### U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

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In Cooperation with Maryland State Weather Service

## CLIMATOLOGICAL DATA

### MARYLAND AND DELAWARE SECTION

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## GENERAL SUMMARY

In 1929 there was much less property damage from weather elements than in 1928. The winter was rather mild, with precipitation well below normal and a light seasonal snowfall; the spring was warm and wet; the summer was cool, sunshiny, and dry, with unusual frequency of thunderstorms; the autumn was wet and also mild, except that October was very cool. The only general heavy snowstorm of the winter occurred February 21; the only general damaging windstorm was March 7; the tide was very high in Chesapeake Bay April 16, May 3, and October 2–3 and 22; two tornadoes occurred at night May 2 in north-central Maryland; and a tropical hurricane passed over the section October 2, but caused little property damage.

The annual mean temperature, 54.4°, was 0.5° warmer than normal. January averaged slightly above normal; February was normal; March and April were very warm; May, June, and July were slightly cool; August and October were very cool; and September, November, and December were mild.

Precipitation for the year averaged 42.46 inches, which is 0.94 inch above normal. Precipitation was deficient in January, March, May, July, August, and December; slightly above normal in February, June, September, and November; and abundant in April and October. Annual amounts were 40 to 50 inches, except between 30 and 40 inches in central and eastern Allegany County, in Howard and northern Prince Georges Counties, the southern portion of southern Maryland, in southern Somerset and southern Worcester Counties, and the northern third of the Eastern Shore, and except between 50 and 60 inches in northwestern Frederick and northern Baltimore Counties.

Annual snowfall averaged 20 inches, which is 6.4 inches below normal. Annual amounts were 8 to 18 inches over southern Maryland and the Eastern Shore; 15 to 30 inches in north-central Maryland, except 30 to 34 inches in the Blue Ridge Mountain region; and between 20 and 30 inches in western Maryland, except above 30 inches in the Allegheny Mountain region, with maximum of 60 inches in the highlands.

The annual number of days with 0.01 inch or more of precipitation for the section averaged 117, or 8 above normal.

The sunshine of the year was slightly above normal. Sunshine was abundant in January, June, July, and August, but very deficient in April and November.

The growing season, or interval between the last general killing frost in spring and the first general killing in autumn, was shorter than normal by two weeks generally, except longer than normal by one to two weeks in the Blue Ridge Mountain region, on the northern Eastern Shore, and in southern Maryland, and by five weeks in the Chesapeake Bay region.

Wheat, rye, barley, oats, early potatoes, sweet potatoes, to-matoes, peas, and strawberries were good crops, while sugar corn, field corn, late potatoes, tobacco, apples, peaches, and pears were fair crops.

Outstanding features during 1929: January.—Cold waves 7-8th and 13-14th; low temperatures 25th to 31st; light monthly snowfall; ice in upper Chesapeake Bay closing week. February.—

Cold wave 20th-21st; mild periods marked by fog; heavy snowstorm 21st, with falls 5 to 8 inches over southern half of section and 8 to 12 inches over northern half; ice in upper Chesapeake Bay first decade. March.—Very light snowfall confined to northern-border counties; very warm periods 11-16th and 19-25th; heavy northeast rains 2d and 4-6th; westerly gale 7th featured by gusts of hurricane force, causing some property damage in nearly every community, total loss estimated between \$500,000 and \$1,000,000. April.—Unusually mild and wet; very light snowfall confined to Allegheny Mountain region; cloudy and wet period 9-17th; very warm spell 4-9th, with summer temperatures, unprecedented for intensity and duration so early in the year; southwest gale over north portion 1st; northeast storm 15-16th, with high winds (gale force on Eastern Shore) and heavy rains, causing high tide in Chesapeake and Delaware Bays and along the coast and high water in all streams. May.—Unusual frequency of thunderstorms; severe thunderstorms night 2d; two were tornadoes, one passing through Frederick County and the other through Montgomery and Howard Counties, causing death of 6 persons, injury to 10 others, and property loss of nearly \$200,000; high tide along the eastern shore of Chesapeake Bay 3d, caused by southwest gale; heavy northeast rain over southern third of section 20th-21st; heavy hail at Maryland Line 24th, damaging crops and tree fruit. June.—Very cool spell 2d to 6th, with freezing temperatures in Allegheny Mountain highlands and light frost over western half of section and interior of the Eastern Shore 4th; (Continued on page 50)

## COMPARATIVE DATA FOR MARYLAND AND DELAWARE

		Temper	ature	·.			Pre	cipitati	on		
Year	Mean	Departure from the normal	Highest	Lowest	Average	Departure from the normal	Greatest local	Least local	Greatest in 24 hours	Snowfall	Number of days with 0.01 inch or more
1895 1896 1897 1898 1899	52. 6 54. 0 53. 6 54. 9 53. 5 55. 0	-1.3 +0.1 -0.3 +1.0 -0.4 +1.1	102 103 102 109 102 106	-18 -18 -12 -20 -26 -15	34.47 37.11 44.97 42.11 40.84 36.66	-7.03 -4.39 +3.47 +0.61 -0.66 -4.84	42.07 64.94 63.85 65.77 51.38 52.19	14. 42 30. 18 32. 56 32. 59 28. 69 28. 21	4.80 4.50 14.75 5.98 5.35 5.53	29. 9. 23. 0 18. 4 21. 6 40. 3 26. 8	94 92 109 109 98 88
1901 1902 1903 1904 1905 1906 1907 1908 1909 1910:	52. 6 53. 6 53. 3 <b>51. 2</b> 53. 3 54. 6 52. 2 54. 1 54. 0 53. 8	$\begin{array}{c} -1.3 \\ -0.3 \\ -0.6 \\ -2.7 \\ -0.6 \\ +0.7 \\ -1.7 \\ +0.2 \\ +0.1 \\ -0.1 \end{array}$	106 104 100 102 104 101 99 102 99 99	-15 -17 -12 -20 -20 -15 -29 -21 - 5 -15	45. 08 49. 20 46. 94 86. 49 43. 84 48. 01 48. 86 40. 01 37. 47 37. 42	+3.58 +7.70 +5.44 -5.01 +2.34 +6.51 +7.36 -1.49 -4.03 -4.08	70, 87 61, 38 78, 72 50, 26 64, 64 62, 92 66, 59 52, 50 50, 45 52, 45	34. 63 33. 75 36. 58 25. 72 31. 88 36. 10 37. 55 31. 63 28. 30 26. 74	5. 45 6. 00 6. 00 5. 90 4. 65 8. 66 5. 00 7. 93 3. 80 7. 19	18. 7 33. 3 17. 9 41. 8 36. 1 20. 7 34. 6 32. 5 30. 0 34. 8	99 105 106 96 106 123 121 101 105 109
1911 1912 1913 1914 1915 1916 1917 1918 1919 1920	54. 9 53. 3 56. 1 53. 4 54. 1 53. 2 51. 3 53. 8 54. 9 53. 3	+1.0 -0.6 +2.2 -0.5 +0.2 -0.7 -2.6 -0.1 +1.0 -0.6	106 102 102 102 103 101 102 109 105 98	- 5 -40 - 6 -21 - 6 -11 -32 -30 -19 -10	48: 61 48: 42 38: 98 35: 97 43: 58 40: 47 40: 65 37: 96 47: 62 44: 95	+2.11 +1.92 -2.52 -5.53 +2.08 -1.03 -0.85 -3.54 +6.12 +3.45	55. 58 52. 68 48. 96 43. 32 59. 39 49. 72 54. 22 46. 95 60. 84 56. 29	33. 62 35. 50 25. 41 29. 35 26. 82 26. 14 27. 17 28. 88 30. 69 32. 49	7. 35 6. 07 4. 05 3. 81 5. 11 6. 00 4. 52 4. 50 9. 02 4. 30	23. 2 32. 2 6. 1 37. 2 23. 1 28. 5 85. 7 31. 4 11. 9 20. 0	119 112 108 98 107 112 110 98 114
1921 1922 1923 1924 1925 1926 1927 1928 1929	56. 6 55. 0 54. 4 52. 6 54. 6 52. 8 54. 4 54. 0 54. 4	+2.7 +1.1 +0.5 -1.3 +0.7 -1.1 +0.5 +0.1 +0.5	102 100 102 103 104 107 100 100	-15 -15 - 9 -13 -31 -16 -5 -11 -13	87. 72 40. 15 40. 27 46. 26 34. 91 43. 90 40. 37 45. 09 42. 46	-3.78 -1.45 -1.23 +4.76 -6.59 +2.40 -1.13 +3.59 +0.94	54, 12 55, 65 50, 38 52, 70 48, 37 54, 02 53, 56 55, 38 56, 60	28. 89 24. 39 31. 47 87. 41 27. 87 32. 08 27. 89 34. 92 33. 09	5. 60 6. 75 5. 17 4. 53 5. 25 6. 54 3. 92 11. 66 4. 58	20. 5 34. 8 22. 0 30. 5 23. 0 24. 6 15. 3 25. 4 20. 0	114 111 115 111 112 128 125 118 117

### Climatological Data for the Year 1929

			Temperature, degrees Fahrenheit Precipitation									ny		Sky		<b>u</b> o				
Stations	Counties	Elevation, feet	Length of record, years	Annual mean	Highest	Date	Lowest	Date	Length of record,	Total for the year	Greatest monthly	Month	Least monthly	Month	Total snowfall	Number of raini	Number of clear days	Number of partly cloudy days	Number of cloudy days	Prevailing direction of wind
Maryland Aberdeen Annapolis Baltimore (U.S.W.B.) Bell 1 Boyds Cambridge (near) Cecilton Cheitenham Chewsville Clear Spring Colenan 9 College Park Crisfield Cumberland Darlington Easton Elkton Elkton Emmitsburg Fallston 6 Ferry Land ing Frederick Friendsville Frostburg Grantsville Graat Falls 9 Hancock (Tonoloway) Keedysville Laurel Lutherville Maryland Line Mechanicsville Millington Newburg Oakland Pleardy Pleasant Hill 9 Pocomoke City Princess Anne Public Landing 9 Ridgely Rock Hall Salisbury Sines (Deep River) Solomons State Sanatorium Stevensville Takoma Towson Western Port Westminster Woodstock  District of Columbia Washington (U.S.W.B.)  Delaware City Dover Milford Millshoro Willington Willington	Prince Georges Montgomery Dorchester Cecil Prince Georges Washingtondo Kent Prince Georges Somerset Allegany Harford Talbot Cecil Frederick Harford Calvert Frederick Garrett Montgomery Washingtondo Prince Georges Baltimore Baltimore St. Marys Kent Charles Garrett Allegany Baltimore Worcester Caroline Kent Wiccomico Garrett Calvert Frederick Garrett Allegany Baltimore St. Marys Kent Charles Garrett Allegany Baltimore Worcester Caroline Kent Wiccomico Garrett Calvert Frederick Queen Annes Montgomery Baltimore Montgomery Baltimore Sussex New Castle Kent Garset Somerset Rent Somerset Somerset Caroline Kent Somerset Somerset Rent Somerset Rent Somerset Somerset Caroline Kent Calvert Frederick Gueen Annes Montgomery Baltimore Allegany Carroll Baltimore	2, 351 200 455 400 320 340 840 840 840 840 840 840 840 8	111 644 59 9 0 136 111 29 322 27 30 42 41 66 39 38 61 60 60 13 35 55 11 125 53 35 5 5 125 38 22 4 4 30 0 3 3 11 386 20 20 59 59 6 6 43 40 37 37 37 38 6	53. 7 56. 0 56. 8 54. 1 57. 1 56. 0 52. 1 55. 8 55. 2 55. 3 55. 2 55. 4 55. 6 55. 6 55. 6 55. 6 55. 7 56. 8 57. 1 58. 8 58. 8 58	95-97 97 99 99 100 98 99 99 99 99 99 99 99 99 99 99 99 99	July 29 July 30 July 29 Aug. 13 July 28 Sept. 3 July 29 Aug. 13 July 28 Sept. 3 July 28 July 29 July 28 July 29	6 2 4 4 6 7 7 7 11 1 8 9 9 100 10 7 7 7 7 6 9 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Jan. 14 Jan. 1	11	37. 92 43. 62 42. 47 42. 47 43. 48 46. 30 41. 19 40. 61 39. 64 40. 15 41. 71 44. 75 40. 15 47. 59 39. 48 45. 31 47. 99 42. 28 43. 14 45. 50 38. 27 44. 71 47. 59 39. 48 45. 31 47. 99 42. 28 43. 14 45. 50 38. 28 45. 31 47. 99 42. 28 43. 14 45. 50 38. 28 46. 22 47. 20 40. 15 40. 28 40. 37 40. 68	6. 38 87. 477 6. 46 77. 76 9. 46 8. 46 8. 48 8.	Apr. Apr. Apr. Apr. Apr. Apr. Apr. Apr.	1.80 1.13 0.72 1.81 1.13 0.72 1.81 1.91 1.61 1.65 1.80 1.81 1.81 1.61 1.68 1.65 1.70 1.14 0.68 1.65 1.70 1.14 0.68 1.65 1.70 1.14 0.68 1.60 1.63 1.10 1.14 1.14 1.14 1.15 1.16 1.16 1.17 1.19 1.18 1.19 1.19 1.19 1.19 1.19 1.19	Aug. July July July July July July July July	13. 4 12.5 5 15.8 12.8 19.5 19.5 19.5 19.5 19.5 19.5 19.5 19.5	116 127 129 120 116 118 128 129 120 114 118 128 129 120 114 118 128 129 120 114 128 129 120 120 120 120 120 120 120 120 120 120	1166 1555 1477 1611 1616 1616 1616 1616 1616 1616	1111 96 6 99 96	138 8 114 119 108 109 109 109 130 101 101 101 101 101 101 101 101 101	S. W. W. S.
For Maryland and District of Columbia For Delaware For entire section			 	54.2 55.7 54.4	101 102 102	July 28 July 29 July 29	-13 6 -13	Jan. 14 Jan. 14 Jan. 14		42. 68 40.59 42. 46	9.27 8.17 9.27	Oct. Apr. Oct.	0. 59 0. 85 0. 59	July July July	20.9 11.8 20.0	117 114 117	159 159 160	102 109 101	104 97 104	sw. sw. sw.

\*Also on other dates. †Also in September. ‡Also in November. \$Post Office addresses of these stations are as follows: Of Bell, Glenndale; of Coleman, Worton; of Fallston, Bagley; of Ferry Landing, Owings; of Great Falls, Bethesda; of Pleasant Hill, Owings Mills; of Public Landing, Snow Hill.

#### (Continued from page 49)

unusual frequency of thunderstorms second half of month; some damage by hail, lightning, thundergusts, and heavy showers locally third week. July.—Abundance of sunshine; unusually dry; 24th-31st; very cool period 15th-22d, with some lightfrost in Allebuildings fired by lightning in southern Queen Annes and northern Talbot Counties 14th. August.—Plentiful sunshine; light rainfall; low humidity; much cool weather; some damage by lightning, hail, or thundergusts 13th, 14th, and 30th; some deteriora-21st; two barns and contents destroyed by lightning near West-stooled well.—J. B., jr. minster night 8th, loss \$20,000. October. - Much pleasant

weather; most of the rain fell 1st-2d and 22d; first freezing temperature and killing frost in central and eastern divisions, except Chesapeake Bay region, 11th; tropical hurricane 2d, attended by heavy rains, by southeast gale of brief duration, and unusual frequency of thunderstorms; warm periods 7-10th and record-breaking high tide in Chesapeake Bay. November.—Much warm weather; record extremes of temperature; cold wave gheny Mountain region; considerable stock killed and several 29-30th; excessive cloudiness; great deficiency in sunshine; great frequency of days with precipitation and with light fog; first freezing temperature and killing frost in Chesapeake Bay region 10th; winter grains were in fine condition. December. - Excessive cloudiness; unusual frequency of light and dense fogs; glaze tion of crops corn and tobacco suffering most. September. - Warm storms over central and eastern divisions 2d, 12th, and 23d; very weather first decade; very cool period 18th-22d; freezing tem- warm 14th, 15th, and 19th; heavy snowfall in eastern Washington peratures and damaging frosts in western Maryland 19th and County and the Blue Ridge Mountain region 2d; winter grains

	Monthly and Annual Precipitation for the Year 1929, with Departures from the Normal																									
	Jan	uary	<u> </u>	ruary		arch		ril		ay		me		ıly	· -	- 1		ember			Γ	ember	Dece	ember	Anı	nual
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
		1	1	1	l_ '	1	Ι.	٠.	1	1		1		1 1						1		J .:	1	1	L . ' '	
Maryland Aberdeen	1.87 2.18 1.58 3.23 1.80 3.71 2.05 2.27 2.25 3.70 2.36 2.11 3.62 2.88 3.77 3.79	-1. 41 -1. 06 -0. 98 -0. 85 -1. 41 -0. 74 -1. 39 -1. 67 +0. 47 -1. 56 -0. 21 -1. 56 -0. 21 -1. 56 -0. 34	4. 27 4. 15 3. 52 2. 76 3. 75 5. 51 6. 01 6. 81 3. 56 5. 3. 78 3. 06 3. 79 3. 35 5. 51 3. 88 3. 56 5. 3. 78 3. 90 3. 75 5. 5. 13 5. 13	+0.90 -0.56 +2.04 +2.57 +3.71 +0.82 5-0.21 +0.29 +1.11 5-1.14 5-1.14 5-1.74	3. 05 3. 19 3. 08 2. 90 2. 17 4. 36 4. 75 5. 40 4. 3. 26 3. 91 3. 04 3. 70 2. 98 4. 35 2. 22 2. 71 2. 98	-0.85 -0.91 -0.80 +0.80 +0.85 +1.45 +0.78 -0.28 -0.21 -0.35 -0.35 -0.40 -0.19 -0.72	7. 69 6. 60 5. 43 7. 60 6. 56 5. 53 5. 12 7. 54 4. 61 6. 7. 80 5. 64 6. 61 8. 01 5. 19 5. 7. 84 5. 35 5. 05	+2. 98 +3. 61 	2. 30 1. 31 2. 65 5. 61 3. 53 2. 09 2. 49 2. 71 2. 17 6. 36 2. 98 2. 12 4. 15 4. 68 2. 54	-1. 92 +1. 14 -0. 37 -0. 27 -0. 26 -1. 40 -0. 52 -1. 16 -1. 62 +2. 38 -1. 18 -1. 18 -1. 19	84267 976 976 976 977 977 978 978 978 978 978 978	+0. 47 -1. 72 -0. 55 +1. 32 +1. 54 +0. 76 +2. 48 +3. 39 -0. 36 +1. 97 -1. 93 +2. 52 -0. 11 +3. 06 +0. 64	1. 14 1. 38 0. 85 2. 42 1. 10 3. 02 1. 63 4. 14 2. 70 1. 84 1. 66 4. 49 1. 78 0. 81 1. 76	-3.32 -2.27 -0.72 -2.70 +0.14 -1.85 -3.30 -1.16 -2.61 +0.39 -3.73 -2.99 -2.17 -2.38	3. 87 3. 39 2. 58 2. 28 2. 34 2. 23 2. 47 1. 77 3. 81 4. 11 2. 84 4. 17 1. 84 2. 46 2. 23 1. 18	-0.95 -0.58 -2.07 -2.64 -2.32 -0.65 -0.39 -2.54 -2.75 -2.82 -2.24 -2.24 -2.18 -3.11	2. 38 2. 83 0. 68 3. 39 5. 64 3. 73 2. 94 4. 58 1. 87 5. 97 5. 97 5. 36 4. 65 2. 70 5. 64 4. 58	-0. 75 +0.07 -0.56 +0.31 +1.51 -2.02 +2.79 -1.95 +1.45 -0.69 +0.67 -0.93 +3.73 +0.99	5. 13 3. 76 5. 00 8. 09 6. 91 5. 57 3. 13 2. 41 2. 71 3. 00 4. 56 3. 12 9. 16 5. 21 3. 97 5. 68 5. 34 5. 45	+0.85 +4.85 -0.79 -0.01 +2.53 -0.21 +0.59 +6.56 +1.42 +2.90 +3.36 +2.45	2. 22 2. 17 2. 17 3. 74 2. 72 2. 61 2. 18 2. 45 1. 91 4. 18 2. 86 2. 86 3.	3 -0. 28 3 -0. 28 3 -0. 28 3 -0. 28 5 -0. 18 5 -0. 18 5 -0. 18 6 -0. 48 6 -0. 67 6 -0. 67 7 -0. 20 7 -0. 20	3. 10 3. 06 2. 487 1. 63 1. 60 2. 20 3. 1. 92 2. 52 2. 60 1. 95 3. 02 2. 31 2. 31 3. 02 2. 31 2. 31 3. 02 3. 02 3. 03 3. 04 3. 05 3. 06 3. 06 4. 06 5. 06	-0.71 -0.92 -1.77 -1.13 -1.58 -1.58 -1.59 -0.20 -0.96 -0.75 -0.77 -1.30 -1.30 -1.43 -1.05	45.50 38.28 48.98 48.98 37.50 41.51 41.72 42.57 46.22 47.20 33.09 55.60 45.30 34.29 40.28	-5.1 +2.7 -2.5 +1.7 +1.9 +0.5 +1.4 +2.8 -3.2 +12.9 -7.4 +6.3 -1.6
Delasuana					1				İ							i l					1					
Bridgeville Delaware City Dover Milford Millsboro Wilmington	2. 26 3. 00 2. 37 2. 26 3. 72	$ \begin{array}{c} -1.19 \\ -0.39 \\ 0-0.34 \\ -1.23 \\ -1.30 \\ 2+0.26 \end{array} $	4. 66 3. 78 5. 22 4. 28 5. 70 4. 88	$\begin{array}{c} +1.27 \\ +1.09 \\ +1.94 \\ +0.69 \\ +2.17 \\ +1.05 \end{array}$	4.30 2.48 3.58 4.38 3.33 2.30	+0.50 -0.78 -0.64 +0.23 -0.67 -1.24	6. 20 6. 54 7. 06 8. 17 6. 51	+2.47 +2.88 +3.05 +3.56 +4.57 +3.09	1. 74 1. 45 1. 90 2. 09 1. 94 2. 75	-1.95 -1.82 -1.71 -1.55 -1.58 -0.82	4. 22 3. 40 3. 39 2. 72 3. 55 3. 03	+0. 47 -0. 46 -0. 17 -0. 97 -0. 18 -0. 81	1.61 1.40 0.85 1.11 1.28 1.45	-8.06 -2.20 -3.81 -3.15 -3.38 -3.61	1.96 2.18 2.16 2.06 4.38 4.32	-2.40 -1.60 -2.24 -2.48 -0.68 -0.32	3. 93 5. 45 3. 72 4. 09 2. 05 4. 69	+0.95 +2.23 +0.27 +0.67 -0.90 +1.24	4.06 4.00 4.48 5.16 3.23 5.04	+0.87 $+1.52$ $+1.57$ $+1.90$ $-0.16$ $+1.96$	2. 58 2. 2. 27 2. 56 2. 31 3. 70	$ \begin{array}{c} -0.08 \\ +0.21 \\ 7 -0.88 \\ 6 -0.46 \\ 1 -0.32 \\ 0 +0.88 \end{array} $	2. 84 2. 65 3. 41 6 2. 52 2. 49 3.84	-0.93 $-0.94$ $-0.96$ $-1.24$ $-1.36$ $+0.17$	39. 58 37. 75 39. 49 40. 37 40. 69 45. 68	-3.5 -0.2 -3.9 -4.0 -3.7 +1.8

# CONDENSED SUMMARY OF CLIMATOLOGICAL DATA, 1929

			Temper	ature				Precipita	tion	*		N	umber	of day	s	lon
M	onths	Mean	Departure from the normal	Highest	Lowest	Average	Departure from the normal	Greatest local	Least local	Greatest in 24 hours	Snowfall	With 0.01 inch or more of precipitation	Clear	Partly cloudy	Cloudy	Prevailing direct of wind
February March April May June July August September October November December		33. 0 48. 2 55. 4 62. 1 70. 4 74. 4 71. 5 68. 3 53. 6 46. 1 36. 9	+0.3 0.0 +5.6 +2.9 -0.5 -0.8 -1.8 +0.8 +1.5 +1.5 +1.5	69 72 86 95 96 98 102 99 100 85 85 75	-18 1 4 25 26 31 34 35 25 23 -7 -6	2. 68 3. 69 3. 17 6. 47 8. 08 4. 83 1. 71 2. 70 3. 62 5. 44 2. 62 2. 45	-0.69 +0.65 -0.49 +3.11 +0.90 -2.62 -1.57 +0.36 +2.58 -0.84 +0.94	4. 22 6. 81 5: 40 8. 43 6. 89 8. 48 4. 49 5. 13 7. 73 9. 27 5: 14 3. 84	1.22 1.99 1.90 4.61 1.31 1.89 0.59 3.38 0.68 2.41 1.65 1.21	1. 44 1. 65 2. 10 3. 50 3. 59 3. 66 2. 22 1. 18 4. 00 4. 58 1. 70 2. 14	2.2 10.7 1.2 0.2 T. 0.0 0.0 0.0 0.0 0.1 1.8 3.8	10 9 10 14 13 10 7 7 8 9 11 9	12 13 14 12 12 16 17 16 14 15 8 11	6 6 8 10 10 11 10 11 8 9 6 101	13 9 11 10 9 4 3 5 5 8 13	nw. nw. sw. sw. sw. sw. sw. sw. sw.

Monthly and Annual I	Mean Temperatures fo	or the Year 1	929, with	Departures from	the Normal

	Jan	uary	Feb	rùary	Ma	rch	Aï	oril,	М	ay	Ju	ne	Ju	ıl <b>y</b>	Au	gust	Septe	ember	Oct	ober	Nove	mber	Dece	mber	Anr	ual
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
Maryland Aberdeen Annapolis Baltimore (U.S. W.B.) Bell. Boyds. Cambridge. (near). Cecilton Cheltenham Chewsyille. Clear Spring Coleman. College Park Crisfield Cumberland Darlington Easton Elkton. Elkton. Elkton. Elkton. Ernnitsburg Fallston Ferry Landing Frederick Friendsville Frostburg. Grantsville Great Falls Hancock. (Tonoloway Keedysville Laurel Laurel Laurel Laurel Laurel Lutherville Maryland Line Millington Newburg Oakland Pricardy Princess Anne Public Landing, Ridgely Rock Hall Salisbury Sines (Deep Creek) Solomons. State Sanatorium Stevensville Takoma Western Port Westminster	35. 1 31. 9 37. 2 38. 6 35. 1 31. 9 37. 2 38. 6 35. 1 30. 2 1. 34. 1 0	+1.2 +1.6 -0.1 +1.7 +0.9 +0.8 -0.3 -0.9 -0.9 -0.1 -0.1 -0.3 -0.9 +1.3 +1.2 -0.1 -0.5 -0.1 -0.5 +0.6 -0.1 -0.5 +0.6 +0.7 -0.1 -0.5 +0.8 +0.7 -0.1 -0.5 +0.8 +0.7 +0.8 +0.8 +0.8 +0.8 +0.8 +0.8 +0.8 +0.8	34.2 33.8 34.8 34.2 27.7 7 31.5 34.0 34.4 8 33.2 6 31.6 32.7 7 7 31.5 32.0 7 31.5 32.6 33.4 8 33.8 8	-0.6 40.5 40.5 40.5 40.5 40.5 40.5 40.5 40.5	48. 2 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	+6.46.5.2.6.6.88.6.0.2.6.4.4.4.8.1.4.4.4.8.5.2.6.6.4.4.4.8.1.4.4.8.5.2.6.6.4.4.4.8.4.8.4.8.4.8.4.8.4.8.4.8.4.8	55. 4 55. 8 6 . 2 2 . 8 . 2 2 . 5 . 6 . 6 . 7 . 7 . 6 . 6 . 6 . 6 . 6 . 6	+2.4 +2.8 +2.2 +2.2 +2.2 +2.6 +2.6 +2.2 +2.6 +2.2 +2.6 +2.2 +2.6 +2.2 +2.6 +2.2 +2.6 +2.2 +2.6 +2.2 +2.6 +2.2 +2.6 +2.2 +2.6 +2.6	62. 7 4 62. 5 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8 6 8	-1.6 -1.1 -1.1 -1.1 -1.1 -1.1 -1.1 -1.1	73. 36 70. 46 77. 22 70. 80 70. 42 77. 80 70. 72 70. 80 70. 72 70. 80 70. 77 70. 10 70. 70 70. 70 70. 70 70. 70 70. 70 70 70. 70 70 70 70 70 70 70 70 70 70 70 70 70 7	-1.4 +0.6 -0.1 +0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.0 -0.5 -0.1 -0.5 -0.5 -0.0 -0.5 -0.5 -0.5 -0.5 -0.5	76. 4 74. 8 8 74. 6 6 4 74. 8 8 74. 8	-1.3 +0.2 -1.5 +0.7 -1.5 -1.9 -1.6 -1.9 -1.6 -1.9 -1.6 -1.9 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0 -1.0	73. 47. 77. 47. 77. 77. 77. 77. 77. 77. 77	-2.6 -2.6 -2.1 -2.5 -2.6 -2.6 -2.2 -2.2 -2.8 -2.2 -2.8 -2.2 -2.2 -2.8 -2.2 -2.2	70. 4 68. 6 6 68. 8 6 6 6 6 6 6 6 6 6 6 6 6 6	+0.1 +0.1 +1.9 +0.4 +0.1 +1.3 +1.3 +1.0 +1.3 +1.0 +1.1 +1.1 +1.1 +1.1 +1.1 +1.1 +1.2 +1.2	56. 2 52. 7 65. 2	-1.73.43.62.24.82.21.82.1.82.1.82.1.83.12.1.83.12.1.83.12.1.83.12.1.83.12.1.83.13	48. 3 46. 0 48. 0 46. 0 47. 6 48. 1 48. 3 46. 0 48	+2.6 +1.8 +1.8 +1.2 +1.8 +1.2 +1.6 +1.7 +1.6 +1.7 +1.6 +1.7 +1.6 +1.7 +1.6 +1.7 +1.6 +1.7 +1.6 +1.7 +1.6 +1.7 +1.7 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.8 +1.9 +1.9 +1.9 +1.9 +1.9 +1.9 +1.9 +1.9	38. 7 35. 4 33. 8 36. 1 37. 6 33. 8 35. 2 39. 6 33. 8 35. 8 36. 8	+1.5 -1.1 +1.7 +1.7 +1.0 +1.0 +1.1 +1.7 +1.0 +1.0 +1.0 +1.0 +1.0 +1.0 +1.1 +1.1	56. 0 56. 8 1	+0.8 +0.2 +1.4 +1.1 +0.5 +0.8 +0.8 +0.6 +0.1 +1.2 +0.1 +0.1 +0.6 +0.8 +0.8 +0.6 +0.8 +0.8 +0.8 +0.8 +0.8 +0.8 +0.8 +0.8
District of Columbia Washington (U.S. W.B.)	34.9	+1.5	35.0	-0.3	50.2	+7.6	57.6	+4.3	64.5	+0.8	72.4	+0.2	76.9	+0.1	74.4	-0.6	70.2	+2.1	55.6	-1.8	47.6	+2.4	38.4	+1.8	56.5	+1.5
Delaware Bridgeville Delaware City Dover Miford Millsboro Wilmington	35. 6 33. 4 34. 6 35. 6 36. 8 32. 2	$   \begin{array}{r}     +0.9 \\     -0.4 \\     -0.1 \\     +1.6   \end{array} $	33. 7	0.0 +0.1 +0.2 +1.9	48.6 49.7 49.8	+6.7 +7.3 +6.9 +4.7 +7.1 +5.4	56.4 57.4	+2.7 $+2.7$ $+2.3$ $+4.6$	61.8	-1.3 -0.6 +0.8	71.0 72.2 71.9 71.6	-1.1	75. 6 75. 2 76. 2	-0.6 $-1.0$ $-1.5$ $+0.7$	72.8 72.6 73.3	$ \begin{array}{r} -1.8 \\ -1.6 \\ -2.4 \\ -1.2 \end{array} $	69.8 69.8 69.2	+1.4 $+1.4$ $-0.1$ $+0.8$	54.8 54.8 54.8 55.6	-2.8 -2.4 -3.6	49. 8 47. 4 47. 9 47. 8 49. 2 46. 3	$\begin{vmatrix} +1,7\\ +2,4\\ +0,6\\ +2,8 \end{vmatrix}$	36.0 38.0 39.1	$+1.3 \\ +1.1 \\ +2.7$	56. 6 55. 0 55. 9 56. 8 54. 0	+1.6 $+0.5$ $0.0$ $+1.7$ $-0.3$
For Maryland and District of Columbia	32. 6 34. 7 32. 9	+0.2 +0.4 +0.3	<b>32. 7</b> <b>35. 0</b> <b>38.</b> 0	-0.1 +0.7 0.0	48. 0 49. 7 48. 2	+5.5 +6.3 +5.6	55. 4 56. 0 55. 4	+3.0 +2.9 +2.9	62. 0 62. 6 62. 1	-0.4 -0.7 -0.5	70. 2 71. 6 70. 4	-0.5 -0.2 -0.5	74. 2 75. 6 74. 4	-0.8 -0.8 -0.8	71. 8 72. 7 71. 5	-1.8 -1.8 -1.8	68. 2 69. 4 68. 3	+0.9 +0.8 +0.8	53. 4 55. 0 58. 6	-2.7 -2.5 -2.7	45. 8 48. 0 46. 1	+1.4 +2.0 +1.5	36. 8 38. 1 36. 9	+1.9 +1.4 +1.8	54. 2 55. 7 54. 4	+0.5 +0.7 +0.5

## KILLING FROSTS, 1929

Stations		irst in utumn	Stations	Last in spring	First in autumn	Stations	Last in spring	First in autumn
Maryland Aberdeen Annapolis Baltimore Bell Boyds Sambridge Cecilton Cheltenham Chewsville Clear Spring Oolege Park Crisfield Darlington Caston Elkton Caston Cletton Cheltenham Chewsylle Clear Spring College Park Crisfield Caston Clear Spring Crisfield Caston Caston Caston Caston Caston Caston Commitsburg Caston Commitsburg Commi	Mar. 18 No Mar. 19 Oc Apr. 30 Oc Apr. 30 Oc Mar. 18 Oc Mar. 18 Oc May 17 Oc May 17 Oc Mar. 18 No Apr. 30 Oc Mar. 18 No Apr. 30 Oc Mar. 18 Oc Apr. 30 Oc Mar. 18 Oc Apr. 30 Oc Mar. 18 Oc Apr. 30 Oc Apr. 2 Oc Apr. 2 Oc	et. 18 et. 9 et. 9 et. 11 et. 11 et. 9 et. 9 ov. 10 et. 11 ov. 10 ept. 19	Friendsville Frostburg Grantsville Great Falls Hanoock Keedysville Laurel Lutherville Maryland Line Mechanicsville Millington Newburg Oakland Pleasant Hill Pocomoke City Princess Anne Public Landing	May 17 May 23 Apr. 30 May 17 May 17 Mar. 29 Apr. 23 Apr. 18 Mar. 18 Mar. 18 Mar. 18 Mar. 23 May 17 Apr. 23 Apr. 23 Apr. 23 Apr. 23	Oct. 11 Sept. 19 Sept. 19 Sept. 19 Oct. 11 Sept. 19 Oct. 11	Maryland—Continued Rock Hall Salisbury Sines Solomons State Sanatorium Stevensville Takoma Towson Western Port Westminster Woodstock District of Columbia Washington Belaware Bridgeville Delaware City Dover Milford Millsboro Wilmington	Apr. 23 May 23 Mar. 18 Apr. 2 Mar. 18 Apr. 23 May 17 Apr. 2 Apr. 30 Mar. 18 Mar. 18 Mar. 18 Mar. 18 Apr. 23 Apr. 23	Oct. 11 Sept. 19 Nov. 10 Oct. 18 Nov. 10 Oct. 11 Sept. 19 Oct. 11 Oct. 9 Nov. 10 Oct. 11