



NOVEMBER 2005

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

RICHMOND, VA

RICHMOND INTL AIRPORT (RIC)
 Lat: 37°30' N Long: 77°19' W Elev (Ground): 164 Feet
 Time Zone: EASTERN WBAN: 13740 ISSN #:0198-537X

NOVEMBER 2005
RICHMOND, VA

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	72	43	58	5			7	0				0.0	0.00	29.89		7.5	20	8.4	28	20	22	20	01																										
02	65	39	52	-1			13	0				0.0	0.00	29.96		4.8	35	6.5	24	01	18	01	02																										
03	72	38	55	3	37	47	10	0				0.0	0.00	30.06	30.26	8.2	21	8.7	26	22	23	22	03																										
04	75	45	60	8	43	51	5	0				0.0	0.00	29.90	30.09	9.1	20	9.4	23	22	18	20	04																										
05	78	53	66	14	51	57	0	1	BR			0.0	0.00	29.89	30.07	6.6	21	6.9	17	20	13	22	05																										
06	79	53	66	14	54	59	0	1	BR			0.0	0.00	29.85	30.04	10.2	20	10.6	28	18	23	20	06																										
07	73	48	61	10	44	53	4	0	BR HZ			0.0	0.00	30.02	30.21	1.8	33	3.7	16	33	14	32	07																										
08	78	48	63	12	45	53	2	0	RA			0.0	0.08	29.96	30.15	3.8	21	5.8	29	31	23	33	08																										
09	78	56	67	16	57	61	0	2	RA FG+ BR			0.0	0.01	29.77	29.96	7.1	20	7.5	23	19	20	30	09																										
10	72	45	59	8	35	48	6	0	RA			0.0	0.01	29.72	29.91	9.6	32	13.4	35	32	25	31	10																										
11	59	33	46	-4	29	39	19	0				0.0	0.00	29.99	30.19	2.7	30	4.5	20	28	16	28	11																										
12	65	32	49	-1	30	41	16	0				0.0	0.00	30.12	30.31	5.0	17	5.2	15	19	13	19	12																										
13	73	40	57	7	44	51	8	0				0.0	0.00	30.10	30.29	9.8	20	10.2	26	21	22	22	13																										
14	76	56	66	17	54	59	0	1				0.0	0.00	30.09	30.28	2.2	13	6.2	15	07	12	08	14																										
15	77	56	67*	18	60	62	0	2	FG+ BR			0.0	0.00	30.02	30.21	9.2	18	9.6	23	20	21	20	15																										
16	79*	49	64	15	59	63	1	0	RA BR			0.0	0.32	29.83	30.02	11.4	19	15.8	38	33	30	33	16																										
17	50	32	41	-8	26	37	24	0				0.0	0.00	30.08	30.27	10.2	36	11.1	24	01	21	01	17																										
18	45	27	36	-13	17	28	29	0				0.0	0.00	30.20	30.40	4.7	36	5.9	22	01	17	36	18																										
19	54	24	39	-10	22	33	26	0				0.0	0.00	30.19	30.38	3.6	18	3.7	14	17	13	18	19																										
20	63	36	50	2	35	43	15	0	RA			0.0	T	30.08	30.27	4.5	19	5.0	14	21	12	19	20																										
21	54	48	51	4	47	49	14	0	RA BR			0.0	1.43	29.61	29.79	6.1	03	7.6	29	01	21	02	21																										
22	53	41	47	0	35	42	18	0	RA BR			0.0	1.09	29.21	29.40	14.6	32	16.0	39*	30	29	01	22																										
23	44	33	39	-8	21	33	26	0	RA SN			T	T	29.50	29.68	8.6	25	10.7	25	22	21	22	23																										
24	65	30	48	1	29	40	17	0				0.0	0.00	29.33	29.52	7.8	24	15.1	37	27	30*	25	24																										
25	39	24	32*	-14	8	24	33	0				0.0	0.00	30.07	30.26	4.4	01	5.6	17	33	16	01	25																										
26	50	23*	37	-9	20	30	28	0				0.0	0.00	30.15	30.35	3.1	18	3.4	15	19	13	20	26																										
27	56	30	43	-3	34	41	22	0	RA			0.0	T	30.09	30.28	2.9	10	3.5	13	09	10	10	27																										
28	74	52	63	18	56	59	2	0	RA BR			0.0	T	29.97	30.16	9.3	15	10.7	30	16	22	15	28																										
29	71	59	65	20	59	62	0	0	TSRA RA BR			0.0	0.87	29.75	29.93	14.1	16	15.2	31	18	24	15	29																										
30	62	40	51	6	43	48	14	0	BR			0.0	0.00	29.79	29.98	7.6	01	9.5	21	36	16	36	30																										
										65.0		41.1	53.1	■ ■			12.0	0.2	< MONTHLY AVERAGES		TOTALS-->		T	3.81	29.91	2.6	21	8.5	<-- MONTHLY AVERAGES																				
										5.3	2.7	4.1	■ ■	<-----DEPARTURE FROM NORMAL----->										0.75	SUNSHINE, CLOUD, & VISIBILITY TABLES ON PAGE 3																								
DEGREE DAYS										GREATEST 24-HR PRECIPITATION: 2.47 DATE :21-22										SEA LEVEL PRESSURE DATE TIME																													
MONTHLY TOTAL DEPARTURE										GREATEST 24-HR SNOWFALL: T DATE :23										MAXIMUM : 30.47 18 0954																													
SEASON TO DATE TOTAL DEPARTURE										GREATEST SNOW DEPTH: DATE :										MINIMUM : 29.16 22 0354																													
HEATING: 359 -111										NUMBER OF DAYS WITH →										MAXIMUM TEMP ≥ 90: 0										MINIMUM TEMP ≤ 32: 8										PRECIPITATION ≥ 0.01 INCH : 7									
COOLING: 7 1																				MAXIMUM TEMP ≤ 32 : 0										MINIMUM TEMP ≤ 0 : 0										PRECIPITATION ≥ 0.10 INCH : 4									
																				THUNDERSTORMS : 1										HEAVY FOG : 2										SNOWFALL ≥ 1.0 INCH : 0									

HOURLY PRECIPITATION

(WATER EQUIVALENT IN INCHES)

RICHMOND, VA

NOVEMBER 2005

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													01												01		0.00		
02													02												02		0.00		
03													03												03		0.00		
04													04												04		0.00		
05													05												05		0.00		
06													06												06		0.00		
07													07												07		0.00		
08													08										0.05	0.03	08		0.08		
09	0.01												09												09		0.01		
10					0.01	T							10												10		0.01		
11													11												11		0.00		
12													12												12		0.00		
13													13												13		0.00		
14													14												14		0.00		
15													15												15		0.00		
16													16						T	0.24		0.06	0.01	0.01	16		0.32		
17													17												17		0.00		
18													18												18		0.00		
19													19												19		0.00		
20													20										T		20		T		
21													21	0.14	0.11	0.05	0.13	0.20	0.14	0.07	0.06	0.05	0.10	0.05	0.11	21		1.43	
22	0.02	T	0.01	0.04	0.19	T	T	0.01	0.05	0.05	0.04	0.07	22								T	T	T		22		1.09		
23													23												23		T		
24													24												24		0.00		
25													25												25		0.00		
26													26												26		0.00		
27													27												27		T		
28													28												28		T		
29	T	T	T	T	T								29	T	T	T	T	T							29		0.87		
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)	.23	.24	.25	.29	.40	.47	.49	.54	.75	.84	.90	.95
Ending Date	16	16	29	29	29	29	29	29	29	29	22	22
Ending Time (Hour/Min)	1930	1931	2113	2117	2117	2122	2122	2110	2117	2122	0652	0722

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 NOVEMBER 2005

Ceilorometer (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							10.00	10.00	
02							10.00	10.00	
03							9.00	10.00	
04							10.00	10.00	
05							4.00	10.00	
06							4.00	10.00	
07							.75	10.00	
08							7.00	10.00	
09							.25	10.00	
10							7.00	10.00	
11							10.00	10.00	
12							9.00	10.00	
13							10.00	10.00	
14							10.00	10.00	
15							.25	10.00	
16							5.00	10.00	
17							10.00	10.00	
18							10.00	10.00	
19							10.00	10.00	
20							10.00	10.00	
21							1.75	10.00	
22							3.00	10.00	
23							10.00	10.00	
24							10.00	10.00	
25							10.00	10.00	
26							10.00	10.00	
27							10.00	10.00	
28							6.00	10.00	
29							2.00	10.00	
30							3.00	10.00	
MONTHLY AVGS							7.07	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									
2 7 19									

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

NOVEMBER 2005

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
SUNRISE: 0634 NOV 01 SUNSET: 1711																											
01	CLR	NC							7	19	30.01		01	FEW	NC				10.00								
04	CLR	NC							3	17	29.97		04	FEW	NC				3.00	BR							
07	FEW	NC							0	00	29.97		07	FEW	NC				4.00	BR							
10	BKN	250							12	22	29.96		10	FEW	NC				10.00								
13	OVC	250							15	21	29.85		13	SCT	NC				10.00								
16	OVC	200							10	20	29.79	29.98	16	BKN	250				10.00								
19	OVC	200							8	21	29.81	30.00	19	BKN	250				10.00								
22	BKN	200							8	20	29.78	29.98	22	BKN	250				10.00								
SUNRISE: 0635 NOV 02 SUNSET: 1710																											
01	BKN	070							6	24	29.80	29.99	01	BKN	250				10.00								
04	BKN	200							14	01	29.81	30.01	04	SCT	NC				10.00								
07	BKN	200							5	34	29.89	30.09	07	FEW	NC				10.00								
10	FEW	NC							14	01	29.97	30.16	10	SCT	NC				10.00								
13	CLR	NC							14	31	29.96		13	SCT	NC				10.00								
16	CLR	NC							7	34	29.97		16	OVC	150				10.00								
19	CLR	NC							3	14	30.04		19	BKN	250				10.00								
22	CLR	NC							0	00	30.09	30.29	22	BKN	090				10.00								
SUNRISE: 0637 NOV 03 SUNSET: 1709																											
01	CLR	NC							39	36	38	89	0	00	30.09	30.28	01	BKN	090								
04	CLR	NC							39	35	37	86	5	14	30.09	30.29	04	VV	001								
07	CLR	NC							40	36	38	86	5	18	30.13	30.32	07	OVC	001								
10	CLR	NC							62	39	51	43	12	22	30.14	30.33	10	SCT	NC								
13	FEW	NC							70	36	53	29	17	23	30.06	30.26	13	OVC	250								
16	FEW	NC							72	37	54	28	15	21	30.01	30.20	16	OVC	250								
19	SCT	NC							60	39	50	46	10	19	30.00	30.19	19	OVC	200								
22	BKN	250							58	39	49	50	8	21	29.99	30.19	22	OVC	200								
SUNRISE: 0638 NOV 04 SUNSET: 1708																											
01	CLR	NC							50	39	45	66	8	20	29.96	30.15	01	OVC	150								
04	FEW	NC							46	39	43	77	5	18	29.95	30.14	04	OVC	060								
07	FEW	NC							46	38	42	73	7	19	29.93	30.12	07	OVC	050								
10	FEW	NC							63	41	52	45	12	20	29.91	30.10	10	FEW	NC								
13	SCT	NC							72	42	56	34	15	22	29.85	30.04	13	SCT	NC								
16	BKN	250							74	42	57	32	14	21	29.84	30.03	16	SCT	NC								
19	SCT	NC							66	47	56	51	9	21	29.86	30.05	19	FEW	NC								
22	FEW	NC							60	48	54	65	3	16	29.88	30.08	22	CLR	NC								
SUNRISE: 0639 NOV 05 SUNSET: 1707																											
01	BKN	250							58	49	53	72	5	18	29.87	30.06	01	OVC	140								
04	FEW	NC							55	48	51	77	8	19	29.87	30.06	04	FEW	NC								
07	BKN	200				BR			53	49	51	86	6	19	29.89	30.08	07	CLR	NC								
10	BKN	250							63	53	57	70	9	22	29.91	30.10	10	CLR	NC								
13	BKN	250							74	51	61	45	6	25	29.87	30.06	13	CLR	NC								
16	BKN	250							78	52	63	40	10	24	29.86	30.05	16	CLR	NC								
19	BKN	250							64	53	58	68	6	20	29.88	30.07	19	CLR	NC								
22	SCT	NC							63	53	57	70	5	19	29.90	30.09	22	BKN	250								
SUNRISE: 0640 NOV 06 SUNSET: 1706																											
01	FEW	NC							59	51	55	75	6	18	29.89	30.08	01	FEW	NC								
04	CLR	NC							54	51	52	90	3	16	29.88	30.07	04	CLR	NC								
07	CLR	NC							54	51	52	90	3	17	29.90	30.09	07	FEW	NC								
10	CLR	NC							71	55	61	58	12	19	29.91	30.10	10	FEW	NC								
13	FEW	NC							78	54	64	44	22	20	29.79	29.98	13	SCT	NC								
16	BKN	250							79	54	64	42	17	19	29.77	29.96	16	BKN	250								
19	FEW	NC							69	55	61	61	16	20	29.78	29.98	19	FEW	NC								
22	CLR	NC							67	57	61	71	10	21	29.84	30.03	22	CLR	NC								

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

NOVEMBER 2005

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 Otkas	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 Otkas	VISIBILITY (MILES)	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0647 NOV 13 SUNSET: 1700																											
01	CLR	NC		10.00	47	35	42	63	9	19	30.15	30.34	01	CLR	NC		10.00	29	21	26	72	0	00	30.17	30.37		
04	CLR	NC		10.00	43	35	40	74	6	18	30.12	30.32	04	CLR	NC		10.00	27	22	25	81	0	00	30.18	30.38		
07	FEW	NC		10.00	41	36	39	82	7	20	30.16	30.35	07	CLR	NC		10.00	27	22	25	81	0	00	30.21	30.40		
10	FEW	NC		10.00	58	44	51	60	13	22	30.16	30.35	10	CLR	NC		10.00	42	25	36	51	7	19	30.25	30.45		
13	FEW	NC		10.00	71	47	58	42	14	21	30.08	30.27	13	CLR	NC		10.00	51	17	38	26	8	18	30.18	30.37		
16	SCT	NC		10.00	71	49	59	46	17	21	30.05	30.24	16	SCT	NC		10.00	52	19	39	27	7	18	30.15	30.34		
19	OVC	130		10.00	62	50	56	65	8	18	30.06	30.25	19	BKN	250		10.00	38	24	33	57	7	16	30.16	30.36		
22	OVC	140		10.00	61	52	56	72	10	20	30.06	30.25	22	BKN	200		10.00	36	26	32	67	0	00	30.17	30.36		
SUNRISE: 0648 NOV 14 SUNSET: 1659																											
01	SCT	NC		10.00	59	53	56	81	9	20	30.05	30.24	01	BKN	200		10.00	39	31	36	73	0	00	30.16	30.35		
04	BKN	090		10.00	59	55	57	87	7	21	30.06	30.24	04	BKN	120		10.00	40	32	37	73	3	14	30.14	30.33		
07	BKN	150		10.00	56	53	54	90	6	20	30.08	30.27	07	BKN	120		10.00	38	33	36	83	5	14	30.15	30.34		
10	BKN	250		10.00	68	54	60	61	6	22	30.12	30.31	10	SCT	NC		10.00	49	35	43	59	6	21	30.15	30.34		
13	OVC	120		10.00	75	54	63	48	6	05	30.08	30.27	13	FEW	NC		10.00	61	29	47	30	9	18	30.07	30.27		
16	OVC	150		10.00	72	55	62	55	8	06	30.08	30.27	16	CLR	NC		10.00	62	39	51	43	8	22	30.02	30.21		
19	BKN	250		10.00	64	53	58	68	8	07	30.11	30.30	19	OVC	075		10.00	53	41	47	64	3	14	30.02	30.21		
22	BKN	120		10.00	60	52	56	75	7	12	30.11	30.30	22	OVC	075		10.00	54	42	48	64	6	21	30.00	30.19		
SUNRISE: 0649 NOV 15 SUNSET: 1659																											
01	SCT	NC		10.00	59	54	56	83	5	14	30.08	30.27	01	BKN	080		10.00	49	40	45	71	0	00	29.94	30.13		
04	OVC	200		4.00 BR	57	55	56	93	0	00	30.06	30.25	04	OVC	110		10.00	50	41	46	71	5	20	29.87	30.07		
07	BKN	120		2.50 BR	59	57	58	93	7	16	30.07	30.26	07	OVC	090		10.00	49	45	47	86	3	14	29.83	30.02		
10	OVC	060		10.00	67	61	63	81	10	18	30.07	30.27	10	OVC	017		4.00	50	48	49	93	3	03	29.78	29.97		
13	BKN	027		10.00	75	61	66	62	13	22	30.01	30.20	13	OVC	016		1.75	50	49	49	96	8	02	29.63	29.82		
16	BKN	085		10.00	74	61	66	64	14	19	29.97	30.16	16	OVC	005		2.50	52	51	52	97	13	03	29.49	29.67		
19	BKN	100		10.00	70	62	65	76	12	17	29.97	30.16	19	OVC	005		2.00	50	48	49	93	16	02	29.33	29.51		
22	BKN	090		10.00	67	62	64	84	10	18	29.97	30.16	22	OVC	005		2.00	50	48	49	93	16	01	29.21	29.39		
SUNRISE: 0650 NOV 16 SUNSET: 1658																											
01	OVC	090		10.00	67	62	64	84	16	18	29.94	30.13	01	OVC	005		6.00	49	46	47	90	10	36	29.12	29.30		
04	BKN	014		10.00	65	62	63	90	12	18	29.91	30.10	04	OVC	010		10.00	48	44	46	86	26	01	28.98	29.16		
07	BKN	090		10.00	66	62	64	87	15	18	29.88	30.07	07	OVC	015		4.00	44	40	42	85	17	33	29.11	29.29		
10	OVC	023		10.00	73	62	66	69	20	21	29.85	30.04	10	OVC	032		10.00	44	40	42	85	16	31	29.19	29.37		
13	OVC	038		10.00	78	61	67	56	23	20	29.76	29.95	13	BKN	060		10.00	51	35	44	54	21	33	29.19	29.37		
16	OVC	085		10.00	77	61	67	58	15	18	29.71	29.90	16	BKN	080		10.00	50	28	41	43	20	31	29.24	29.42		
19	OVC	070		10.00	74	62	67	67	17	18	29.70	29.89	19	SCT	NC		10.00	45	26	37	48	10	32	29.34	29.52		
22	OVC	028		10.00 -RA	52	46	49	80	9	33	29.87	30.06	22	BKN	070		10.00	43	25	36	49	13	30	29.41	29.59		
SUNRISE: 0651 NOV 17 SUNSET: 1657																											
01	OVC	030		10.00	48	43	46	83	7	04	29.94	30.13	01	SCT	NC		10.00	39	24	33	55	12	28	29.46	29.65		
04	BKN	040		10.00	45	33	40	63	13	02	29.97	30.16	04	CLR	NC		10.00	37	20	31	50	14	29	29.51	29.69		
07	FEW	NC		10.00	39	27	34	62	10	01	30.05	30.24	07	FEW	NC		10.00	34	16	28	48	8	28	29.57	29.76		
10	SCT	NC		10.00	46	23	37	40	12	36	30.09	30.29	10	BKN	150		10.00	39	17	31	41	9	28	29.59	29.79		
13	SCT	NC		10.00	49	25	39	39	14	31	30.07	30.26	13	BKN	250		10.00	43	15	33	32	14	27	29.54	29.73		
16	CLR	NC		10.00	49	23	39	36	10	34	30.07	30.27	16	OVC	250		10.00	43	17	34	35	9	23	29.50	29.68		
19	CLR	NC		10.00	40	24	34	53	8	01	30.12	30.31	19	OVC	055		10.00	42	21	34	43	12	22	29.46	29.64		
22	CLR	NC		10.00	36	17	30	46	13	02	30.20	30.39	22	OVC	070		10.00	39	31	36	73	10	19	29.38	29.57		
SUNRISE: 0652 NOV 18 SUNSET: 1657																											
01	CLR	NC		10.00	32	17	27	54	13	01	30.20	30.40	01	OVC	070		10.00	44	30	38	58	16	20	29.28	29.46		
04	CLR	NC		10.00	27	18	24	69	7	36	30.22	30.42	04	CLR	NC		10.00	43	30	38	60	13	20	29.23	29.42		
07	CLR	NC		10.00	27	17	24	66	9	36	30.24	30.44	07	SCT	NC		10.00	44	32	39	63	16	21	29.25	29.44		
10	CLR	NC		10.00	36	17	30	46	13	02	30.27	30.47	10	BKN	250		10.00	54	36	46	51	17	23	29.25	29.43		
13	CLR	NC		10.00	42	16	33	35	6	VR	30.19	30.39	13	SCT	NC		10.00	63	34	49	34	23	24	29.17	29.35		
16	SCT	NC		10.00	44	12	33	27	3	28	30.16	30.35	16	FEW	NC		10.00	64	30	48	28	18	25	29.24	29.42		
19	FEW	NC		10.00	34	20	29	56	0	00	30.16	30.36	19	CLR	NC		10.00	54	27	42	35	14	33	29.43	29.61		
22	CLR	NC		10.00	30	20	27	66	3	13	30.17	30.37	22	CLR	NC		10.00	34	18	29	52	15	04	29.65	29.84		

OBSERVATIONS AT 3-HOURLY INTERVALS

RICHMOND, VA

NOVEMBER 2005

RIC

WBAN # 13740

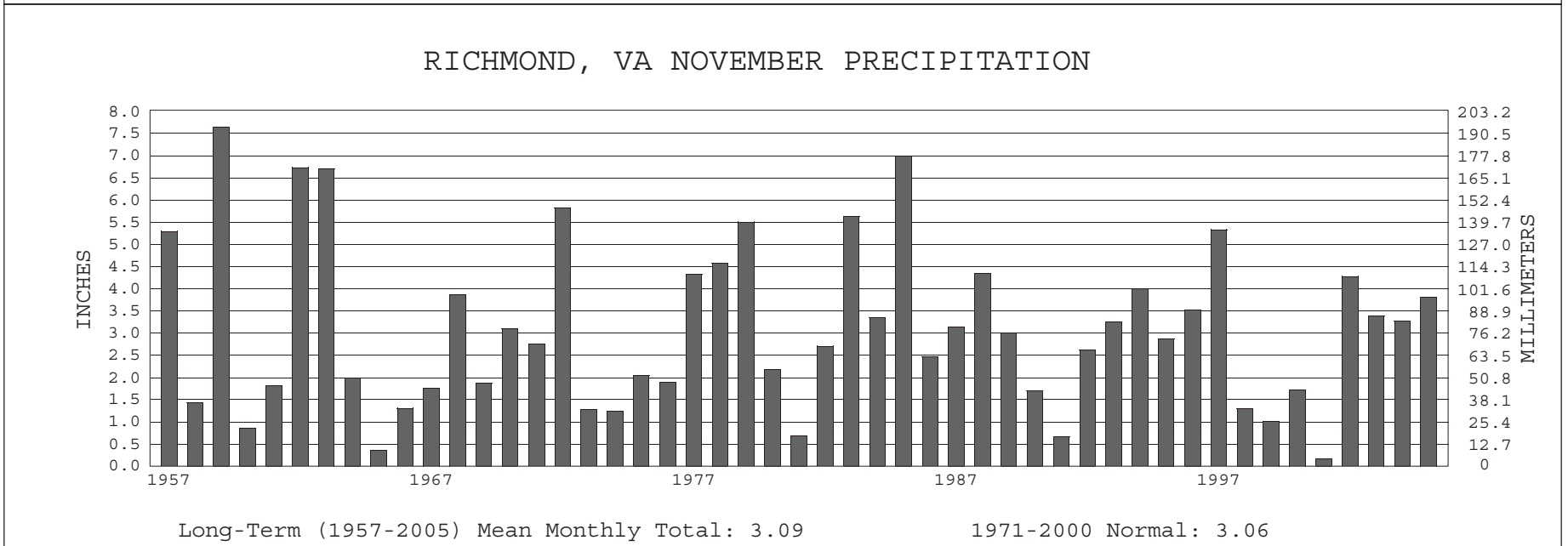
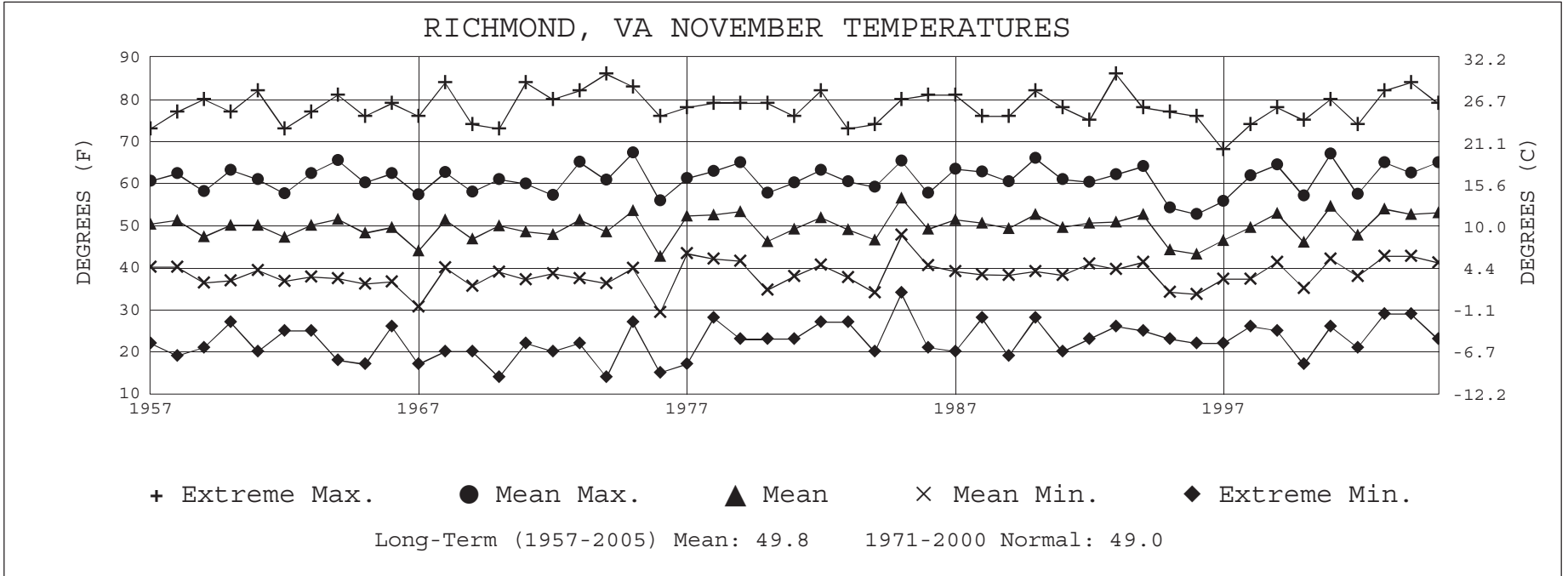
HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	SATELLITE		WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		
	SKY COVER	CEILING 100'S OF FT		OBSERVATION TIME (LST)	EFF CLD AMT Oktas	VISIBILITY (MILES)		DRY BULB	DEW POINT	WET BULB	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
SUNRISE: 0660				NOV 25				SUNSET: 1653				SUNRISE: NOV 31				SUNSET:								
01	CLR	NC		29	11	24	47	14	01	29.78	29.97													
04	BKN	130		27	7	21	43	12	02	29.91	30.11													
07	SCT	NC		24	9	20	52	5	01	30.03	30.22													
10	OVC	200		34	6	26	31	12	34	30.10	30.30													
13	BKN	250		36	2	27	23	0	00	30.10	30.30													
16	SCT	NC		38	3	28	23	0	00	30.10	30.30													
19	FEW	NC		30	8	24	39	5	09	30.16	30.35													
22	CLR	NC		28	10	23	47	3	11	30.17	30.37													
SUNRISE: 0701				NOV 26				SUNSET: 1653																
01	CLR	NC		26	15	23	63	0	00	30.17	30.37													
04	CLR	NC		24	18	22	77	0	00	30.16	30.36													
07	FEW	NC		24	17	22	75	0	00	30.20	30.40													
10	CLR	NC		40	20	33	45	7	18	30.21	30.41													
13	CLR	NC		48	19	37	32	9	22	30.13	30.33													
16	FEW	NC		50	20	38	31	8	20	30.09	30.29													
19	FEW	NC		39	23	33	53	5	16	30.12	30.32													
22	CLR	NC		33	24	30	70	0	00	30.12	30.32													
SUNRISE: 0702				NOV 27				SUNSET: 1652																
01	SCT	NC		34	25	31	70	3	16	30.12	30.31													
04	FEW	NC		32	25	29	75	6	13	30.10	30.29													
07	BKN	200		31	26	29	82	0	00	30.13	30.32													
10	BKN	250		46	27	38	47	0	00	30.15	30.35													
13	OVC	020		53	32	44	45	0	00	30.09	30.29													
16	OVC	150		55	37	47	51	5	05	30.06	30.26													
19	OVC	120		52	42	47	69	6	06	30.05	30.25													
22	OVC	110		53	49	51	86	8	12	30.04	30.23													
SUNRISE: 0702				NOV 28				SUNSET: 1652																
01	OVC	060		52	50	51	93	6	01	30.03	30.22													
04	OVC	035		52	51	52	97	3	33	30.03	30.22													
07	OVC	050	BR	57	54	55	90	6	11	30.02	30.21													
10	OVC	055	-RA	63	56	59	78	14	16	30.01	30.21													
13	OVC	034		72	58	64	61	13	16	29.94	30.14													
16	OVC	070		70	58	63	66	13	14	29.91	30.10													
19	BKN	049		68	58	62	70	13	15	29.92	30.11													
22	OVC	090		67	58	62	73	16	15	29.91	30.10													
SUNRISE: 0703				NOV 29				SUNSET: 1652																
01	BKN	080		66	56	60	70	18	14	29.88	30.07													
04	BKN	200		64	56	59	75	14	15	29.85	30.04													
07	BKN	200		65	57	60	76	15	15	29.81	30.00													
10	OVC	049		69	58	62	68	18	16	29.80	29.98													
13	OVC	036		69	60	64	73	13	16	29.70	29.89													
16	OVC	035	-RA	67	62	64	84	17	16	29.65	29.83													
19	OVC	024	-RA	68	62	64	81	16	17	29.65	29.84													
22	OVC	080	-RA	63	61	62	93	12	19	29.66	29.85													
SUNRISE: 0704				NOV 30				SUNSET: 1652																
01	SCT	NC		59	55	57	87	10	21	29.69	29.88													
04	SCT	NC	BR	55	53	54	93	6	32	29.71	29.90													
07	FEW	NC		50	47	48	89	12	01	29.75	29.94													
10	CLR	NC		54	44	49	69	13	36	29.81	30.00													
13	CLR	NC		60	43	51	53	8	02	29.76	29.96													
16	FEW	NC		60	43	51	53	9	35	29.77	29.97													
19	FEW	NC		50	39	45	66	10	04	29.83	30.02													
22	CLR	NC		44	31	39	60	9	02	29.88	30.07													

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)	SPEED	DIRECTION
01			49	40	45	73	29.90	30.09	9.57	7	2	20
02			48	40	45	75	29.90	30.09	9.32	7	2	19
03			47	40	44	76	29.90	30.09	8.91	7	1	21
04			46	39	43	78	29.90	30.09	8.64	7	0	0
05			46	39	43	79	29.91	30.10	8.37	6	1	23
06			45	39	42	80	29.91	30.11	8.57	6	1	21
07			45	38	42	78	29.93	30.12	8.62	6	1	21
08			47	39	44	76	29.94	30.14	8.53	7	2	22
09			52	40	46	65	29.95	30.14	9.37	9	3	23
10			56	39	48	56	29.95	30.14	9.73	11	4	23
11			58	38	49	50	29.94	30.13	9.77	11	5	23
12			61	38	50	45	29.91	30.10	9.75	11	6	22
13			62	38	51	42	29.89	30.08	9.72	12	6	24
14			63	37	51	41	29.87	30.06	9.73	12	5	22
15			63	37	51	41	29.87	30.06	9.75	12	6	23
16			63	38	51	43	29.86	30.05	9.75	11	4	22
17			60	39	50	48	29.87	30.06	9.73	9	3	20
18			57	40	49	54	29.88	30.07	9.73	8	3	17
19			55	40	48	59	29.89	30.07	9.70	9	3	17
20			53	40	47	64	29.89	30.08	9.43	9	2	16
21			52	40	47	64	29.90	30.09	9.47	8	1	20
22			51	40	46	67	29.90	30.09	9.70	8	2	17
23			50	40	46	69	29.90	30.10	9.80	7	1	18
24			49	40	45	71	29.90	30.10	9.70	7	1	20





NOVEMBER 2005

RICHMOND, VA

LOCAL CLIMATOLOGICAL DATA

NOAA, National Climatic Data Center

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