

JANUARY 1996
 RICHMOND, VA
 R.E.BYRD INTERNATIONAL AP.

LOCAL CLIMATOLOGICAL DATA

published by: National Climatic Data Center



LATITUDE: 37° 30' N LONGITUDE: 77° 20' W ELEVATION (GROUND): 164 FEET TIME ZONE: EASTERN STANDARD ISSN # 0198-537X WBAN # 13740

DATE	TEMPERATURE ° F						DEG DAYS BASE 65°		SIGNIFICANT WEATHER	SNOW/ICE ON GND (IN)		PRECIPITATION (INCHES)		PRESSURE (INCHES OF HG)		WIND SPEED = MPH DIR = TENS OF DEGREES				SUNSHINE		CLOUDINESS														
	MAXIMUM	MINIMUM	AVERAGE	DEP FROM NORMAL	AVERAGE DEW PT	AVERAGE WET BULB	HEATING	COOLING		0700		2400		AVERAGE STATION	AVERAGE SEA LEVEL	RESULTANT WIND SPEED	RES DIR	AVERAGE SPEED	MAXIMUM				TOTAL MINUTES	PERCENT POSSIBLE	SR-SS		MN-MN									
										DEPTH	WATER EQUIV	SNOW-FALL	WATER EQUIV						5-SEC		2-MIN				CEILOMETER TENTHS	SATELLITE TENTHS	CEILOMETER TENTHS	SATELLITE TENTHS								
										LST	LST	LST	LST						SPEED	DIR	SPEED	DIR														
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29								
01	43	39	41	4	40	40	24	0	RF+	0	0	0.0	0.05	29.68	29.88	6.1	2	6.4	17	01	13	03	0	0	10	6	10									
02	42	39	41	4	40	40	24	0	RF	0	0	0.0	0.23	29.49	29.70	5.3	2	5.8	13	30	10	34	0	0	10	7	10									
03	56	30	43	7	34	40	22	0	RSF	0	0	0.08	0.08	29.33	29.53	5.9	32	10.2	32	36	25	36	333	58	2	2	3									
04	38	22	30	-6	15	26	35	0		0	0	0.0	0.00	29.87	30.08	2.1	32	4.5	18	34	15	34	571	98	0	2	1									
05	40	27	34	-2	20	28	31	0		0	0	0.0	0.00	30.10	30.31	5.2	1	6.1	17	02	14	01	460	79	2	1	3									
06	28	20	24	-12	16	22	41	0	SF	0	6.0	0.34	30.23	30.45	6.9	5	7.6	16	03	14	02	0	0	10	8	7										
07	21	19	20	-16	18	19	45	0	RZRSF+	0	3.5	1.19	29.56	29.77	14.0	0	16.1	31	02	26	02	3	1	10	7	7										
08	32	14	23	-13	12	21	42	0	SF+	0	0	0.25	29.49	29.70	11.8	31	12.9	34	33	30	33	362	62	10	5	4										
09	32	20	26	-10	16	23	39	0	SF+	0	0	0.14	29.65	29.86	5.7	23	6.9	20	25	16	25	25	4	10	7	7										
10	38	19	29	-7	17	25	36	0		0	0	0.0	0.00	29.76	29.98	7.3	34	8.9	23	36	20	01	420	72	2	2	2									
11	27	13*	20*	-16	7	17	45	0		0	0	0.0	0.00	30.01	30.23	2.2	4	5.0	15	01	13	01	377	64	2	8	8									
12	29	19	24	-12	23	24	41	0	RZRSFH	0	2.8	0.68	29.54	29.75	4.3	34	7.4	20	33	16	34	0	0	0	0	0										
13	44	14	29	-7	23	26	36	0	F	0	0	0.0	0.00	29.61	29.82	1.7	27	3.3	13	31	11	30	591	100	0	0	0									
14	43	20	32	-3	27	31	33	0	F+	0	0	0.0	0.00	29.81	30.02	4.3	19	6.0	16	17	14	20	595	100	0	0	0									
15	52	32	42	7	30	38	23	0	R	0	0	0.0	T	30.01	30.22	3.5	4	7.1	18	04	16	03	596	100	0	0	0									
16	40	27	34	-1	24	30	31	0		0	0	0.0	0.00	30.24	30.45	6.0	2	6.5	15	01	14	36	400	68	5	6	6									
17	51	34	43	8	35	38	22	0	F	0	0	0.0	0.00	30.09	30.30	5.2	19	5.9	13	20	11	20	564	95	0	2	2									
18	63	36	50*	15	49	50	15	0	RF+	0	0	0.10	29.94	30.14	9.1	14	9.6	28	15	22	15	402	67	0	0	0										
19	68*	26	47	12	49	54	18	0	TRF	0	0	0.70	29.46	29.66	13.1	20	19.7	46	21	38	22	223	37	0	0	0										
20	32	18	25	-10	9	20	40	0		0	0	0.0	0.00	30.23	30.44	7.2	2	7.8	22	01	17	02	569	95	0	0	0									
21	34	20	27	-8	19	25	38	0		0	0	0.0	0.00	30.24	30.45	6.3	34	6.5	15	33	13	01	90	15	6	5	5									
22	44	21	33	-2	23	28	32	0	FH	0	0	0.0	0.00	30.23	30.45	1.5	2	5.0	11	04	9	17	549	91	0	0	0									
23	51	25	38	3	31	35	27	0	FH	0	0	0.0	0.00	29.97	30.18	6.7	18	7.4	18	19	16	19	431	71	0	1	1									
24	59	37	48	13	44	48	17	0	RFH	0	0	0.30	29.55	29.75	14.0	21	18.1	38	19	32	18	78	13	6	0	0										
25	41	26	34	-2	18	29	31	0		0	0	0.0	0.00	30.12	30.33	4.2	31	6.9	21	28	16	29	605	100	0	0	0									
26	51	23	37	1	28	34	28	0	H	0	0	0.0	0.00	30.26	30.47	7.2	14	7.6	21	15	17	15	203	33	0	0	0									
27	61	37	49	13	39	47	16	0	RF	0	0	0.44	29.76	29.96	11.2	21	18.8	44	16	33	26	0	0	7	6	6										
28	40	29	35	-1	12	27	30	0		0	0	0.0	0.00	30.20	30.41	3.9	32	6.9	21	30	16	28	536	88	0	2	2									
29	37	28	33	-3	26	30	32	0	RP-SF	0	0	0.04	30.11	30.33	4.7	18	5.6	17	20	15	18	0	0	0	0	0										
30	45	32	39	3	34	37	26	0	RF	0	0	0.01	29.86	30.07	3.1	18	5.4	16	16	14	15	106	17	6	5	5										
31	41	25	33	-3	25	31	32	0	RSF	0	0	0.10	29.75	29.96	9.1	1	9.7	28	36	21	01	108	17	8	8	7										
MONTHLY AVERAGES											42.7	25.5	34.1	-1.6	25.8	31.7	<----->		29.88	30.09	1.0	32	8.4	<- MONTHLY AVERAGES ->												
DEPARTURE		DEGREE DAYS					TOTAL SNOWFALL:		TOTAL PRECIPITATION:		SUNSHINE TOTALS:		PERCENT POSSIBLE:																							
17.0		-5.2		MONTHLY			SEASON TO DATE			PRECIP. DEPARTURE:		TOTAL		DATE		TOTAL POSSIBLE :		18436		50																
HEATING:		952		44		2671		273		GREATEST 24-HR PRECIPITATION:		1.19		09		WIND		SPEED		DIRECTION		DATE														
COOLING:		0		0		0		0		GREATEST 24-HR SNOWFALL:		6.0		06		MAXIMUM 5-SECOND		46		21		19														
										GREATEST SNOW DEPTH:		0				MAXIMUM 2-MINUTE		38		22		19														
NUMBER OF DAYS WITH -->		SKY CONDITIONS					MAXIMUM TEMP ≥ 90 :		MINIMUM TEMP ≤ 32 :		PRECIPITATION ≥ 0.01 INCH :		15																							
		CLEAR		PARTLY CLOUDY		CLOUDY		7		MAXIMUM TEMP ≤ 32 :		7		MINIMUM TEMP ≤ 0 :		0																				
		2		7		7		1		THUNDERSTORMS :		1		HEAVY FOG :		5																				

JANUARY 1996
 RICHMOND, VA

HOURLY PRECIPITATION (WATER EQUIVALENT IN INCHES)

JANUARY 1996
RICHMOND, VA

WBAN # 13740

DATE	A.M. HOUR (L.S.T.) ENDING AT												DATE	P.M. HOUR (L.S.T.) ENDING AT												DATE		
	1	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12			
01	0.02	0.01				T	0.01	T	T				01	T	0.01			T						01	*	0.06		
02							T	0.02	0.03	0.02	0.03	T	02	0.02	0.02		T	T		0.01	0.02	0.02	0.02	0.02	0.01	02		
03	0.02	0.01	0.01	0.02	0.01		0.01	0.01	0.01		0.01		03				T					T	T		03	*	0.11	
04													04												04			
05													05												05			
06													06	T	T	T	0.03	0.01	0.01	0.01	0.03	0.04	0.02	0.03	0.02	06	*	0.20
07	0.02	0.02	0.02	0.02	0.03	0.06	0.04	0.03	0.03	0.02	0.04	0.05	07	0.08	0.02	T	0.01	0.05	0.02	T	0.02	0.01	T	T	T	07	*	0.59
08	T	T	T	T	T	T	T	T	T	T	T	T	08	T												08	*	T
09												0.01	0.01	09	0.01	T										09	*	0.03
10													10													10		
11													11													11		
12	T	T	0.05	0.12	0.22	0.13	0.13	0.02	0.01	T			12													12		
13													13													13		
14													14													14		
15												T	15													15		
16													16													16		
17													17													17		
18													18													18	*	0.09
19	0.03		0.02	T	0.01	0.03	0.01	0.01		0.01	0.57	T	19	0.01	T	T		0.01	T	T	T	0.01	0.03	0.01	0.04	19	*	0.71
20													20													20		
21													21													21		
22													22													22		
23													23													23		
24											0.17	0.06	24	0.01				0.05	0.01						24			
25													25													25		
26													26													26		
27	T	T					0.01	0.10	0.10	0.06	0.07	0.04	27	0.05	0.01		T								27			
28													28													28		
29													29	T	0.02	0.01										29	*	0.03
30													30											T	T	30	*	T
31				T	0.01	0.07	0.02	T					31													31		

PUBLISHED BY: NCDC, ASHEVILLE, NC.

* The sum of the hourly totals follows the * when it disagrees with the daily total on page 1. NWS does not edit ASOS hourly precipitation but may edit daily and monthly totals. Hourly, daily, and monthly totals are printed as reported by the ASOS site.

MAXIMUM SHORT DURATION PRECIPITATION (MSDP) **

TIME PERIOD (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)												
ENDED: DATE												
ENDED: TIME												

** NCDC derives MSDP data from one-minute ASOS data. The MSDP data are not printed when inconsistent with ASOS hourly totals.

The time indicated is the ending time of the interval.
Date and time are not entered for trace amounts.

REFERENCE NOTES :

WFO = WEATHER FORECAST OFFICE.
 ASOS = AUTOMATED SURFACE OBSERVING SYSTEM.
 * = EXTREME FOR THE MONTH (LAST OCCURRENCE IF MORE THAN ONE).
 T = TRACE PRECIPITATION AMOUNT.
 + = ALSO OCCURS ON EARLIER DATES.
 F+ = HEAVY FOG, VISIBILITY .25 MILES OR LESS.
 BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA.
 THE HEATING DEGREE DAY SEASON BEGINS JULY 1.
 THE COOLING DEGREE DAY SEASON BEGINS JANUARY 1.
 CEILOMETER (30-SECOND) DATA ARE USED TO DERIVE CLOUDINESS AT OR BELOW 12,000 FEET. THIS CLOUDINESS IS THE MEAN CLOUD COVER DETECTED DURING THE TIME INTERVAL (HOUR, SUNRISE TO SUNSET, OR MIDNIGHT TO MIDNIGHT).
 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. 50 x 50 KM).
 SKY CONDITION IS BASED ON THE SUM (NOT TO EXCEED 10) 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 - 3 TENTHS, PARTLY CLOUDY = 4 - 7 TENTHS, AND CLOUDY = 8 - 10 TENTHS.
 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' INDICATES CALM.
 SR-SS = SUNRISE TO SUNSET. MN-MN = MIDNIGHT TO MIDNIGHT.
 SNOWFALL IS FOR THE 24-HOUR PERIOD ENDING AT THE TIME INDICATED IN COLUMN HEADING.
 WATER EQUIVALENT OF SNOW ON THE GROUND IS REPORTED ONLY WHEN THE DEPTH IS 2 OR MORE INCHES.
 H, F, F+, P-, R, S, AND ZR ARE REPORTED FROM ASOS AUTOMATED SENSORS. OTHER WEATHER TYPES MAY BE ADDED TO THE REPORT BY STATION PERSONNEL OR BE PROVIDED BY THE WEATHER FORECAST OFFICE (WFO).

A HAIL	GL GLAZE	SG SNOW GRAINS
BD BLOWING DUST	H HAZE	SP SNOW PELLETS
BN BLOWING SAND	IC ICE CRYSTALS	T THUNDER
BS BLOWING SNOW	IF ICE FOG	V VOLCANIC ASH
BY BLOWING SPRAY	IP ICE PELLETS	ZL FREEZING DRIZZLE
D DUST	K SMOKE	ZR FREEZING RAIN
F FOG	L DRIZZLE	& TORNADO
F+ HEAVY FOG	P- UNKN. PRECIP.	&C FUNNEL CLOUD
GF GROUND FOG	R RAIN	&W WATERSPOUT
	S SNOW	

NORMALS ARE FOR THE YEARS 1961 - 1990.
 A HEATING (COOLING) DEGREE DAY IS THE DIFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F.
 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 THE MOISTURE CONTENT WAS INCREASED TO 100% RELATIVE HUMIDITY.

TEMPERATURE - HUMIDITY INDEX (STEADMAN, 1979)

TEMPERATURE ° F	RELATIVE HUMIDITY (PERCENT)										
	0	10	20	30	40	50	60	70	80	90	100
120	107	116	130	148							
115	103	111	120	135	151						
110	99	105	112	123	137	150					APPARENT TEMPERATURE
105	95	100	105	113	123	135	149				
100	91	95	99	104	110	120	132	144			
95	87	90	93	96	101	107	114	124	136		
90	83	85	87	90	93	96	100	106	113	122	
85	78	80	82	84	86	88	90	93	97	102	108
80	73	75	77	78	79	81	82	85	86	88	91
75	69	70	72	73	74	75	76	77	78	79	80
70	64	65	66	67	68	69	70	70	71	71	72

WIND CHILL EQUIVALENT TEMPERATURE (SIPLE & PASSEL, 1945)

TEMPERATURE ° F	WIND VELOCITY (MPH)									
	4	5	10	15	20	25	30	35	40	45
45	45	43	34	29	26	23	21	20	19	18
40	40	37	26	23	19	16	13	12	11	10
35	35	32	22	16	12	8	6	4	3	2
30	30	27	16	9	4	1	-2	-4	-5	-6
25	25	22	10	2	-3	-7	-10	-12	-13	-14
20	20	16	3	-5	-10	-15	-18	-20	-21	-22
15	15	11	-3	-11	-17	-22	-25	-27	-29	-30
10	10	6	-9	-18	-24	-29	-33	-35	-37	-38
5	5	0	-15	-25	-31	-36	-41	-43	-45	-46
0	0	-5	-22	-31	-39	-44	-49	-52	-53	-54
-5	-5	-10	-27	-38	-46	-51	-56	-58	-60	-62
-10	-10	-15	-34	-45	-53	-59	-64	-67	-69	-70
-15	-15	-21	-40	-51	-60	-66	-71	-74	-76	-78
-20	-20	-26	-46	-58	-67	-74	-79	-82	-84	-85
-25	-25	-31	-52	-65	-74	-81	-86	-89	-92	-93
-30	-30	-36	-58	-72	-81	-88	-93	-97	-100	-102

ADDITIONAL INFORMATION :

OBSERVATIONS AT 3-HOURLY INTERVALS

JANUARY 1996
RICHMOND, VA WBAN # 13740

HOUR (LST)	W 12K FEET			SATELLITE > 12K FT			VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	W 12K FEET			SATELLITE > 12K FT			VISIBILITY (MILES)	WEATHER	TEMPERATURE °F				RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)									
	CEILOMETER TENTHS	CELLING 100'S OF FT	OBSERVATION TIME (LST)	EFF. CLD AMT TENTHS	LOWEST CLOUD TOP	HIGHEST CLOUD TOP			DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL		CEILOMETER TENTHS	CELLING 100'S OF FT	OBSERVATION TIME (LST)	EFF. CLD AMT TENTHS	LOWEST CLOUD TOP	HIGHEST CLOUD TOP			DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL	DRY BULB	DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
SUNRISE: 0724 JAN 01 SUNSET: 1702																																											
01	10	1				.50	F	43	43	43	100	6	34	29.65	29.86	01		2	0001	10	290	460	.50	SF	20	18	19	92	12	03	30.02	30.24											
04	10	1				.75	F	42	41	42	96	6	02	29.66	29.87	04		3	0300	9	290	440	.50	SF	20	18	19	92	14	04	29.90	30.11											
07	10	1	0659	5	190	380	F	39	39	39	100	7	02	29.69	29.89	07	10	20	0600	8	260	330	1.25	ZRF	20	18	19	92	15	02	29.81	30.02											
10	10	1	0959	10	180	300	F	39	39	39	100	6	01	29.74	29.95	10	10	16	0900	8	240	330	1.25	RF	21	18	20	88	23	02	29.66	29.87											
13	10	1	1200	8	130	300	F	40	40	40	100	6	01	29.70	29.90	13	10	18					1.00	RF	20	18	19	92	17	01	29.49	29.70											
16	10	3	1500	3	130	260	F	40	40	40	100	8	01	29.68	29.88	16	10	19	1500	6	150	180	.50	SF	20	18	19	92	14	36	29.34	29.55											
19	10	3	1800	5	150	440	F	39	39	39	100	5	03	29.68	29.88	19		15	1800	0	NT	NT	2.00	S	20	17	19	88	13	31	29.26	29.47											
22	10	1	2100	3	150	380	F	39	39	39	100	5	08	29.67	29.87	22		40	2100	4	130	130	1.00	SF	20	17	19	88	18	32	29.27	29.48											
SUNRISE: 0724 JAN 02 SUNSET: 1703																																											
01	10	1	0000	5	150	380	F	40	39	40	96	6	02	29.62	29.82	01		19	0001	0	NT	NT	10.00		22	17	21	81	12	30	29.26	29.47											
04	10	3	0300	5	180	300	F	40	39	40	96	7	01	29.58	29.79	04	10	5	0300	0	NT	NT	1.00	SF	22	19	21	88	12	30	29.28	29.49											
07	10	1	0659	8	130	300	RF	39	39	39	100	8	01	29.57	29.78	07	10	33				1.75	SF	22	19	21	88	14	31	29.33	29.54												
10	10	3	0900	3	130	330	F	40	39	40	96	6	06	29.56	29.77	10	10	42	0900	9	190	300	2.00	SF	23	19	22	85	16	32	29.42	29.63											
13	10	3	1200	7	150	300	F	41	40	41	96	8	34	29.49	29.69	13	10	50	1200	9	130	230	10.00		27	13	23	56	20	32	29.48	29.69											
16	10	3	1500	9	140	210	F	41	40	41	96	6	01	29.45	29.65	16		NC	1500	0	NT	NT	10.00		31	6	24	35	18	32	29.58	29.79											
19	10	3	1800	6	130	230	F	41	41	41	100	6	08	29.39	29.60	19		NC				10.00		28	2	21	33	8	30	29.70	29.91												
22	10	3	2100	6	220	330	F	41	40	41	96	3	02	29.38	29.58	22		NC	2100	2	130	300	10.00		23	2	18	40	7	24	29.74	29.96											
SUNRISE: 0724 JAN 03 SUNSET: 1703																																											
01		1	0000	2	130	300	F	41	41	41	100	3	10	29.28	29.48	01	0	NC	0059	6	130	440	10.00		23	2	18	40	9	26	29.76	29.97											
04		1	0300	2	130	440	F	41	41	41	100	0	00	29.25	29.46	04	3	110	0359	10	240	300	10.00		23	5	18	46	7	24	29.75	29.96											
07		1	0659	1	130	440	F	41	40	41	96	6	26	29.23	29.44	07	8	110				10.00		22	8	18	55	7	19	29.74	29.95												
10		NC	0900	0	NT	NT		44	41	43	89	14	24	29.30	29.50	10	8	46				10.00		27	8	22	45	3	23	29.75	29.96												
13		NC	1200	0	NT	NT		55	37	47	51	12	28	29.26	29.46	13		4	1200	10	190	260	.25	SF	27	25	26	92	10	25	29.64	29.85											
16	8	55	1500	6	130	330	F	52	33	44	49	12	31	29.29	29.49	16		50	1501	10	140	210	10.00		31	25	29	79	8	21	29.57	29.77											
19	10	35	1800	8	200	330	F	43	35	40	74	13	02	29.38	29.58	19		100	1800	7	130	180	10.00		30	23	28	75	5	18	29.55	29.75											
22	10	44	2100	10	190	260	S	32	17	27	54	17	01	29.51	29.72	22	0	NC	2100	0	NT	NT	10.00		26	22	25	85	6	19	29.51	29.72											
SUNRISE: 0724 JAN 04 SUNSET: 1704																																											
01	9	55	0000	8	130	380	F	30	14	25	51	9	34	29.60	29.80	01	10	60	0059	1	130	330	10.00		29	18	25	64	8	33	29.53	29.74											
04	0	NC	0300	0	NT	NT		27	16	24	63	10	34	29.70	29.91	04	10	60	0359	1	130	330	10.00		27	24	26	89	3	31	29.58	29.79											
07	0	NC				10.00		23	15	21	71	5	35	29.80	30.01	07	10	55	0659	8	130	190	10.00		28	25	27	89	0	00	29.66	29.87											
10	0	NC	0900	2	150	260	F	30	15	25	54	5	30	29.92	30.13	10		65	0959	0	NT	NT	10.00		34	18	29	52	7	30	29.74	29.95											
13	0	NC				10.00		35	12	28	39	3	28	29.92	30.13	13		60	1200	2	130	460	10.00		38	17	31	43	17	28	29.73	29.94											
16	0	NC	1506	0	NT	NT		37	12	29	36	6	22	29.93	30.14	16		49	1500	2	150	180	10.00		33	20	29	59	14	35	29.80	30.01											
19	0	NC	1806	0	NT	NT		31	15	26	52	0	00	29.96	30.18	19		NC	1800	0	NT	NT	10.00		27	10	22	49	13	36	29.92	30.13											
22	7	120	2100	6	130	300	F	30	19	26	64	0	00	29.98	30.20	22		NC	2100	0	NT	NT	10.00		22	6	18	50	10	01	29.98	30.20											
SUNRISE: 0724 JAN 05 SUNSET: 1705																																											
01	10	50	0059	2	130	260	F	30	22	27	72	0	00	30.00	30.21	01		NC	0000	4	130	380	10.00		17	4	14	56	6	01	30.02	30.23											
04	10	90				10.00		29	25	28	85	0	00	30.00	30.22	04		NC	0300	8	190	300	10.00		15	4	13	62	6	36	30.05	30.26											
07	10	75	0659	8	130	230	F	29	22	27	75	8	01	30.04	30.25	07		NC	0600	7	200	330	10.00		13	4	11	67	0	00	30.07	30.29											
10	2	NC				10.00		33	24	30	70	13	01	30.11	30.33	10	0	NC	0900	7	140	330	10.00		19	5	16	54	8	02	30.11	30.33											
13	0	NC	1200	0	NT	NT		38	19	31	46	7	31	30.09	30.30	13	0	NC	1200	7	150	300	10.00		24	5	19	44	0	00	30.02	30.24											
16	0	NC	1500	0	NT	NT		39	18	32	43	8	34	30.11	30.32	16	2	110	1500	10	260	280	10.00		26	6	21	42	5	22	30.00	30.21											
19	0	NC	1800	1	130	330	F	32	18	27	56	5	04	30.14	30.36	19	0	NC	1800	10	270	300	10.00		24	10	20	55	3	10	29.98	30.20											
22	0	NC	2100	1	130	380	F	30	17	26	58	8	02	30.20	30.41	22		NC				10.00		23	12	20	63	7	10	29.91	30.12												
SUNRISE: 0724 JAN 06 SUNSET: 1706																																											
01	10	100	0059	6	130	210	F	28	14	24	56	10	03	30.25	30.46	01		42				10.00	S	24	17	22	75	6	08	29.81	30.02												
04		80	0359	4	130	260	F	26	13	22	58	7	02	30.29	30.50	04		24				1.00	SF	23	21	22	92	10	04	29.68	29.89												
07		65	0600	3	130	190	F	25	12	21	58	5	05	30.30	30.51	07		5				2.00	ZRF	29	27	28	92	7	01	29.56	29.77												
10		55	0900	4	130	260	F	26	12	22	55	10	02	30.32	30.53	10		5				2.00	F	25	23	24	92	10	34	29.48	29.69												
13	10	35	1200	10	210	280	F	27	12	23	53	7	11	30.27	30.49	13		9				2.00	F	25	21	24	85	12	29	29.45	29.66												
16	10	12	1500	10	270	290	SF																																				

OBSERVATIONS AT 3-HOURLY INTERVALS

JANUARY 1996
RICHMOND, VA

WBAN # 13740

HOUR (LST)	≤ 12K FEET		SATellite > 12K FT				VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	≤ 12K FEET		SATellite > 12K FT				VISIBILITY (MILES)	WEATHER	TEMPERATURE °F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)				
	CEILOMETER TENTHS	CEILING 100'S OF FT	OBSERVATION	TIME (LST)	EFF CLD AMT TENTHS	LOWEST CLOUD TOP			HIGHEST CLOUD TOP	DRY BULB	DEW POINT		WET BULB	SPEED (MPH)	DIRECTION TENS OF DEG	STATION		SEA LEVEL	CEILOMETER TENTHS	CEILING 100'S OF FT	OBSERVATION	TIME (LST)	EFF CLD AMT TENTHS			LOWEST CLOUD TOP	HIGHEST CLOUD TOP	DRY BULB		DEW POINT	WET BULB	RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
01	4	NC	SUNRISE: 0723				JAN 13	SUNSET: 1712			01	10	9	SUNRISE: 0721				JAN 19	SUNSET: 1719			01	10	9	SUNRISE: 0721				JAN 19	SUNSET: 1719						
04	0	NC									04	10	9									04	10	9												
07	0	NC									07	10	13									07	10	13												
10	0	NC									10	10	33									10	10	33												
13		NC									13		90									13		90												
16		NC									16		NC									16		NC												
19	0	NC									19		NC									19		NC												
22	0	NC									22		NC									22		NC												
01	0	NC	SUNRISE: 0723				JAN 14	SUNSET: 1713			01		NC	SUNRISE: 0721				JAN 20	SUNSET: 1720			01		NC	SUNRISE: 0721				JAN 20	SUNSET: 1720						
04	0	NC									04		NC									04		NC												
07	0	NC									07	0	NC									07	0	NC												
10	0	NC									10	0	NC									10	0	NC												
13	0	NC									13	0	NC									13	0	NC												
16		NC									16	0	NC									16	0	NC												
19	0	NC									19	0	NC									19	0	NC												
22	0	NC									22	0	NC									22	0	NC												
01	0	NC	SUNRISE: 0723				JAN 15	SUNSET: 1714			01	0	NC	SUNRISE: 0720				JAN 21	SUNSET: 1721			01	0	NC	SUNRISE: 0720				JAN 21	SUNSET: 1721						
04	0	NC									04	10	30									04	10	30												
07		NC									07	10	30									07	10	30												
10	0	NC									10	9	20									10	9	20												
13	0	NC									13	8	22									13	8	22												
16	0	NC									16	1	NC									16	1	NC												
19	0	NC									19	4	NC									19	4	NC												
22	0	NC									22	0	NC									22	0	NC												
01	0	NC	SUNRISE: 0723				JAN 16	SUNSET: 1715			01	0	NC	SUNRISE: 0720				JAN 22	SUNSET: 1722			01	0	NC	SUNRISE: 0720				JAN 22	SUNSET: 1722						
04	2	NC									04	0	NC									04	0	NC												
07	10	26									07	0	NC									07	0	NC												
10	0	NC									10	0	NC									10	0	NC												
13	10	18									13	0	NC									13	0	NC												
16	8	14									16	0	NC									16	0	NC												
19	10	12									19	0	NC									19	0	NC												
22	10	8									22	0	NC									22	0	NC												
01	10	6	SUNRISE: 0722				JAN 17	SUNSET: 1717			01	0	NC	SUNRISE: 0719				JAN 23	SUNSET: 1723			01	0	NC	SUNRISE: 0719				JAN 23	SUNSET: 1723						
04	10	10									04	0	NC									04	0	NC												
07	0	NC									07	0	NC									07	0	NC												
10	0	NC									10	0	NC									10	0	NC												
13	0	NC									13	0	NC									13	0	NC												
16	0	NC									16	0	NC									16	0	NC												
19	0	NC									19	10	110									19	10	110												
22	0	NC									22	0	NC									22	0	NC												
01		6	SUNRISE: 0722				JAN 18	SUNSET: 1718			01		120	SUNRISE: 0719				JAN 24	SUNSET: 1724			01		120	SUNRISE: 0719				JAN 24	SUNSET: 1724						
04		1									04		NC									04		NC												
07		1									07		NC									07		NC												
10		NC									10	3	NC									10	3	NC												
13		75									13	3	NC									13	3	NC												
16	9	75									16	5	NC									16	5	NC												
19	10	20									19	10	90									19	10	90												
22	10	7									22	0	NC									22	0	NC												

OBSERVATIONS AT 3-HOURLY INTERVALS

JANUARY 1996 WBAN # 13740
RICHMOND, VA

HOUR (LST)	≤ 12K FEET		SATELLITE > 12K FT				VISIBILITY (MILES)	WEATHER	TEMPERATURE ° F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		HOUR (LST)	≤ 12K FEET		SATELLITE > 12K FT				VISIBILITY (MILES)	WEATHER	TEMPERATURE ° F			RELATIVE HUMIDITY (PCT)	WIND		PRESSURE (INCHES, HG)		
	CEILOMETER TENTHS	CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF. CLD AMT TENTHS	100'S OF FT				DRY BULB	DEW POINT	WET BULB		SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL		CEILOMETER TENTHS	CEILING 100'S OF FT	OBSERVATION TIME (LST)	EFF. CLD AMT TENTHS	100'S OF FT				DRY BULB	DEW POINT	WET BULB		RELATIVE HUMIDITY (PCT)	SPEED (MPH)	DIRECTION TENS OF DEG	STATION	SEA LEVEL
					LOWEST CLOUD TOP	HIGHEST CLOUD TOP																LOWEST CLOUD TOP	HIGHEST CLOUD TOP											
SUNRISE: 0718 JAN 25 SUNSET: 1725																																		
01	0	NC	0000	0	NT	NT	10.00		36	21	31	55	13	30	29.81	30.02	01		75	0000	9	260	380	3.00	F	40	39	40	96	0	00	29.65	29.85	
04	0	NC	0300	0	NT	NT	10.00		33	18	28	54	17	29	29.91	30.11	04		50	0300	7	180	300	2.50	RF	40	39	40	96	0	00	29.59	29.80	
07		NC	0600	0	NT	NT	10.00		31	17	27	56	9	30	30.04	30.25	07	10	8	0600	10	280	330	3.00	RF	38	37	38	96	15	33	29.62	29.82	
10		NC	0900	0	NT	NT	10.00		35	18	29	50	8	33	30.16	30.37	10	10	65	0900	7	180	330	7.00	S	35	28	32	76	18	36	29.72	29.92	
13		NC	1200	0	NT	NT	10.00		38	16	31	41	0	00	30.16	30.38	13	10	90	1200	9	260	300	10.00		35	24	31	64	15	36	29.74	29.94	
16	0	NC	1500	0	NT	NT	10.00		41	15	32	35	0	00	30.18	30.39	16	7	110	1500	5	130	440	10.00		34	18	29	52	15	01	29.79	30.00	
19	0	NC	1800	0	NT	NT	10.00		33	18	28	54	0	00	30.25	30.47	19	0	NC	1800	0	NT	NT	10.00		28	16	24	61	6	03	29.88	30.09	
22	0	NC					10.00		29	17	25	61	5	12	30.30	30.50	22	0	NC	2100	5	130	460	10.00		26	12	22	55	8	02	29.95	30.16	
SUNRISE: 0718 JAN 26 SUNSET: 1726																																		
01	0	NC					10.00		26	20	24	78	3	13	30.32	30.53	HOURLY SUMMARY NOTES																	
04	0	NC					10.00		25	20	23	81	5	13	30.34	30.55	CEILING IS REPORTED IN HUNDREDS OF FEET (ABOVE GROUND LEVEL)																	
07	0	NC					10.00		25	21	24	85	6	15	30.36	30.58	FOR CLOUDS AT OR BELOW 12,000 FEET.																	
10	9	49					10.00		34	26	31	73	9	14	30.38	30.59	CLOUD TOPS ARE REPORTED IN HUNDREDS OF FEET (ABOVE MEAN																	
13	10	55					10.00		42	29	37	60	3	15	30.27	30.49	SEA LEVEL) FOR CLOUDS ABOVE 12,000 FEET.																	
16		65	1500	6	300	440	10.00		48	32	41	54	12	14	30.20	30.42	NC = A CEILING WAS NOT DETECTED AT OR BELOW 12,000 FEET.																	
19		NC	1800	8	300	460	10.00		45	32	40	61	10	11	30.18	30.40	NT = CLOUD TOPS WERE NOT DETECTED ABOVE 12,000 FEET.																	
22	10	90					10.00		47	32	41	56	13	13	30.11	30.32	SEE PAGE 3 FOR ADDITIONAL NOTES.																	
SUNRISE: 0717 JAN 27 SUNSET: 1727																																		
01	10	65					10.00	R	51	46	49	83	16	13	29.98	30.19																		
04	10	60	0359	10	300	330	10.00		57	48	52	72	18	15	29.86	30.06																		
07	10	55	0659	10	270	310	10.00	R	59	52	55	78	21	17	29.74	29.94																		
10		6	0900	10	300	330	4.00	RF	56	55	55	97	15	17	29.69	29.89																		
13		60	1200	9	140	230	7.00	R	58	56	57	93	21	20	29.57	29.77																		
16		60	1500	4	130	210	10.00		53	28	42	38	18	26	29.60	29.80																		
19		NC	1800	0	NT	NT	10.00		47	17	36	30	26	28	29.76	29.96																		
22		NC	2100	0	NT	NT	10.00		40	13	31	33	18	29	29.90	30.10																		
SUNRISE: 0716 JAN 28 SUNSET: 1728																																		
01		NC	0059	0	NT	NT	10.00		35	13	28	40	12	27	29.98	30.19																		
04		NC	0359	0	NT	NT	10.00		33	11	26	40	12	31	30.07	30.29																		
07	0	NC	0659	0	NT	NT	10.00		30	10	24	43	9	31	30.18	30.40																		
10	0	NC	0959	4	130	460	10.00		35	10	27	35	5	34	30.27	30.47																		
13	0	NC	1200	4	130	300	10.00		39	10	30	30	7	35	30.21	30.43																		
16	0	NC	1500	1	200	380	10.00		40	9	30	28	7	36	30.23	30.44																		
19	0	NC	1800	0	NT	NT	10.00		33	15	27	48	0	00	30.25	30.46																		
22	0	NC	2100	5	180	330	10.00		31	14	26	49	7	09	30.27	30.48																		
SUNRISE: 0716 JAN 29 SUNSET: 1729																																		
01	0	NC	0000	9	230	300	10.00		29	15	25	56	3	13	30.25	30.47																		
04	0	NC	0300	9	260	330	10.00		29	20	26	69	6	15	30.23	30.44																		
07	0	NC	0600	9	230	300	10.00		29	23	27	78	0	00	30.20	30.42																		
10	8	90					10.00		35	24	31	64	7	16	30.20	30.41																		
13	10	11	1200	8	210	260	1.00	SF	33	29	32	85	10	20	30.11	30.32																		
16		48	1500	7	190	300	10.00		33	30	32	89	6	20	30.04	30.24																		
19		26	1800	7	260	330	10.00		33	30	32	89	6	21	30.02	30.22																		
22		21					10.00		34	31	33	89	7	19	29.98	30.20																		
SUNRISE: 0715 JAN 30 SUNSET: 1731																																		
01	9	80					10.00		35	32	34	89	7	25	29.95	30.17																		
04	0	NC					10.00		33	31	32	92	5	22	29.93	30.14																		
07	0	NC					10.00		33	30	32	89	5	01	29.95	30.16																		
10	0	NC					10.00		38	32	36	79	0	00	29.95	30.16																		
13	7	NC					10.00		44	34	40	68	7	15	29.88	30.09																		
16	9	44					10.00		44	36	41	74	8	18	29.81	30.01																		
19	10	38	1800	5	210	380	10.00		41	37	39	86	7	19	29.78	29.99																		
22	10	65	2100	9	300	380	5.00	RF	40	38	39	93	7	19	29.72	29.93																		

SUMMARY BY HOURS

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	SPEED	DIRECTION
							STATION	SEA LEVEL					
01			32	25	30	77	29.88	30.09	7.84	7	1	35	
02			32	25	30	79	29.88	30.09	7.32	7	1	35	
03			32	25	30	80	29.88	30.09	6.97	8	1	35	
04			32	26	30	79	29.87	30.08	7.07	8	1	36	
05			32	25	30	78	29.87	30.08	7.11	7	1	33	
06			32	26	30	79	29.87	30.08	7.07	8	1	3	
07			31	29	26	80	29.88	30.09	6.95	8	1	33	
08			31	25	29	80	29.89	30.10	6.94	7	2	33	
09			33	26	30	77	29.90	30.11	7.08	9	1	32	
10			35	27	32	73	29.91	30.12	7.60	10	2	35	
11			37	27	33	70	29.90	30.11	7.72	11	2	30	
12			38	27	34	66	29.88	30.09	8.08	10	3	30	
13			39	27	35	64	29.86	30.06	8.16	10	2	27	
14			40	27	35	63	29.84	30.05	8.41	9	2	30	
15			40	27	35	62	29.84	30.05	8.71	10	3	30	
16			40	26	35	60	29.84	30.05	8.64	10	2	29	
17			39	25	34	62	29.86	30.06	8.40	8	1	30	
18			37	26	33	67	29.87	30.08	8.33	7	1	1	
19			36	25	32	69	29.88	30.09	8.69	8	1	30	
20			34	24	31	70	29.89	30.10	8.52	8	1	36	
21			33	24	30	73	29.90	30.11	8.25	8	1	34	
22			33	23	30	72	29.90	30.11	7.82	8	1	36	
23			32	24	29	74	29.90	30.11	7.67	8	0	0	
24			32	25	30	77	29.89	30.10	7.76	6	0	0	

SUPPLEMENTARY HOURLY PRECIPITATION

UNIVERSAL RAIN GAUGE (WATER EQUIVALENT IN INCHES)

JANUARY 1996
RICHMOND, VA

LATITUDE 37° 30'N
LONGITUDE 77° 19'W

DATE	A.M. HOUR (L.S.T.) ENDING AT												DATE	P.M. HOUR (L.S.T.) ENDING AT												DATE	DAILY TOTAL
	1	2	3	4	5	6	7	8	9	10	11	12		1	2	3	4	5	6	7	8	9	10	11	12		
01													01		0.01				0.01	0.01					01	0.03	
02							0.02	0.01	0.04				02	0.04						0.02	0.10				02	0.23	
03			0.03										03												03	0.03	
04													04												04	0.00	
05													05												05	0.00	
06													06	T	T	T	0.03	0.01	0.01	0.01	0.03	0.04	0.03	0.02	0.02	06	0.20
07	0.02	0.02	0.02	0.02	0.03	0.06	0.05	0.02	0.03	0.03	0.04	0.05	07	0.08	0.01										07	0.57	
08	T	T	T	T	T	T	T	T	T	T	0.01	0.01	08	0.01						T					08	0.03	
09													09	0.05	T										09	0.10	
10													10												10	0.00	
11													11												11	0.00	
12	T	T	0.08	0.12	0.18	0.10	0.08	T	T	T			12												12	0.56	
13													13												13	0.00	
14													14												14	0.00	
15													15												15	0.00	
16													16												16	0.00	
17													17												17	0.00	
18													18												18	0.08	
19	0.02		0.03	0.02	0.01	0.02	0.01	0.01			0.53		19									0.03	0.02	0.03	19	0.65	
20													20												20	0.00	
21													21												21	0.00	
22													22												22	0.00	
23													23												23	0.00	
24											0.13	0.06	24	0.01	0.01			0.03	0.01						24	0.25	
25													25												25	0.00	
26													26												26	0.00	
27							0.07	0.10	0.06	0.07	0.05		27	0.04	0.01										27	0.40	
28													28												28	0.00	
29													29		0.02	0.02									29	0.04	
30													30												30	0.00	
31					0.02	0.07							31												31	0.09	
PUBLISHED BY: NCDC, ASHEVILLE, NC.																								MONTHLY TOTAL		3.26	

SUPPLEMENTARY MAXIMUM SHORT DURATION PRECIPITATION (MSDP)

TIME PERIOD (MINUTES)	5	10	15	20	30	45	60	80	100	120	150	180
PRECIPITATION (INCHES)	0.14	0.23	0.30	0.35	0.44	0.50	0.53	0.53	0.53	0.53	0.53	0.53
ENDED: DATE	19	19	19	19	19	19	19	19	19	19	19	19
ENDED: TIME	1024	1029	1033	1038	1048	1054	1054	1054	1054	1054	1054	1054

The time indicated is the ending time of the interval.
Date and time are not entered for trace amounts.

The National Weather Service has determined that the ASOS Heated Tipping-Bucket (HTB) rain gauge may not measure water equivalent precipitation accurately during frozen precipitation events. Precipitation data from a nearby site is provided on this page to supplement the ASOS HTB data.
M = Missing Data.

USCOM - NOAA - ASHEVILLE, NC 250

I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION,
AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC DATA CENTER.

Kenneth D Haden

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL ENVIRONMENTAL AND INFORMATION SERVICE NATIONAL CLIMATIC DATA CENTER NATIONAL CLIMATIC DATA CENTER DIRECTOR
ASHEVILLE, NORTH CAROLINA ASHEVILLE, NORTH CAROLINA NATIONAL CLIMATIC DATA CENTER

Inquiries/Comments Call: (704) 271-4800

To change your address, please return a copy of the mailing label
with your address to: National Climatic Data Center
(Subscription Service).

NATIONAL CLIMATIC DATA CENTER
151 PATTON AVE ROOM 120
ASHEVILLE, NORTH CAROLINA 28801-5001

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE \$300

FIRST CLASS
POSTAGE AND FEES PAID
NOAA
PERMIT G-19