

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

November was featured by much warm weather, record extremes of temperature, a cold wave at its close, more than the usual amount of cloudiness, and a great frequency of days with precipitation and with light fog. There were no high winds of a damaging character. The mean temperature, 46.1°, was 1.5° milder than normal. It was the third successive mild November.

Temperature periods during the month were well marked. The 1st-4th was very warm, with a mean temperature about 14° above normal. Maximum temperatures on the 1st or 2d were the highest of record for November, except at a few stations. The 5-6th and 9-10th were cool, while the 7-8th was mild. The second decade was warm throughout, with a mean temperature about 8° above normal. The third decade was cold, except mild on the 26-27th, with a mean temperature about 7° below normal. The cold wave of the 29-30th produced lowest temperatures of record for November on the 30th, except over the southern third of the Eastern Shore.

The first occurrence this season of freezing temperature and killing frost in the Chesapeake Bay region was on the 10th. The first general "freeze" this season, 21st-25th, was attended by the first general light snow on the 22-23d.

Monthly precipitation averaged but slightly above normal. In western Maryland, however, precipitation was 0.5 to 2.5 inches above normal, while in the central and eastern divisions it ranged from 0.2 to 0.9 inch below normal generally. Monthly amounts were between 2 and 3 inches, except slightly below 2 inches in Howard, Montgomery, and northern Prince Georges Counties, and the District of Columbia; slightly above 3 inches in the Blue Ridge Mountain region and near the Pennsylvania line from the Blue Ridge Mountains to the Delaware River; and between 3 and 5.2 inches in the Allegheny Mountain region.

Rainfall was heavy in western Maryland on the 2-3d and in the central and eastern divisions on the 3d-4th, and over the section, except the southern Eastern Shore, on the 17-18th.

Monthly snowfall averaged one and one-half times the normal. Over the northern portion of the section to eastward of the Allegheny Mountains monthly amounts ranged from a trace in the northeastern portion to 1 inch at the south and west. Over the southern portion of the section the totals ranged from 1 inch at the north to between 3 and 5 inches over the extreme southern Eastern Shore. In the Allegheny Mountain region the totals ranged from 1 inch at the foothills to 13.5 inches in the northern highlands.

Snow flurries occurred in the Allegheny Mountain region on the 5th, in the central and eastern divisions on the 22d and 28th, and in the southern portion of the section during the night of the 28-29th. Light snow fell in the Allegheny Mountain region on the 19th, 20th, and 21st, in western Maryland on the 22d, and in the central and eastern divisions on the 23d. A moderate snowfall occurred in the Allegheny Mountain region on the 28-29th.

Monthly sunshine was very deficient, being about 10 per cent below normal and the least in November since 1921. Monthly relative humidity averaged slightly above normal.

Outstanding long periods of overcast sky were 12-15th and 22d-24th, while outstanding long periods of clear, sunshiny weather were 5-6th and 9-11th.

The heavy fog of the 13-14th interrupted fishing and oyster-ing and interfered with shipping and land and air transportation.

Owing to the favorable temperatures of the first two decades and the abundant moisture in the soil, winter grains that were already up made excellent growth, and the late-sown came up and likewise did well. All grains were a good stand and fine in color and condition. They became covered in the Allegheny Mountain region by 2 to 6 inches of snow on the 28th. Pastures were fair. The month was not favorable for outdoor operations, owing to frequent rains of the first and second decades and the cold weather of the third decade. Digging sweet potatoes and picking apples and pears ended during the first week. Husking and cribbing corn, digging late potatoes, cutting and hauling wood, stripping tobacco, plowing, marketing crops, and storing vegetables for winter were in progress; also marketing holly, butchering, and pruning during the third decade.—*J. B., jr.*

### PRESSURE

The monthly mean sea-level pressure at Washington was 30.10; at Baltimore, 30.09; at Aberdeen, 30.08 inches. The highest at Washington was 30.57; at Baltimore and Aberdeen, 30.56 inches—all on the 22d. The lowest at Washington was 29.32; at Baltimore and Aberdeen, 29.30 inches—all on the 28th.

### TEMPERATURE

The monthly mean for the section, 46.1°, is 1.5° above normal. The highest monthly mean was 50.7° at Crisfield; the lowest, 37.6°, at Grantsville. The highest temperature, 85°, occurred at Newburg on the 2d; the lowest, -7°, at Friendsville and Grantsville on the 30th. The greatest monthly range was 84° at Oakland; the least, 61°, at Crisfield. The greatest daily range was 39° at Oakland on the 10th.

### PRECIPITATION

The monthly average for the section, 2.62 inches, is 0.08 inch above normal. The greatest monthly amount was 5.14 inches at Grantsville; the least, 1.65 inches, at Great Falls. The greatest 24-hour amount was 1.70 inches at Salisbury on the 3d-4th. The monthly average snowfall for the section, 1.8 inches, is 0.7 inch above normal. The greatest monthly snowfall was 13.5 inches at Grantsville; the least, a trace, in the extreme northeastern portion of the section. The number of days with 0.01 inch or more of precipitation, 11, is 4 above normal.

### RELATIVE HUMIDITY

The average percentages were: Washington, D. C., 8 a. m., 79; 12 noon, 60; 8 p. m., 67. Baltimore, Md., 8 a. m., 76; 12 noon, 59; 8 p. m., 67. Aberdeen, Md., 8 a. m., 82; 4 p. m., 67. Philadelphia, Pa., 8 a. m., 75; 12 noon, 63; 8 p. m., 70.

### WIND

(By 3-cup anemometer, except 4-cup at Aberdeen, Md.)

The prevailing wind direction for the section was west. The total movement at Washington was 3,972; at Baltimore, 6,322; at Aberdeen, 3,565 miles. The maximum velocity at Washington was 25 miles from northwest on the 28th; at Baltimore, 36 miles from southwest on the 28th; at Aberdeen, 20 miles from west on the 19th.

(Continued on page 42)

Climatological Data for November, 1929

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 sections. T. Precipitation is less than 0.01 inch rain or melted snow. 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, Glendendale; of Coleman, Worton; of Fallston, Bagley; of Ferry Landing, Owings; of Great Falls, Bethesda; of Pleasant Hill, Owings Mills; of Public Landing, Snow Hill. Also on other dates. \*Custom House, Gay and Water Streets. \*\*Weather Bureau Building, 24th and M Streets.

(Continued from page 41)

SUNSHINE AND CLOUDINESS

At Washington, 40 per cent of the possible sunshine was recorded; at Baltimore, 44 per cent; at Aberdeen, 37 per cent. For the whole section the average number of clear days was 8; partly cloudy, 9; cloudy, 13.

MISCELLANEOUS PHENOMENA (WITH DATES)

Fogs, dense.—On coast, 12, 18; over section, 13, 14; Aberdeen, 26; Darlington, District of Columbia, and southern Maryland, 27.

Sleet, light.—Aberdeen, 20; extreme northeastern portion of section, 23. Thunderstorms.—Rock Hall, 18. Winds, high.—Northwest, 4; westerly, 19, 28, 30; on coast, from north-east, 23.

NOTES

Chewsville.—Winter grains looking excellent. Pleasant Hill.—Ground frozen 1 inch at close of month. Public Landing.—On the 1st Mr. Harry Ward assumed the duties of cooperative observer, succeeding the late Mr. Louis C. de Guibert.



Daily Temperatures for November, 1929

Table with columns for Stations, 1-31, and Mean. Rows list various Maryland and Delaware locations with their daily maximum and minimum temperatures for November 1929.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from record. § Instruments are read in morning; maximum temperature then read is charged to preceding day, in which it almost always occurs. Temperatures at Aberdeen, Baltimore, and Washington are from midnight to midnight; other stations, except Cumberland, are for 24-hour period ending late in afternoon, near sunset. Data in italics determined from surrounding stations. (WB-1-9-30-850)