U. S. DEPARTMENT OF COMMERCE

SINCLAIR WEEKS, Secretary
WEATHER BUREAU
F. W. REICHELDERFER, Chief

LOCAL CLIMATOLOGICAL DATA

WITH COMPARATIVE DATA

1952

RICHMOND, VIRGINIA



CHATTANOOGA: 1953

NARRATIVE CLIMATOLOGICAL SUMMARY

Several of the more noteworthy figures in the climate of Richmond were recorded prior to the opening of the first-order station in October 1897. The least monthly precipitation, 0.11, occurred in October 1874 and again in November 1890. The longest period without measurable precipitation, 39 days, was from September 13 to October 21, 1884. The wettest year of record was 1889 with a total of 72.02 inches. The warmest year was 1891 with an average temperature of 61.4°.

February 1899 was long remembered as the "cold February"; the temperature went to the all-time low of -3° on the 10th and -2° on the 11th and was below 10° during seven consecutive days. Snow storms on the 6-7 and 11-14, totalled 19.8 inches, although the greatest depth on the ground was 17.7 inches. Richmond's hottest August occurred in 1900 when there were fifteen consecutive days with the temperature reaching above 90° and a total of 23 days during the month with the temperature above 90°. A major flood occurred in the James River in December 1901 with a crest of 23.2 feet on the 31st. A glaze storm on December 15-17, 1905 caused great damage. Telephone, telegraph, and power lines were broken so that electricity had to be shut off until repairs could be made. One person was killed by a live wire. Hundreds of trees were damaged or destroyed. A killing frost on October 12, 1906 was the earliest of record for any autumn. The shortest growing season occurred in 1907 with 190 days (April 15 - October 22). A heavy wet snow on December 22-23, 1908 accumulated 17.2 inches in about 20 hours. The weight of this heavy snow broke many telephone and telegraph lines and even a few poles, and did considerable damage to trees, especially evergreens. A ten inch snowfall on April 3, 1915, stands as the record for so late in the season. It disrupted train and trolley service and did considerable damage to power, telephone, and telegraph lines.

The record cold December of 1917 and the near record cold January of 1918 combined to make that the coldest winter. Heavy snow in each month totalled 29.3 inches, the most for any two-month period and made the season's snowfall the second greatest of record. The year 1917 had the lowest annual mean temperature. Richmond's highest temperature, 107°, was recorded on August 6, 1918. A killing frost which occurred on April 26, 1919 is the record for so late in the season. The deepest snow fell January 27-29, 1922 in a storm that produced a total of 19.1 inches. The greatest depth on the ground during this storm was 18.0 inches on January 28. The summer of 1922 produced excessive rainfall which on three occasions, July 13 and 28 and August 26, resulted in the overflow of Shockoe Creek over the entire Shockoe Valley and Main Street from 14th to 17th Streets. The worst of these floods was on July 13th when the water rose to a depth of more than five feet at the Main Street railroad station. Damages from the three freshets amounted to nearly a million dollars. A similar and greater flood in the same area occurred on July 30, 1923, when there was a torrential downpour of 6.33 inches in two hours and a 24-hour total of 7.26 inches. One life was lost, and again the damages amounted to more than half a million dollars. During the period 1925-34 when so much of the country was suffering from prolonged droughts, the Richmond area was fortunate with only two years, 1925 and 1930, that were much below normal in precipitation, and in both of these years there was sufficient moisture during the growing season for most crops. The growing season of 1929 was the longest of record, lasting from March 11 to November 22, a total of 256 days.

A series of major floods in the James River began in 1935 and continued with a flood each year for two more years. On September 7, 1935 the crest at Richmond was 23.6 feet.

(Continued on back page)

LATITUDE LONGITUDE

77° 25' W ELEVATION (ground) 162 feet

METEOROLOGICAL DATA FOR THE CURRENT YEAR

RICHMOND, VIRGINIA CHIMBORAZO PARK 1952

Relative Temperature Precipitation Wind † Number of days humidity a.m., EST Averages Extremes Snow, Sleet, Hail Fastest mile Max. temp. Min. temp. Sunrise to sunsei Month A inch or m (Snow, Sle Sleet Average hourly speed Prevailing direction Thundersto å ė 90° and above 32° and Highest Cloudy Dell Speed 1:30 7:30 1:30 7:30 Clear Total Date Date 7 34.5 43.5 16 30 0.5 55 69 NW 10 45 16 12 0 33.8 43.1 27 22 630 2.50 0.82 24 79 49 61 8.0 Feb. 4.5 10 8E Mar. 36.7 47.2 84 1.84 23-24 79 80 60 9.0 16 o Apr. 48.2 58.7 91 22 35 223 2.07 25-26 76 48 60 8.9 WNN 134 58 SW NW SW SE SE NW 74 75 77 87 12 7 9 76.5 55.0 65.8 88 46 54 58 13+ 51 3.90 1.36 24-25 0.0 0.0 82 49 67 7.9 WSW 26 12 60 13 65 6.9 66 6.9 52 32 50 45 27 66.9 78.0 103 26 29+ 29 June 89,1 3 4.29 1.75 29-30+ т 84 48 WSW. 78 79 70.2 80.5 68.0 76.8 7- 8 6- 7 23 31 July 90.7 102 23 0 2.84 1.35 0.0 0.0 84 90 48 SSW 12 10 8 13 12 8 18 78 6.7 4 14 2 3 54 59 64 76 71 58 Aug. 85.6 91 24 0 8.08 2.20 0.0 0.0 12 15 59.8 70.1 44.3 56.3 40.2 50.5 46 90 83 78 6.7 28 1.52 88 51 80.4 96 11 0.77 22-23 0.0 1 17 Sept 0.0 5 30 44 52 68.2 87 281 2.08 0.79 0.0 0.0 83 67 7.2 20 3.9 17 Oct. 0 0.5 T 29 83 73 6.7 28 6.59 2.30 19-20 0.5 30 86 21 Nov. 60.8 79 427 S 15 17 9 0 49.0 32.2 40.6 63 10 18 29 751 2.90 1.15 31 T 2 83 87 59 74 6.8 NW 28 31 45 Dec. 15 0 June Year 69.3 49.2 59.3 103 16 3582 2.30 19-20 4.5 82 81 51 68 7.5 s 52 64 5.8 152 33

MEANS AND EXTREMES FOR PERIOD OF RECORD

-	Temperature									Precipitation											Relati umid		Wind					a	.	Mean number of days									
	Means				Extr	emes	1	e days									Sno	w, Slee	t, Hail		BST	EST	EST	-	#	Fa	stest	mile	sunshi	unset		nrise unsei		nore	storms	\prod	Mar		Min. temp
Month	Daily	Daily minimum	Monthly	Record highest	Year	Record	Year	Mean degre	Meen total	Maximum monthly	Year	Minimum monthly	Year	Maximum in 24 hrs.		Mean total	Maximum monthly	Year	Maximum in 24 hrs.	Year	1:30 а.п.,	7:30 a.m.,	8	Mean hourly speed	Prevailing direction	(OD 1	Direction	Year	1	Average sky sunrise to s	Clear	Partly cloudy	Cloudy	Ol inch or n	¥, a	1 2	8		1 32.
(a)	55	55	55	55		55		55	81	81		81		55		55	55		55		-	55	35 41	55	55	41	41		50	54	55	55	55	55	55 5	5 5:	5 55	55	55 5
JΙ	48.2	30.4	39.3	80	1943	L 1	1918	797	3.28	10.08	1937	0.55	1876	2.66	1921	3.5	22.4	1940	16.0	1940	77	84	81 86	8.2	SW	62	SW	1913	44	5.8	10	Я	13	11	1		4 9	ુ .	19
F	49.1	30.2		82	1930	- 3		715		8.92									12.6		72	78	57 63	8.5	SW	51		1917	55	5.3	10	7	11	10	1	*	1 d	2	17
4	58.5	37,7	48.1	94	1907	12	1943	531	3,67						1903			1914			74	77	53 63	9,2	SW	51		1942	60	5.3	11	ġ	11	11	#	2 :	1 4	- 7	9
. [67.6	45.8			1925	19	1923	275	3.40	8.89						0.3	10,0	1915		1915	75		51 58		SW	62	NW !	1943	63	5.1	11	9	10	10	*	3 '	4	ď	1
- 1	77.3	55.7	66.5		1941		1923	70	3.78	9.13						T	0.3	1951	0.3		83	76	52 64	7.3	SW	56		1923	67	5.0	12	10	9	12	oj .	6 1	1 2	Q.	d
۱ ا	84.2		74.2				1938	7	3.85	9.28	1938	1.15	1950	3.69	1938	T	T	1952		1952+			54 68	6.7	S₩	53		1917		5.2	10	11	9	11	O)	8 1	1 7	ď	q
ĺ	87.5		78.0				1933	*		16.08	1945	0.57				T	T	1931	H T	1931+	90	81	57 73	6.5	SW	47		1920	66	5.2	10	13	8	11	g ı	.0 1	시 1 <u>1</u>	q	q
- 1	85.7		76.4		1918		1923	1				0.45				T	T	1915		1915	90		58 74	6,2	SW	50		1952	62	5.2	10	12	9	11	oj.	7 7	1 8	q	q
ı	80.5	61.2	70.9		1932		1942		3.23	10.41	1888	D. 15	1884	6.68		0.0	0.0		0.0	h	90	85	77 75	6.3	NE	45		1952		5.0	12	9	9	19	얼	3 2	3 4	g	q
- !	70.5 59.1	49.5 39.0		99	1941 1946		1952+ 1929	194	2.85	8.51 6.69	T890	p.11	1874	4.81	1929	0.4	T	1925 1938		1925	87 81			6.9	NE	49		1917	63 58	4.4	14	8	.9	7	ď	4 3	4	9	j
	48.9	31.4	40.2	77	1927	- 2	1917	771	3.01	7.10	1905	0.57	1889	2.52	1909		17.2	1908	7.2 17.2	1938 1908	78	82	64 67 60 69	7.5 7.5	SW	47 46		1920 1944	49	4.8 5.5	11	7	10 13	10	*	* 3	2 0	2	18
ğ	68.1	48.4	= 0 0	107	Aug.		Feb.		41.90		July		Nov.		July			Jan.		Dec.				7.5				Apr. 1943+								0 17	7 32	1	

REFERENCE NOTES

- (a) Length of record, years.

 * Less than one half.

 No record.

- Airport data. City Office data. Also on sarlier dates, months, or years. Trace, an amount too small to measure.
- Beginning with this issue new normals are being used for all first order stations. These are generally based on the 30 year record 1821 through 1830. Where 30 years of record are not available, normals are based on records of from 10 to 30 years adjusted the 30 year period ending with 1950.

Unless otherwise indicated, dimensional units used in this bulletin are: temperature in de-grees F.; precipitation and snowfall in inches; wind movement in miles per hour; and re-lative humidity in percent.

Sky cover is expressed in a range of 0 for no clouds or obstructions to 10 for complete sky cover. Degree days are based on daily average temperatures of 65° y. Sloet and hail have been included in smortall totals since June 1948.

Data for earlier years may be obtained by contacting the Weather Bureau Office in the city

Heavy fog in the Means and Extremes Table includes data referred to at various times in the past as "Dense" or "Thick". The upper visibility limit for heavy fog is 1/4 mile.

Below zero temperatures are preceded by a minus sign.

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[#] Wind direction to 8 compass points only.

AVERAGE TEMPERATURE

_													
Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	An'l
1901	38.8	34.7	49.6	52 8	85.5	74.8	81.0	77.4	70.0	59.1	44.1	38.6	57.2
1902	36.2	34 6	50.0	55.8	67.8	74.3	79.0	75.0	68.6	61.6	54.8	40.1	
1903	38 2	43 0	54.4	57 8	67.8	70.2	79.3	75.8	69.4	58.8	44.8		58.0
1904	33 4	94 2	47.5	54 2	67 2	74.4	77.7	75.6	70.9	57 7	46 2	35.8	
			49.8						71.7	59 4		40.4	
		38.6	42 0	59.1	67 0	75.0	76 6	78.2	73.6	57 8	50 0	41 4	58.5
1907			52.1	50.4	62 7	60 4	79 1	75 4	73.6 72.8	55 0	47 8	42 0	B7 0
1908	20.0	36.6	52.2	20.4	47 2	72 0	78 0	74 0	68 4	En 4	50.4	41 2	58 4
1909	42 2	47 4	52.2 46.4	57 4	ee n	76 2	76 8	74 2	67 4	55 4	53.7	35 9	58 2
1010	30 0	30 4	53.9	50 4	63 9	70 3	77 8	74 4	71 8	61 0	42.5	94 1	57.2
1910	90.0	35.4	33.5	30.4	05.0	70.0				01.0	F#.5	D4	P*
1011	41.8	41 0	44.6	52 4	69.8	75.0	79.6	77.7	72.5	59.2	45.0	43.2	58.5
	28.9	25 0	44.9	80 C	87 0	72 2	77 6	76 4	73 0	En 3	48 2	43.2 43.2	57 2
	46.7		52.0							60.2	50.2	42.2	59.4
1914		36.0	41.0	Be 0	20.0	75 8	74 0		68.2	21.2	40.2	35.7	57.3
	39.4	49.7	41.8	50.0	86.0	72 0	78 0		72.4	61.8 61.3	48.0 49.2	37 7	58.0
	44.0	33.1	43.4	55.5	20.7	71 7	77 5	74 1	68.2		48.5		57.7
	39.8		40.0	57.4	21.2	79 6	70 0	75.8	68.2	B4.5	44.4	20.0	
	28.0			54.7				78.3	65.2 65.6	24.0	44.4 47.8	49.9	55.3 57.3
	40.6		49.5					75 0	71.3	67 2	48.8	25 0	58.5
1920	94.9	25.6	48.2	55.0	60.0	72 4	75 A	75 2	71.0	22.0	47 2	41.0	56.5
1920	34.2	30.5	20.4	33.2	60.6	12.3	13.4	13.2	1.1.0	02.0	7		PG. 5
1921	90 0	42 0	57.6	60.1	63 7	74.8	80 0	76 A	78 8	59.5	51.6	41.0	80.2
1922	35.0	41 0	49.4	50 6	67 2	75.0	77 6	73 3	70 6	80 8	40.0	42 3	58.4
	40.1	37.0	48.0	85 0	64 4	76 0	76 4	75 2	70.8	57.7	44 0	42.3 47.6	58.0
	38.0		45.6					76.4			48.8		56.4
1925	36.6	47 4	48.9	50.7	22.0	77 0	79 6	74.3	75.4	55.1	46.7	38.6	58.5
	37.8	41 8	43.0	54 5	85 7	71 4	77 6	78.0	71 2	60.2	48.4	37.8	57.1
	37.9		50.2						70.6	81 4		41.0	58.1
	38.9		47.4						65.8		50.4	41 A	57.7
	38.8		52 8	60.2	65 8	73.1	77.0	75.1	71.2		49.8	41.0 41.4	58.4
1930			46.4	55 4	68 8	74.2	79 8		76.8		48.1		58.7
1550	00.0	10.0	10.1	00.0	00.0							۳٠.٠	
1931	39.7	41.5	42.3	54.4	65.5	73.8	80.4	75.7	74.4	62.3	55.9	47.8	59.5
			43.9				79.1	78.8	72.2	60.4	46.8	42.4	
1933	45.6	41.2	46.4	56.8	70.1	75.8	76.2	76.6	74.4	58.7	47.4	43.2	59.4
	42.4	29.0	43.4	56.8	67.0	78.1	80.6	76.6 76.0	72.3	58.0	47.4 51.1	39.6	57.9
		39.6	52.2	53.7	63.8	74.4	77.6	76.2	68,6	59.9	52.4	33.3	57.3
1936	33.0	34.6	52.4	54.0	68.6	74.2	79.9	79.0	73.6		47.6	41.4	58.3
1937	46.4	39.3	44.7	56.4	66.8	76.4	77.0	77.6			47.8		58.0
1938	38.2	44:8	53.2	59.7	65.6	72.0	77.1	79.0		59.2	52.0	40.8	59.2
1939	42.3	45.5	49.4	56.8	67.8	77.0	76.2	77.8	72.8	60.6	46.6		59.5
1940	27.3	39.9	44.6	53.6	66.0	75.4	76.6	74.4	67.9	57.8	49.5	44.4	56.4
		İ					l	Ì		l			١.
1941	37.0	36.1	42.0	61.2	68.6	74.4	78.8	78.0	73.6		51.4	43.9	59.3
1942			49.2	60.2	70.7	75.8	80.0	75.4	72.0	61.2	50.8	37.7	58.9
1943		42.2	47.6	54.2				78.8			48.6		58.8
1944		41.2	45.5	56.7	71.8	76.9	78.4	75.7	71.8	58.8	48.9	37.0	58.5
1945		41.8	58.6	61.3	64.2	75.6			74.4	59.2	51.1	34.6	59.0
1946			54.9					73.4		62.2	54.2	44.7	59.7
	45.2		41.4	58.2	67.4	72.9	75.6	79.4	71.2		47.0		58.0
1948	32.2	40.8	51.4	58.3	66.7	75.1	78.6	76.2	69.6				58.7
1949			49.2									43.9	
1950	50.7	41.8	45.3	55.3	65.6	74.0	76.2	75.3	68.4	62.1	48.0	37.4	58.3
1951	41.4	42.4	47.3	56.9	65.3	74.4	78.8	76.4	70.5	62.4	45.5	43.1	58.7
			47.2										
	ļ.	l	l '	i	l	l	1	İ	l	l	}		1
formal	39.6	40.9	48.2	56.8	66.5	74.7	77.9	76.3	71.2	60.0	49.8	40.8	58.6
			1	1	1	1	1			1	1	1	1

			,											-			1952
OV.	Dec.	An'l		Year	Jan.	Feb.	Мах.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
,1	38.6	57.2		1901	2.80	0.55	3.79	5.29	3.80	2.32	5.06	6.99	3.21	0.79	1.37	6.08	42.05
		58.2	Į.	1902	3.26	4.84	1.89	3.12	3.42	4.81	6.21	3.10	4.91	4.81	4.83	4.12	49.32
		58.0 56.2	l	1903 1904	3.61 2.34	5.02 2.71	8.14	1.57	3.36 1.45	5.73 4.11	5.17 6.25	3.21	1.60	3.44	1.40 2.55	2.28 3.71	47.42 37.84
:2 -		57.6	l	1905	2.47	4.14	2.18	3.08	4.09	3.72	3,25	4.01	2.61	1.24	0.51	7.10	38.38
		58.5	l	1906	2,54	2.57	4.78	2.16	3.37	5,14	6.75	8.68	0.35	7.47	0.87	2.12	46.80
		57.0 58.4	l	1907	1,22	2.30 3.92	2.91 2.96	4.87	5.78 6.71	6.21 5.72	2,99 4,37	5.31	6.51	2.30	1.25	3.44	48.48 52.78
		58.2	l	1909	3.00	2.94	4.13	3.21	3,41	4.59	1.25	4.01	2.89	0.77	0.62	3,39	34.21
		57.2	Ì	1910	3.38	2.38	1.42	8.74	2.67	5.67	6.40	2.90	1.07	5.03	0.98	2.50	43.14
. 0	43.2	58.5		1911	3.65	2,20	2.15	4.00	0.60	2.83	0.57	7.26	1.85	3.61	4.33	3.95	37.00
. 2	43.2	57.2 59.4		1912	2.34	3.76	8.18	2.17	4.59	2.50	1.25	1.49	4.20	0.58	1.73	2.84	35.63
.2	42.2 35 7	57.3		1913	2.53 3.65	1,51 3.27	3.53	2.54	4.80 2.50	3.78 2.76	3,65	4.59	3.20	3.95 1.67	1.49 2.20	2.17 4.95	37.74 32.83
		58.0		1915	5.41	3.92	1.10	1.68	3.00	3.77	2.42	7.34	1.99	3.27	0.63	1.93	36.46
. 5	38.8	67.7		1916	1.51	3.68	1.57	1.94	4.74	8.72	5.39	1.55	2.01	1.44	1.31	3.40	37.26
		55.3 57.3	l	1917	2.98 5.81	2.28	5.97 3.98	2.56 8.02	4.59	5,31 5,36	6.28	2.74	4.62 3.55	3.78	0.44	1.72	43,27
		58.5	İ	1919	3.64	2.22	3.51	3.25	5.19	3.90	9.92	2.62	0.54	1.71	1.31	2.30	40.11
	41.0			1920	2.02	6.67	3.11	2.96	3.06	6.34	6.05	8.69	2.71	0.66	6.69	1.87	50.83
		80.2		1921	3.80	3.52	2.13	4.65	3.89	1.49	2.36	0.61	0.95	1.20	2.97	3.02	30.59
		58.4		1922	4,58	3.81	7.01	2.01	3.27	6.42	8.48	7.78	0.66	3.68	0.86	3.14	51.70
		58.0 56.4	-	1923	4.61 2.98	3.09 2.34	5.88 4.00	3.96 5.11	7.36	2,09 4,85	10.87 2.33	8.41	9.58	2.16 0.78	2.20 1.61	3.40	48.96 47.39
. 7	38.6	58.5	1	1925	5.42	0.90	2.47	2.33	2.15	2.24	2.32	2.55	0.93	4.67	1.55	3.89	31.42
	37.8		1	1926	3.30	3.60	1.96	2.01	1.59	2.19	7.17	5.24	1.46	0.81	3.63	4.56	37.52
		58.1 57.7	1	1927 1928	0.70 2.23	2.87 1.84	1.95 2.71	3.47 6.86	3.30	3.12 7.19	9.10	7.19 8.05	4.01 7.01	2.02 0.40	1.61	5.02 1.46	44.36 42.89
. 8	41,4	58.4	l	1929	1.53	5,19	3.96	3.50	4.00	3.02	2.16	2.41	2.41	6.99	3.34	2.70	41.21
. 1	36.8	58.7		1930	4.25	1.21	1.07	3.19	2.71	5.18	4.51	2.35	1.37	1.31	1.63	2.48	31.26
	47.8	59.5		1931	1.88	2.60	2.94	3.97	5.64	2.98		11.42	1.92	1.15	0.24	2.52	41.73
	42.4		l	1932	5.64	1.66	6.21	1.69	4.17	3.17	1.66	1.36	0.75	6.58	3.50	4.84	41.23
	43.2 39.6	59.4	i	1933	3.85 1.63	2.73 5.34	2.15 4.36	4.02 2.10	4.84	1.63	4.59 3.22	8.84	1.05 5.92	0.72	1.17	3.14	38.73 40.75
. 4	33.3	57.3		1935	4.41	2.13	4.00	4.40	3.81	6.22	5.64	3.68	9.23	1.73	3.19	2.12	50.56
	41.4	58.3		1936	7.76	3.92	3.83	2.68	0.45	3.88	3.18	2.90	1.43	1.68	0.92	4.34	36.97
		58.0 59.2		1937 1938	10.08 2.96	2.42 1.89	3.57	6.02 2.80	1.64	6.02 9.28	6.00 9.71	9.85	2.61 3.85	6.34 1.58	2.44 3.61	0.90 2.61	55.98 48.96
. 6	41.4	59.5	•	1939	2.64	3.87	4.39	3.00	1.80	4.99	4.33	5.84	1.56	4.33	2.41	1.50	40.66
. 5	44.4	56.4		1940	3.09	2.81	2.09	5.19	4.65	3.78	3.52	11.08	1.55	2.02	4.58	1.56	45.92
		59.3		1941	2.32	1.14	2.43	3.23	1.88	2.08	3,51	3.86	2.20	0.75	0.46	2.96	26.82
		58.9 58.8	l	1942 1943	4.33	1.11	5.15 4.49	0.52	3.57	4.75	4.31 5,08	5.73 0.80	3.05	7.38	1.23	3.05	44.18
		58.5		1944	3.19 2.90	1.93	5.67	2.16 3.32	3.11	4.07 1.29	5.51	5.16	3.74	2.11 1.76	3,77	2.14	34,41 41,78
.1	34.6	59.0		1945	2.22	3.28	1.39	2.90	5.35	1,43	16,08	2.67	6.44	1.06	3.12	5.78	51.72
		59.7		1946	2.29	2.52	2.39	3.07	7.59	4.14	8,43	3,15	1.80	2.15	1.78	3.08	42.39
		58.0 58.7		1947 1948	3.86 4.69	2.61	2.30 4.98	4.60	3.47 5.47	1.95	2.87 5.79	2.52 6.38	7.03	1.81	5.17	1.47	39.20 52.51
		60.5	1	1949	3,25	2.50	2.34	2.31	6.11	4.65	4.25	8.56	3.46	5.36	2.24	1.84	46.87
	37.4		1.	1950	2.51	1.65	3.37	0.75	5.21	1,15	7.92	3.54	3.99	1.89	1.27	3.15	36.40
	43.1		ľ	1951	1.20	1.98	3.23	2.55	3.03	5.11	3.69	4.92	1.97	2.05	4.81	3.72	38.26
		59.3		1952	5.39	2.50	5.61	4.99	3.90	4.29	2.84	8.08	1,52	2.08	6.59	2.90	50.69
.8	40.8	58.6	j	Normal	3.63	2.73	3.43	3.27	3.69	3.78	5.38	4.95	3.36	2.62	2.41	2.92	42.17

MONTHLY AND SEASONAL DEGREE DAYS

MONTHLY AND SEASONAL SNOWFALL

	1			T	T	1		T	T	ſ	$\overline{}$		<u></u>	1	T	T												
Season	July	Âug.	Sept.	Oot	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total		Season	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	Total
1900-01	0	0	4	97	400	766	812	848	474	366	50	1	3818		1900-01	0	0	0	0	T	7.2		1.0	1.4	T	0	0	15.1
1901-02	0	0	33	201	627	815	893	854	468	315	51	0	4257		1901-02	0	0	0	0	0	1.0				T	0	0	15.8
1902-03 1903-04	0	%	29 33	128	308 606	775 893	834 980	616 893	333 543	240 338	55 42	10	3328 4561	1	1902-03	0	0	0	0	.0.	1.1			0	0	0	0	2.2
1904-05	Ĭŏ	١ĭ	28	265	564	905	930	946	487	251	18	5	4380	1	1903-04 1904-05	6	0	0	0	1.8	0.9 8.5			T	0	0	8	20.4 19.0
1905-06	0	- ē	13	221	504	760	676	742	718	210	69	7	3920	1	1905-06	 ŏ	1 6	 ŏ -	- 6	****	1.3				-	8	8	15.4
1906-07	0	0	8	244	457	732	686	840	455	446	122	58	4048		1906-07	ŏ	ŏ	۱ŏ	ŏ	1.9	Ť	3.1		6.4	Ť	ŏ	ŏ	21.2
1907-08	0	0	14	294	516	713	834	792	405	195	115	3	3881		1907-08	0	0	0	o	T	T	3.2	7.8	2.8	Ŏ	O	ō	13.8
1908-09	0	16	24	167	438	738	704	484	583	262	86	0	3502		1908-09	0	0	0	0	T	17.2			3.8	0	_	0	25.3
1909-10			43	299	358	902	806	717	370	210	113	29	3847		1909-10	0	0	0	0	T	3.3	1,0	0.7	5.B	8	0	9	11.7
1910-11	1	0	12	184	675	958	719	672	632	382	68	0	4303		1910-11	0	0	0	0	0	0.7	2.6	T	4.0	0	0	0	7.3
1911-12	0	0	3	192	603		1122	873	626	180	54	13	4339		1911-12	0	0	0	0	0	T	8.9			0	0	0	21.6
1912-13 1913-14	0	0	20	184	507 444	676 707	568 717	700 843	419 719	237	48	26	3385 3993		1912-13	0	0	0	0	2.0	0.2	0.4	3.1	0_	_0_	0	0	5.7
1914-15	l ŏ	ĭ	71	138	516	911	794	596	756	294 230	52 60	24	4097	Į l	1913-14 1914-15	8	0	0	0	0	5.4	0.2	10.8	15.8	0.2	0	8.	26.8 17.5
1915-16	۱ŏ	Ιô	32	146	474	846	655	763	670	296	22	1 7	3905		1915-16	ŏ	۱۵	ŏ	ŏ	l ŏ	0.6	2.6	1.9	4.4	T	ı		9.5
1916-17	0	Ò	47	203	498	809	778	764	574	261	171	4	4109		1916-17) ŏ	١٥	ŏ	o	ìř	9.1	T	0.8	T	Ì÷	ì	Ď	9.9
1917-18	0	0	75	327	619		1151	666	431	312	31	5	4699	1	1917-18	l ō	Ö	Ö	ō	Ť	15.3	14.4	1.3	١ō	2.7	ŏ	ŏ	33.7
1918-19	0	0	68	137	514	671	755	709	476	255	70	6	3661		1918-19	6	0	0	0	0	T	T	0	0	0	0	0	T
1919-20	0	0	12	86	496	898	954	854	522	312	158	7	4299	1	1919-20	0	0	0	0	0	6.0	T	3.6	T	0	0	0	9.6
1920-21	0	0	6	133	532	745	777	643	271	176	128	1	3412		1920-21	0	0		0	0	0	T	1.0	0	7	0	۰	1.0
1921-22	0	0	0	180	412	746	929	647	490	249	29	1	3683		1921-22	0	0	0	0	0	T	22.1	5.3	0.1	ō	Ó	ō	27.5
1922-23	0	0	19	192	482	703	774	784	534	292	80	.7	3867		1922-23	0	0	0	0	0	0.2	0.5	5.0	0_	0	0	O	5.7
1923-24 1924-25	8	6	24 55	229 205	546 488	763	838 881	780 492	608 500	332	104	11	4020 3787		1923-24	0	0	0	0	0_	1.0	T	T	3.7	T	0	0	4.7
1925-26	۱٥	ŏ	12	333	549	817	846	646	683	240 333	163	30	4318	li	1924-25 1925-26	0	0	0	0	0.3 T	Ŧ	1.6	,0,	5.0	0	0	0	1.9
1926-27	Ιĭ	ŏ	15.	203	561	845	842	534	474	362	71	39	3947		1926-27	0	ŏ	ŏ	ا أ	Ť	ō	0.3	1.4	1.3	0.3	6	0	12.3
1927-28	Ō	11	26	164	363	744	807	711	544	338	103	2	3813		1927-28	ŏ	ŏ	ŏ	ا ة	l ā	Ť	4.6	1.8	Ť	ŏ	ŏ	ŏ	6.4
1928-29	0	1	80	169	445	743	816	751	411	206	83	10	3715	i l	1928-29	Ó	Ō	ō	ŏ	T	1.2	0.9	2.3	T	ŏ	ò	ŏ	4.4
1929-30	0	0	40	224	477	736	789	556	572	303	33	4	3734		1929-30	0	0	0	0	3.8	3.0	9.6	2.5	0	0	0	0	18.9
1930-31	l a	1	0	268	507	876	786	660	704	318	74	6	4200		1930-31	0	0	0	0	T	6.0	1.5	7	T	0		0	7.5
1931-32	0	5	17	149	284	535	479	548	650	303	87	1	3058		1931-32	O	0	ō	ŏ	ō	1.0	0.6	T	2.6	o	Ò	0	4.2
1932-33	0	0	15	170	540	699	601	667	566	250	38	14	3560	'	1932-33	0	0	0	0	0	7.5	1.7		T	0	0	0	14.9
1933-34 1934-35	0	9	4	211	530 423	676 790	703	1011	670	253	61	Ŏ	4119		1933-34	0	0	0	0	Ī	0.1		13.4	2.4	0_	0	0	15.9
1935-36	0	ő	27	189	390	984	901 991	713 884	399	357 353	98 28	0	3907 4239		1934-35 1935-36	0	0	0	0	T	3.9 12.3	5.8	0.1	T	0.2	0	0	10.0
1936-37	ŏ	ŏ	13	157	529	730	573	724	632	273	49	ŏ	3680		1936-37	l ŏ	ŏ	6		0	T T	3.0	13,3	1.6	T 0	0 0	ŏ	28.6 5.1
1937-38	ŏ	ŏ	58	298	515	780	828	566	380	207	84	8	3724		1937-38	l ŏ	ŏ	l ŏ	ŏ	Ť	1.2	0.5	T	1 0	l ŏ	ŏ	ŏ	1.7
1938-39	0	0	31	198	409	747	697	548	502	283	101	Ō	3516		1938-39	lo	Ō	Ō	ŏ	9.2	Ť	1,2	ŏ	0.3	Ŏ	ō	ō	10.7
1939-40	0	0	3	214	550	737	1172	726	634	343	49	1	4429		1939-40	0	0	0	0	T	3.3	22,4	0.5	0.3	2.5	0	0	29.0
1940-41	1	0	62	237	467	640	871	806	715	192	63	8	4062		1940-41	0	0	0	0	0	T	0.3	3.3	5.9	0	0	0	9.5
1941-42	0	0	7	100	413	657	875	785	490	199	7	Ō	3533		1941-42	0	0	Ŏ	ō	ō	0	5.2	T	T	0	ŏ	ŏ	5.2
1942-43	0	2	49	135	430	843	767	640	548	343	60	0	3817		1942-43	0	0	0	0	0	7.3	0.1	T	8.0	T	0	0	13.4
1943-44	0	0	46	229	493	797	787	687	608	269	14	1	3931	j	1943-44	0	0	0	0	0.3	4.5	3.4	2.0	Ŧ	0	0	0	10.2
1944-45 1945-46	0	0	16	213 193	483 423	865 945	930 809	648	268 320	153 232	113	27	3717 3617		1944-45 1945-46	0	0	0	8	0	8.2	6.9	0.6	0	0	0	0	0.5
1946-47	ő	4	านั้	131	332	626	613	862	727	229	83	1 2	3622	1	1946-47	0	1 6	ŏ	0	1 6	1.4	0.5	4.1	11.8	0	0	0	15.7 17.3
1947-48	١ŏ	ō	77	78	544		1012	697	451	227	39	i	3919		1947-48	ŏ	ŏ	ŏ	ŏ	0.6	0.3	13.2	8.9	7	ŏ	ŏ	ŏ	23.0
1948-49	0	Ō	28	240	326	662	577	487	508	265	55	ī	3149		1948-49	Ŏ	Ŏ	ŏ	ŏ	0	0.9	1.3	T	0.4	Ť	ŏ	ŏ	2.6
1949-50	0	0	36	105	433	860	452	645	606	310	66	0	3313		1949-50	0	0	O	0	0	т	T	3.0	5.0	Ō	T	Ō	8.0
1950-51	0	0	54	119	519	849	722	628	543	258	59	0	3751		1950-51	0	0	0	0	0.2	2.6	0.1	0.5	0.1	T	0.3	0	3.8
1951-52	0	0	17	138	585	676	657	630	551	223	51	0	3528		1951-52	0	0	o	0	T	0.2	1.0	8.0	T	0	0	T	9.2
1952-53	0	0	11	,	427	751	I	ļ			l	Į			1952-53	0	0	0	0	0.5	T	1		1	1			
The horizont	al li	nes d	FAWS .	on th	e Ave	rage	Tempe	ratur	e. To	tal P	recin	itati	os. No	nth 1	w and Season	al De	arree	Deve .	and	Month	lv an	d See	sonal	Snow	4.11	table	* *an	Pata

The horizontal lines drawn on the Average Temperature, Total Precipitation, Monthly and Seasonal Degree Days, and Monthly and Seasonal Snowfall tables separate the data according to station location (see Station Location table).

STATION LOCATION

		Klevation above														
•.		,				Se	e level					kround				-
Location	Occupied from		Atrine distance and direction from previous location	Latitude	Longitude	Ground	Actual barometer elevation (H _s)	Wind instruments	Extreme thermometers	Psychrometer	Telepsychrometer	Tipping bucket rain gage	Weighing rain gage	8" rain gage		REMARES
High elevation in East Richmond	1-1880	2-1893				CITY Est 150	OFFICE		?					?		W. H. Pleasants, Exact address unknown.
Near Southern RR Bridge	3-1893	3-1895	?			Est 35			?					7		A. J. Duesberry, River Ob- server, Observed Tempera- tures.
Westbrook Farms	4-1895	10-1897	4 mi. N	27° 36' N	77° 24' W	196			?							Capt. J.C.Shafer, Tempera- tures only.
State Library Building Capitol Square	9-18-95	5-22-97	4 m1. S	37° 32'N	77° 27'₩	142										Section Center, No Observations.
Chamber of Commerce Bldg Ninth & Main Streets	5-22-97	10- 4-97	3/8 mi. SW	37° 32'N	77° 27'₩	104								·		Section Center, No Observations.
Chamber of Commerce Bldg. Ninth & Main Sts.	10- 5-97	5-31-00					143.70	107	98	98		89		89		Observational Program begun 10-5-97.
Times Bldg., 10th & Bank Streets	5-31-00	6-30-05	1/8 mi. NE	37° 32'N	77° 27' ₩	115	156.90	92	82	82		76		76		
Mutual Assurance Bldg. 9th & Main Streets	6-30-05	1-30-10	1/8 mi. SW			104	214.82	154	145	145		138		138		· ·
Weather Bureau Building Chimborazo Park, 3301 E Broad Street	1-30-10	7- 1-39	1-1/2 mi. E	37° 32'N	77° 25'#	162	169.59	53	11	11		3		3		
Weather Bureau Building Chimborazo Park, 3301 E Broad Street	7- 1-39	9-24-42														Observational program at Airport
Weather Bureau Building Chimborazo Park, 3301 E Broad Street		4-19-46											4			Observations, including Pi- bals, returned to WBO.Byrd Field occupied by AAF.
Weather Bureau Building Chimborazo Park, 3301 B Broad Street	1	1														
Observational and Pibal moved to WBAS. Weighin	Program g gage re	returned turned to	to WBAS, Byr WBO. Clima	d Field. tological	Climatolog observatio	ical	Observat	ions	only	at WB	о. т	riple	regi	ster	and asso	ciated instruments
Weather Bureau Building Chimborazo Park, 330i B Broad Street	6- 1-50	Present		37° 32'N	77° 25'₩	162		# 53	11			-	4	3		# Wind instruments for display.
		İ		ļ	Δ.	IRPOR	T_STATIO	Ŋ		-						1
Old WB/CAA Bldg. lo- cation	7-15-25	8- 3-30	None	37° 30' N	77° 20'₩		163.96	-	-	-	-	-	-	-		Branch service of City Off- ice and CAA cooperating.
WB-CAA Building	8- 3-30	5-26-35	None	37° 30' N	77° 20' W	158	163.96	40	.5	5	-	-	-	3		Full WBAS established; closed 1935.
WB-CAA Building	5-27-35	7-14-38	None	37° 30' N	77° 20' ¥	158	163.96	* 40	5	5	-	-	-	3		Observations by CAA during period WB closed.
WB-CAA Building	7-14-38	7-24-42	None	37° 30'N	77° 20' W	158	163.96	* 50	5	5	-	-	-	3	'	Reopened same location; closed 1942 because AF had AP.
Army Hangar (Operations Annex)	7-24-42	4-19-46	1/2 mi.NNW	37° 30' N	77° 20' W	156	159.72	55	5	5	-	-	-	3		Army base closed after World War II.
Old Airport Administra- tion Building	4-19-46	6- 1-50	1/3 mi.SSE	37° 30' N	77° 20'₩	156	166.85	46	5	5	-	-	-	4		WBAS re-opened in airport terminal building (old).
Byrd Field, New Termina Building	6- 1-50	Present	4/5 mi. N	37° 30'N	77° 20'W	162	180.24	67	6	6	-	3	-	3		All Airport operations con- solidated in new Terminal Building.
	l			[[ŀ			.		1	1		• Data doubtful.

NARRATIVE CLIMATOLOGICAL SUMMARY (Continued)

On March 20, 1936 the river reached an all-time high of 26.5 feet. The second highest mark, 25.2 feet, was reached on April 27, 1937. One of the most sudden floods in the James River at Richmond occurred during the night of February 14, 1936, when the water rose about six feet in half an hour because of an ice jam just below the City. Quite cold weather in January had caused the river to freeze over and some jamming began as early as January 31, but no solid ice pack dammed up the water until February 14th. When the water reached about 20 feet, the jam was broken and part of the water receded so rapidly that two steamers, three barges, and two ice breakers were carried away and badly damaged, and a tug was sunk in the harbor. January 1940 was the coldest month of record. One of the heaviest snowfalls occurred on the 23-24, with 16.0 inches at the City Office and 21.6 at the Byrd Field Weather Bureau Airport Station. At the City Office there were no record breaking low temperatures, but at the Airport Station an extreme low of -12° was registered on the 29th, and the temperature went to below zero six consecutive days (25-30). The deep snow hindered traffic for several days, and snow removal was retarded by the cold weather. The passage of the remnants of a tropical storm through Virginia in August 1940 resulted in some torrential rainfall which produced another major flood of 23.2 feet at Richmond on the 23rd.

1941 was the driest year of record with only 26.82 inches of precipitation; however, the second half of the growing season had enough moisture to prevent a complete crop failure. October 1941 was notable for six days with max-

imum temperature above 90° ; the highest was 99° on the 6th. The greatest number of consecutive days with measurable precipitation occurred in August 1942 when there was rain every day from the 3rd to the 14th, a total of 12.

One of the worst, if not the worst, glaze storm in Richmond's history occurred on January 27-28, 1943. The total thickness of the ice accumulation was nearly an inch. Telephone, telegraph, and power lines suffered great damage, and service to some sections of the Richmond area was not restored for two weeks or more. There was some damage to buildings and many thousands of trees were destroyed or badly broken. Another major flood occurred in the James River in September 1944. The crest at Richmond was 22.4 on the 21st. The wettest month of record was July 1945 with a total rainfall of 16.08 inches. Of this amount, 5.72 inches fell in a 24-hour period on the 17-18th. High water in Gillie Creek weakened a bridge on Government Road near the Weather Bureau Office so that it gave way under a loaded bus, and three lives were lost. During this period there were hundreds of complaints of flooded basements in the City. On July 14, 1948 a heavy downpour of rain on the 13-14th produced 3.18 inches, of which 1.79 inches fell in a 15-minute period, the heaviest rain of record for that length of time. Large amounts of dust in the air were brought down as mud in several showers on March 29, 1950. Smoke from Canadian forest fires carried southeastward at high levels all but completely obscured the sun and the moon during the period September 24-30, 1950.