

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.

March was cold and windy, and the wettest March since 1917. The Allegheny Mountain region remained snow covered until the 29th. There was some loss of life by flood and much property damage from wind and flood.

A "northeaster" on the 10-11th caused light snow and heavy rain in the Coastal Plain and heavy snow and heavy rain to the westward thereof. Snowfall was between 10 and 15 inches in the northern Piedmont Plateau and in Allegany and Garrett Counties. High northeast winds during the night of the 10-11th crippled telephone, telegraph, and lighting systems by blowing down poles, and caused the worst damage of this character since the "northeaster" of March 4, 1909. Several weeks were required to completely restore wire service, and railroad and inter-urban electric schedules were interrupted until poles were removed from the tracks. Loss of poles and wires was estimated at nearly \$1,000,000.

A "northeaster" on the 21st caused snowfall of 15 to 20 inches in the northern Piedmont Plateau.

Flood of March 29.—Heavy rain during the night of the 28-29th caused streams in the Allegheny Mountain region, already swollen from melted snows and moderate rains, to overflow their banks, and resulted in the worst flood in history along the Potomac River in extreme western Maryland. A family of five were drowned at Kitzmiller. Most of the towns along the Potomac River west of Harpers Ferry and some towns in Garrett and western Allegany Counties sustained damage; the worst occurred at Cumberland. Total losses from the flood may exceed \$4,000,000.

Flood at Cumberland, Md., and near-by points.—During March, 1924, heavy snowfalls occurred throughout western Maryland, and all roads were more or less blocked with drifts of snow, in some cases 15 to 20 feet high. The mountains were also covered with at least 3 to 4 feet of snow. The maximum temperature on March 28 rose to 71°, and on the 29th rainfall at Cumberland between 2 a. m. and 8 a. m. was 1.63 inches. This, together with the melting snows from various mountains, brought a tremendous amount of water into the Potomac River. At 8 a. m. the water had risen to 8 feet on the Cumberland gage. The reading on the 28th was 4 feet 3 inches.

Wills Creek, which flows into the Potomac River at Cumberland, was out of its banks at 8:30 a. m., of the 29th. At this time the lowlands along both sides of the river at Cumberland were beginning to be flooded. The Potomac rose at the rate of 1 foot per hour until 3 p. m., and then the rise was about 1½ feet per hour until 6 p. m., when the river remained stationary for about one hour, and then began to recede. According to measurements, after the water receded, it was found that the river at the gage had reached a height of 19 feet 2½ inches.

By 2 p. m. the entire lowland of Cumberland, known as the "Flats," was covered with 3 feet of water. Wills Creek flooded the main business section of Cumberland to a height of 3 feet. Mechanic Street, one of the main streets of the city, was like a river bed, the water rushing down the street at a great velocity. At 7 p. m. the crest of the flood was reached. By this time telephone, telegraph, and electric wires had been torn away, and the city was in complete darkness. Half of the west side of Cumberland was flooded to a depth of 5 feet. The center of the city contained about 4 feet of water. Most of the paving was washed away. The water had entirely receded by 5 a. m. of March 30, and cleaning up began immediately. There was no loss of life in Cumberland, but the property loss, including railroad damage and bridges washed away, was about \$4,000,000 at a conservative estimate. From all information available the water on March 29, 1924, was 2.5 feet higher than at any previous time in the history of Cumberland.—*Harvey H. Weiss.*

Western Port, Md.—Highest water in Potomac River and Georges Creek within memory of oldest citizens. State bridge across Potomac went out 10:30 a. m., the 29th. C. & P. R. R. bridge also gone. Flats in Piedmont, W. Va., under 6 to 8 feet of water. All lower end of Western Port under 5 to 6 feet of water. Losses about \$100,000. Pulp mill lost about 1,000 cords of wood and 10,000 tons of coal. No electric lights, gas, or telephones. Town's water lines all gone.—*Norris Bruce.*

Kitzmiller, Md.—Five persons drowned here. Total losses about \$35,000.

Keyser, W. Va.—Estimated loss about \$60,000.

Wyatt, W. Va.—Losses here about \$42,000.

Losses to State in bridges and highways under \$5,000.

Railroads sustained heavy losses, but not yet estimated. Many miles of railroad track washed away. Shops at Maryland Junction, near Cumberland, flooded, and hundreds of men compelled to seek safety; loss here of about \$50,000 in railroad ties and other material, according to newspapers. Railroads lost heavily from suspension of business, and a number of days elapsed before schedules were normal.

Crops.—Grains and grasses turned green only in eastern half of section. Planting peas, gardens, and early potatoes in southern counties during second half of month interrupted by rains. Fruit trees remained dormant.—*J. B., jr.*

PRESSURE.

The monthly mean sea level pressure at Washington was 29.82; Baltimore, 29.81; Aberdeen, 29.80 inches. The highest at Washington was 30.21, Baltimore and Aberdeen, 30.20 inches, on 25th; lowest at Washington and Baltimore, 28.98, Aberdeen, 29.05 inches, on 11th.

TEMPERATURE.

The monthly mean for the section, 40.8°, is 1.2° below normal. Highest monthly mean, 44.2°, at Crisfield; lowest, 31.8°, at Grantsville. Highest temperature, 77°, at Easton on 30th and Friendsville on 29th; lowest, 11°, at Grantsville on 15th and Oakland on 14th and 20th. Greatest local monthly range, 65°, at Friendsville; least, 42°, at Crisfield. Greatest daily range, 46°, at Hancock on 28th.

PRECIPITATION.

Monthly average for section, 5.02 inches, is 1.37 inches above normal. Greatest monthly amount was 6.66 inches, at Baltimore; least, 3.13 inches, at Aberdeen. Greatest amount in 24 hours, 2.68 inches, at Oakland, on 29th. Average monthly snowfall for section, 10.9 inches, is 5.9 inches above normal. Greatest monthly snowfall, 32.3 inches, at Emmitsburg; least, a "trace," at Milford and Public Landing. Average number of days with 0.01 inch or more, 10, is normal.

WIND.

Prevailing direction was northwest. Total movement at Washington was 7,474; Baltimore, 5,350; Aberdeen, 7,851 miles. Maximum velocity at Washington was 36 miles per hour from northwest on 12th and 16th; Baltimore, 32 miles from northeast on 11th; Aberdeen, 40 miles from northeast on 10th.

SUNSHINE AND CLOUDINESS.

At Washington and Baltimore monthly sunshine was 62 per cent of possible. For whole section average number clear days was 14; partly cloudy, 8; cloudy, 9.

Climatological Data for March, 1924.

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 (Clear, Partly cloudy, Cloudy), Prevailing direction of wind, Observers.

The departures from normal temperature and precipitation are computed only for such stations as have ten or more years of record, but all complete reports are used in determining section or division means. Data in italics determined from surrounding stations. Reference letters, a, b, c, appearing in the table indicate number of days missing; for example, b represents two days, etc. Post office 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 Public Landing, Snow Hill. Also on other dates. T. Precipitation is less than 0.01 inch rain or melted snow. * Customhouse Building, Gay and Water Streets. ** Weather Bureau Building, 24th and M Streets.

MISCELLANEOUS PHENOMENA (WITH DATES).

Fogs, dense.—Morning 5 and 30; night 29.
Sleet.—Night 1-2, 7, 11, 21.
Thunderstorms.—District of Columbia, 5; Millsboro, Public

Landing, 26; Oakland, 27; western Maryland and southern Coastal Plain, 29.
Winds, high.—Northeast, 10-11 (gale), 21; northwesterly, 7, 8, 12, 13, 15, 16, 17, 30, 31.

Daily Precipitation for March, 1924.

Table with columns for Stations, Watersheds, Day of month (1-31), and Total. Rows list various Maryland and Delaware stations such as Aberdeen, Annapolis, Baltimore, etc.

Except as otherwise indicated observations are generally made late in the afternoon, near sunset, and precipitation recorded is for the 24 hours ending at the 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. * Precipitation included in the next following measurement.
T. Trace, or less than 0.01 inch. Data in italics determined from surrounding stations.

COMPARATIVE DATA FOR MARYLAND AND DELAWARE FOR MARCH.

Table with columns for Year, Temperature (Mean, Departure from normal, Highest, Lowest, Average), and Precipitation (Departure from normal, Greatest local, Least local, Greatest in 24 hours, Snowfall, Number of days with 0.01 inch or more). Rows list years from 1885 to 1909.

Daily Temperatures for March, 1924.

Table with columns for Stations (Maryland, District of Columbia, Delaware) and days 1-31, plus a Mean column. Each station entry includes Maximum and Minimum temperature values.

*, b, c, etc., indicate respectively 1, 2, 3, etc., days missing from the record. Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs. Data in italics determined from surrounding stations.