

In Cooperation with Maryland State Weather Service

CLIMATOLOGICAL DATA

15 MARYLAND AND DELAWARE SECTION

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PRICE: 5 CENTS A COPY; 50 CENTS A YEAR

VOL. XLI BALTIMORE, MD., MARCH, 1936 No. 3

GENERAL SUMMARY

This was the second consecutive warm March and the first wet March since 1932. It was the wettest March of record in western Maryland, except in eastern Washington County. The unusually heavy rain of the 17-18th over western Maryland, falling upon a saturated ground, produced the record flood on the Potomac River (see account on pages 10-11).

Monthly precipitation was between 7 and 10 inches over Garrett, Allegany, and western Washington Counties, and between 4 and 7 inches over the remainder of the section, except between 3 and 4 inches over St. Marys and Calvert Counties. Monthly snowfall was very heavy (20 to 27 inches) in the Allegheny Mountain highlands. It was light (1 to 6 inches) over the northern counties from Allegany to Harford, and was but a trace over southern Maryland and on the Eastern Shore.

Light snow fell in western Maryland on the 2d, 7th, and 12th. Snow flurries occurred in north-central and southern Maryland on the 7th and 12th. At night of the 2d and on the 13th light snow fell in western and north-central Maryland and snow flurries occurred in southern Maryland and on the Eastern Shore. Light to moderate snow fell on the 18-19th and heavy snow (8 to 12 inches) on the 21st in the Allegheny Mountain region.

There was an unusual amount of cloudiness, except for the clear, sunshiny period of the 28th-31st. Monthly sunshine was between 5 and 10 per cent below normal.

The heavy snowfalls in Garrett and Allegany Counties from October to March, inclusive, were a contributing factor to the March flood on the Potomac River. Total snowfalls and the normal snowfalls for the period were: Friendsville, 111.7, 51.8; Frostburg, 59.5, 43.8; Grantsville, 128.2, 61.9; Oakland, 106.0, 59.9; Sines, 108.5, 50.3; Western Port, 67.5, 29.9; Cumberland, 45.8, 28.5; Picardy, 48.5, 16.3; Tonoloway, 46.1, 25.4; Hancock, 42.9, 25.4; average for the two counties: total, 76.5; normal, 39.4.

Grains and grasses improved to mostly good to excellent in western Maryland, and to good over the northern portions and to fair to good over the southern portions of the central and eastern divisions, during the second and third decades. In central and eastern divisions there was some plowing on high land, some garden vegetables were planted, some clover and oats were sown, tobacco was sown in beds, and tree fruit buds were swelling. Some early potatoes and some peas were planted on the southern and central Eastern Shore. — J. B., jr.

TEMPERATURE

The monthly mean for the section, 47.2°, is 5.0° above normal. The highest monthly mean was 51.2° at Salisbury; the lowest, 37.0° at Sines. The highest temperature, 83°, occurred at Cumberland on the 30th; the lowest, 15°, at Hancock and Lutherville on the 2d. The greatest local monthly range was 63° at Hancock; the least, 46° at Annapolis. The greatest daily range was 47° at Cumberland and Takoma on the 4th and at Hancock on the 29th.

PRECIPITATION

The monthly average for the section, 5.84 inches, is 2.27 inches above normal. The greatest monthly amount was 9.39

inches at Grantsville; the least, 3.26 inches at Solomons. The greatest 24-hour amount was 4.65 inches at Picardy on the 16-17th. The monthly average snowfall for the section, 2.7 inches, is 1.9 inches below normal. The average number of days with .01 inch or more of precipitation, 12, is 2 above normal.

MISCELLANEOUS PHENOMENA (WITH DATES)

Dust Clouds.—Boyd's College Park, and Ferry Landing, 25; Annapolis and Clear Spring, 26. *Fogs, light.*—1 to 12, 15 to 21, 24 to 30. *Fogs, dense.*—3, 4, 6, 9, 10, 11, 12, 25, 27. *Halos, lunar.*—4, 30, 31. *Halos, solar.*—1, 5, 6, 10, 13, 14, 15, 20, 23, 24, 25, 26, 30, 31. *Rainbow (double), lunar.*—Princess Anne, 4. *Rainbow, solar.*—Baltimore, 19. *Sleet, light.*—Carroll, Baltimore, and Harford Counties, 12; Garrett County, 2, 16. *Sundogs.*—Solomons, 10, 28. *Tide, high.*—17-18. *Thunderstorms.*—Extreme southern Eastern Shore, night 2-3; La Plata and Milford, night 11-12; western and central divisions, 16; Eastern Shore, 17; western Maryland, 17, 27; Ferry Landing, 18; southern portion of section, 20, 27; Garrett County, 24. *Winds, high.*—Northeast, 11, 20; southeast, 17; south, 16; southwest, 13, 28, 29, 30; northwest, 12, 21, 22, 31.

PRESSURE, HUMIDITY, SUNSHINE AND WIND

Stations	Atmospheric pressure reduced to sea level				Wind				Mean relative humidity			Percentage of sunshine	
	Average	Highest	Date	Lowest	Date	Average hourly velocity	Maximum velocity	Direction	Date	8 a. m.	Local 7 h		8 p. m.
Aberdeen, Md.	29.90	30.40	8	29.06	21	9.6	34	se.	17	81	71	71	..
Annapolis, Md.	29.88	30.39	8	29.09	21	9.0	17	79	64	75	..
Baltimore, Md.	29.89	30.41	8	29.09	21	10.7	34	s.	17	76	66	71	50
Elkins, W. Va.	29.94	30.29	8	29.35	21	6.6	27	w.	13	87	62	68	39
Harrisburg, Pa.	29.88	30.35	8	29.11	21	8.3	30	nw.	22	75	61	66	40
Norfolk, Va.	29.91	30.39	8	29.24	21	11.0	43	se.	17	80	54	68	52
Philadelphia, Pa.	29.91	30.41	8	29.07	21	12.9	41	se.	17	77	64	67	53
Pittsburgh, Pa.	29.87	30.32	1	29.32	21	12.0	34	sw.	27	82	62	68	45
Washington, D. C.	29.88	30.40	8	29.07	21	7.8	34	nw.	21	75	54	60	46

COMPARATIVE DATA FOR MARCH

Year	FOR MARYLAND						FOR DELAWARE					
	Temperature			Precipitation			Temperature			Precipitation		
	Mean	Highest	Lowest	Average	Average snowfall	No. of days with .01 in. or more	Mean	Highest	Lowest	Average	Average snowfall	No. of days with .01 in. or more
1895.....	39.8	74	-7	2.94	3.5	9	40.9	69	19	3.61	1.2	9
1896.....	36.4	72	-13	4.26	14.6	9	38.2	12	4.74	3.5	10	
1897.....	44.4	82	12	2.93	0.7	10	44.5	80	20	2.72	T	8
1898.....	47.5	84	7	3.80	3.0	11	48.2	78	22	2.67	1.0	9
1899.....	40.9	77	-1	4.79	3.7	11	42.0	72	20	5.32	3.4	11
1900.....	37.3	74	-8	3.23	13.2	9	38.4	69	6	3.72	6.0	10
1901.....	42.6	81	-9	3.50	1.9	9	42.7	74	8	3.60	0.6	7
1902.....	44.7	80	3	3.92	10.5	10	46.2	75	16	3.74	3.5	10
1903.....	49.2	85	15	5.12	0.2	10	49.9	79	23	6.10	0.0	9
1904.....	41.2	87	5	2.99	2.0	10	41.2	74	17	3.42	1.4	10
1905.....	45.4	88	-15	3.16	2.2	10	44.4	83	11	3.12	0.6	11
1906.....	36.7	68	-8	4.83	11.3	13	38.5	63	14	6.11	4.3	13
1907.....	46.1	93	2	3.30	6.5	9	46.1	88	16	2.99	4.8	9
1908.....	45.7	85	11	3.16	0.6	10	47.6	83	22	1.74	0.8	9
1909.....	40.2	80	9	3.69	7.6	11	41.8	73	17	3.82	2.5	10
1910.....	49.0	89	14	1.11	2.1	5	49.3	86	22	2.58	3.0	10
1911.....	39.8	77	-5	2.56	9.3	12	40.6	74	6	3.10	7.0	10
1912.....	39.5	78	-7	6.89	7.7	13	41.1	72	16	7.16	7.9	12
1913.....	47.2	83	-6	4.56	0.7	10	49.1	80	13	3.86	T	10
1914.....	37.8	80	-14	2.40	15.4	10	38.6	75	4	3.02	19.5	10
1915.....	36.6	64	3	1.14	4.4	5	38.8	62	19	1.26	1.7	3
1916.....	35.9	78	-3	3.88	4.5	10	35.9	69	8	3.51	5.8	10
1917.....	41.1	82	-5	5.34	10.2	13	41.7	76	17	6.26	0.9	13
1918.....	45.6	84	8	3.61	0.1	9	44.8	80	17	3.48	T	9
1919.....	45.8	76	14	3.87	0.6	10	46.4	78	24	4.68	0.1	9
1920.....	43.2	85	-1	3.00	2.7	9	43.6	75	11	3.86	1.7	10
1921.....	53.6	91	14	2.38	T	11	54.6	88	23	2.51	0.5	11
1922.....	44.2	80	11	4.70	2.2	13	45.0	76	19	4.48	0.2	12
1923.....	43.3	82	-6	4.23	5.8	11	44.0	80	13	5.00	4.5	12
1924.....	40.7	77	11	4.98	12.2	10	41.7	76	22	5.34	1.7	10
1925.....	44.8	82	-3	2.26	0.4	9	46.6	79	9	2.28	T	8
1926.....	38.0	80	-8	2.21	2.1	10	39.3	80	10	2.30	0.5	9
1927.....	45.4	84	10	1.72	0.1	9	45.6	82	18	1.92	T	10
1928.....	41.7	83	7	2.97	7.0	10	42.2	82	14	2.81	0.6	11
1929.....	48.0	86	4	3.14	1.3	10	49.7	81	11	3.39	T	11
1930.....	42.2	77	4	2.16	1.6	7	43.7	76	18	2.00	T	7
1931.....	39.1	65	14	4.28	7.4	13	40.6	64	25	5.24	7.4	12
1932.....	38.2	75	-4	5.70	5.7	10	40.1	70	12	6.46	1.8	10
1933.....	40.1	79	0	4.40	3.2	13	41.8	80	16	3.15	1.2	13
1934.....	38.7	78	-10	4.35	11.7	14	40.1	75	6	5.26	13.4	14
1935.....	47.6	86	10	2.99	1.8	14	47.9	77	19	3.25	0.4	13
1936.....	47.0	83	15	5.87	3.0	12	48.9	76	20	5.60	T	12
Period.....	42.2	93	-15	3.54	4.9	10	42.8	88	4	3.73	2.7	10

Daily Precipitation for March, 1936

Table with columns: Stations, Drainage basin, Day of month (1-31), Total. Rows include Maryland (Aberdeen to Woodstock) and District of Columbia (Washington). Precipitation values are listed in inches for each day, with a total for 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 Municipal Building. Porter Reservoir.
*Precipitation included in following measurement.

These rains were unusually heavy in the upper portion of the Potomac Basin where amounts in excess of 4.00 inches occurred in less than 12 hours over a large area. The 48-hour amounts over the entire drainage basin of the Potomac ranged from slightly less than 1.00 inch over the lower reach to more than 5.00 inches over the headwaters.

The occurrence of a period of mild thawing weather of several days duration just prior to the heavy rainfall left the soil in a well saturated condition and the percentage of runoff was unusually high. This, coupled with the fact that the rivers were somewhat above normal stage when the heavy rainfall began, gave the most disastrous Potomac River flood since records began. From below Cumberland, Md., to Washington, D. C., the gage heights exceeded the flood of 1889.

It is impracticable at this time to give an estimate of flood losses in the Potomac Basin but they are believed to be considerably higher than ever before incurred. Practically all towns along the rivers suffered inundation to some extent. Numerous bridges were wrecked and carried away; many miles of highway and railroad tracks were washed out and badly damaged. A few persons were drowned, but the loss of life was not great considering the magnitude of the flood.

The following table shows comparative gage heights for the floods of 1889, 1924, and 1936 in the Potomac Basin.

Table with columns: Station, 1889 stage, 1924 stage, 1936 stage. Rows include Bloomington, Md.; Cumberland, Md.; Hancock, Md.; Shepherdstown, W. Va.; Riverton, Va.; Harpers Ferry, W. Va.; Point of Rocks, Md.; Chain Bridge, D. C.; Washington, D. C.

*Data furnished by U. S. Geological Survey. **The crests shown for the 1936 flood at Riverton, Va., and Harpers Ferry, W. Va., have not been determined by leveling to highwater marks and are subject to change.

The Susquehanna River in Maryland also reached unusual stages and towns along its banks were partially inundated with resulting damage. It was necessary to open all the flood gates of the Conowingo power dam and the stream flow of 875,000 cfs on the 20th was the greatest since that dam was constructed.

Daily Temperatures for March, 1936

Table with columns for Stations, 31 days (1-31), and Mean. Rows list various locations like Aberdeen, Annapolis, Baltimore, etc., with their respective temperature readings 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, Annapolis, Baltimore, Dundalk, Sines, and Washington are from midnight to midnight; other stations, except Cumberland and Cheltenham, are for 24-hour period ending late in afternoon, near sunset. (W. B. O., Richmond, Va., 6-4-36-1, 150)