

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

CHARLES F. MARVIN, Chief

In Cooperation with Maryland State Weather Service

CLIMATOLOGICAL DATA

MARYLAND AND DELAWARE SECTION

ROSCOE NUNN, Meteorologist and Section Director

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GENERAL SUMMARY

July was unusually dry and sunshiny. The monthly sunshine was the greatest of record in July since 1912. Relative humidity averaged about 5 per cent below normal. There was an unusual frequency of thunderstorms, but they were not general over the section. Thundergusts were neither violent nor damaging.

The month averaged 0.8° cooler than normal. The hot weather, while not severe, was the impressive temperature factor of the month. The warmest periods were 7-10th and 24th-31st, with highest temperatures close to the century mark, except in the Allegheny Mountain region. The mean temperatures of these periods averaged about 8° and 5° above normal, respectively. Moderately cool periods were 2d-4th and 12-13th. The 15th-22d was markedly cool, with mean temperature about 8° below normal and produced near-freezing temperatures and light frost on the 20th and 21st in the Allegheny Mountain region.

For the section, as a whole, this was the second driest July of record, only July of 1909 being drier. The average rainfall was about two-fifths of normal. Monthly amounts were between 1 and 2 inches generally, except between 2 and 5 inches in the Blue Ridge Mountain region and in Worcester County. Rainfall was in the form of light thundershowers, except that they were heavy locally at night of the 1st and 10th and on the 5th, 14th, 19th, and 24th.

In the afternoon of Sunday, the 14th, a thunderstorm, attended by severe lightning and heavy rain, passed over southern Kent, southwestern Queen Annes, and northern Talbot Counties. The heavy rain badly washed fields and roads, while the lightning killed considerable stock and fired a number of barns and sheds.

The abundant rainfall of June, especially during the third decade, prevented serious deterioration of crops. The month was exceptionally favorable for farming operations. Harvesting of wheat, rye, and barley was finished early in the month and threshing progressed rapidly thereafter. Oats were also harvested and threshed. The yield of wheat averaged fairly good; that of rye, barley, and oats was good. Corn was well cultivated; during the third decade it was in tassel and silking, but in need of rain. Digging of early potatoes ended; the yield was good. Tomatoes were fruiting and ripening during the second half of the month. Sweet potatoes did well. At the close of the month tomatoes, tobacco, truck crops, late potatoes, gardens, grasses, and pastures were showing some bad effects of the hot and dry weather of the third decade. Early apples and early peaches were being marketed.—*J. B., jr.*

PRESSURE

The monthly mean sea-level pressure at Washington was 30.04; at Baltimore, 30.03; at Aberdeen, 30.05 inches. The highest at Washington and Aberdeen was 30.34; at Baltimore, 30.35 inches—all on the 21st. The lowest at Washington was 29.69; at Baltimore, 29.67; at Aberdeen, 29.70 inches—all on the 2d.

TEMPERATURE

The monthly mean for the section, 74.4°, is 0.8° below normal. The highest monthly mean was 77.0° at Solomons; the lowest, 66.6°, at Grantsville. The highest temperature, 102°, occurred at Millsboro on the 29th; the lowest, 34°, at Grantsville on the 20th. The greatest monthly range was 60° at Hancock; the least, 36°, at Solomons. The greatest daily range was 45° at Western Port on the 4th.

PRECIPITATION

The monthly average for the section, 1.71 inches, is 2.62 inches below normal. The greatest monthly amount was 4.49 inches at State Sanitorium; the least, 0.59 inch, at Frostburg. The greatest 24-hour amount was 2.22 inches at Public Landing on the 19th. The average number of days with 0.01 inch or more, 7, is 3 below normal.

RELATIVE HUMIDITY

The average percentages were: Washington, D. C., 8 a. m., 72; 12 noon, 50; 8 p. m., 63. Baltimore, Md., 8 a. m., 68; 12 noon, 48; 8 p. m., 59. Aberdeen, Md., 8 a. m., 82; 4 p. m., 62. Philadelphia, Pa., 8 a. m., 71; 12 noon, 50; 8 p. m., 58.

WIND

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

The prevailing wind direction for the section was southwest. The total movement at Washington was 3,063; at Baltimore, 6,266; at Aberdeen, 4,683 miles. The maximum velocity at Washington was 25 miles from southwest on the 9th; at Baltimore, 31 miles from southwest on the 29th; at Aberdeen, 36 miles from northwest on the 25th.

SUNSHINE AND CLOUDINESS

At Washington, 70 per cent of the possible sunshine was recorded; at Baltimore, 72 per cent; at Aberdeen, 75 per cent. For the whole section the average number of clear days was 17; partly cloudy, 11; cloudy, 3.

MISCELLANEOUS PHENOMENA (WITH DATES)

Fogs, dense.—Aberdeen and Fallston, 12, 13; Cecilton, Ferry Landing, and Newburg, 13; Mechanicsville, Millsboro, and on the coast, 12; Frederick, 23.

Frost, light.—Allegheny Mountain region, 20, 21.

Hail, light.—Stevensville, 14.

Lightning, damage by.—On 14th: Southern Queen Annes County, near Queenstown, stable and granary, with contents, burned and a horse killed; near Carmichael, 19 sheep in a herd of 37 in a field killed; near Grasonville, barn and farm machinery therein burned. Northern Talbot County, near Longwood, 2 horses and 4 mules, sheltered under shed on farm, killed.

Rainbows.—Aberdeen, 29; Grantsville, 8.

Sundog.—Grantsville, 23.

Thunderstorms.—1, 5, 6, 7, 8, 9, 10, 12, 14, 18, 19, 22, 25, 27, 29, 30, 31.

Winds, high.—Thundergusts: Westerly, 8, 9, 14, 25, 29.

Climatological Data for July, 1929

Stations	Counties	Elevation, feet	Length of record, years	Temperature, in degrees Fahr.					Precipitation, in inches				Number of days			Prevailing direction of wind	Observers			
				Mean	Departure from the normal	Highest	Date	Lowest	Date	Greatest daily range	Total	Departure from the normal	Greatest in 24 hours	Total snowfall (unmelted)	With precip. 0.01 inch or more			Clear	Partly cloudy	Cloudy
<i>Maryland</i>																				
Aberdeen.....	Harford.....	80	11	74.6	-0.2	95	29	52	3	28	2.41	-2.62	1.44	0.0	8	8	12	11	s.	U. S. Army.
Annapolis.....	Anne Arundel.....	45	64	76.4	-1.3	97	30	54	3	28	1.13	-3.50	0.44	0.0	6	15	11	5	sw.	Louis E. Foster.
Baltimore.....	.....	115	59	77.4	+0.2	97	29	58	20	24	1.13	-3.51	0.45	0.0	9	15	9	7	sw.	U. S. Weather Bureau.
Bell II.....	Prince Georges.....	151	9	74.8	.....	99	28	46	3	40	0.72	.....	0.29	0.0	8	19	7	5	sw.	Bureau Plant Industry.
Boys.....	Montgomery.....	424	10	74.0	-1.0	99	28	45	13	39	1.81	-1.41	1.02	0.0	7	20	9	2	sw.	Thomas B. Daymude.
Cambridge (near).....	Dorchester.....	25	36	76.6	-1.5	98	29	49	17	35	0.85	-3.80	.....	0.0	5	18	8	5	sw.	Matt Harding.
Cecilton.....	Cecil.....	85	11	76.4	+0.7	99	29	49	3	31	0.90	-4.59	0.39	0.0	7	16	10	5	sw.	Wm. F. Coale.
Cheltenham.....	Prince Georges.....	230	29	75.0	-0.6	98	29	60	116	34	2.27	-2.27	1.11	0.0	8	18	9	4	sw.	Geo. Hartnell.
Chewsville.....	Washington.....	530	32	72.2	-1.9	94	28	42	20	34	1.85	-2.13	0.54	0.0	9	19	9	3	sw.	D. Paul Oswald.
Clear Spring.....	.....do.....	530	32	74.8	+1.3	101	28	47	116	40	2.92	-1.07	1.76	0.0	6	21	8	2	sw.	Mrs. Leo A. Cobill.
Coleman II.....	Kent.....	600	32	76.0	-0.6	98	28	51	16	30	0.74	-3.88	0.50	0.0	5	15	11	2	sw.	Walter B. Harris.
College Park.....	Prince Georges.....	87	43	74.7	-0.5	96	29	48	13	36	1.06	-3.38	0.34	0.0	7	20	7	4	sw.	Prof. Thos. H. White.
Crisfield.....	Somerset.....	5	10	76.8	0.0	93	110	56	17	25	1.93	-2.81	0.73	0.0	6	12	18	1	sw.	A. B. Cochrane.
Cumberland.....	Allegany.....	623	57	74.5	+0.5	100	28	45	3	43	0.88	-2.35	0.41	0.0	6	21	9	1	.....	Harvey H. Weiss.
Darlington.....	Harford.....	300	39	73.9	-0.6	96	29	48	4	36	2.32	-2.17	0.90	0.0	8	18	11	2	sw.	Fred. C. Jones.
Easton.....	Talbot.....	35	39	75.2	-0.9	94	19	51	13	33	3.42	-1.09	1.88	0.0	5	18	11	2	sw.	Clement E. Bray.
Elkton.....	Cecil.....	28	3	75.1	.....	97	28	48	13	37	2.64	.....	1.13	0.0	7	19	10	2	w.	H. W. Bouchelle.
Emmitsburg.....	Frederick.....	720	61	74.4	-0.8	95	28	49	3	28	2.15	-1.92	1.10	0.0	6	19	10	2	w.	Mt. St. Mary's College.
Fallston II.....	Harford.....	450	60	73.8	-0.2	97	29	50	3	30	1.17	-3.44	0.41	0.0	9	17	13	1	sw.	Miss Dorra Curtiss.
Ferry Landing II.....	Calvert.....	110	13	74.5	-1.0	95	29	51	16	29	2.43	-3.90	0.76	0.0	7	17	9	5	sw.	Thos. J. Bourne.
Frederick.....	Frederick.....	275	55	75.5	-0.8	100	28	48	20	34	2.34	-1.68	0.70	0.0	8	20	9	2	sw.	A. T. Brust.
Friendsville.....	Garrett.....	1,501	11	69.5	+0.7	90	127	88	20	38	1.14	-3.12	0.40	0.0	5	14	16	1	.....	Joab J. Friend.
Frostburg.....	Allegany.....	1,929	28	69.0	-2.6	90	30	43	20	33	0.59	-3.44	0.23	0.0	7	18	12	1	w.	T. F. Lewis.
Grantsville.....	Garrett.....	2,351	36	66.6	-1.3	88	28	34	20	41	1.68	-2.63	0.49	0.0	13	12	16	3	w.	Floyd J. Miller.
Great Falls II.....	Montgomery.....	200	40	74.6	-1.0	98	7	46	3	36	2.31	-1.84	0.91	0.0	8	15	13	3	sw.	Chas. E. Sullivan.
Hancock (Tonoloway).....	Washington.....	455	19	72.0	-2.9	99	28	39	20	43	1.51	-2.26	0.62	0.0	6	22	8	1	.....	American Fruit Growers.
Keedysville.....	.....do.....	400	25	75.0	-0.5	99	28	44	20	38	2.32	-1.49	0.80	0.0	11	20	8	3	sw.	J. A. Miller.
Laurel.....	Prince Georges.....	320	35	74.2	-1.0	96	128	51	16	29	1.13	-3.55	0.46	0.0	8	20	8	3	.....	Evan G. Chaney.
Lutherville.....	Baltimore.....	340	3	73.4	.....	98	28	44	3	37	1.21	.....	0.44	0.0	8	19	8	4	sw.	August W. Clark, P. M.
Maryland Line.....	.....do.....	840	5	72.8	.....	94	28	45	16	35	1.04	.....	0.46	0.0	5	19	9	3	w.	Chester L. Fulton.
Mechanicsville.....	St. Marys.....	165	3	.....	.....	.....	.....	.....	.....	.....	1.14	.....	0.48	0.0	5	17	9	5	sw.	Zach. S. Graves.
Millington.....	Kent.....	27	32	75.2	-0.9	.....	.....	.....	.....	.....	1.38	-5.32	0.41	0.0	8	18	11	2	s.	Henry L. Higman.
Newburg.....	Charles.....	110	4	76.0	.....	97	29	51	116	30	0.85	.....	0.34	0.0	7	20	8	3	sw.	John P. Burdette.
Oakland.....	Garrett.....	2,461	80	66.9	+0.2	89	28	35	20	41	2.42	-2.27	0.62	0.0	10	16	14	1	w.	R. E. Weber.
Pleasant Hill II.....	Allegany.....	900	3	72.8	.....	100	28	42	21	40	0.88	.....	0.34	0.0	8	22	8	1	w.	D. E. Cattet.
Pocumoke City.....	Baltimore.....	660	5	.....	.....	.....	.....	.....	.....	.....	1.10	.....	0.65	0.0	5	18	11	2	.....	J. E. Henry.
Princess Anne.....	Worcester.....	37	24	.....	.....	.....	.....	.....	.....	.....	3.02	-0.72	0.87	0.0	7	10	20	1	.....	Wm. H. Dryden.
Public Landing II.....	Somerset.....	17	54	75.0	-1.0	96	29	48	17	37	1.63	-2.70	0.50	0.0	9	9	20	2	sw.	James R. Stewart.
.....	Worcester.....	10	14	75.8	+0.8	95	10	52	14	31	4.14	+0.14	2.22	0.0	7	13	16	2	s.	Louis C. de Guibert.
Ridgely.....	Caroline.....	57	8	75.4	-0.7	96	129	50	14	31	2.66	-1.85	1.02	0.0	7	17	10	4	sw.	Albert White.
Rock Hall.....	Kent.....	25	15	76.2	-0.6	98	29	50	13	31	1.46	-3.30	1.43	0.0	2	19	10	2	s.	Charles Judefind.
Salisbury.....	Wicomico.....	23	24	75.9	-0.7	95	110	49	17	36	2.70	-1.16	0.73	0.0	7	20	9	2	s.	Homestead Dairy Farms.
Shues (Deep Creek).....	Garrett.....	2,040	2	68.2	.....	93	81	43	21	38	1.84	.....	0.47	0.0	6	12	16	3	.....	C. E. Mac Murray.
Solomons.....	Calvert.....	20	38	77.0	-1.1	97	9	61	116	25	1.66	-2.61	1.40	0.0	7	8	15	8	sw.	Dr. W. H. Marsh.
State Sanatorium.....	Frederick.....	1,460	21	73.8	+0.5	92	19	51	13	28	4.49	+0.39	1.24	0.0	9	19	10	2	.....	Dr. V. F. Cullen.
Stevensville.....	Queen Annes.....	12	3	76.4	.....	95	128	53	13	27	1.78	.....	0.92	0.0	7	17	11	3	sw.	T. R. Price.
Takoma.....	Montgomery.....	320	31	74.8	-0.1	94	29	53	20	25	0.90	-3.73	0.30	0.0	9	14	12	5	.....	L. M. Mooers.
Towson.....	Baltimore.....	465	17	.....	.....	.....	.....	.....	.....	.....	0.81	-2.99	0.30	0.0	4	15	9	7	.....	Metropolitan District.
Western Port.....	Allegany.....	1,000	36	73.0	-0.4	99	28	42	13	45	1.56	-2.19	0.60	0.0	8	.....	.....	.....	.....	Norris Bruce.
Westminster.....	Carroll.....	770	20	73.6	-1.6	96	28	48	13	32	1.75	-2.77	0.77	0.0	5	18	11	2	.....	Prof. S. P. Caltrider.
Woodstock.....	Baltimore.....	415	59	73.6	-1.6	96	28	46	13	36	1.76	-2.38	1.00	0.0	6	18	11	2	w.	Woodstock College.
<i>Dist. of Columbia</i>																				
Washington**.....	.....	112	59	76.9	+0.2	97	28	55	20	28	1.29	-3.42	0.56	0.0	7	14	12	5	s.	U. S. Weather Bureau.
<i>Delaware</i>																				
Bridgeville.....	Sussex.....	45	6	76.1	+0.2	97	30	50	17	25	1.61	-3.56	1.12	0.0	5	17	12	2	sw.	George Ray.
Delaware City.....	New Castle.....	12	43	76.0	-0.6	95	18	52	13	31	1.40	-2.20	0.60	0.0	5	18	9	4	s.	James E. Maden.
Dover.....	Kent.....	34	40	75.6	-1.0	98	29	53	13	29	0.85	-3.81	0.55	0.0	4	19	10	2	se.	Arthur G. Livingston.
Milford.....	Sussex.....	20	47	75.2	-1.5	99	29	48	17	34	1.11	-3.15	0.55	0.0	4	13	16	2	s.	Chas. J. Holzmueller.
Millsboro.....	.....do.....	20	37	76.8	+0.7	102	29	46	17	38	1.28	-3.38	0.59	0.0	5	16	13	2	sw.	Rev. M. P. S. Huntington.
Wilmington.....	New Castle.....	86	36	74.1	-2.4	92	19	49	13	31	1.45	-3.61	0.95	0.0	7	18	9	4	w.	Street and Water Depts.
Means and extremes:	.....	.....	.....	74.2	-0.8	101	28	34	20	45	1.76	-2.53	2.22	0.0	7	17	11	3	sw.	.....
For Maryland and District of Columbia.	.....	.....	.....	75.6	-0.8	102	29	46	17	38	1.28	-3.29	1.12	0.0	5	17	11	3	sw.	.....
For Delaware.....	.....	.....	.....	74.4	-0.8	102	29	34	20	45	1.71	-2.62	2.22	0.0	7	17	11	3	sw.	.....

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, Glendale; 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.

Daily Precipitation for July, 1929

Table with columns for Stations, Watersheds, Day of month (1-31), and Total. Lists precipitation data for numerous Maryland and Delaware stations.

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 measured in the morning; amount then recorded is for the preceding 24 hours.
T. Trace, or less than 0.01 inch. Data in italics determined from surrounding stations.

COMPARATIVE DATA FOR MARYLAND AND DELAWARE FOR JULY

Table with columns for Year, Temperature (Mean, Departure from normal, Highest, Lowest), Precipitation (Average, Departure from normal, Greatest local, Least local, Greatest in 24 hours, Snowfall, Number of days with 0.01 inch or more), and Year. Compares 1895-1912 data.

Daily Temperatures for July, 1929

Table with columns for Stations, days 1-31, and Mean. Rows list stations in Maryland and Delaware, with maximum and minimum temperature data for each day.

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-8-28-29-820)