

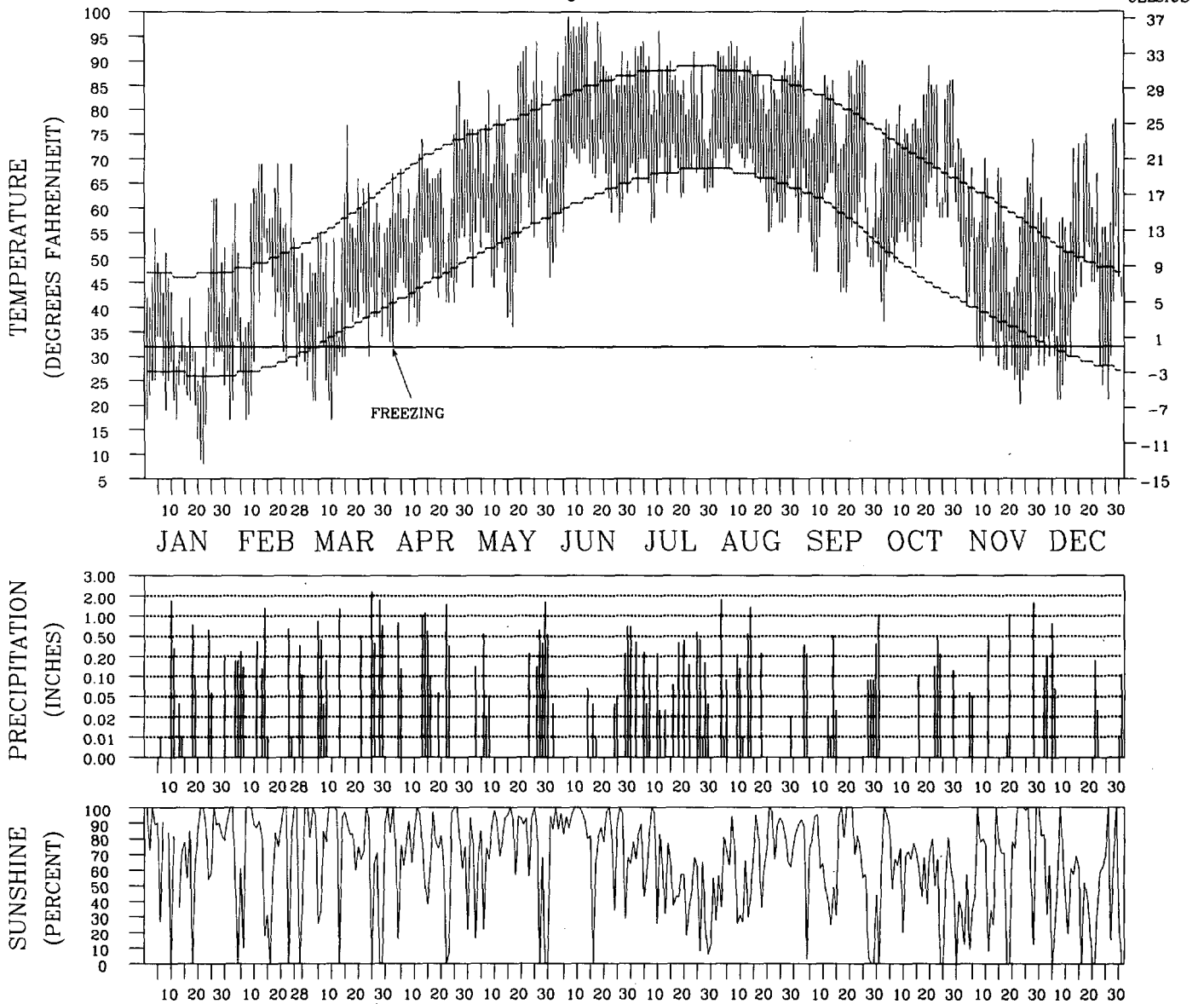
1984 LOCAL CLIMATOLOGICAL DATA

ANNUAL SUMMARY WITH COMPARATIVE DATA

RICHMOND, VIRGINIA



Daily Data



TEMPERATURE DEPICTS NORMAL MAXIMUM, NORMAL MINIMUM AND ACTUAL DAILY HIGH AND LOW VALUES (FAHRENHEIT)
 PRECIPITATION IS MEASURED IN INCHES. SCALE IS NON-LINEAR
 SUNSHINE IS PERCENT OF THE POSSIBLE SUNSHINE

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, ASHEVILLE, NORTH CAROLINA, 28801

noaa

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

NATIONAL ENVIRONMENTAL SATELLITE, DATA AND INFORMATION SERVICE

NATIONAL CLIMATIC DATA CENTER ASHEVILLE NORTH CAROLINA

Kenneth D. Wadsworth
 DIRECTOR
 NATIONAL CLIMATIC DATA CENTER

METEOROLOGICAL DATA FOR 1984

RICHMOND, VIRGINIA

LATITUDE: 37°30' N LONGITUDE: 77°20' W ELEVATION: FT. (grd) 164 (msl) 177 TIME ZONE: EASTERN WBAN: 13740

	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F:													
Averages													
-Daily Maximum	41.1	54.3	53.6	66.0	77.1	90.0	85.4	87.8	79.6	76.4	59.1	58.8	69.1
-Daily Minimum	24.1	34.6	33.5	45.5	53.7	65.4	66.5	66.1	55.3	55.8	34.0	36.5	47.6
-Monthly	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
-Monthly Dewpt.	22.8	33.4	29.6	41.8	51.7	63.5	66.4	67.1	56.2	55.6	31.5	37.4	46.4
Extremes													
-Highest	62	69	77	86	94	99	96	94	99	89	74	78	99
-Date	27	24	16	27	26	12	11	30	3	20	28	29	SEP 3
-Lowest	8	17	17	32	36	49	57	55	43	37	20	21	8
-Date	22	7	10	2	17	1	8	21	19	3	23	26	JAN 22
DEGREE DAYS BASE 65 °F:													
Heating	994	589	657	282	93	3	0	0	73	57	546	531	3825
Cooling	0	0	0	10	114	392	346	381	154	100	0	2	1499
% OF POSSIBLE SUNSHINE													
	76	67	72	70	72	82	54	66	63	56	61	48	66
AVG. SKY COVER (tenths)													
Sunrise - Sunset	6.6	6.3	6.1	7.1	6.3	5.8	7.6	5.4	6.3	7.2	5.3	7.2	6.4
Midnight - Midnight	5.9	5.8	5.9	6.7	6.2	5.2	7.4	5.5	6.0	6.6	4.6	6.4	6.0
NUMBER OF DAYS:													
Sunrise to Sunset													
-Clear	6	8	7	4	6	7	5	13	10	3	11	4	84
-Partly Cloudy	10	7	10	11	10	10	5	7	5	9	8	9	101
-Cloudy	15	14	14	15	15	13	21	11	15	19	11	18	181
Precipitation													
.01 inches or more	10	12	10	9	10	9	16	10	10	6	6	8	116
Snow, Ice pellets													
1.0 inches or more	0	2	0	0	0	0	0	0	0	0	0	0	2
Thunderstorms													
	1	0	6	6	7	9	13	10	3	0	1	0	56
Heavy Fog, visibility													
1/4 mile or less	2	8	0	3	3	0	1	3	1	6	2	6	35
Temperature °F													
-Maximum													
90° and above	0	0	0	0	4	15	8	11	4	0	0	0	42
32° and below	9	0	0	0	0	0	0	0	0	0	0	0	9
-Minimum													
32° and below	28	13	14	1	0	0	0	0	0	0	17	13	86
0° and below	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG. STATION PRESS. (mb)													
	1015.9	1009.5	1009.1	1006.6	1009.3	1009.8	1010.5	1009.8	1013.9	1015.2	1014.9	1015.7	1011.7
RELATIVE HUMIDITY (%)													
Hour 01	76	77	69	75	75	79	87	89	86	85	72	81	79
Hour 07	78	82	76	79	75	76	86	88	87	88	74	83	81
Hour 13 (Local Time)	60	57	53	51	51	46	63	58	53	55	44	56	54
Hour 19	69	66	56	54	57	60	70	75	70	75	59	70	65
PRECIPITATION (inches):													
Water Equivalent													
-Total	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
-Greatest (24 hrs)	2.10	1.55	2.54	1.96	2.07	1.17	0.62	1.82	0.62	1.42	1.66	0.84	2.54
-Date	10-11	13-14	25-26	22-23	29-30	29-30	25	3	3-4	PM-1	28	5-6	MAR 25-26
Snow, Ice pellets													
-Total	1.1	2.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	4.2
-Greatest (24 hrs)	0.7	1.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	1.5
-Date	18-19	6	29									5	FEB 6
WIND:													
Resultant													
-Direction (!!!)	007	233	317	246	230	203	202	284	023	342	320	236	264
-Speed (mph)	2.2	1.6	2.4	1.2	3.4	2.7	2.7	0.8	2.7	0.5	1.9	1.7	0.9
Average Speed (mph)	6.5	8.8	9.8	8.6	9.5	7.6	7.9	3.9	5.2	7.4	7.3	6.9	7.5
Fastest Mile													
-Direction (!!!)		SW	21	30	27	15	27	23	34	20	27	25	
-Speed (mph)		28	30	23	26	20	32	17	21	21	22	18	
-Date		25	21	25	4	29	11	18	14	21	28	29	
PEAK GUST													
-direction (!!!)		SW	SW	W	SW	NE	W	SW	N	SW	S	S	
-Speed (mph)		35	41	48	55	33	43	28	29	31	36	26	
-Date		28	21	13	8	1	11	18	26	21	28	22	

NORMALS, MEANS, AND EXTREMES

RICHMOND, VIRGINIA

LATITUDE: 37°30'N	LONGITUDE: 77°20'W	ELEVATION: FT. (grd)		164 (msl)		177		TIME ZONE: EASTERN					WBAN: 13740	
	(a)	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F:														
Normals														
-Daily Maximum		46.7	49.6	58.5	70.6	77.9	84.8	88.4	87.1	81.0	70.5	60.5	50.2	68.8
-Daily Minimum		26.5	28.1	35.8	45.1	54.2	62.2	67.2	66.4	59.3	46.7	37.3	29.6	46.5
-Monthly		36.6	38.9	47.2	57.9	66.1	73.5	77.8	76.8	70.2	58.6	48.9	39.9	57.7
Extremes														
-Record Highest	55	80	83	93	96	100	104	105	102	103	99	86	80	105
-Year		1950	1932	1938	1976	1941	1952	1977	1983	1954	1941	1974	1971	JUL 1977
-Record Lowest	55	-12	-10	11	25	31	40	51	46	35	21	10	-1	-12
-Year		1940	1936	1960	1977	1956	1967	1965	1934	1974	1962	1933	1942	JAN 1940
NORMAL DEGREE DAYS:														
Heating (base 65°F)		880	731	552	226	65	0	0	0	24	221	483	778	3960
Cooling (base 65°F)		0	0	0	13	99	258	397	366	180	23	0	0	1336
% OF POSSIBLE SUNSHINE	34	53	58	60	65	65	68	66	66	64	60	58	53	61
MEAN SKY COVER (tenths)														
Sunrise - Sunset	39	6.4	6.1	6.3	6.1	6.3	6.0	6.1	6.0	5.8	5.4	5.7	6.2	6.0
MEAN NUMBER OF DAYS:														
Sunrise to Sunset														
-Clear	39	8.3	8.7	8.1	7.8	6.9	6.7	7.0	7.4	9.4	11.4	9.8	9.5	101.1
-Partly Cloudy	39	6.7	6.2	8.3	9.3	10.4	11.9	11.5	11.7	8.6	7.1	7.7	6.3	105.7
-Cloudy	39	16.0	13.3	14.6	12.8	13.7	11.3	12.5	11.9	12.1	12.4	12.5	15.3	158.4
Precipitation														
.01 inches or more	47	10.3	9.1	10.8	9.3	10.8	9.5	11.0	9.8	8.0	7.3	8.2	8.9	113.3
Snow, Ice pellets														
1.0 inches or more	47	1.3	1.2	0.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.6	4.0
Thunderstorms	47	0.2	0.4	1.6	2.5	5.6	6.6	8.6	6.8	3.1	1.0	0.5	0.3	37.3
Heavy Fog Visibility														
1/4 mile or less	55	2.7	2.1	1.7	1.7	1.9	1.6	2.3	2.6	3.1	3.4	2.2	2.9	28.4
Temperature °F														
-Maximum														
90° and above	55	0.0	0.0	0.1	0.8	2.7	9.3	13.3	11.1	4.6	0.4	0.0	0.0	42.2
32° and below	55	3.3	1.5	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.*	1.6	6.6
-Minimum														
32° and below	55	21.5	18.9	10.3	2.1	0.1	0.0	0.0	0.0	0.0	1.9	10.4	20.3	85.3
0° and below	55	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.*	0.5
AVG. STATION PRESS. (mb)	12	1012.6	1012.2	1010.0	1009.4	1008.9	1009.7	1010.2	1011.3	1011.9	1013.2	1013.1	1013.4	1011.3
RELATIVE HUMIDITY (%)														
Hour 01	50	77	74	73	74	83	87	89	90	90	87	80	78	82
Hour 07 (Local Time)	50	81	79	78	76	80	82	85	89	90	89	84	81	83
Hour 13	50	57	52	49	45	51	54	57	57	56	53	50	55	53
Hour 19	50	69	63	59	55	65	67	71	76	78	77	70	70	68
PRECIPITATION (inches):														
Water Equivalent														
-Normal		3.23	3.13	3.57	2.90	3.55	3.60	5.14	5.01	3.52	3.74	3.29	3.39	44.07
-Maximum Monthly	47	7.97	5.97	8.65	5.92	8.87	9.24	18.87	14.10	10.98	9.39	7.64	7.07	18.87
-Year		1978	1979	1984	1984	1972	1938	1945	1955	1975	1971	1959	1973	JUL 1945
-Minimum Monthly	47	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		1981	1978	1966	1963	1965	1980	1983	1943	1978	1963	1965	1980	SEP 1978
-Maximum in 24 hrs	47	3.31	2.67	2.54	2.60	3.08	4.61	5.73	8.79	3.82	6.50	4.07	3.16	8.79
-Year		1962	1979	1984	1978	1981	1963	1969	1955	1955	1961	1956	1958	AUG 1955
Snow, Ice pellets														
-Maximum Monthly	47	28.5	21.4	19.7	2.0						T	7.3	12.5	28.5
-Year		1940	1983	1960	1940						T	1979	1953	JAN 1940
-Maximum in 24 hrs	47	21.6	16.8	12.1	2.0						T	7.3	7.5	21.6
-Year		1940	1983	1962	1940						T	1979	1953	JAN 1940
WIND:														
Mean Speed (mph)	36	7.9	8.5	9.0	8.8	7.7	7.2	6.7	6.3	6.5	6.9	7.4	7.6	7.5
Prevailing Direction through 1963		S	NNE	W	S	SSW	S	SSW	S	S	NNE	S	SW	S
Fastest Mile														
-Direction (!!!)	31	NW	SW	SE	NW	N	NW	NW	W	SE	SE	NW	SW	SE
-speed (MPH)	31	43	45	42	40	45	52	56	54	45	68	38	40	68
-year		1971	1951	1952	1972	1962	1952	1955	1964	1952	1954	1977	1968	OCT 1954

(!!!) See Reference Notes on Page 6B.
Page 3

PRECIPITATION (inches)

RICHMOND, VIRGINIA

YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	ANNUAL
1955	1.09	3.18	2.66	3.14	1.79	3.06	7.93	14.10	5.79	2.57	1.76	0.86	47.93
1956	1.65	3.57	3.06	2.75	4.35	3.28	10.32	2.28	2.96	4.92	6.11	3.98	49.23
1957	3.36	5.29	2.82	2.25	2.75	3.92	1.80	7.46	3.43	5.35	5.30	6.88	50.61
1958	2.96	4.38	3.81	4.35	5.79	6.09	3.27	9.77	1.90	5.35	1.43	4.43	53.53
1959	1.31	1.87	2.92	4.32	2.44	3.45	12.85	5.75	3.30	3.25	7.64	2.24	51.34
1960	2.13	4.56	3.29	3.57	3.59	0.91	7.34	7.20	6.21	3.31	0.85	3.04	46.00
1961	2.57	5.39	4.02	1.73	4.83	6.49	2.85	3.90	1.64	8.78	1.81	5.05	49.06
1962	5.95	3.00	4.87	3.80	4.08	5.57	5.65	2.37	3.46	0.50	6.73	2.64	48.62
1963	1.55	2.98	5.62	0.64	2.39	7.01	0.52	3.75	3.20	0.30	6.70	2.80	37.46
1964	4.16	4.46	2.61	2.71	1.14	2.40	6.46	9.88	2.56	3.62	1.98	3.05	45.03
1965	2.51	2.77	3.68	2.13	0.87	3.39	6.33	0.81	4.81	1.38	0.36	0.72	29.76
1966	4.58	3.80	0.94	2.18	2.58	2.54	4.07	1.31	5.06	4.81	1.31	3.07	36.25
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
Record Mean	3.11	3.03	3.64	2.99	3.73	3.68	5.46	4.83	3.58	3.38	3.18	3.20	43.82

See Reference Notes on Page 6B.
Page 4A

AVERAGE TEMPERATURE (deg. F)

RICHMOND, VIRGINIA

YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	ANNUAL
1955	35.8	40.1	50.2	60.8	67.2	70.1	81.3	78.7	70.6	59.5	46.4	34.8	58.0
1956	36.0	43.0	46.3	55.5	65.0	74.7	77.8	76.5	67.9	60.9	47.6	48.9	58.3
1957	35.2	43.3	47.2	61.5	67.8	76.2	78.4	74.6	71.9	54.6	50.3	43.0	58.7
1958	34.6	33.8	42.3	57.5	65.7	71.3	80.2	76.4	69.1	58.7	51.2	33.4	56.2
1959	37.5	41.6	47.3	59.3	69.4	74.8	77.9	79.0	70.8	61.4	47.3	41.6	59.0
1960	38.8	39.3	35.9	61.8	64.9	73.7	76.3	77.5	69.3	57.1	50.1	34.6	56.6
1961	33.5	42.2	50.8	53.0	63.6	72.8	78.5	77.1	73.5	58.1	50.1	37.1	57.5
1962	36.6	39.7	45.0	57.5	70.6	74.0	74.8	74.6	66.2	60.5	47.2	36.1	56.9
1963	35.9	33.3	50.8	59.2	64.0	72.0	76.1	75.7	65.5	58.6	50.1	32.4	56.1
1964	38.1	37.2	47.6	55.4	66.4	73.1	75.8	73.1	67.1	53.4	51.5	42.9	56.8
1965	35.6	38.8	43.0	53.9	69.6	70.7	74.9	75.9	70.7	56.1	48.2	41.3	56.6
1966	31.1	37.7	47.5	52.8	63.1	71.4	76.4	74.6	67.2	55.5	49.5	38.0	55.4
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	57.3
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
Record Mean	37.3	39.3	47.1	57.1	66.2	74.1	77.7	76.3	70.1	58.8	48.8	39.8	57.7
Max	47.1	50.0	58.5	69.6	78.1	85.2	88.1	86.6	80.9	70.6	60.3	49.9	68.7
Min	27.4	28.6	35.7	44.6	54.3	62.9	67.3	66.1	59.2	46.9	37.2	29.7	46.7

See Reference Notes on Page 6B.
Page 4B

HEATING DEGREE DAYS Base 65 deg. F

RICHMOND, VIRGINIA

SEASON	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1955-56	0	0	9	186	555	928	896	631	578	323	107	10	4223
1956-57	0	3	75	146	519	493	915	600	546	201	63	5	3566
1957-58	0	0	50	317	434	674	936	871	696	254	70	6	4308
1958-59	0	0	24	212	409	973	847	650	542	212	44	10	3923
1959-60	0	0	36	217	530	717	807	737	894	184	88	2	4212
1960-61	0	0	24	257	439	936	971	632	461	390	106	7	4223
1961-62	0	0	27	218	459	860	875	702	623	276	32	0	4072
1962-63	0	0	73	175	526	891	897	882	434	218	102	1	4199
1963-64	0	0	71	197	439	1004	826	801	537	306	74	12	4267
1964-65	0	0	32	352	402	676	909	726	674	339	17	34	4161
1965-66	0	6	25	275	498	726	1043	759	538	371	133	27	4401
1966-67	0	0	47	293	466	833	738	841	560	230	171	17	4196
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							

See Reference Notes on Page 6B.
Page 5A

COOLING DEGREE DAYS Base 65 deg. F

RICHMOND, VIRGINIA

YEAR	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
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

See Reference Notes on Page 6B.
Page 5B

SNOWFALL (inches)

RICHMOND, VIRGINIA

SEASON	JULY	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUNE	TOTAL
1955-56	0.0	0.0	0.0	0.0	T	T	1.1	T	T	T	0.0	0.0	1.1
1956-57	0.0	0.0	0.0	0.0	T	T	5.8	0.7	T	1.2	0.0	0.0	7.7
1957-58	0.0	0.0	0.0	0.0	T	2.9	3.7	7.7	6.3	0.0	0.0	0.0	20.6
1958-59	0.0	0.0	0.0	0.0	0.0	12.5	2.4	0.0	0.0	0.0	0.0	0.0	14.9
1959-60	0.0	0.0	0.0	0.0	T	1.2	2.5	8.9	19.7	0.0	0.0	0.0	32.3
1960-61	0.0	0.0	0.0	0.0	0.0	1.7	7.2	5.0	T	0.0	0.0	0.0	13.9
1961-62	0.0	0.0	0.0	0.0	T	0.9	20.6	1.2	16.2	0.0	0.0	0.0	38.9
1962-63	0.0	0.0	0.0	0.0	0.9	8.1	1.6	6.3	T	0.0	0.0	0.0	16.9
1963-64	0.0	0.0	0.0	0.0	T	0.4	5.7	10.2	7.0	1.2	0.0	0.0	24.5
1964-65	0.0	0.0	0.0	0.0	0.4	0.0	12.4	6.6	1.0	0.0	0.0	0.0	20.4
1965-66	0.0	0.0	0.0	0.0	0.0	T	26.2	3.0	0.0	0.0	0.0	0.0	29.2
1966-67	0.0	0.0	0.0	0.0	0.2	12.2	6.3	17.1	T	0.0	0.0	0.0	35.8
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							
Record Mean	0.0	0.0	0.0	T	0.4	2.0	5.0	4.3	2.8	0.1	0.0	0.0	14.6

See Reference Notes on Page 6B.
Page 6A

REFERENCE NOTES

RICHMOND, VIRGINIA

GENERAL
T - TRACE AMOUNT.
BLANK ENTRIES DENOTE MISSING/UNREPORTED DATA.
INDICATES A STATION OR INSTRUMENT RELOCATION.
SEE STATION LOCATION TABLE ON PAGE 8.

SPECIFIC
PAGE 2
PM - INCLUDES LAST DAY OF PREVIOUS MONTH

PAGE 3
(a) - LENGTH OF RECORD IN YEARS, ALTHOUGH INDIVIDUAL MONTHS MAY BE MISSING.
* LESS THAN .05
NORMALS - BASED ON THE 1951-1980 RECORD PERIOD.
EXTREMES - DATES ARE THE MOST RECENT OCCURRENCE
WIND DIR. - NUMERALS SHOW TENS OF DEGREES CLOCKWISE FROM TRUE NORTH. "00" INDICATES CALM.
RESULTANT DIRECTIONS ARE GIVEN TO WHOLE DEGREES.

PAGES 4A, 4B, 6A
RECORD MEANS ARE FOR ENTIRE PERIOD OF RECORD, REGARDLESS OF LOCATION

EXCEPTIONS
NONE

RICHMOND, VIRGINIA

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 coldest air being 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 late December and January, when low temperatures usually average in the upper 20-s and the high temperatures in the upper 40-s. Temperatures seldom lower to zero, but there have been several occurrences of below zero temperatures. Summertime high temperatures above 100 deg. 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 occurs 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. The flood of record at Richmond was Agnes June 23, 1972, which produced crests 6 1/2 feet above the old high water marks dating back 200 years. Agnes was followed closely by serious flooding on October 7, 1972, and preceded by Camille on August 22, 1969, which is now the fourth greatest flood of record. 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. Hurricane winds usually diminish before reaching Richmond. However, as Hurricane Hazel moved through central Virginia, October 15, 1954, it produced a wind of 68 mph, with a peak gust of 79 mph.

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 distance and direction from previous location	Latitude North	Longitude West	Elevation above										* Type M = AMOS T = AUTOB	Remarks	
						Sea level	Ground											Automatic Observing Equipment *
							Ground at temperature site	Wind instruments	Extreme thermometers	Psychrometer	Sunshine Switch	Tipping bucket rain gage	Weighing rain gage	8" rain gage	Hygrothermometer			
COOPERATIVE																		
High elevation in East Richmond	1/1880	2/1893				Est. 150										W. H. Pleasants; exact address unknown.		
Near Southern RR Bridge	3/1893	3/1895				Est. 35										A. J. Duesberry, River Observer.		
Westbrook Farms	4/1895	10/1897	4 mi. N	27° 36'	77° 24'	196										Capt. J. C. Shafer; temperatures only		
CITY																		
State Library Building Capitol Square	9/18/95	5/22/97	4 mi. S	37° 32'	77° 27'	142										Section Center; no observations		
Chamber of Commerce Building, Ninth & Main Streets	5/22/97	5/31/00	3/8 mi. SW	37° 32'	77° 27'	104	107	98	98		89		89			Observational Program begun 10/5/97.		
Times Building 10th & Bank Streets	5/31/00	6/30/05	1/8 mi. NE	37° 32'	77° 27'	115	92	82	82		76		76					
Mutual Assurance Bldg. Ninth & Main Streets	6/30/05	1/30/10	1/8 mi. SW			104	154	145	145		138		138					
Weather Bureau Building Chimborazo Park 3301 E Broad Street	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.		
AIRPORT																		
WB-CAA Building	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.		
Army Hangar (Operations Annex)	9/24/42	4/19/46	1/2 mi. NNW	37° 30'	77° 20'	156	55	5	5				3			AF operation.		
Old Airport Administration Building	4/19/46	6/01/50	1/3 mi. SSE	37° 30'	77° 20'	156	46	5	5				4			WBAS reopened.		
Byrd Field † New Terminal Building † R. E. Byrd International Airport effective 2/18/71	6/01/50	Present	4/5 mi. N	37° 30'	77° 20'	c164	b20 g33	d6	d6	%60	e19	f19	e19	a4 h4	NA	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.		

SUBSCRIPTION:
Price and ordering information available through: National Climatic Data Center, Federal Building, Asheville, North Carolina 28801

USCOMM-NOAA-ASHEVILLE - 1450

U.S. DEPARTMENT OF COMMERCE
NATIONAL CLIMATIC DATA CENTER
FEDERAL BUILDING
ASHEVILLE, N.C. 28801

AN EQUAL OPPORTUNITY EMPLOYER

POSTAGE AND FEES PAID
U.S. DEPARTMENT OF COMMERCE
COM 210



FIRST CLASS