	T	0.0	0																															Sprinkles occurred from 125-130 & 235-255 with a	
23	71	48	50	0.00	0.0	0																															The early morning sky was cloudy with clearing s	
24	76	49	61	T	0.0	0																															A sprinkle occurred between 0830 and 0835 and a	
25	79	61	64	0.88	0.0	0																															The AM sky averaged 50-60% cloudy and the PM was	
26	71	49	50	0.01	0.0	0																															Today had a partly cloudy in the AM and a cloudy	
27	74	48	53	0.00	0.0	0																															A very clear breezy day with a max. wind gust of	
28	70	47	58	0.02	0.0	0																															Cirrostratus clouds started coming in at 0745 a	
29	73	57	60	1.78	0.0	0																															The AM was rainy one and the PM was mostly cloud	
30	64	49	52	0.00	0.0	0																															The AM was 35 to 40% cloudy with mainly altocumu	
31	72	46	49	0.00	0.0	0																																Today had a clear AM until cumulus clouds came

75.7	54.7	SUM	3.50	CHECK BAR (for wire weight) NORMAL CHECK BAR		OBSERVER						STATION INDEX NO. 44-7998-02	
CONDITION OF RIVER AT GAGE				READING	DATE	SUPERVISING OFFICE AKQ Wakefield							
A. Obstructed by rough ice		E. Ice gorge below gage											
B. Frozen, but open at gage		F. Shore ice											
C. Upper surface smooth ice		G. Floating ice											
D. Ice gorge above gage		H. Pool stage											