CLIMATOLOGICAL

VIRGINIA SECTION

EDWARD A. EVANS, Meteorologist

Vol. XXXIV

RICHMOND, VA., YEAR 1924

No. 13

GENERAL SUMMARY

The year was characterized by subnormal temperature, much cloudiness, and an unusual amount of rainfall. There was an accumulating deficiency in temperature up to August when the weather became more seasonal, that month furnishing a small excess in temperature; also the maximum temperature for the summer at most stations in Middle Virginia and the Great Valley. In Tidewater, however, the warmest weather occurred in June. Excepting September, which was cold and wet, the remainder of the year was more seasonal.

Up to July there was an accumulating excess in precipitation, but, excepting September, the remainder of the year was deficient in rainfall. Outstanding features of the year's weather, with respect to rainfall, were the unusually heavy rains of May and September, particularly those of September 29 and 30, which were widely distributed over the headwaters of the streams of the State, resulting in serious floods. Nearly 30 per cent of the year's rainfall occurred in May and September. Following the heavy rainfall of the last two days of the latter month, and in striking contrast with it, was a protracted spell of fair weather, leaving October practically rainless up to the 27th. Rainfall of the two following months was below normal.

The excess moisture and the subnormal temperature during the seasons of crop planting and of crop growth seriously delayed preparation of the soil and the planting of crops and their growth in most sections of the State. Staple crops, as a result, were late; acreage in some instances was reduced, cultivation made difficult, and harvest delayed. On the whole, for staple farm crops the year was unfavorable. With respect to fruit, however, it was very favorable and large crops of all varieties of good to excellent quality were secured.

Notes on damaging snowstorm of March 10 and 11, tornado of April 30, destructive winds of June, and floods of September may be found in the section publications for those months.-H.A.F.

ERRATA, 1924

January.—Page 3, Hawfield, 3d, should be 1.03; total, 4.21. Page 2, Cape Henry, mean temperature should be 41.9; departure, +1.7. Dante, precipitation departure should be omitted.

February.—Page 6, Norfolk, precipitation departure should be -0.60 Lynchburg, temperature departure should be -2.6; precipitation departure should be -1.75

March.—Page 10, Washington, D. C., temperature departure should be

April.—Page 14, Cape Henry, temperature departure should be -1.2. Newport News, temperature departure should be —3.7. Hawfield, precipitation departure should be +1.22.

May.—Page 18, Randolph, precipitation departure should be +4.38; Washington, D. C., +2.90; Narrows, +0.99.

June.—Page 22, Runnymede, mean temperature should be 72.4. Pages

22 and 23, Quantico, precipitation should be omitted.

July.—Page 26, Cape Henry, precipitation departure should be -2.19. Richmond, precipitation departure should be -2.09.

August.—Page 30, Saltville, mean temperature should be 77.8.

September.—Diamond Springs, precipitation departure should be +6.63. Mineral, mean temperature should be 63.5. Narrows, precipitation departure should be +3.25.

October.—Page 38, Buchanan, mean temperature should be 57.4. Narrows, precipitation departure should be -2.21. Roanoke, precipitation departure should be -2.14. Cape Henry, mean temperature should be 60.2; departure, -1.9.

November.—Page 42, Cape Henry, temperature departure should be 0.5. Catawba Sanatorium, precipitation departure should be —0.05. December.—Langley Field, precipitation departure should be -0.72. Fredericksburg, precipitation departure should be -1.55. Warsaw, temperature departure should be +0.5.

Note.—Annual means are computed from data for all stations; whereas in monthly publications means do not include all stations, as in some cases reports are received too late to be used in the computations.

CLIMATOLOGICAL DATA, 1924

		6											
	Ter	nperat	ure	Pre	cipitat	ion	· N	Number of days					
Month	Mean	Highest	Lowest	Average	Greatest 24. hour rain	Average snow-fall	Rainy	Clear	Partly eloudy	Cloudy			
January February March April May June July August September October November December	35.5 43.2 52.8 60.7 71.4 72.8 74.6 64.2	75 72 85 86 95 102 100 107 100 88 80	-12 2 11 16 26 35 38 40 27 14 11 -4	3. 92 2. 69 4. 02 3. 73 7. 16 4. 88 3. 61 4. 35 6. 83 1. 16 1. 99 -3. 07	2. 33 2. 30 2. 80 2. 10 4. 87 2. 80 2. 39 4. 48 5. 41 3. 48 2. 20 2. 37	0.9 3.5 7.4 1.6 T.0.0 0.0 0.0 0.0 0.5	7 8 9 10 14 14 10 8 11 2 5 7	15 11 13 13 12 10 13 17 10 24 14 13	5 8 7 8 8 11 10 9 6 4 6 8	11 10 11 9 11 9 8 5 14 3 10			

COMPARATIVE ANNUAL DATA

Year	Mean tempera- ture	Highest	Lowest	Average pre- cipitation	Average snow-fall	No. of rainy days	No. of clear days	No. of partly cloudy days	No. of cloudy days
1892 1893 1894 1895 1896 1896 1897 1898 1899 1900 1900 1901 1902 1903 1804 1805 1806 1907 1908 1909 1910 1911 1912 1913 1914 1615 1916 1917 1918 1919 1920 1921 1919 1921 1919 1920 1921 1919 1921 1919 1922 1923 1924 Normal and extremes	54. 8 55. 1 57. 0 65. 5 55. 3 55. 8 55. 3 55. 8 55. 3 55. 8 55. 3 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8 55. 8	106 104 106 107 107 105 103 105 106 107 106 108 102 102 102 102 102 102 103 101 103 103 103 104 104 105 106 107 106 107 107 107 107 107 108 109 109 109 109 109 109 109 109 109 109	- 8	40. 01 46. 83 85. 97 38. 09 42. 89 40. 81 44. 80 43. 18 39. 33 50. 17 51. 42 44. 85 66. 18 43. 686 44. 19 45. 21 39. 81 41. 36 83. 19 45. 21 39. 81 41. 40 39. 19 46. 21 39. 81 41. 40 45. 21 41. 47 40. 88 41. 48 42. 38	23. 1 17. 0 38. 8 12. 3 11. 3 66. 7 18. 6 9. 5 16. 2 14. 9 18. 5 16. 2 2 24. 6 4. 0 9. 3 9. 3 9. 3 9. 3 9. 3 13. 5 14. 7 7. 1 18. 6 19. 2 19. 2	95 103 88 94 92 108 96 95 95 95 111 112 115 110 101 101 101 101 101 102 106 97 100 101 101 101 101 101 101 101 101 10	163 1566 1666 1667 174 163 177 170 170 170 170 170 170 170 170 170	101 100 104 103 106 99 101 194 97 89 97 89 101 112 120 106 116 106 107 97 99 89 102 107 96 107 97 97 98 99 109 101 110 110 110 110 110 110 110	102 109 95 88 97 95 102 94 93 104 108 104 95 98 90 90 90 90 90 90 90 109 91 102 91 102 91 103 104 104 105 106 107 107 107 107 107 107 107 107 107 107
TOTHIA BING CAUCHES	00. 7	100	25	12.00	1 0	102	104	102	,,,,

Climatological Data for the Year 1924

			1	Tempe	rature	, degrees	Fahre	nheit			Pı	recipita	ion			ny		Sky		8
Stations	Countles	Elevation, feet	Length of record,	Annual mean	Highest	Date	Lowest	Date	Length of record, years	Total for the year	Greatest monthly	Month	Least monthly	Month	Total snowfall	Number of rain days	Number of clear days	Number of partly cloudy days	Number of cloudy days	Prevailing direction of wind
Tidewater Virginia															ľ					-
Cape Henry	Princess Anne King George Princess Anne Southampton Prince George	20 21 25 21 40	51 5 16 6 8	57. 9 59. 2 57. 9 59. 3	95 102 100	Aug. 6 June 20 June 20 June 20	14 12 9 7	Jan. 6 Jan. 22 Jan. 6 Jan. 22	51 5 16 6 8	51.94 63.91 57.07 46.08	8, 98 10, 35 8, 50 9, 50	June May Aug. May	0.44 0.35 1.11 1.08	Oct. Oct. Oct. Oct.	1.7 T. 6.0 0.7	95 122 115	205 228 94	110 108 51 168	110 53 87 104	sw. sw. ne. sw.
Langley Field‡‡ Newport News Norfolk Onley Richmond	Elizabeth City Warwick Norfolk Accomac Henrico	5 13 91 40 144	5 21 54 6 45	58. 2 58. 8 56. 2 56. 4	99 96 98 100 97	June 21 June 21 June 20 Aug. 6 Aug. 31	9 8 10 8 8	Jan. 6 Jan. 22 Jan. 6 Jan. 21 Jan. 22	5 21 54 6 45	44.84 45.36 44.62 47.39	8.88 11.79 7.47 6.84 9.58	May May May May Sept.	0.04 0.20 0.11 1.74 0.78	Oct. Oct. Oct. Aug. Oct.	3.8 1.5 4.0	109 116 79 122	187 171	115 86	114	ne. ne. s. w. ne.
Runnymede (near) ‡‡ Urbanna Williamsburg	Surry	25 35 .70	35 31	57. 4 57. 1	96 97 99	June 20* June 20 June 20	7	Jan. 21 Jan. 22	35 31	57.37 51.17	9. 99 8. 55 9. 23	May Sept. May	0.73 1.22	Oct.	5. 0 3. 2	94 110	191 181	62 67	113 118	s. se.
Means and extremes		,		57.1	102	June 20	6	Jan. 22		51.42	11.79	Мау	0.04	Oct.	2.6	112	169	96	101	ne.
Middle Virginia Callaville Charlottesville (near) Chatham Clarksville Columbia	Brunswick Albemarle Pittsylvania Mecklenburg Fluvanna	250 854 . 286 246	30 33 2 27 26	55. 6 55. 1 56. 8	98 97 100 95 100	Aug. 27 Aug. 6 June 20 Aug. 7 Aug. 6	3 3 8 7 6	Jan. 22 Jan. 22 Jan. 6* Jan. 6 Jan. 22	30 33 2 27 26	58. 14 54. 70 41. 27 50. 81 47. 94	11.49 10.82 6,41 10.38 7,14	May May May May May	1. 09 2. 47 1. 20 1. 32 1. 10	Nov. Nov. Oct. Feb. Oct.	9.0 30.5	81 98 94 91 82	223 138 218 183	78 74 84	65 454 64 106	w. w. w.
Culpeper	Culpeper Pittsylvania Spottsylvania Buckingham Orange	1	17 24 34	52.8 58.4 54.7	98 100 99	Aug. 6 June 19* Aug. 6	4 5 3	Jan. 22 Jan. 6 Jan. 22	17 24 34 3 7	50. 76 43. 84 47. 48 45. 91 48. 60	10. 05 6. 86 7. 51 8. 33 9. 09	May Sept. Sept. May May	1. 16 1. 13 1. 72 1. 43 1. 24	Oct. Oct. Dec. Oct. Oct.	33. 5 15. 6 16. 7 T.	78 117 96 101 95	164 176 214	117 99 65	85 91 87	8. W. 80. SW.
Leeds Manor ##	Campbell	500 681	23 53 53	55, 6 54, 9	107 101 97	Aug. 6 Aug. 31 June 20 June 21	3 3 5	Jan. 22 Jan. 6 Jan. 22	23 53 1 9	40. 60 46. 89 47. 70	9, 05 6, 95 5, 16 7, 79 8, 69	Sept. May May Sept. May	0.35 0.80 1.45 0.83 0.78	Oct. Oct. Nov. Oct. Oct.	8.0 8.3 T.	108 105 88	152 99	112 69	102 198	sw: nw. sw. s.
Mineral (near) Mount Weather ‡‡ New Canton Quantico Randolph	Prince William	300 1,726 300 17 344	9 20 30 24	52. 6 49. 1 54. 8 54. 9	99 91 95 . 99	Aug. 6 Aug. 7 Aug. 6 July 30*	$-{0\atop 2}\atop {4\atop 2}$	Jan. 22 Jan. 6* Jan. 22 Jan. 22	9 20 30 24 19	46. 43 43. 36 48. 80 45. 29	7. 42 9. 96 9. 12 8. 21	May Sept. May	1. 92 1. 03 1. 40	Oct. Oct. Oct. Nov.	10.5	102 88 97	65 168 226	104 104 48	197 94 92	8. W. SW.
Rocky Mount. Stuart. Washington, D. C	Franklin	1, 150 1, 188 112	29 2 54	52.7 55; 6 54, 1	95 97 102	Sept. 1 June 20 Aug. 6	- 4 0 6	Dec. 22 Jan. 6 Jan. 22	29 2 54	53. 99 51. 23 49. 02	10.41 9.61 7.86	Sept. Sept. Sept.	1.45 1.29 0.44	Oct. Oct. Oct.	8.0	85 116 112	189 121	91 119	86 126	nw. w. nw.
Means and extremes				54.5	107	Aug. 6	- 4	Dec. 22		47.48	11.49	May	0.44	Oct.	13, 4	97	161	92	113	w.
The Great Valley Blacksburg Buchanan Burkes Garden Catawba Sanatorium Dale Enterprise	Montgomery Botetourt Tazewell Roanoke Rockingham	820 3, 250 2, 100	33 23 29 14 45	50. 7 53. 3 46. 8 53. 0 52. 1	90 96 84 93 97	June 19* July 30 Aug. 31 Aug. 6* Aug. 6	- 6 1 -12 - 3 0	Jan. 6 Jan. 6 Jan. 6 Jan. 6 Jan. 6	38 23 29 14 45	49. 05 49. 24 46. 08 48. 16 42. 00	6. 49 7. 57 8. 17 7. 28 8. 68	Aug. Sept. Sept. Sept. May	1. 66 0. 84 0. 95 1. 02 1. 28	Oct. Oct. Oct. Oct. Dec.	16. 2 27. 0 35. 5	137 84 79 109 112	129 160 146 217 150	77 35 59 82 110	160 171 161 67 106	w. w. w.
Dante Hot Springs Ivanhoe Lexington Marion	Wythe	2, 195 2, 028 1, 060	7 32 47 3	52. 4 49. 6 53. 0 51. 9	92 89 95 91	Aug. 22* June 20 June 20* June 20*	- 5 - 5 - 2 - 6	Jan. 6 Jan. 6 Jan. 7 Jan. 6	7 32 18 47 3	51. 18 44. 89 43. 24 44. 10 46. 47	7. 47 7. 25 5. 67 6. 87 7. 34	Sept. May Jan. Aug. Aug.	1, 02 0, 05 0, 98 0, 73 0, 94	Oct. Oct. Oct. Oct. Oct.	8.0 21.4 5.8 21.7 17.2	134 134 120 103 144	165 160 199 151	115 128 42 81	86 78 125 134	w.
Mendota Narrows Radford Roanoke Saltville	Washington Giles Montgomery Roanoke Smyth	907	20	55.2	97 100	June 20* Aug. 29	 - 2 - 4	Jan. 6 Jan. 5	19 10 29 20 1	50. 74 35. 06 37. 63 43. 32 48. 15	6. 78 5. 34 5. 06 7. 83 6. 82	Jan. Sept. Jan. Sept. Sept.	0.77 0.48 0.98 1.20 0.47	Oct. Oct. Oct. Oct. Oct.	16.0 21.0 24.7	131 71 102 119 132	181	114	71	sw.
Speers Ferry Winchester Woodstock Wytheville	Scott Frederick Shenandoah Wythe	927	20 33 22	53.9	103 90 88	Aug. 6 Aug. 6 June 20	3 3 - 5	Jan. 22 Jan. 22 Jan. 6	28 20 33 22	36. 99 41. 15 42. 37 37. 87	5.50 9.38 8.26 6.27	Jan. May May Sept.	0.40 0.82 1.42 1.23	Oct. Feb. Oct. Oct.	28.8 17.7	98 102 78 138	196 156 149	61 68 99	109 142 118	W. nw. W.
Means and extremes			ļ	52.0	103	Aug. 6	-12	Jan. 6		44.31	9.38	May	0.05	Oct.	20.1	112	166	82	118	w.
State means and ex	tremes		····	54. 5	107	Aug. 6	-12	Jan. 6		47.41	11.79	May	0.04	Oct.	12.8	105	165	90	111	w.

Station and annual means are computed for a 12-month record. Section and State averages are computed from monthly means. 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, *, *, appearing in the tables indicate number of days missing: for example, * represents two days, etc.

*Also on other dates,

1!Post-office addresses of these stations are as follows: Diamond Springs, Norfolk; Runnymede, Elberon: Hawfield, Rapidan: Leeds Manor, Markham: Lincoln, Purcell-ville; Mayhurst, Orange; Mount Weather, Bluemont: Langley Field, Hampton.

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

		Mo	nthl	y and	Anı	ual I	reci	pitat	ion	or th	e Y e	ar 19	24,	with	Dep	artur	es fr	om t	he N	orme	.1					
	Jan	uary	Feb	ruary	Ma	rch	Ap	ril	M	ау	Ju	ne	Ju	ly	Aug	rust	Septe	mber	Octo	ober	Nove	mber	Dece	mber	Anı	nal
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 Ashland Cape Henry Dahlgren Diamond Springs Franklin	3. 38 3. 05 2. 22 3. 68	+0.03	3. 64 2. 41 3. 93 3. 99	-0.25 +0.83	3.38 6.70 3.22 5.20	-0.94 -0.25	3. 95 5. 44 4. 35 3. 79	+0.03 +1.24	6, 74 8, 59 6, 67 10, 35 6, 97	+2.66 +4.56 +6.66	5, 23 8, 98 4, 48 8, 35 6, 42	+1.06 +4.56 +3.22	2. 12 3. 66 1. 60 6. 25 5. 41	-2. 62 -2. 19 +0. 53	3. 93 5. 35 4. 12 7. 25 8. 50	-0.65 -0.75 -3.39	8. 08 5. 07 5. 52 9. 71 7. 47	+4.90 +0.99 +6.63	1. 02 0. 45 1. 26 0. 35 1. 11	-2. 24 -3. 43 -2. 17	1. 87 2. 43 2. 07 2. 70 1. 59	-0.45 -0.31 +0.62	2. 79 3. 06 5. 23 2. 94	-0.04 -0.37 +1.66	51. 94 63. 91 57. 07	+ 1.98 +21.04
Hopewell Langley Field Newport News Norfolk Onley	2. 78 2. 42 3. 00 1. 96 3. 37	-0.24 -0.31 -1.41	2. 45 2. 94 3. 79 3. 15 2. 38	-0. 82 +0. 31 -0. 72	3. 12 3. 63 4. 95 3. 16 6. 15	-0.31 +1.07 -1.12	3. 59 2. 56 3. 76 2. 89 5. 05	-0.76 +0.57 -0.90	9. 50 8. 88 11. 79 7. 47 6. 84	+5.32 +8.33 +3.40	6. 54 6. 11 7. 96 6. 46 5. 57	+2.18 +2.93 +2.13	3. 43 2. 70 6. 06 4. 45 2. 03	-2. 23 -0. 25 -1. 35	2. 10 6. 15 9. 21 4. 27 174	+1.16 +3.55 -1.70	7. 81 5. 25 7. 47 6. 59 4. 39	+2.32 +4.69 +2.53	1. 03 0. 04 0. 20 0. 11 1. 95	-3. 05 -2. 39 -3. 80	1.35 1.86 2.00 2.30	-0.86	2.38 2.30 2.85 2.85	-0.72 -0.64	46. 08 44. 84 45. 36 44. 62	+ 1.99
Richmond Runnymede. Urbanna Warsaw Williamsburg	2.76	-0.55	3. 12 3. 54	-0.30 +0.32	7. 20 4. 86	+3.60 +0.84	4. 94	+1.22	7.58 6.48 9.23	+2.98 +5.72	7. 11 4. 6 8 6. 4 4	+0.47 +1.72	3.79 4.04 3.04	-0.45 -3.10	2. 72 4. 27	-2.15	8, 55 8, 04 7, 00	+5. 47 +3. 55	3. 48 1.90 1.22	-1. 25 -1. 88	1. 52 1. 77 1. 61	-0.76 -0.56	3.07 3.20 2.26	+0.48 -0.25	51. 17	+ 4.8
Means	2.94	-0.41	3.23	+0.08	4.67	+0.42	4. 28	+0.65	8.30	+4.91	6.53	+2.34	3.72	-1.49	4.62	-0.16	7. 15	+4.04	1.04	-2.57	1.89	-0.52	3.05	+0.05	51. 42	+ 7.34
Callaville Charlottesville Chatham Clarksville Columbia	3.48 3.38 3.60	+0.10 +0.16	3.00 1.32 2.80	-1.98 -0.24	3. 10 3. 92 4. 17	+0.16 +0.74	4.00 3.31 3.31	+0.04 -0.30	6. 41 10. 38 7. 14	+6.35 +3.48	5. 67 5. 35	+1.19 +0.70	3. 97 5. 42 4. 48	+0.98 +0.13	1.35 1.82 4.48	$-2.99 \\ +0.04$	6. 10 9. 44 6. 50	+6.57 +3.34	1. 20 1. 70 1. 10	-0.97 -2.01	1, 79 1, 61 1, 65	-0.95 -0.68	3. 78 2. 84 3. 36	-0.69 -0.04	50.81 47.94	+ 7.8 + 5.19
Culpeper Danville Fredericksburg Guinea Mills Hawfield	3.97 3.75 3.39 3.92 4.21	+0.75 +0.63 +0.16	2. 78 2. 98 2. 65 2. 75 3. 57	+0.31 -0.23 -0.34 +0.41	3.07 3.38 4.76 3.59 4.86	+0.37 -0.05 +1.20 +1.34	4. 51 5. 36 4. 95 3. 90 4. 71	+1. 17 +2. 14 +1. 38 +1. 22	10. 05 5. 56 6. 77 8. 33 9. 09	+6. 30 +1. 64 +2. 84 	5. 43 3. 81 3. 93 4. 22 6. 45	+0.03 -0.59 -0.85 +1.84	2. 51 3. 11 2. 45 2. 92 2. 16	-1.44 -1.05 -1.85 -2.72	5. 59 2. 67 4. 73 3. 12 4. 55	+1.63 -2.26 -0.11 -0.85	7. 62 6. 86 7. 51 7. 07 3. 57	+4.51 +3.91 +4.36 +0.01	1. 16 1. 13 2. 57 1. 43 1. 24	-1.48 -1.78 -0.51	1. 45 1. 43 2. 05 2. 13 1. 90	-1.05 -0.81 -0.26 -0.59	2. 62 3. 80 1. 72 2. 53 2. 29	-0. 60 +0. 43 -1. 55 -0. 65	50. 76 43. 84 47. 48 45. 91 48. 60	+10.50 + 1.90 + 4.4
Leeds Manor Lincoln Lynchburg Macon Manassas	4. 80 3. 37 3. 09 3. 63	+1.77	2. 69 2. 98 1. 87 1. 78 2. 81	+0. 5 5 -1. 7 5	4. 25 4. 69 2. 77 3. 54 4. 66	+1.69 -1.04	2.99 3.13 3.35 4.82 4.26	-0.32 +0.18	9. 02 6. 95 5. 16 7. 66 7. 98	+3.76 +1.17	3. 15 3. 63 3. 58 6. 94 2. 17	-1.83 -0.31	3. 85 2. 70 3. 74 1. 08 0. 96	-0.86 -0.29	2. 80 3. 31 4. 80 5. 32 5. 11	-1.21 +0.55	9. 05 3. 86 4. 69 7. 79	+1. 10 +1. 06	0.35 0.80 2.48 0.83	-2. 13 -0. 90	1. 80 1. 45 1. 57	-1.34	3. 34 2. 47	+0.07	40. 60 46. 89	- 2.9
Mayhurst	4. 12 3. 60 4. 70 3. 78 3. 00	+0.86 +1.60 +0.32 -0.12	2. 95 2. 34 2. 68 3. 01 2. 86	$ \begin{array}{c} -0.01 \\ +0.58 \\ -0.07 \\ +0.20 \end{array} $	2, 82 3, 18 5, 83 3, 62 6, 81	-0.85 +3.23 -0.37 +3.58	4.10 4.63 1.29 3.65 2.26	+0.85 -2.16 +0.41 -0.92	8. 69 7. 42 8. 40 9. 12 2. 64	+4. 27 +4. 95 +5. 63 -0. 81	6. 45 5. 53 1. 99 5. 26	+0.92 -3.47 +1.26	2. 77 2. 62 2. 88 2. 22	-2,03 -0.93 -1.59	3. 93 4. 31 1. 94 5. 10	-1.06 -3.24 +0.25	7. 22 6. 32 9. 96 7. 15	+4.03 +6.88 +3.77	0.78 1.92 1.03 1.40 1.78	-2.60 -2.57 -1.71 -1.22	2. 12 2. 02 1. 29 1. 82 2. 66	-0.10 -0.79 -0.48 +0.78	1. 75 2. 54 1. 37 2. 67 2. 04	-1.82 -1.54 -0.48 -0.96	47. 70 46. 43 43. 86 48. 80	+ 2.4 + 2.5 + 6.99
Randolph Rocky Mount. Stuart Washington, D. C.	5. 18 3. 21	-0.16	3. 43	-0.48	2. 72 6. 17	+2.32	5.39	+2.14	4.20 6.73	+2.90	2. 99 3. 89	-0.29	5.80 2.76	-1.89	3.57 5.07	+0.67	9. 61 7. 86	+4.27	1.29 0,44	-2. 65	2. 18 1. 47	-1.24	5. 90 2. 98	-0.18	49.02	+ 5.5
Means	3.96	6 +0.72	2. 70	-0. 25	4.01		4.00	+ 0.00	7.68	+3.90	4.63	+0.17	3.11	-1.30	3.90	O. Əb	7. 20	+3.88	1.41		1. 82	-0.50	2.93	0. 50	47.40	, T 3. I
Blacksburg Buchanan Burkes Garden Catawba Sanatorium Dale Enterprise	3. 14 4. 14 3. 88	$\begin{array}{c} -0.53 \\ +0.83 \\ +1.07 \end{array}$	2. 13 3. 1. 76 7. 2. 42	5 - 1.37 5 - 1.11 2 - 0.31	4. 51 2. 97 2. 63	-0.59 -1.06 -0.54	4, 18 2, 86 2, 48	-0.31 -0.36 -0.55	4. 35 5. 89 8. 68	+0.01 +2.49 +4.48	3. 34 5. 00	-2.16 -1.36 -0.24	3. 64 5. 78 2. 71	-1.07 +0.89 -1.69	4. 97 6. 97 4. 02	$^{+0.46}_{+2.58}$ $^{+0.01}$	8. 17 7. 28 5. 01	+4.65 +4.03 +1.74	0. 95 1. 02 1. 47	-2. 22 -2. 54 -1. 30	3. 40 2. 31 2. 47	+0.59 +0.34	3.64 3.84 1.28	+0.05 +0.33 -1.42	46.08 48.16 42:00	$\begin{array}{c} -1.8 \\ +4.6 \\ +1.5 \end{array}$
Dante Hot Springs Ivanhoe Lexington Marion	4. 42 4. 60 5. 63 4. 30 3. 83	$\begin{array}{c} 2 \\ +1.23 \\ +2.42 \\ +1.06 \\ +0.64 \end{array}$	2. 76 1. 38 2. 69 2. 00 2. 40	$ \begin{array}{c} 5 \\ -1.50 \\ +0.30 \\ -1.06 \\ -1.21 \end{array} $	3. 20 2. 77 3. 09 4. 58 3. 55	-1.16 -0.61 $+1.20$ -0.54	3. 60 1. 81 3. 04 2. 92 3. 71	-1, 64 -0, 05 -0, 10 +0, 49	6. 10 7. 25 4. 58 6. 66 4. 42	+3.44 +1.04 +3.04 +0.36	5. 56 3, 68 3. 07 1. 54 3. 66	-1. 16 -1. 52 -2. 65 -1. 46	5. 74 5. 32 4. 47 3. 62 4. 21	+1.32 $+0.12$ -0.45 -0.33	3.50 6.90 5.48 6.87 7.34	+3.30 +0.70 +3.08 +2.94	7. 47 6. 12 5. 11 6. 63 6. 33	+2.80 +2.03 +3.16 +3.55	1. 02 0. 05 0. 98 0. 73 0. 94	-3. 01 -2. 28 -2. 26 -1. 53	1.95 2.60 2.62 2.24 2.41	+0.35 +0.85 +0.85 -0.35 +0.25	5. 86 2. 41 2. 49 2. 01 3. 57	-0.61 -0.70 -0.89 +0.37	51. 18 44. 89 43. 24 44. 10 46. 47	+ 3.8 + 2.2 + 3.7 + 3.5
Mendota Narrows Radford Roanoke Saltville	6. 78 3. 33 5. 06 5. 06 3. 8	3 +2.26 3 -0.63 5 +1.88 5 +2.14	3. 46 3. 1. 70 3. 2. 46 4. 2. 46 3. 25	$ \begin{array}{r} +0.18 \\ -1.58 \\ -0.27 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0.72 \\ -0$	4. 81 8. 44 3. 52 8. 12 3. 91	-0.56 -0.34 -0.14 -0.47	3. 73 2. 26 2. 55 3. 77 3. 61	-0.11 -0.34 -0.19 +0.97	5. 02 3. 96 4. 84 4. 94 4. 61	+1.24 +0.99 +1.41 +1.70	6. 33 3. 22 3. 78 3. 13 6. 27	+1, 40 -0, 21 -0, 05 -1, 81	4.76 3.56 3.39 4.26 4.00	-0. 16 -0. 73 -0. 92 +0. 09	3. 02 4. 19 3. 21 2. 46 4. 02	-1.59 +0.09 -0.23 -1.11	5. 47 5. 34 3. 03 7. 83 6. 82	+1.89 +3.25 +0.05 +4.93	0. 77 0. 48 0. 98 1. 20 0. 47	-2.55 -2.21 -2.18 -2.14	2. 48 1. 20 2. 19 2. 03 2. 60	+0.20 -0.60 +0.20 -0.40	4. 67 2. 38 2. 65 3. 05 4. 75	+0.48 -1.10 -0.52 -0.29	50. 74 35. 06 37. 63 43. 32 48. 15	+ 2.6 - 3.3 - 0.8 + 2.8
Speers Ferry Winchester Wise Woodstock Wytheville																										
Means		1	1	1	ľ	1	1 1	i	1		i i	į	Į.	1	ı	i.		!		l	1	Į.	1	l	t .	1

Monthly and Annual Mean Temperatures for the Year 1924, with													, with Departures from the Normal													
	January February March		Aı	ril	М	ау	Ju	me	Jı	ıly	Au	gust	Septe	ember	Oct	ober	Nove	ember	Dece	mber	An	nual				
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																										
Ashland Cape Henry Dahlgren Diamond Springs Franklin	41. 9 35. 6 43. 1 39. 8	ł. 	35. 0	-1.6 -0.9	43.3	-1.1 -0.3	51.4		60. 7 63. 9 60. 7 66. 1 66. 4		71.9	-1.0 -0.7 +1.2	1 74.0		75.0 76.9		69.0 65.4	-3.4	60.2 57.3	-1.9 -4.0	47.6	-0.5 +1.7	37. 9 45. 0 46. 4 43. 2	+1.3	57.9 59.2 57.9	-0.7 -0.2
Hopewell Langley Field Newport News Norfolk Onley	39.2 42.2	$\begin{vmatrix} +1.4 \\ -1.9 \\ +1.6 \end{vmatrix}$	*39. 8 38. 3 38. 4 40. 5 36. 4	$ \begin{array}{r r} -1.9 \\ -1.4 \\ -2.2 \end{array} $	47,3 46.2 44.9 46.8 44.4	-1.7 -3.0 -1.4	56. 6 54. 2 53. 2 55. 4 51. 8	-1.7 -3.7 -1.4	66. 6 64. 5 63. 8 65. 2 62. 0	-1.5 -3.7 -1.0	577. 8 73. 5 72. 7 73. 9 572. 0	$ \begin{array}{r} -1.1 \\ -0.7 \\ -0.5 \end{array} $	78.2 76.1 74.0 76.6 74.8	-4.0 -2.1	79.2 78.0 75.4 77.6 76.6	+0.2	70.0 69.0 67.2 68.8 66.3	-3.0 -4.6 -2.8	58.7	-3.4		+0.2		+2.5 +1.3	59.3 58.2 58.8 56.2	-0.7 -0.7
Richmond Runnymede Urbanna Warsaw Williamsburg	38. 0 40. 4 40. 0	+0.9	39. 3 34. 4	+1.3	48.1	-1. 6 +0. 1 -3. 1 -2. 4	55. 5	-2. 6 -0. 7 -2. 7	64. 4 62. 6	-1.8	72.9	-0.2	74.3 72.6		73.4	+0.4	66.4	-3.1	54.6		49.2	+1.8	41.6 38.1	+2.0 +0.5	57.4	-1.5 -0.3 -0.7
Means	40.1	+0.6	38.5	~1.4	45. 8	-1.6	54. 2	-1.9	63.8	2.0	73.4	-0.8	75.2	-2.6	76.4	-0.1	67.1	-2.6	58.5	-1.9	50.2	+0.8	4 2.2	+1.5	57.1	-1.0
Middle Virginia Callaville	35. 4 35. 2 36. 8 34. 6 36. 5		39. 6 36. 7	-0.7 -1.1 -0.5	46. 2 44. 6		55. 2 55. 1		62. 4 63. 4				74. 2	-1.7	76.0	+1.2	64.4 65.2	-4.1 	59.8 58.3 55.4	+1.3	47.6 48.8 48.1	-0.1	37.3 41.2 •39.3		55.1 56.8	-2.1 -1.3 -0.3
Culpeper Danville Fredericksburg Leeds Manor Lincoln	33. 4 38. 6 36. 8	+0.2 +0.5	*32. 2 40. 0 35. 7 32. 0 32. 3	-2.2 0.0	40.4	-1.8	56.0 51.8 48.3	-3.4 -3.2	63. 7 61. 0	$-4.5 \\ -4.2$	70.8	-1.3	77. 2 73. 1 70. 0	-3.4	73.2	-0.7	64.3 63.2		57.2 59.6	-1.8 -0.8	51.0 48.0 47.1	+1.1	35.2 41.8 39.0	+1.0	52.8 58.4 54.7	-1.7 -1.5 -1.3
Lynchburg	36. 2 35. 3 *33. 7 30. 4 36. 4	-0.6	33.0	+0.1 -1.1	43. 4 41. 6 36. 2	-1.8 -2.8 -2.5 -1.6	49.6 47.6	-1.3	61. 2 58. 8 54. 6	-4.6	68.8 66.3	-1.5 +0.1	71.4 68.8	-1.9	74.3	-0.6	63.5 58.0	-5.9	59.4 54.6 55.0	i	48.0 45.8 42.2	+0.6		+0.9	52.6 49.1	-2.0 -0.9 -1.1 -1.3
Quantico	*33. 4 36. 6 35. 0	-4.7 +1.6	35. 8 37. 0 34. 2	~1.9 ~1.1	42. 8 45. 0 42. 6	 0. o	52. 6 54. 7 51. 9	-3. 5 -1. 4	58. 6 61. 1 60. 0	-6.8 -3.7	69. 7 72. 2 71. 3	-0.9	70.4 72.3 75.0	-4.9 -1.8	72.3 75.0 74.8	-0.2	62.2 64.4 64.2	-6.9 -3.9	52.2 59.2 57.4	-5.5 0.0	44.8 49.3 46.0	-3.0 +0.8	36.0 *37.1 40.6 36.4	-1.5 -0.2	52.7 55.6 54.1	0.0 -3.9 -0.9
Means	35. 2	0.5	35. 2	-0.8	43.6	-2.2	52, 6	-2.4	60.8	-4.4	71.5	-0.5	73.3	-2.4	74.9	+0.2	64, 1	-4.3	57.3	-0.6	47.2	+0.5	38.3	+0.9	54.5	-1.4
Blacksburg	28.0 33.4	-3, 6 -2, 9	34. 4 29. 2	-3.3	41.0 35.0 40.8		52.0 47.5 52.0	+0.4 -2.4	56. 4 58. 7 51. 2 58. 4 57. 2	-6.2 -4.7	68.3 63.9 68.9	+0.2	69.6	-1.4	75.1	0.0 +0.3	64.8	-4.5 -3.9	57.4 48.4 57.4	-1.4 0.0	47.5 40.6 47.1	+0.6 +0.8	39.2 33.4	+1.9 -0.4	53.3 46.8 53.0	-1.0 -1.7 -2.0 -1.2
Dante Hot Springs Lexington Marion Roanoke	32. 5 31. 0 32. 6 32. 3 35. 0	-0.4 -1.4 -1.6	34.0	+0.6 -0.3 -1.8 +1.0	41. 0 38. 3 42. 2 40. 2 44. 8	-2.7	53, 8 49, 2 51, 6 52, 0 54, 6	-0.4 -1.5 -0.4	56. 5	-4.5 -4.6 -5.8	69. 5 67. 1 71. 0 69. 6 72. 9	+0.5 +0.4 -0.4	69. 0 67. 5 72. 5 69. 2 73. 0	-1.6 -1.9 -3.3	72.5 68.4 73.2 72.2 74.7	+0.1 +0.1 +0.9 +0.3	61.0 58.9 63.4 60.4 64.2	-3.2 -2.9 -4.9	55.0	+2.3	46.0 41.8 •44.4 44.4 47.2	+0.5	36.1 34.0 36.1 36.5 39.6	+0.2	52.4 49.6 53.0 51.9 55.2	-1.0 -1.1 -1.4 -0.6
	31.5	-0.4 -2.8	33.9	-1.2 -2.6	b42. 2 41. 3 38. 8 39. 8 39. 5	3.9	53. 3	-0.9	55.8	-4.2	470. 4 71. 8 70. 0 68. 7	-0.2	68.6	-1.0 -4.2	^h 77.8 76.4 72.0 70.9		63.0 59.7 58.8			+4.2				+1.6		-0.3 -1.7
Means	32. 0 35. 4				40. 4 43. 2	-3.0 -2.3	51. 7 52. 8			-4.9 -3.8			69. 8 72. 8	i		+0.6 +0.2		-3.9 -3.7	1				36, 4 38.9			-1.2 -1.2

For explanation of reference marks see page 50.

KILLING FROSTS, 1924

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Stations	Last in spring	First in autumn	Stations	Last in spring	First in autumn	Stations	Last in spring	First in autumn	Stations	Last in spring	First in autumn
Tidewater Virginia Ashland Cape Henry Dahlgren Diamond Springs Franklin Hopewell Langley Field Newport News Norfolk Onley Richmond Runnymede Urbanna Warsaw	Apr. 2 Apr. 3 Apr. 2 Apr. 3 Apr. 3 Apr. 2 Apr. 3 Apr. 2 Mar. 22 Apr. 3 Apr. 3	Nov. 18 Nov. 17 Nov. 20 Oct. 24 Oct. 24 Nov. 16 Oct. 20 Nov. 16 Oct. 24 Oct. 24 Nov. 20	Williamsburg Middle Viryinia Callaville Charlottesville Chatham Clarksville Columbia Culpeper Danville Fredericksburg	Apr. 3 Apr. 3 Apr. 3 Apr. 3 Apr. 4 Apr. 3 Apr. 3 Apr. 4	Oct. 24 Nov. 16 Oct. 22 Oct. 24 Oct. 23 Oct. 22 Nov. 16 Oct. 23	Quantico Rocky Mount Stuart Washington Great Valley	Apr. 4 Apr. 3 Apr. 28 Apr. 3 Apr. 3 Apr. 3 Apr. 3 Apr. 3 Mar. 20	Oct. 22 Nov. 17 Oct. 21 Oct. 23 Oct. 22 Nov. 17 Oct. 22 Oct. 22 Oct. 23	Lexington Marion Roanoke Winchester Wise Woodstock	May 10 Apr. 3 Apr. 21 Apr. 12 Apr. 3 Apr. 3 Apr. 3 Apr. 2 Apr. 2 Apr. 23 Apr. 3	Oct. 22 Oct. 22 Oct. 22 Oct. 23