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

CHARLES F. MARVIN, Chief

In Cooperation with Maryland State Weather Service

## CLIMATOLOGICAL DATA

15	MARYI	INA DNA	D DELAWARE SEC	ПОИ
	JOHN R.	WEEKS, Me	eteorologist and Section D	irector
		PRICE: 5 CENT	S A COPY; 50 CENTS A YEAR	
Vol.	XXXVI	BALTIMO	RE, MD., YEAR 1931	No. 13

#### GENERAL SUMMARY

This was the warmest year in a decade and the third warmest of record. The mean temperature, 2° warmer than normal, was but 0.6° less than in 1921, the warmest year of record, and 0.1° less than in 1913, the second warmest year. The maximum temperature was not unusually high, being 103° on July 1, at Cumberland; nor was the minimum temperature unusually low, being -8° on January 22, at Oakland. January, February, and October were mild; March was cold; April was cool; May was slightly cooler than normal; June and August were slightly warmer than normal; July and September were very warm; November and December were exceptionally mild, November being the mildest such month of record. September to December, inclusive, produced a mean temperature 5.4° above normal.

Annual precipitation averaged 95 per cent of normal and was 14.9 inches greater than in 1930, the driest year of record. The excess over 1930 was due to an unusual number of heavy showers and rains, spaced at intervals beneficial to crops. Aside from these, rainfall was less than in 1930. Seventy-eight per cent of the annual precipitation occurred from March to September, inclusive. The very severe drought that began in December, 1929, terminated in February, 1931. During this 15-month period precipitation totaled but 29.58 inches, which is 21.51 inches less than the normal, or 58 per cent of the normal. Precipitation was markedly deficient in January, February, October, and November; somewhat deficient in April, June, September, and December. It was abundant in March, somewhat abundant in July, and exceptionally so in August. Springs and wells improved during the second half of March, but were low again from August to December.

Snowfall was very light, except well above normal in March and normal in April. The annual amount was 47 per cent of normal. The only heavy snowstorm was at night of March 16-17, and embraced the central and east-

Sunshine was abundant in January, June, September, and October; deficient in March, May, August, and December; and near normal in February, April, July, and November.

Yields of crops, fruits, and hay were good to excellent, except the late potato crop was light. The peach crop was very heavy on Eastern Shore.-J.B.,jr.

### CONDENSED SUMMARY OF CLIMATOLOGICAL DATA, 1931.

	Tem	erati	ıre	Pre	cipitat	ion :	Numl	e <b>r</b> (	of d	ays	direction
Months	Mean	Highest	Lowest	Average	Greatest in 24 hours	Snowfall	With 0.01 inch or more of precipitation	Clear	Partly cloudy	Cloudy	Prevailing directions of wind
January. February March April May June July August September October November December	34.6 36.6 39.3 51.4 62.3 70.8 77.6 73.8 72.2 59.3 51.8 42.8	66 65 65 84 95 102 103 101 100 91 80 72	-8 7 14 18 23 35 44 40 30 22 16	1. 68 1. 67 4. 38 3. 08 4. 50 3. 43 4. 53 7. 70 2. 54 1. 78 0. 94 2. 45	1.38 1.15 1.90 2.02 2.31 4.00 4.42 5.50 3.30 1.85 1.02 2.00	1.4 0.7 7.4 1.4 T. 0.0 0.0 0.0 0.0 T. 0.8 0.6	5 8 13 9 13 8 12 15 8 6 6	13 13 7 15 10 15 10 18 17 11 10	10 6 12 10 11 11 11 8 9	10 14 9 5 5 10 4 5	nw.

	KII	LING	ROSTS, 1931.	**	•
Stations	Last in Spring	First in Autumn	Stations	Last in Spring	First in Autumn
Maryland.			Maryland (con,t.)		
AberdeenAnnapolis	Apr. 30 Apr. 30	Nov. 7	MillingtonOakland	Apr. 30 May 4	Oct. 19 Sept. 29
Baltimore	Apr. 30	Nov. 7	Picardy	Apr. 30	Oct. 13
Bell	Apr. 30	Oct. 13	PicardyPleasant Hill	Apr. 30	Oct. 13
Bovds	Apr. 30	Oct. 13	Pocomoke City	Apr. 30	Oct. 19
Cambridge	Apr. 30	Nov. 5	Princess Anne	Apr. 30	Oct. 19
Cecilton	Apr. 30	Nov. 7	Ridgely	Apr. 30	Nov. 5
Cheltenham		Nov. 5	Rock Hall	Apr. 30	Nov. 7
Chewsville	May 4	Oct. 13	Salisbury	Apr. 30	Nov. 5
Coleman	Apr. 30	Nov. 7	Sines	May 4	Sept. 30
College Park Crisfield	Apr. 30	Oct. 13 Nov. 7	Solomons State Sanatorium	Apr. 30	Nov. 7
Cumberland	Apr. 30 Apr. 30	Nov. 7 Oct. 13	State Sanatorium		Nov. 7
Darlington	Apr. 30 Apr. 30	Oct. 18	Takoma		Nov. 7
Easton	Apr. 30	Nov. 5	Towson		Nov. 7
Elkton	Apr. 30	Oct. 13	Western Port	May 4	Oct. 13
Emmitsburg	Apr. 30	Nov. 7	Westminster	Apr. 30	Oct. 19
Fallston	Apr. 30	Nov. 7	Woodstock		Oct. 13
Ferry Landing	Apr. 30	Nov. 7	•		
Frederick		Oct. 13	District of Columbia.		
Friendsville	May 4	Oct. 13	11.		
Frostburg	Apr. 30	Oct. 13	Washington	Mar. 21	Nov. 7
Grantsville	May 4	Sept. 29	D-1		
Great Falls	Apr. 30 May 4	Oct. 13 Oct. 13	Delaware .		ŀ
Hancock Keedysville		Oct. 13	Bridgeville	Ann 90	Nov. 5
La Plata		Nov. 5	Delaware City	Apr. 30	Nov. 7
Laurel		Oct. 18	Dover	Apr. 30	Nov. 7
Lutherville		Oct. 13	Milford	Apr. 30	Nov. 5
Maryland Line	Apr. 30	Nov. 7	Millsboro	Apr. 30	Nov. 5
Mechanicsville	Apr. 30	Nov. 5	Wilmington	Apr. 30	Nov. 7
	[	1		[•	

### COMPARATIVE DATA FOR MARYLAND AND DELAWARE

	,	<b>T</b> emper	ature				Pre	cipitati	on		٠
Years	Mean	Departure from the normal	Highest	Lowest	Average	Departure from the normal	Greatest local	Least local	Greatest in 24 hours.	Snowfail	Number of days with 0.01 inch or more
1895	52. 6 54. 0 53. 6 54. 9 53. 5 55. 0	$ \begin{array}{r} -1.3 \\ +0.1 \\ -0.3 \\ +1.0 \\ -0.4 \\ +1.1 \end{array} $	102 103 102 109 102 106	-18 -13 -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 5.93 5.35 5.53	29.9 23.0 18.4 21.6 40.3 26.8	94 92 109 109 98
1901 1902 1903 1904 1905 1906 1907 1908 1909 1910	52. 6 53. 6 53. 3 51. 2 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	$\begin{array}{c} -15 \\ -17 \\ -12 \\ -20 \\ -20 \\ -15 \\ -29 \\ -21 \\ -5 \\ -15 \end{array}$	45. 08 49. 20 46. 94 36. 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 1919	54.9 53.3 56.1 53.4 54.1 53.2 51.3 53.8 54.9 53.3	$\begin{array}{c} +1.0 \\ -0.6 \\ +2.2 \\ -0.5 \\ +0.2 \\ -0.7 \\ -2.6 \\ -0.1 \\ +1.0 \\ -0.6 \end{array}$	106 102 102 102 103 101 102 109 105 98	- 5 -40 - 6 -21 - 6 -11 -32 -30 -19 -10	43. 61 43. 42 88. 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	83, 62 35, <b>50</b> 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 35. 7 31. 4 11. 9 20. 0	119 112 108 98 107 112 110 98 114 113
1921 1922 1923 1924 1925 1926 1927 1928 1929 1930 1931	56.6 55.0 54.4 52.6 54.6 52.8 54.4 54.0 54.4 55.0 56.0	+2.7 +1.1 +0.5 -1.3 +0.7 -1.1 +0.5 +0.1 +0.5 +1.1 +2.0	102 100 102 103 104 107 100 100 102 110	-15 -15 - 9 -13 -31 -16 - 5 -11 -13 -20 - 8	37. 72 40. 15 40. 27 46. 26 34. 91 43. 90 40. 37 45. 99 42. 46 23. 78 38. 68	$\begin{array}{c} -3.78 \\ -1.45 \\ -1.23 \\ +4.76 \\ -6.59 \\ +2.40 \\ -1.13 \\ +3.59 \\ +0.94 \\ -17.72 \\ -2.25 \end{array}$	54. 12 55. 65 50. 38 52. 70 48. 37 54. 02 53. 56 55. 38 55. 60 33. 52 47. 90	28. 89 24. 39 31. 47 37. 41 27. 87 32. 08 27. 89 34. 92 33. 09 17. 76 29. 91	5. 60 6. 75 5. 17 4. 53 5. 25 6. 54 3. 92 11. 66 4. 58 3. 25 5. 50	20, 5 34, 8 22, 0 30, 5 23, 0 24, 6 15, 3 25, 4 20, 0 22, 4 12, 3	114 111 115 111 112 128 125 118 117 94

# Climatological Date for the Year 1931

		<del>  .</del>	[ :	Гетре	erature	, degrees	Fahre	nheit	1		Pr	ecipitat	ion			ļ	[	Sky		
Stations	Counties	Elevation, fest	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	Prevailing direction of wind
Maryland Aberdeen Annapolis Baltimore (U.S.W.B.) Bell § Boyds Cambridge (near) Cecilton Cheltenham Chewsville Coleman § College Park Crisfield Cumberland Darlington Easton Elkton Emmitsburg Fallston § Ferry Landing § Ferry Landing § Frederick Friendsville Graat Falls § Hancock (Tonoloway) Hancock (Tonolow	Prince Georges Montgomery Dorchester Cecli Prince Georges Washington Kent Prince Georges Somerset Allegany Harford Talbot Cecli Frederick Harford Calvert Frederick Garrett Allegany Garrett Montgomery Washington do Charles Prince Georges Baltimore Baltimore Baltimore St. Marys Kent Garrett	200 455 421 400 190 320 340 840 165 27	18 666 661 11 12 28 13 13 13 14 14 15 5 662 15 57 18 32 12 15 5 66 10 17 26 4 40 23 5 5 33 35 26 16 17 17 18 18 18 18 18 18 18 18 18 18 18 18 18	55. 8 57. 7 59. 2 55. 8 55. 8 56. 7 56. 6 56. 7 56. 6 56. 7 56. 6 56. 8 57. 4 56. 9 56. 8 56. 8 57. 4 56. 9 56. 8 56. 8 57. 8 56. 9 56. 8 56. 8 56. 8 56. 9 56. 8 56. 8 56. 9 56. 9	97 96 1011 99 98 98 98 99 97 100 95 103 98 99 92 100 100 100 98 81 101 102 98 98 101 102 98 98 99 99 99 99 99 99 99 99 99 99 99	Aug. 1 July 30 July 1 July 1 July 1 July 1 July 1 July 1 July 30 July 30 July 30 July 30 July 1 July 2 July 2 July 2 July 2 July 1 July 2 July 2 July 1 July 30 July 1 Aug. 8 July 2 Aug. 8 July 30 July 1 Aug. 8 July 30 July 30 July 4 Aug. 8 July 4 Aug. 8 Aug.	10 14 19 5 7 13 15 15 10 10 15 5 7 7 14 19 9 11 16 —22 8 8 —2 7 6 6	Jan. 10 Jan. 16 Jan. 22 Jan. 23 Jan. 22 Jan. 22 Jan. 28 Jan. 29 Jan. 29 Jan. 29 Jan. 20 Jan. 16	138 6111 122 38 313 314 444 122 625 157 7 133 32 1 15 7 26 38 32 1 15 7 26 38 32 1 15 7 26 38 32 2 61	34. 91 42. 30 39. 57 38. 14 46. 04 46. 04 46. 04 47. 02 34. 38 40. 02 34. 21 47. 02 34. 36 57, 11 39. 96 36. 78 47. 90 36. 78 47. 90 36. 78 47. 90 37. 165 38. 90 44. 47 47. 02 48. 20 49. 20 40 40 40 40 40 40 40 40 40 40 40 40 40	7. 95 9. 61 7. 98 9. 36 4. 99 14. 49 14. 49 15. 25 16. 64 10. 69 15. 25 16. 64 10. 69 16. 68 17. 88 18. 88 19. 88 19. 88 10. 68	Aug. Aug. Aug. Aug. Aug. Aug. Aug. Aug.	0. 83 1. 09 1. 13 0. 88 0. 87 1. 09 1. 13 0. 62 0. 81 1. 74 0. 62 0. 82 1. 62 0. 82 0. 82	Sept. Nov. Nov. Nov. Nov. Nov. Nov. Nov. Nov	5.5 6.8 4.9 8.4 4.9 9.0 11.0 0.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6.0 6	106 105 110 107 122 89 108 130 813 120 818 132 87 100 101 103 104 104 105 106 107 107 107 107 107 107 107 107 107 107	112 147 127 155 170 169 169 162 166 167 161 161 163 163 173 161 163 163 173 164 165 165 165 165 165 165 165 165 165 165	111 107 115 114 109 112 118 118 118 118 118 118 118 118 118	142 1111 123 96 86 95 107 91 93 88 96 99 93 104 96 99 103 88 87 77 66 89 99 91 103 88 89 99 91 103 88 89 99 91 90 91 88 91 91 88 91 91 91 88 91 91 91 91 91 88 91 91 91 91 91 91 91 91 91 91 81 91 91 91 91 91 91 91 91 91 91 91 91 91	Se. Se. SW. NW. SW. NW. SW. SW. W. SW. NW. SW. SW. NW. SW. SW. NW. SW. SW. SW. SW. SW. SW. SW. SW. SW. S
District of Columbia Washington (U.S.W.B.)		112	61	58.2	99	June 20	16	Jan. 16	61	33, 51	5. 92	Aug.	1.01	Nov.	1.0	121	126	115	124	nw.
Delaware Bridgeville Delaware City Dover Milford Milford Willsboro Wilmington	Sussex New Castle Kentdo Sussex New Castle	45 12 34 20 20 86	8 45 42 39 29 29	57. 5 57. 4 57. 4 57. 7 57. 8 55. 7	98 99 99 101 101 97	Aug. 3* Aug. 3* July 1* Aug. 3 Aug. 3 July 1	13 13 15 13 13	Jan. 16 Jan. 15 Jan. 16 Jan. 16 Jan. 15	8 41 42 49 39 38	38.02 39.73 43.46 40.89 43.17 40.87	8.37 10.20 11.51 9.99 10:68 8.53	Aug. Aug. Aug. Aug. Aug.	0.91 0.65 1.12 0.97 0.85 0.68	Nov. Nov. Nov. Nov. Nov.	10.0 5.7 8.7 10.0 8.0 5.0	101 83 103 107 93 99	182 170 180 174 174 167	101 80 90 112 106 82	82 115 95 79 85 116	nw. nw. sw. s. nw. nw.
For Maryland and District of Columbia For Delaware For entire section				55.9 57.2 56.0	103 101 103	July 1 Aug. 8 July 1	-8 12 -8	Jan. 22 Jan. 15 Jan. 22		38. 44 40. 95 38. 68	14. 49 11. 51 14. 49	Aug. Aug. Aug.	0.34 0.65 0.34	Nov. Nov. Nov.	12.9 8.0 12.3	111 98 111	153 174 154	112 96 111	100 95 100	sw. sw.

<sup>\*</sup>Also on other dates. 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; || Drum Point Light Station.

Monthly and Annual Precipitation for the Year 1931, with Departures from the Normal  January February March   April   May   June   July   August   September   October   November   December   Annual Precipitation for the Year 1931, with Departures from the Normal													
	January		March	April	Мау	`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
Maryland Aberdeen Annapolis Battimore (U.S.W.B.) Bell Boyds Cambridge (near) Cecilton Cheltenham Chewaville Coleman Colege Park Crisheld Cumberland Darlington Easton Elkton Elkton Emmitsburg Fallston Ferry Landing Frederick Friendsville Great Falls Hancock (Tonoloway) Hancock (City) Keedysville La Plata Laurel Laure	2. 03 -0.81 1.78 -1.6 1.89 -1.61 1.95 -1.22 1.39 -1.42 1.79 -1.77 1.48 -1.6 1.74 -1.75 1.48 -1.3 1.49 -1.7 1.95 -1.2 0.99 -1.44 2.35 -1.0 1.88 -1.3 2.28 -1.3 1.81 -1.4 2.20 -0.9 1.74 -1.6 1.45 -1.6	1. 80 -1. 17 1. 555 -1. 88 1. 41 -1. 98 1. 43 -1. 36 1. 53 -1. 44 1. 70 -1. 88 2. 00 -1. 22 1. 62 -1. 26 1. 62 -1. 26 1. 62 -1. 44 1. 52 -1. 64 1. 55 -0. 98 1. 38 -1. 38 1. 38 -1. 38 1. 38 -1. 38 1. 36 -1. 38 1. 40 -1. 44 1. 57 -2. 06 2. 55 -0. 55 1. 70 -1. 44 1. 57 -2. 06 1. 10 -1. 44 1. 57 -2. 06 1. 10 -1. 44 1. 59 -0. 44 1. 10 -0. 44 1	4. 42 +1.76 3. 87 +0.0 4. 62 +0.91 4. 17 +1.11 3. 51 +0.6 4. 27 +1.11 3. 61 +0.6 4. 27 +1.11 3. 61 +0.6 3. 92 +0.46 4. 4.0 +0.73 4. 33 +0.73 4. 33 +0.73 4. 38 +1.0 5. 31 +1.6 4. 38 +1.0 5. 57 +1.6 4. 38 +1.0 5. 57 +0.1 3. 78 +0.1 3. 78 +0.1 3. 78 +0.1 3. 78 +0.1 3. 78 +0.1 3. 85 -0.1 3. 85 -0.2 3. 34 +0.2 3. 34 +0.2 3. 38 +0.6 4. 38 +0.0 3. 3. 39 +0.6	5 2. 34 — 1. 36 4 3. 23 — 0. 41 2 2. 77 — 0. 57 3 2. 56 — 1. 56 2 2. 71 — 0. 95 3 2. 59 — 0. 36 3 2. 59 — 0. 36 3 2. 59 — 0. 36 3 2. 77 — 0. 27 5 2. 77 — 0. 27 6 2. 77 — 0. 27 6 2. 77 — 0. 27 9 2. 79 — 0. 68 2 2. 55 — 1. 68 2 2. 55 — 1. 68 3 2. 57 — 0. 51 3 2. 57 — 0. 51 3 2. 57 — 0. 51 5 2. 55 — 1. 68 5 2. 55 — 1. 68 6 3. 64 — 0. 97 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	4. 29 +1.73 4. 20 +0.18 5. 80 +2.22 4. 55 +1.11 2. 70 -0.03 4. 08 +1.05 4. 49 +1.07 4. 48 +1.01 4. 44 +0.77 3. 86 +0.14 4. 44 +0.77 3. 86 +0.14 4. 47 +1.12 3. 20 +1.33 3. 3. 45 +0.14 4. 44 +1.22 3. 20 +1.33 3. 86 +0.23 4. 77 +1.43 4. 44 +1.22 3. 20 +1.33 3. 86 +0.23 4. 77 +1.43 4. 44 +1.23 3. 20 +1.33 3. 86 +0.24 4. 55 +1.11 4. 53 +1.11 5. 53 +1.13 6. 29 +3.07 7. 4. 95 +1.13 5. 53 +1.13 6. 29 +3.07 7. 4. 95 +1.13 6. 29 +3.07 7. 4. 95 +1.13 6. 35 +1.13 6. 36	3 1.99 -1.77 6 4.55 +0.33 1.89 -1.99 9 4.08 +0.60 3 4.84 +1.05 3 5.56 -0.11 2.99 -0.77 3 5.56 -0.11 1.292 -1.20 1.292 -1.20 1.292 -1.20 1.292 -1.20 1.292 -1.20 1.292 -1.20 1.293 -0.77 1.292 -1.20 1.292 -1.20 1.292 -1.20 1.292 -1.20 1.293 -0.70 1.292 -1.20 1.292 -1.20 1.293 -0.70 1.293 -0.70 1	4.79 +0.0 3.7.37 +2.8 6.6.44 +1.4 9.8.60 -0.6 4.90 +1.9 9.1 1.7.78 +3.4 1.7.84 +3.9 1.7.84 +3.9 1.8.33 -0.8 1.8.33 -0.8 1.8.35 -0.1 1.8.35 -0.1 1.8.35 -0.1 1.8.35 -0.1 1.8.35 -0.3 1.8.35 -0.3 1.8.	7. 95 + 8. 5. 4 9. 61 + 4. 9. 61 + 4. 9. 61 + 4. 9. 61 + 4. 9. 61 + 4. 9. 9. 10. 61 + 4. 9. 9. 10. 61 + 4. 9. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	4 0.83 - 2.41 3 1.96 - 2.43 1 2.05 - 1.32 5 2.38 - 0.92 2 2.82 - 0.25 9 1.59 - 1.93 3 2.75 - 0.45 7 2.42 - 0.70 3 0.94 - 2.23 4 4.99 + 1.22 2 3.18 + 0.46 5 2.59 - 0.47 1 1.09	1.20 -1.0 1.48 -1.7 1.79 -1.1 1.00 -1.7 1.85 -0.5 2.72 -0.4 2.30 -0.1 2.30 -0.1	5 0.88 - 1.44   5 1.09 - 1.8   6 1.09 - 1.8   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.4   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.38 - 1.5   7 1.58 - 1.58	2 39 -0.00 1 2 21 -1.2 2 13 -0.3 3 2 20 -1.1 3 2 13 -0.3 3 2 20 -1.4 4 2 13 -0.3 3 2 39 -0.3 4 1 91 -0.7 7 2 19 -0.8 3 2 19 -0.8 3 1 .98 -1.3 3 1 .98 -1.3 3 2 12 -1.4 3 2 12 -1.4 3 2 12 -1.4 4 .99 -1.0 5 2 27 5 2 12 -1.4 2 3 .03 +0.1 5 1 5.04 -1.1 4 .99 -1.0 6 1 1.90 -1.0 6 2 .05 -0.5 6 2 1.2 -1.4 2 3 .03 +0.1 4 .99 -1.0 6 3 1.76 -0.8 8 1 .76 -0.8 8 1 .76 -0.8 8 1 .76 -0.8	384. 91 — 2. 99 942. 30 — 2. 97 938. 14 — 0. 99 938. 14 — 0. 99 938. 11 — 2. 8 938. 14 — 0. 99 938. 14 — 0. 99 938. 14 — 0. 19 938. 15 — 3. 98 942. 74 + 0. 11 938. 35 — 3. 38 940. 02 — 1. 98 947. 02 + 6. 6 947. 02 +
Maryland Line Mechanicsville Millington Oakland. Parkton (Prettyboy Dam) Picardy Pleasant Hill Pocomoke City Princess Anne Ridgely Rock Hall Salisbury Sines (Deep Creek) Solomons (Drum Pt. Lt. St.) State Sanatorium Stevensville Takoma Towson. Western Port Westminster Woodstock.	1. 85 1. 70 1. 68 1. 68 1. 88 – 1. 5 1. 66 – 2. 3 0. 71 1. 72 1. 59 – 1. 0 1. 87 – 1. 2 1. 68 – 1. 3 1. 75 – 1. 6 1. 75 – 1. 6 1. 75 – 1. 6 1. 75 – 1. 6 1. 70 – 1. 7 2. 09 – 1. 7 2. 09 – 1. 7 1. 1. 20 – 1. 7 1. 1. 20 – 1. 7 1. 1. 20 – 1. 7 1. 20 – 1. 1 1. 36 – 1. 1 1. 72 – 1. 2 1. 36 – 1. 3 1. 36 –	1. 38 1. 76 1. 35 1. 96 - 1. 3 1. 96 - 1. 3 1. 96 - 1. 3 1. 22 - 2. 0 1. 46 - 2. 0 1. 48 - 1. 5 2. 01 - 1. 3 3. 1. 44 - 1. 7 3. 31 1. 75 - 1. 1 1. 55 - 1. 4 1. 57 - 1. 3 1. 1. 72 - 0. 6 3. 1. 22 - 2. 0	5.15 3.82 5.36 + 1.6 5.36 + 1.6 5.36 + 1.6 5.36 + 1.6 6.3.29 4.68 5.3.99 + 0.2 5.02 + 1.6 6.3.99 + 0.2 6.4.22 + 1.6 6.3.77 - 0.2 4.00 6.5.31 + 2.1 6.4.90 + 1.1 6.4.90 +	2 91 2 91 3 11 3 11 3 11 2 2 55 -1 0 2 4 52 +0 3 3 02 +0 0 3 02 +0 0 5 3 15 -0 3 1 3 21 -0 1 1 2 25 -0 8 1 2 25 -0 8 1 3 27 -0 8 2 93 -0 7 3 82 3 14 3 2 7 -0 8 3 93 -0 7 3 82 5 3 56 -0 3 3 14 9 3 97 +1 0 9 3 97 +1 0 5 2 66 -0 7 5 2 19 -1 0	4.77 3.76 3.65+0.6 5.27 3.65+0.6 4.71 5.18 3.3.92+1.8 3.4.92+1.8 3.4.92+1.8 3.4.12+1.15 5.98 4.12+1.15 5.98 4.12+1.15 5.98 4.12+1.16 5.98	4.82 3.45 5.47 9.8.30 — 0.33 9.2.84 — 1.71 1.78 2.42 7.1.59 — 1.77 9.4.20 + 0.40 9.8.51 — 0.22 3.2.80 — 0.23 3.2.80 — 0.23 4.401 9.2.55 — 0.23 9.2.55 — 0.23 9.2.50 — 1.33 9.2.50 — 1.33	3. 85	6.81 7.38 8.63 110.62+5.9 9.5.66+1.3 8.47 5.84 15.84 15.84 15.84 15.84 15.84 16.78 17.87 18.17 18.17 18.17 19.18 19.1	1.27 3.19 3.29 4.1.71 - 1.81 3.29 2.48 2.48 2.48 1.73 1.15 2.222 - 0.93 2.20 4.77 + 1.95 2.222 - 0.93 4.88 1.55 - 1.91 0.3.09 - 0.89 1.41 2.32 9.10 - 2.32 9.10 - 2.32	$\begin{array}{c} 1.68 \\ 1.23 \\ 1.23 \\ 1.98 \\ 1.98 \\ 1.98 \\ 1.98 \\ 1.98 \\ 1.98 \\ 1.04 \\ 1.98 \\ 1.04 \\ 1.98 \\ 1.04 \\ 1.04 \\ 1.04 \\ 1.04 \\ 1.05 \\ 1.$	0. 86 0. 62 0. 97 0. 97 1. 0. 97 1. 0. 64 0. 62 0. 62 1. 0. 10 1. 0.	1.96 2.19 2.95 5.1.87 - 1.77 5.1.87 - 1.78 2.32 2.08 2.36 2.36 2.36 2.33 - 0.87 2.01 - 1.34 4.63 2.04 - 0.87 2.07 - 1.37 4.63 2.07 - 1.37 2.07 - 1.37 2.07 - 1.37 2.07 - 0.87 2.07 - 0.87	35. 91
Washington (U.S. W.B.)  Delaware  Bridgeville Delaware City Dover Milford Millsboro Wilmington  For Mayylend and Dis	1.56 -1.9 1.93 -1.5 2.20 -0.5 1.98 -1.2 2.05 -1.4 1.84 -1.5 2.40 -1.0	1.36 -1.9 1.33 -2.11 1.65 -1.0 1.46 -1.8 1.51 -2.0 1.54 -2.0 1.72 -1.6	3.50 -0.2 2.4.58 +0.8 4.90 +1.7 5.74 +1.7 5.92 +1.9 5.97 +2.1 4.34 +0.96	5 2.87 -0.46 4 3.16 -0.44 9 2.89 -0.46 6 3.07 -0.5 2 3.61 +0.06 5 4.51 +0.86 6 2.63 -0.86	4.84 +1.14 4.8.98 +0.84 5.4.17 +0.98 4.26 +0.78 4.26 +0.78 4.3.59 0.00 5.4.90 +1.58 6.4.55 +1.00	4 2.12 -2.0 4 8.49 -0.3 8 4.23 +0.4 9 8.92 +0.4 9 2.88 -0.7 3 3.29 -0.4 4.72 +0.96	1 4.23 -0.4 5 2.63 -2.6 3 2.92 -0.7 2 2.73 -1.9 9 3.07 -1.4 3 2.12 -2.5 5 5.24 +0.1	8 5.92 +1.9 4 8.37 +3.8 4 10.20 +6.2 1 11.51 +6.8 6 9.99 +5.4 5 10.68 +5.6 7 8.53 +3.9	1 2.79 - 0.45 9 2.23 - 0.98 3 0.97 - 2.33 9 1.83 - 1.81 1 2.25 - 1.18 7 3.50 + 0.56 0 1.24 - 2.33	3. 05 — 0.1 2. 50 — 0. 0 3. 40 + 0. 5 2. 76 — 0. 4 1. 93 — 1. 3 2. 00 — 1. 15	6 1.01 -1.3 9 0.91 -1.7 5 0.65 -1.5 4 1.12 -1.9 7 0.97 -2.0 8 0.85 -1.7 2 0.68 -2.19	7 2.36 -1.05 8 2.45 -1.05 7 2.44 -0.86 9 2.29 -1.42 9 2.04 -1.75 9 2.32 -1.36	288.02 -5.9 339.73 +1.5 548.46 +0.2 240.89 -3.4 243.17 -0.7 940.37 -3.4
For Maryland and District of Columbia For Delaware For entire section	1.64 -1.5 2.07 -1.2 1.68 -1.5	1.69 -1.30 1.54 -1.70 1.67 -1.4	4.28 +0.8 5.24 +1.5 4.38 +0.9	8 3.05 -0.52 7 3.31 -0.22 5 3.08 -0.49	4.54 +1.18 4.24 +0.79 4.50 +1.18	3, 38 -0. 58 3, 76 +0. 08 3, 43 -0. 50	3 4.70 +0.5 3 3.12 -1.5 4.53 +0.3	7. 44 + 3. 1 2 9. 88 + 5. 3 2 7. 70 + 3. 3	6 2.61 -0.60 3 2.00 -1.35 9 2.54 -0.68	1. 69 —1. 1' 2. 61 —0. 4 1. 78 —1. 10	7 0.95 -1.57 4 0.86 -1.89 0 0.94 -1.63	2.47 — 0.64 9 2.32 — 1.25 1 2.45 — 0.7	$ \begin{vmatrix} 38.44 - 2.2 \\ 40.95 - 1.9 \\ 38.68 - 2 2 \end{vmatrix} $

Figures in italics determined from surrounding stations,

	:	Mont	hly a	and A	Annu	al M	ean '	Temp	erat	ures :	for t	he Y	ear 1	931,	wit	h Der	partu	res f	rom	the :	Norm	al				
	Jan	uary	Februa		iry March		April			May	Jt	ine	J:	July		igust	Sept	ember	Oc	October		ember	December		Annua	
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). Cecilion Cheltenham Chewsville. Coleman College Park. Crisfield Oumberland Darlington Easton Elkton Emmitsburg Fallston Ferry Landing Frederick Friendsville Frostburg. Grantsville Great Falls Hancock (Tonoloway) Keedysville La Plata La urel Lutherville Maryland Line Millington Oakland Parkton (PrettyboyDam) Picardy Princess Anne Ridgely Rock Hall Salisbury Sines (Deep Creek) Solomons (DrumPt Lt. St) State Sanatorium Stevensville Takoma Western Port Woodstock.	33. 6 37. 0 35. 0 36. 4 33. 2 35. 0 36. 2 32. 4 35. 0 36. 2 32. 4 36. 2 36. 3 36. 4 36. 2 36. 2	+1.9 +4.8 +1.0 +1.1 +1.1 +1.1 +1.1 +1.1 +1.1 +1.1	38. 4. 6. 6. 2. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3. 3.	+3.4 +4.5 +4.5 +4.5 +4.5 +3.6 +3.6 +3.6 +3.6 +3.6 +3.6 +4.5 +4.5 +4.6 +4.6 +4.6 +4.6 +4.6 +4.6 +4.6 +4.6	41. 2 41. 9 41. 2 41. 9 41. 2 42. 0 43. 8 4 42. 0 43. 8 4 42. 0 44. 8 43. 8 4 42. 0 44. 8 43. 8 4 42. 0 44. 8 4 43. 8 4 44. 0 44. 0 4 44. 0 4 44. 0 4 44. 0 4 44. 0 4 44. 0 4 44. 0 4 44. 0 44. 0 4 44. 0 44	-2.1 (	52. 8 9 5 6 5 2 2 2 2 2 2 5 5 1 5 5 2 5 5 1 5 5 2 5 5 2 5 5 2 5 5 5 5	-1.2 -1.2 -1.2 -1.3 -1.2 -1.1 -1.1 -1.1 -1.1 -1.1 -1.1 -1.1	62.1 0 0 2 4 6 0 2 2 2 4 6 0 2 2 2 4 6 0 2 2 2 2 4 6 0 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	$\begin{array}{c} -1.3 \\ +0.81 \\ +0.31 \\ +0.11 \\ +0.11 \\ +0.12 \\ +0.11 \\ +0.12 \\ +0.12 \\ +0.13 \\ +0.12 \\ +0.14 \\ +0.13 \\ +0.12 \\ +0.14 \\ +0.14 \\ +0.15 \\ -1.14 \\ -0.11 \\ +0.15 \\ -1.14 \\ -0.15 \\ -1.14 \\ -0.15 \\ -1.14 \\ -0.15 \\ -1.14 \\ -0.15 \\ $	71. 48 671. 94 71. 48 671. 94 71. 148 69. 48 71. 148 69. 48 71. 158 71. 188 71. 188 71	0.0 0.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4.1 4	78. 8 81. 0 77. 68. 8 78. 2 78. 2 78. 2 78. 2 77. 0 77. 0 77. 0 77. 1 77. 1 77. 1 77. 2 77. 2 77. 2 77. 2 77. 2 77. 2 79. 6 79. 8 79. 6 79. 79. 6 79. 8 79.	+1.18 + +2.14 +2.14 +2	75. C 7. 74. 77. 77. 77. 77. 77. 77. 77. 77.	$ \begin{array}{c} -0.5 \\ +1.6 \\ +$	76. 2 77. 3 2 2 77. 3 3 2 77. 3 3 2 77. 3 3 2 77. 3 3 2 77. 3 3 2 77. 3 3 2 77. 3 3 2 77. 3 3 2 77. 3 3 2 77. 3 3 2 77. 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	+3.6.8.2.4.4.4.4.2.4.7.4.5.1.7.4.5.1.7.4.8.8.2.4.4.4.2.0.7.4.5.1.7.4.8.8.6.0.2.7.4.4.8.8.4.4.4.7.7.4.8.4.4.4.8.4.4.4.7.7.4.8.4.4.8.4.4.4.7.7.4.8.8.4.4.4.8.4.4.4.8.4.4.8.4.4.8.4.4.8.4.4.8.4.4.8.4.8.4.4.8	57. 8 61. 6 60. 4 57. 0 61. 6 60. 4 57. 0 63. 8 58. 6 60. 8 58. 2 60. 8 58. 2 60. 4 60. 4	+4	2 b4. 50. 6 6. 6 50. 2 1 50. 4 46. 9 50. 6 52. 4 46. 9 50. 6 53. 0 4 552. 2 50. 6 50. 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	+68.1.7.7.4.0.4.8.5.2.6.6.5.8.6.7.8.2.6.6.5.8.6.7.9.5.9.13.8.8.8.4.4.7.7.9.5.9.13.8.8.8.4.8.3.4.4.1.1.4.5.8.8.4.8.3.4.4.1.4.5.8.8.8.1.4.7.7.5.8.8.8.8.1.4.8.3.4.4.1.4.4.5.8.8.8.1.4.4.8.3.4.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.4.8.8.8.1.4.8.8.1.8.1	46.7.21.48.0.2.46.48.49.49.49.49.49.49.49.49.49.49.49.49.49.	+8.6.5.9.8.4 +8.6.5.9.8.4 +5.7.9.8.4.9.6.8.87 +6.7.5.6.8.8.87 +7.7.7.7.9.7.79.7.79.7.9 +7.7.7.7.9.8.0.6.8.2.6.5.7 +7.7.7.7.9.8.0.6.8.2.6.5.7 +7.7.7.7.9.8.0.6.8.2.6.5.7 +7.7.7.7.9.8.0.6.8.2.6.5.7 +8.7.7.8.8.0.7 +8.7.7.8.8.0.7 +8.7.7.8.8.0.7 +8.7.7.8.8.0.7 +8.7.8.0.7 +8.7.	55. 18. 55. 6. 8. 55. 6. 8. 55. 6. 8. 55. 6. 8. 55. 6. 8. 55. 6. 8. 55. 6. 8. 55. 6. 8. 55. 6. 8. 55. 6. 8. 55. 6. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 55. 56. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8. 8.	+1.8.6.4.1.8.4.1.1
District of Columbia Washington (U.S. W.B.)	37.0	+3.6	39. 4	+4.1	41.3	-1.3	54, 2	+0.9	65. 1	+1.4	73.3	+1.1	79.6	+2.9	75. 6	+0.6	74. 1	+6.0	61. 2	+3.8	54.0	+8.8	44.2	+7.6	58. 2	+3.2
	37. 2 34. 8 36. 2 37. 0 37. 5 33. 6	+1.3	37.8	+3.2 +1.9 +2.2 +2.3	41.3 40.6 40.7 40.6	-0.3 -2.4 -4.3 -3.7	51.8 52.1 52.5 52.0	-0.7 -0.3 -1.1 -1.3 -0.8 -2.1	62. 4 62. 8 62. 9	+0.1 -1.0 -1.1 0.9	73. 0 72. 0 72. 0 71. 7	+0.1	79.9	+2.7 +2.5 +2.8 +3.3 +3.2 +0.9	75. 4 76. 6 75. 8 76. 2 76. 3 74. 2	+1.9 $+1.4$ $+1.3$ $+1.8$	74. 0 73. 6 74. 1 74. 0	+4.9 +5.6 +5.1 +4.8 +5.1 +4.1	61.2	+2.9 +3.9 +4.3 +2.9 +3.6 +2.3	53. 3	+6.6 +7.0	43.6 44.6 45.3	+7.6 +7.9 +7.4	57.4 57.7 57.8	+2.4 $+2.9$ $+2.3$ $+1.9$ $+2.5$ $+1.5$
For Maryland and Dis- trict of Columbia For Delaware For entire section	34, 4 36, 0 34, 6	+1.5	37.3	+2.4	39. 1 40. 6 39. 3	-3.1	51. 9	-1.0 -1.3 -1.0	62.8	-0.1 -0.7 -0.1	71.9	+0.1 -0.1 0.0	77. 5 78. 9 77. 6	+2.5 +2.2 +2.4	73. 6 75. 8 73. 8	+0.6 +1.0 +0.6	72. 0 73. 5 72. 2	+4.4 +4.3 +4.4	60.8	$^{+3.0}_{+2.8}_{+2.9}$	52. 9	+6.8 +6.2 +6.7	44. 4 ·	+7.4	57.2	+2.0 +1.8 +2.0

<sup>.</sup> Figures in italics determined from surrounding stations.

(W.B.O.-2-18-32-1,350)