

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

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In Cooperation with Maryland State Weather Service

# CLIMATOLOGICAL DATA

15 MARYLAND AND DELAWARE SECTION

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### GENERAL SUMMARY

March, 1932, interrupted an unusually long period of decidedly above-normal temperatures, from September, 1931, to February, 1932. March was cold, wet, stormy, and unusually windy; the coldest month since February, 1931; and the coldest March since 1926 and the wettest March since 1912. Monthly sunshine was about 5 per cent above normal. The outstanding features were the rain-sleet-snow and wind storms of 6-7th and 27-28, a brief statement of which will be found on pages 10 and 11.

Warm weather prevailed during the 1st-5th. A severe cold spell from 7-16th produced the lowest temperatures of the year, and the only opportunity for harvesting ice. Minimum temperatures were zero or slightly below on 9th and 16th in the Allegheny Mountain highlands. Temperatures were close to or slightly above normal from 17th to 31st, except cold on 21st and 28th.

Monthly precipitation was unevenly distributed over the section and averaged 1.68 per cent of normal. Totals ranged from slightly below 4 inches to between 7 and 8 inches. Rainfall was heavy, except in the Allegheny Mountain region, on 6th and 27-28th; in the Allegheny Mountain region on 17th; and in southern Maryland and on northern Eastern Shore on 22d.

Monthly snowfall averaged slightly above normal, but was twice the total average for the preceding four months. Snowfall was moderate to heavy in the Blue Ridge and Allegheny Mountain regions on 6th. A very heavy snowfall occurred on 27-28th in the Allegheny Mountain region, with depths 10 to 16.5 inches; this was the heaviest snowstorm in that division since the remarkably heavy one of April 27-28, 1928.

Winter grains turned brown and were damaged slightly during the severe cold spell of 7-16th, while early tree-fruit blossoms in eastern and central divisions were killed. During the third decade winter grains were greening slowly and tree-fruit buds were swelling. During the first and fourth weeks planting of early potatoes, peas, and gardens and sowing of oats and clover were in progress on the southern Eastern Shore.

The surface soil was well saturated and shallow springs and wells were improved at the close of the month. — J. B., jr.

### TEMPERATURE

The monthly mean for the section, 38.5°, is 4.5° below normal. The highest monthly mean was 43.1°, at Crisfield; the lowest, 29.4°, at Sines. The highest temperature was 75° at Cumberland and Hancock on the 30th; the lowest, -4°, at Oakland on the 16th. The greatest monthly range was 69° at Oakland; the least, 48°, at Baltimore and Solomons. The greatest daily range was 47° at Hancock on the 30th.

### PRECIPITATION

The monthly average for the section, 5.78 inches, is 2.34 inches above normal. The greatest monthly amount was 7.76 inches at Friendsville; the least, 3.61 inches at Crisfield. The greatest 24 hours amount was 3.05 inches at Frostburg on the 27-28th. The monthly average snowfall for the section, 5.3 inches, is 0.7 inch above normal. The greatest monthly snowfall was 32.1 inches at Sines; the least, 0.2 inch at Ferry Landing. The number of days with 0.01 inch or more, 10, is normal.

### MISCELLANEOUS PHENOMENA (WITH DATES)

Fogs, dense. — Aberdeen, 22; Princess Anne, 21; State Sanatorium and Washington, D. C., 17.

Geese, wild, from southwest. — Clear Springs, 20.

Halos, solar. — 11, 14, 23, 25, 26, 30.

Robin, first. — Princess Anne, 22.

Sleet, light. — Over section, 6, night 16-17, night 20-21; Oakland, 22; northern-border counties, 28.

Thunder. — Eastern half of section, 6, 22; north-central Maryland, 26; Pocomoke City and Ridgely, 28.

Winds, high. — Northwest, 1, 6-7, 8, 9, 10, 14, 15, 22, 28, 29, 31; northeast, 6; southwest, 19, 26.

### PRESSURE, HUMIDITY, SUNSHINE AND WIND

Stations	Atmospheric pressure reduced to sea level			Mean relative humidity		Sunshine		Wind†							
	Average	Highest	Lowest	8 a. m.	8 p. m.	Hours	Percentage	Average hourly velocity	Direction	Miles	Highest Direction	Date			
Aberdeen, Md.	29.84	30.36	25	28.58	6	80	63	241	65	11.1	nw.	48	nw.	6	
Baltimore Md.	29.86	30.33	30	28.68	6	83	53	249	63	14.2	nw.	47	sw.	7	
Elkins, W. Va.	29.96	30.48	11	28.17	2	68	65	57	129	35	8.3	w.	30	w.	22
Harrisburg, Pa.	29.85	30.30	25	28.86	6	69	57	56	209	56	10.8	nw.	32	w.	22
Norfolk, Va.	29.90	30.37	30	28.35	6	76	53	69	260	70	15.8	s.	56	w.	6
Philadelph. Pa.	29.85	30.38	23	28.54	6	61	56	56	198	53	15.8	nw.	44	ne.	6
Pittsburgh, Pa.	29.92	30.44	11	29.10	22	75	59	62	186	50	12.4	w.	41	w.	22
Wash'ton, D. C.	29.88	30.33	30	28.67	6	69	51	52	201	54	10.5	nw.	36	nw.	6

†Velocity of wind in miles per hour by 4-cup anemometer. \*4 p.m.

### COMPARATIVE DATA FOR MARYLAND AND DELAWARE FOR MARCH

Years	Temperature			Precipitation				Number of days				
	Mean	Highest	Lowest	Average	Greatest local	Least local	Greatest 24-hour rain	Average snow-fall	Rainy	Clear	Partly cloudy	Cloudy
Normals.	43.0	.....	.....	3.44	.....	.....	.....	4.6	10	13	9	9
Extremes.	.....	98	-15	.....	9.36	0.08	4.50	.....	.....	.....	.....	.....
1895	39.9	74	-7	3.10	6.20	1.10	1.55	2.8	10	12	8	10
1896	36.6	74	-13	4.38	6.80	2.18	2.80	12.4	10	14	8	9
1897	44.4	82	12	2.93	5.95	2.04	1.63	0.7	10	12	10	9
1898	47.6	84	7	3.66	8.34	1.17	1.87	1.9	11	10	9	12
1899	41.0	77	-1	4.83	7.42	2.44	2.02	3.7	11	11	7	13
1900	37.4	74	-8	3.27	5.05	1.31	1.80	13.0	9	12	8	11
1901	42.6	88	-9	3.51	6.99	1.13	2.60	1.8	9	10	10	11
1902	44.8	80	3	3.91	5.92	1.82	2.20	1.0	10	13	10	8
1903	49.3	85	15	5.22	9.36	3.00	3.40	0.2	10	11	7	13
1904	41.2	87	5	3.04	4.24	1.13	1.98	1.9	10	11	10	10
1905	45.3	88	-15	3.16	6.86	0.99	1.67	2.0	10	13	8	10
1906	36.9	68	-8	4.97	7.18	2.22	3.98	10.4	7	9	8	14
1907	46.1	93	2	3.26	7.50	1.88	2.60	6.3	9	14	9	8
1908	45.9	85	11	3.00	7.34	1.36	1.80	0.6	10	12	9	10
1909	40.4	80	9	3.70	5.82	1.73	2.80	7.0	11	13	9	9
1910	50.1	89	14	1.25	4.02	0.68	1.98	2.2	5	17	9	5
1911	39.9	77	-5	2.61	4.42	1.28	1.37	9.0	12	13	11	7
1912	39.7	78	-7	6.75	9.08	4.89	3.73	6.7	13	12	9	10
1913	47.4	83	-6	4.47	8.75	2.19	4.95	0.6	10	11	11	9
1914	37.9	80	-14	2.49	4.55	1.15	1.25	15.8	10	12	9	10
1915	36.9	64	3	1.16	2.16	0.43	1.50	4.1	4	18	8	5
1916	35.9	78	-3	3.82	6.84	1.87	2.38	4.6	10	12	8	11
1917	41.2	82	-5	5.46	8.85	2.87	1.97	9.0	18	14	7	10
1918	45.5	84	8	3.59	7.06	1.57	4.50	0.1	9	17	7	7
1919	45.8	78	-14	3.99	5.35	1.79	2.48	0.5	10	17	7	7
1920	43.3	85	-1	3.14	4.61	1.91	2.38	2.6	9	18	5	8
1921	53.7	91	14	2.39	3.71	1.46	2.02	0.1	11	16	10	6
1922	44.3	80	11	4.67	9.22	3.38	3.13	1.9	18	11	6	14
1923	43.4	82	-6	4.39	7.28	1.69	2.54	5.7	11	16	7	8
1924	40.8	77	11	5.02	6.68	3.13	2.68	10.9	10	14	8	9
1925	45.0	82	-3	2.25	3.96	1.15	1.26	0.3	9	15	6	10
1926	38.1	80	-8	2.22	4.51	1.11	1.30	1.9	10	13	11	7
1927	45.4	83	7	2.95	3.19	1.21	1.46	0.1	9	10	10	11
1928	41.8	86	4	3.17	5.40	1.90	2.10	1.2	10	14	10	8
1929	48.2	86	7	4	4.24	4.45	6.65	2.82	1.5	7	16	8
1930	42.4	77	4	2.14	4.45	0.60	1.90	7.4	13	7	10	14
1931	39.3	65	14	4.88	5.97	3.22	1.90	7.4	10	13	7	9
1932	38.5	75	-4	5.78	7.76	3.61	3.05	5.3	10	13	9	9

Climatological Data, March, 1932

Table with columns: Stations, Counties, Elevation, Length of record, Temperature (Mean, Departure from normal, Highest, Date, Lowest, Date, Greatest daily range), Precipitation (Total, Departure from normal, Greatest in 24 hours, Total snowfall), Number of days (With precip., Clear, Partly cloudy, Cloudy), Prevailing direction of wind, Observers.

The departures from normal temperature and precipitation are computed only for such stations as have 10 or more years of record, but all complete reports are used in determining section or division means. Data in italics determined from surrounding stations. T. Precipitation is less than 0.01 inch rain or melted snow. †Post addresses of these stations are as follows: Of Bell, Glendale, of Coleman, Worton; of Fallston, Bagley; of Ferry Landing, Owings; of Great Falls, Bethesda; of Pleasant Hill, Owings Mills. †Also on other dates. \*Custom House, Gay and Water Sts. \*\*Weather Bureau Building, 24th and M Sts. †Prettyboy Dam. ‡Drum Point Light station. ‡Municipal Building. ‡Porter Reservoir.

THE STORMS OF MARCH, 1932

Following, what was, at Baltimore, the warmest winter in over one hundred and fourteen years, a series of centers of low pressure developed over the Gulf of Mexico and the Gulf States, moved northeast with increase in force, and gave Maryland, Delaware and adjacent ocean regions gales, rain, sleet, and snow. Space does not permit detailed description of these disturbances and for such information the reader is referred to the National Monthly Weather Review and other publications. The storm of March 6-7 caused the most damage in this section, the gales, particularly in the western portion of Maryland, being accompanied by rain, sleet, and snow, that intensified their effect. At Baltimore, the barometer reached the lowest point in over sixty-two years of record, being 28.68 inches, sea-level, at 2 p. m., March 6.

The damage to communication lines alone was extensive and quite unusual in amount, exceeding \$1,000,000, while the grand total of damage from storms during the month is probably in excess of \$2,000,000.

MARCH 6-7. - Rain set in over the section in the morning of the 6th, as the storm approached from the southwest, accompanied by increasing northeast winds, which reached gale force at times. With backing of the wind into northwest, as the storm passed over the section and to the northeastward thereof, lowering temperature resulted, the rain changed to sleet and then to snow, the snow ending during the night. The northwest winds increased to a gale in the afternoon and continued at gale force through the night and on the 7th. The rain was heavy, except in the Allegheny Mountain region, while the snow was light, except moderate to heavy over the western portion of Maryland with depths 3 to 7 inches

Daily Precipitation for March, 1932

Table with columns: Stations, Watershed, Day of month (1-31), Total. Rows list various stations in Maryland and Delaware with their respective precipitation amounts for each day of the month.

Except as otherwise indicated, observations are generally made late in afternoon, near sunset, and precipitation recorded is for the 24 hours ending at time of observation.
\*\*\*Regular Weather Bureau station; precipitation is for the 24-hour period, midnight to midnight.
\*\*Precipitation is for 24-hour period, midnight to midnight.
†††Precipitation measured in the morning; amount then recorded is for the preceding 24 hours.
T. Trace, or less than 0.01 inch.
§Prettyboy Dam. §§Drum Point Light Station. §§§Municipal Building. §§§§Porter Reservoir. \*Precipitation included in following measurement.

in the Allegheny Mountain region, 6 to 9 inches in the Blue Ridge Mountain region, and 3 to 6 inches between the two mountain regions. Under the northwest gales the snow drifted badly, to heights of 5 feet or more in the Blue Ridge Mountain region, where hundreds of motorists were marooned and general traffic was interrupted.

Frederick County and adjacent portions of neighboring Counties were isolated by the general prostration of communication lines, under the weight of accumulated snow upon the wires and the pressure of the gales against the poles; power lines were also prostrated. Several days to a week or more passed before restoration of service was possible in some districts.

Approximately \$1,000,000 will be expended by the Chesapeake and Potomac Telephone Company for extraordinary repairs, including a wide area in Maryland, Virginia, and West Virginia, necessitating replacement of 21,400 poles, 10,000 miles of open wire lines, and 60 miles of cable. The loss suffered by the Potomac Edison Company was placed at \$75,000, and by the Postal Telegraph Company at \$12,500; that by the Western Union Telegraph Company has not yet been determined.

On the 6th the weather was unusually stormy on Chesapeake Bay. Hundreds of small vessels at anchorage were driven ashore by high tide and gale, and damaged; wharves were also damaged. Five steamers, moored for scrapping at Fairfield near Baltimore, broke away; four were

recovered and one sank. Grounding of a steamer at Sandy Point resulted in loss of the entire cargo of 18,000 bunches of bananas. The severe cold wave of 7-10th, the only one of the season, that followed in the wake of the snow, caused the death of 10 persons.

MARCH 22.—Two workmen were killed at Baltimore, when a piece of sheet metal on a tank, on which they were standing, was lifted by a westerly gust of gale force, throwing them to the ground 30 feet below. Slight property damage resulted locally over the section.

MARCH 27-28.—High winds and a heavy fall of wet snow in Garrett and western Allegany Counties during the night caused a general prostration of communication lines, resulting in a loss of \$500,000. One hundred telephone poles were leveled and roads were blocked by snow drifts of 7 to 8 feet.

The high northwest winds on the 28th damaged some dwellings and barns, uprooted some trees, and felled some poles in northeastern Anne Arundel, Queen Annes, and Kent (Md.) Counties. Loss by the Postal Telegraph Company was estimated at \$13,000, that by the Western Union Telegraph Company has not yet been determined.—J.R.W., and J.B., jr.

Daily Temperatures for March, 1932

Table with columns for Stations, days 1-31, and Mean. Rows list various locations in Maryland and Delaware, including Aberdeen, Annapolis, Baltimore, etc., with their respective maximum and minimum temperatures for each day.

§§ Instruments are read in morning; maximum temperature then read is charged to preceding day, on which it almost always occurs. Temperatures at Aberdeen, Baltimore, Sines, and Washington are from midnight to midnight; other stations, except Cumberland are for 24-hour period ending late in afternoon, near sunset.