



# DECEMBER 2015 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 2015  
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			
2	3	4	5	6	7	8	9	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
01	53	41	47	2	47	47	18	0	RA DZ BR	0		0.0	0.45	29.92	30.11	2.4	21	5.5	14	17	12	17	01	
02	62	52	57	13	56	56	8	0	RA FG BR	0		0.0	0.06	29.64	29.84	6.5	19	7.8	20	15	17	17	02	
03	59	36	48	4	30	40	17	0		0		0.0	0.00	29.94	30.14	10.2	32	10.9	30	30	25	31	03	
04	53	31	42	-1	29	36	23	0		0		0.0	0.00	30.33	30.53	3.3	32	4.0	12	35	9	34	04	
05	55	30	43	0	32	37	22	0		0		0.0	0.00	30.47	30.67	3.3	03	3.8	14	04	12	03	05	
06	55	28	42	-1	33	37	23	0	BR	0		0.0	0.00	30.29	30.48	0.6	33	1.6	9	23	6	14	06	
07	51	35	43	0	38	41	22	0	BCFG	0		0.0	0.00	29.99	30.19	0.5	18	1.2	8	28	7	17	07	
08	58	32	45	3	36	41	20	0	MIFG	0		0.0	0.00	29.95	30.14	1.6	10	3.2	16	01	12	04	08	
09	60	34	47	5	43	45	18	0	FG+ FG BR	0		0.0	0.00	29.89	30.07	7.1	18	7.4	20	19	15	18	09	
10	64	38	51	9	45	48	14	0	MIFG BCFG BR	0		0.0	0.00	29.80	29.99	2.1	17	2.8	10	16	8	18	10	
11	70	44	57	16	49	52	8	0	MIFG	0		0.0	0.00	29.79	30.00	6.1	21	6.3	18	22	14	20	11	
12	76*	45	61	20	54	56	4	0	MIFG BR	0		0.0	0.00	29.96	30.16	3.6	21	4.0	14	26	12	26	12	
13	72	48	60	19	55	56	5	0	MIFG BR	0		0.0	0.00	29.98	30.16	4.6	19	4.9	14	21	12	21	13	
14	72	54	63	22	61	62	2	0	RA BR	0		0.0	0.08	29.67	29.81	12.5	19	12.8	31	20	23	21	14	
15	68	46	57	17	46	52	8	0		0		0.0	0.00	29.52	29.77	7.9	27	10.5	28	24	21	24	15	
16	59	36	48	8	40	44	17	0		0		0.0	0.00	29.88	30.08	1.3	09	2.7	14	05	12	04	16	
17	53	43	48	8	50	51	17	0	RA BR	0		0.0	0.97	29.68	29.85	0.5	25	2.2	12	23	10	23	17	
18	53	35	44	4	37	42	21	0	RA BR	0		0.0	T	29.65	29.87	7.5	34	9.6	30	30	23	31	18	
19	46	26	36*	-4	18	30	29	0		0		0.0	0.00	30.07	30.31	8.4	25	9.5	30	28	22	27	19	
20	49	25*	37	-2	26	32	28	0		0		0.0	0.00	30.33	30.54	2.9	15	3.3	11	18	9	18	20	
21	61	35	48	9	41	45	17	0		0		0.0	0.00	30.15	30.32	8.7	19	9.2	25	19	20	19	21	
22	63	49	56	17	55	56	9	0	RA BR	0		0.0	1.08	29.88	30.06	5.6	19	6.6	22	13	18	22	22	
23	71	58	65	26	64	64	0	0	RA BR	0		0.0	1.49	29.82	29.99	9.5	16	10.9	36*	21	26*	20	23	
24	71	65	68	30	66	66	0	3	TS TSRA RA FG BR	0		0.0	1.30	29.84	30.06	10.5	21	11.2	35	20	24	19	24	
25	75	64	70*	32	66	67	0	5	RA	0		0.0	0.01	29.98	30.18	8.6	20	8.8	23	22	17	21	25	
26	67	54	61	23	59	59	4	0	RA DZ FG BR	0		0.0	0.01	30.11	30.31	5.9	03	6.9	15	07	13	07	26	
27	75	54	65	27	60	62	0	0	RA DZ FG+ FG BR	0		0.0	T	29.90	30.07	9.0	22	9.7	31	22	24	22	27	
28	67	44	56	18	45	47	9	0	RA DZ BR	0		0.0	0.09	30.04	30.25	11.1	04	11.9	26	04	21	04	28	
29	55	45	50	12	49	49	15	0	RA FG+ FG BR	0		0.0	0.17	29.85	30.05	3.1	27	5.5	19	21	13	21	29	
30	55	49	52	15	54	54	13	0	RA DZ FG+ FG BR	0		0.0	0.23	29.98	30.17	1.8	01	4.5	18	12	16	12	30	
31	56	49	53	16	51	52	12	0	RA BR	0		0.0	T	29.92	30.11	2.5	04	4.6	16	03	14	04	31	
61.4		42.7	52.1	Σ	46.3	49.2	13.0	0.3	< MONTHLY AVERAGES   TOTALS >		0.0	5.94	29.94	30.14	2.2	21	6.6	< MONTHLY AVERAGES						
10.7	11.3	11.1	-----DEPARTURE FROM NORMAL ----->		2.68		SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																	
<b>DEGREE DAYS</b>									GREATEST 24-HR PRECIPITATION : 2.01 DATE : 23-24				SEA LEVEL PRESSURE				DATE		TIME					
MONTHLY									GREATEST 24-HR SNOWFALL : 0.0 DATE :				MAXIMUM :				05		1109					
TOTAL DEPARTURE									GREATEST SNOW DEPTH : 0 DATE :				MINIMUM :				14		2331					
SEASON TO DATE									NUMBER OF -> DAYS WITH				MAXIMUM TEMP >= 90 : 0		MINIMUM TEMP <= 32 : 6		PRECIPITATION >= 0.01 INCH : 12							
HEATING : 403 -340									995 -424		MAXIMUM TEMP <= 32 : 0		MINIMUM TEMP <= 0 : 0		PRECIPITATION >= 0.10 INCH : 7									
COOLING : 8 7									1825 276		THUNDERSTORMS : 1		HEAVY FOG : 4		SNOWFALL >= 1.0 INCH : 0									

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA (KRIC)  
DECEMBER 2015

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	0.01	T		T	0.02	0.11	0.11	0.12	0.06	0.01	0.01		01											01	0.45	0.45		
02	0.01	T	T	T							0.01	0.04	02	T	T		T						T	02	0.06	0.06		
03													03										T	03	0.00	0.00		
04													04										T	04	0.00	0.00		
05													05										T	05	0.00	0.00		
06													06										T	06	0.00	0.00		
07													07										T	07	0.00	0.00		
08													08										T	08	0.00	0.00		
09													09										T	09	0.00	0.00		
10													10										T	10	0.00	0.00		
11													11										T	11	0.00	0.00		
12													12										T	12	0.00	0.00		
13													13										T	13	0.00	0.00		
14													14			0.05	0.02	T	T	T		0.01	14	0.08	0.08			
15													15										T	15	0.00	0.00		
16													16										T	16	0.00	0.00		
17				T	T	T	0.01	0.06	0.03	0.06	0.14	0.19	17	0.13	0.19	0.08	0.07	0.01					17	0.97	0.97			
18				T	T					T			18					T					18	T	T			
19													19										T	19	0.00	0.00		
20													20										T	20	0.00	0.00		
21													21										T	21	0.00	0.00		
22			T	T	T	0.30	0.19	0.05	0.21	0.33	T		22										T	22	1.08	1.08		
23		T	0.04	T	0.11	0.02	T	0.04	0.21	0.04	0.01	0.06	23	0.03	0.29	0.25	0.12	0.01	0.01	0.03	0.21	0.01	T	23	1.49	1.49		
24	T	T	T		0.04	0.18	0.09	0.03	T	0.02	0.22	T	24	0.50	0.13	T	0.05	0.04	T				T	24	1.30	1.30		
25													25			T	T		0.01	T			T	25	0.01	0.01		
26													26										T	26	0.01	0.01		
27	T	T			T								27										T	27	T	T		
28	0.01	T						0.01	T				28	T				T					T	28	0.09	0.09		
29	0.05	0.01	0.01	0.01		0.01	0.02	0.06	T	T			29										T	29	0.17	0.17		
30					T	T	T						30	T	0.03	0.07	0.06	0.05			0.02	T	30	0.23	0.23			
31		T	T										31										T	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)	0.32	0.43	0.43	0.43	0.43	0.49	0.51	0.56	0.63	0.63	0.67	0.73
Ending Date	24	24	24	24	24	24	24	24	24	24	24	24
Ending Time (Hr/Min)	1216	1219	1219	1219	1219	1256	1302	1316	1340	1340	1219	1302

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 2015

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 COOP  
Lat/Lon:37.54417/-77.27583 Elevation:165  
Distance:4 MI Dir:E  
Augmented Elements:Temp, Precip, Snow  
Equipment:MMTS, SRG, Snowboard

Date	VISIBILITY (MILES)	
	MINIMUM	MAXIMUM
01	1.50	10.00
02	0.50	10.00
03	10.00	10.00
04	10.00	10.00
05	8.00	10.00
06	6.00	10.00
07	10.00	10.00
08	8.00	10.00
09	0.12	10.00
10	4.00	10.00
11	8.00	10.00
12	3.00	10.00
13	3.00	10.00
14	2.50	10.00
15	10.00	10.00
16	7.00	10.00
17	2.50	7.00
18	5.00	10.00
19	10.00	10.00
20	10.00	10.00
21	10.00	10.00
22	1.25	10.00
23	1.50	10.00
24	2.00	10.00
25	7.00	10.00
26	0.50	10.00
27	0.25	10.00
28	2.50	10.00
29	0.25	10.00
30	0.12	1.00
31	1.00	10.00
<b>AVGS</b>	4.69	9.61
<b>MINIMUM VISIBILITY (MILES)</b>		
<= .25	<= 3.0	>= 7.0
4	16	12

# OBSERVATIONS AT 3-HOURLY INTERVALS

**RICHMOND, VA**  
**DECEMBER 2015**      **KRIC**

**WBAN # 13740**

HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		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						DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL				
<b>SUNRISE: 0705</b>					<b>DEC 01</b>					<b>SUNSET: 1652</b>					<b>SUNRISE: 0710</b>					<b>DEC 07</b>					<b>SUNSET: 1651</b>				
01	OVC	004	4.00	-RA BR	41	40	41	96	7	33	29.99	30.19	01	OVC	085	10.00		40	37	39	89	0	00	30.10	30.30				
04	OVC	003	1.50	-RA BR	41	40	41	96	7	33	29.97	30.17	04	OVC	080	10.00		40	37	39	89	3	16	30.05	30.25				
07	OVC	060	2.50	RA BR	42	41	42	96	3	35	29.97	30.17	07	SCT	080	10.00		37	35	36	93	0	00	30.03	30.22				
10	OVC	017	2.00	-RA BR	45	44	45	97	0	00	29.97	30.16	10	BKN	085	10.00		45	38	42	77	0	00	30.03	30.23				
13	BKN	140	7.00		52	50	51	93	5	18	29.92	30.11	13	BKN	180	10.00		50	37	44	61	0	00	29.97	30.16				
16	OVC	050	10.00		53	51	52	93	7	21	29.88	30.07	16	BKN	150	10.00		48	40	44	74	0	00	29.93	30.12				
19	OVC	140	10.00		52	51	51	97	7	19	29.85	30.04	19	FEW	200	10.00		39	38	39	96	3	12	29.94	30.14				
22	OVC	003	8.00		53	53	53	100	7	19	29.84	30.03	22	OVC	070	10.00		44	40	42	85	5	30	29.96	30.15				
<b>SUNRISE: 0706</b>					<b>DEC 02</b>					<b>SUNSET: 1651</b>					<b>SUNRISE: 0711</b>					<b>DEC 08</b>					<b>SUNSET: 1651</b>				
01	OVC	120	5.00	-RA BR	52	52	52	100	8	17	29.77	29.97	01	OVC	070	10.00		39	39	39	100	0	00	29.92	30.12				
04	OVC	003	4.00	BR	53	52	52	96	7	17	29.75	29.94	04	CLR	NC	9.00		35	34	35	96	0	00	29.92	30.12				
07	OVC	003	1.50	BR	53	53	53	100	7	19	29.75	29.94	07	CLR	NC	10.00	MIFG	34	33	34	97	0	00	29.96	30.16				
10	OVC	002	0.50	FG	54	54	54	100	5	16	29.70	29.89	10	FEW	300	10.00		49	36	43	61	10	04	29.99	30.19				
13	OVC	004	2.00	BR	58	58	58	100	9	20	29.61	29.80	13	FEW	300	10.00		57	37	48	47	5	34	29.95	30.15				
16	OVC	110	2.50	-RA BR	61	60	60	97	8	17	29.54	29.73	16	FEW	300	10.00		55	37	47	51	5	18	29.92	30.11				
19	OVC	150	10.00		59	58	58	96	7	22	29.58	29.77	19	FEW	300	10.00		45	38	42	77	6	14	29.95	30.15				
22	OVC	150	10.00		60	59	59	96	6	23	29.57	29.77	22	CLR	NC	10.00		41	37	39	86	5	10	29.96	30.16				
<b>SUNRISE: 0707</b>					<b>DEC 03</b>					<b>SUNSET: 1651</b>					<b>SUNRISE: 0712</b>					<b>DEC 09</b>					<b>SUNSET: 1651</b>				
01	OVC	220	10.00		57	47	52	69	11	30	29.62	29.81	01	CLR	NC	9.00		38	37	38	97	5	15	29.94	30.13				
04	OVC	075	10.00		52	40	46	64	13	30	29.70	29.90	04	CLR	NC	2.50	BR	38	37	38	97	5	16	29.92	30.12				
07	SCT	280	10.00		46	32	40	58	15	31	29.83	30.02	07	VV	002	0.12	FG	40	40	40	100	3	19	29.95	30.15				
10	SCT	300	10.00		48	26	39	42	14	32	29.93	30.13	10	OVC	003	1.50	BR	43	43	43	100	6	19	29.97	30.16				
13	BKN	300	10.00		51	26	41	38	11	30	29.94	30.13	13	BKN	300	10.00		57	46	51	67	11	20	29.87	30.06				
16	BKN	300	10.00		50	25	40	38	10	33	30.00	30.19	16	BKN	300	10.00		58	46	52	65	7	17	29.80	30.00				
19	FEW	250	10.00		43	28	37	56	9	36	30.12	30.32	19	OVC	250	10.00		53	45	49	74	7	18	29.81	30.00				
22	FEW	250	10.00		38	28	34	68	7	35	30.20	30.40	22	SCT	250	10.00		50	45	48	83	7	18	29.81	30.01				
<b>SUNRISE: 0708</b>					<b>DEC 04</b>					<b>SUNSET: 1651</b>					<b>SUNRISE: 0713</b>					<b>DEC 10</b>					<b>SUNSET: 1651</b>				
01	CLR	NC	10.00		35	27	32	72	5	32	30.23	30.42	01	OVC	090	10.00		50	46	48	86	3	19	29.81	30.00				
04	SCT	250	10.00		34	27	31	76	6	32	30.25	30.45	04	FEW	110	10.00		45	44	45	97	0	00	29.78	29.97				
07	FEW	250	10.00		32	27	30	82	3	32	30.31	30.51	07	BKN	300	5.00	MIFG	39	39	39	100	5	21	29.83	30.02				
10	FEW	250	10.00		44	29	38	55	7	01	30.37	30.57	10	FEW	300	10.00		55	47	51	74	3	30	29.86	30.05				
13	CLR	NC	10.00		50	29	41	44	7	29	30.32	30.52	13	BKN	300	10.00		62	45	53	54	5	16	29.79	29.98				
16	CLR	NC	10.00		52	29	42	41	8	35	30.32	30.52	16	SCT	300	10.00		61	45	53	56	6	17	29.76	29.95				
19	CLR	NC	10.00		40	32	37	73	0	00	30.37	30.57	19	FEW	250	10.00		51	45	48	80	5	13	29.78	29.97				
22	CLR	NC	10.00		36	31	34	82	0	00	30.41	30.60	22	CLR	NC	10.00		48	44	46	86	3	12	29.79	29.98				
<b>SUNRISE: 0709</b>					<b>DEC 05</b>					<b>SUNSET: 1651</b>					<b>SUNRISE: 0714</b>					<b>DEC 11</b>					<b>SUNSET: 1651</b>				
01	CLR	NC	10.00		33	30	32	89	0	00	30.43	30.62	01	BKN	200	10.00		49	45	47	86	3	18	29.73	29.93				
04	CLR	NC	10.00		32	29	31	88	3	34	30.45	30.64	04	FEW	250	10.00		48	46	47	93	5	19	29.73	29.93				
07	CLR	NC	10.00		32	29	31	88	5	35	30.49	30.69	07	SCT	230	8.00		45	44	45	97	6	19	29.77	29.97				
10	CLR	NC	10.00		46	36	42	68	8	03	30.52	30.72	10	BKN	250	10.00		55	51	53	87	5	24	29.85	30.04				
13	CLR	NC	10.00		53	35	45	51	7	06	30.48	30.68	13	SCT	250	10.00		67	51	58	57	10	22	29.81	30.00				
16	CLR	NC	10.00		52	34	44	50	6	05	30.46	30.66	16	SCT	250	10.00		67	51	58	57	10	21	29.79	29.98				
19	CLR	NC	10.00		41	35	38	79	5	05	30.48	30.67	19	SCT	250	10.00		54	49	51	83	6	19	29.84	30.03				
22	CLR	NC	10.00		35	32	34	89	0	00	30.47	30.66	22	SCT	250	10.00		54	50	52	87	5	18	29.89	30.08				
<b>SUNRISE: 0709</b>					<b>DEC 06</b>					<b>SUNSET: 1651</b>					<b>SUNRISE: 0714</b>					<b>DEC 12</b>					<b>SUNSET: 1652</b>				
01	CLR	NC	9.00		32	30	31	92	0	00	30.42	30.62	01	SCT	250	10.00		53	50	51	89	5	22	29.92	30.11				
04	CLR	NC	7.00		30	29	30	96	3	34	30.40	30.59	04	FEW	300	8.00		50	50	50	100	3	16	29.93	30.13				
07	CLR	NC	7.00		29	28	29	96	3	35	30.38	30.58	07	BKN	300	3.00	MIFG	49	49	49	100	0	00	29.97	30.16				
10	CLR	NC	10.00		44	37	41	76	3	36	30.37	30.57	10	BKN	250	10.00		61	57	59	87	8	22	30.00	30.19				
13	FEW	250	10.00		52	36	45	55	3	23	30.28	30.47	13	BKN	250	10.00		73	57	63	57	8	23	29.95	30.15				
16	BKN	250	10.00		53	35	45	51	0	00	30.22	30.41	16	BKN	250	10.00		73	57	63	57	7	22	29.95	30.14				
19	SCT	250	10.00		41	36	39	82	5	14	30.17	30.37	19	BKN	250	10.00		63	57	60	81	0	00	29.99	30.18				
22	SCT	250	10.00		38	34	36	86	0	00	30.15	30.35	22	SCT	250	10.00		57	55	56	93	5	19	30.01	30.20				

# OBSERVATIONS AT 3-HOURLY INTERVALS

**RICHMOND, VA**  
**DECEMBER 2015**

**KRIC**

**WBAN # 13740**

HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		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						DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL				
<b>SUNRISE: 0715</b>					<b>DEC 13</b>					<b>SUNSET: 1652</b>					<b>SUNRISE: 0719</b>					<b>DEC 19</b>					<b>SUNSET: 1654</b>				
01	FEW	250	4.00	BR	53	53	53	100	0	00	30.00	30.19	01	CLR	NC	10.00			34	20	29	56	7	25	29.94	30.14			
04	SCT	250	6.00	BR	51	51	51	100	3	18	29.98	30.17	04	CLR	NC	10.00			33	12	27	42	9	30	30.03	30.22			
07	BKN	250	5.00	MIFG	50	50	50	100	6	18	30.01	30.20	07	CLR	NC	10.00			28	15	24	58	7	22	30.08	30.28			
10	BKN	300	9.00		59	57	58	93	0	00	30.03	30.23	10	CLR	NC	10.00			37	17	30	44	15	23	30.14	30.34			
13	OVC	300	10.00		68	59	63	73	5	21	29.96	30.16	13	FEW	050	10.00			43	17	34	35	15	25	30.10	30.30			
16	BKN	250	10.00		69	56	61	63	8	21	29.93	30.12	16	CLR	NC	10.00			46	17	36	31	15	26	30.09	30.29			
19	BKN	250	10.00		62	57	59	84	6	15	29.93	30.12	19	CLR	NC	10.00			40	19	33	43	7	24	30.17	30.37			
22	BKN	250	10.00		59	56	57	90	7	19	29.91	30.10	22	CLR	NC	10.00			32	23	29	69	0	00	30.23	30.42			
<b>SUNRISE: 0716</b>					<b>DEC 14</b>					<b>SUNSET: 1652</b>					<b>SUNRISE: 0719</b>					<b>DEC 20</b>					<b>SUNSET: 1654</b>				
01	SCT	300	10.00		55	54	54	96	7	18	29.86	30.06	01	CLR	NC	10.00			27	22	25	81	0	00	30.28	30.47			
04	OVC	055	10.00		60	58	59	93	10	20	29.82	30.01	04	CLR	NC	10.00			27	22	25	81	0	00	30.31	30.50			
07	OVC	300	10.00		61	60	60	97	9	19	29.76	29.96	07	CLR	NC	10.00			26	23	25	88	0	00	30.36	30.56			
10	BKN	250	10.00		66	60	62	81	16	18	29.71	29.91	10	FEW	250	10.00			39	25	34	57	6	10	30.43	30.63			
13	OVC	200	10.00		70	60	64	71	17	19	29.61	29.80	13	FEW	250	10.00			47	23	38	39	5	21	30.37	30.56			
16	OVC	027	2.50	-RA BR	65	64	64	97	11	18	29.52	29.71	16	BKN	300	10.00			47	26	39	44	6	15	30.31	30.51			
19	OVC	012	10.00		67	66	66	97	16	18	29.44	29.62	19	OVC	280	10.00			38	30	35	73	3	15	30.33	30.53			
22	OVC	041	10.00		68	66	67	93	18	19	29.39	29.57	22	OVC	300	10.00			36	32	34	86	5	16	30.30	30.50			
<b>SUNRISE: 0716</b>					<b>DEC 15</b>					<b>SUNSET: 1652</b>					<b>SUNRISE: 0720</b>					<b>DEC 21</b>					<b>SUNSET: 1655</b>				
01	CLR	NC	10.00		65	57	60	76	17	23	29.39	29.57	01	OVC	250	10.00			36	33	35	89	6	16	30.28	30.47			
04	CLR	NC	10.00		59	53	56	81	11	25	29.44	29.63	04	OVC	200	10.00			40	35	38	83	8	18	30.23	30.42			
07	FEW	070	10.00		57	49	53	74	13	25	29.47	29.67	07	BKN	200	10.00			39	34	37	82	8	18	30.20	30.40			
10	FEW	065	10.00		62	48	55	60	11	28	29.56	29.75	10	OVC	250	10.00			47	33	41	59	8	21	30.20	30.40			
13	FEW	050	10.00		67	43	54	42	11	27	29.57	29.75	13	OVC	250	10.00			60	44	52	56	16	22	30.12	30.31			
16	CLR	NC	10.00		66	42	54	42	9	30	29.61	29.80	16	OVC	200	10.00			58	48	53	70	15	19	30.04	30.23			
19	CLR	NC	10.00		53	43	48	69	5	33	29.67	29.87	19	OVC	180	10.00			54	47	50	77	14	18	30.01	30.20			
22	CLR	NC	10.00		50	40	45	68	6	01	29.76	29.95	22	OVC	300	10.00			50	47	48	89	7	18	30.00	30.19			
<b>SUNRISE: 0717</b>					<b>DEC 16</b>					<b>SUNSET: 1653</b>					<b>SUNRISE: 0721</b>					<b>DEC 22</b>					<b>SUNSET: 1655</b>				
01	CLR	NC	10.00		47	39	43	74	3	03	29.81	30.00	01	OVC	200	10.00			50	48	49	93	5	19	29.96	30.15			
04	CLR	NC	10.00		40	37	39	89	0	00	29.85	30.04	04	OVC	080	10.00			51	49	50	92	3	17	29.90	30.09			
07	CLR	NC	10.00		38	36	37	93	3	02	29.91	30.10	07	OVC	045	2.50	-RA BR			51	51	51	100	7	18	29.90	30.09		
10	CLR	NC	10.00		50	39	45	66	9	04	29.95	30.14	10	OVC	095	1.25	+RA BR			54	54	54	100	18	13	29.79	29.98		
13	CLR	NC	10.00		57	40	49	53	0	00	29.90	30.09	13	OVC	012	10.00			61	59	60	93	14	22	29.80	30.00			
16	FEW	250	10.00		57	42	50	58	6	15	29.87	30.06	16	OVC	015	10.00			62	60	61	93	13	22	29.82	30.01			
19	FEW	250	10.00		49	42	46	77	0	00	29.90	30.09	19	OVC	019	10.00			61	59	60	93	3	18	29.87	30.06			
22	FEW	250	10.00		45	43	44	93	3	13	29.88	30.08	22	OVC	250	10.00			57	57	57	100	7	18	29.91	30.10			
<b>SUNRISE: 0718</b>					<b>DEC 17</b>					<b>SUNSET: 1653</b>					<b>SUNRISE: 0721</b>					<b>DEC 23</b>					<b>SUNSET: 1656</b>				
01	OVC	003	5.00	BR	46	45	46	96	0	00	29.82	30.01	01	OVC	060	1.50	BR			59	59	59	100	6	19	29.92	30.11		
04	OVC	070	6.00	-RA BR	48	48	48	100	5	28	29.79	29.98	04	OVC	003	1.50	-RA BR			59	59	59	100	8	14	29.89	30.08		
07	OVC	110	7.00	-RA	49	49	49	100	0	00	29.76	29.95	07	OVC	110	7.00	-RA			60	60	60	100	5	13	29.88	30.07		
10	OVC	065	3.00	-RA BR	51	50	50	96	0	00	29.70	29.89	10	OVC	034	4.00	-RA BR			62	62	62	100	10	13	29.87	30.06		
13	OVC	037	4.00	RA BR	52	52	52	100	0	00	29.59	29.78	13	OVC	004	10.00	-RA			65	65	65	100	9	15	29.77	29.96		
16	OVC	100	2.50	-RA BR	53	53	53	100	5	15	29.54	29.73	16	OVC	021	2.50	-RA			67	67	67	100	14	15	29.69	29.89		
19	OVC	009	2.50	BR	53	53	53	100	3	22	29.56	29.75	19	OVC	035	9.00	-RA			70	69	69	97	14	18	29.71	29.90		
22	OVC	045	5.00	BR	53	53	53	100	7	22	29.59	29.78	22	OVC	017	10.00			70	68	69	93	18	20	29.69	29.88			
<b>SUNRISE: 0718</b>					<b>DEC 18</b>					<b>SUNSET: 1653</b>					<b>SUNRISE: 0721</b>					<b>DEC 24</b>					<b>SUNSET: 1656</b>				
01	OVC	005	6.00	BR	53	53	53	100	0	00	29.59	29.78	01	OVC	140	10.00			69	65	66	87	17	20	29.73	29.92			
04	OVC	110	5.00	-RA BR	52	52	52	100	6	02	29.58	29.78	04	OVC	150	10.00			67	62	64	84	14	23	29.77	29.96			
07	OVC	015	10.00		48	44	46	86	10	36	29.61	29.80	07	OVC	080	10.00			66	65	65	96	16	19	29.83	30.02			
10	OVC	034	10.00		43	39	41	86	11	02	29.65	29.85	10	OVC	031	5.00	RA BR			68	67	67	96	8	22	29.91	30.10		
13	OVC	043	10.00		45	34	40	66	11	33	29.63	29.82	13	OVC	090	2.00	+RA BR			68	65	66	90	20	23	29.88	30.07		
16	BKN	250	10.00		46	32	40	58	8	31	29.65	29.85	16	OVC	060	5.00	-TSRA			67	65	66	93	3	28	29.91	30.09		
19	BKN	250	10.00		43	28	37	56	16	28	29.75	29.94	19	OVC	200	10.00			68	68	68	100	6	18	29.92	30.11			
22	FEW	060	10.00		38	20	32	48	14	30	29.86	30.05	22	OVC	140	10.00			70	68	69	93	14	21	29.97	30.16			

# OBSERVATIONS AT 3-HOURLY INTERVALS

**RICHMOND, VA**

**DECEMBER 2015**

**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
<b>SUNRISE: 0722 DEC 25</b>					<b>SUNSET: 1657</b>							
01	OVC	250	10.00		69	67	68	93	10	21	29.97	30.16
04	OVC	250	10.00		68	67	67	96	8	20	29.98	30.17
07	OVC	200	10.00		68	67	67	96	9	19	30.00	30.19
10	BKN	250	10.00		69	65	66	87	9	22	30.02	30.21
13	BKN	200	10.00		73	63	67	71	13	21	29.96	30.15
16	SCT	110	10.00		70	66	67	87	10	19	29.97	30.16
19	SCT	090	10.00		66	66	66	100	7	19	30.02	30.21
22	OVC	055	10.00		67	67	67	100	5	23	30.02	30.21
<b>SUNRISE: 0722 DEC 26</b>					<b>SUNSET: 1657</b>							
01	OVC	007	8.00		66	66	66	100	6	28	30.04	30.23
04	OVC	250	10.00		63	63	63	100	10	34	30.07	30.26
07	OVC	003	3.00	-DZ BR	61	61	61	100	7	05	30.11	30.31
10	OVC	005	10.00		61	61	61	100	9	08	30.17	30.36
13	OVC	005	3.00	BR	60	59	59	96	8	06	30.14	30.34
16	OVC	004	1.25	BR	56	55	55	97	9	04	30.13	30.32
19	OVC	005	4.00	BR	55	54	54	96	7	04	30.14	30.34
22	OVC	002	0.50	-DZ FG	55	55	55	100	5	03	30.11	30.30
<b>SUNRISE: 0723 DEC 27</b>					<b>SUNSET: 1658</b>							
01	OVC	003	0.50	-DZ FG	54	54	54	100	0	00	30.05	30.24
04	VV	003	0.75	BR	55	55	55	100	3	21	29.99	30.19
07	VV	003	0.50	FG	56	56	56	100	6	24	29.97	30.16
10	SCT	250	10.00		66	63	64	90	13	22	29.93	30.12
13	BKN	026	10.00		73	63	67	71	17	24	29.81	30.01
16	BKN	250	10.00		73	62	66	69	16	21	29.77	29.96
19	BKN	300	10.00		69	62	65	78	14	21	29.78	29.97
22	OVC	300	10.00		68	63	65	84	11	23	29.81	30.00
<b>SUNRISE: 0723 DEC 28</b>					<b>SUNSET: 1659</b>							
01	OVC	022	9.00	-RA	64	62	63	93	18	36	29.88	30.07
04	OVC	017	10.00		58	53	55	84	14	36	29.95	30.14
07	OVC	022	10.00		51	44	48	77	14	03	30.07	30.26
10	OVC	036	10.00		47	40	44	77	13	04	30.16	30.35
13	OVC	038	10.00		45	37	41	74	13	05	30.14	30.33
16	OVC	022	10.00		45	38	42	77	10	04	30.13	30.32
19	OVC	010	9.00		44	42	43	93	10	05	30.08	30.27
22	OVC	004	2.50	-DZ BR	46	46	46	100	8	04	30.02	30.21
<b>SUNRISE: 0723 DEC 29</b>					<b>SUNSET: 1659</b>							
01	OVC	011	2.50	-RA BR	49	49	49	100	5	35	29.90	30.10
04	OVC	004	1.00	BR	46	45	46	96	8	33	29.85	30.04
07	OVC	003	2.00	RA BR	45	45	45	100	5	26	29.81	30.01
10	OVC	003	1.00	BR	46	45	46	96	7	31	29.83	30.03
13	OVC	005	5.00	BR	50	49	49	96	6	22	29.80	29.99
16	BKN	250	10.00		55	53	54	93	10	21	29.82	30.02
19	BKN	250	10.00		53	53	53	100	5	22	29.88	30.07
22	BKN	250	0.50	FG	53	52	52	96	0	00	29.93	30.12
<b>SUNRISE: 0723 DEC 30</b>					<b>SUNSET: 1700</b>							
01	VV	002	0.12	FG	53	53	53	100	0	00	29.96	30.15
04	VV	003	0.25	FG	54	54	54	100	5	02	30.01	30.20
07	OVC	002	0.75	-DZ BR	52	52	52	100	7	05	30.05	30.24
10	OVC	003	0.50	BR	52	52	52	100	3	08	30.06	30.25
13	VV	002	0.12	FG	54	54	54	100	0	00	30.01	30.20
16	OVC	004	1.00	-RA BR	54	54	54	100	0	00	29.98	30.17
19	OVC	003	1.00	BR	55	55	55	100	3	25	29.93	30.13
22	OVC	003	1.00	BR	54	54	54	100	3	25	29.92	30.11

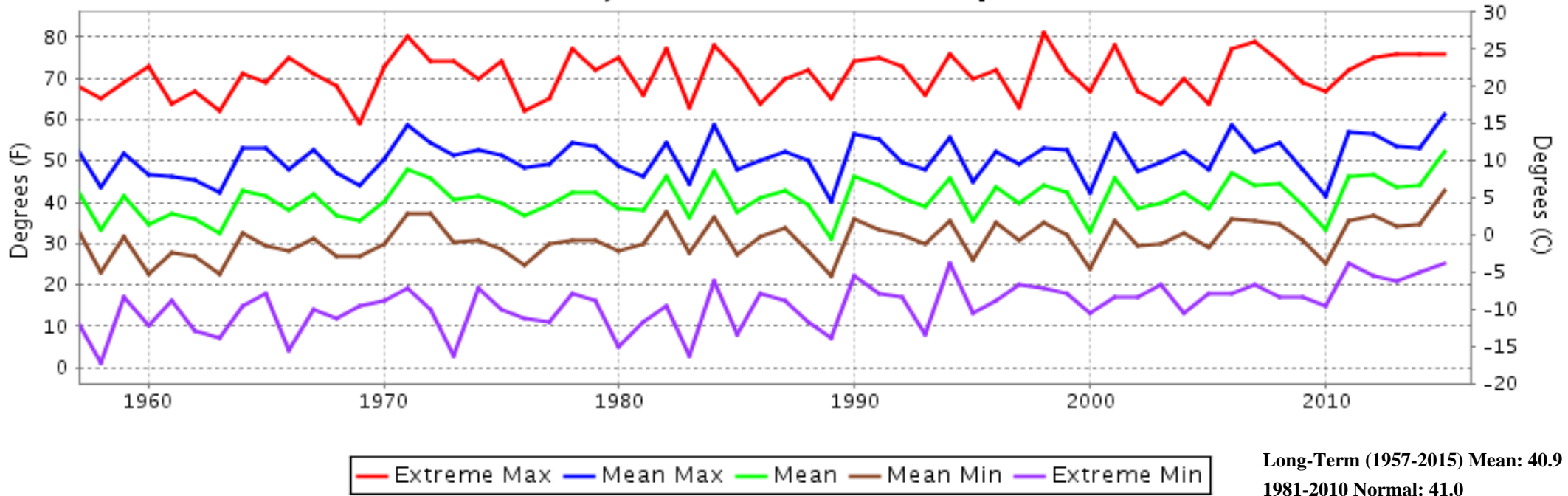
HOUR (LST)	SKY COVER	CEILING 100's of FT.	VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)	
					DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION Tens of Deg	STATION	SEA LEVEL
<b>SUNRISE: 0724 DEC 31</b>					<b>SUNSET: 1701</b>							
01	VV	003	1.00	BR	55	55	55	100	6	30	29.88	30.08
04	OVC	010	7.00		56	55	55	97	7	34	29.88	30.07
07	OVC	004	10.00		54	53	53	97	5	02	29.94	30.13
10	OVC	045	10.00		54	51	52	90	7	07	29.97	30.16
13	OVC	026	10.00		54	50	52	87	5	12	29.93	30.12
16	OVC	018	10.00		54	49	51	83	5	02	29.92	30.11
19	OVC	260	10.00		51	49	50	92	6	13	29.94	30.13
22	OVC	020	8.00		50	50	50	100	0	00	29.94	30.13

**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.

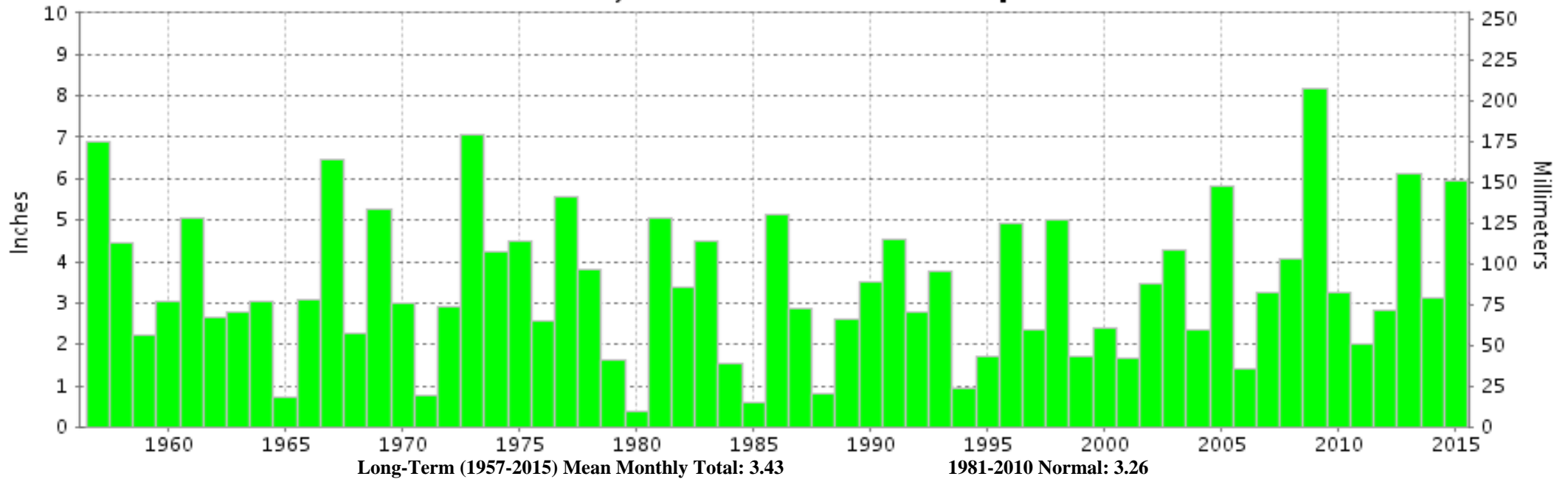
## SUMMARY BY HOUR

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	49	46	48	90	29.94	30.13	7.57	5	4	22
02	48	46	47	91	29.94	30.13	7.29	6	3	22
03	48	45	47	90	29.94	30.14	7.59	6	3	22
04	48	45	47	91	29.94	30.13	7.40	6	3	22
05	48	45	46	91	29.94	30.14	7.46	6	3	20
06	47	44	46	92	29.95	30.15	6.84	6	3	20
07	46	44	45	92	29.97	30.16	6.93	6	3	20
08	47	44	45	91	29.97	30.17	6.64	6	3	19
09	50	46	48	87	29.98	30.18	7.21	7	2	18
10	52	46	49	81	29.99	30.18	7.67	8	2	18
11	55	46	51	75	29.98	30.17	7.68	8	3	21
12	56	46	51	71	29.96	30.15	8.42	8	3	22
13	58	47	52	69	29.93	30.13	8.49	9	4	24
14	59	47	53	67	29.92	30.11	8.62	9	4	23
15	59	47	53	68	29.91	30.10	8.84	8	4	23
16	58	47	53	70	29.91	30.10	8.30	8	3	21
17	56	47	52	75	29.91	30.11	8.67	7	2	20
18	54	48	51	80	29.92	30.12	9.34	6	2	20
19	53	48	50	84	29.93	30.13	9.21	7	2	19
20	52	48	50	87	29.94	30.14	9.06	5	3	18
21	51	47	49	88	29.94	30.13	8.60	6	3	20
22	51	47	49	88	29.95	30.14	8.56	6	3	21
23	51	47	49	89	29.94	30.14	8.49	5	3	21
24	50	47	48	90	29.94	30.13	8.10	5	3	20

## RICHMOND, VA DECEMBER Temperatures



## RICHMOND, VA DECEMBER Precipitation





**DECEMBER 2015  
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, appearing to read "Thomas R. Karl".

**DIRECTOR**

NCEI now offers free online access to the **Edited Local Climatological Data Publication**. Go to : [www.ncdc.noaa.gov/IPS/lcd/lcd.html](http://www.ncdc.noaa.gov/IPS/lcd/lcd.html)

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 : [ncei.orders@noaa.gov](mailto:ncei.orders@noaa.gov)

NOAA, National Centers for Environmental Information  
Attn: Customer Engagement Branch  
151 Patton Avenue  
Asheville, NC 28801-5001