



# AUGUST 2013 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	1300 LST	2400 LST	2400 LST	AVERAGE STATION 15	AVERAGE SEA LEVEL 16	RESULTANT SPEED 17	RES DIR 18	AVERAGE SPEED 19	MAXIMUM					
																			3-SEC		2-MIN			
20	21	22	23	24																				
01	84	69	77	-1	70	72	0	12	TS TSRA RA BR	0		0.0	0.76	29.75	29.92	5.0	20	6.0	36*	30	26	31	01	
02	88	67	78	0	66	70	0	13		0		0.0	0.00	29.77	29.97	4.2	23	5.3	17	28	14	27	02	
03	90	70	80	2	67	71	0	15	RA	0		0.0	T	29.78	29.96	3.2	26	5.1	17	01	13	29	03	
04	85	64	75	-2	61	66	0	10		0		0.0	0.00	29.78	29.98	7.8	35	8.3	25	31	20	36	04	
05	83	62	73	-4	58	64	0	8		0		0.0	0.00	29.88	30.07	1.4	35	3.6	16	35	12	36	05	
06	75	65	70	-7	66	67	0	5	TS TSRA RA BR	0		0.0	1.39	29.87	30.06	7.5	13	7.8	21	09	16	10	06	
07	88	70	79	2	69	72	0	14	RA BR	0		0.0	T	29.88	30.07	6.8	19	7.2	21	20	16	21	07	
08	90	74	82	5	72	75	0	17		0		0.0	0.00	29.86	30.04	7.7	18	8.1	17	20	14	20	08	
09	93*	77	85*	8	74	77	0	20		0		0.0	0.00	29.78	29.97	10.9	22	11.3	28	22	23	22	09	
10	88	72	80	3	72	75	0	15	TS TSRA RA BR HZ	0		0.0	0.45	29.86	30.05	0.7	29	4.2	31	34	24	34	10	
11	86	73	80	3			0	15	RA BR	0		0.0	T	29.89				2.7	10	03	8	03	11	
12	91	74	83	6	72	75	0	18	FG+ BR	0		0.0	0.00	29.82	29.99	1.1	03	2.9	14	02	10	01	12	
13	89	75	82	6	72	75	0	17	RA BR	0		0.0	0.02	29.65	29.82	6.1	24	7.7	23	24	15	23	13	
14	78	61	70	-6	54	61	0	5	RA	0		0.0	0.01	29.78	30.00	8.6	36	9.0	29	01	23	36	14	
15	79	59	69	-7	56	61	0	4		0		0.0	0.00	29.96	30.15	3.9	02	4.8			9	36	15	
16	78	58	68	-8	58	62	0	3		0		0.0	0.00	29.98	30.17	3.6	02	4.0	20	14	13	02	16	
17	80	63	72	-4	63	66	0	7	RA BR	0		0.0	0.35	30.01	30.21	7.3	04	7.7	21	06	16	05	17	
18	70	66	68*	-8	65	66	0	3	RA DZ BR	0		0.0	0.54	29.99	30.19	6.9	01	7.1	17	35	15	35	18	
19	75	65	70	-6	66	68	0	5	RA MIFG BR	0		0.0	0.21	29.98	30.15	2.2	21	2.4	17	18	9	18	19	
20	85	68	77	1	70	72	0	12	BR HZ	0		0.0	0.00	29.96	30.16	2.3	18	2.6	10	15	9	15	20	
21	88	70	79	3	72	74	0	14	TS TSRA RA BR	0		0.0	0.02	29.99	30.17	3.4	16	3.6	15	15	12	17	21	
22	92	73	83	7	70	73	0	18	RA BR	0		0.0	T	29.87	30.04	2.4	26	3.7	15	29	13	28	22	
23	80	64	72	-4	68	70	0	7	TS TSRA RA BR HZ	0		0.0	1.78	29.82	30.02	3.4	01	4.7	32	36	26*	01	23	
24	84	62	73	-3	62	66	0	8	BR	0		0.0	0.00	30.03	30.25	3.8	03	5.0	17	03	13	03	24	
25	82	60	71	-5	59	64	0	6		0		0.0	0.00	30.17	30.36	3.8	06	4.8	16	06	13	05	25	
26	85	57*	71	-5	59	64	0	6		0		0.0	0.00	30.03	30.20	6.0	21	6.1	17	18	14	21	26	
27	92	65	79	4	66	71	0	14	RA BR HZ	0		0.0	0.01	29.80	29.98	4.6	25	5.6	16	28	13	26	27	
28	83	72	78	3	71	73	0	13	TS TSRA RA BR HZ	0		0.0	2.07	29.72	29.90	3.0	23	5.7	29	02	22	02	28	
29	87	69	78	3	70	73	0	13	BR	0		0.0	0.00	29.73	29.95	5.7	03	7.0	22	06	18	07	29	
30	86	65	76	1	67	70	0	11	MIFG BR	0		0.0	0.00	29.83	30.01	3.2	17	3.3	15	22	10	15	30	
31	90	71	81	6	70	73	0	16	RA	0		0.0	T	29.72	29.90	8.1	20	8.3	25	19	21	19	31	

84.6	67.1	75.9	☼	66.2	69.5	0.0	11.1	< MONTHLY AVERAGES   TOTALS >				0.0	7.61	29.87	30.06	0.7	23	5.7	< MONTHLY AVERAGES			
-3.0	-0.3	-1.6		----- DEPARTURE FROM NORMAL -----								2.95	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3									

<b>DEGREE DAYS</b>				<b>GREATEST 24-HR PRECIPITATION :</b> 2.07 <b>DATE :</b> 28				<b>SEA LEVEL PRESSURE</b>											
<b>MONTHLY</b>				<b>GREATEST 24-HR SNOWFALL :</b> 0.0 <b>DATE :</b>				<b>MAXIMUM :</b> 30.42 <b>DATE</b> 25 <b>TIME</b> 0954											
<b>TOTAL DEPARTURE</b>				<b>GREATEST SNOW DEPTH :</b> 0 <b>DATE :</b>				<b>MINIMUM :</b> 29.76 <b>DATE</b> 13 <b>TIME</b> 1756											
<b>SEASON TO DATE</b>				<b>NUMBER OF -&gt; DAYS WITH</b>				<b>MAXIMUM TEMP &gt;= 90 :</b> 7				<b>MINIMUM TEMP &lt;= 32 :</b> 0				<b>PRECIPITATION &gt;= 0.01 INCH :</b> 12			
<b>HEATING :</b> 0 -1 0 -1				<b>MAXIMUM TEMP &lt;= 32 :</b> 0				<b>MINIMUM TEMP &lt;= 0 :</b> 0				<b>PRECIPITATION &gt;= 0.10 INCH :</b> 8							
<b>COOLING :</b> 344 -44 1405 98				<b>THUNDERSTORMS :</b> 6				<b>HEAVY FOG :</b> 1				<b>SNOWFALL &gt;= 1.0 INCH :</b> 0							

**AUGUST 2013  
RICHMOND, VA**

# HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA (KRIC)  
AUGUST 2013

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	0.03	0.02	0.06	T								0.04	01	0.12	0.31					0.18	T					01	0.76	0.76
02													02													02	0.00	0.00
03													03						T	T						03	T	T
04													04													04	0.00	0.00
05													05													05	0.00	0.00
06			T	T	0.46	0.33	T	0.14	0.34	0.03	T	T	06													06	1.39	1.39
07			T										07													07	T	T
08													08													08	0.00	0.00
09													09													09	0.00	0.00
10													10	T	0.45									T	T	10	0.45	0.45
11	T	T											11													11	T	T
12													12													12	0.00	0.00
13													13	T												13	0.02	0.02
14	0.01	T											14													14	0.01	0.01
15													15													15	0.00	0.00
16													16													16	0.00	0.00
17													17								0.02	0.02	0.03	0.20	0.08	17	0.35	0.35
18	0.06	0.01	0.01	0.07	0.08	0.12	0.02	0.05	0.02	0.03	T	0.02	18	T	T	T		T	T	0.02	0.01	0.02	T	T	18	0.54	0.54	
19				0.01	T	0.04	0.06	0.01	0.04	0.05	T		19			T										19	0.21	0.21
20													20													20	0.00	0.00
21													21								0.01	0.01				21	0.02	0.02
22			T	T									22													22	T	T
23												0.12	23	0.05		0.11	1.28	0.08	0.01	T	0.03	T	0.10		23	1.78	1.78	
24													24													24	0.00	0.00
25													25													25	0.00	0.00
26													26													26	0.00	0.00
27													27						0.01	T					27	0.01	0.01	
28										0.02	T	T	28	T	T	T	T	0.02	0.05	0.02		0.40	1.53	0.03	28	2.07	2.07	
29													29													29	0.00	0.00
30													30													30	0.00	0.00
31													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)	0.39	0.52	0.69	0.90	1.09	1.30	1.53	1.93	1.96	1.96	1.96	1.96
Ending Date	28	23	23	28	28	28	28	28	28	28	28	28
Ending Time (Hr/Min)	2158	1533	1537	2159	2158	2208	2159	2200	2208	2208	2208	2208

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 2013

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

Beginning with the January 2013 LCD, monthly mean temperature calculations have changed to the National Data Stewardship Team standard. Monthly maximum and minimum temperature are not rounded until after monthly mean temperature is calculated. This is the most accurate outcome, but may be slightly different from the mean derived from rounded monthly maximum and minimum.

Date	VISIBILITY (MILES)	
	MINIMUM	MAXIMUM
01	2.00	10.00
02	7.00	10.00
03	9.00	10.00
04	9.00	10.00
05	10.00	10.00
06	1.75	10.00
07	4.00	10.00
08	9.00	10.00
09	7.00	10.00
10	5.00	10.00
11	5.00	10.00
12	0.25	10.00
13	4.00	10.00
14	10.00	10.00
15	10.00	10.00
16	10.00	10.00
17	5.00	10.00
18	1.00	10.00
19	2.00	10.00
20	0.75	10.00
21	6.00	10.00
22	6.00	10.00
23	1.50	10.00
24	6.00	10.00
25	9.00	10.00
26	10.00	10.00
27	5.00	10.00
28	0.75	10.00
29	2.50	10.00
30	4.00	10.00
31	9.00	10.00
<b>AVGS</b>	5.53	10.00
<b>MINIMUM VISIBILITY (MILES)</b>		
<= .25	<= 3.0	>= 7.0
1	9	12

# OBSERVATIONS AT 3-HOURLY INTERVALS

**RICHMOND, VA**  
**AUGUST 2013**      **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: 0513</b>					<b>AUG 01</b>					<b>SUNSET: 1918</b>					<b>SUNRISE: 0518</b>					<b>AUG 07</b>					<b>SUNSET: 1912</b>				
01	OVC	060	3.00	-RA BR	71	69	70	94	6	15	29.82	30.01	01	OVC	110	10.00			70	67	68	90	3	18	29.89	30.08			
04	OVC	040	4.00	BR	72	69	70	91	9	18	29.76	29.95	04	OVC	006	8.00			71	68	69	90	6	21	29.90	30.09			
07	OVC	030	3.00	BR	73	71	72	94	9	17	29.75	29.94	07	OVC	300	6.00	BR		73	69	70	87	3	16	29.90	30.09			
10	OVC	007	8.00		75	72	73	90	9	19	29.75	29.93	10	BKN	300	10.00			82	70	74	67	10	21	29.91	30.10			
13	BKN	029	9.00		77	73	74	88	6	24	29.71	29.90	13	BKN	300	10.00			87	63	71	45	13	22	29.89	30.08			
16	BKN	110	10.00		83	74	77	74	6	23	29.66	29.85	16	BKN	250	10.00			87	67	74	51	14	20	29.85	30.04			
19	BKN	120	7.00	-TSRA	73	67	69	81	7	19	29.69	29.88	19	BKN	250	10.00			81	70	74	69	5	16	29.86	30.04			
22	OVC	240	10.00		71	68	69	90	0	00	29.72	29.91	22	BKN	200	10.00			77	71	73	82	6	17	29.88	30.06			
<b>SUNRISE: 0514</b>					<b>AUG 02</b>					<b>SUNSET: 1917</b>					<b>SUNRISE: 0519</b>					<b>AUG 08</b>					<b>SUNSET: 1911</b>				
01	SCT	250	10.00		68	66	67	93	0	00	29.71	29.90	01	OVC	150	10.00			77	71	73	82	6	16	29.88	30.06			
04	CLR	NC	7.00		67	65	66	93	3	21	29.73	29.92	04	OVC	150	10.00			75	71	72	88	7	17	29.87	30.05			
07	CLR	NC	10.00		72	68	69	87	0	00	29.78	29.97	07	BKN	170	10.00			77	72	74	85	8	18	29.89	30.08			
10	FEW	250	10.00		84	67	73	57	3	VR	29.82	30.01	10	OVC	300	10.00			84	73	76	70	7	17	29.88	30.07			
13	BKN	250	10.00		85	65	72	51	5	19	29.80	29.99	13	OVC	300	10.00			87	70	75	57	10	19	29.86	30.05			
16	BKN	300	10.00		86	66	73	51	9	23	29.78	29.97	16	BKN	250	10.00			88	70	76	55	10	18	29.82	30.01			
19	BKN	300	10.00		83	65	71	55	5	24	29.78	29.97	19	OVC	250	10.00			83	73	76	72	7	15	29.83	30.01			
22	BKN	300	10.00		74	66	69	76	7	22	29.80	29.99	22	BKN	200	10.00			79	73	75	82	8	17	29.83	30.02			
<b>SUNRISE: 0515</b>					<b>AUG 03</b>					<b>SUNSET: 1916</b>					<b>SUNRISE: 0520</b>					<b>AUG 09</b>					<b>SUNSET: 1910</b>				
01	BKN	300	10.00		75	65	69	71	6	24	29.80	29.98	01	OVC	230	10.00			78	74	75	87	6	19	29.81	30.00			
04	BKN	230	10.00		71	66	68	84	0	00	29.79	29.97	04	OVC	170	9.00			77	74	75	90	7	20	29.80	29.99			
07	BKN	300	9.00		74	68	70	82	6	20	29.80	29.99	07	OVC	300	9.00			80	73	75	79	9	22	29.81	30.00			
10	BKN	300	10.00		84	67	73	57	9	23	29.79	29.98	10	OVC	300	10.00			87	74	78	65	15	22	29.79	29.98			
13	BKN	200	10.00		88	65	73	46	10	24	29.75	29.94	13	BKN	300	10.00			93	74	79	54	16	24	29.78	29.96			
16	OVC	300	10.00		85	66	72	53	9	31	29.75	29.94	16	BKN	250	10.00			92	74	79	56	16	22	29.74	29.92			
19	BKN	130	10.00		79	70	73	74	3	05	29.75	29.94	19	BKN	250	10.00			88	75	79	66	9	22	29.74	29.93			
22	BKN	120	10.00		76	70	72	82	0	00	29.76	29.95	22	BKN	250	10.00			85	75	78	72	11	22	29.80	29.98			
<b>SUNRISE: 0516</b>					<b>AUG 04</b>					<b>SUNSET: 1915</b>					<b>SUNRISE: 0521</b>					<b>AUG 10</b>					<b>SUNSET: 1909</b>				
01	OVC	110	9.00		73	69	70	87	0	00	29.74	29.93	01	OVC	250	10.00			82	73	76	74	9	23	29.80	29.99			
04	BKN	100	9.00		72	68	69	87	7	36	29.73	29.91	04	SCT	250	10.00			80	72	75	76	8	25	29.81	30.00			
07	FEW	085	10.00		73	62	66	69	11	36	29.77	29.96	07	BKN	250	10.00			80	73	75	79	0	00	29.85	30.04			
10	CLR	NC	10.00		79	58	66	49	14	01	29.81	29.99	10	BKN	240	10.00			84	71	75	65	0	00	29.88	30.06			
13	FEW	060	10.00		83	55	66	38	14	35	29.80	29.98	13	OVC	300	9.00	-TSRA		87	73	77	63	7	11	29.84	30.03			
16	FEW	060	10.00		84	55	66	37	13	31	29.78	29.97	16	BKN	200	6.00	HZ		78	72	74	82	10	01	29.86	30.04			
19	FEW	060	10.00		78	59	66	52	5	01	29.80	29.99	19																
22	FEW	060	10.00		68	60	63	76	0	00	29.85	30.04	22	OVC	200	6.00	BR		75	72	73	90	0	00	29.92	30.11			
<b>SUNRISE: 0516</b>					<b>AUG 05</b>					<b>SUNSET: 1914</b>					<b>SUNRISE: 0522</b>					<b>AUG 11</b>					<b>SUNSET: 1908</b>				
01	CLR	NC	10.00		64	58	60	81	0	00	29.86	30.05	01	BKN	120	6.00	-RA BR		75	72	73	90	0	00	29.89	30.08			
04	SCT	080	10.00		65	57	60	76	7	32	29.88	30.06	04	OVC	070	5.00	BR		73	71	72	94	0	00	29.90	30.09			
07	SCT	250	10.00		68	57	62	68	10	35	29.91	30.10	07	BKN	100	6.00	BR		75	71	72	88	3	03	29.92	30.11			
10	SCT	180	10.00		79	58	66	49	3	02	29.93	30.12	10	OVC	034	9.00			79	72	74	79	5	05	29.93	30.12			
13	BKN	150	10.00		81	54	65	39	3	VR	29.89	30.07	13	OVC	036	10.00			82	72	75	72	3	17	29.90	30.08			
16	BKN	250	10.00		81	57	66	44	6	10	29.85	30.04	16	BKN	200	10.00			84	72	76	67	0	00	29.86	30.04			
19	SCT	250	10.00		78	58	66	50	7	23	29.86	30.05	19	BKN	180	10.00			80	74	76	82	5	12	29.85	30.04			
22	BKN	250	10.00		70	62	65	76	5	13	29.85	30.04	22																
<b>SUNRISE: 0517</b>					<b>AUG 06</b>					<b>SUNSET: 1913</b>					<b>SUNRISE: 0522</b>					<b>AUG 12</b>					<b>SUNSET: 1907</b>				
01	OVC	085	10.00		69	64	66	84	7	14	29.85	30.04	01	SCT	055	1.50	BR		76	74	75	94	0	00	29.84	30.03			
04	OVC	050	10.00		68	64	66	87	6	12	29.83	30.02	04	BKN	120	2.50	BR		74	72	73	94	0	00	29.83	30.01			
07	OVC	048	10.00		66	63	64	90	8	12	29.86	30.05	07	BKN	300	6.00	BR		77	73	74	88	3	34	29.84	30.03			
10	OVC	018	10.00		69	66	67	90	8	14	29.88	30.07	10	BKN	300	10.00			85	72	76	65	0	00	29.84	30.03			
13	OVC	022	10.00		72	66	68	82	13	15	29.89	30.08	13	SCT	045	10.00			90	71	77	54	0	00	29.81	30.00			
16	BKN	043	10.00		74	67	69	79	7	15	29.88	30.07	16	BKN	300	10.00			89	70	76	53	0	00	29.78	29.97			
19	BKN	200	10.00		72	68	69	87	6	10	29.88	30.07	19	BKN	300	8.00			83	74	77	74	3	VR	29.77	29.96			
22	SCT	250	10.00		70	67	68	90	6	14	29.90	30.09	22																

# OBSERVATIONS AT 3-HOURLY INTERVALS

## RICHMOND, VA

### AUGUST 2013

### 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: 0523</b>					<b>AUG 13</b>					<b>SUNSET: 1906</b>					<b>SUNRISE: 0528</b>					<b>AUG 19</b>					<b>SUNSET: 1857</b>				
01	OVC	220	7.00		79	75	76	88	3	16	29.72	29.90	01	OVC	033	10.00			66	63	64	90	0	00	30.00	30.19			
04	OVC	220	4.00	BR	76	74	75	94	3	19	29.67	29.85	04	OVC	110	6.00		BR	66	64	65	93	0	00	29.99	30.18			
07	OVC	300	7.00		77	72	74	85	8	21	29.65	29.84	07	OVC	048	2.00		-RA BR	67	65	66	93	0	00	30.00	30.19			
10	OVC	130	10.00		82	71	74	69	10	26	29.67	29.86	10	OVC	011	2.00		-RA BR	69	66	67	90	5	19	29.98	30.17			
13	BKN	250	10.00		86	72	76	63	14	23	29.62	29.80	13	OVC	012	10.00			72	67	69	84	6	23	29.98	30.16			
16	BKN	250	10.00		87	71	76	59	8	27	29.58	29.77	16	OVC	014	10.00			74	68	70	82	6	22	29.93	30.12			
19	BKN	190	10.00		84	72	76	67	3	22	29.60	29.78	19	OVC	027	10.00			74	68	70	82	0	00	29.92	30.11			
22	BKN	250	10.00		81	74	76	79	5	29	29.61	29.80	22	SCT	250	7.00		MIFG	69	67	68	93	0	00	29.95	30.14			
<b>SUNRISE: 0524</b>					<b>AUG 14</b>					<b>SUNSET: 1904</b>					<b>SUNRISE: 0529</b>					<b>AUG 20</b>					<b>SUNSET: 1855</b>				
01	OVC	075	10.00	-RA	73	68	70	84	6	01	29.63	29.82	01	OVC	004	7.00			71	69	70	94	3	20	29.94	30.13			
04	SCT	120	10.00		70	59	63	68	18	36	29.68	29.86	04	OVC	023	7.00			71	69	70	94	0	00	29.93	30.12			
07	BKN	100	10.00		65	49	56	56	15	36	29.79	29.98	07	VV	002	0.75		BR	71	69	70	94	3	22	29.97	30.16			
10	BKN	250	10.00		69	49	58	49	7	03	29.85	30.04	10	OVC	250	10.00			79	70	73	74	0	00	30.01	30.19			
13	BKN	250	10.00		74	50	60	43	10	33	29.83	30.02	13	OVC	250	10.00			84	70	74	63	0	00	30.00	30.19			
16	BKN	250	10.00		76	52	62	43	13	34	29.84	30.02	16	BKN	250	10.00			85	69	74	59	8	17	29.95	30.14			
19	BKN	250	10.00		71	54	61	55	6	36	29.86	30.05	19	BKN	250	10.00			79	71	74	77	6	16	29.96	30.15			
22	SCT	250	10.00		65	55	59	70	0	00	29.92	30.11	22	BKN	250	10.00			75	71	72	88	0	00	30.00	30.19			
<b>SUNRISE: 0525</b>					<b>AUG 15</b>					<b>SUNSET: 1903</b>					<b>SUNRISE: 0530</b>					<b>AUG 21</b>					<b>SUNSET: 1854</b>				
01	SCT	300	10.00		62	54	58	75	8	35	29.93	30.12	01	BKN	250	7.00			73	70	71	90	0	00	30.01	30.19			
04	SCT	300	10.00		61	53	57	75	7	36	29.94	30.13	04	BKN	250	7.00			72	69	70	91	0	00	30.00	30.19			
07	BKN	300	10.00		61	54	57	78	7	01	29.98	30.17	07	OVC	250	7.00			74	70	71	88	0	00	30.03	30.22			
10	BKN	300	10.00		69	59	63	70	5	VR	30.00	30.19	10	OVC	250	10.00			82	72	75	72	7	15	30.04	30.23			
13	BKN	250	10.00		77	54	63	45	0	00	29.97	30.16	13	BKN	250	10.00			87	72	77	61	6	14	30.00	30.19			
16	BKN	250	10.00		77	55	64	47	5	05	29.93	30.11	16	BKN	250	10.00			87	73	77	63	6	16	29.94	30.13			
19	SCT	250	10.00		71	60	64	68	3	09	29.94	30.13	19	BKN	220	10.00			80	74	76	82	0	00	29.93	30.12			
22	SCT	050	10.00		65	59	61	81	3	11	29.98	30.17	22	BKN	095	10.00			75	73	74	94	5	17	29.94	30.13			
<b>SUNRISE: 0526</b>					<b>AUG 16</b>					<b>SUNSET: 1902</b>					<b>SUNRISE: 0531</b>					<b>AUG 22</b>					<b>SUNSET: 1853</b>				
01	FEW	055	10.00		61	57	59	87	0	00	29.96	30.15	01	SCT	150	10.00			74	71	72	91	3	18	29.92	30.11			
04	CLR	NC	10.00		59	56	57	90	0	00	29.95	30.14	04	BKN	120	9.00			75	73	74	94	7	20	29.88	30.07			
07	SCT	300	10.00		63	59	61	87	6	36	29.98	30.17	07	BKN	250	8.00			76	72	73	88	6	23	29.90	30.09			
10	BKN	300	10.00		75	57	64	54	7	02	30.00	30.19	10	SCT	250	10.00			84	72	76	67	0	00	29.90	30.08			
13	OVC	300	10.00		76	55	64	48	7	05	29.98	30.17	13	SCT	250	10.00			89	69	75	52	8	36	29.86	30.04			
16	BKN	250	10.00		75	54	63	48	6	01	29.97	30.16	16	SCT	250	10.00			89	70	76	53	0	00	29.80	29.98			
19	BKN	250	10.00		71	61	65	71	3	36	29.98	30.17	19	SCT	200	10.00			85	66	72	53	6	26	29.80	29.98			
22	FEW	040	10.00		65	59	61	81	5	03	30.01	30.20	22	SCT	250	10.00			77	69	72	77	0	00	29.82	30.01			
<b>SUNRISE: 0527</b>					<b>AUG 17</b>					<b>SUNSET: 1859</b>					<b>SUNRISE: 0532</b>					<b>AUG 23</b>					<b>SUNSET: 1851</b>				
01	FEW	055	10.00		64	59	61	84	7	01	30.00	30.19	01	FEW	210	10.00			75	70	72	84	3	26	29.79	29.98			
04	SCT	050	10.00		64	59	61	84	6	02	30.00	30.19	04	SCT	240	10.00			73	68	70	84	0	00	29.77	29.95			
07	BKN	060	10.00		67	60	63	79	9	02	30.03	30.22	07	OVC	300	10.00			75	70	72	84	0	00	29.81	29.99			
10	OVC	250	10.00		76	63	68	64	9	05	30.05	30.24	10	OVC	220	10.00			80	70	73	71	0	00	29.81	30.00			
13	OVC	150	10.00		78	64	69	62	6	07	30.03	30.22	13	OVC	070	6.00		BR	76	72	73	88	5	07	29.82	30.01			
16	OVC	070	10.00		77	63	68	62	9	06	30.01	30.20	16	OVC	030	1.50		RA BR	71	68	69	90	13	01	29.82	30.01			
19	OVC	035	10.00		74	64	68	71	6	04	30.01	30.20	19	OVC	030	3.00		-RA BR	70	68	69	93	9	35	29.86	30.05			
22	OVC	040	7.00	-RA	71	67	68	87	6	04	30.02	30.21	22	OVC	060	7.00		-RA	64	61	62	90	6	11	29.94	30.13			
<b>SUNRISE: 0527</b>					<b>AUG 18</b>					<b>SUNSET: 1858</b>					<b>SUNRISE: 0533</b>					<b>AUG 24</b>					<b>SUNSET: 1850</b>				
01	OVC	007	8.00	-RA	69	67	68	93	8	03	29.98	30.16	01	CLR	NC	10.00			63	61	62	93	3	31	29.94	30.13			
04	OVC	007	3.00	-RA BR	68	66	67	93	9	03	29.96	30.15	04	CLR	NC	10.00			62	60	61	93	3	32	29.98	30.17			
07	OVC	013	2.00	-DZ BR	67	65	66	93	11	01	29.99	30.18	07	FEW	300	9.00			65	62	63	90	6	34	30.03	30.22			
10	OVC	011	2.00	-RA BR	68	66	67	93	7	01	30.02	30.21	10	FEW	030	10.00			77	66	70	69	8	02	30.07	30.26			
13	OVC	015	9.00	-DZ	69	66	67	90	11	36	30.01	30.20	13	SCT	040	10.00			82	62	69	51	5	03	30.07	30.26			
16	OVC	020	10.00		68	64	66	87	8	02	30.00	30.19	16	SCT	045	10.00			81	61	68	51	10	02	30.07	30.26			
19	OVC	005	1.00	-RA BR	67	65	66	93	0	00	30.01	30.20	19	FEW	045	10.00			76	61	67	60	3	04	30.08	30.27			
22	OVC	005	3.00	-DZ BR	66	64	65	93	0	00	30.04	30.23	22	FEW	050	10.00			68	64	66	87	0	00	30.15	30.34			

# OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

AUGUST 2013

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: 0533</b>					<b>AUG 25</b>					<b>SUNSET: 1849</b>				
01	FEW	080	10.00		67	63	65	87	0	00	30.14	30.33		
04	CLR	NC	10.00		64	61	62	90	5	35	30.16	30.35		
07	SCT	250	10.00		67	64	65	91	6	01	30.22	30.41		
10	BKN	250	10.00		76	61	67	60	8	03	30.23	30.42		
13	BKN	250	10.00		79	57	66	47	10	06	30.20	30.39		
16	BKN	250	10.00		80	57	66	45	6	07	30.15	30.35		
19	BKN	250	10.00		70	57	62	64	3	12	30.12	30.31		
22	SCT	250	10.00		64	57	60	78	3	14	30.14	30.33		
<b>SUNRISE: 0534</b>					<b>AUG 26</b>					<b>SUNSET: 1847</b>				
01	FEW	300	10.00		61	56	58	84	3	19	30.13	30.32		
04	FEW	300	10.00		58	55	56	90	0	00	30.10	30.29		
07	BKN	300	10.00		63	57	60	81	6	21	30.10	30.29		
10	SCT	300	10.00		76	60	66	58	7	24	30.09	30.28		
13	SCT	300	10.00		83	61	69	48	10	21	30.01	30.20		
16	SCT	300	10.00		85	60	69	43	10	22	29.93	30.12		
19	SCT	300	10.00		78	60	67	54	8	21	29.90	30.09		
22	SCT	300	10.00		72	58	64	61	5	22	29.90	30.09		
<b>SUNRISE: 0535</b>					<b>AUG 27</b>					<b>SUNSET: 1846</b>				
01	BKN	300	10.00		70	58	63	66	5	23	29.86	30.05		
04	BKN	210	10.00		68	59	63	73	6	22	29.83	30.02		
07	BKN	230	10.00		70	62	65	76	7	24	29.84	30.02		
10	BKN	250	10.00		83	67	72	59	6	21	29.80	29.99		
13	OVC	300	10.00		91	66	74	44	7	27	29.78	29.96		
16	BKN	300	8.00		89	68	75	50	10	28	29.74	29.93		
19	OVC	300	5.00	HZ	80	74	76	82	0	00	29.74	29.93		
22	OVC	300	6.00	HZ	79	73	75	82	0	00	29.77	29.95		
<b>SUNRISE: 0536</b>					<b>AUG 28</b>					<b>SUNSET: 1844</b>				
01	OVC	220	5.00	HZ	78	73	75	85	3	32	29.73	29.92		
04	OVC	120	5.00	BR	76	73	74	91	0	00	29.72	29.91		
07	OVC	300	2.50	BR	76	73	74	91	3	18	29.75	29.94		
10	OVC	070	2.50	HZ	79	73	75	82	6	27	29.77	29.96		
13	OVC	160	10.00		82	68	73	63	9	28	29.73	29.92		
16	OVC	095	9.00	-RA	78	71	73	79	3	22	29.70	29.89		
19	OVC	080	5.00	BR	75	72	73	90	7	20	29.67	29.86		
22	OVC	041	0.75	TS+RA BR	72	70	71	94	10	07	29.69	29.88		
<b>SUNRISE: 0537</b>					<b>AUG 29</b>					<b>SUNSET: 1843</b>				
01	OVC	023	10.00		74	71	72	91	0	00	29.64	29.83		
04	OVC	012	3.00	BR	73	71	72	94	8	36	29.67	29.85		
07	OVC	070	2.50	BR	75	72	73	90	9	01	29.72	29.91		
10	OVC	032	7.00		77	72	74	85	7	02	29.76	29.95		
13	SCT	250	10.00		82	70	74	67	10	03	29.77	29.96		
16	SCT	110	10.00		83	69	74	63	9	08	29.78	29.97		
19	SCT	040	10.00		77	70	72	79	7	10	29.81	30.00		
22	CLR	NC	10.00		72	68	69	87	3	06	29.85	30.04		
<b>SUNRISE: 0538</b>					<b>AUG 30</b>					<b>SUNSET: 1842</b>				
01	CLR	NC	9.00		69	66	67	90	0	00	29.86	30.04		
04	CLR	NC	7.00	MIFG	68	65	66	90	0	00	29.85	30.04		
07	SCT	300	4.00	BR	69	67	68	93	0	00	29.88	30.07		
10	SCT	300	10.00		78	66	70	67	0	00	29.88	30.07		
13	SCT	300	10.00		83	67	72	59	0	00	29.83	30.02		
16	SCT	250	10.00		85	66	72	53	7	19	29.78	29.97		
19	SCT	250	10.00		79	68	72	69	8	15	29.76	29.95		
22	CLR	NC	10.00		74	68	70	82	7	16	29.77	29.96		

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: 0538</b>					<b>AUG 31</b>					<b>SUNSET: 1840</b>				
01	FEW	046	10.00		72	69	70	91	6	18	29.76	29.95		
04	FEW	090	10.00		71	68	69	90	6	19	29.74	29.93		
07	FEW	250	10.00		73	69	70	87	9	19	29.74	29.93		
10	BKN	250	10.00		82	70	74	67	11	20	29.75	29.94		
13	BKN	250	10.00		88	71	76	57	14	20	29.71	29.90		
16	BKN	250	10.00		88	71	76	57	13	19	29.66	29.84		
19	OVC	250	10.00		82	70	74	67	9	19	29.67	29.86		
22	OVC	200	10.00		77	70	72	79	6	20	29.69	29.88		

## 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

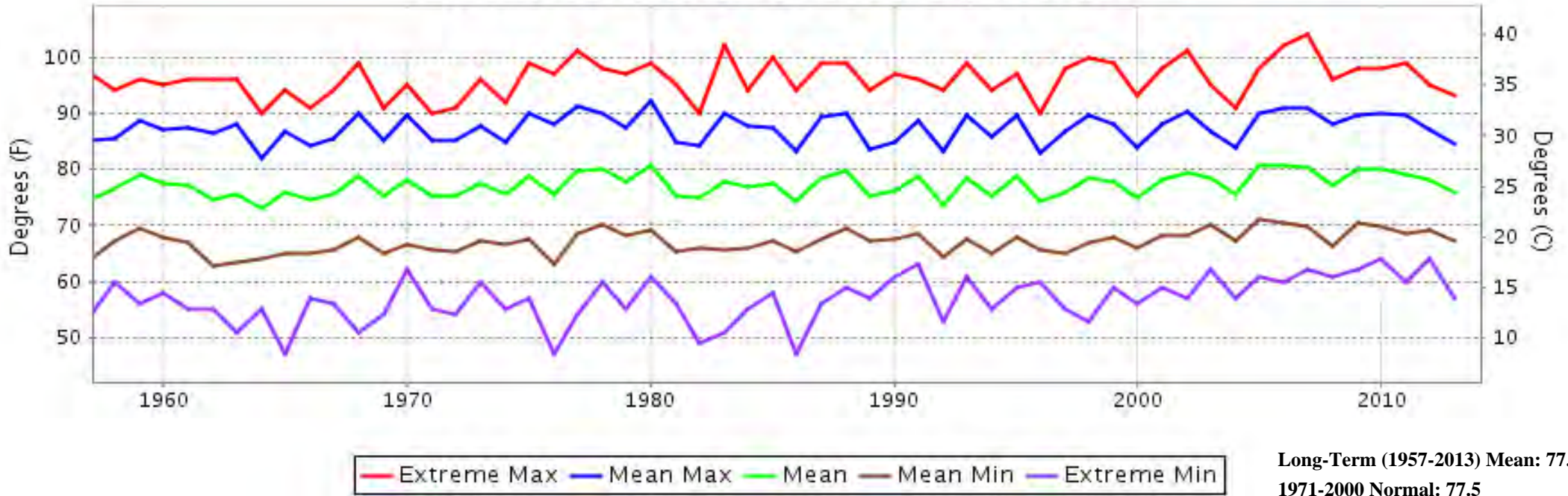
Ceiling is reported in hundreds of feet above ground level for clouds at or below 12,000 feet. NC = No Ceiling detected.

& = Original observation contained additional weather elements. See page 3 for additional notes.

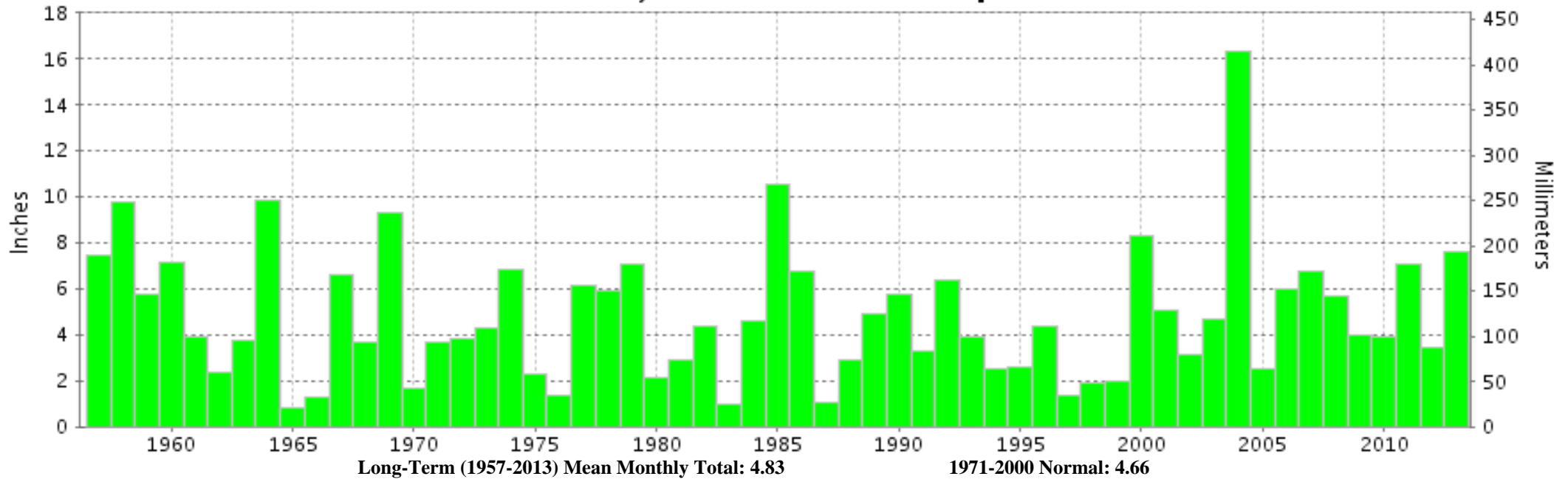
## SUMMARY BY HOUR

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	71	67	68	86	29.87	30.05	8.79	3	1	23
02	71	66	68	87	29.86	30.05	8.81	5	1	25
03	70	66	68	87	29.86	30.05	8.44	4	1	25
04	70	66	67	88	29.86	30.05	7.92	4	1	24
05	69	66	67	88	29.87	30.05	7.72	5	1	23
06	69	65	67	87	29.88	30.07	6.90	4	0	20
07	71	66	68	85	29.89	30.08	7.54	6	1	24
08	74	66	69	79	29.90	30.08	8.39	7	1	25
09	76	67	70	74	29.90	30.09	8.82	7	1	25
10	78	67	71	68	29.90	30.09	9.05	6	1	24
11	80	66	71	63	29.90	30.08	9.44	8	1	26
12	81	66	71	61	29.89	30.08	9.44	8	1	25
13	82	66	71	59	29.87	30.06	9.77	8	1	26
14	82	66	71	59	29.86	30.05	9.68	9	1	25
15	82	66	72	59	29.85	30.04	9.35	8	1	26
16	82	66	71	59	29.84	30.03	9.50	8	1	26
17	81	66	71	61	29.84	30.03	9.37	8	0	21
18	80	67	71	65	29.84	30.03	9.13	6	1	24
19	77	67	71	71	29.85	30.04	8.97	5	0	13
20	75	68	70	78	29.86	30.05	9.10	5	1	11
21	73	67	69	81	29.87	30.06	9.10	5	2	10
22	72	67	69	83	29.88	30.07	8.85	4	1	11
23	72	67	69	84	29.88	30.06	9.20	3	0	16
24	71	66	68	85	29.87	30.06	9.30	3	1	22

## RICHMOND, VA AUGUST Temperatures



## RICHMOND, VA AUGUST Precipitation





**AUGUST 2013  
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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