



# NOVEMBER 2017 LOCAL CLIMATOLOGICAL DATA

NOAA, National Centers for Environmental Information

**RICHMOND, VA**  
**RICHMOND INTERNATIONAL AIRPORT (KRIC)**  
 Lat:37° 30'N Long: 77° 19'W Elev (Ground) 164 Feet  
 Time Zone : EASTERN WBAN: 13740 ISSN#: 0198-537X



**NOVEMBER 2017  
RICHMOND, VA**

Date 1	Temperature °F						Deg Days BASE 65°		WEATHER 10	SNOW/ICE ON GND(IN)		PRECIPITATION ON GND(IN)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES								Date 24																						
	MAXIMUM 2	MINIMUM 3	AVERAGE 4	DEP FROM NORMAL 5	AVERAGE DEW PT 6	AVERAGE WET BULB 7	HEATING 8	COOLING 9		0700 LST 11	1300 LST 12	2400 LST 13	2400 LST 14	AVERAGE STATION 15	AVERAGE SEA LEVEL 16	RESULTANT SPEED 17	RES DIR 18	AVERAGE SPEED 19	MAXIMUM																											
																			3-SEC		2-MIN																									
									DEPTH 11	WATER- EQUIV 12	SNOW- FALL 13	WATER EQUIV 14					SPEED 20	DIR 21	SPEED 22	DIR 23																										
01	71	45	58	5	50	54	7	0		0		0.0	0.00	30.02	30.22	4.1	16	5.0	16	19	13	18	01																							
02	77	57	67	14	58	61	0	2		0		0.0	0.00	30.03	30.22	3.6	17	4.5	19	17	14	18	02																							
03	82*	54	68*	16	59	62	0	3	RA BR	0		0.0	0.23	29.91	30.11	1.8	29	5.5	25	36	20	35	03																							
04	64	52	58	6	49	52	7	0		0		0.0	0.00	30.04	30.25	7.8	02	8.3	24	03	17	02	04																							
05	64	51	58	6	56	56	7	0	RA DZ MIFG BR	0		0.0	0.12	29.98	30.17	1.7	26	4.0	10	34	9	34	05																							
06	76	56	66	14	60	62	0	1	BR	0		0.0	0.00	29.83	30.02	4.0	23	8.6	23	01	20	01	06																							
07	61	42	52	1	46	48	13	0	RA DZ BR	0		0.0	0.17	29.92	30.11	10.0	01	10.7	22	36	17	01	07																							
08	46	41	44	-7	42	43	21	0	RA DZ BR	0		0.0	0.07	29.99	30.20	10.8	01	10.9	22	36	17	01	08																							
09	55	45	50	-1	48	49	15	0	RA BR	0		0.0	0.11	29.93	30.11	6.1	36	6.6	14	03	12	01	09																							
10	52	30	41	-10	32	39	24	0	BR	0		0.0	0.00	30.03	30.28	11.9	36	12.5	30	34	25	35	10																							
11	42	26	34*	-16	17	28	31	0		0		0.0	0.00	30.37	30.57	3.8	01	4.5	16	03	12	03	11																							
12	48	28	38	-12	29	35	27	0	RA BR	0		0.0	0.02	30.26	30.44	1.2	15	1.5	9	24	6	12	12																							
13	48	39	44	-6	40	42	21	0	RA MIFG BR	0		0.0	0.65	30.13	30.32	5.7	35	6.2	16	33	13	34	13																							
14	51	35	43	-6	36	40	22	0	BR	0		0.0	0.00	30.13	30.33	7.5	36	7.8	20	02	15	01	14																							
15	56	33	45	-4	38	42	20	0		0		0.0	0.00	30.01	30.18	3.3	36	4.4	17	02	12	02	15																							
16	65	41	53	4	36	45	12	0	RA	0		0.0	T	29.79	30.00	6.7	30	9.4	26	29	20	30	16																							
17	55	32	44	-5	30	37	21	0		0		0.0	0.00	29.99	30.19	4.2	34	5.2	20	35	15	32	17																							
18	62	32	47	-2	40	47	18	0		0		0.0	0.00	29.70	29.83	12.7	19	12.9	33	20	26	19	18																							
19	66	39	53	4	35	47	12	0	RA	0		0.0	0.01	29.49	29.73	12.4	28	16.6	40*	21	29*	31	19																							
20	54	33	44	-4	25	35	21	0		0		0.0	0.00	29.98	30.20	4.2	24	5.5	17	26	13	27	20																							
21	62	34	48	1	37	43	17	0	RA	0		0.0	0.01	29.98	30.16	7.7	19	7.8	20	19	16	19	21																							
22	63	36	50	3	39	46	15	0	RA BR	0		0.0	0.04	29.83	30.03	8.8	34	10.0	28	34	22	33	22																							
23	45	28	37	-10	24	32	28	0		0		0.0	0.00	29.96	30.15	2.8	02	3.3	21	36	16	03	23																							
24	56	26*	41	-6	28	34	24	0		0		0.0	0.00	29.86	30.05	1.3	15	1.5	10	28	8	18	24																							
25	69	29	49	3	35	42	16	0	BR	0		0.0	0.00	29.67	29.85	5.9	24	6.9	23	22	20	22	25																							
26	59	34	47	1	32	40	18	0		0		0.0	0.00	29.83	30.05	3.8	33	4.3	19	34	15	35	26																							
27	62	29	46	0	27	38	19	0		0		0.0	0.00	29.98	30.19	1.7	23	2.7	13	23	12	23	27																							
28	63	32	48	3	35	42	17	0		0		0.0	0.00	30.14	30.34	3.4	17	3.6	21	17	15	17	28																							
29	71	35	53	8	35	44	12	0		0		0.0	0.00	30.03	30.23	1.9	26	4.6	17	27	10	03	29																							
30	65	39	52	7	41	46	13	0		0		0.0	0.00	29.99	30.17	2.4	15	5.0	17	13	14	19	30																							
										60.3		37.8		49.1		☼	38.6		44.4		15.9		0.2		< MONTHLY AVERAGES   TOTALS >				0.0		1.43		29.96		30.16		1.9		32		6.7		< MONTHLY AVERAGES			
										-1.1		-1.6		-1.3			<----- DEPARTURE FROM NORMAL ----->																-1.81		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3											
<b>DEGREE DAYS</b>										GREATEST 24-HR PRECIPITATION : 0.67 DATE : 12-13										SEA LEVEL PRESSURE				DATE TIME																						
MONTHLY										GREATEST 24-HR SNOWFALL : 0.0 DATE :										MAXIMUM : 30.65				11 1025																						
TOTAL DEPARTURE										GREATEST SNOW DEPTH : 0 DATE :										MINIMUM : 29.45				19 0354																						
TOTAL DEPARTURE										NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 : 0				MINIMUM TEMP <= 32 : 10				PRECIPITATION >= 0.01 INCH : 10																								
HEATING : 478 35 612 -64										MAXIMUM TEMP <= 32 : 0				MINIMUM TEMP <= 0 : 0				PRECIPITATION >= 0.10 INCH : 5																												
COOLING : 6 1 1706 158										THUNDERSTORMS : 0				HEAVY FOG : 0				SNOWFALL >= 1.0 INCH : 0																												

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA (KRIC)  
NOVEMBER 2017

WBAN # 13740

Date	FOR HOUR (LST) ENDING AT												Date	FOR HOUR (LST) ENDING AT												Date	Sum of Hourly Data	2400 LST Water Equiv.
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24			
01													01												01	0.00	0.00	
02													02												02	0.00	0.00	
03													03							T	0.18	0.05	T	03	0.23	0.23		
04													04											04	0.00	0.00		
05	T	0.12									T		05											05	0.12	0.12		
06													06											06	0.00	0.00		
07													07	T	0.03	T	0.02	T	0.01	0.05	0.01	0.04	T	0.01	07	0.17	0.17	
08	T	T					0.01	T	T	0.01	T	0.01	08	T	T	T	T	T	0.01	0.03				08	0.07	0.07		
09			T	0.01	0.01	0.02	0.02	T	0.01	T			09			0.02	0.01				0.01	T		T	09	0.11	0.11	
10													10											10	0.00	0.00		
11													11											11	0.00	0.00		
12													12								T	T	0.01	0.01	12	0.02	0.02	
13	0.09	0.10	0.14	0.18	0.10	0.04	T						13											13	0.65	0.65		
14													14											14	0.00	0.00		
15													15											15	0.00	0.00		
16		T											16											16	T	T		
17													17											17	0.00	0.00		
18													18											18	0.00	0.00		
19		0.01	T	T	T	T							19											19	0.01	0.01		
20													20											20	0.00	0.00		
21													21										0.01	21	0.01	0.01		
22				0.02	T	0.02	T						22											22	0.04	0.04		
23													23											23	0.00	0.00		
24													24											24	0.00	0.00		
25													25											25	0.00	0.00		
26													26											26	0.00	0.00		
27													27											27	0.00	0.00		
28													28											28	0.00	0.00		
29													29											29	0.00	0.00		
30													30											30	0.00	0.00		

\* Indicates sum of Hourly and Daily disagree.

### MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)	0.09	0.12	0.16	0.17	0.19	0.23	0.23	0.26	0.29	0.33	0.38	0.44
Ending Date	05	03	03	03	03	03	03	13	13	13	13	13
Ending Time (Hr/Min)	0110	2053	2059	2059	2111	2120	2120	0348	0348	0348	0348	0348

Note : The hourly and daily precipitation totals are printed in the last 2 columns and hi-lighted in red when they disagree. NWS does not edit ASOS hourly values but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

Date and time are not entered for TRACE amounts.

# REFERENCE NOTES & SUPPLEMENTAL SUMMARIES

\* = Extreme for the month (last occurrence if more than one).

T = Trace precipitation amount.

+ = also occurs on earlier date.

FG+ = Heavy fog, visibility .25 miles or less.

BLANK entries denote missing or unreported data.

Resultant wind is the vector sum of the wind speeds and directions divided by the number of observations.

Wind direction is recorded in tens of degrees (2 digits) clockwise from true north. '00' = calm, 'VR' = variable.

Precipitation is for the 24-hour period ending at the time indicated in the column heading.

Ceilometer (30-second) data are used to derive cloudiness at or below 12,000 feet. This cloudiness is the mean cloud cover detected during sunrise to sunset (SR-SS), or midnight to midnight (MN-MN).

## WEATHER NOTATIONS

QUALIFIER	WEATHER PHENOMENA		
DESCRIPTOR	PRECIPITATION	OBSCURATION	OTHER
BC Patches	DZ Drizzle	BR Mist	DS Duststorm
BL Blowing	GR Hail	DU Widespread Dust	FC Funnel Cloud
DR Low Drifting	GS Small Hail and/or Snow Pellets	FG Fog	+FC Tornado Waterspout
FZ Freezing	IC Ice Crystals	FU Smoke	PO Well-Developed Dust/Sand Whirls
MI Shallow	PL Ice Pellets	HZ Haze	
PR Partial	RA Rain	PY Spray	SQ Squalls
SH Shower(s)	SG Snow Grains	SA Sand	SS Sandstorm
TS Thunderstorm	SN Snow	VA Volcanic Ash	GL Glaze
VC In the Vicinity	UP Unkown Precipitation		

Intensity (as indicated on pages 4 to 6):  
'+' = Heavy    '' = Moderate    '-' = Light

# RICHMOND, VA NOVEMBER 2017

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet.

Clear = 0-2 oktas, Partly Cloudy = 3-6 oktas, Cloudy = 7-8 oktas.

A Heating (Cooling) Degree Day is the difference between the average daily temperature and 65 degrees F. The HDD season begins July 1, the CDD season begins January 1.

Snow Depth, Snowfall, and Sunshine data may come from nearby sites that the National Weather Service deems Climatologically representative of this site.

NORMALS ARE FOR THE YEARS 1981-2010

ADDITIONAL NOTES & ERRATA:

Date	VISIBILITY (MILES)	
	MINIMUM	MAXIMUM
01	10.00	10.00
02	10.00	10.00
03	1.75	10.00
04	8.00	10.00
05	4.00	10.00
06	2.00	10.00
07	1.00	10.00
08	1.00	10.00
09	2.00	10.00
10	0.75	10.00
11	10.00	10.00
12	3.00	10.00
13	2.00	10.00
14	4.00	10.00
15	10.00	10.00
16	10.00	10.00
17	10.00	10.00
18	10.00	10.00
19	10.00	10.00
20	10.00	10.00
21	10.00	10.00
22	4.00	10.00
23	10.00	10.00
24	10.00	10.00
25	6.00	10.00
26	10.00	10.00
27	10.00	10.00
28	10.00	10.00
29	10.00	10.00
30	10.00	10.00
<b>AVGS</b>	6.98	10.00
<b>MINIMUM VISIBILITY (MILES)</b>		
<= .25	<= 3.0	>= 7.0
0	8	18

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA  
NOVEMBER 2017 KRIC

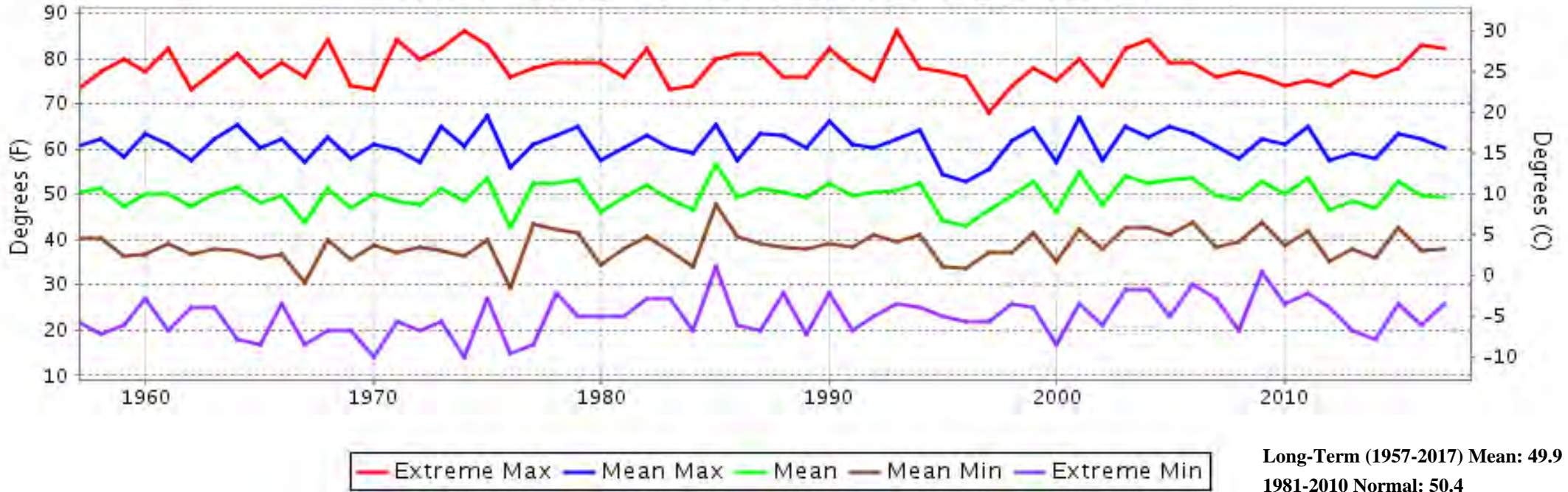
WBAN # 13740

Table with columns for HOUR (LST), SKY COVER, CEILING (100's of FT.), VISIBILITY (MILES), WEATHER, TEMPERATURE (°F), WIND (SPEED (MPH), DIRECTION Tens of Deg), PRESSURE (INCHES, HG), and SEA LEVEL.

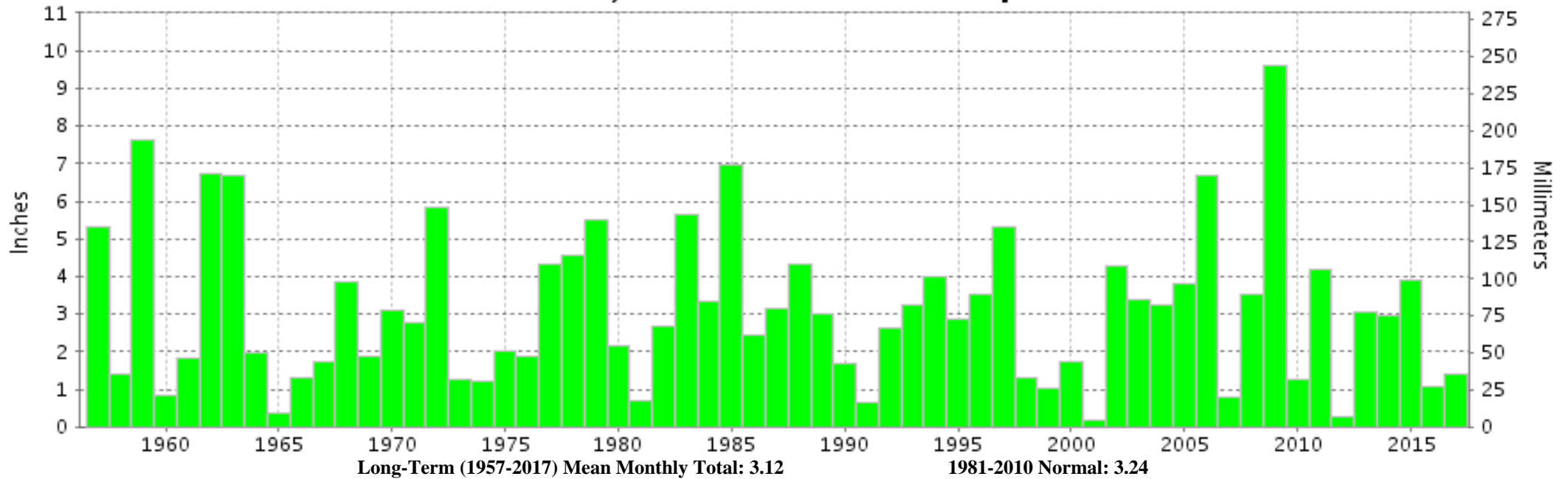




## RICHMOND, VA NOVEMBER Temperatures



## RICHMOND, VA NOVEMBER Precipitation





NOVEMBER 2017

RICHMOND, VA

## LOCAL CLIMATOLOGICAL DATA

### NOAA, National Centers for Environmental Information

*I certify that this is an official publication of the National Oceanic and Atmospheric Administration (NOAA). It is compiled using information from weather observing sites operated by NOAA-National Weather Service / Department Of Transportation-Federal Aviation Administration and received at the National Centers for Environmental Information (NCEI), Asheville, North Carolina 28801.*

A handwritten signature in black ink that reads "Mary A. Wohlgemuth".

**DIRECTOR**

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(828) 271-4800, option 2  
Fax Number : 828-271-4876  
TDD : (828) 271-4010  
or Email : [ncdc.orders@noaa.gov](mailto:ncdc.orders@noaa.gov)

NOAA\National Centers for Environmental Information  
Attn: User Engagement & Services Branch  
151 Patton Avenue  
Asheville, NC 28801-5001