

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU.
VIRGINIA SECTION.

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VOL. XXX. RICHMOND, VA., YEAR 1921. No. 13.

GENERAL SUMMARY.

The year 1921 was the warmest and driest year in Virginia since the beginning of State-wide records in 1891. Three months during the year—March, April, and September—the average temperature surpassed that of the same months for thirty years, or more, while it is twenty years since the record for July was exceeded. Precipitation averaged below normal for all months, but two—May and November. The year was one of the most unfavorable for agricultural interests ever experienced in Virginia. The exceedingly warm weather of March brought fruit trees into early bloom and was followed by a disastrous cold wave near the close of the month which killed all but a small percentage of the fruit-buds. Killing frosts occurring again early in April over the fruit growing section made the destruction more certain and complete. Wheat also suffered during this period. The cloudy, cool weather of May was unfavorable for proper germination and early growth of spring crops, and, later, during the summer and fall months, a drought of unusual length and severity contributed to lowering the yield of field crops and caused fall seeding to be greatly delayed. During the last two months of the year, however, owing to the mild weather and generally sufficient moisture, meadows, wheat, and other winter crops improved rapidly and at the close of the year were reported as being near the average in condition and development.

THE WEATHER BY MONTHS.

JANUARY.—Temperature averaged considerably above normal. In the Great Valley and in a portion of Middle Virginia precipitation was mostly in the form of snow which formed a protecting cover of great value to wheat.

FEBRUARY.—Abnormally warm weather prevailed until the 18th; thereafter it was much cooler. Precipitation was ample; 24-hour amounts of snowfall of from 10 to 14 inches occurred on the 20th in the extreme northern portion of the State.

MARCH.—The average temperature was the highest on record for March. A cold wave on the 29th was followed on the 30th by heavy to killing frost in most sections. Damage to fruit was very heavy. Precipitation was much below normal.

APRIL.—The average temperature was the highest on record for the month by 0.5°. General heavy to killing frosts occurred on the 2d and 11-12th. Precipitation was sufficient in the east, but in several northwestern counties lack of adequate moisture, combined with freezing temperature, caused a decided deterioration in the condition of winter grain crops.

MAY.—Temperature averaged considerably below normal. Frosts occurred during the month at only a few mountain stations. Precipitation averaged above normal. A hail-storm on the 23d caused severe damage to growing crops, especially wheat, in Loudoun County.

JUNE.—Rather dry weather prevailed. It was an excellent month for harvesting hay and grain; corn was kept well cultivated and generally made rapid advancement, except in those localities where the drought was most severe; tobacco, cotton, and peanuts, however, made slow growth; potatoes were blighted by the drought in some northern sections, and pastures became short. Local damage was caused on the 26th by hail and high wind in Loudoun and Fauquier Counties.

JULY.—It was the hottest July since 1901. In the northern portion of the Great Valley and in the extreme northern portion of Middle Virginia precipitation was generally ample. Over the southeastern and south-central portions of the State rather dry weather prevailed. Hail damaged crops locally in western Loudoun County on the 29th.

AUGUST.—Temperature was rather variable, there being several alternate periods of cool and warm weather. Droughty conditions became more severe in south-central and eastern counties. The month was unfavorable for crops. Many streams ran dry and pastures became parched and brown.

SEPTEMBER.—It was the warmest September since 1881. No frosts occurred during the month. The summer drought continued practically unabated over much of Middle and Tidewater Virginia. Deterioration of crops continued over central and most southern counties. It was an excellent month for gathering fall crops.

OCTOBER.—The first killing frost of the season was recorded in the mountainous district on the 9th; on the 13th and 14th killing frosts occurred generally in the Great Valley and locally in Middle and Tidewater Virginia. Plowing and seeding were badly retarded by dry soil and early sown grain came up irregularly.

NOVEMBER.—It was the warmest November since 1909. The first general killing frost of the season in central counties occurred on the 6th; on the 13th the area covered was more extensive, and on the 30th reached the coast. The rains at the beginning of the month, combined with those at the end of the previous month, permitted active resumption of seeding over the chief wheat producing areas.

DECEMBER.—Temperatures averaged considerably above normal. Precipitation was generally ample. Under favorable weather conditions crops improved and outdoor work kept well abreast of the season.—W. F. F.

CLIMATOLOGICAL DATA, 1921.

Month.	Temperature.			Precipitation.			Number of days.			
	Mean.	Highest.	Lowest.	Average.	Greatest 24-hour rain.	Average snow-fall.	Rainy.	Clear.	Partly cloudy.	Cloudy.
January.....	38.2	75	-12	3.12	2.70	8.4	6	12	8	11
February.....	40.8	76	1	2.91	2.00	3.7	7	11	6	11
March.....	55.9	92	17	2.04	1.16	T.	8	16	8	7
April.....	59.1	95	13	2.99	1.71	T.	9	13	8	9
May.....	61.9	95	24	4.61	3.05	0.0	12	10	8	13
June.....	73.0	102	40	2.50	2.15	0.0	7	14	10	6
July.....	77.5	103	45	3.96	4.41	0.0	10	15	11	6
August.....	73.2	103	40	2.43	2.45	0.0	8	15	10	6
September.....	74.1	104	46	2.80	2.90	0.0	8	13	11	6
October.....	57.3	87	20	1.96	6.04	T.	4	20	6	5
November.....	50.0	82	15	3.03	2.05	T.	9	11	8	11
December.....	40.0	72	4	2.59	2.00	1.4	8	11	8	12

COMPARATIVE ANNUAL DATA.									KILLING FROSTS, 1921.					
Year.	Mean temperature.	Highest.	Lowest.	Average precipitation.	Average snow-fall.	No. of rainy days.	No. of clear days.	No. of partly cloudy days.	Stations.	Last in spring.	First in autumn.	Stations.	Last in spring.	First in autumn.
1892	54.8	106	- 8	40.01	.....	95	163	101	TIDEWATER VIRGINIA.			MIDDLE VIRGINIA-CON.		
1893	55.1	104	-26	46.83	23.1	103	156	100	Ashland.....	Apr. 2	Nov. 4	Lincoln.....	Mar. 30	Oct. 26
1894	57.0	106	-11	35.97	17.0	88	166	104	Cape Henry.....	Feb. 26	Nov. 30	Lynchburg.....	Apr. 2	Oct. 14
1895	54.6	107	-18	38.09	38.8	94	174	103	Dahlgren.....	Mar. 29	Oct. 14	Mayhurst.....	Mar. 30	Nov. 6
1896	56.4	105	-10	42.89	12.3	93	163	106	Diamond Springs.....	Mar. 12	Nov. 30	Mineral.....	Apr. 12	Oct. 14
1897	56.0	103	-15	40.81	11.8	92	171	99	Franklin.....	Apr. 12	Oct. 14	Mount Weather.....	Apr. 19	Oct. 13
1898	56.5	105	- 9	44.80	8.7	108	162	101	Hopewell.....	Apr. 12	Nov. 13	New Canton.....	Apr. 12	Oct. 14
1899	56.4	106	-29	43.18	36.7	98	176	95	Langley Field.....	Feb. 25	Nov. 30	Quantico.....	Mar. 30	Nov. 22
1900	57.0	107	- 8	39.33	18.6	86	181	91	Mount Moriah Farm.....	Apr. 2	Nov. 13	Randolph.....	Apr. 20	.....
1901	55.3	106	-14	50.17	9.5	100	167	94	Newport News.....	Mar. 29	Nov. 13	Rocky Mount.....	Mar. 30	Oct. 9
1902	55.6	108	0	51.42	14.9	95	170	97	Norfolk.....	Mar. 5	Nov. 13	Washington, D. C.....	Apr. 11	Oct. 14
1903	55.1	105	-13	44.85	8.4	95	172	89	Onley.....	Mar. 30	Nov. 5	THE GREAT VALLEY.		
1904	53.8	100	-14	36.18	24.9	95	170	101	Richmond.....	Apr. 2	Nov. 6	Blacksburg.....	Apr. 20	Oct. 9
1905	54.8	98	-15	43.58	18.5	111	155	112	Runnymede.....	Mar. 30	Oct. 14	Buchanan.....	Apr. 12	Oct. 9
1906	56.3	102	- 2	49.56	16.2	124	143	120	Warsaw.....	Mar. 30	Oct. 14	Burkes Garden.....	Apr. 20	Oct. 13
1907	54.3	97	-16	44.19	17.4	115	159	115	West Point.....	Apr. 2	Oct. 14	Catawba Sanatorium.....	Apr. 11	Oct. 13
1908	55.4	102	-20	45.21	30.0	110	162	108	Williamsburg.....	Mar. 30	Nov. 6	Dale Enterprise.....	Apr. 11	Oct. 9
1909	55.5	102	- 5	39.81	12.9	101	171	104	MIDDLE VIRGINIA.			Dante.....	Apr. 12	Oct. 13
1910	54.7	102	- 9	41.37	20.3	112	151	116	Arcola.....	Mar. 30	Oct. 14	Hot Springs.....	May 9	Oct. 9
1911	56.8	104	0	41.50	9.2	115	149	110	Callaville.....	Apr. 12	Oct. 13	Lexington.....	Apr. 20	Oct. 14
1912	54.5	100	-25	39.19	24.6	103	165	106	Charlottesville.....	Mar. 30	Nov. 11	Pulaski.....	May 2	Oct. 14
1913	57.2	102	- 3	42.75	4.0	100	178	98	Clarksville.....	Mar. 30	Oct. 9	Roanoke.....	Apr. 11	Oct. 9
1914	55.0	103	-17	37.17	39.8	101	168	100	Columbia.....	Apr. 12	Oct. 13	Staunton.....	Apr. 2	Oct. 13
1915	55.8	101	- 6	39.12	13.5	97	160	116	Culpeper.....	Mar. 30	Oct. 13	Winchester.....	Mar. 30	Oct. 26
1916	55.5	102	-11	39.36	18.6	103	165	106	Danville.....	Mar. 30	Nov. 13	Wise.....	.....	Oct. 13
1917	55.3	103	-27	40.82	23.7	114	158	107	Fredericksburg.....	Apr. 2	Nov. 6	Woodstock.....	Mar. 30	Oct. 13
1918	55.3	108	-22	44.43	24.7	105	159	97	Hawfield.....	Apr. 11	Oct. 9	Wytheville.....	Apr. 12	Oct. 13
1919	56.8	103	-16	41.66	7.4	102	161	99	Lawrenceville.....	Apr. 11	Oct. 9			
1920	54.8	99	- 9	46.80	7.1	106	162	89	Leeds Manor.....	Mar. 30	Nov. 6			
1921	58.4	104	-12	34.94	13.8	97	161	102						

Climatological Data for the Year 1921.

Stations.	Counties.	Elevation, feet.	Temperature, degrees Fahrenheit.						Precipitation, in inches.						Sky.				Prevailing direction of wind.	
			Length of record, years.	Annual mean.	Highest.	Date.	Lowest.	Date.	Length of record, years.	Total for the year.	Greatest monthly.	Month.	Least monthly.	Month.	Total snowfall.	Number of rainy days.	Number of clear days.	Number of partly cloudy days.		Number of cloudy days.
Tidewater Virginia.																				
Ashland	Hanover	221	29		97	Aug. 2	13	Jan. 19	29											
Cape Henry	Princess Anne	20	47	61.0	98	Aug. 2	21	Jan. 19	47	39.63	8.28	July	1.30	Jan.	T.	106	129	122	114	ne.
Dahlgren	King George	21	2	57.7	96	June 24	12	Jan. 19	2	36.57	4.56	May	1.46	Oct.	4.5	104	122	204	39	sw.
Diamond Springs II	Princess Anne	25	13	61.8	98	Aug. 3	19	Jan. 19	13	43.27	6.41	May	1.20	Sept.		78				
Franklin	Southampton	21	3				18	Jan. 19	3						0.2					
Hopewell	Prince George	40	5	62.7	102	Aug. 2*	16	Jan. 19	5	39.14	5.39	Sept.	1.59	Aug.	1.8	103	38	200	127	sw.
Langley Field II	Elizabeth City	5	2	60.8	95	June 24*	20	Jan. 19*	2	34.05	4.62	May	0.38	Oct.	T.	91	86	145	134	n.
Mount Moriah Farm	King George	100	3	59.1	97	Aug. 30	14	Jan. 19*	3	29.66	3.96	July	1.03	Aug.	1.2	82	204	77	84	n.
Newport News	Warwick	13	18	60.4	96	Aug. 2	18	Jan. 19	18	39.27	6.18	May	1.35	Oct.	1.0	114	180	104	81	ne.
Norfolk	Norfolk	91	51	61.8	96	Sept. 2	20	Jan. 19	51	30.36	4.72	May	1.05	June	T.	97	119	128	118	ne.
Onley	Accomac	40	3	59.7	99	July 12	10	Dec. 21	3	34.05	5.65	Apr.	0.55	Sept.		66				s.
Richmond	Henrico	144	42	60.2	101	Aug. 2	15	Jan. 19	42	30.59	4.65	Apr.	0.61	Aug.	1.0	111	123	115	127	ne.
Runnymede (near) II	Surry	25	33	61.0	100	Aug. 2	12	Jan. 19	33	39.59	5.84	May	1.41	Oct.	T.	87	157	60	148	sw.
Warsaw (near)	Richmond	160	29		97	Sept. 1	12	Dec. 22	29						T.					sw.
West Point	King William	16	7		103	July 2			9											sw.
Williamsburg	James City	70	29	61.2	100	Aug. 2	15	Jan. 19*	27	35.11	5.73	July	0.35	Oct.			167	68	130	sw.
Means and extremes				60.6	103	July 2	10	Dec. 21		35.19	8.28	July	0.35	Oct.	0.9	94	133	122	110	sw.
Middle Virginia.																				
Arcola	Loudoun	300	5	57.4	99	July 8*	8	Jan. 19	5	33.42	6.66	May	0.63	Oct.	16.9	105	181	127	57	sw.
Callaville	Brunswick	250	27	59.2	101	Aug. 31	12	Jan. 19	27	36.00	4.82	May	0.52	Aug.	4.5	70	218	107	40	w.
Charlottesville (near)	Albemarle	854	30	59.1	100	Sept. 2	9	Jan. 19	30	33.66	4.52	May	1.65	Sept.	16.1	107	123	95	147	s.
Clarksville	Mecklenburg	286	4	59.1	96	Aug. 30	16	Jan. 19	24	29.56	4.15	Jan.	0.53	Aug.	5.0	59	239	29	97	w.
Columbia	Fluvanna	246	23	59.4	99	June 17	12	Jan. 19	23	30.48	3.95	Jan.	1.07	June	4.0	82	194	18	153	e.
Culpeper	Culpeper	450	14	57.5	96	July 8*	6	Jan. 19	14	33.80	7.11	May	1.21	Oct.	13.9	91				s.
Danville	Pittsylvania	413	6	62.4	101	Aug. 2*	17	Jan. 19	21	33.12	4.96	Jan.	0.33	Aug.	8.0	101	156	134	75	s.
Fredericksburg (near)	Spottsylvania	100	31	58.8	98	June 28	10	Jan. 19	31	35.20	6.72	May	0.73	Oct.	5.8	100	186	101	78	s.
Hawfield II	Orange	400							4											
Lassiter	Goochland	100							11	30.68	5.20	May	0.43	Aug.						
Lawrenceville	Brunswick								2	30.95	4.31	May	0.05	Aug.	8.3	69	234	69	62	sw.
Leeds Manor II	Fauquier	550	7	56.4	94	July 3*	6	Jan. 19	7	42.53	8.77	May	1.33	Jan.	27.5	93	216	81	68	sw.
Lincoln II	Loudoun	500	20	58.0	97	June 26*	7	Jan. 19	20											
Lynchburg	Campbell	681	50	59.4	96	Sept. 2	13	Jan. 19	50	28.92	6.15	May	0.83	Aug.	13.2	106	144	138	83	w.
Manassas	Prince William								0											
Mayhurst II	Orange	500	2	60.0	99	Sept. 2	10	Jan. 19	6	29.72	5.26	May	1.45	Oct.		82	202	97	66	s.
Mineral (near)	Louisa	300	6	57.2	97	June 28	8	Jan. 19	6	31.14	5.14	July	0.68	Oct.		92				e.
Mount Weather II	Loudoun	1,726	18	58.4	88	July 8*	4	Jan. 19*	18	42.88	8.57	July	0.90	Mar.	24.0	82	66	107	192	s.
New Canton	Buckingham	300	27	59.1	99	Aug. 2	13	Jan. 13	27	31.06	3.86	Jan.	0.88	June	5.7	102	126	154	85	sw.
Quantico	Prince William	17	20				9	Jan. 19	15											
Randolph	Charlotte	334	1		104	Sept. 2	12	Jan. 29	16	33.71	4.67	May	0.08	Aug.		65	230	69	66	s.
Rocky Mount	Franklin	1,150	26	58.2	93	June 24	7	Jan. 19	26	43.03	6.86	July	1.10	Aug.	36.0	192	5	168	136	nw.
Washington	Dist. Columbia	112	51	58.0	96	June 28	11	Jan. 19	51	36.13	5.77	May	1.10	Aug.	11.7	118	126	103	136	n.
Means and extremes				58.5	104	Sept. 2	4	Jan. 19*		34.55	8.77	May	0.05	Aug.	13.0	90	176	90	99	sw.
The Great Valley.																				
Blacksburg	Montgomery	2,170	30	53.6	88	May 12*	3	Jan. 19*	30	40.69	5.62	Jan.	1.87	Dec.	38.2	129	122	101	142	w.
Buchanan	Botetourt	820	4	59.1	98	July 8	9	Jan. 13*	20	35.39	4.98	July	1.36	Mar.	26.0		173	42	150	w.
Burkes Garden	Tazewell	3,250	26	50.5	84	July 5	-12	Jan. 11	26	40.80	5.17	Sept.	1.67	Apr.	28.0	91	118	65	182	w.
Catawba Sanatorium	Roanoke	2,100	11	57.5	94	Aug. 2*	10	Jan. 13*	11	36.83	6.19	Oct.	1.10	Apr.	26.0		202	99	64	
Dale Enterprise	Rockingham	1,350	42	56.5	94	Aug. 20	3*	Jan. 11	42	28.72	4.29	July	1.25	Feb.	20.0	110	129	154	82	s.
Dante	Russell	2,000	4	56.5	93	July 4	14	Jan. 13	4	44.92	7.71	July	1.73	June	16.0	139	148	80	137	
Hot Springs	Bath	2,195	29	53.8	87	June 28*	3	Jan. 13	29	37.92	5.47	Sept.	1.15	Mar.	16.3	110	148	155	62	
Ivanhoe	Wythe	2,028							15	34.53	4.75	Jan.	1.28	Dec.		109				
Lexington	Rockbridge	1,060	44	56.1	95	Aug. 2	3	Jan. 11	44	29.68	4.10	June	1.28	Aug.	21.7	94	220	50	95	
Mendota	Washington	1,350							16	47.07	7.01	Aug.	1.87	Mar.	9.1	124				
Narrows	Giles	1,519							7											
Pulaski	Pulaski	1,919	2	56.0	91	Aug. 3	4	Jan. 11	2	29.92	4.31	Sept.	1.42	Dec.	27.3	128	170	143	52	w.
Radford	Montgomery	1,773							26	33.83	4.20	Jan.	1.46	Mar.	33.0	90				
Roanoke	Roanoke	907	17	59.4	95	June 24*	11	Jan. 13*	17	35.51	5.46	July	1.33	Mar.		108	172	135	58	nw.
Speers Ferry	Scott	1,221							25	30.78	5.88	July	0.83	Oct.		90	210	50	105	w.
Staunton	Augusta	1,380	31	57.5	95	June 17	4	Jan. 13	33	32.10	4.95	Sept.	1.28	Oct.	23.0		147	131	87	sw.
Winchester	Frederick	717	17				10	Jan. 19	15	31.87	6.51	May	0.63	Oct.	21.0	73	163	143	59	nw.
Wise	Wise	2,474	1						1											
Woodstock	Shenandoah	927	25		100	Sept. 2	1	Feb. 21	30	27.27	7.02	May	0.97	Oct.	19.0	46	158	66	141	w.
Wytheville	Wythe	2,293	27	54.4	89	Aug. 2	8	Jan. 11	27	33.82	5.36	July	1.25	Dec.	36.1	139	149	115	101	w.
Means and extremes				56.0	100	Sept. 2	-12	Jan. 11		35.63	7.71	July	0.63	Oct.	24.0	105	162	102	101	w.
State means and extremes				58.4	104	Sept. 2	-12	Jan. 11		34.94	8.77	May	0.05	Aug.	13.8	97	161	102	102	sw.

Estimated and incomplete data not considered in means.

All other records are used in determining section and division means, but the mean departures from normal temperature and precipitation are based only on records from stations that have ten or more years of observation.

Reference letters, ^a, ^b, ^c, appearing in the tables indicate number of days missing: for example, ^b represents two days, etc.

* Also on other dates.

† Post-office addresses of these stations are as follows: Diamond Springs, Norfolk; Runnymede, Elberon; Dry Bridge, Midlothian; Hawfield, Rapidan; Leeds Manor, Markham; Lincoln, Purcellville; Mayhurst, Orange; Mount Weather, Bluemont; Langley Field, Norfolk.

T. Precipitation is less than 0.01 inch rain or snow.

Monthly and Annual Precipitation for the Year 1921, with Departures from the Normal.

	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
Stations.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.	Precipitation.	Departure.
Tidewater Virginia.																										
Ashland	3.35	+0.50	2.84	-0.07	2.19	-1.31	3.85	+0.25	4.15	+0.07	2.12	-2.05	3.24	-1.32	0.78	-3.80	1.02	-2.16	1.65	-1.61	.....	.....	.....	.....	.....	.....
Cape Henry	1.30	-2.06	3.25	-0.52	2.50	-1.82	3.39	-0.53	3.47	-0.56	3.59	-0.83	8.28	+2.43	3.69	-2.41	2.74	-1.34	1.59	-2.29	1.67	-1.07	4.16	+0.78	39.63	-10.26
Dahlgren	2.81	.....	2.61	.....	3.04	.....	2.94	.....	4.56	.....	4.32	.....	4.31	.....	3.49	.....	2.22	.....	1.46	.....	2.49	.....	2.35	.....	38.67	.....
Diamond Springs	2.85	-0.69	4.10	+1.00	2.22	-1.25	4.26	+1.09	6.41	+2.72	4.85	-0.28	1.46	-4.26	3.30	-0.56	1.20	-1.88	4.83	+2.31	2.80	+0.72	5.05	+1.48	49.27	+0.40
Franklin	3.95	.....	2.90	.....	2.18	.....	3.41	.....	3.83	.....	2.78	.....	.....	.....	0.78	.....	3.54	.....	2.21	.....	2.64	.....	4.24	.....	.....	.....
Hopewell	3.81	.....	4.26	.....	1.89	.....	3.88	.....	3.89	.....	1.83	.....	3.55	.....	1.59	.....	5.39	.....	1.87	.....	3.15	.....	4.04	.....	39.14	.....
Langley Field	3.26	+0.60	3.52	+0.16	2.00	-1.94	3.91	+0.59	4.62	+1.06	2.52	-1.41	3.03	-1.90	2.10	-2.80	3.06	+0.13	0.38	-2.71	1.63	-1.09	3.62	+0.60	34.05	-8.80
Mount Moriah Farm	2.73	.....	1.51	.....	2.17	.....	2.87	.....	3.92	.....	1.80	.....	3.96	.....	1.03	.....	2.52	.....	1.28	.....	2.92	.....	2.95	.....	29.66	.....
Newport News	3.92	+0.61	3.32	-0.16	1.97	-1.91	4.16	+0.97	6.18	+2.72	2.06	-2.97	2.15	-4.16	4.22	-1.44	3.61	+0.83	1.35	-1.24	2.29	+0.12	4.04	+0.28	39.27	-6.35
Norfolk	1.55	-1.82	3.02	-0.73	1.50	-2.78	3.02	-0.77	4.72	+0.65	1.05	-3.28	3.27	-2.53	3.13	-2.84	2.42	-1.63	1.28	-2.63	1.70	-1.02	3.69	+0.20	30.36	-19.18
Onley	1.82	.....	4.05	.....	1.95	.....	5.65	.....	4.10	.....	0.90	.....	2.82	.....	3.80	.....	0.55	.....	2.80	.....	3.12	.....	2.49	.....	34.05	.....
Richmond	3.80	+0.78	3.52	+0.42	2.13	-1.69	4.65	+1.20	3.89	+0.04	1.49	-2.03	2.36	-2.06	0.61	-3.80	0.95	-2.48	1.20	-2.12	2.97	+0.58	3.02	+0.02	30.59	-11.04
Runnymede (near)	3.85	+0.65	3.81	-0.15	4.16	-0.39	3.30	-0.57	5.94	+1.73	2.23	-2.74	3.59	-2.48	2.50	-2.58	2.15	-1.29	1.41	-2.24	2.65	-0.05	4.10	+0.76	39.59	-9.29
Warsaw (near)	3.70	+0.60	2.20	-1.22	3.10	-0.50	4.40	+1.17	3.65	+0.15	1.35	-2.86	2.85	-1.64	3.78	-0.42	1.20	-1.37	0.77	-2.38	.....	.....	.....	.....	.....	.....
West Point	1.18	-1.98	4.38	+1.35	2.49	-1.37	2.99	-0.41	4.79	+1.29	1.00	-3.21	3.29	-2.39	1.71	-2.27	1.41	-2.04	1.40	-1.72	3.04	+0.85	.....	.....	.....	.....
Williamsburg	3.49	+0.18	4.66	+1.34	3.22	-0.80	3.71	-0.01	4.97	+1.46	0.89	-3.83	5.73	-0.41	0.87	-5.55	1.39	-2.06	0.35	-2.75	2.27	+0.10	36.6	+1.15	35.11	-11.18
Means	2.96	-0.45	3.39	+0.15	2.37	-1.43	3.77	+0.20	4.56	+0.74	2.25	-2.23	3.61	-1.82	2.24	-2.60	2.21	-1.39	1.66	-1.70	2.52	-0.10	3.65	+0.65	35.19	-9.98
Middle Virginia.																										
Arcoia	2.14	.....	2.08	.....	1.85	.....	3.77	.....	6.66	.....	0.92	.....	4.74	.....	2.11	.....	3.53	.....	0.63	.....	3.08	.....	1.91	.....	33.42	.....
Callaville	3.67	+0.37	3.91	+0.31	2.42	-2.00	4.36	+0.81	4.83	+0.98	2.05	-2.20	3.16	-2.80	0.52	-4.30	4.46	+1.15	1.89	-0.83	1.25	-0.89	3.42	+0.06	36.00	-9.34
Charlottesville	3.65	+0.34	1.95	-1.05	2.35	-1.16	3.08	-0.35	4.52	+0.11	3.49	-2.17	3.60	-1.25	1.55	-3.36	1.65	-2.25	3.00	-0.43	2.24	-0.31	4.28	-0.79	39.66	-12.67
Clarksville	4.15	+0.87	3.40	+0.10	3.23	-0.63	3.34	+0.07	3.05	-0.98	2.11	-2.37	2.40	-2.04	0.53	-4.28	1.10	-1.77	0.90	-1.77	3.08	+0.52	2.27	-1.26	29.56	-13.44
Columbia	3.95	+0.51	2.83	-0.21	2.25	-1.18	2.93	-0.68	3.20	-0.64	1.07	-3.58	2.53	-1.82	2.36	-2.08	2.38	-0.78	1.46	-1.65	3.01	+0.73	2.51	-0.89	30.48	-12.27
Culpeper	4.57	+1.35	1.91	-0.56	1.62	-1.08	2.75	-0.59	7.11	+3.36	1.77	-3.63	3.62	-0.33	1.89	-2.07	1.95	-1.16	1.21	-1.43	3.12	+0.62	2.28	-0.94	33.80	-6.46
Danville	4.96	+1.84	3.90	+0.69	1.75	-1.68	3.44	+0.22	4.41	+0.49	2.11	-2.29	1.94	-2.22	0.33	-4.60	4.08	+1.13	1.83	-1.08	3.09	+0.85	1.28	-2.09	33.12	-8.74
Fredericksburg	3.33	+0.10	2.64	-0.35	2.03	-1.53	3.00	-0.57	6.72	+2.79	1.62	-3.16	2.68	-1.62	1.48	-3.36	5.61	+2.46	0.73	-2.35	3.14	+0.83	2.22	-1.05	35.20	-7.81
Hawfield	3.94	+0.44	2.67	-0.49	.....	.....	2.91	-0.58	7.29	+2.71	1.79	-2.82	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Lassiter	2.95	-0.77	4.00	+1.33	1.35	-2.77	3.30	+0.28	5.20	+1.96	1.10	-3.34	2.90	-2.26	0.43	-3.64	1.40	-1.45	1.90	-0.56	3.30	+0.89	2.80	-0.25	30.63	-10.68
Lawrenceville	2.95	.....	2.88	.....	3.10	.....	2.45	.....	4.31	.....	2.75	.....	2.60	.....	0.05	.....	2.55	.....	2.50	.....	1.80	.....	3.01	.....	30.95	.....
Leeds Manor	1.33	.....	1.34	.....	1.55	.....	2.88	.....	8.77	.....	5.60	.....	5.12	.....	2.60	.....	4.70	.....	2.46	.....	3.75	.....	2.43	.....	42.58	.....
Lincoln	1.30	-1.73	1.67	-0.75	1.57	-1.43	2.87	-0.58	7.86	+4.67	4.39	-1.07	.....	.....	3.95	-0.57	1.71	-1.05	.....	.....	4.00	+1.92	.....	.....	.....	.....
Lynchburg	2.60	-1.12	2.60	-0.89	1.75	-2.06	2.76	-0.41	6.15	+2.16	1.85	-2.04	3.56	-0.47	0.83	-3.42	1.71	-1.92	2.45	-0.93	1.65	-1.14	1.01	-2.26	28.92	-14.50
Manassas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Mayhurst	3.46	+0.20	2.19	-0.77	2.33	-1.84	2.84	-0.41	5.26	+0.84	1.64	-3.99	1.82	-2.98	1.67	-3.32	1.99	-1.20	1.45	-1.93	2.74	+0.52	3.43	-1.14	29.72	-15.52
Mineral (near)	3.43	.....	2.09	.....	1.73	.....	2.34	.....	3.52	.....	1.10	.....	5.14	.....	3.17	.....	1.23	.....	0.68	.....	3.85	.....	3.06	.....	31.14	.....
Mount Weather	1.49	-1.61	1.78	-0.32	0.90	-1.70	1.95	-1.46	3.45	+0.00	3.48	-1.92	8.57	-3.75	5.69	-2.51	1.80	-1.96	1.08	-2.52	5.08	+3.00	2.57	-1.94	34.59	-2.05
New Canton	3.86	+0.40	3.29	+0.21	1.87	-2.12	2.79	-0.46	3.26	-0.23	0.88	-3.12	2.89	-0.95	1.42	-3.43	3.45	+0.07	1.18	-1.93	3.78	+1.48	2.42	-0.68	31.06	-10.75
Quantico	3.44	+0.32	2.21	-0.45	2.53	-0.70	2.42	-0.76	5.76	+2.31	2.18	-2.35	1.74	-2.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Randolph	4.15	+0.83	4.01	+1.00	3.15	-0.43	3.66	+0.78	4.67	+0.84	0.90	-3.22	4.03	-0.65	0.08	-3.85	1.59	-1.00	1.85	-0.98	3.13	+0.91	2.47	-0.82	33.71	-6.59
Rocky Mount	5.33	+2.18	3.44	-0.01	1.50	-2.52	3.74	-0.28	5.18	+1.26	4.18	-0.53	6.86	+1.94	1.10	-3.34	4.86	+1.54	2.55	-1.17	2.87	+0.30	1.42	-2.21	43.09	-2.28
Washington, D. C.	2.30	-1.07	2.29	+1.13	2.76	-1.09	2.93	+0.32	5.77	+1.94	4.45	-0.73	4.79	+0.14	1.10	-3.30	3.29	-0.80	1.35	-1.74	4.15	+1.44	1.95	-1.21	36.13	-7.87
Means	3.33	-0.18	2.69	-0.17	2.08	-1.49	3.03	-0.26	5.56	+1.62	2.29	-2.48	4.05	-0.97	1.71	-2.97	2.75	-0.48	1.64	-1.42	3.15	+0.72	2.27	-1.11	34.55	-8.83
The Great Valley.																										
Blacksburg	5.62	+2.40	3.68	+0.51	2.18	-1.54	1.89	+1.29	2.77	-1.06	3.49	-1.12	4.95	-0.35	3.19	-0.80	3.99	+0.85	3.06	+0.08	4.00	+1.75	1.87	-1.14	40.66	-1.71
Buchanan	3.89	+0.85	2.68	-0.04	1.36	-1.35	2.10	-0.85	3.64	-0.31	3.02	-1.26	4.98	+0.01	2.94	-1.13	2.66	-0.78	2.12	-1.52	4.21	+2.21	1.79	-1.52	35.39	-6.19
Burkes Garden	3.55	-0.12	3.01	-0.49	2.00	-3.10	1.67	-2.20	4.08	-0.26	3.89	-1.77	3.64	-1.07	4.94	+0.43	5.17	+1.65	3.44	+0.27	2.57	-0.24	3.34	-0.25	40.80	-7.15
Catawba Sanatorium	2.18	-1.13	2.24	-0.68	2.35	-1.68	1.10	-2.12	2.24	-1.16	4.01	-0.69	5.37	+0.48	1.75	-2.64	4.18	+0.93	6.19	+2.68	3.22	+0.86	2.00	-1.51	36.88	-6.66
Dale Enterprise	1.84	-0.92	1.25	-1.48	1.43	-1.74	1.60	-1.43	3.63	-0.57	2.86	-2.38	4.29	-0.11	1.80	-2.21	3.54	+0.27	1.26	-1.51	3.27	+1.14	1.95			

Monthly and Annual Mean Temperatures for the Year 1921, with Departures from the Normal.

Stations.	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.		Annual.	
	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.	Temperature.	Departure.
Tidewater Virginia.																										
Ashland.....	39.0	+2.5	41.0	+4.3	57.3	+10.5	60.2	+4.4	61.8	-4.3	72.2	-0.1	78.3 ^a	+1.6	73.6	-1.7	75.2	+6.1	58.0 ^b	-0.1	56.3	+4.2	44.1	+0.4	61.0	+2.4
Cape Henry.....	43.8	+3.6	44.1	+2.9	57.3	+10.7	59.8	+5.2	61.7	-2.5	72.8	-0.1	78.7	+1.2	75.4	-1.5	76.1	+4.3	62.3	+0.2	56.3	+4.2	44.1	+0.4	61.0	+2.4
Dahlgren.....	37.0	.....	38.6	.....	55.0	.....	58.4	.....	61.8	.....	72.6	.....	78.8	.....	73.2	.....	74.9 ^a	.....	56.6	.....	48.3	.....	38.3	.....	57.7	.....
Diamond Springs.....	45.2	+3.1	45.0	+2.9	59.3	+10.6	61.4	+3.9	62.8	-3.3	73.4	+0.1	79.2	+1.9	76.6	-0.3	76.6	+4.3	61.8	-1.5	55.5	+4.6	44.4	+2.4	61.8	+2.4
Franklin.....	44.2	.....	44.9 ^a	.....	59.8 ^a	.....	61.8 ^a	.....	64.2	.....	75.2	.....	.....	.....	78.3	.....	78.7	.....	59.6	.....	54.2 ^a	.....	43.1 ^a	.....	.....	.....
Hopewell.....	42.5	.....	44.8	.....	61.0	.....	63.5	.....	65.5	.....	77.2	.....	82.1	.....	78.4	.....	78.5	.....	61.2	.....	54.2	.....	43.4	.....	62.7	.....
Langley Field.....	41.4	+0.9	44.6	+4.4	57.0	+9.1	60.0	+4.1	62.5	-3.5	76.0	+1.4	79.2	+0.2	75.5	-2.2	76.5	+4.5	60.4	-0.7	54.2	+4.2	42.5	+0.4	60.8	+1.9
Mt. Moriah Farm.....	35.5 ^b	.....	41.0	.....	57.4 ^a	.....	60.2	.....	62.2	.....	73.6	.....	79.4	.....	74.8	.....	75.8	.....	58.3	.....	51.2	.....	40.3	.....	59.1	.....
Newport News.....	42.1	+1.0	43.4	+3.6	56.9	+9.0	60.0	+3.1	62.0	-5.5	73.5	+0.1	79.0	+1.0	75.1	-2.1	76.3	+4.5	60.6	-1.5	53.7	+3.5	42.7	+1.2	60.4	+1.4
Norfolk.....	43.6	+3.2	45.0	+3.2	58.1	+10.4	61.2	+5.2	63.0	-3.2	74.8	+0.4	79.8	+1.4	76.4	-0.3	77.8	+6.1	62.0	+0.7	55.8	+4.6	44.2	+1.2	61.8	+2.7
Onley.....	40.6	.....	44.5 ^a	.....	61.4	.....	63.5	.....	65.2	.....	71.6	.....	83.4	.....	77.2	.....	76.5	.....	60.2	.....	58.2	.....	40.6	.....	59.7	.....
Richmond.....	39.9	+1.9	42.0	+2.1	57.6	+10.7	60.1	+2.9	63.0	-4.3	74.8	-0.3	80.0	+0.8	76.6	-0.9	76.8	+6.0	59.5	-0.3	51.6	+2.8	41.0	0.0	60.2	+1.7
Runnymede (near).....	42.8	+3.3	44.0	+5.0	59.2	+11.2	61.9	+5.7	62.4	-3.8	73.6	+0.5	79.5	+2.3	75.7	-0.1	76.9	+7.4	59.9	+1.0	58.4	+4.6	43.0	+2.8	61.0	+3.3
Warsaw (near).....	41.2	+4.5	44.6 ^b	+7.6	56.6	+10.9	59.5 ^b	+4.8	61.6	-3.9	72.4	-0.1	78.1	+1.7	74.2	-1.3	74.8	+5.5	60.0 ^a	+1.4	.....	.....	39.1 ^a	+1.5	.....	.....
West Point.....	40.2	.....	42.4	.....	58.3	.....	61.8	.....	64.0	.....	75.9	.....	82.0	.....	76.5	.....	77.2	.....	60.3	.....	52.4	.....	42.3	.....	61.2	+3.4
Williamsburg.....	42.4	+2.2	43.4	+3.0	59.8	+11.4	61.8	+5.0	63.6	-1.5	74.0	+1.7	79.4	+2.6	75.4	-0.2	77.5	+8.0	60.6	+0.5	54.0	+5.7	42.3	+1.8	61.2	+3.4
Means.....	41.3	+2.8	43.3	+3.9	57.8	+10.4	60.6	+4.5	62.6	-3.6	73.8	+0.4	79.8	+1.4	75.7	-1.1	76.6	+5.7	60.1	0.0	53.4	+4.3	42.1	+1.3	60.6	+2.5
Middle Virginia.																										
Arcola.....	36.2	.....	38.4	.....	55.2	.....	59.4	.....	62.4	.....	73.4	.....	78.8	.....	72.2	.....	73.8	.....	55.3 ^b	.....	46.8	.....	37.0	.....	57.4	.....
Callville.....	39.8	+0.8	41.6	+3.3	57.6	+9.1	58.2	+1.8	60.6	-5.4	72.8	-0.1	78.4	+1.5	74.0	-2.0	75.4	+5.5	57.6	-2.0	52.0 ^a	+3.4	41.8	+1.8	59.2	+1.5
Charlottesville (near).....	37.6	+1.6	40.2	+3.5	56.2	+10.1	60.4	+4.4	62.4	-3.7	74.8	+2.5	78.8	+2.7	74.4	-0.3	75.8	+7.3	59.7	+1.2	49.4	+1.7	39.2	+1.6	59.1	+2.7
Clarksville.....	37.6	.....	41.4	.....	56.5	.....	64.6	.....	62.5	.....	74.2	.....	77.8	.....	75.0	.....	72.9	.....	56.4	.....	50.2 ^a	.....	40.0	.....	59.1	.....
Columbia.....	38.4	+1.7	41.1	+4.6	57.2	+10.7	60.9	+6.0	64.0	-1.8	74.8	+3.5	78.3	+3.0	74.0	-0.4	75.2	+7.4	57.5	-0.3	50.9 ^a	+4.8	40.4	+3.5	59.4	+3.6
Culpeper.....	35.4	+1.4	39.0	+4.1	56.2	+12.1	60.0	+5.5	61.8	-3.1	72.8	+1.6	77.8	+2.8	72.4	-1.1	73.6	+7.0	55.1	-1.3	47.8	+3.8	38.0	+3.3	57.5	+3.0
Danville.....	40.8	.....	43.4	.....	58.9	.....	62.3	.....	66.4	.....	77.6	.....	81.6	.....	79.3	.....	79.8	.....	60.0	.....	54.1 ^a	.....	44.5	.....	62.4	.....
Fredericksburg (near).....	36.6	+2.3	41.4	+5.7	57.6	+11.4	60.3	+5.3	62.6	-2.6	72.3	+0.2	77.9	+1.4	72.8	-2.3	74.6	+5.8	57.6	-0.4	49.8	+3.1	40.0	+3.2	58.8	+2.8
Leeds Manor.....	35.8	.....	37.9	.....	52.8	.....	57.8	.....	60.8	.....	72.2	.....	77.6	.....	71.0	.....	72.4 ^a	.....	56.2	.....	46.0	.....	36.4	.....	56.4	.....
Lincoln.....	36.0	+4.2	38.9	+7.1	54.5	+11.3	60.6	+7.4	63.2	-0.8	73.8	+3.2	80.0 ^a	+4.1	72.6	-1.1	74.1	+6.5	58.2	+1.4	47.7	+3.4	36.1 ^a	+3.2	58.0	+4.2
Lynchburg.....	39.0	+3.2	41.4	+3.2	57.1	+11.7	59.1	+3.5	63.2	-2.7	74.3	+0.8	78.8	+1.5	74.4	-0.4	75.6	+7.2	57.6	+0.7	50.6	+4.5	42.3	+4.0	59.4	+3.0
Mayhurst.....	38.8	+2.9	41.6	+6.3	57.7	+11.5	62.3	+7.1	64.4	-1.0	75.2	+3.5	79.8	+3.7	75.5	+0.6	76.2	+7.6	60.4	+1.4	49.2	+4.0	39.0 ^a	+2.7	60.0	+4.2
Mineral (near).....	37.0	.....	38.6	.....	56.2 ^a	.....	58.6	.....	60.6	.....	70.6	.....	77.0	.....	72.7 ^a	.....	74.4 ^a	.....	54.9	.....	47.8	.....	37.9 ^b	.....	57.2	.....
Mount Weather.....	30.8	+0.5	34.8	+6.3	50.0	+11.3	56.4	+7.5	58.0	-1.2	69.5	+3.3	73.2	+2.5	66.7	-2.8	69.2	+5.3	54.6	+0.7	44.3	+2.7	33.2	+1.9	53.4	+3.2
New Canton.....	39.4	+2.7	41.0	+4.4	57.0	+10.3	60.2	+4.9	62.4	-3.0	73.2	+1.1	77.8	+1.5	73.6	-1.3	74.4	+5.7	57.5	0.0	51.1	+4.7	41.7	+4.6	59.1	+3.0
Quantico.....	38.9	+4.5	41.3	+8.2	58.0	+13.0	61.2	+7.1	64.1	0.0	76.4	+5.2	82.0	+4.9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Randolph.....	38.2	.....	41.0	.....	56.8	.....	60.2	.....	63.8	.....	75.6	.....	79.6	.....	77.6 ^a	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Rocky Mount.....	38.3	+0.2	41.2	+3.5	56.0	+8.8	58.8	+2.7	64.0	-1.4	73.1	+1.1	75.5	+0.2	71.6	-2.8	72.8	+8.7	55.1 ^a	-2.6	50.6 ^a	+2.8	41.9 ^b	+3.3	58.2	+1.6
Washington, D. C.....	36.6	+3.7	39.0	+4.5	55.5	+13.3	59.2	+6.0	62.3	-1.9	74.2	+1.7	79.3	+2.4	42.8	-1.8	74.4	+6.2	57.0	+0.3	47.5	+2.6	37.9	+1.8	58.0	+3.3
Means.....	37.5	+2.3	40.2	+5.0	56.2	+11.1	60.1	+5.4	62.6	-2.2	73.7	+2.3	78.2	+2.6	73.5	-1.3	74.4	+6.3	57.1	-0.1	49.2	+3.5	39.3	+2.9	58.5	+3.2
The Great Valley.																										
Blacksburg.....	33.0	+0.1	37.5	+4.8	52.3	+9.6	53.8	+3.4	57.6	-2.5	67.8	+0.2	70.2	-0.5	67.2	-2.6	68.8	+4.8	52.2	-1.1	45.4	+3.2	37.6	+3.6	53.6	+1.9
Buchanan.....	37.4	.....	41.5	.....	57.1	.....	60.2	.....	63.8	.....	74.3	.....	77.8	.....	73.2	.....	74.8	.....	57.5	.....	50.3	.....	41.4	.....	59.1	.....
Burkes Garden.....	31.1	-0.5	34.2	+3.5	49.1	+8.4	50.0	+2.9	54.1	-3.3	65.1	+1.4	67.3	+3.3	63.6	-2.4	64.4	+4.5	49.0	-0.8	43.4	+3.4	35.6	+4.1	50.5	+2.0
Catawba Sanatorium.....	37.3	.....	39.7	.....	55.0	.....	57.6	.....	61.6	.....	72.4	.....	75.2	.....	72.0 ^a	.....	72.2	.....	56.8	.....	49.6	.....	40.6	.....	57.5	.....
Dale Enterprise.....	35.5 ^a	+2.5	37.8	+4.0	54.4	+11.9	57.4	+5.1	60.6	-2.1	71.8	+1.6	75.6	+2.0	71.4	-0.7	72.7	+6.5	55.3	-0.1	47.4	+3.8	37.8	+3.2	56.5	+3.2
Dante.....	37.0	.....	40.6	.....	54.6	.....	54.8	.....	60.5	.....	71.6	.....	73.4	.....	71.0	.....	71.4	.....	54.4	.....	47.6	.....	40.9	.....	56.5	.....
Hot Springs.....	35.0	+8.6	36.4	+5.5	52.1	+10.1	54.8	+5.2	58.8	-1.1	69.0	+2.4	71.2	+2.1	67.0	-1.3	67.7	+5.6	52.4	-0.1	45.1	+3.8	36.5	+3.3	53.8	+3.2
Lexington.....	35.0	+1.0	39.2	+4.3	52.3	+8.5	56.0	+2.9	60.6	-2.4	71.4	+0.8	75.3	+0.9	71.2	-1.9	72.6	+6.3	54.2	-1.2	46.9	+1.2	38.0 ^a	+2.9	56.1	+2.0
Pulaski.....	35.5	.....	39.8	.....	53.2	.....	55.2	.....	60.6	.....	71.2	.....	73.6	.....	69.4	.....	71.5	.....	53.6	.....	48.0	.....	40.4	.....	56.0	.....
Roanoke.....	38.6	+1.7	41.8	+5.3	57.2	+10.1	60.4	+4.5	64.0	-1.4	74.4	+3.6	76.3	+1.1	73.2	-1.2	74.9	+8.2	58.2	+0.9	51.2	+5.3	42.8	+5.7	59.4	+3.6
St. Charles.....	.....	.....	39.6 ^a	.....	55.0	.....	.....	.....	61.2	-2.4	73.4	+2.9	76.5	+2.5	71.8	-1.8	73.0	+5.8	56.4	+0.1	49.1	+3.7	39.8	+3.1	57.5	+2.9
Staunton.....	36.8	+1.4	39.0	+4																						

