



AUGUST 2016 LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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



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			
01	88	70	79	1	72	74	0	14		0		0.0	0.00	29.83	30.02	1.7	18	3.6	15	20	13	19	01	
02	87	73	80	2	73	74	0	15	RA	0		0.0	T	29.83	30.03	2.9	10	4.7	23	12	18	10	02	
03	81	70	76	-2	68	70	0	11		0		0.0	0.00	29.91	30.10	7.7	06	8.0	19	05	15	04	03	
04	83	69	76	-1	67	70	0	11	RA	0		0.0	T	29.91	30.10	5.7	06	6.6	18	05	13	07	04	
05	83	69	76	-1	71	73	0	11	RA	0		0.0	T	29.83	30.00	5.0	15	5.7	13	17	10	20	05	
06	92	73	83	6	73	75	0	18	TS TSRA RA BR	0		0.0	0.09	29.66	29.84	4.5	24	6.4	26	18	20	32	06	
07	88	71	80	3	66	70	0	15		0		0.0	0.00	29.74	29.94	4.3	35	5.3	19	01	13	35	07	
08	78	68	73*	-4	66	68	0	8	RA	0		0.0	0.02	29.86	30.07	4.0	04	4.6	22	03	17	05	08	
09	87	67	77	0	71	72	0	12	RA BR	0		0.0	0.22	29.97	30.17	3.1	09	4.6	13	15	10	01	09	
10	91	73	82	5	72	75	0	17		0		0.0	0.00	30.01	30.19	6.5	20	7.1	19	21	15	22	10	
11	93	74	84	7	73	76	0	19		0		0.0	0.00	29.95	30.12	6.7	20	7.0	18	21	14	22	11	
12	94	74	84	7	74	77	0	19		0		0.0	0.00	29.82	30.00	9.0	20	9.5	25	22	18	20	12	
13	96	78	87	11	75	78	0	22		0		0.0	0.00	29.78	29.97	10.7	22	10.9	24	23	20	22	13	
14	99	77	88*	12	73	77	0	23		0		0.0	0.00	29.86	30.05	5.9	23	7.3	24	29	17	24	14	
15	96	73	85	9	72	75	0	20	TS TSRA RA BR	0		0.0	0.20	29.97	30.17	2.8	11	6.4	39*	18	30*	19	15	
16	95	72	84	8	73	76	0	19	FG+ FG BR	0		0.0	0.00	29.98	30.16	7.0	20	7.6	20	21	15	20	16	
17	97	76	87	11	72	75	0	22	TS RA	0		0.0	T	29.91	30.09	5.5	24	7.3	18	22	14	22	17	
18	90	72	81	5	70	73	0	16		0		0.0	0.00	29.85	30.03	3.0	33	5.7	21	35	15	34	18	
19	89	70	80	4	69	72	0	15		0		0.0	0.00	29.78	29.96	1.5	15	4.6	17	22	14	19	19	
20	91	69	80	4	68	72	0	15		0		0.0	0.00	29.72	29.89	3.9	14	4.8	15	13	13	14	20	
21	94	72	83	7	71	74	0	18	RA	0		0.0	T	29.65	29.84	3.5	24	8.8	27	22	21	25	21	
22	87	66	77	1	58	65	0	12		0		0.0	0.00	29.88	30.10	8.0	34	8.4	24	33	20	35	22	
23	85	63	74	-2	60	65	0	9		0		0.0	0.00	30.09	30.29	4.3	10	5.5	16	13	13	12	23	
24	86	61*	74	-2	60	65	0	9		0		0.0	0.00	30.09	30.26	3.1	16	4.4	14	14	12	15	24	
25	92	66	79	3	67	71	0	14		0		0.0	0.00	29.93	30.11	7.4	20	7.8	23	21	17	19	25	
26	99*	72	86	10	71	75	0	21		0		0.0	0.00	29.87	30.06	1.2	05	4.6	25	03	14	02	26	
27	94	71	83	8	68	73	0	18		0		0.0	0.00	29.93	30.13	6.4	06	7.0	19	05	15	04	27	
28	90	68	79	4	67	70	0	14	FG+ BR	0		0.0	0.00	30.01	30.19	5.2	05	6.2	18	06	14	07	28	
29	91	64	78	3	64	69	0	13		0		0.0	0.00	29.96	30.13	3.6	04	4.9	18	03	14	36	29	
30	94	69	82	7	66	71	0	17		0		0.0	0.00	29.90	30.08	3.2	05	5.0	18	36	14	11	30	
31	92	68	80	5	68	72	0	15	TS RA	0		0.0	T	29.80	29.97	2.3	16	4.4	17	20	13	20	31	

**AUGUST 2016
RICHMOND, VA**

90.4			70.3			80.3			☼	69.0			72.3			0.0		15.5		< MONTHLY AVERAGES TOTALS >				0.0		0.53		29.88		30.07		1.2		17		6.3		< MONTHLY AVERAGES			
2.8			2.9			2.8				<----- DEPARTURE FROM NORMAL ----->												-4.13		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																	
DEGREE DAYS										GREATEST 24-HR PRECIPITATION : 0.23 DATE : 08-09										SEA LEVEL PRESSURE				DATE TIME																	
MONTHLY					SEASON TO DATE					GREATEST 24-HR SNOWFALL : 0.0 DATE :					MAXIMUM : 30.34				24 0754																						
TOTAL DEPARTURE					TOTAL DEPARTURE					GREATEST SNOW DEPTH : 0 DATE :					MINIMUM : 29.76				21 1602																						
HEATING :		0		-1		0		-1		NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 :		19		MINIMUM TEMP <= 32 :		0		PRECIPITATION >= 0.01 INCH :				4															
COOLING :		482		94		1354		47		MAXIMUM TEMP <= 32 :				0		MINIMUM TEMP <= 0 :		0		PRECIPITATION >= 0.10 INCH :				2																	
										THUNDERSTORMS :				4		HEAVY FOG :		2		SNOWFALL >= 1.0 INCH :				0																	

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA (KRIC)
AUGUST 2016

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		T										02	T	T	
03													03												03	0.00	0.00	
04													04												04	T	T	
05													05		T										05	T	T	
06													06						0.02	0.07		T			06	0.09	0.09	
07													07												07	0.00	0.00	
08													08		T	T	T	T	T	T					08	0.02	0.02	
09		0.01			0.14	0.03		T	T	T		0.01	09					0.04				0.01	T	T	T	09	0.22	0.22
10													10												10	0.00	0.00	
11													11												11	0.00	0.00	
12													12												12	0.00	0.00	
13													13												13	0.00	0.00	
14													14												14	0.00	0.00	
15													15				T	0.18					0.02	T	15	0.20	0.20	
16													16												16	0.00	0.00	
17													17												17	T	T	
18													18												18	0.00	0.00	
19													19												19	0.00	0.00	
20													20												20	0.00	0.00	
21													21					T		T					21	T	T	
22													22												22	0.00	0.00	
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	
31													31												31	T	T	

* 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)	0.10	0.15	0.17	0.17	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Ending Date	15	15	15	15	15	15	15	15	15	15	15	15
Ending Time (Hr/Min)	1611	1616	1619	1619	1628	1628	1628	1628	1628	1628	1628	1628

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 AUGUST 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:

Station Augmentation-SANDSTON, VA
Lat/Lon:37.54417/-77.27583 Elevation:165ft
Distance:4mi Dir:E
Augmented Elements:TEMP, PRECIP, SNOW
Equipment:METS, SRG, SNOWBOARD

Date	VISIBILITY (MILES)	
	MINIMUM	MAXIMUM
01	10.00	10.00
02	7.00	10.00
03	7.00	10.00
04	10.00	10.00
05	10.00	10.00
06	4.00	10.00
07	10.00	10.00
08	7.00	10.00
09	3.00	10.00
10	7.00	10.00
11	10.00	10.00
12	10.00	10.00
13	10.00	10.00
14	10.00	10.00
15	8.00	10.00
16	2.00	10.00
17	10.00	10.00
18	10.00	10.00
19	8.00	10.00
20	9.00	10.00
21	7.00	10.00
22	10.00	10.00
23	10.00	10.00
24	10.00	10.00
25	10.00	10.00
26	9.00	10.00
27	8.00	10.00
28	0.25	10.00
29	10.00	10.00
30	10.00	10.00
31	7.00	10.00
AVGS	8.17	10.00
MINIMUM VISIBILITY (MILES)		
<= .25	<= 3.0	>= 7.0
1	3	27

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

AUGUST 2016

KRIC

WBAN # 13740

HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		
					DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL	
SUNRISE: 0533					AUG 25					SUNSET: 1849			
01	SCT	250	10.00		67	64	65	91	6	17	30.00	30.19	
04	FEW	250	10.00		67	64	65	91	6	21	29.97	30.16	
07	BKN	250	10.00		71	67	68	87	7	21	29.98	30.17	
10	BKN	250	10.00		82	63	70	53	13	21	29.96	30.15	
13	BKN	250	10.00		89	66	74	47	14	20	29.90	30.09	
16	BKN	250	10.00		90	67	74	47	8	17	29.86	30.05	
19	SCT	300	10.00		83	70	74	65	5	19	29.86	30.05	
22	FEW	300	10.00		77	70	72	79	6	18	29.86	30.05	
SUNRISE: 0534					AUG 26					SUNSET: 1847			
01	CLR	NC	10.00		75	70	72	84	5	19	29.86	30.05	
04	CLR	NC	10.00		73	69	70	87	6	20	29.86	30.05	
07	BKN	250	9.00		75	70	72	84	3	22	29.89	30.08	
10	BKN	250	10.00		90	72	77	56	10	36	29.90	30.09	
13	BKN	250	10.00		96	71	78	44	6	VR	29.88	30.07	
16	SCT	300	10.00		98	70	78	40	9	01	29.85	30.03	
19	SCT	300	10.00		88	73	77	61	3	09	29.85	30.04	
22	FEW	075	10.00		81	74	76	79	6	07	29.89	30.08	
SUNRISE: 0535					AUG 27					SUNSET: 1846			
01	FEW	055	10.00		79	73	75	82	0	00	29.89	30.07	
04	BKN	070	10.00		77	73	74	88	6	03	29.90	30.09	
07	BKN	300	10.00		79	73	75	82	7	05	29.95	30.13	
10	FEW	300	10.00		88	69	75	54	9	08	29.97	30.16	
13	FEW	300	10.00		93	62	73	36	10	06	29.96	30.15	
16	FEW	300	10.00		91	62	72	38	11	09	29.93	30.11	
19	FEW	300	10.00		82	67	72	60	7	05	29.95	30.14	
22	CLR	NC	10.00		74	65	68	74	6	06	30.00	30.18	
SUNRISE: 0536					AUG 28					SUNSET: 1844			
01	CLR	NC	10.00		71	67	68	87	0	00	29.99	30.18	
04	CLR	NC	10.00		68	66	67	93	6	34	30.00	30.18	
07	OVC	002	0.25	FG	70	70	70	100	8	36	30.05	30.24	
10	BKN	250	10.00		81	70	74	69	8	08	30.05	30.24	
13	SCT	043	10.00		87	65	72	48	6	08	30.03	30.21	
16	BKN	300	10.00		87	63	71	45	10	07	29.96	30.15	
19	SCT	250	10.00		78	67	71	69	8	05	29.95	30.14	
22	SCT	250	10.00		72	67	69	84	5	06	29.99	30.18	
SUNRISE: 0537					AUG 29					SUNSET: 1843			
01	SCT	250	10.00		69	66	67	90	3	36	29.98	30.17	
04	CLR	NC	10.00		66	65	65	96	0	00	29.94	30.13	
07	BKN	300	10.00		70	67	68	90	3	01	29.97	30.16	
10	BKN	300	10.00		83	62	70	49	8	05	30.00	30.19	
13	SCT	250	10.00		89	61	71	39	9	02	29.95	30.14	
16	SCT	250	10.00		90	63	72	41	7	VR	29.90	30.09	
19	FEW	250	10.00		84	65	72	53	3	09	29.91	30.10	
22	CLR	NC	10.00		75	63	67	66	0	00	29.92	30.11	
SUNRISE: 0538					AUG 30					SUNSET: 1842			
01	CLR	NC	10.00		70	64	66	82	0	00	29.91	30.10	
04	FEW	050	10.00		70	65	67	84	3	34	29.91	30.09	
07	SCT	300	10.00		74	67	69	79	8	01	29.95	30.14	
10	FEW	300	10.00		86	67	73	53	6	VR	29.94	30.13	
13	SCT	300	10.00		92	64	73	40	6	33	29.90	30.08	
16	SCT	300	10.00		91	64	73	41	8	04	29.84	30.03	
19	FEW	300	10.00		80	69	73	69	6	11	29.84	30.03	
22	CLR	NC	10.00		75	69	71	82	0	00	29.86	30.04	

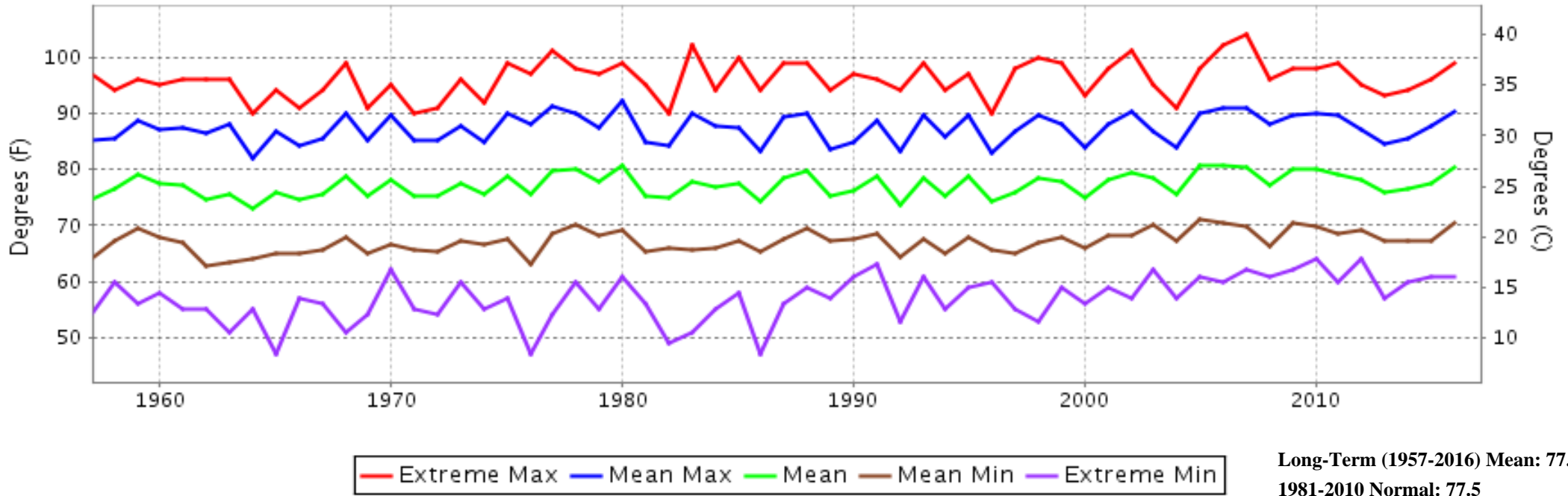
HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		
					DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL	
SUNRISE: 0538					AUG 31					SUNSET: 1840			
01	FEW	075	10.00		71	68	69	90	0	00	29.86	30.05	
04	SCT	075	9.00		69	67	68	93	0	00	29.84	30.03	
07	BKN	300	8.00		74	70	71	88	0	00	29.84	30.03	
10	OVC	300	10.00		83	67	72	59	7	18	29.83	30.02	
13	BKN	300	10.00		90	65	73	44	5	23	29.76	29.95	
16	BKN	250	10.00		88	66	73	48	9	16	29.70	29.89	
19	BKN	250	10.00		82	69	73	65	7	14	29.71	29.90	
22	OVC	250	10.00		78	69	72	74	9	34	29.75	29.93	

3-HOURLY OBSERVATION NOTES
 Sky Cover is the amount of the sky obscured. CLR or SKC = 0, FEW = 1/8-2/8, SCT = 3/8-4/8, BKN = 5/8-7/8, OVC = 8/8, W = Vertical Visibility = 8/8
 Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC = No Ceiling detected.
 & = Original observation contained additional weather elements.
 See page 3 for additional notes.

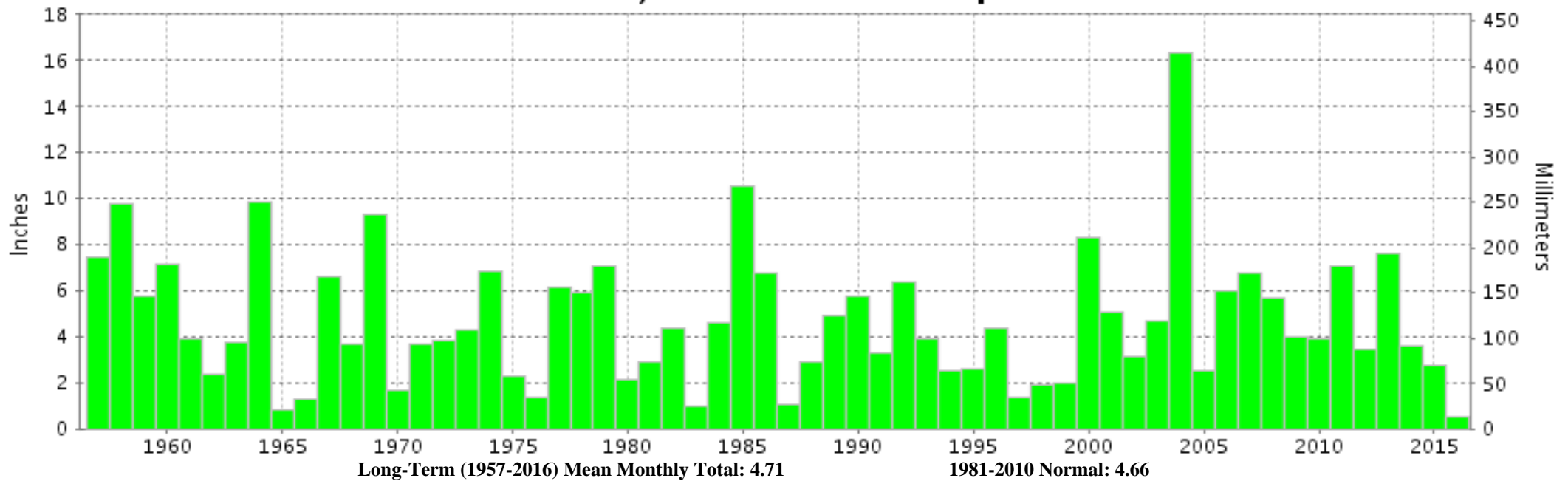
SUMMARY BY HOUR

HOUR (LST)	AVERAGES								RESULTANT WIND (MPH)	
	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (Inches, HG)		VISIBILITY (Miles)	WIND SPEED (MPH)	SPEED	DIRECTION
					STATION	SEA LEVEL				
01	73	69	71	88	29.88	30.07	9.90	3	2	19
02	73	69	70	89	29.88	30.06	10.00	4	1	20
03	72	69	70	90	29.87	30.06	9.97	4	2	20
04	72	69	70	90	29.87	30.06	9.77	4	1	20
05	71	69	70	91	29.88	30.07	9.52	4	2	21
06	72	69	70	91	29.90	30.08	8.81	4	1	20
07	74	70	71	86	29.91	30.09	9.14	6	1	19
08	78	70	73	77	29.91	30.10	9.65	7	1	21
09	81	70	73	70	29.91	30.10	10.00	8	1	16
10	83	69	74	64	29.91	30.10	10.00	8	1	18
11	85	69	74	59	29.91	30.10	10.00	8	1	19
12	87	68	74	55	29.90	30.08	10.00	9	1	16
13	88	68	74	53	29.89	30.07	9.97	9	1	17
14	88	68	74	52	29.87	30.06	10.00	9	1	20
15	88	68	74	52	29.85	30.04	10.00	8	1	19
16	88	67	74	53	29.85	30.03	10.00	9	1	15
17	86	68	74	56	29.84	30.03	10.00	9	2	13
18	84	68	74	60	29.84	30.03	10.00	7	1	14
19	81	69	73	69	29.85	30.04	9.81	6	2	12
20	79	70	73	75	29.87	30.05	9.90	6	2	12
21	77	70	72	80	29.88	30.07	9.90	5	2	13
22	76	70	72	81	29.88	30.07	9.94	5	2	14
23	75	69	71	84	29.88	30.07	9.94	5	2	14
24	74	70	71	87	29.88	30.07	9.87	4	2	16

RICHMOND, VA AUGUST Temperatures



RICHMOND, VA AUGUST Precipitation





**AUGUST 2016
RICHMOND, VA**

**LOCAL CLIMATOLOGICAL DATA
NOAA, National Climatic Data Center**

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 Climatic Data Center (NCDC), Asheville, North Carolina 28801.

A handwritten signature in black ink, appearing to read "Thomas R. Karl".

DIRECTOR

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