



DECEMBER 2016 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



**DECEMBER 2016
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	68	41	55	10	39	48	10	0	RA BR	0		0.0	0.18	29.57	29.81	8.6	28	9.6	32	23	23	20	01						
02	55	31	43	-1	30	38	22	0		0		0.0	0.00	29.86	30.09	4.5	28	5.8	25	26	17	28	02						
03	52	31	42	-2	28	37	23	0		0		0.0	0.00	30.03	30.24	5.7	32	7.0	21	34	17	33	03						
04	44	33	39	-4	30	36	26	0	RA BR	0		0.0	0.07	30.08	30.25	1.1	03	4.5	11	33	8	35	04						
05	52	39	46	3	40	42	19	0	RA FG BR	0		0.0	0.24	29.86	30.06	1.2	33	3.4	13	34	12	33	05						
06	46	41	44	1	41	43	21	0	RA BR	0		0.0	1.22	29.74	29.91	7.8	01	8.3	28	35	21	35	06						
07	56	36	46	3	38	42	19	0		0		0.0	0.00	29.80	30.02	4.6	34	5.8	18	34	14	33	07						
08	52	36	44	2	29	38	21	0	BR	0		0.0	0.00	29.89	30.08	6.5	30	7.1	29	31	23	31	08						
09	41	27	34	-8	14	27	31	0		0		0.0	0.00	30.14	30.36	9.1	32	9.5	23	32	16	31	09						
10	39	22	31	-11	14	25	34	0		0		0.0	0.00	30.32	30.52	3.4	31	4.7	16	28	14	24	10						
11	42	26	34	-7	21	31	31	0	RA	0		0.0	T	30.23	30.44	4.7	15	6.1	19	15	15	19	11						
12	55	39	47	6	44	45	18	0	RA FG BR	0		0.0	0.41	29.82	30.00	7.1	23	8.2	20	22	15	21	12						
13	50	39	45	4	38	41	20	0	RA MIFG BR	0		0.0	T	29.93	30.12	3.7	08	4.9	14	14	12	04	13						
14	50	36	43	2	34	39	22	0		0		0.0	0.00	29.85	30.06	1.9	31	6.9	22	01	18	01	14						
15	43	17	30	-10	7	25	35	0		0		0.0	0.00	29.91	30.16	13.0	31	14.3	40	32	31	33	15						
16	29	15*	22*	-18	2	18	43	0		0		0.0	0.00	30.27	30.47	1.2	18	4.5	11	15	9	15	16						
17	54	26	40	0	36	38	25	0	RA FZRA BR	0		0.0	T	29.91	30.07	9.7	20	10.2	23	21	17	21	17						
18	70*	37	54	14	49	51	11	0	RA BR	0		0.0	0.03	29.85	30.09	4.3	23	14.1	43	22	30	01	18						
19	39	29	34	-6	21	30	31	0		0		0.0	0.00	30.42	30.64	10.6	02	10.8	24	01	21	01	19						
20	42	23	33	-6	18	26	32	0		0		0.0	0.00	30.31	30.47	3.1	02	4.1	14	36	10	04	20						
21	52	20	36	-3	21	30	29	0		0		0.0	0.00	30.06	30.25	1.5	15	2.2	10	18	8	14	21						
22	62	33	48	9	27	38	17	0		0		0.0	0.00	29.92	30.14	4.4	27	10.3	32	01	26	01	22						
23	48	24	36	-3	26	33	29	0		0		0.0	0.00	30.27	30.48	1.3	16	2.3	10	06	8	15	23						
24	50	38	44	6	41	43	21	0	RA FG+ BR	0		0.0	0.43	30.08	30.28	2.7	23	4.3	15	22	12	21	24						
25	49	34	42	4	39	41	23	0	FG+ FG BR	0		0.0	0.00	30.27	30.50	2.6	05	3.0	14	06	10	07	25						
26	54	42	48	10	42	44	17	0		0		0.0	0.00	30.35	30.52	1.7	17	4.1	15	19	13	19	26						
27	68	50	59*	21	53	56	6	0	RA	0		0.0	T	29.87	30.03	12.0	23	13.4	30	21	23	22	27						
28	54	34	44	6	32	39	21	0		0		0.0	0.00	29.92	30.13	0.6	04	4.9	21	29	17	29	28						
29	58	33	46	8	34	40	19	0	RA BR	0		0.0	0.22	29.65	29.83	6.6	26	10.5	45*	31	37*	29	29						
30	44	28	36	-1	19	31	29	0		0		0.0	0.00	29.72	29.97	10.6	27	11.2	31	29	24	28	30						
31	49	23	36	-1	22	32	29	0		0		0.0	0.00	29.96	30.15	9.4	20	10.0	31	19	23	21	31						
										50.5		31.7		41.1		☼		30.0		37.0		23.7		0.0		< MONTHLY AVERAGES TOTALS >			
										-0.2		0.3		0.1		☼		<-----		DEPARTURE FROM NORMAL		----->		-0.46		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3			
DEGREE DAYS										GREATEST 24-HR PRECIPITATION : 1.22 DATE : 06				SEA LEVEL PRESSURE				DATE TIME											
MONTHLY										GREATEST 24-HR SNOWFALL : 0.0 DATE :				MAXIMUM : 30.71				19 1054											
SEASON TO DATE										GREATEST SNOW DEPTH : 0 DATE :				MINIMUM : 29.60				01 0123											
TOTAL DEPARTURE										NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 : 0				MINIMUM TEMP <= 32 : 14				PRECIPITATION >= 0.01 INCH: 8							
HEATING : 734 -9 1324 -95										THUNDERSTORMS : 0				MAXIMUM TEMP <= 32 : 1				MINIMUM TEMP <= 0 : 0				PRECIPITATION >= 0.10 INCH: 6							
COOLING : 0 -1 1699 150																		SNOWFALL >= 1.0 INCH : 0											

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA (KRIC)
DECEMBER 2016

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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		0.18											01												01	0.18	0.18	
02													02												02	0.00	0.00	
03													03												03	0.00	0.00	
04													04			T	T	T	T	0.01	T	0.01	0.02	0.03	04	0.07	0.07	
05	0.04	0.07	0.09	0.03	0.01	T							05												05	0.24	0.24	
06						0.01	T	0.01	0.04	0.03	0.06	0.11	06	0.06	0.06	0.10	0.16	0.35	0.19	0.03	T	0.01	T	06	1.22	1.22		
07													07												07	0.00	0.00	
08													08												08	0.00	0.00	
09													09												09	0.00	0.00	
10													10												10	0.00	0.00	
11													11												11	T	T	
12	T		T	T			0.02	0.11	0.13	0.08	0.03	0.03	12	0.01	T								T	T	12	0.41	0.41	
13													13							T					13	T	T	
14													14												14	0.00	0.00	
15													15												15	0.00	0.00	
16													16												16	0.00	0.00	
17			T	T		T	T	T	T			T	17	T											17	T	T	
18													18	T	T		0.01	0.01	T	0.01	T	T	T	18	0.03	0.03		
19													19												19	0.00	0.00	
20													20												20	0.00	0.00	
21													21												21	0.00	0.00	
22													22												22	0.00	0.00	
23													23												23	0.00	0.00	
24							0.02	0.13	0.08	0.07	0.06	0.02	24	0.05	T	T									24	0.43	0.43	
25													25												25	0.00	0.00	
26													26												26	0.00	0.00	
27												T	27												27	T	T	
28													28												28	0.00	0.00	
29					T	0.04	0.11	0.07	T				29			T									29	0.22	0.22	
30													30												30	0.00	0.00	
31													31												31	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)	0.14	0.18	0.18	0.21	0.29	0.37	0.47	0.49	0.53	0.60	0.65	0.70
Ending Date	01	01	06	06	06	06	06	06	06	06	06	06
Ending Time (Hr/Min)	0130	0131	1700	1658	1704	1721	1723	1723	1754	1723	1754	1804

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	
VC In the Vicinity	UP Unkown Precipitation		GL Glaze

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

RICHMOND, VA DECEMBER 2016

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	10.00	10.00
04	1.75	10.00
05	0.50	10.00
06	1.25	10.00
07	7.00	10.00
08	5.00	10.00
09	10.00	10.00
10	10.00	10.00
11	10.00	10.00
12	0.50	10.00
13	0.75	10.00
14	10.00	10.00
15	10.00	10.00
16	10.00	10.00
17	1.00	10.00
18	2.50	10.00
19	10.00	10.00
20	10.00	10.00
21	10.00	10.00
22	10.00	10.00
23	8.00	10.00
24	0.25	10.00
25	0.25	10.00
26	10.00	10.00
27	10.00	10.00
28	10.00	10.00
29	2.00	10.00
30	10.00	10.00
31	10.00	10.00
AVGS	6.80	10.00
MINIMUM VISIBILITY (MILES)		
<= .25	<= 3.0	>= 7.0
2	10	20

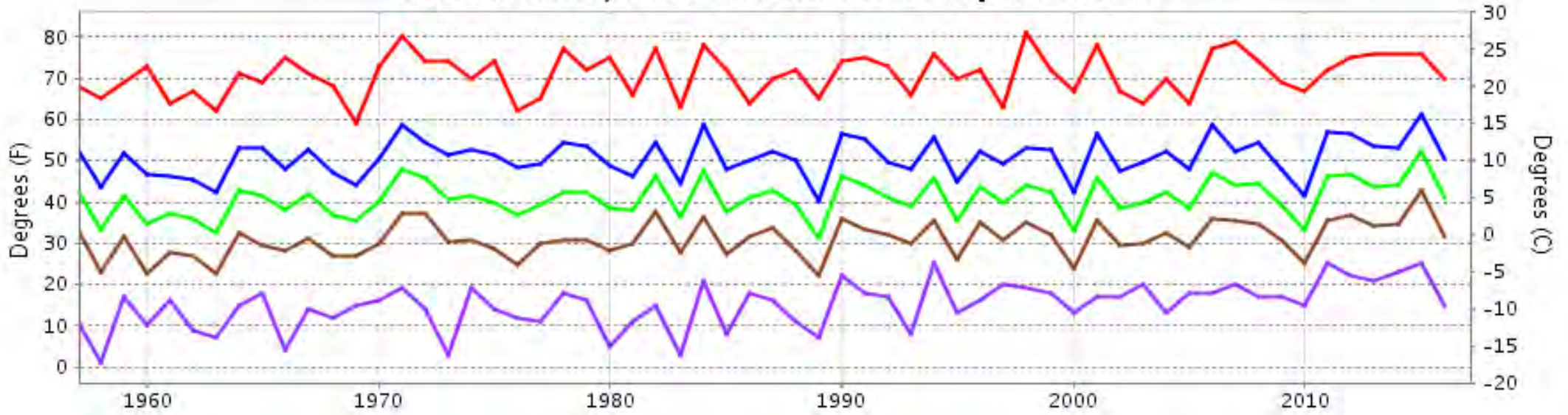
OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA
DECEMBER 2016 KRIC

WBAN # 13740

Table with columns for Hour (LST), Sky Cover, Ceiling, Visibility, Weather, Temperature (°F), Wind (Speed, Direction), Pressure (Station, Sea Level), and their respective values for two consecutive days (DEC 01 and DEC 02) at 3-hour intervals.

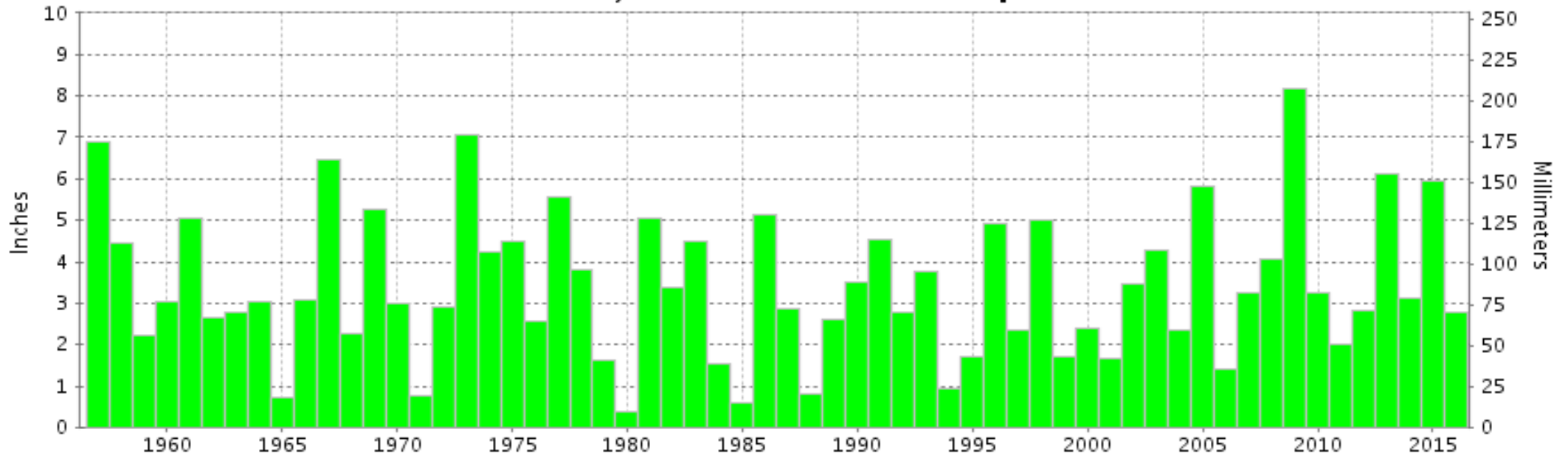
RICHMOND, VA DECEMBER Temperatures



— Extreme Max
 — Mean Max
 — Mean
 — Mean Min
 — Extreme Min

Long-Term (1957-2016) Mean: 40.9
1981-2010 Normal: 41.0

RICHMOND, VA DECEMBER Precipitation



Long-Term (1957-2016) Mean Monthly Total: 3.42

1981-2010 Normal: 3.26



DECEMBER 2016

RICHMOND, VA

LOCAL CLIMATOLOGICAL DATA

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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 "Margarita Jee SS".

DIRECTOR (ACTING)

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We welcome your questions or comments, please contact us at:
(828) 271-4800, option 2
Fax Number : 828-271-4876
TDD : (828) 271-4010
or Email : ncdc.orders@noaa.gov

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