



SEPTEMBER 2002

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

RICHMOND, VA

R.E.BYRD INTERNATIONAL AP (RIC)
 Lat: 37°30' N Long: 77°19' W Elev (Ground): 164 Feet
 Time Zone: EASTERN WBAN: 13740 ISSN #:0198-537X

DATE	TEMPERATURE °F						DEG DAYS BASE 65°		WEATHER	SNOW/ICE ON GND(IN)		PRECIPITATION (INCHES)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES								DATE
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING		0700 LST	1300 LST	2400 LST	2400 LST	AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT SPEED	RES DIR	AVERAGE SPEED	MAXIMUM					
																			5-SEC		2-MIN			
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	71	64	68	-6	65	66	0	3	RA BR			0.0	1.08	30.03	30.21	10.2	36	10.7	21	01	17	01	01	
02	77	63	70	-4	64	65	0	5	RA DZ BR			0.0	T	29.92	30.11	3.2	34	5.1	16	01	12	33	02	
03	87	61	74	1	68	70	0	9	BR			0.0	0.00	29.87	30.05	5.3	20	5.8	21	20	14	23	03	
04	94*	69	82*	9	70	73	0	17	TS TSRA RA BR			0.0	0.27	29.80	29.99	0.8	28	7.0	29	04	22	30	04	
05	85	66	76	3	60	65	0	11				0.0	0.00	29.87	30.06	5.7	01	6.1	21	02	15	36	05	
06	82	62	72	0	60	64	0	7				0.0	0.00	29.97	30.16	5.8	05	6.3	16	01	14	03	06	
07	81	59	70	-2	60	64	0	5				0.0	0.00	30.08	30.27	2.8	06	4.2	20	05	14	07	07	
08	82	61	72	0	64	67	0	7	FG+ BR			0.0	0.00	30.07	30.25	3.9	04	5.3	15	06	12	06	08	
09	87	61	74	2	59	65	0	9	BR			0.0	0.00	29.88	30.07	8.2	03	8.8	23	02	16	04	09	
10	85	69	77	6	70	72	0	12	RA BR			0.0	0.02	29.59	29.78	9.1	02	9.8	22	01	18	02	10	
11	88	65	77	6	56	64	0	12				0.0	0.00	29.54	29.72	9.9	33	12.2	29	36	24	36	11	
12	77	56	67	-4	49	57	0	2				0.0	0.00	29.88	30.06	3.9	36	5.2	21	35	15	01	12	
13	82	52*	67	-4	56	61	0	2				0.0	0.00	29.96	30.15	5.1	19	6.0	21	19	14	21	13	
14	81	62	72	1	69	70	0	7	RA BR			0.0	0.05	29.98	30.17	7.2	19	7.4	24	17	20	17	14	
15	79	70	75	5	73	73	0	10	RA DZ BR			0.0	0.72	29.96	30.14	7.5	20	7.8	28	21	24	21	15	
16	82	70	76	6	72	73	0	11	RA BR			0.0	0.15	29.82	30.00	1.6	19	4.8	14	01	12	01	16	
17	83	64	74	4	63	66	0	9	BR			0.0	0.00	29.84	30.03	4.3	35	5.3	18	31	15	36	17	
18	83	60	72	2	63	66	0	7	BR HZ			0.0	0.00	29.87	30.05	2.4	13	3.1	12	05	9	14	18	
19	81	62	72	2	63	66	0	7	BR HZ			0.0	0.00	29.88	30.07	4.1	15	4.6	16	19	12	13	19	
20	84	65	75	6	69	70	0	10	BR			0.0	0.00	29.85	30.03	5.8	16	6.4	15	16	13	16	20	
21	85	66	76	8	68	70	0	11				0.0	0.00	29.83	30.01	6.3	18	6.9	20	19	13	17	21	
22	86	64	75	7	67	69	0	10	BR			0.0	0.00	29.81	29.99	4.3	16	4.6	17	14	14	18	22	
23	73	62	68	0	61	64	0	3				0.0	0.00	29.90	30.09	10.4	01	10.5	28	01	22	01	23	
24	79	55	67	0	54	59	0	2				0.0	0.00	30.04	30.22	5.7	02	6.4	18	01	13	02	24	
25	77	58	68	1	59	63	0	3	RA			0.0	T	30.05	30.24	7.0	04	7.7	16	05	14	06	25	
26	69	63	66*	0	66	67	0	1	RA FG BR			0.0	0.59	29.84	30.03	6.1	03	6.5	16	03	13	03	26	
27	86	66	76	10	73	74	0	11	RA BR			0.0	T	29.58	29.77	9.3	19	11.2	31*	17	24	19	27	
28	79	60	70	4	62	65	0	5	RA			0.0	T	29.82	30.01	9.3	36	11.3	29	01	24*	35	28	
29	77	56	67	2	59	61	0	2	BR			0.0	0.00	30.03	30.22	4.4	03	5.1	15	01	13	01	29	
30	78	57	68	3	60	63	0	3	BR			0.0	0.00	30.07	30.25	2.1	11	3.1	13	21	9	13	30	

81.3	62.3	71.8	■ ■	63.4	66.4	0.0	7.1	< MONTHLY AVERAGES	TOTALS-->	0.0	2.88	29.89	30.07	1.6	04	6.8	<-- MONTHLY AVERAGES
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1.6	2.4	2.0	■ ■	←-----DEPARTURE FROM NORMAL----->							-1.10	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3						
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DEGREE DAYS				GREATEST 24-HR PRECIPITATION: 1.08 DATE :01				SEA LEVEL PRESSURE DATE TIME							
MONTHLY TOTAL DEPARTURE				SEASON TO DATE TOTAL DEPARTURE				GREATEST 24-HR SNOWFALL: 0.0 DATE :				MAXIMUM : 30.31 30 0854			
HEATING: 0 -27				0 -28				GREATEST SNOW DEPTH:				MINIMUM : 29.59 11 0354			
COOLING: 213 26				1696 301				NUMBER OF DAYS WITH →		MAXIMUM TEMP ≥ 90: 1		MINIMUM TEMP ≤ 32: 0		PRECIPITATION ≥ 0.01 INCH : 7	
								MAXIMUM TEMP ≤ 32 : 0		MINIMUM TEMP ≤ 0 : 0		PRECIPITATION ≥ 0.10 INCH : 5			
								THUNDERSTORMS : 1		HEAVY FOG : 1		SNOWFALL ≥ 1.0 INCH : 0			

SEPTEMBER 2002
 RICHMOND, VA

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA

SEPTEMBER 2002 RIC WBAN # 13740

DATE	FOR HOUR (LST) ENDING AT												DATE	FOR HOUR (LST) ENDING AT												DATE	Sum if Different (See Note)	2400 LST	
	1	2	3	4	5	6	7	8	9	10	11	12		13	14	15	16	17	18	19	20	21	22	23	24			Water	Equiv.
01	0.08	0.09	0.13	0.21	0.05	0.03	0.09	0.39	0.01				01		T										01		1.08		
02	T	T	T		T	T	T	T					02												02		T		
03													03												03		0.00		
04													04								0.25	0.02			04		0.27		
05													05												05		0.00		
06													06												06		0.00		
07													07												07		0.00		
08													08												08		0.00		
09					0.02	T							09												09		0.00		
10													10				T								10		0.02		
11													11												11		0.00		
12													12												12		0.00		
13													13												13		0.00		
14													14			0.03	T	0.01	0.01	T					14		0.05		
15						T	T						15	0.08	T	T	T				0.05	0.07	0.12	T	15		0.72		
16	0.01	0.08	0.01										16	0.01											16		0.15		
17													17												17		0.00		
18													18												18		0.00		
19													19												19		0.00		
20													20												20		0.00		
21													21												21		0.00		
22													22												22		0.00		
23													23												23		0.00		
24													24												24		0.00		
25													25								T	T			25		T		
26			T	0.02	0.01	0.05	0.06	0.05	0.04	0.02	0.03	0.05	26	0.08	0.06	0.06	0.03	0.01	T	T	T	0.01	T	T	0.01	26		0.59	
27					T								27		T						T	T			27		T		
28													28												28		T		
29	T												29												29		0.00		
30													30												30		0.00		

MAXIMUM SHORT DURATION PRECIPITATION (See Note)

Time Period (Minutes)	5	10	15	20	30	45	60	80	100	120	150	180
Precipitation (Inches)												
Ending Date												
Ending Time (Hour/Min)												

Date and time are not entered for TRACE amounts.

Note : The sum of the hourly totals is given when it differs from the daily total. 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.

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.

Water Equivalent of snow on the ground is reported only when the depth is 2 or more inches.

NORMALS ARE FOR THE YEARS 1971–2000

WEATHER NOTATIONS

QUALIFIER	WEATHER PHENOMENA		
	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	SQ Squalls
PR Partial	RA Rain	PY Spray	SS Sandstorm
SH Shower(s)	SG Snow Grains	SA Sand	GL Glaze
TS Thunderstorm	SN Snow	VA Volcanic Ash	
VC In the Vicinity	UP Unknown Precipitation		

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

RICHMOND, VA SEPTEMBER 2002

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).

Satellite data are used to derive cloudiness above 12,000 feet. Effective Cloud Amount is based on the cloud cover and the transparency of the clouds within the satellite field of view (approx. 31x31 miles).

Sky Condition is based on the sum (not to exceed 8) of the sunrise to sunset cloud cover below and above 12,000 feet. Both ceilometer and satellite data must be present to compute Sky Condition. 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.

Dew Point is the temperature to which the air must be cooled to achieve 100% relative humidity. Wet Bulb is the temperature the air would have if cooled to saturation at constant pressure by evaporation of water into it.

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

ADDITIONAL NOTES:

DATE	SUNSHINE		CLOUDINESS (OKTAS)				VISIBILITY (MILES)		RESERVED
	TOTAL MINUTES	PERCENT POSSIBLE	SR–SS		MN–MN		MINIMUM	MAXIMUM	
			CEILOMETER	SATELLITE	CEILOMETER	SATELLITE			
01							.75	10.00	
02							4.00	10.00	
03							.50	10.00	
04							.50	10.00	
05							10.00	10.00	
06							9.00	10.00	
07							7.00	10.00	
08							.13	10.00	
09							4.00	10.00	
10							4.00	10.00	
11							8.00	10.00	
12							10.00	10.00	
13							8.00	10.00	
14							5.00	10.00	
15							1.00	10.00	
16							1.50	10.00	
17							4.00	10.00	
18							3.00	10.00	
19							4.00	10.00	
20							6.00	10.00	
21							10.00	10.00	
22							3.00	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							10.00	10.00	
26							.25	10.00	
27							.25	10.00	
28							9.00	10.00	
29							3.00	10.00	
30							3.00	10.00	
MONTHLY AVGS							5.12	10.00	
SUNSHINE (MINUTES)									
Total: Possible: Percent Possible:									
NUMBER OF DAYS WITH:									
SKY CONDITION									
CLR PTLY CLDY CLOUDY MISSING 30									
MINIMUM VISIBILITY (MILES)									
<=0.25 <=3.0 >=7.0 3 10 11									

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

SEPTEMBER 2002

RIC

WBAN # 13740

HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)				
	SKY COVER	CEILING 100'S OF FT			OBSERVATION TIME (LST)	EFF CLD AMT Oktas	DRY BULB		DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL			SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)		EFF CLD AMT Oktas	DRY BULB	DEW POINT	WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION
			SUNRISE: 0539		SEP 01	SUNSET: 1838								SUNRISE: 0544		SEP 07	SUNSET: 1829											
01	OVC	005	3.00	RA BR	67	67	67	100	10	02	30.10	30.29	01	CLR	NC		10.00				64	63	63	96	0	00	30.04	30.23
04	OVC	006	4.00	-RA BR	67	67	67	100	9	02	30.05	30.24	04	CLR	NC		10.00				60	60	60	100	3	01	30.05	30.24
07	OVC	008	2.00	+RA BR	66	66	66	100	12	36	30.07	30.25	07	CLR	NC		10.00				63	62	62	97	3	36	30.08	30.27
10	OVC	005	5.00	BR	65	65	65	100	12	01	30.07	30.26	10	FEW	NC		10.00				75	60	66	60	9	02	30.11	30.29
13	OVC	009	9.00		67	64	65	91	12	35	30.03	30.22	13	FEW	NC		10.00				79	59	67	50	7	03	30.09	30.28
16	OVC	013	10.00		68	64	66	87	14	36	29.97	30.16	16	CLR	NC		10.00				80	55	65	42	10	09	30.06	30.25
19	OVC	012	10.00		68	65	66	90	8	34	29.96	30.15	19	CLR	NC		10.00				73	57	63	57	5	08	30.07	30.26
22	OVC	008	10.00		66	64	65	93	10	35	29.98	30.17	22	CLR	NC		10.00				65	61	63	87	3	09	30.11	30.29
			SUNRISE: 0540		SEP 02	SUNSET: 1837								SUNRISE: 0545		SEP 08	SUNSET: 1828											
01	OVC	007	4.00	-DZ BR	65	64	64	97	8	33	29.96	30.15	01	CLR	NC		5.00	BR			64	64	64	100	0	00	30.11	30.29
04	OVC	006	7.00		65	64	64	97	8	34	29.94	30.13	04	FEW	NC		4.00	BR			62	62	62	100	3	35	30.09	30.28
07	OVC	012	5.00	-RA BR	64	64	64	100	7	01	29.97	30.16	07	VV	001		0.13	FG			63	63	63	100	3	01	30.10	30.29
10	OVC	015	10.00		68	62	64	81	10	34	29.95	30.14	10	SCT	NC		10.00				74	66	69	76	8	01	30.12	30.31
13	OVC	022	10.00		72	63	66	73	0	00	29.92	30.11	13	SCT	NC		10.00				80	64	70	58	9	07	30.08	30.27
16	BKN	034	10.00		75	63	67	66	0	00	29.87	30.06	16	SCT	NC		10.00				79	64	69	60	9	11	30.02	30.21
19	CLR	NC	10.00		71	65	67	81	5	17	29.87	30.06	19	SCT	NC		10.00				75	65	69	71	5	08	30.02	30.21
22	CLR	NC	7.00		65	64	64	97	3	14	29.89	30.08	22	CLR	NC		10.00				68	66	67	93	6	03	30.02	30.21
			SUNRISE: 0541		SEP 03	SUNSET: 1835								SUNRISE: 0546		SEP 09	SUNSET: 1826											
01	CLR	NC	4.00	BR	63	63	63	100	0	00	29.89	30.08	01	CLR	NC		10.00				65	64	64	97	5	36	29.99	30.18
04	FEW	NC	4.00	BR	62	62	62	100	6	14	29.89	30.08	04	CLR	NC		10.00				63	62	62	97	6	36	29.95	30.14
07	FEW	NC	1.00	BR	64	64	64	100	5	19	29.90	30.09	07	SCT	NC		4.00	BR			64	64	64	100	8	01	29.95	30.14
10	SCT	NC	10.00		77	68	71	74	8	20	29.90	30.09	10	SCT	NC		10.00				76	63	68	64	10	02	29.93	30.12
13	CLR	NC	10.00		84	68	73	59	8	18	29.86	30.05	13	SCT	NC		10.00				84	58	68	41	12	05	29.88	30.07
16	FEW	NC	10.00		87	70	75	57	10	19	29.82	30.01	16	BKN	250		10.00				85	50	64	30	10	05	29.81	30.00
19	BKN	250	10.00		78	72	74	82	7	19	29.83	30.01	19	BKN	250		10.00				77	56	64	48	3	36	29.81	30.00
22	FEW	NC	9.00		74	72	73	94	5	19	29.84	30.03	22	BKN	150		10.00				75	57	64	54	9	03	29.78	29.97
			SUNRISE: 0542		SEP 04	SUNSET: 1834								SUNRISE: 0547		SEP 10	SUNSET: 1825											
01	CLR	NC	10.00		74	70	71	88	8	21	29.81	30.00	01	OVC	150		10.00				72	62	66	71	8	03	29.74	29.93
04	FEW	NC	8.00		70	68	69	93	7	20	29.80	29.98	04	BKN	150		10.00				71	66	68	84	9	02	29.70	29.88
07	SCT	NC	6.00	BR	72	70	71	94	7	19	29.83	30.01	07	OVC	008		10.00				70	69	69	97	7	02	29.68	29.87
10	CLR	NC	9.00		84	71	75	65	6	24	29.82	30.01	10	BKN	010		10.00				77	73	74	88	12	02	29.66	29.85
13	SCT	NC	10.00		93	71	78	49	7	25	29.79	29.97	13	BKN	250		10.00				83	73	76	72	13	04	29.58	29.77
16	SCT	NC	9.00	TS	92	72	78	52	8	01	29.75	29.93	16	BKN	250		10.00				85	72	76	65	12	03	29.52	29.70
19	SCT	NC	8.00		82	74	76	77	6	09	29.76	29.95	19	BKN	250		10.00				79	72	74	79	3	03	29.49	29.67
22	OVC	150	6.00	BR	72	71	71	97	7	36	29.81	30.00	22	BKN	250		10.00				74	71	72	91	7	36	29.46	29.64
			SUNRISE: 0543		SEP 05	SUNSET: 1832								SUNRISE: 0548		SEP 11	SUNSET: 1823											
01	FEW	NC	10.00		69	62	65	78	8	35	29.83	30.02	01	BKN	250		10.00				73	68	70	84	10	29	29.44	29.62
04	FEW	NC	10.00		67	58	62	73	9	35	29.84	30.02	04	SCT	NC		10.00				71	60	64	68	12	28	29.41	29.59
07	FEW	NC	10.00		68	57	62	68	9	01	29.89	30.08	07	CLR	NC		10.00				75	56	64	52	13	28	29.44	29.62
10	CLR	NC	10.00		77	60	66	56	7	03	29.91	30.10	10	CLR	NC		9.00				84	64	71	51	12	31	29.48	29.66
13	FEW	NC	10.00		82	60	68	47	7	03	29.87	30.06	13	SCT	NC		10.00				86	58	68	39	20	31	29.49	29.67
16	CLR	NC	10.00		83	59	68	44	9	02	29.84	30.02	16	FEW	NC		10.00				82	53	65	37	22	36	29.55	29.73
19	FEW	NC	10.00		77	60	66	56	5	02	29.86	30.05	19	CLR	NC		10.00				72	49	59	44	8	01	29.64	29.83
22	CLR	NC	10.00		69	63	65	81	0	00	29.89	30.08	22	CLR	NC		10.00				66	48	56	52	10	36	29.74	29.93
			SUNRISE: 0544		SEP 06	SUNSET: 1831								SUNRISE: 0549		SEP 12	SUNSET: 1822											
01	CLR	NC	10.00		65	63	64	93	0	00	29.91	30.10	01	CLR	NC		10.00				65	46	55	51	9	35	29.77	29.96
04	CLR	NC	10.00		63	63	63	100	0	00	29.92	30.11	04	CLR	NC		10.00				58	47	52	67	5	36	29.80	29.98
07	OVC	250	9.00		66	64	65	93	8	05	29.96	30.15	07	CLR	NC		10.00				60	49	54	67	9	34	29.86	30.05
10	BKN	250	10.00		75	59	65	58	10	05	29																	

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

SEPTEMBER 2002

RIC

WBAN # 13740

HOUR (LST)	SATellite		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATellite		WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)					
	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)		DIRECTION TENS OF DEG	STATION		SEA LEVEL	OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
01	CLR	NC		10.00	56	54	55	93	5	14	29.96	30.15	01	BKN	250	5.00	BR	66	65	65	96	0	00	29.88	30.07		
04	CLR	NC		10.00	56	55	55	97	0	00	29.95	30.14	04	BKN	250	5.00	BR	63	63	63	100	0	00	29.87	30.06		
07	CLR	NC		9.00	57	56	56	96	0	00	29.99	30.18	07	SCT	NC	4.00	BR	64	64	64	100	0	00	29.91	30.10		
10	CLR	NC		10.00	73	57	63	57	7	22	30.00	30.19	10	BKN	150	7.00		74	63	67	69	7	20	29.92	30.11		
13	SCT	NC		10.00	80	53	64	39	12	23	29.95	30.14	13	OVC	060	10.00		79	61	68	54	9	13	29.88	30.07		
16	FEW	NC		10.00	82	52	64	35	8	23	29.90	30.09	16	BKN	180	10.00		80	59	67	49	7	16	29.84	30.03		
19	SCT	NC		10.00	71	57	63	61	8	16	29.93	30.12	19	BKN	080	10.00		72	62	66	71	6	13	29.84	30.03		
22	SCT	NC		10.00	66	59	62	78	7	18	29.97	30.16	22	OVC	075	10.00		69	64	66	84	5	12	29.88	30.07		
SUNRISE: 0550		SEP 14		SUNSET: 1819		SUNRISE: 0555		SEP 20		SUNSET: 1809																	
01	SCT	NC		10.00	64	59	61	84	0	00	29.97	30.16	01	OVC	065	10.00		68	66	67	93	3	15	29.88	30.07		
04	BKN	250		10.00	65	63	64	93	0	00	29.97	30.16	04	BKN	250	10.00		66	66	66	100	0	00	29.87	30.06		
07	OVC	250		6.00	BR	67	66	66	97	0	00	30.00	30.19	07	OVC	040	6.00	BR	67	67	67	100	3	16	29.88	30.07	
10	OVC	180		10.00	76	72	73	88	10	19	30.01	30.20	10	SCT	NC	10.00		77	71	73	82	8	23	29.89	30.08		
13	OVC	030		8.00	BR	81	72	75	74	10	19	29.98	30.16	13	BKN	250	10.00		82	69	73	65	5	19	29.85	30.03	
16	OVC	150		5.00	BR	77	74	75	90	9	18	29.96	30.15	16	OVC	250	10.00		83	70	74	65	9	17	29.80	29.98	
19	OVC	012		7.00	BR	72	72	72	100	12	18	29.98	30.17	19	OVC	250	10.00		77	70	72	79	7	16	29.80	29.98	
22	OVC	070		6.00	BR	71	71	71	100	10	18	29.99	30.18	22	SCT	NC	10.00		71	70	70	96	7	15	29.83	30.01	
SUNRISE: 0551		SEP 15		SUNSET: 1817		SUNRISE: 0556		SEP 21		SUNSET: 1808																	
01	OVC	009		5.00	BR	72	72	72	100	13	20	29.98	30.17	01	CLR	NC	10.00		68	66	67	93	6	17	29.80	29.99	
04	OVC	060		4.00	BR	71	71	71	100	8	20	29.97	30.15	04	CLR	NC	10.00		67	67	67	100	7	17	29.81	30.01	
07	OVC	008		2.50	BR	73	72	72	96	9	20	29.99	30.18	07	CLR	NC	10.00		68	68	68	100	6	18	29.84	30.03	
10	OVC	016		6.00	BR	76	73	74	91	9	22	30.01	30.19	10	CLR	NC	10.00		79	67	71	67	8	19	29.84	30.02	
13	OVC	140		4.00	BR	75	75	75	100	9	20	29.97	30.16	13	BKN	046	10.00		85	67	73	55	9	19	29.80	29.99	
16	OVC	140		10.00	-RA	77	75	76	94	5	17	29.92	30.11	16	BKN	070	10.00		82	69	73	65	7	17	29.79	29.98	
19	OVC	110		8.00	-RA	74	74	74	100	3	13	29.91	30.10	19	SCT	NC	10.00		75	69	71	82	3	15	29.81	30.00	
22	OVC	038		5.00	-RA BR	70	70	70	100	6	24	29.92	30.11	22	SCT	NC	10.00		70	69	69	97	6	14	29.85	30.04	
SUNRISE: 0552		SEP 16		SUNSET: 1816		SUNRISE: 0557		SEP 22		SUNSET: 1806																	
01	OVC	090		5.00	-RA BR	70	70	70	100	5	17	29.86	30.05	01	BKN	250	10.00		68	68	68	100	6	16	29.84	30.03	
04	OVC	006		4.00	BR	71	71	71	100	7	20	29.82	30.01	04	BKN	250	10.00		66	66	66	100	3	14	29.84	30.03	
07	OVC	008		3.00	BR	72	72	72	100	6	22	29.84	30.03	07	FEW	NC	10.00		65	65	65	100	5	12	29.85	30.04	
10	OVC	008		2.00	-RA BR	73	73	73	100	7	19	29.85	30.04	10	SCT	NC	10.00		78	70	73	76	7	18	29.85	30.03	
13	OVC	009		10.00		75	74	74	96	0	00	29.82	30.01	13	SCT	NC	10.00		84	66	72	55	8	18	29.78	29.97	
16	SCT	NC		10.00		82	72	75	72	9	01	29.76	29.94	16	BKN	250	10.00		84	63	70	49	7	15	29.74	29.92	
19	CLR	NC		10.00		74	73	73	97	0	00	29.77	29.96	19	BKN	250	10.00		74	67	69	79	3	15	29.75	29.94	
22	CLR	NC		6.00	BR	72	72	72	100	3	31	29.80	29.99	22	OVC	250	10.00		71	70	70	96	6	14	29.78	29.97	
SUNRISE: 0553		SEP 17		SUNSET: 1814		SUNRISE: 0558		SEP 23		SUNSET: 1805																	
01	BKN	095		7.00	BR	70	68	69	93	8	35	29.80	29.99	01	OVC	010	10.00		72	72	72	100	0	00	29.78	29.96	
04	FEW	NC		6.00	BR	66	64	65	93	7	36	29.82	30.01	04	OVC	095	10.00		71	69	70	94	7	36	29.79	29.98	
07	SCT	NC		4.00	BR	66	65	65	96	9	36	29.88	30.06	07	OVC	085	10.00		69	65	66	87	13	36	29.86	30.05	
10	CLR	NC		10.00		77	62	68	60	5	VR	29.89	30.08	10	OVC	200	10.00		70	58	63	66	16	01	29.91	30.10	
13	SCT	NC		10.00		81	58	67	46	9	35	29.84	30.03	13	BKN	200	10.00		70	58	63	66	14	35	29.92	30.11	
16	BKN	250		10.00		81	59	67	47	7	31	29.80	29.98	16	OVC	060	10.00		73	58	64	59	12	02	29.92	30.11	
19	BKN	250		8.00		71	64	67	79	0	00	29.81	30.00	19	BKN	075	10.00		68	58	62	70	9	01	29.95	30.14	
22	SCT	NC		6.00	BR	67	64	65	91	0	00	29.84	30.03	22	BKN	200	10.00		64	56	59	75	7	01	29.98	30.17	
SUNRISE: 0554		SEP 18		SUNSET: 1813		SUNRISE: 0559		SEP 24		SUNSET: 1803																	
01	BKN	250		6.00	BR	65	64	64	97	0	00	29.85	30.04	01	OVC	200	10.00		61	52	56	72	9	01	29.99	30.17	
04	BKN	250		4.00	BR	63	62	62	97	0	00	29.86	30.05	04	SCT	NC	10.00		57	50	53	78	7	36	29.98	30.17	
07	BKN	150		4.00	BR	64	64	64	100	0	00	29.88	30.07	07	FEW	NC	10.00		58	51	54	78	7	01	30.03	30.22	
10	BKN	250		6.00	HZ	77	66	70	69	5	18	29.90	30.09	10	SCT	NC	10.00		71	53	61	53	9	05	30.06	30.25	
13	BKN	250		7.00		81	60	68	49	5	04	29.86	30.05	13	BKN	200	10.00		77	55	64	47	8	32	30.04	30.23	
16	BKN	250		9.00		81	62	69	53	3	10	29.83	30.02	16	BKN	250	10.00		77	54	63	45	7	03	30.01	30.20	
19	OVC	250		8.00		72	65	68	79	7	14	29.84	30.03	19	BKN	250	10.00		68	55	61	63	6	06	30.04	30.24	
22	OVC	250		6.00	BR	68	65	66	90	8	14	29.88	30.07	22	OVC	250	10.00		63	56	59	78	3	02	30.08	30.27	

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

SEPTEMBER 2002

RIC

WBAN # 13740

HOUR (LST)	SATELLITE			WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE			WEATHER	TEMPERATURE °F				WIND		PRESSURE (INCHES, HG)						
	SKY COVER	CEILING 100'S OF FT	OBSERVATION TIME (LST)		EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG		STATION	SEA LEVEL	SKY COVER		CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	
SUNRISE: 0559					SEP 25		SUNSET: 1802					SUNRISE: SEP 31 SUNSET:																		
01	OVC	250		10.00		60	56	58	86	5	36	30.07	30.26																	
04	OVC	250		10.00		59	55	57	87	6	02	30.07	30.26																	
07	OVC	250		10.00		60	56	58	86	6	36	30.08	30.27																	
10	BKN	250		10.00		71	64	67	79	9	06	30.09	30.28																	
13	OVC	250		10.00		75	61	66	62	8	06	30.04	30.23																	
16	OVC	100		10.00		74	60	65	62	10	05	30.01	30.20																	
19	OVC	130		10.00		70	61	64	73	8	04	30.02	30.21																	
22	OVC	150		10.00		67	60	63	79	6	04	30.02	30.21																	
SUNRISE: 0600					SEP 26		SUNSET: 1800																							
01	OVC	150		10.00		65	62	63	90	6	03	29.98	30.16																	
04	OVC	035		6.00	-RA BR	63	63	63	100	9	03	29.94	30.12																	
07	OVC	006		2.00	-RA BR	64	64	64	100	10	04	29.92	30.11																	
10	OVC	006		1.50	-RA BR	65	65	65	100	7	03	29.90	30.09																	
13	OVC	006		1.50	-RA BR	68	68	68	100	8	05	29.82	30.01																	
16	OVC	004		1.50	-RA BR	68	68	68	100	6	01	29.77	29.96																	
19	OVC	003		3.00	-RA BR	69	69	69	100	7	07	29.75	29.94																	
22	VV	001		0.50	-RA FG	69	69	69	100	6	01	29.73	29.92																	
SUNRISE: 0601					SEP 27		SUNSET: 1759																							
01	OVC	001		1.75	BR	67	67	67	100	6	36	29.71	29.90																	
04	OVC	001		0.25	BR	66	66	66	100	0	00	29.66	29.85																	
07	SCT	NC		2.00	BR	72	72	72	100	6	17	29.64	29.83																	
10	OVC	018		10.00		77	74	75	90	10	17	29.62	29.81																	
13	BKN	047		10.00		84	75	78	74	16	18	29.54	29.72																	
16	BKN	250		10.00		85	75	78	72	20	19	29.49	29.67																	
19	BKN	250		10.00		80	76	77	87	16	18	29.51	29.69																	
22	OVC	034		10.00		78	77	77	97	12	21	29.55	29.72																	
SUNRISE: 0602					SEP 28		SUNSET: 1757																							
01	OVC	075		10.00		77	75	76	94	8	24	29.57	29.76																	
04	OVC	065		9.00		75	74	74	96	13	32	29.64	29.83																	
07	BKN	041		10.00		69	59	63	70	15	01	29.77	29.96																	
10	FEW	NC		10.00		73	59	65	62	17	02	29.85	30.03																	
13	FEW	NC		10.00		77	61	67	58	15	01	29.85	30.04																	
16	CLR	NC		10.00		77	58	65	52	14	05	29.85	30.04																	
19	CLR	NC		10.00		69	59	63	70	5	01	29.92	30.11																	
22	CLR	NC		10.00		62	59	60	90	6	36	29.95	30.14																	
SUNRISE: 0603					SEP 29		SUNSET: 1756																							
01	CLR	NC		10.00		59	58	58	96	7	01	29.97	30.16																	
04	CLR	NC		7.00		57	57	57	100	7	36	29.98	30.17																	
07	CLR	NC		3.00	BR	58	57	57	97	6	01	30.03	30.22																	
10	FEW	NC		9.00		70	62	65	76	8	04	30.06	30.25																	
13	SCT	NC		10.00		75	58	65	55	5	10	30.02	30.21																	
16	BKN	050		10.00		73	58	64	59	10	04	30.02	30.20																	
19	CLR	NC		9.00		67	61	63	81	5	08	30.04	30.24																	
22	CLR	NC		6.00	BR	61	60	60	97	0	00	30.06	30.25																	
SUNRISE: 0604					SEP 30		SUNSET: 1754																							
01	CLR	NC		5.00	BR	60	59	59	96	0	00	30.06	30.25																	
04	CLR	NC		5.00	BR	58	58	58	100	0	00	30.06	30.25																	
07	CLR	NC		4.00	BR	59	59	59	100	3	14	30.10	30.29																	
10	SCT	NC		10.00		71	62	66	73	7	VR	30.11	30.30																	
13	BKN	045		10.00		75	58	65	55	0	00	30.06	30.25																	
16	SCT	NC		10.00		76	57	65	52	5	16	30.03	30.22																	
19	FEW	NC		10.00		68	62	64	81	5	09	30.03	30.23																	
22	SCT	NC		10.00		65	62	63	90	3	12	30.06	30.25																	

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, VV = 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.

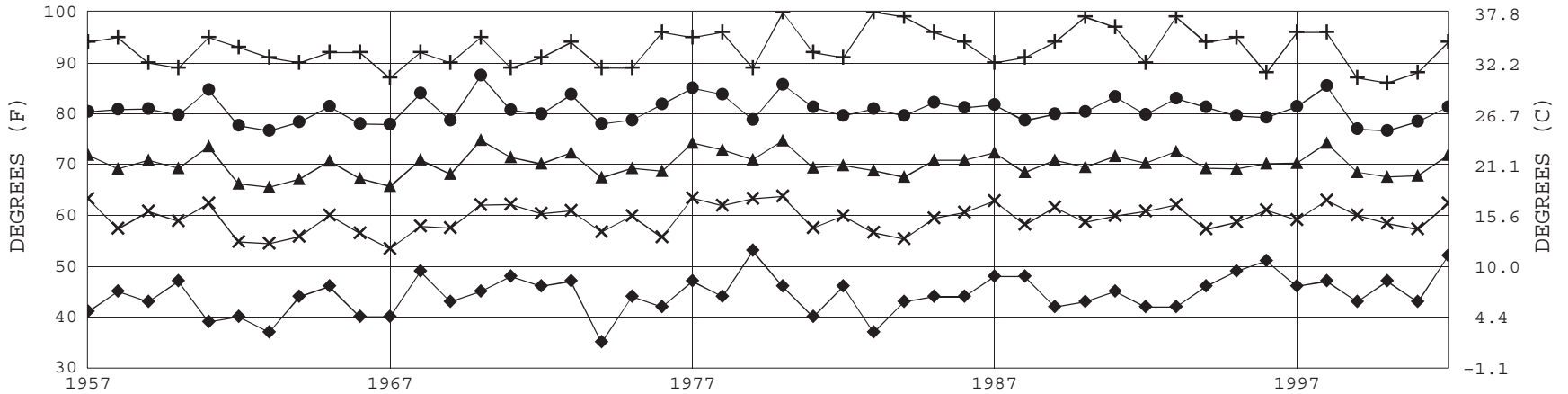
& = Original observation contained additional weather elements.

See page 3 for additional notes.

SUMMARY BY HOUR

HOUR (LST)	AVERAGES										RESULTANT WIND (MPH)	
	CEILOMETER	EFF CLD AMT	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY	PRESSURE (INCHES, HG)		VISIBILITY (MILES)	WIND SPEED (MPH)	DIRECTION	
							STATION	SEA LEVEL			SPEED	DIRECTION
01			66	64	65	91	29.88	30.07	8.03	5	1	34
02			66	63	64	92	29.88	30.07	7.74	5	1	34
03			65	63	64	92	29.88	30.06	7.78	5	2	36
04			65	63	63	94	29.88	30.07	7.58	5	2	35
05			64	62	63	93	29.88	30.07	6.98	6	3	36
06			64	62	63	93	29.89	30.08	6.55	6	3	1
07			66	63	64	92	29.91	30.10	6.22	6	3	1
08			68	64	66	87	29.92	30.10	7.22	8	3	1
09			72	65	67	79	29.92	30.11	8.33	9	3	3
10			74	64	68	73	29.92	30.11	8.82	9	2	2
11			77	64	69	65	29.91	30.10	9.00	8	3	2
12			78	63	68	62	29.90	30.09	8.88	8	2	2
13			79	63	69	61	29.88	30.07	9.32	9	1	2
14			80	63	69	59	29.87	30.05	9.53	7	1	7
15			80	62	69	58	29.85	30.04	9.43	8	2	5
16			79	62	69	58	29.85	30.04	9.48	9	3	6
17			79	63	69	60	29.85	30.04	9.57	8	3	8
18			76	63	68	68	29.85	30.04	9.37	7	3	8
19			73	64	67	75	29.86	30.05	9.37	6	2	10
20			71	64	67	80	29.88	30.06	9.23	5	2	11
21			69	64	66	85	29.88	30.07	8.68	6	2	10
22			68	64	66	88	29.89	30.08	8.58	6	1	7
23			68	64	66	89	29.89	30.08	8.44	5	0	0
24			67									

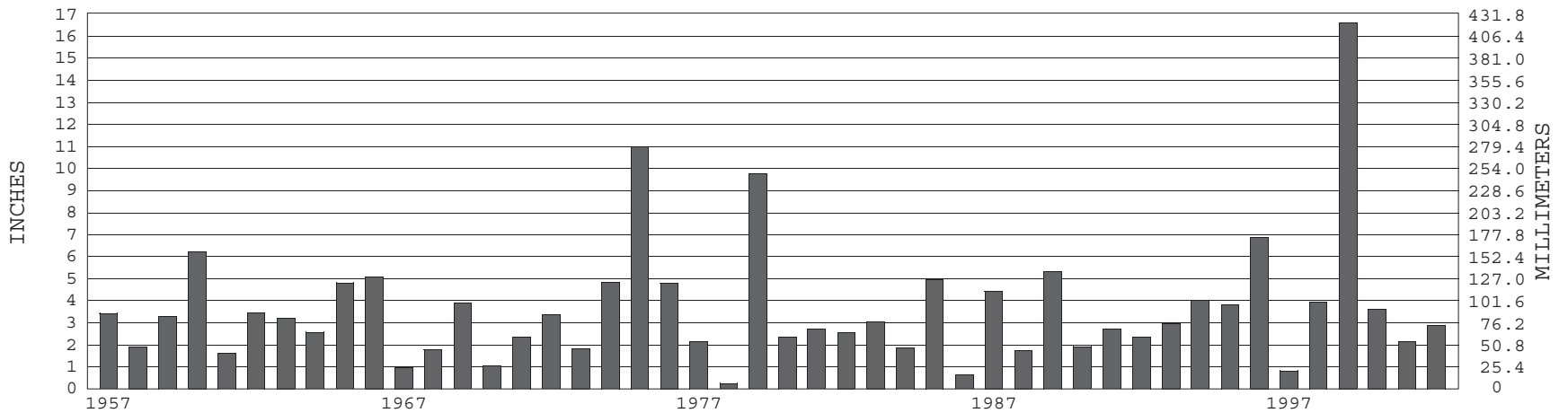
RICHMOND, VA SEPTEMBER TEMPERATURES



+ Extreme Max. ● Mean Max. ▲ Mean × Mean Min. ◆ Extreme Min.

Long-Term (1957-2002) Mean: 70.1 1961-1990 Normal: 69.8

RICHMOND, VA SEPTEMBER PRECIPITATION



Long-Term (1957-2002) Mean Monthly Total: 3.65

1961-1990 Normal: 3.98



SEPTEMBER 2002

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.

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