A UNITED STATES DEPARTMENT OF COMMERCE PUBLICATION

LOCAL CLIMATOLOGICAL DATA
ANNUAL SUMMARY WITH COMPARATIVE DATA

RICHMOND, VIRGINIA

1970

U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION ENVIRONMENTAL DATA SERVICE

NARRATIVE CLIMATOLOGICAL SUMMARY

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 west section of the City.

The climate might be classed 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 in late December and in January, when low temperatures usually average in the upper twenties and the high temperatures in the upper forties. Temperatures seldom lower to zero. The record lowest temperature of minus 12° was recorded at the Airport in January 1940. The record high temperature of 107° occurred in August 1918 at Chimborazo Park.

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 so that no one month can be depended upon to be normal. Snow has been recorded during seven of the twelve months. Falls of 4 inches or more occur on an average of once a year. Snow usually remains on the ground only 1 or 2 days at a time, but on one occasion it remained 21 days (January 23 to February 13, 1948). Ice storms (freezing rain or glaze) are not uncommon in winter, 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 heavy damage was done to trees and overhead transmission lines of all kinds.

The James River reaches tidewater at Richmond where flooding has occurred in every month of the year, most frequently in March (28 times in the past 61 years), and only twice in July. Hurricanes and less severe storms of tropical origin have been responsible for most of the flooding during the summer and early fall months. In recent years, three hurricanes brought more than normal rainfall to Richmond within a 6-week period in 1955. The most noteworthy of these were Hurricanes Connie and Diane that brought heavy rains five days apart, which sent the James River out of its banks at Richmond, during August 18 through August 20.

Damaging storms occur mainly from snow and freezing rain in winter and from hurricanes, tornadoes, and severe thunderstorms at other seasons. Damage may be from wind, flooding, or rain, or from any combination of these. Three tornadoes have been observed in the Richmond area, the latest July 20, 1956. The highest wind recorded has been 68 m.p.h. with a peak gust of 79 m.p.h. at the time of Hurricane Hazel, October 15, 1954.

The dates of the last freeze in spring and of the first in autumn mark the limits of the growing season for most crops. The average growing season is 216 days. May 11, 1966, has been the latest date in spring when a temperature of 32° or lower was recorded; October 5, 1965, has been the earliest date in autumn.

METEOROLOGICAL DATA FOR THE CURRENT YEAR

Station: RICHMOND, VIRGINIA — BYRD FIELD — Standard time used: EASTERN — Latitude: 37° 30' N — Longitude: 77° 20' W — Elevation (ground): 164 feet — Year: 1970

Month	Temperature: Averages: Daily maximum	Daily minimum	Monthly	Extremes: Highest	Date	Lowest	Date	Degree days (Base 65°): Heating	Cooling	Precipitation: Total	Greatest in 24 hrs.	Date	Snow, Ice pellets: Total	Greatest in 24 hrs.	Date	Relative humidity: Hour 01 (Local time)	Hour 07 (Local time)	Hour 13 (Local time)	Hour 19 (Local time)	Wind &: Resultant: Direction	Resultant: Speed	Average speed	Fastest mile: Speed	Fastest mile: Direction #	Fastest mile: Date	Percent of possible sunshine	Average sky cover sunrise to sunset	Number of days: Sunrise to sunset: Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, Ice pellets 1.0 inch or more	Thunderstorms	Heavy fog	Temperatures: Maximum ‡: 90° and above	32° and below	Minimum: 32° and below	0° and below	Average daily solar radiation - langleys
JAN	40.8	19.3	30.1	75	29	-1	22	1076	0	1.32	0.56	6-7	5.4	4.0	6-7	74	75	53	65	28	2.3	7.2	31	NW	21	54	6.0	10	6	15	7	2	0	1	0	9	29	1	
FEB	50.0	24.1	37.1	66	19	8	4	778	0	2.37	0.80	16-17	0.4	0.4	3	68	76	50	58	28	2.0	8.5	29	N	25	60	5.6	13	3	12	8	0	0	1	0	2	25	0	
MAR	53.6	32.1	42.9	77	26	19	17+	677	0	3.70	0.76	29	0.0	0.0		73	76	52	61	36	1.6	7.4	25	N	29	49	6.7	8	6	17	12	0	2	2	0	0	12	0	
APR	70.7	45.7	58.2	88	24+	30	8	231	35	2.84	0.91	26	0.0	0.0		71	78	49	56	27	0.8	8.2	36	W	2	60	6.3	8	8	14	10	0	4	7	0	0	1	0	
MAY	81.6	56.5	69.1	94	24+	37	7	51	185	1.84	0.65	17	0.0	0.0		81	77	49	63	17	0.7	7.5	29	NW	17	76	4.8	12	11	8	6	0	3	4	7	0	0	0	
JUN	88.1	63.2	75.7	100	18	53	29	0	328	1.12	0.44	25-26	0.0	0.0		80	80	48	59	20	2.2	7.5	26	SW	21	72	5.9	7	13	10	6	0	4	0	11	0	0	0	
JUL	88.5	68.0	78.3	96	4	59	7	0	418	4.74	1.35	4-5	0.0	0.0		88	86	59	72	17	1.5	6.1	28	N	2	53	6.6	6	13	12	12	0	9	2	17	0	0	0	
AUG	89.5	66.5	78.0	95	31+	62	27+	0	410	1.69	1.09	19-20	0.0	0.0		90	88	53	71	16	1.0	5.4	22	NW	19	62	5.8	6	13	12	10	0	5	1	17	0	0	0	
SEP	87.5	62.0	74.8	95	24+	45	29	12	313	1.02	0.50	10	0.0	0.0		85	84	47	68	20	1.7	6.3	23	NW	18	73	4.6	12	11	7	4	0	3	0	15	0	0	0	
OCT	73.6	52.2	62.9	88	3	30	18	124	67	1.55	0.71	21	0.0	0.0		86	88	53	71	06	2.9	6.6	24	N	16	44	6.7	6	9	16	8	0	0	5	0	0	1	0	
NOV	60.9	38.9	49.9	73	10	14	25	445	0	3.10	1.39	10-11	0.0	0.0		81	84	51	72	30	0.7	7.0	25	S	20	41	6.3	8	6	16	11	0	4	3	0	0	9	0	
DEC	50.7	30.1	40.4	73	2	16	29	756	0	3.00	1.29	16	0.9	0.7	31	77	77	53	68	27	2.4	7.8	34	W	4	47	5.7	11	5	15	8	0	0	4	0	0	18	0	
YEAR	69.6	46.6	58.1	100	JUN. 18	-1	JAN. 22	4150	1756	28.29	1.39	NOV. 10-11	6.7	4.0	JAN. 6-7	80	81	51	65	25	0.6	7.1	36	W	APR. 2	58	5.9	107	104	154	102	2	34	30	67	11	95	1	

NORMALS, MEANS, AND EXTREMES

Month	Temperature: Normal: Daily maximum	Daily minimum	Monthly	Extremes: Record highest	Year	Record lowest	Year	Normal heating degree days (Base 65°)	Precipitation: Normal total	Maximum monthly	Year	Minimum monthly	Year	Maximum in 24 hrs.	Year	Snow, Ice pellets: Mean total	Maximum monthly	Year	Maximum in 24 hrs.	Year	Relative humidity: Hour 01 (Local time)	Hour 07 (Local time)	Hour 13 (Local time)	Hour 19 (Local time)	Wind &: Mean speed	Prevailing direction	Fastest mile: Speed	Direction #	Year	Pct. of possible sunshine	Mean sky cover sunrise to sunset	Mean number of days: Sunrise to sunset: Clear	Partly cloudy	Cloudy	Precipitation .01 inch or more	Snow, Ice pellets 1.0 inch or more	Thunderstorms	Heavy fog	Temperatures: Max. ‡: 90° and above	32° and below	Min.: 32° and below	0° and below	Average daily solar radiation - langleys
(a)	(b)	(b)	(b)	41		41		(b)	(b)	33		33		33		33	33		33		36	36	36	36	22	15	20	20		20	25	25	25	25	33	33	33	41	41	41	41	41	
J	48.3	29.0	38.7	80	1950	-12	1940	815	3.46	5.95	1962	1.08	1951	3.21	1962	5.6	28.5	1940	21.6	1940	77	81	57	69	8.1	S	40	S	1959	52	6.4	9	6	16	10	2	*	3	0	3	21	*	
F	50.6	29.2	39.9	83	1932+	-10	1936	703	2.90	5.61	1944	0.98	1968	1.87	1969	3.3	17.1	1967	9.2	1947	74	79	52	63	8.6	NNE	45	SW	1951	54	6.1	9	6	13	9	1	*	2	0	1	19	*	
M	59.1	36.3	47.7	93	1938	11	1960+	546	3.42	5.85	1944	0.94	1966	2.04	1942	3.0	19.7	1960	12.1	1962	74	78	48	59	9.0	W	42	SE	1952	59	6.1	8	9	14	11	1	1	2	*	*	10	0	
A	70.4	45.8	58.1	96	1960	26	1964+	219	3.15	5.32	1952	0.64	1963	2.07	1952	0.1	2.0	1940	2.0	1940	75	76	46	57	8.9	S	40	NW	1954	61	6.2	7	10	13	10	*	2	2	1	0	2	0	
M	79.3	54.6	67.0	100	1941	31	1956	53	3.72	7.73	1946	0.87	1965	2.30	1958	0.0	0.0		0.0		83	78	49	65	7.8	SSW	45	N	1962	65	6.2	7	11	13	10	0	6	2	3	0	*	0	
J	86.8	63.4	75.1	104	1952	40	1967	0	3.75	9.24	1938	0.91	1960	4.61	1963	0.0	0.0		0.0		87	81	53	68	7.3	S	52	NW	1952	67	5.9	7	12	11	9	0	7	2	10	0	0	0	
J	89.4	66.7	78.1	104	1936+	51	1965+	0	5.61	18.87	1945	0.52	1963	5.73	1969	0.0	0.0		0.0		89	85	56	72	6.8	SSW	56	NW	1955	65	6.1	7	12	12	11	0	9	2	13	0	0	0	
A	86.5	65.4	76.0	102	1953	46	1934	0	5.54	14.10	1955	0.52	1943	8.79	1955	0.0	0.0		0.0		90	88	57	76	6.5	S	54	W	1964	64	6.0	7	12	12	10	0	7	3	11	0	0	0	
S	81.8	58.6	70.2	103	1954	37	1963	36	3.65	8.49	1945	0.69	1954	3.82	1955	0.0	0.0		0.0		90	89	55	79	6.8	S	45	SE	1952	65	5.6	10	8	12	8	0	3	3	5	0	0	0	
O	70.6	46.7	58.7	99	1941	21	1962	214	3.00	8.78	1961	0.30	1963	6.50	1961	T	T	1954	T	1954	87	89	52	77	7.0	NNE	68	SE	1954	60	5.2	12	7	12	7	0	1	4	*	0	2	0	
N	59.9	37.1	48.5	86	1950	10	1933+	495	3.04	7.64	1959	0.36	1965	4.07	1956	0.5	7.3	1953	7.3	1953	80	84	50	70	7.5	S	35	S	1957	55	5.7	10	7	13	8	*	1	2	0	*	11	0	
D	49.8	29.5	39.7	78	1956	-1	1942	784	2.97	6.88	1957	0.72	1965	3.16	1958	2.2	12.5	1958	7.5	1966	77	81	54	70	7.5	SW	40	SW	1968+	52	6.0	10	6	15	9	1	*	3	0	2	21	*	
YR	69.4	46.9	58.1	104	JUN. 1952+	-12	JAN. 1940	3865	44.21	18.87	JUL. 1945	0.30	OCT. 1963	8.79	AUG. 1955	14.7	28.5	JAN. 1940	21.6	JAN. 1940	82	82	53	69	7.6	S	68	SE	OCT. 1954	61	6.0	103	106	156	113	4	37	29	43	6	86	1	

Means and extremes above are from existing and comparable exposures. Annual extremes have been exceeded at other sites in the locality as follows: Highest temperature 107 in August 1918; minimum monthly precipitation 0.11 in November 1890 and earlier.

(a) Length of record, years, based on January data. Other months may be for more or fewer years if there have been breaks in the record.
(b) Climatological standard normals (1931-1960).
* Less than one half.
\+ Also on earlier dates, months, or years.
T Trace, an amount too small to measure.
Below zero temperatures are preceded by a minus sign.
The prevailing direction for wind in the Normals, Means, and Extremes table is from records through 1963.
‡ ≥ 70° at Alaskan stations.

Unless otherwise indicated, dimensional units used in this bulletin are: temperature in degrees F.; precipitation, including snowfall, in inches; wind movement in miles per hour; and relative humidity in percent. Heating degree day totals are the sums of negative departures of average daily temperatures from 65° F. Cooling degree day totals are the sums of positive departures of average daily temperatures from 65° F. Sleet was included in snowfall totals beginning with July 1948. The term "ice pellets" includes solid grains of ice (sleet) and particles consisting of snow pellets encased in a thin layer of ice. Heavy fog reduces visibility to 1/4 mile or less.

Sky cover is expressed in a range of 0 for no clouds or obscuring phenomena to 10 for complete sky cover. The number of clear days is based on average cloudiness 0-3, partly cloudy days 4-7, and cloudy days 8-10 tenths.

Solar radiation data are the averages of direct and diffuse radiation on a horizontal surface. The langley denotes one gram calorie per square centimeter.

& *Figures instead of letters in a direction column indicate direction in tens of degrees from true North; i.e., 09 - East, 18 - South, 27 - West, 36 - North, and 00 - Calm.* Resultant wind is the vector sum of wind directions and speeds divided by the number of observations. If figures appear in the direction column under "Fastest mile" the corresponding speeds are fastest observed 1-minute values.

\# To 8 compass points only.

AVERAGE TEMPERATURE

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1931	38.3	40.4	41.3	53.4	64.4	72.6	77.8	73.8	73.4	59.8	54.2	41.2	57.6
1932	48.1	46.4	44.3	54.3	63.6	73.8	77.8	76.9	70.0	59.0	45.8	41.2	58.4
1933	44.3	40.3	45.6	56.0	69.1	74.4	75.2	75.7	71.2	57.1	45.0	41.8	58.0
1934	42.6	28.2	42.8	56.3	66.2	76.6	79.7	74.9	71.3	56.3	49.5	38.4	56.9
1935	34.5	38.7	51.9	53.5	62.9	73.6	77.2	75.3	67.6	58.3	51.5	31.6	56.4
1936	31.4	33.7	51.2	53.1	66.5	73.7	79.7	76.5	71.6	59.8	46.3	40.1	57.0
1937	46.0	38.3	43.3	53.3	65.8	76.0	76.8	77.2	66.0	55.0	46.2	38.4	57.0
1938	37.2	43.1	53.6	59.9	64.9	71.6	76.8	78.3	68.4	57.7	49.9	40.3	58.5
1939	41.6	44.8	48.8	56.0	66.9	76.4	75.7	77.1	71.8	59.0	44.8	39.8	58.6
1940	24.2	38.2	43.3	52.4	65.0	74.7	76.0	73.6	66.2	55.8	47.4	42.5	54.9
1941	35.2	34.2	40.8	59.8	66.8	73.0	78.3	75.8	72.2	64.7	48.7	41.9	57.6
#1942	34.2	35.2	48.0	58.8	69.5	75.2	79.4	75.2	71.3	60.8	50.0	37.1	57.9
1943	40.0	41.5	47.0	53.9	69.0	79.2	78.5	78.4	68.4	57.3	47.5	38.6	58.3
1944	38.6	40.4	45.2	56.2	71.6	76.4	77.7	75.4	71.2	57.9	48.2	36.1	57.9
1945	34.2	40.8	58.6	61.4	63.9	75.7	76.2	75.2	73.6	57.8	49.6	33.4	58.4
#1946	38.0	41.7	53.8	57.2	65.8	72.8	75.4	72.6	70.0	60.9	52.9	43.4	58.8
1947	44.6	33.5	40.0	57.5	67.0	72.2	74.8	78.5	70.1	63.7	46.4	38.4	57.2
1948	31.1	39.8	50.8	57.7	66.3	74.4	78.2	75.7	68.6	56.2	52.9	42.0	57.8
1949	45.2	46.5	48.6	55.7	66.0	75.2	80.1	76.6	67.4	62.5	49.0	42.4	59.6
#1950	49.7	40.7	44.4	54.7	65.0	74.2	76.8	75.5	68.2	61.2	47.3	36.1	57.8
1951	40.8	41.3	46.8	56.6	64.6	74.3	78.6	76.0	70.0	61.6	44.7	42.0	58.1
1952	42.4	42.2	46.3	58.1	65.4	77.6	80.4	76.4	69.2	59.2	49.4	39.2	58.5
1953	42.9	43.4	48.3	58.0	71.5	75.2	79.9	77.3	70.0	60.7	48.5	42.5	59.9
1954	38.0	44.9	47.0	61.2	63.0	74.6	78.6	76.8	74.4	62.3	46.1	38.2	58.8
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	61.3	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	53.4
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
RECORD MEAN	37.8	39.4	46.7	56.9	66.2	74.1	77.7	76.1	69.9	58.8	48.5	39.2	57.6
MAX	47.7	50.0	58.1	69.2	78.2	85.3	88.0	86.2	80.8	70.8	60.0	49.3	68.6
MIN	27.9	28.7	35.3	44.5	54.2	62.8	67.3	65.9	59.0	46.7	37.0	29.1	46.5

TOTAL DEGREE DAYS

RICHMOND, VIRGINIA

Season	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1931-32	0	4	25	194	328	575	496	580	662	319	111	1	3295
1932-33	0	0	31	209	568	711	637	684	601	265	54	21	3781
1933-34	1	0	1	249	569	712	716	1024	681	265	74	0	4292
1934-35	0	9	3	262	443	817	920	734	403	356	105	0	4052
1935-36	0	0	40	223	413	1034	1038	933	422	372	60	13	4548
1936-37	0	0	17	199	564	748	590	742	668	283	78	1	3890
1937-38	0	0	75	321	556	820	876	622	379	204	91	11	3955
1938-39	0	0	38	228	462	778	724	551	527	288	120	0	3716
1939-40	3	0	5	250	610	785	1265	777	673	380	91	3	4842
1940-41	2	0	74	286	474	475	924	862	595	224	92	13	4021
1941-42	0	3	13	152	510	691	995	854	529	222	13	0	3982
#1942-43	0	2	52	104	439	849	753	652	578	356	63	0	3868
1943-44	0	0	57	251	532	808	819	710	639	280	17	0	4113
1944-45	0	2	21	236	476	873	950	670	253	162	125	27	3795
#1945-46	0	0	3	229	456	986	849	643	350	257	76	11	3860
1946-47	0	5	21	161	370	669	633	880	770	249	94	10	3862
1947-48	0	0	81	98	558	822	1049	733	469	250	48	3	4111
1948-49	0	0	28	279	373	712	615	515	525	293	67	3	3412
#1949-50	0	0	52	134	478	700	483	676	631	327	85	2	3568
1950-51	0	0	60	138	538	886	739	660	559	267	76	0	3923
1951-52	0	0	22	161	608	710	692	655	579	233	58	0	3718
1952-53	0	1	19	316	460	792	680	598	509	234	7	6	3622
1953-54	0	0	28	152	488	691	829	556	553	183	151	1	3632
1954-55	0	0	5	220	561	826	898	690	450	155	67	12	3884
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	3	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	330	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	326	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	91	0	4527
1970-71	0	0	12	124	445	756							

TOTAL PRECIPITATION

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
1938	3.28	1.82	3.72	3.24	4.92	9.24	11.89	0.95	4.41	1.57	2.74	2.74	50.52
1939	3.40	3.98	5.33	3.04	1.39	5.41	5.23	8.34	1.70	4.84	2.18	1.51	46.35
1940	4.16	2.99	2.31	4.22	4.26	4.02	4.45	9.33	1.77	2.27	4.59	1.83	46.20
1941	2.19	1.17	1.97	3.44	1.31	1.83	2.82	3.05	1.23	0.35	0.66	2.89	22.91
#1942	3.59	1.03	5.31	0.78	1.11	5.30	3.52	6.61	3.71	6.74	1.31	3.04	42.05
1943	2.87	2.27	3.01	2.11	4.04	3.15	3.87	0.52	5.13	2.90	1.44	1.98	33.29
1944	2.83	5.61	5.85	3.59	1.41	1.42	7.76	6.44	5.50	1.79	3.94	2.26	48.40
1945	2.25	3.57	1.33	3.50	5.09	1.71	18.87	2.92	8.49	0.91	3.09	5.28	57.01
#1946	2.16	2.69	2.23	2.59	7.73	6.01	6.64	3.87	4.39	2.36	1.90	2.71	45.28
1947	4.31	1.43	2.22	2.53	4.69	4.48	3.38	1.87	6.38	2.37	7.03	1.56	42.20
1948	4.11	2.66	5.54	4.59	6.42	2.73	4.05	7.75	3.05	3.21	5.74	4.14	53.99
1949	3.26	2.55	2.12	2.22	5.11	3.53	6.34	8.99	2.64	3.87	1.88	1.94	44.45
#1950	2.17	1.71	3.20	0.74	4.27	0.99	6.69	3.32	4.04	1.77	1.74	2.73	33.37
1951	1.08	1.90	2.85	2.26	2.51	5.85	2.63	5.23	0.98	2.71	4.52	3.63	36.15
1952	5.71	2.76	5.05	5.32	3.72	4.50	2.71	6.41	2.35	2.04	6.42	3.37	50.36
1953	4.47	3.36	3.95	3.16	2.35	3.06	2.04	0.99	6.84	2.16	1.83	2.94	37.17
1954	3.70	1.56	2.44	3.08	4.36	1.09	1.30	3.95	0.69	4.99	1.86	2.43	31.45
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	53.33
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	5.93	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
RECORD MEAN	2.93	3.00	3.42	2.84	3.43	3.77	5.78	5.17	3.49	2.94	3.20	3.11	43.08

TOTAL SNOWFALL

Season	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1937-38	0.0	0.0	0.0	0.0	T	0.6	1.5	0.0	0.0	0.0	0.0	0.0	2.1
1938-39	0.0	0.0	0.0	0.0	4.4	0.0	0.6	0.0	T	0.0	0.0	0.0	5.0
1939-40	0.0	0.0	0.0	0.0	0.0	2.9	28.5	0.3	0.5	2.0	0.0	0.0	34.2
1940-41	0.0	0.0	0.0	0.0	0.0	0.0	0.4	3.6	5.2	0.0	0.0	0.0	9.2
1941-42	0.0	0.0	0.0	0.0	0.0	0.0	5.5	0.0	0.0	0.0	0.0	0.0	5.5
#1942-43	0.0	0.0	0.0	0.0	0.0	0.0	6.0	T	0.0	4.6	0.0	0.0	10.6
1943-44	0.0	0.0	0.0	0.0	0.0	0.5	1.4	2.5	1.6	0.0	0.0	0.0	6.0
1944-45	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.5
#1945-46	0.0	0.0	0.0	0.0	0.0	0.0	8.2	6.0	0.0	0.0	0.0	0.0	14.2
1946-47	0.0	0.0	0.0	0.0	0.0	0.0	0.3	T	9.3	13.5	0.0	0.0	23.1
1947-48	0.0	0.0	0.0	0.0	T	T	16.1	10.1	0.0	0.0	0.0	0.0	26.2
1948-49	0.0	0.0	0.0	0.0	0.0	0.6	1.5	T	T	0.0	0.0	0.0	2.1
#1949-50	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.9	5.9	0.0	0.0	0.0	8.8
1950-51	0.0	0.0	0.0	0.0	T	0.7	T	T	T	T	0.0	0.0	0.7
1951-52	0.0	0.0	0.0	0.0	T	T	2.4	11.0	T	0.0	0.0	0.0	13.4
1952-53	0.0	0.0	0.0	0.0	1.0	T	T	T	5.6	0.2	0.0	0.0	6.8
1953-54	0.0	0.0	0.0	0.0	7.3	0.0	7.5	0.0	0.0	T	0.0	0.0	14.8
1954-55	0.0	0.0	0.0	T	0.0	2.2	9.3	1.4	0.0	0.0	0.0	0.0	12.9
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							

Record mean values above (not adjusted for instrument location changes listed in the Station Location table) are means for the period beginning in 1930 for temperature and 1938 for precipitation.

# Indicates a break in the data sequence during the year, or season, due to a station move or relocation of instruments. See Station Location table. Data are from Airport locations.

STATION LOCATION

RICHMOND, VIRGINIA

Location	Occupied from	Occupied to	Airline distance and direction from previous location	Latitude North	Longitude West	Elevation above Sea level: Ground at temperature site	Elevation above Ground: Wind instruments	Extreme thermometers	Psychrometer	Telepsychrometer	Tipping bucket rain gage	Weighing rain gage	8" rain gage	Hygrothermometer	Elevation above Sea level: Pyranometer	Remarks
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, observed temperatures.
Westbrook Farms	4-1895	10-1897	4 mi. N	27° 36'	77° 24'	196		?								Capt. J. C. Shafer, temperatures only.
CITY OFFICE																
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 Bldg., Ninth & Main Sts.	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 Street	5-31-00	6-30-05	1/8 mi. NE	37° 32'	77° 27'	115	92	82	82		76		76			
Mutual Assurance Bldg. 9th and Main Street	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- 1-53	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. Observational program at Airport 7-1-39 to 9-24-42 and after 4-19-46. a - At this site 9-24-42 to 4-19-46. and after 6-1-50.
AIRPORT STATION																
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 ft. 8-3-30 to 5-26-35, estimated 40 ft. 5-26-35 to 7-14-38 and estimated 50 ft. 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- 1-50	1/3 mi.SSE	37° 30'	77° 20'	156	46	5	5				4			WBAS re-opened in airport terminal building (old).
Byrd Field New Terminal Building	6- 1-50	Present	4/5 mi. N	37° 30'	77° 20'	c164	b20	d6	d6		e19		e19	a4		a - Installed 2700 ft. ENE of thermometer site 6-26-59. b - 67 ft. to 1-11-61. c - 162 feet to 6-26-59. d - Discontinued 6-26-59. e - 3 feet to 10-9-69.

Requests for additional information should be directed to the National Weather Service Office for which this summary was issued.

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