

CLIMATOLOGICAL DATA

38

VIRGINIA SECTION

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VOL. XLIII

RICHMOND, VA., YEAR 1933

No. 13

GENERAL SUMMARY

The year as a whole was considerably warmer and drier than usual; but the number of clear, partly cloudy, cloudy and rainy days was practically normal.

The average temperature, 57.6°, has been exceeded only twice in the history of the State, the years 1921 and 1931 averaging 58.4° and 57.8° respectively. The coolest in the last 43 years was that of 1917, with an average of 53.3°. Eight months averaged above normal, the outstanding of which were January, the third warmest of record; May, the second warmest; September, the fifth warmest; and December, the fourth warmest. All station averages for the year were above normal.

The rainfall for the State was 39.46 inches, or about 2.00 inches less than normal. In the 43-year record, the year 1933 ranked 13th in point of dryness. The wettest year of this record was that of 1906, with an average of 50.03 inches; the driest that of 1930, with an average of 24.99 inches. The only unusually wet months were April, May, July and August; after which last month continued dry weather approximated drought conditions, particularly in the Great Valley section of the State, where the deficiency for the year amounted to more than four inches; and the Tidewater section, where, notwithstanding the record-breaking rains of August, the year's deficiency amounted to nearly three inches. Station monthly amounts ranged from .07 inch at Mount Weather in November to 16.64 inches at Williamsburg in August. Snowfall was half the usual amount.

The production of crops over the State was fair, notwithstanding adverse weather conditions at times. Peaches, and to a less extent, apples, were damaged somewhat by March frosts. The rains of April and May seriously delayed late plantings in northern counties and prevented the proper spraying of fruits in Great Valley. The severe tropical storm of August damaged crops in the eastern section of the State to the extent of \$5,000,000; and the similar, but less intense storm in September added to the loss. Through October and November crop activities in southeastern counties were more or less at a standstill on account of hard ground and dry weather.

Damaging storms during the year are covered in the bulletins of January, March, May, June, July, August, and September.

MONTHLY STATE DATA, 1933

Month	Temperature			Precipitation			Number of days			
	Mean	Highest	Lowest	Average	Greatest 24-hour	Average snow-fall	Rainy	Clear	Partly cloudy	Cloudy
January	43.7	78	11	3.39	2.51	1.9	8	11	8	12
February	39.4	77	-7	3.03	1.83	4.3	11	12	5	11
March	44.6	84	9	3.12	2.01	0.4	10	12	8	11
April	55.0	90	23	4.50	3.05	T.	10	14	8	8
May	68.0	97	36	5.29	3.85	0.0	13	11	11	9
June	73.6	104	35	2.12	2.18	0.0	7	17	10	3
July	74.7	104	40	5.48	4.64	0.0	10	15	8	8
August	74.4	99	49	5.74	6.64	0.0	12	11	11	9
September	73.0	98	37	1.80	4.29	0.0	6	15	9	6
October	56.8	95	20	1.30	1.70	0.0	4	20	7	4
November	45.3	83	8	1.15	1.58	0.5	5	14	7	9
December	42.5	81	0	2.54	2.36	1.5	8	12	8	11

KILLING FROSTS, 1933

Stations	Last in spring	First in autumn	Stations	Last in spring	First in autumn
<i>Tidewater Virginia</i>					
Cape Henry	Mar. 6	Nov. 9	<i>Middle Virginia Cont.</i>		
Christchurch	Mar. 25	Nov. 9	Powhatan	Mar. 30	Oct. 27
Dahlgren	Mar. 25	Nov. 11	Quantico	Mar. 30	Oct. 26
Diamond Springs	Mar. 30	Nov. 9	Randolph	Mar. 30	Oct. 19
Emporia	Oct. 26	Nov. 9	Rocky Mount	Apr. 27	Oct. 26
Holland	Apr. 14	Oct. 26	Stuart	Apr. 13	Oct. 15
Hopewell	Mar. 30	Nov. 9	Washington	Apr. 23	Oct. 26
Langley Field	Mar. 25	Nov. 16	<i>Great Valley</i>		
Norfolk	Mar. 11	Nov. 9	Blacksburg	Apr. 13	Oct. 6
Onley	Apr. 14	Nov. 9	Buchanan	Apr. 27	Oct. 26
Richmond	Mar. 30	Nov. 9	Burkes Garden	Apr. 27	Oct. 6
Tappahannock	Apr. 27	Oct. 26	Catawba Sanatorium	Apr. 24	Oct. 19
Walkerton	Apr. 27	Oct. 26	Dale Enterprise	Apr. 28	Oct. 19
Wallaceton	Mar. 30	Nov. 9	Damascus	Apr. 27	Oct. 26
Williamsburg	Mar. 30	Nov. 9	Dante	Apr. 27	Oct. 9
<i>Middle Virginia</i>					
Callaville	Apr. 27	Oct. 26	Deerfield	Mar. 30	Oct. 7
Charlottesville	Apr. 23	Oct. 26	Emory	Apr. 28	Oct. 6
Chatham	Apr. 13	Oct. 26	Floyd	Mar. 30	Oct. 11
Clarendon	Mar. 30	Oct. 26	Glen Lyn	Apr. 27	Oct. 26
Clarksville	Apr. 27	Oct. 19	Hot Springs	Apr. 28	Oct. 19
Columbia	Apr. 23	Oct. 26	Ivanhoe	Apr. 27	Oct. 11
Culpeper	Mar. 30	Oct. 26	Lexington	Apr. 27	Oct. 26
Danville	Apr. 27	Oct. 15	Mendota	Apr. 27	Oct. 11
Farmville	Apr. 27	Oct. 15	Monterey	Apr. 27	Oct. 26
Fredericksburg	Apr. 27	Oct. 26	North River Dam	Apr. 13	Oct. 11
Halifax	Apr. 14	Oct. 15	Pennington Gap	Apr. 13	Oct. 9
Kenbridge	Apr. 27	Oct. 26	Roanoke	Apr. 13	Oct. 19
Lincoln	Mar. 30	Oct. 27	Saltville	Apr. 12	Oct. 25
Lynchburg	Mar. 30	Oct. 19	Staunton	Apr. 23	Oct. 26
Martinsville	Apr. 27	Oct. 26	Winchester	Apr. 23	Oct. 26
Mineral	Apr. 21	Oct. 26	Woodstock	Apr. 27	Oct. 26
Mount Weather	Apr. 21	Oct. 26	Wytheville	Apr. 13	Oct. 11
New Canton	Apr. 27	Oct. 26			

COMPARATIVE ANNUAL DATA FOR THE STATE

Year	Mean temperature	Highest	Lowest	Average precipitation	Average snow-fall	No. of rainy days	No. of clear days	No. of partly cloudy days	No. of cloudy days
NORMALS OR EXTREMES.....	55.8	109	-29	41.43	17.0	103	162	102	101
1891	55.6	106	-8	47.94		95	163	101	102
1892	54.6	104	-26	39.45		103	166	100	109
1893	54.7	106	-11	46.22	23.1	88	166	104	95
1894	56.8	107	-18	35.76	17.0	94	174	103	88
1895	54.4	107	-10	38.23	38.8	93	163	106	97
1896	56.6	105	-10	42.64	12.3	92	171	99	95
1897	56.0	103	-15	39.19	11.8	108	162	101	102
1898	56.6	105	-9	44.71	8.7	98	176	95	94
1899	55.4	106	-29	42.20	36.7	86	181	91	93
1900	57.1	107	-8	39.52	18.6	100	167	94	104
1901	54.5	106	-14	49.99	9.5	95	170	97	98
1902	55.6	108	-0	40.67	14.9	95	172	89	104
1903	54.9	105	-13	44.09	8.4	115	159	115	91
1904	53.7	100	-14	36.11	24.9	95	170	101	95
1905	54.9	98	-15	43.27	18.5	124	143	120	102
1906	56.2	102	-2	50.03	15.2	115	159	115	91
1907	54.5	97	-16	44.41	17.4	110	162	108	96
1908	55.5	102	-5	38.02	12.9	101	171	104	90
1909	55.6	102	-9	41.37	20.3	112	151	116	98
1910	56.8	104	0	41.00	9.2	115	149	110	106
1911	54.9	100	-25	40.88	24.6	103	165	106	95
1912	57.2	102	-3	42.93	4.0	100	178	98	89
1913	55.1	103	-17	36.66	39.8	101	168	100	97
1914	55.6	101	-5	40.03	13.5	97	180	116	89
1915	55.6	102	-11	38.94	18.6	103	165	106	95
1916	53.3	103	-27	40.11	23.7	114	158	107	100
1917	55.5	108	-22	43.48	24.7	105	159	97	109
1918	56.8	103	-16	41.05	7.4	102	161	99	105
1919	54.8	99	-9	45.91	7.1	106	162	89	115
1920	58.8	104	-12	34.94	13.8	97	161	102	102
1921	56.9	100	-13	45.15	24.8	110	145	107	113
1922	56.1	103	-1	40.90	10.3	104	168	96	101
1923	54.4	107	-12	47.34	12.8	105	165	90	111
1924	56.6	108	-14	32.53	9.5	98	160	99	106
1925	55.5	107	-6	41.41	16.5	112	157	97	111
1926	56.5	104	-7	41.64	10.4	113	148	103	114
1927	55.7	108	-5	43.07	9.2	110	151	112	103
1928	56.2	99	-8	46.31	16.7	115	155	97	113
1929	56.9	109	-13	24.99	23.4	86	165	99	101
1930	57.8	104	-2	38.00	3.7	105	163	106	96
1931	57.5	108	-9	44.78	13.1	102	169	90	107
1932	57.6	104	-7	39.46	8.2	105	163	101	101
1933	57.6	104	-7	39.46	8.2	105	163	101	101

Climatological Data for the Year 1933

Stations	Counties	Elevation, feet	Temperature, degrees Fahrenheit						Precipitation						Total snowfall	Number of rainy days	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			Number of clear days	Number of partly cloudy days	Number of cloudy days	
Tidewater Virginia																				
Cape Henry	Princess Anne	20	60	60.9	97	Aug. 2	20	Dec. 29	60	30.76	8.68	Aug.	0.30	Oct.	0.2	106	118	130	117	sw.
Christ Church	Middlesex	87	10	59.6	100	June 20	7	Feb. 6	10	45.24	11.78	Aug.	0.70	Oct.	5.0	94	225	64	76	nw.
Dahlgren	King George	18	14	57.9	97	July 31 ^a	11	Dec. 29 ^a	14	38.93	6.80	May	1.09	Sept.	4.8	117	82	160	123	nw.
Diamond Springs ^{††}	Princess Anne	25	25	63.0	99	June 22	18	Feb. 6 ^a	25	43.89	14.80	Aug.	0.15	Oct.	0.0	72	194	122	49	sw.
Emporia	Greensville	100							3	39.10	7.08	May	0.55	Oct.	6.0	106	187	84	94	sw.
Holland	Nansemond	80	1	60.8 ^a	102	June 9	13	Nov. 17 ^a	1	39.31 ^a	9.33	Aug.	0.29	Nov.						w.
Hopewell	Prince George	30	43	60.9	102	June 22	10	Feb. 6	45	37.58	7.48	Aug.	1.30	Oct.	4.1	104	118	167	80	sw.
Langley Field	Elizabeth City	10	42	60.4	96	June 20 ^a	17	Feb. 6 ^a	46	32.42	9.42	Aug.	0.10	Oct.	0.4	107	101	120	144	se.
Norfolk	Norfolk	91	63	61.8	99	June 22	17	Feb. 6	63	35.93	13.13	Aug.	0.89	Oct.	1.7	113	92	115	158	s.
Onley	Accomac	40	15	59.0	97	June 22	9	Dec. 30	16	47.10	12.08	Aug.	1.00	Oct.	6.0	110	135	145	85	nw.
Richmond	Henrico	170	54	59.4	100	June 22	12	Dec. 30	62	38.73	8.84	Aug.	0.72	Oct.	7.5	120	123	119	123	sw.
Tappahannock	Essex	25	3	58.8 ^a	96	June 9 ^a	10	Dec. 30	3	41.50 ^a	10.29	Aug.	1.43	Mar.		110	153	144	63	sw.
Walkerton	King and Queen	40	1	57.9 ^a	102	June 22	6	Feb. 6	7	45.99	9.86	Aug.	0.66	Oct.	8.5	110	153	144	68	sw.
Wallacetown	Richmond	15							1	45.99	11.78	Aug.	0.80	Oct.	4.0	98	212	77	77	sw.
Williamsburg	James City	70	39	60.8	100	June 22	12	Feb. 6	33	51.14	16.64	Aug.	0.52	Oct.	3.0		182	77	106	sw.
Means and extremes				60.1	102	June 9 ^a	6	Feb. 6		40.68	16.64	Aug.	0.10	Oct.	3.9	105	148	117	100	sw.
Middle Virginia																				
Bedford	Bedford	950							17	35.47	5.40	Apr.	0.28	Sept.	6.0	100				sw.
Callville	Brunswick	250	38	59.0	100	June 21 ^a	9	Nov. 17	39	37.95	5.91	Aug.	0.52	Oct.	1.5	71	213	94	58	sw.
Charlottesville (near)	Albemarle	854	41	58.4	101	June 22	8	Dec. 30	58	46.58	8.26	July	0.84	Nov.	13.2	110	130	105	130	n.
Chatham	Pittsylvania	852	10	59.2	102	June 21 ^a	10	Feb. 9 ^a	10	32.58	6.96	May	0.20	Sept.		82	205	100	60	s.
Clarendon	Arlington	200							9	52.25	10.51	Aug.	0.97	Nov.	17.3	135	172	90	103	w.
Clarksville	Mecklenburg	286	16	60.0	104	June 22 ^a	12	Dec. 30	43	38.28	6.82	May	0.46	Oct.	0.0	103	248	19	98	e.
Columbia	Fluvanna	246	32	58.6	101	June 21 ^a	10	Nov. 17 ^a	35	42.62	6.86	May	0.89	Nov.	6.7	106	175	64	126	s.
Culpeper	Culpeper	400	25	56.5	96	June 21	8	Dec. 30	26	40.21	6.51	Apr.	0.58	Nov.	15.4	115	267	25	73	s.
Danville	Pittsylvania	564	18	60.7	103	June 2 ^a	2	Jan. 30	43	35.78	7.72	May	0.46	Oct.	6.1	108	151	129	85	sw.
Farmville	Prince Edward	450	13	59.4	100	June 21 ^a	10	Feb. 6	13	41.34	7.70	July	0.30	Oct.	5.0	101	130	113	122	sw.
Fredericksburg (near)	Spottsylvania	75	43	58.0	96	June 21	9	Dec. 30	41	39.80	8.09	Aug.	1.06	Nov.	12.5	87	174	104	87	sw.
Halifax	Halifax	428	2	59.4 ^a					3	40.49	7.80	July	0.33	Sept.	2.5	79	238	27	100	w.
Kenbridge	Lunenburg	500	32	59.4 ^a					2	39.87 ^a	5.51	July	0.40	Oct.						
Lincoln	Loudoun	631	64	59.1	100	June 22	9	Jan. 9 ^a	3	44.91	8.27	Apr.	0.75	Nov.	22.5	103	167	91	107	s.
Lynchburg	Campbell	681							64	33.61	4.41	Apr.	0.35	Sept.	9.0	113	151	137	77	nw.
Manassas (near)	Prince William	156							3	43.05	8.33	Aug.	0.83	Nov.	9.9	117	167	74	124	sw.
Martinsville	Henry	1,014							3	35.66	6.77	May	0.64	Sept.	3.0	101	183	145	37	w.
Mineral (near)	Louisa	250	18	56.8	99	June 21	8	Nov. 17 ^a	18	39.30	6.31	Aug.	0.17	Nov.	2.3	98	160	98	107	s.
Mount Weather	Loudoun	1,725	29	52.8	94	June 9	0	Dec. 30	30	49.08	8.72	Aug.	0.07	Nov.	13.5	88	49	143	173	w.
New Canton	Buckingham	300	38	57.9	99	June 21 ^a	9	Feb. 6 ^a	40	40.09	7.18	July	0.46	Sept.	10.5	108	168	117	80	sw.
Orange	Orange	514							11	41.92	7.92	July	0.70	Nov.	14.0	89	234	66	65	w.
Powhatan	Powhatan	100							11	40.08	6.61	Aug.	0.53	Sept.	7.8	98	141	56	168	sw.
Quantico	Prince William	20	32	56.6	97	June 9 ^a	8	Dec. 30	29	41.14	7.57	Aug.	0.83	Sept.	14.6	125	84	150	131	nw.
Randolph	Charlotte	334							29	38.68	6.51	July	0.73	Oct.	2.5	94	221	40	104	sw.
Rocky Mount	Franklin	1,132	34	56.8	102	June 22	6	Feb. 6 ^a	40	33.41	4.74	Apr.	0.90	Oct.	4.0	78	245	41	79	sw.
Stuart	Patrick	1,188	11	59.4	99	June 21	6	Feb. 9	11	36.26	7.32	Aug.	1.13	Nov.	1.3	85	146	155	64	e.
Washington, D. C.		112	63	57.1	100	June 9	8	Dec. 30	63	49.11	9.91	Aug.	0.95	Nov.	12.8	141	141	99	125	nw.
Means and extremes				58.1	104	June 22 ^a	0	Dec. 30		40.34	10.51	Aug.	0.07	Nov.	8.6	101	175	91	99	sw.
The Great Valley																				
Afton	Nelson	1,750							3	43.25 ^a	7.71	Apr.	0.77	Sept.						w.
Balcony Fall	Rockbridge	725							3	39.30	8.42	Apr.	1.00	Oct.	1.5	84	122	139	104	w.
Berryville	Clarke	581							2	39.62 ^a	6.89	Aug.	0.75	Nov.			196	79	90	w.
Blacksburg	Montgomery	2,100	42	55.0	98	June 8 ^a	0	Feb. 9	42	33.60	6.52	July	0.30	Sept.	11.5	108	178	80	107	sw.
Buchanan	Botetourt	820	16	56.7	100	June 8 ^a	4	Feb. 6	33	38.53	6.04	May	0.34	Sept.		106	161	114	90	w.
Burkes Garden	Tazewell	3,250	37	51.6	98	July 24	-7	Feb. 9	38	43.03	5.49	Feb.	0.93	Oct.	26.0	109	109	95	161	w.
Catawba Sanatorium	Roanoke	2,100	22	56.4	96	July 24	-2	Feb. 9	23	33.38	5.29	May	0.59	Sept.	9.0	74	259	70	36	nw.
Clifton Forge	Alleghany	1,055							4	40.81	7.04	May	0.73	Oct.		93	156	87	122	sw.
Dale Enterprise	Rockingham	1,350	54	54.2	96	June 21 ^a	3	Dec. 30	54	39.25	8.59	July	0.70	Nov.	15.0	99	145	166	54	s.
Damascus	Washington	1,928	1	55.5	95	June 23	-2	Feb. 9	7	42.29	7.09	May	1.35	Oct.		132				s.
Dante	Russell	2,000	15	56.1	98	June 8 ^a	-6	Feb. 9	17	43.39	6.78	July	1.28	Oct.	6.0	128	109	146	110	sw.
Deerfield	Augusta	1,700							7	37.15	8.94	July	0.88	Nov.	16.0	119	165	147	53	sw.
Emory	Washington	2,112	7	55.2	95	June 8 ^a	-4	Feb. 9 ^a	7	42.29	6.69	May	1.10	Oct.	11.3	138	113	161	91	w.
Floyd	Floyd	2,600	1	55.8 ^a	97	June 22	0	Feb. 9	1	30.24 ^a	5.35	May	1.02	Sept.						w.
Glenlyn	Giles	1,600	2	56.1	98	July 24	0	Feb. 9	20	35.28	6.13	July	0.91	Sept.	4.8	135	164	87	164	sw.
Hot Springs	Bath	2,195	39	51.9	93	June 8 ^a	-1	Feb. 9	42	36.57	5.48	Apr.	0.71	Sept.	12.6	108	145	137	83	sw.
Ivanhoe	Wythe	2,000							27	31.16	6.77	May	1.10	Sept.		78				
Lexington	Rockbridge	1,060	64	56.7	98	July 24	6	Feb. 9	62	35.30	6.66	May	0.32	Sept.		67	105	201		
Mendota	Washington	1,350							29	44.23	7.22	May	1.54	Nov.	3.2	132				
Monterey	Highland	3,200							3	49.62 ^a	7.49	July	1.55	Nov.						
North River Dam	Augusta	1,918							3	42.03	8.79	July	0.77	Nov.	14.7	95	199	100	66	n.
Pennington Gap	Lee	1,586	2	55.6	96	July 2	-5	Feb. 9	2	41.56	6.80	Feb.	0.83	Sept.	8.0	124	147	119	99	sw.
Radford	Montgomery	1,800							28	28.30	5.05	July	0.76	Sept.		97				
Riverton	Warren	500			</															

Monthly and Annual Precipitation for the Year 1933, 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
Tideewater																										
Cape Henry	3.04	-0.11	2.90	-0.33	2.10	-1.77	2.07	-1.23	2.51	-1.06	2.03	-1.98	2.44	-2.93	8.68	+3.82	2.29	-0.57	0.30	-2.71	1.22	-1.14	1.18	-2.26	30.76	-12.22
Christchurch	4.53	.....	3.79	.....	2.86	.....	6.34	.....	3.80	.....	1.25	.....	3.88	.....	11.78	.....	2.07	.....	0.70	.....	1.96	.....	2.28	.....	45.24	.....
Dahlgren	2.98	+0.10	1.69	-1.09	2.09	-1.13	4.67	+0.97	6.80	+4.05	2.22	-1.31	5.00	+1.04	6.20	+0.74	1.01	-1.84	1.42	-0.76	1.16	-1.26	3.69	+1.10	88.93	+0.61
Diamond Springs	3.75	+0.26	3.34	-0.03	2.70	-0.91	3.05	-0.18	2.43	-1.69	1.63	-3.53	6.30	+0.62	14.80	+10.48	4.17	+0.33	0.15	-2.74	1.45	-0.93	1.12	-3.11	44.89	-1.43
Emporia	3.64	.....	3.00	.....	2.50	.....	5.30	.....	7.08	.....	5.60	.....	3.03	.....	4.32	.....	1.32	.....	0.55	.....	1.04	.....	1.72	.....	39.10	.....
Holland	3.57	.....	3.07	.....	2.80	.....	2.78	.....	2.78	.....	3.84	.....	7.20	.....	9.38	.....	2.42	.....	0.35	.....	0.29	.....	0.88	.....	39.31	.....
Hopewell	3.15	+0.14	2.15	-1.25	1.79	-2.27	4.63	+1.21	4.56	+0.49	2.02	-2.59	4.25	-0.31	7.48	+3.11	2.39	-1.33	1.30	-1.53	1.48	-0.77	2.38	-0.91	37.58	-6.07
Langley Field	3.16	+0.15	2.58	-1.06	1.98	-1.81	4.20	+1.30	2.25	-1.12	2.69	-1.79	3.23	-1.11	9.42	+5.39	1.32	-1.83	0.10	-1.70	1.31	-0.90	0.77	-2.33	32.42	-6.81
Norfolk	2.99	-0.11	2.52	-0.70	1.98	-1.79	2.13	-1.10	1.78	-2.05	2.05	-2.17	5.26	-0.49	13.13	+7.91	2.07	-1.16	0.39	-2.65	0.99	-1.17	0.66	-2.68	35.93	-8.16
Onley	4.04	+0.97	4.00	+0.32	2.31	-1.41	3.60	+0.03	5.93	+2.70	1.34	-1.99	4.70	+0.50	12.08	+7.69	3.58	+0.84	1.00	-1.60	2.29	-0.05	2.23	-1.44	47.10	+6.56
Richmond	3.85	+0.64	2.73	-0.44	2.15	-1.53	4.02	+0.63	4.84	+1.05	1.63	-2.27	4.59	-0.14	8.84	+4.42	1.05	-2.20	0.72	-2.16	1.17	-1.04	3.14	-0.15	38.73	-3.29
Tappahannock	4.27	.....	3.82	.....	1.43	.....	2.76	.....	4.66	.....	1.80	.....	5.08	.....	10.29	.....	1.49	.....	2.06	.....	1.50	.....	3.34	.....	41.50	.....
Walkerton	5.30	.....	2.97	.....	1.83	.....	3.32	.....	3.96	.....	0.85	.....	5.60	.....	9.86	.....	1.51	.....	0.66	.....	2.53	.....	3.21	.....	41.60	.....
Wallaceton (near)	3.65	.....	3.80	.....	2.08	.....	3.07	.....	2.86	.....	2.14	.....	7.89	.....	11.78	.....	5.72	.....	0.80	.....	0.89	.....	1.31	.....	45.99	.....
Williamsburg	4.14	+0.78	3.30	-0.23	1.96	-2.00	5.74	+2.13	5.28	+1.74	1.90	-3.00	6.61	+0.90	16.04	+11.49	1.86	-1.24	0.52	-2.30	1.30	-0.87	1.88	-1.89	51.14	+5.51
Means	3.74	+0.31	2.98	-0.53	2.13	-1.62	3.85	+0.41	4.10	+0.45	2.20	-2.29	5.00	-0.21	10.31	+6.12	2.28	-1.00	0.73	-2.02	1.37	-0.90	1.99	-1.52	40.68	-2.80
Middle Virginia																										
Bedford	3.05	+0.07	2.24	-1.95	3.23	-0.46	5.40	+2.48	4.54	+0.83	2.42	-1.76	3.62	-0.25	2.36	-1.94	0.28	-3.01	2.58	-0.54	1.76	-0.49	3.99	+0.97	35.47	-6.05
Callaway	3.59	+0.11	3.39	-0.24	4.31	-0.04	5.63	+1.81	3.35	-0.56	2.63	-1.61	3.23	-2.49	5.91	+1.10	2.07	-1.55	0.52	-2.55	0.68	-1.59	2.64	-0.77	37.95	-8.38
Charlottesville (near)	3.90	+0.63	2.48	-0.52	3.18	-0.21	7.18	+3.73	5.70	+1.70	2.87	-1.83	8.26	+4.00	5.89	+1.33	1.13	-2.50	2.56	-0.86	0.84	-1.72	2.59	-0.59	46.58	+3.16
Chatham	2.60	.....	2.91	.....	4.32	.....	3.55	.....	6.96	.....	1.49	.....	3.36	.....	2.67	.....	0.29	.....	0.78	.....	0.73	.....	2.71	.....	32.58	.....
Clarendon	3.29	.....	2.58	.....	3.23	.....	5.16	.....	6.44	.....	4.01	.....	7.94	.....	10.51	.....	2.41	.....	3.13	.....	0.97	.....	2.58	.....	52.25	.....
Clarksville	4.10	+0.53	3.91	+0.23	3.56	-0.11	4.53	+1.04	6.82	+2.79	1.59	-2.43	3.72	-0.79	2.65	-1.78	3.37	+0.25	0.46	-2.22	1.21	-1.02	2.36	-0.91	38.28	-4.12
Columbia	3.70	+0.27	2.25	-0.59	2.71	-0.83	6.83	+2.29	6.86	+3.42	1.96	-2.13	6.74	+2.52	5.68	+1.04	0.99	-2.06	1.76	-1.44	0.89	-1.41	3.25	+0.99	42.62	+1.17
Culpeper	4.51	+1.45	2.44	-0.90	2.83	-0.24	6.51	+3.09	4.49	+0.68	1.24	-3.48	5.61	+2.08	5.06	+1.45	1.87	-1.37	2.26	-0.40	0.58	-1.79	2.21	-0.70	40.21	-1.03
Danville	2.43	-1.04	3.64	+0.16	3.50	-0.14	3.68	+0.42	7.72	+3.99	0.89	-3.10	5.14	+0.62	3.88	-0.56	1.05	-2.01	0.46	-2.39	1.01	-1.32	2.58	-0.69	35.78	-6.19
Farmville	3.78	+1.19	2.93	-0.30	2.16	-2.22	4.35	+2.12	5.90	+2.06	4.08	-0.08	7.70	+3.49	4.10	-0.44	0.88	-1.36	0.30	-3.62	1.12	-1.06	4.49	+0.44	41.34	+0.28
Fredricksburg (near)	4.08	+0.90	1.93	-0.97	1.51	-1.89	4.42	+0.94	6.23	+2.40	2.06	-2.15	6.55	+2.23	8.09	+3.33	1.21	-1.92	1.41	-1.71	1.00	-1.08	3.80	-1.44	39.80	-1.68
Halifax	2.44	.....	3.77	.....	4.73	.....	4.37	.....	7.11	.....	1.76	.....	7.80	.....	2.96	.....	0.33	.....	0.62	.....	1.57	.....	3.03	.....	40.49	.....
Kenbridge	3.50	.....	3.29	.....	4.07	.....	4.26	.....	4.96	.....	3.03	.....	5.81	.....	4.74	.....	1.78	.....	0.40	.....	1.31	.....	2.72	.....	39.87	.....
Lincoln	3.72	+0.71	2.35	-0.20	4.07	+1.16	5.45	+2.01	6.26	+2.81	2.90	-1.99	4.20	+0.88	8.27	+4.17	2.15	-0.47	2.76	-0.30	0.75	-1.47	2.03	-0.80	44.91	+6.51
Lynchburg	2.73	-0.70	2.17	-0.98	2.72	-0.82	4.41	+1.46	4.26	+0.63	2.61	-1.18	4.30	+0.09	3.50	-0.28	0.35	-2.96	1.45	-1.70	1.25	-1.08	3.86	+0.60	33.61	-6.92
Manassas (near)	3.57	.....	2.47	.....	3.03	.....	5.86	.....	5.28	.....	2.17	.....	4.83	.....	8.33	.....	0.91	.....	3.37	.....	0.83	.....	2.40	.....	43.05	.....
Martinsville	2.70	.....	3.47	.....	3.98	.....	3.41	.....	6.77	.....	1.38	.....	5.70	.....	3.23	.....	0.64	.....	0.95	.....	1.49	.....	1.94	.....	35.66	.....
Mineral (near)	3.44	+0.42	2.59	+0.09	2.55	-0.76	5.21	+1.80	4.74	+1.39	1.97	-1.94	6.21	+1.94	6.31	+1.85	1.85	-0.87	1.29	-1.33	0.17	-2.10	2.97	+0.30	39.30	+0.79
Mount Weather	3.61	+0.73	3.87	+1.55	4.02	+1.39	5.31	+1.70	6.91	+3.19	1.20	-3.56	3.77	-0.21	8.72	+4.11	8.49	+5.55	1.77	-2.03	0.07	-2.32	1.34	-1.30	49.08	+8.80
New Canton	3.51	+0.08	2.79	-0.36	2.44	-1.25	4.97	+1.58	5.93	+2.55	1.07	-2.58	7.18	+3.27	5.12	+0.37	0.48	-2.72	2.05	-0.01	0.96	-1.36	3.61	+0.50	40.09	-0.93
Orange	3.58	+0.36	2.28	-0.30	2.50	-0.49	4.88	+1.47	4.73	+1.19	2.34	-1.95	7.92	+3.08	6.36	+1.29	1.27	-1.89	2.60	+0.22	0.70	-1.73	2.76	-0.26	41.92	+1.05
Powhatan	3.41	+0.53	3.20	+1.00	2.30	-0.72	5.16	+1.54	5.55	+2.47	1.84	-1.29	5.88	+2.41	6.61	+2.43	0.53	-2.73	1.46	-1.31	0.90	-1.37	3.24	+0.27	40.08	+3.23
Quantico	3.64	+0.63	2.08	-0.47	1.79	-1.37	5.33	+2.02	6.54	+3.47	2.04	-1.91	5.28	+1.37	7.57	+2.92	0.83	-2.14	2.37	-0.30	0.92	-1.10	2.75	+0.07	41.14	+3.19
Randolph	3.15	-0.37	3.54	+0.35	3.18	-0.29	4.16	+0.99	5.75	+2.14	2.38	-1.41	6.51	+1.98	4.20	+0.12	1.04	-1.68	0.73	-2.07	1.36	-0.81	2.68	-0.68	38.68	-1.73
Rocky Mount	2.16	-1.18	2.25	-1.20	3.33	-0.56	4.74	+1.40	4.31	+0.60	1.98	-2.70	4.11	-0.70	3.95	-0.39	1.25	-2.33	0.90	-2.69	1.73	-0.85	2.70	-0.94	33.41	-11.54
Stuart	2.12	-1.03	2.76	-0.29	4.85	+0.50	3.40	-0.14	4.70	+1.30	1.91	-1.57	3.13	-1.60	7.32	+1.81	1.34	-2.80	1.56	-2.65	1.13	-2.11	2.04	-2.22	36.26	-10.80
Washington, D.C.	3.25	-0.30	3.68	-0.64	3.24	-0.51	4.67	+1.40	6.23	+2.56	3.88	-0.25	6.71	+2.00	9.91	+5.90	2.62	-0.62	2.56	-0.28	0.95	-1.42	2.63	-0.89	49.11	+6.95
Means	3.32	+0.20	2.82	-0.27	3.23	-0.45	4.91	+1.67	5.75	+1.98	2.20	-1.95	5.60	+1.23	5.72	+1.33	1.53	-1.48	1.59	-1.48	1.00	-1.38	2.67	-0.45	40.34	-1.05
Great Valley																										
Afton	3.63	.....	2.42	.....	3.93	.....	7.71	.....	5.60	.....	2.90	.....													

Monthly and Annual Mean Temperatures for the Year 1933, with Departures from the Normal

	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
Stations	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																										
Cape Henry	48.5	+8.4	44.6	+3.4	48.2	+1.6	55.5	+0.9	68.9	+4.7	74.4	+1.5	75.0	-2.5	77.8	+0.9	76.9	+5.1	63.6	+1.5	50.1	-2.0	47.3	+3.6	60.9	+2.2
Christchurch	46.8	+4.1	41.4	+1.5	46.2	+1.1	55.7	+0.6	68.8	+5.5	75.4	+2.5	76.4	-0.1	76.9	+3.2	73.7	+4.5	59.6	+0.3	48.0	+0.7	44.7	+5.9	59.6	+2.2
Dahlgren	44.0	+8.9	39.4	+1.5	44.2	-2.0	54.9	+0.6	67.2	+5.5	74.4	+2.5	75.9	-0.1	77.0	+3.2	73.7	+4.5	59.6	+0.3	48.0	+0.7	44.7	+5.9	59.6	+2.2
Diamond Springs	51.2	+14.1	48.2	+4.8	51.2	+1.1	58.3	+0.5	71.3	+5.5	75.8	+2.2	76.8	-0.6	78.6	+2.1	77.5	+5.1	64.6	+2.0	52.2	+0.8	50.8	+7.2	63.0	+3.7
Holland	47.3	+4.3	43.4	+1.5	48.9	+1.1	56.3	+0.2	69.5	+4.0	74.6	+1.1	75.1	+1.1	77.7	+0.5	75.8	+3.8	60.1	+0.3	48.2	+0.8	44.6	+4.0	60.9	+2.4
Hopewell	47.4	+8.0	43.2	+3.4	48.9	+1.1	56.3	+0.2	69.5	+4.0	74.6	+1.1	75.1	+1.1	77.7	+0.5	75.8	+3.8	60.1	+0.3	48.2	+0.8	44.6	+4.0	60.9	+2.4
Langley Field	47.0	+6.5	43.8	+2.9	47.2	-1.1	56.3	+0.2	69.5	+3.7	74.6	+0.1	76.0	-2.7	77.6	+0.2	76.6	+4.5	61.5	+0.5	48.8	-1.5	45.9	+3.6	60.4	+1.4
Norfolk	49.3	+8.7	44.6	+1.9	49.0	+0.8	58.6	+1.8	71.1	+4.9	76.8	+2.4	76.8	-1.9	78.4	+1.0	77.2	+5.6	63.4	+0.9	50.0	-1.4	47.0	+3.9	61.8	+2.3
Onley	46.2	+8.2	42.5	+2.4	46.0	+0.4	54.0	+0.2	68.5	+6.2	73.6	+1.2	75.2	-2.4	77.0	+1.5	74.8	+4.7	59.2	-1.4	47.8	-2.5	42.9	+1.8	59.0	+1.7
Richmond	45.6	+7.7	41.2	+1.6	46.4	+0.8	56.8	+0.2	70.1	+3.6	75.8	+1.7	76.2	-2.3	76.6	+0.1	74.4	+3.9	58.7	-0.9	47.4	+0.9	43.2	+3.4	59.4	+1.5
Tappahannock	45.2	+4.7	40.7	+1.5	46.3	+0.8	55.4	+0.2	68.2	+5.2	74.6	+1.1	75.9	-0.6	76.8	+0.1	74.4	+3.9	58.7	-0.9	47.4	+0.9	43.2	+3.4	59.4	+1.5
Walkerton	44.8	+4.1	40.7	+1.5	46.3	+0.8	55.4	+0.2	68.2	+5.2	74.6	+1.1	75.9	-0.6	76.8	+0.1	74.4	+3.9	58.7	-0.9	47.4	+0.9	43.2	+3.4	59.4	+1.5
Williamsburg	47.4	+7.2	43.8	+3.0	48.2	-0.7	58.0	+0.9	71.2	+6.2	74.7	+1.9	77.0	+0.2	77.8	+2.3	75.8	+5.9	60.7	+0.7	48.8	+0.3	45.9	+5.0	60.8	+2.7
Means	47.0	+8.6	42.9	+2.8	47.5	-0.1	56.7	+0.8	70.0	+4.9	75.3	+1.9	76.1	-1.2	77.2	+1.3	75.4	+4.8	60.2	+0.4	48.2	-1.0	44.6	+3.8	60.1	+2.2
Middle Virginia																										
Callaville	44.9	+6.1	41.8	+2.5	45.6	-2.9	56.0	-0.3	70.3	+4.8	74.4	+1.5	75.1	-1.8	76.8	+1.1	74.2	+4.0	57.9	-1.2	46.5	-2.0	44.3	+4.2	59.0	+1.3
Charlottesville (near)	43.6	+7.5	39.6	+2.4	43.8	-2.7	56.7	+0.7	68.8	+3.1	75.8	+3.3	75.8	-0.6	76.6	+1.0	74.2	+5.1	58.4	-0.1	46.0	-1.8	42.0	+4.0	58.4	+1.8
Chatham	45.2	+4.0	41.0	+1.0	47.0	+0.8	58.8	+0.8	69.8	+5.2	75.2	+2.2	77.3	-0.3	78.6	+0.5	75.4	+6.5	56.5	+0.5	46.9	+0.5	45.2	+0.5	59.2	+0.5
Clarksville	44.0	+7.5	40.2	-0.6	47.8	-0.3	57.9	+1.4	72.6	+7.9	75.8	+2.6	79.6	+3.2	78.4	+3.3	75.9	+6.4	57.9	-0.8	46.6	-0.4	43.8	+4.6	60.0	+2.9
Columbia	44.8	+8.1	40.2	+2.5	45.2	-1.4	56.0	+0.8	68.9	+4.1	75.6	+3.8	76.8	+1.0	76.0	+1.8	74.3	+6.0	56.6	-0.8	46.4	-0.1	42.6	+4.9	58.6	+2.6
Culpeper	42.3	+8.4	38.0	+1.7	43.0	-2.3	55.0	+0.6	66.6	+2.7	73.3	+2.0	74.4	-0.8	74.0	+1.2	71.8	+4.3	58.0	-1.1	44.4	-0.4	39.7	+4.0	56.5	+1.7
Danville	46.2	+6.8	42.6	-0.5	48.4	-2.2	58.0	+0.8	71.6	+4.2	77.0	+0.9	77.9	-1.4	77.0	-0.8	76.8	+4.4	59.8	-1.1	47.6	-2.0	45.7	+4.3	60.7	+1.0
Farmville	45.6	+8.2	41.8	-0.5	46.5	+0.5	56.7	+1.3	70.5	+3.6	75.2	+0.5	76.0	-3.4	77.9	0.0	74.6	+4.0	57.6	-1.6	47.0	+0.4	43.8	+6.9	59.4	+2.1
Fredericksburg (near)	44.4	+7.8	41.1	+4.2	44.3	-2.5	56.0	+0.7	68.1	+3.2	73.7	+1.6	75.4	-1.2	76.0	+1.1	72.7	+3.5	56.8	-1.9	46.2	-0.9	41.2	+3.7	58.0	+1.6
Kenbridge	44.8	+4.1	41.3	+4.6	42.1	-1.3	54.9	+1.5	67.4	+3.5	75.4	+4.0	76.6	+0.4	76.8	+2.8	72.4	+3.9	57.6	+0.6	44.5	-0.6	38.4	+4.2	57.2	+2.8
Lincoln	42.6	+10.2	37.7	+4.2	42.1	-1.3	54.9	+1.5	67.4	+3.5	75.4	+4.0	76.6	+0.4	76.8	+2.8	72.4	+3.9	57.6	+0.6	44.5	-0.6	38.4	+4.2	57.2	+2.8
Lynchburg	45.4	+7.9	40.5	+0.2	46.4	-0.9	56.4	+0.9	69.7	+2.4	76.0	+1.4	76.5	-1.0	76.6	0.0	75.5	+6.5	57.4	-1.1	46.4	-0.8	43.6	+3.8	59.1	+1.5
Mineral (near)	43.8	+9.6	39.7	+4.2	43.6	-2.0	54.9	+1.2	66.6	+4.5	72.6	+2.7	74.1	-0.3	73.9	+0.9	71.8	+4.2	54.4	-0.8	45.0	-0.2	40.6	+4.1	56.8	+2.3
Mount Weather	40.1	+10.0	33.0	+2.6	38.7	-0.8	51.4	+2.2	62.4	+3.2	70.0	+3.3	71.4	+0.3	71.3	+2.0	67.6	+3.1	52.0	-1.7	40.4	-1.6	35.0	+2.9	52.8	+2.1
New Canton	44.6	+7.9	41.0	+3.2	45.0	-2.2	56.8	+0.4	67.9	+3.1	73.7	+1.6	74.4	-1.7	74.3	-0.1	72.6	+1.8	55.8	-1.5	46.4	-0.3	43.2	+5.3	57.9	+1.5
Quantico	42.1	+7.5	39.2	+4.6	43.8	-1.6	54.6	+0.4	66.0	+2.1	74.0	+1.9	74.7	-2.3	74.8	+0.4	71.2	+2.7	55.9	-1.2	44.6	-0.7	38.5	+2.5	56.6	+1.4
Rocky Mount	41.9	+4.1	38.7	0.0	43.4	-3.0	54.4	-1.7	67.4	+2.5	73.9	+1.9	73.4	-1.8	71.8	-2.0	70.8	+1.8	53.9	-3.1	45.2	-2.3	47.0	+8.1	56.8	+0.4
Stuart	46.4	+6.6	42.0	-0.7	46.8	-0.1	56.4	+0.1	69.9	+5.4	76.0	+3.7	75.6	-0.7	74.6	+0.2	74.6	+4.2	58.8	+0.6	47.2	-1.0	44.2	+2.2	59.4	+1.7
Washington, D. C.	42.6	+9.2	38.4	+3.1	43.0	+0.4	55.7	+2.4	67.3	+3.6	74.7	+2.5	76.1	-0.6	76.0	+1.0	71.8	+3.7	56.5	-0.9	45.0	-0.2	38.5	+1.9	57.1	+2.2
Means	44.0	+7.8	39.9	+2.3	44.8	-1.5	55.8	+0.6	68.5	+3.8	74.6	+2.3	75.7	-0.7	75.4	+0.8	73.3	+4.1	56.7	-1.0	45.8	-0.9	42.2	+4.2	58.1	+1.8
Great Valley																										
Blacksburg	41.0	+8.0	36.0	+2.1	42.6	-0.4	52.8	+2.0	66.0	+6.0	71.1	+3.5	72.2	+1.4	71.3	+1.5	70.5	+5.9	53.2	-0.1	42.4	-0.1	41.2	+6.7	55.0	+3.0
Buchanan	42.4	+7.3	38.0	-2.4	44.2	-4.1	54.3	-1.6	66.3	+1.9	71.8	-0.6	72.4	-3.0	73.5	-0.8	73.8	+3.7	56.2	-2.8	44.4	-1.9	43.6	+5.2	56.7	+0.1
Burkes Garden	39.3	+7.6	34.1	+2.3	39.3	-1.3	49.0	+1.3	62.0	+5.2	65.8	+2.2	67.6	+1.0	66.8	+1.1	67.1	+6.8	49.4	-0.3	39.4	-0.6	39.8	+7.5	61.6	+2.7
Catawba Sanatorium	43.2	+7.2	37.9	-0.7	43.1	-2.4	53.9	-0.3	65.8	+3.3	71.8	+2.2	72.2	-0.3	71.8	+0.2	72.3	+5.7	55.8	-0.9	45.4	-0.2	43.2	+6.2	56.4	+1.6
Dale Enterprise	40.6	+7.5	36.5	+2.0	40.2	-2.8	52.0	-0.4	65.0	+2.6	71.2	+1.2	71.8	-1.9	70.6	-1.3	69.2	+2.6	53.4	-1.9	42.3	-1.5	38.0	+3.0	54.2	+0.8
Damascus	39.6	+6.1	36.1	+2.8	42.8	+0.5	52.6	+0.7	66.7	+1.0	73.0	+0.7	73.6	-0.7	70.7	+0.7	70.2	+5.7	53.4	-3.2	43.2	+0.5	44.0	+5.5	55.5	.....
Dante	41.5	+6.8	36.6	-2.6	44.2	-1.9	54.2	-0.1	67.0	+6.1	70.8	+1.5	73.2	+2.0	71.3	+0.3	71.6	+4.4	53.8	-2.6	43.9	-0.9	44.8	+6.8	56.1	+1.6
Emory	41.4	+6.7	36.7	+2.8	43.2	+0.5	52.4	+0.5	65.5	+1.0	69.1	+0.8	71.8	-0.6	70.2	+0.3	71.0	+5.4	54.4	-2.2	42.0	-0.3	43.0	+5.2	55.2	+0.5
Floyd	43.1	+7.5	37.5	+2.8	43.8	+0.5	54.5	+0.5	66.0	+1.0	71.8	+0.8	72.5	-0.3	71.3	+0.3	71.7	+5.4	54.4	-2.2	42.0	-0.3	43.0	+5.2	55.2	+0.5
Glen Lyn	40.3	+6.3	35.2	+2.8	42.8	+0.5	54.6	+0.5	67.8	+1.0	72.5	+0.8	74.0	-0.3	72.6	+0.3	72.4	+5.6	55.6	-3.8	43.8	-0.5	42.0	+5.1	56.1	.....
Hot Springs	38.0	+6.4	34.2	+2.0	38.8	-3.3	50.3	+0.2	64.0	+4.3	67.6	+1.0	69.2	-0.1	67.4	-0.7	67.2	+4.6	50.6	-1.7	38.2	-4.4	37.5	+3.8	51.9	+1.0
Lexington	42.2	+8.3	37.4	+1.8	44.6	+0.5	52.9	+0.2	67.0	+4.3	72.5	+2.0	74.4	0.0	73.2	+0.3	72.8	+6.1	55.5	+0.3	45.5	+1.9	42.2	+6.7	56.7	+2.7
Pennington Gap	40.4	+7.1	35.9	+4.8	44.8	+0.5	53.6	+0.5	67.1	+1.0	71.6	+0.8	73.9	-0.3	72.2	+0.3	71.8	+5.4	56.4	-3.9	39.2	-0.4	40.7	+5.5	56.6	.....
Roanoke	44.4	+7.1	40.1	+1.3	46.2	-1.4	56.2	-0.1	69.3	+6.8	74.8	+3.0	76.1	+0.4	74.8	+0.4										