

1996

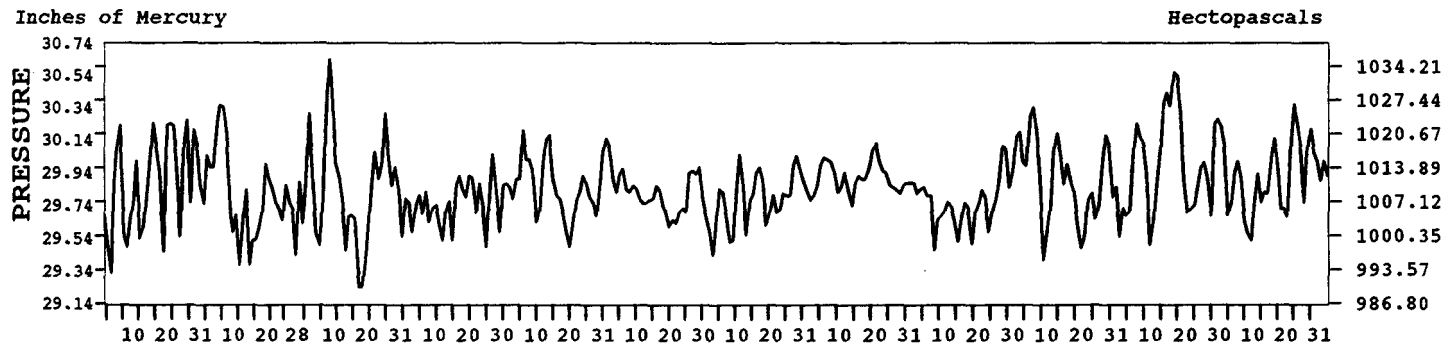
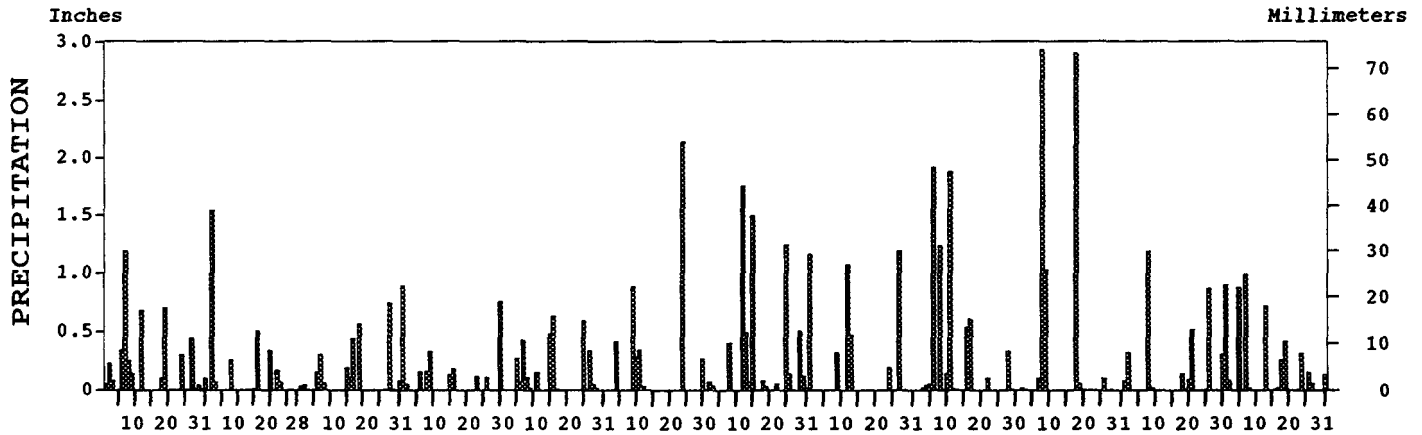
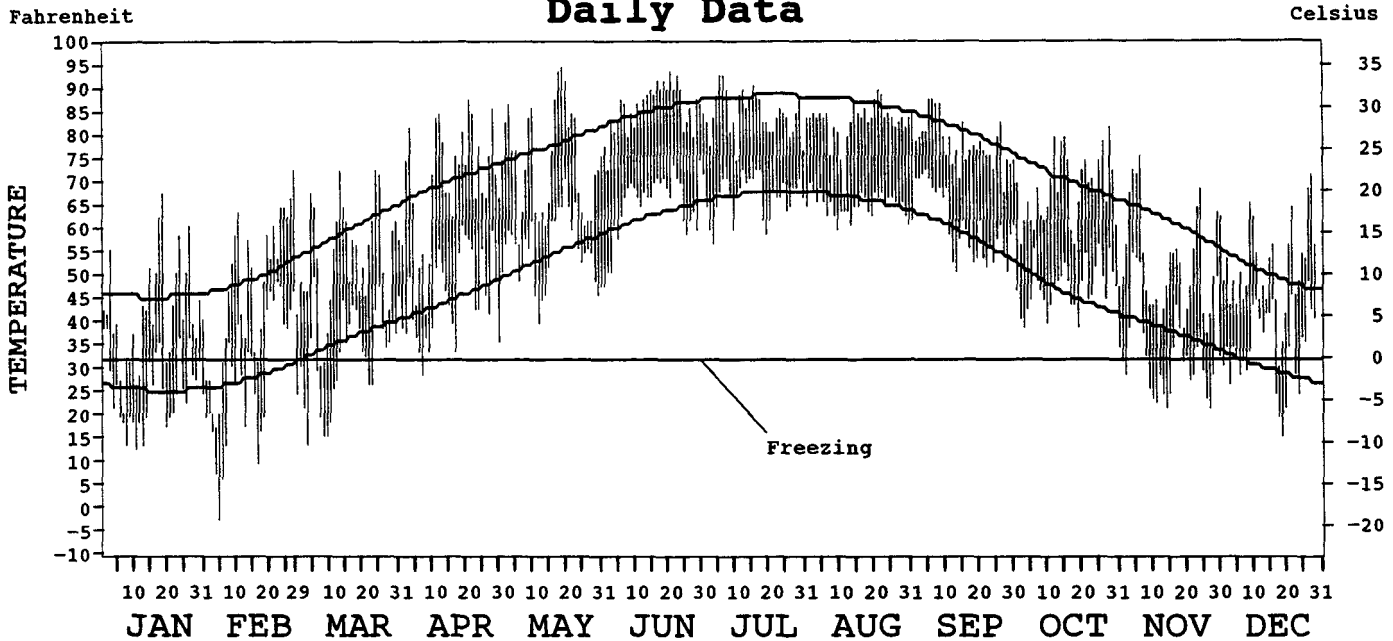
# LOCAL CLIMATOLOGICAL DATA ANNUAL SUMMARY WITH COMPARATIVE DATA



ISSN 0198-536

## RICHMOND, VIRGINIA (RIC)

### Daily Data



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ASHEVILLE, NORTH CAROLINA

*Janeth D. ...*  
ACTING DIRECTOR  
NATIONAL CLIMATIC DATA CENTER

# METEOROLOGICAL DATA FOR 1996

## RICHMOND, VA (RIC)

LATITUDE: 37° 30' 40" N      LONGITUDE: 77° 19' 24" W      ELEVATION (FT): GRND: 164      BARO: 178      TIME ZONE: EASTERN (UTC+ 5)      WBAN: 13740

ELEMENT		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
TEMPERATURE ° F	MEAN DAILY MAXIMUM	42.7	46.9	53.7	69.8	74.4	85.8	85.2	83.0	79.2	69.5	52.7	52.3	66.3	
	HIGHEST DAILY MAXIMUM	68	73	73	88	95	94	93	90	88	82	76	72	95	
	DATE OF OCCURRENCE	19	28	25	22	20	22	8 +	23	8 +	30	8	30	MAY 20	
	MEAN DAILY MINIMUM	25.5	28.7	32.7	45.9	55.2	64.3	67.5	65.5	61.0	48.3	33.6	35.2	46.9	
	LOWEST DAILY MINIMUM	13	-2	14	29	36	48	57	60	51	39	22	16	-2	
	DATE OF OCCURRENCE	11	5	4	8	1	2	5	11	30+	21+	29+	21	FEB 5	
	AVERAGE DRY BULB	34.1	37.8	43.2	57.9	64.8	75.1	76.4	74.3	70.1	58.9	43.2	43.8	56.6	
	MEAN WET BULB	31.7	34.1	37.5	50.5	58.7	68.3	70.0		64.6	54.0	39.4	40.6		
	MEAN DEW POINT	25.8	26.1	27.9	42.5	54.1	64.4	66.7		61.2	49.9	33.9	36.0		
	NUMBER OF DAYS WITH:														
	MAXIMUM ≥ 90°	0	0	0	0	3	9	5	1	0	0	0	0	0	18
	MAXIMUM ≤ 32°	7	7	2	0	0	0	0	0	0	0	0	1	1	17
	MINIMUM ≤ 32°	25	16	13	1	0	0	0	0	0	0	16	11	11	82
MINIMUM ≤ 0°	0	1	0	0	0	0	0	0	0	0	0	0	0	1	
H/C	HEATING DEGREE DAYS	952	782	669	247	122	8	0	0	10	193	652	654	4289	
	COOLING DEGREE DAYS	0	0	0	40	123	315	360	293	173	12	0	0	1316	
RH	MEAN (PERCENT)	72	64	59	60	72	72	75	80	77	75	72	77	71	
	HOUR 01 LST	77	70	68	71	83	86	87	93	87	86	81	83	81	
	HOUR 07 LST	80	78	73	71	82	84	84	93	89	88	83	84	82	
	HOUR 13 LST	64	54	49	48	57	53	60	62	59	55	55	64	57	
	HOUR 19 LST	69	59	53	54	69	66	71	79	79	80	75	78	69	
S	PERCENT POSSIBLE SUNSHINE	50													
W/O	NUMBER OF DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	5	4	2	1	3	2	1	5	2	1	1	6	33	
	THUNDERSTORMS	1	0	1	1	3	5	6	4	3	2	2	1	29	
CLOUDINESS	SUNRISE-SUNSET: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)			3	3	3	2								
	SATELLITE (> 12,000 FT.)			2		2	2								
	MIDNIGHT-MIDNIGHT: (OKTAS)														
	CEILOMETER (≤ 12,000 FT.)			3	2	4	2								
	SATELLITE (> 12,000 FT.)			2											
NUMBER OF DAYS WITH:															
CLEAR	2	1	9		9	10									
PARTLY CLOUDY		1	5		4	8									
CLOUDY	7	4	10		8	1									
PR	MEAN STATION PRESS. (IN.)	29.88	29.80	29.85	29.74	29.85	29.82	29.78	29.91	29.77	29.88	30.03	29.91	29.85	
	MEAN SEA-LEVEL PRESS. (IN.)	30.09	30.01	30.05	30.04	30.05	30.02	29.98	30.11	29.97	30.08	30.24	30.12	30.06	
WINDS	RESULTANT SPEED (MPH)	1.0	2.5	1.8	4.7	1.1	2.9		0.3	1.8	1.6	0.2	1.0		
	RES. DIR. (TENS OF DEGS.)	32	29	27	23	18	18		19	24	28	13	30		
	MEAN SPEED (MPH)	8.4	9.0	9.8	11.0	7.5	7.0	7.3	4.9	7.1	7.2	6.4	7.9	7.8	
	PREVAIL. DIR. (TENS OF DEGS.)	01	20	03	19	22	19	20	04	15	19	36	19	19	
	MAXIMUM 2-MINUTE WIND:														
	SPEED (MPH)	38	28	37	40	40	31	30	44	40	37	32	40	44	
	DIR. (TENS OF DEGS.)	22	36	22	27	27	25	21	36	10	01	24	15	36	
	DATE OF OCCURRENCE	19	16	5	23	11	24	15	27	06	08	08	01	AUG 27	
	MAXIMUM 5-SECOND WIND:														
	SPEED (MPH)	46	36	49	51	60	38	37	52	53	46	40	48	60	
DIR. (TENS OF DEGS.)	21	29	22	25	28	25	29	01	08	01	24	16	28		
DATE OF OCCURRENCE	19	11	5	16	11	24	08	27	06	08	08	01	MAY 11		
PRECIPITATION	WATER EQUIVALENT:														
	TOTAL (IN.)	4.65	2.97	2.71	2.88	3.18	4.35	6.51	4.40	6.87	7.18	3.52	4.91	54.13	
	GREATEST 24-HOUR (IN.)	1.19	1.54	0.74	0.89	1.05	2.14	1.76	1.53	1.99	3.96	1.18	0.98	3.96	
	DATE OF OCCURRENCE	9	2	28	1	15-16	25	12	12-13	10-11	08-09	8	7	OCT 08-09	
	NUMBER OF DAYS WITH:														
PRECIPITATION ≥ 0.01	15	9	12	10	14	7	15	6	14	10	11	15	138		
PRECIPITATION ≥ 0.10	11	5	7	9	8	6	8	6	8	5	6	9	88		
PRECIPITATION ≥ 1.00	1	1	0	0	0	1	3	3	3	3	1	0	16		
SNOWFALL	SNOW, ICE PELLETS, HAIL:														
	TOTAL (IN.)	12.3										T	1.0		
	GREATEST 24-HOUR (IN.)	6.0										T	1.0		
	DATE OF OCCURRENCE	6										21+	19		
	MAXIMUM SNOW DEPTH (IN.)	0										0	0		
DATE OF OCCURRENCE															
NUMBER OF DAYS WITH:															
SNOWFALL ≥ 1.0	3										0	1			

# NORMALS, MEANS, AND EXTREMES FOR 1996

RICHMOND, VA (RIC)

LATITUDE: 37° 30' 40" N      LONGITUDE: 77° 19' 24" W      ELEVATION (FT): GRND: 164      BARO: 178      TIME ZONE: EASTERN (UTC+ 5)      WBAN: 13740

ELEMENT		POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE ° F	NORMAL DAILY MAXIMUM	30	45.7	49.2	59.5	70.0	77.8	85.1	88.4	87.1	80.9	70.7	61.3	50.2	68.8
	MEAN DAILY MAXIMUM	76	47.2	50.2	58.8	69.4	77.6	85.1	88.4	86.5	80.9	70.6	60.3	50.0	68.8
	HIGHEST DAILY MAXIMUM	67	80	83	93	96	100	104	105	102	103	99	86	80	105
	YEAR OF OCCURRENCE		1950	1932	1938	1990	1941	1952	1977	1983	1954	1941	1993	1971	JUL 1977
	MEAN OF EXTREME MAXS.	76	69.2	71.0	80.1	88.0	91.1	96.0	97.4	95.8	93.4	85.5	77.9	70.0	84.6
	NORMAL DAILY MINIMUM	30	25.7	28.1	36.3	44.6	54.2	62.7	67.5	66.4	59.0	46.5	37.9	29.9	46.6
	MEAN DAILY MINIMUM	76	28.3	29.8	36.6	45.4	54.8	63.5	68.1	66.6	60.1	47.8	38.4	30.8	47.5
	LOWEST DAILY MINIMUM	67	-12	-10	11	23	31	40	51	46	35	21	10	-1	-12
	YEAR OF OCCURRENCE		1940	1936	1960	1985	1956	1967	1965	1934	1974	1962	1933	1942	JAN 1940
	MEAN OF EXTREME MINS.	76	10.3	13.8	21.4	30.7	40.9	51.0	57.9	55.6	45.4	32.4	22.8	14.4	33.0
	NORMAL DRY BULB	30	35.7	38.7	48.0	57.3	66.0	73.9	78.0	76.8	70.0	58.6	49.6	40.1	57.7
	MEAN DRY BULB	76	37.8	40.0	47.7	57.4	66.2	74.3	78.2	76.6	70.5	59.2	49.4	40.4	58.1
	MEAN WET BULB	13	33.5	35.9	42.0	50.6	59.2	67.4	71.9	64.6	63.8	53.7	44.7	37.0	52.0
	MEAN DEW POINT	13	26.6	27.9	34.0	43.1	53.9	62.9	68.5	61.7	60.0	48.9	38.5	30.2	46.4
	NORMAL NO. DAYS WITH:														
MAXIMUM ≥ 90°	30	0.0	0.0	0.1	0.8	2.3	8.7	13.8	11.0	4.1	0.3	0.0	0.0	41.1	
MAXIMUM ≤ 32°	30	4.3	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	7.6	
MINIMUM ≤ 32°	30	23.0	19.5	10.8	2.3	0.1	0.0	0.0	0.0	0.0	2.1	9.4	19.2	86.4	
MINIMUM ≤ 0°	30	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	
H/C	NORMAL HEATING DEG. DAYS	30	908	736	527	241	61	0	0	0	23	233	462	772	3963
	NORMAL COOLING DEG. DAYS	30	0	0	0	10	92	270	403	366	173	34	0	0	1348
RH	NORMAL (PERCENT)	30	68	66	63	61	70	72	75	77	77	74	69	69	70
	HOUR 01 LST	30	75	73	72	73	83	86	88	90	90	86	79	76	81
	HOUR 07 LST	30	79	78	78	76	81	83	86	90	90	89	84	80	83
	HOUR 13 LST	30	56	53	49	45	52	54	57	58	57	52	51	55	53
	HOUR 19 LST	30	65	62	57	53	63	66	69	74	77	75	68	68	66
S	PERCENT POSSIBLE SUNSHINE	46	54	58	62	66	65	69	68	66	65	63	59	54	62
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG (VISBY ≤ 1/4 MI)	68	2.7	2.1	1.7	1.6	1.8	1.5	2.0	2.4	2.9	3.3	2.2	2.8	27.0
	THUNDERSTORMS	60	0.2	0.4	1.6	2.4	5.3	6.7	8.7	6.3	2.9	1.0	0.6	0.2	36.3
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	0			5.6		5.6	3.2							
	MIDNIGHT-MIDNIGHT (OKTAS)	0			5.6										
	MEAN NO. DAYS WITH:														
	CLEAR	1	2.0	1.0	9.0		9.0	10.0							
PARTLY CLOUDY	0		1.0	5.0		4.0	8.0								
CLOUDY	1	7.0	4.0	10.0		8.0	1.0								
PR	MEAN STATION PRESSURE (IN.)	24	29.91	29.90	29.85	29.81	29.81	29.81	29.83	29.86	29.89	29.92	29.93	29.94	29.87
	MEAN SEA-LEVEL PRES. (IN.)	13	30.12	30.09	30.06	29.98	30.01	29.99	30.01	30.05	30.09	30.12	30.14	30.15	30.07
WINDS	MEAN SPEED (MPH)	38	8.3	8.7	9.3	9.2	7.9	7.5	7.1	6.6	7.0	7.2	7.7	7.9	7.9
	PREVAIL. DIR (TENS OF DEGS.)	21	36	36	36	19	19	19	19	18	36	36	36	36	18
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	1	38	28	37	40	40	31	30	44	40	37	32	40	44
	DIR. (TENS OF DEGS.)		22	36	22	27	27	25	21	36	10	10	24	15	36
	YEAR OF OCCURRENCE		1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	AUG 1996
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	1	46	36	49	51	60	38	37	52	53	46	40	48	60
DIR. (TENS OF DEGS.)		21	29	22	25	28	25	29	10	80	10	24	16	28	
YEAR OF OCCURRENCE		1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	1996	MAY 1996	
PRECIPITATION	NORMAL TOTAL (IN.)	30	3.24	3.16	3.61	2.96	3.84	3.62	5.03	4.40	3.34	3.53	3.17	3.26	43.16
	MAXIMUM TOTAL (IN.)	59	7.97	5.97	8.65	7.31	8.87	9.24	18.87	14.10	10.98	9.39	7.64	7.07	18.87
	YEAR OF OCCURRENCE		1978	1979	1984	1987	1972	1938	1945	1955	1975	1971	1959	1973	JUL 1945
	MINIMUM TOTAL (IN.)	59	0.64	0.48	0.94	0.64	0.87	0.38	0.51	0.52	0.26	0.30	0.36	0.40	0.26
	YEAR OF OCCURRENCE		1981	1978	1966	1963	1965	1980	1983	1943	1978	1963	1965	1980	SEP 1978
	MAXIMUM IN 24 HOURS (IN.)	59	3.31	2.67	3.43	2.97	3.08	4.61	5.73	8.79	4.02	6.50	4.07	3.16	8.79
	YEAR OF OCCURRENCE		1962	1979	1992	1987	1981	1963	1969	1955	1985	1961	1956	1958	AUG 1955
	NORMAL NO. DAYS WITH:														
PRECIPITATION ≥ 0.01	30	10.4	9.4	10.2	9.0	10.7	9.6	10.4	9.5	7.6	7.0	8.0	9.1	110.9	
PRECIPITATION ≥ 1.00	30	0.8	0.7	0.8	0.6	1.0	0.9	1.4	1.3	1.0	1.2	0.8	0.7	11.2	
SNOWFALL	NORMAL TOTAL (IN.)	30	5.8	5.5	2.4	0.1	0.0	0.0	0.0	0.0	T	0.3	2.2	16.3	
	MAXIMUM TOTAL (IN.)	59	28.5	21.4	19.7	2.0	T	0.0	0.0	0.0	0.0	T	7.3	12.5	28.5
	YEAR OF OCCURRENCE		1940	1983	1960	1940	1994					1979	1953	1958	JAN 1940
	MAXIMUM IN 24 HOURS (IN.)	59	21.6	16.8	12.1	2.0	T	0.0	0.0	0.0	0.0	T	7.3	7.5	21.6
	YEAR OF OCCURRENCE		1940	1983	1962	1940	1994					1979	1953	1966	JAN 1940
	MAXIMUM SNOW DEPTH (IN.)	75	18	20	13	1	0	0	0	0	0	0	6	9	20
	YEAR OF OCCURRENCE		1922	1922	1980	1964							1938	1958	FEB 1922
NORMAL NO. DAYS WITH:															
SNOWFALL ≥ 1.0	30	1.5	1.4	0.6	0.*	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	4.3	

PRECIPITATION (inches) 1996 RICHMOND, VIRGINIA (RIC)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1967	1.50	3.35	2.34	1.32	3.71	3.58	5.00	6.65	0.95	1.00	1.76	6.48	37.64
1968	2.53	0.98	4.00	2.93	3.13	2.89	3.41	3.71	1.78	1.59	3.87	2.28	33.10
1969	2.04	3.95	3.95	2.60	3.32	4.36	13.90	9.31	3.89	1.88	1.87	5.26	56.33
1970	1.32	2.37	3.70	2.84	1.84	1.12	4.74	1.69	1.02	1.55	3.10	3.00	28.29
1971	1.84	4.37	2.68	1.76	6.82	4.10	4.40	3.73	2.35	9.39	2.76	0.75	44.95
1972	1.43	5.15	2.11	3.35	8.87	8.82	5.80	3.84	3.35	7.89	5.82	2.91	59.34
1973	2.66	3.11	3.44	4.58	3.56	2.45	3.64	4.34	1.82	2.56	1.27	7.07	40.50
1974	3.21	2.54	3.79	1.58	3.02	1.80	2.25	6.84	4.83	0.39	1.23	4.22	35.70
1975	5.71	2.96	8.04	2.78	2.59	4.00	12.29	2.31	10.98	3.10	2.04	4.51	61.31
1976	3.39	1.35	2.14	1.08	3.76	2.85	2.63	1.35	4.78	6.99	1.88	2.56	34.76
1977	2.22	1.34	2.67	2.33	3.99	1.25	4.20	6.15	2.16	7.88	4.32	5.57	44.08
1978	7.97	0.48	5.67	4.31	3.92	5.26	4.24	5.93	0.26	1.21	4.57	3.80	47.62
1979	6.16	5.97	2.59	3.97	3.80	2.42	4.36	7.08	9.76	3.87	5.50	1.64	57.12
1980	6.05	1.01	5.49	4.28	4.68	0.38	5.18	2.15	2.37	6.96	2.18	0.40	41.13
1981	0.64	2.76	1.52	2.96	6.62	3.69	4.01	2.89	2.70	2.36	0.68	5.04	35.87
1982	2.76	4.44	3.74	2.97	3.48	3.97	9.21	4.39	2.55	2.90	2.70	3.37	46.48
1983	1.59	3.95	6.04	5.21	2.50	5.46	0.51	0.97	3.05	4.02	5.63	4.50	43.43
1984	3.98	3.97	8.65	5.92	4.52	2.01	3.55	4.58	1.86	2.14	3.34	1.52	46.04
1985	3.54	3.20	1.80	0.65	2.36	4.01	5.31	10.58	4.97	5.09	6.99	0.58	49.08
1986	2.69	2.67	1.16	1.16	3.15	1.30	7.01	6.75	0.63	2.43	2.46	5.15	36.56
1987	5.53	2.57	1.65	7.31	2.94	6.29	1.20	1.11	4.43	1.25	3.13	2.86	40.27
1988	2.53	3.08	1.98	2.55	4.81	2.25	7.50	2.95	1.74	2.74	4.34	0.79	37.26
1989	1.88	4.34	5.00	4.27	5.02	5.85	4.00	4.89	5.33	3.54	3.00	2.62	49.74
1990	2.84	2.38	2.54	2.81	6.85	0.97	6.74	5.76	1.92	3.90	1.70	3.52	41.93
1991	3.62	1.09	5.87	0.87	0.91	6.24	3.47	3.32	2.69	2.50	0.67	4.53	35.78
1992	1.57	2.89	5.87	2.21	4.95	2.28	5.68	6.40	2.35	1.94	2.62	2.79	41.55
1993	4.48	2.88	7.24	3.23	4.66	1.75	1.91	3.89	2.97	2.23	3.24	3.77	42.25
1994	3.10	4.38	7.92	2.70	2.49	1.73	7.46	2.54	3.99	2.56	3.99	0.95	43.81
1995	3.15	1.14	3.00	1.98	4.33	1.85	2.89	2.59	3.82	5.11	2.87	1.71	34.44
1996	4.65	2.97	2.71	2.88	3.18	4.35	6.51	4.40	6.87	7.18	3.52	4.91	54.13
POR= 59 YRS	3.15	2.98	3.70	2.94	3.75	3.59	5.32	4.69	3.56	3.37	3.11	3.13	43.29

WBAN : 13740

AVERAGE TEMPERATURE (°F) 1996 RICHMOND, VIRGINIA (RIC)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1967	40.9	34.8	46.6	58.8	60.7	72.1	76.6	75.5	65.7	57.2	44.0	41.9	56.2
1968	33.9	34.2	52.0	58.8	64.7	74.7	78.9	78.9	70.9	61.9	51.3	37.0	58.1
1969	33.9	36.8	42.3	57.6	65.5	75.7	78.3	75.1	68.1	58.5	46.8	35.5	56.2
1970	30.1	37.1	42.9	58.2	69.1	75.7	78.3	78.0	74.8	62.9	49.9	40.4	58.1
1971	33.8	39.5	44.5	55.0	63.3	74.7	76.6	75.3	71.4	64.6	48.5	48.0	57.9
1972	40.7	37.6	47.2	56.2	64.6	70.1	77.1	75.2	70.1	55.8	47.9	45.9	57.4
1973	37.6	38.5	52.6	57.9	65.1	76.0	77.4	77.5	72.3	60.6	51.3	40.8	59.0
1974	45.8	40.1	50.4	59.9	65.8	70.6	76.9	75.7	67.4	55.4	48.5	41.7	58.2
1975	40.7	41.4	45.3	52.9	67.7	73.6	76.0	78.8	69.3	62.5	53.6	40.0	58.5
1976	35.1	48.5	52.6	60.5	65.2	74.6	77.3	75.7	68.7	54.4	42.7	36.7	57.7
1977	25.3	40.5	53.7	61.1	68.2	73.0	81.4	79.8	74.2	57.3	52.3	39.5	58.9
1978	33.4	30.3	44.5	57.3	65.5	74.7	77.5	80.1	72.9	58.3	52.5	42.5	57.5
1979	36.4	28.6	51.1	58.4	67.1	70.8	76.9	77.8	71.0	58.3	53.3	42.3	57.7
1980	38.8	36.0	47.4	61.1	68.3	72.8	80.0	80.7	74.7	56.9	46.2	38.6	58.5
1981	31.2	42.2	44.6	60.6	64.1	77.9	79.6	75.1	69.4	56.4	49.1	38.0	57.4
1982	31.6	41.7	49.1	55.9	70.4	73.4	78.6	75.0	69.8	59.2	51.9	46.1	58.6
1983	37.8	39.1	50.4	56.1	66.1	75.6	79.4	77.7	68.8	58.1	49.0	36.2	57.9
1984	32.6	44.5	43.6	55.8	65.4	77.7	76.0	77.0	67.5	66.1	46.6	47.7	58.4
1985	32.6	40.2	49.7	62.0	68.0	74.3	79.0	77.5	70.8	62.6	56.6	37.8	59.3
1986	36.2	39.3	50.0	59.2	66.9	76.1	80.9	74.2	70.8	61.8	49.1	40.9	58.8
1987	34.7	37.0	47.1	54.3	67.3	75.8	81.3	78.5	72.3	52.9	51.3	43.0	58.0
1988	32.3	39.1	47.9	56.0	65.8	72.8	79.9	79.8	68.4	53.6	50.6	39.2	57.1
1989	42.3	39.6	47.9	55.8	64.1	76.1	77.7	75.3	70.8	60.2	49.3	31.3	57.5
1990	46.3	48.0	52.1	57.9	65.8	75.0	79.9	76.3	69.5	63.1	52.6	46.3	61.1
1991	40.2	44.0	50.8	60.2	72.1	75.3	80.7	78.6	71.6	59.9	49.6	44.3	60.6
1992	40.7	42.7	47.2	57.8	61.7	70.8	79.5	73.7	70.3	56.3	50.6	40.9	57.7
1993	41.4	37.8	45.9	55.9	67.7	75.0	82.5	78.5	72.5	58.6	50.9	39.0	58.8
1994	33.4	40.2	48.9	63.2	63.2	78.0	81.1	75.4	69.2	57.6	52.6	45.6	59.0
1995	40.7	38.7	50.2	58.1	65.8	74.1	80.8	78.9	69.1	61.1	44.2	35.6	58.1
1996	34.1	37.8	43.2	57.9	64.8	75.1	76.4	74.3	70.1	58.9	43.2	43.8	56.6
POR= 67 YRS	37.4	39.5	47.3	57.2	66.2	74.2	78.1	76.4	70.1	58.8	49.0	40.0	57.8

HEATING DEGREE DAYS (base 65°F) 1996 RICHMOND, VIRGINIA (RIC)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1967-68	0	0	64	256	623	708	956	887	416	191	86	0	4187
1968-69	0	0	0	161	403	864	957	783	695	237	66	0	4166
1969-70	0	0	45	221	541	907	1076	778	677	231	51	0	4527
1970-71	0	0	12	124	445	756	960	709	627	295	104	3	4035
1971-72	0	0	11	69	512	526	748	788	554	286	58	21	3573
1972-73	0	0	17	285	513	588	843	735	394	247	79	0	3701
1973-74	0	0	5	163	414	744	589	691	455	204	75	5	3345
1974-75	0	0	62	310	513	715	746	654	604	368	44	1	4017
1975-76	0	0	27	121	356	770	917	480	386	227	78	11	3373
1976-77	0	1	15	332	660	869	1227	680	366	176	42	7	4375
1977-78	0	0	4	259	401	784	974	964	627	235	88	5	4341
1978-79	0	0	16	214	366	694	876	1011	439	218	44	4	3882
1979-80	0	0	8	242	353	698	806	835	541	135	47	2	3667
1980-81	0	0	14	267	557	813	1042	633	626	171	107	0	4230
1981-82	0	1	29	273	473	834	1029	645	486	280	6	1	4057
1982-83	0	6	10	213	399	585	836	718	445	282	69	2	3565
1983-84	0	1	86	236	475	887	994	589	657	282	93	3	4303
1984-85	0	0	73	57	546	531	997	692	484	177	35	5	3597
1985-86	0	0	31	114	257	838	886	713	465	187	78	3	3572
1986-87	0	16	24	172	476	741	931	777	550	317	57	0	4061
1987-88	0	0	5	370	409	677	1008	746	527	279	79	32	4132
1988-89	0	0	27	361	425	794	696	709	546	293	108	0	3959
1989-90	0	3	38	181	468	1036	574	472	436	258	50	3	3519
1990-91	0	0	33	146	365	574	762	582	443	193	27	1	3126
1991-92	0	0	25	190	458	637	749	640	545	261	142	10	3657
1992-93	0	0	37	275	427	739	724	757	585	280	24	0	3848
1993-94	0	0	26	213	436	799	973	687	497	130	120	0	3881
1994-95	0	0	11	232	365	595	750	731	453	236	72	1	3446
1995-96	0	0	28	166	620	905	952	782	669	247	122	8	4499
1996-	0	0	10	193	652	654							

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COOLING DEGREE DAYS (base 65°F) 1996 RICHMOND, VIRGINIA (RIC)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1969	0	0	0	21	90	328	417	321	147	26	0	0	1350
1970	0	0	0	35	185	328	418	410	313	67	0	0	1756
1971	0	0	0	0	56	297	367	327	209	62	22	5	1345
1972	0	0	7	30	52	180	381	326	178	9	8	0	1171
1973	0	0	13	42	91	338	391	395	231	32	9	2	1544
1974	0	0	10	58	106	180	377	340	141	21	26	0	1259
1975	0	0	0	16	135	267	348	433	165	51	18	0	1433
1976	0	8	9	99	91	307	389	337	133	12	0	0	1385
1977	0	0	22	66	148	258	513	467	289	24	27	0	1814
1978	0	0	0	12	112	302	393	475	263	15	0	1	1573
1979	0	0	16	30	117	188	374	404	195	42	9	0	1375
1980	0	0	1	25	157	243	472	494	313	23	1	0	1729
1981	0	0	1	45	89	395	458	319	169	16	0	0	1492
1982	0	0	0	13	181	259	428	323	157	43	13	7	1424
1983	0	0	0	23	108	325	452	405	207	27	0	0	1547
1984	0	0	0	10	114	392	346	381	154	100	0	2	1499
1985	0	4	20	94	139	290	441	392	213	51	10	0	1654
1986	0	0	8	19	142	344	498	308	205	79	6	0	1609
1987	0	0	0	2	136	329	513	427	227	0	3	0	1637
1988	0	0	3	16	108	269	466	465	137	12	0	0	1476
1989	0	3	24	27	88	341	403	331	218	42	4	0	1481
1990	0	1	43	51	81	312	470	356	177	96	0	2	1589
1991	0	0	10	53	254	316	494	428	227	40	3	0	1825
1992	0	0	0	51	48	192	457	275	202	12	3	0	1240
1993	0	0	0	14	112	307	547	426	261	20	18	0	1705
1994	0	0	5	80	70	396	507	332	142	9	2	2	1545
1995	1	0	0	35	105	281	495	437	157	52	3	0	1566
1996	0	0	0	40	123	315	360	293	173	12	0	0	1316

SNOWFALL (inches) 1996 RICHMOND, VIRGINIA (RIC)

YEAR	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1967-68	0.0	0.0	0.0	0.0	T	5.6	2.3	2.4	2.8	0.0	0.0	0.0	13.1
1968-69	0.0	0.0	0.0	0.0	1.2	2.8	T	T	11.9	0.0	0.0	0.0	15.9
1969-70	0.0	0.0	0.0	0.0	0.0	1.8	5.4	0.4	0.0	0.0	0.0	0.0	7.6
1970-71	0.0	0.0	0.0	0.0	0.0	0.9	3.3	2.0	8.4	0.6	0.0	0.0	15.2
1971-72	0.0	0.0	0.0	0.0	T	0.0	T	13.7	0.0	T	0.0	0.0	13.7
1972-73	0.0	0.0	0.0	T	0.6	0.0	4.3	0.4	1.4	0.0	0.0	0.0	6.7
1973-74	0.0	0.0	0.0	0.0	0.0	9.9	T	5.0	T	0.0	0.0	0.0	14.9
1974-75	0.0	0.0	0.0	0.0	0.0	T	2.7	2.9	0.4	0.0	0.0	0.0	6.0
1975-76	0.0	0.0	0.0	0.0	0.0	T	0.2	T	1.0	0.0	0.0	0.0	1.2
1976-77	0.0	0.0	0.0	0.0	1.0	1.7	11.1	T	0.0	0.0	0.0	0.0	13.8
1977-78	0.0	0.0	0.0	0.0	T	T	1.3	5.1	5.0	0.0	0.0	0.0	11.4
1978-79	0.0	0.0	0.0	0.0	0.0	0.0	0.7	19.5	T	0.0	0.0	0.0	20.2
1979-80	0.0	0.0	0.0	T	0.0	T	16.6	7.0	15.0	0.0	0.0	0.0	38.6
1980-81	0.0	0.0	0.0	0.0	0.0	0.2	0.6	0.0	0.2	0.0	0.0	0.0	1.0
1981-82	0.0	0.0	0.0	0.0	T	1.9	8.3	10.8	T	0.2	0.0	0.0	21.2
1982-83	0.0	0.0	0.0	0.0	0.0	7.9	0.1	21.4	0.0	T	0.0	0.0	29.4
1983-84	0.0	0.0	0.0	0.0	0.1	T	1.1	2.8	0.3	0.0	0.0	0.0	4.3
1984-85	0.0	0.0	0.0	0.0	0.0	T	8.3	T	T	0.0	0.0	0.0	8.3
1985-86	0.0	0.0	0.0	0.0	0.0	1.3	3.3	4.4	T	T	0.0	0.0	9.0
1986-87	0.0	0.0	0.0	0.0	0.0	0.0	15.8	5.3	0.7	T	0.0	0.0	21.8
1987-88	0.0	0.0	0.0	0.0	4.5	T	8.1	T	T	T	0.0	0.0	12.6
1988-89	0.0	0.0	0.0	0.0	0.0	1.8	T	13.6	T	T	T	0.0	15.4
1989-90	0.0	0.0	0.0	0.0	1.1	9.9	0.0	T	T	0.2	0.0	0.0	11.2
1990-91	0.0	0.0	0.0	0.0	0.0	T	T	1.9	T	0.0	0.0	0.0	1.9
1991-92	0.0	0.0	0.0	0.0	0.1	T	0.0	0.8	T	T	0.0	0.0	0.9
1992-93	0.0	0.0	0.0	0.0	0.0	0.0	0.5	5.3	3.5	T	0.0	0.0	9.3
1993-94	0.0	0.0	0.0	0.0	0.0	5.1	2.2	1.7	0.7	0.0	T	0.0	9.7
1994-95	0.0	0.0	0.0	0.0	0.0	T	3.1	T	0.8	0.0	0.0	0.0	3.9
1995-96	0.0	0.0	0.0	0.0	T	T	12.3						
1996-					T	1.0							
POR= 58 YRS	0.0	0.0	0.0	T	0.4	2.0	4.8	3.9	2.4	0.1	T	0.0	13.6

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REFERENCE NOTES:

PAGE 1:

THE TEMPERATURE GRAPH SHOWS NORMAL MAXIMUM AND NORMAL MINIMUM DAILY TEMPERATURES (SOLID CURVES) AND THE ACTUAL DAILY HIGH AND LOW TEMPERATURES (VERTICAL BARS).

PAGE 2 AND 3:

H/C INDICATES HEATING AND COOLING DEGREE DAYS.  
RH INDICATES RELATIVE HUMIDITY  
W/O INDICATES WEATHER AND OBSTRUCTIONS  
S INDICATES SUNSHINE.  
P INDICATES PRESSURE.  
CLOUDINESS ON PAGE 3 IS THE SUM OF THE CEILOMETER AND SATELLITE DATA NOT TO EXCEED EIGHT EIGHTHS(OKTAS).

GENERAL:

T INDICATES TRACE PRECIPITATION, AN AMOUNT GREATER THAN ZERO BUT LESS THAN THE LOWEST REPORTABLE VALUE.  
+ INDICATES THE VALUE ALSO OCCURS ON EARLIER DATES.  
BLANK ENTRIES DENOTE MISSING OR UNREPORTED DATA.  
NORMALS ARE 30-YEAR AVERAGES (1961 - 1990).  
ASOS INDICATES AUTOMATED SURFACE OBSERVING SYSTEM.  
PM INDICATES THE LAST DAY OF THE PREVIOUS MONTH.  
POR (PERIOD OF RECORD) BEGINS WITH THE JANUARY DATA MONTH AND IS THE NUMBER OF YEARS USED TO COMPUTE THE MEAN. INDIVIDUAL MONTHS WITHIN THE POR MAY BE MISSING.  
WHEN THE POR FOR A NORMAL IS LESS THAN 30 YEARS, THE NORMAL IS PROVISIONAL AND IS BASED ON THE NUMBER OF YEARS INDICATED.  
0.\* OR \* INDICATES THE VALUE OR MEAN-DAYS-WITH IS BETWEEN 0.00 AND 0.05.  
CLOUDINESS FOR ASOS STATIONS DIFFERS FROM THE NON-ASOS OBSERVATION TAKEN BY A HUMAN OBSERVER. ASOS STATION CLOUDINESS IS BASED ON TIME-AVERAGED CEILOMETER DATA FOR CLOUDS AT OR BELOW 12,000 FEET AND ON SATELLITE DATA FOR CLOUDS ABOVE 12,000 FEET.  
THE NUMBER OF DAYS WITH CLEAR, PARTLY CLOUDY, AND CLOUDY CONDITIONS FOR ASOS STATIONS IS THE SUM OF THE CEILOMETER AND SATELLITE DATA FOR THE SUNRISE TO SUNSET PERIOD.

GENERAL CONTINUED:

CLEAR INDICATES 0 - 2 OKTAS, PARTLY CLOUDY INDICATES 3 - 6 OKTAS, AND CLOUDY INDICATES 7 OR 8 OKTAS.  
WHEN AT LEAST ONE OF THE ELEMENTS (CEILOMETER OR SATELLITE) IS MISSING, THE DAILY CLOUDINESS IS NOT COMPUTED.  
WIND DIRECTION IS RECORDED IN TENS OF DEGREES (2 DIGITS) CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM. "36" INDICATES TRUE NORTH.  
RESULTANT WIND IS THE VECTOR AVERAGE OF THE SPEED AND DIRECTION.  
AVERAGE TEMPERATURE IS THE SUM OF THE MEAN DAILY MAXIMUM AND MINIMUM TEMPERATURE DIVIDED BY 2.  
SNOWFALL DATA COMPRISE ALL FORMS OF FROZEN PRECIPITATION, INCLUDING HAIL.  
A HEATING (COOLING) DEGREE DAY IS THE DIFFERENCE BETWEEN THE AVERAGE DAILY TEMPERATURE AND 65° F.  
DRY BULB IS THE TEMPERATURE OF THE AMBIENT AIR.  
DEW POINT IS THE TEMPERATURE TO WHICH THE AIR MUST BE COOLED TO ACHIEVE 100 PERCENT RELATIVE HUMIDITY.  
WET BULB IS THE TEMPERATURE THE AIR WOULD HAVE IF THE MOISTURE CONTENT WAS INCREASED TO 100 PERCENT RELATIVE HUMIDITY.  
ON JULY 1, 1996, THE NATIONAL WEATHER SERVICE BEGAN USING THE "METAR" OBSERVATION CODE THAT WAS ALREADY EMPLOYED BY MOST OTHER NATIONS OF THE WORLD. THE MOST NOTICEABLE DIFFERENCE IN THIS ANNUAL PUBLICATION WILL BE THE CHANGE IN UNITS FROM TENTHS TO EIGHTHS(OKTAS) FOR REPORTING THE AMOUNT OF SKY COVER.

1996  
RICHMOND,  
VIRGINIA (RIC)

Richmond is located in east-central Virginia at the head of navigation on the James River and along a line separating the Coastal Plains (Tidewater Virginia) from the Piedmont. The Blue Ridge Mountains lie about 90 miles to the west and the Chesapeake Bay 60 miles to the east. Elevations range from a few feet above sea level along the river to a little over 300 feet in parts of the western section of the city.

The climate might be classified as modified continental. Summers are warm and humid and winters generally mild. The mountains to the west act as a partial barrier to outbreaks of cold, continental air in winter. The cold winter air is delayed long enough to be modified, then further warmed as it subsides in its approach to Richmond. The open waters of the Chesapeake Bay and Atlantic Ocean contribute to the humid summers and mild winters. The coldest weather normally occurs in late December and January, when low temperatures usually average in the upper 20s, and the high temperatures in the upper 40s. Temperatures seldom lower to zero, but there have been several occurrences of below zero temperatures. Summertime high temperatures above 100 degrees are not uncommon, but do not occur every year.

Precipitation is rather uniformly distributed throughout the year. However, dry periods lasting several weeks do occur, especially in autumn when long periods of pleasant, mild weather are most common. There is considerable variability in total monthly amounts from year to year. Snow usually remains on the ground only one or two days at a time. Ice storms (freezing rain or glaze) are not uncommon, but they are seldom severe enough to do any considerable damage. A notable exception was the spectacular glaze storm of January 27-28, 1943, when nearly 1 inch of ice accumulation caused heavy damage to trees and overhead transmission lines.

The James River reaches tidewater at Richmond where flooding may occur in every month of the year, most frequently in March and least in July. Hurricanes and tropical storms have been responsible for most of the flooding during the summer and early fall months. Hurricanes passing near Richmond have produced record rainfalls. In 1955, three hurricanes brought record rainfall to Richmond within a six-week period. The most noteworthy of these were Hurricanes Connie and Diane that brought heavy rains five days apart.

Damaging storms occur mainly from snow and freezing rain in winter and from hurricanes, tornadoes, and severe thunderstorms in other seasons. Damage may be from wind, flooding, or rain, or from any combination of these. Tornadoes are infrequent but some notable occurrences have been observed within the Richmond area.

Based on the 1951-1980 period, the average first occurrence of 32 degrees Fahrenheit in the fall is October 26 and the average last occurrence in the spring is April 10.

# STATION LOCATION

RICHMOND, VIRGINIA

LOCATION	OCCUPIED FROM	OCCUPIED TO	AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION	LATITUDE NORTH	LONGITUDE WEST	ELEVATION ABOVE										AUTOMATED OBSERVING	* Type M = AMOS T = AUTOB S = ASOS W = AWOS	REMARKS
						SEA LEVEL		GROUND										
						GROUND	TEMPERATURE	WIND INSTRUMENTS	EXTREMETHERMOMETERS	PSYCHROMETER	SUNSHINE SWITCH	FIPPINGBUCKET	RAIN GAGGE	WEIGHING RAIN GAGGE	8 INCH RAIN GAGGE			
CITY - - NOTE: For period January 1880 through October 1897 refer to previous editions.	9/18/95	5/22/97	4 mi. S	37°32'	77°27'	142												Section Center; no observations.
State Library Building Capitol Square	5/22/97	5/31/00	3/8 mi. SW	37°32'	77°27'	104	107	98	98		89							Observational Program begun 10/5/97.
Chamber of Commerce Bldg., Ninth & Main Sts	5/31/00	6/30/05	1/8 mi. NE	37°32'	77°27'	115	92	82	82		76							
Times Building 10th & Bank Streets	6/30/05	1/30/10	1/8 mi. SW			104	154	145	145		138							
Mutual Assurance Bldg. Ninth & Main Streets	1/30/10	7/01/53	1-1/2 mi. E	37°32'	77°25'	162	53	11	11		3	A4		3				Climatological observations were continuous at City Office sites 10/5/97 through 6/30/53. A - At this site 9/24/42 to 4/19/46 and after 6/1/50.
Weather Bureau Building Chimborazo Park 3301 E Broad Street	7/15/25	9/24/42	None	37°30'	77°20'	158	#	5	5					3				CAA to 8/3/30. WBAS 8/3/30 to 5/26/35 and 7/14/38 to 9/24/42. # - 40 feet 8/3/30 to 5/26/35, estimated 40 feet 5/26/35 to 7/14/38 and estimated 50 feet to 9/24/42.
AIRPORT WB-CAA Building	9/24/42	4/19/46	1/2 mi. NNW	37°30'	77°20'	156	55	5	5					3				AF operation.
Army Hangar (Operations Annex)	4/19/46	6/01/50	1/3 mi. SSE	37°30'	77°20'	156	46	5	5					4				WBAS reopened.
Old Airport Administration Bldg.	6/01/50	8/19/88	4/5 mi. N	37°30'	77°20'	c164	b20 g33	d6	d6	%60 j30	e19	f19	e19	a4 h4 i4	NA M			a - Installed 2700 feet ENE of thermometer site 6/26/59. b - 67 feet to 1/11/61. c - 162 feet to 6/26/59. d - Discontinued 6/26/59. e - 3 feet to 10/9/69. % - Commissioned 11/19/63. f - Installed on roof 1/1/80. g - Minor move 12/2/82. h - Type change 7/9/84. i - ASOS installed 10/1985. j - Type change 11/12/85. k - Inactive summer 1985 until relocated 12/10/85. l - Not moved 8/19/88, other instruments moved 8/20-31/88.
Byrd Field + New Terminal Building + R.E. Byrd International Airport effective 2/18/71 ++	8/19/88	Present	1/4 mi. N	37°31'	77°20'	164	k33	NA	NA	NA	3	3	3	k4	M			S ASOS Commissioned 10/01/95
++ Richmond International Airport effective 9/22/85.																		
Executive Terminal Richmond International Airport																		

SUBSCRIPTION: Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801. INQUIRIES/COMMENTS CALL: (704) 271-4800

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151 Patton Avenue, Rm 120  
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