

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

In Cooperation with Maryland State Weather Service

CLIMATOLOGICAL DATA

15 MARYLAND AND DELAWARE SECTION

J. R. WEEKS

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GENERAL SUMMARY

This January was cold and wet; on the Eastern Shore it was the wettest January of record. Sunshine was above normal.

The severe cold of the third decade, ushered in by the cold wave of the 23d, offset greatly the mildness of the first and second decades, and produced a monthly mean temperature that was the lowest in January since 1920.

The cold wave caused a sharp drop in temperature from the maximum in the afternoon of the 22d to the minimum in the morning of the 23d; the drop ranged from 55° to 60° in western Maryland to 40° at the Maryland-Virginia line on the Eastern Shore.

Precipitation was frequent during the first and second decades and was mostly rain; it was infrequent during the third decade and was snow. Monthly amounts were mostly 6 to 8 inches over the eastern half of the section and 5 to 6 inches over the western portion of north-central Maryland; they were 4 to 5 inches in western Maryland, except 5 to 7 inches in the Allegheny Mountain highlands.

Monthly amounts of snowfall ranged from 1 to 2 inches over most of the southern half of the section northward to 5 inches in extreme northern Delaware and to 14 inches in extreme northern Baltimore County and northwestward to 18 to 22 inches in extreme northern Frederick County; in western Maryland they were mostly 18 to 25 inches, except 25 to 47 inches in the Allegheny Mountain highlands.

Snowfalls were light, except moderate on the 17th in the Allegheny Mountain region and on the 19th in southern Frederick, northern Carroll, and northern Baltimore Counties, and heavy on the 19th in western Maryland and northern Frederick County with depths mostly 10 to 15 inches.

The upper Chesapeake Bay, the tributaries of Chesapeake Bay, and the rivers within the section froze over on the 23d, and continued frozen to the close of the month, with thickening ice. During the closing week much difficulty was experienced by steam vessels with ice in the main channel between Baltimore harbor and the lower Bay, and ice-breaker convoys were required.

Grains and grasses were snow-covered throughout the month in western Maryland. The heavy rain of the 2-3d melted the snow that was on the ground in the central and eastern divisions, and revealed grains in good condition and grasses fair to good. Grains and grasses became snow-covered again in the northern portions of the central and eastern divisions on the 19th and continued so to the close of the month, but, lacking a snow cover, they turned brown in the southern portions after the 23d. — J. B., jr.

TEMPERATURE

The monthly mean for the section, 28.1°, is 5.9° below normal. The highest monthly mean was 32.8° at Solomons; the lowest, 19.6° at Sines. The highest temperature, 62°, occurred at Snow Hill on the 13th; the lowest, 20° below zero at Oakland on the 25th. The greatest local monthly range was 77° at Oakland; the least, 49°, at Coleman. The greatest daily range was 52° at Emmitsburg on the 23d and at Sines on the 22d.

PRECIPITATION

The monthly average for the section, 6.00 inches, is 2.70 inches above normal. The greatest monthly amount was 7.95

inches at Dover; the least, 3.89 inches at Chewsville. The greatest 24-hour amount was 3.11 inches at Aberdeen on the 2-3d. The monthly average snowfall for the section, 9.0 inches, is 1.8 inches above normal. The greatest monthly snowfall was 47.1 inches at Grantsville; the least, 1.0 inch at Cambridge, Easton, Ridgely, and Milford. The average number of days with .01 inch or more of precipitation, 13, is 3 above normal.

MISCELLANEOUS PHENOMENA (WITH DATES)

Corona, lunar.—Grantsville, 29. Corona, solar.—Grantsville, 21. Fog, light.—1 to 15, 17, 18, 19, 26, 27, 30, 31. Fog, dense.—2, 3, 4, 7, 9, 15, 18. Glaze, light.—2, 6, 13. Halos, lunar.—5-6, 7, 8, 10, 11, 15, 29. Halos, solar.—7, 16, 17, 21, 25, 26, 29, 30. Sleet, light.—8-9, 11, 15, 17. Sleet, moderate.—6, 19. Thunderstorms.—Somerset, Wicomico, and Worcester Counties, 15, 19. Central and southern Delaware, 19. Winds, high.—Over section: Westerly, 3, 5, 13, 19, 20, 22-23 (gale), 24, 27, 28, 31. Eastern Shore: Southeast, 2, 9; northeast, 19.

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 n'n
Aberdeen, Md.	30.04	30.56	8	29.05	19	10.0	40	nw.	23	77	..	70
Annapolis, Md.	30.05	30.54	1	29.00	19	8.7	79	66	74
Baltimore, Md.	30.05	30.56	8	29.10	19	10.9	42	sw.	23	72	62	64
Elkins, W. Va.	30.09	30.54	1	29.32	19	7.3	32	w.	22	87	74	81
Harrisburg, Pa.	30.03	30.55	8	29.22	19	7.9	30	w.	22	78	62	66
Norfolk, Va.	30.06	30.59	1	29.22	19	9.8	39	w.	19	76	64	71
Philadelphia, Pa.	30.03	30.58	8	29.05	19	12.5	38	sw.	13	71	59	63
Pittsburgh, Pa.	30.02	30.51	7	29.31	22	11.9	40	w.	13	87	78	83
Washington, D. C.	30.06	30.56	8	29.07	19	8.2	38	nw.	23	73	59	64

COMPARATIVE DATA FOR JANUARY

Year	MARYLAND						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.....	29.5	66	-17	4.35	13.4	11	31.6	65	7	5.09	6.8	12
1896.....	32.0	66	-13	1.82	1.0	4	32.0	65	4	1.62	0.6	5
1897.....	29.1	66	-12	1.94	8.1	7	31.7	64	3	2.00	10.3	6
1898.....	25.3	72	-2	3.60	5.3	3	36.7	66	15	3.25	0.8	11
1899.....	31.9	70	-24	3.30	5.7	10	34.8	65	1	3.65	7.8	11
1900.....	33.6	69	-8	2.34	1.8	7	34.3	62	6	3.34	1.5	6
1901.....	32.5	68	-4	2.68	8.5	7	33.5	68	6	2.94	5.5	5
1902.....	29.8	59	-7	3.52	10.2	8	31.5	64	8	3.64	5.2	8
1903.....	31.4	62	-6	4.02	6.7	9	33.6	60	8	3.73	4.2	8
1904.....	25.7	64	-20	2.59	15.3	10	28.6	63	-10	2.08	8.1	10
1905.....	28.6	69	-14	3.66	17.0	11	29.5	63	-6	4.14	19.3	10
1906.....	35.7	75	-6	2.85	2.3	10	40.2	76	5	3.08	2.0	11
1907.....	35.6	76	-19	3.18	6.2	12	37.5	77	3	2.36	3.6	12
1908.....	32.6	63	-21	3.24	7.1	8	34.3	63	5	3.37	6.1	8
1909.....	34.9	69	-3	2.74	6.1	10	38.1	71	10	2.84	4.1	9
1910.....	31.9	69	-12	4.38	12.9	12	33.5	65	6	4.07	3.0	10
1911.....	36.7	76	-5	3.96	4.3	12	38.6	68	11	4.14	2.6	11
1912.....	29.7	60	-40	2.59	15.5	10	26.6	59	-4	3.48	15.9	11
1913.....	41.5	74	8	3.17	1.6	13	44.3	71	22	3.23	T.	12
1914.....	35.9	76	-14	3.95	4.2	7	37.6	74	0	3.20	0.1	6
1915.....	33.7	66	-10	5.90	6.7	12	37.2	67	15	5.65	1.5	12
1916.....	37.9	74	-11	1.77	3.2	11	38.8	73	-1	1.60	3.1	9
1917.....	33.3	66	0	3.07	4.4	11	34.0	64	-9	3.02	1.5	9
1918.....	21.2	61	-30	4.24	24.0	10	22.9	58	-9	4.25	21.7	10
1919.....	36.0	66	-19	3.42	2.7	7	37.2	65	2	3.94	1.1	8
1920.....	27.8	64	-10	2.40	2.9	10	28.2	64	5	2.95	2.1	11
1921.....	35.5	70	-5	2.27	1.5	8	37.1	66	4	2.40	0.1	7
1922.....	30.1	68	-15	3.96	23.0	10	31.4	60	6	4.01	17.3	9
1923.....	34.7	68	0	4.12	6.5	12	35.9	67	13	4.64	2.2	10
1924.....	33.4	66	-10	4.07	1.3	7	35.6	67	1	3.93	T.	7
1925.....	30.9	63	-31	4.59	19.3	12	33.5	62	-1	5.36	7.9	12
1926.....	32.2	72	-11	3.12	4.6	10	34.2	65	5	2.94	1.1	10
1927.....	32.5	78	-5	1.60	2.1	11	33.7	73	2	1.57	4.6	10
1928.....	34.2	72	-11	2.48	9.4	7	35.2	71	-11	2.87	12.6	8
1929.....	32.6	69	-13	2.68	2.3	10	34.7	67	6	2.88	0.9	9
1930.....	33.8	75	-17	2.67	11.6	11	36.4	75	4	3.46	8.2	12
1931.....	34.4	66	-8	1.64	1.5	5	36.0	65	12	2.07	0.3	5
1932.....	44.4	80	13	4.98	1.1	12	46.4	77	22	5.56	1.2	11
1933.....	40.8	70	4	3.11	1.5	9	42.3	68	14	3.81	T.	8
1934.....	37.1	70	-6	2.52	0.5	9	38.4	66	3	2.26	T.	9
1935.....	31.2	71	-23	4.67	20.4	11	33.4	70	-7	5.49	16.8	11
1936.....	27.8	62	-20	5.87	9.7	13	30.8	61	-5	7.23	2.3	13
Period.....	34.0	80	-40	3.29	7.5	10	34.4	77	-11	3.38	5.1	9

Climatological Data, January, 1936

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 in. or more	Clear			Partly cloudy	Cloudy
<i>Maryland</i>																				
Aberdeen	Harford	26	18	28.2	-4.9	52	13	-4	23	27	7.00	+3.89	3.11	3.0	18	9	10	12	nw.	U. S. Army.
Annapolis	Anne Arundel	45	71	30.4	-7.0	57	13	2	23	30	6.31	+2.76	2.44	1.5	15	8	11	12	nw.	U. S. Navy.
Baltimore*		14	66	30.8	-3.0	55	13	0	23	34	5.94	+2.44	2.87	3.7	14	9	7	15	sw.	U. S. Weather Bureau.
Bellii	Prince Georges	151	16	29.2	-5.1	57	13	-2	23	47	5.90	+2.35	2.36	2.5	12	9	10	12	nw.	Bureau Plant Industry.
Boys	Montgomery	375	17	28.0	-5.8	56	13	-3	23	45	4.18	+1.24	1.85	3.7	10	10	11	10	nw.	Ralph F. Staley.
Cambridge (near)	Dorchester	13	43	32.6	-3.7	56	13	5	23	40	6.26	+2.68	2.76	1.0	10	13	7	11	nw.	Matt Harding.
Cecilton	Cecil	85	18																	
Cheltenham	Prince Georges	230	36	28.8	-6.5	57	13	1	23	47	5.95	+2.42	2.38	2.5	16	9	8	14	nw.	U. S. Magnetic Obs'ry.
Cheltenham	Washington	630	39	24.4	-6.9	50	13	-10	23	48	3.89	+1.05	1.33	10.4	15	8	13	10	nw.	D. Paul Oswald.
Clear Spring	do.	560	39	25.7	-5.4	54	13	-7	23	35	4.89	+1.82	1.53	18.0	14	8	11	12	nw.	Mrs. Anna Bevan Cohill.
Colemanii	Kent	80	39	28.7	-5.4	48	13	-1	23	39	6.73	+3.38	2.98	2.5	13	11	10	10	nw.	Walter B. Harris.
College Park	Prince Georges	160	49	29.6	-4.4	59	13	0	23	46	5.67	+2.44	2.42	2.5	12	9	10	12	nw.	Prof. Thos. H. White.
Crisfield	Somerset	5	17			54	13						2.58							A. B. Cochrane.
Cumberland	Allegany	623	64	26.2	-5.4	56	13	-8	23	53	4.17	+1.49	0.95	17.7	10	10	7	14		W. R. E. King.
Darlington	Harford	360	46	26.4	-5.1	46	13	-5	23	38	7.60	+4.10	2.60	6.2	14	8	11	12	nw.	Fred. C. Jones.
Dundalk	Baltimore	12	2	28.7	-5.1	55	13	-3	23	28	5.90		2.28	4.5	15	8	11	12	w.	U. S. Airway Station.
Easton	Talbot	35	46	30.4	-4.8	54	13	0	23	34	6.96	+3.87	2.84	1.0	11	13	8	10	nw.	Clement E. Bray.
Elkton	do.	28	10	27.4	-10.1	48	13	-4	23	41	6.41	+2.96	2.08	3.7	12	14	5	12	nw.	H. W. Bouchele.
Emmitsburg	Frederick	720	68	26.2	-5.1	49	13	-12	23	52	4.65	+1.24	1.50	18.5	13	9	12	10	n.	Mt. St. Mary's College.
Fallstonii	Harford	450	67	27.1	-4.4	48	13	-4	23	40	5.68	+2.11	2.03	5.7	15	7	14	10	nw.	Miss Dora Curtiss.
Ferry Landingff	Calvert	120	20	31.0	-4.8	58	13	-2	23	46	6.62	+3.30	2.41	1.5	11	10	8	13	nw.	Thos. J. Bourne.
Frederick	Frederick	325	62	27.4	-5.3	55	13	-5	23	46	5.21	+1.98	1.84	8.2	15	9	11	11	w.	August T. Brust.
Friendsville	Garrett	1,980	18	22.6	-8.2	56	14	-19	23	41	5.91	+2.33	1.20	38.0	23	2	11	18	w.	Joab J. Friend
Frostburg	Allegany	1,950	35	24.0	-6.6	50	18	-15	23	41	4.39	+0.98	0.95	25.5	16	10	7	14	w.	F. T. Lewis.
Grantsville	Garrett	2,320	43	20.2	-7.4	49	13	-19	23	37	7.11	+3.52	1.30	47.1	24	2	11	18	w.	Floyd J. Miller.
Great Fallsii	Montgomery	200	47	28.8	-4.6	55	13	-1	23	43	5.45	+2.35	2.10	3.0	11	8	11	12	nw.	Chas. E. Sullivan.
Hancock (Tonoloway)	Washington	550	26	24.8	-6.7	53	13	-12	26	43	4.79	+2.24	1.40	20.0	12	9	9	13	nw.	American Fruit Growers.
Hancock (City)	do.	420	32								4.72	+2.17	1.28	18.6	12					Marvin K. Murray.
Keedysville	do.	420	32	25.9	-6.8	53	13	-7	23	49	4.50	+1.58	1.50	9.2	10	9	11	11	nw.	J. A. Miller.
La Plata	Charles	190	22	30.8	-6.2	56	13	1	23	44	6.95	+3.73	2.66	2.8	15	10	7	14	nw.	Walter M. Page.
Laurel	Prince Georges	300	42	28.8	-4.4	55	13	0	23	45	5.30	+1.95	2.25	2.7	11	9	10	12	nw.	Evan G. Chaney.
Lutherville	Baltimore	340	10	27.4	-6.5	53	13	-4	23	48	6.48	+2.97	2.40	8.5	14	9	12	10	nw.	Clarence J. Thomson, Jr.
Maryland Line	do.	840	12	25.6	-4.1	49	13	-9	23	47	6.11	+2.50	2.20	14.5	13	10	12	9	nw.	Chester L. Fulton.
Millington	Kent	27	39	29.6	-4.9	55	3	-1	23	42	7.76	+4.30	2.06	3.0	13	14	8	9	nw.	Henry L. Higman.
Oakland	Garrett	2,420	37	21.6	-7.1	57	14	-20	25	45	5.05	+1.26	0.98	25.3	25	2	11	18	w.	R. E. Weber.
Parkton§§	Baltimore	780	6	25.8		48	13	-7	23	46	5.75		2.28	11.5	13					C. W. Hendrix.
Picardy	Allegany	1,080	10	26.0	-7.8	51	13	-11	23	49	4.58	+2.41	1.30	19.5	13	10	7	14	w.	American Fruit Growers.
Pleasant Hillii	Baltimore	660	12								6.37	+2.93	2.60	6.5	12	9	12	10	nw.	J. E. Henry.
Princess Anne	Somerset	17	61	32.4	-4.8	58	13	6	23	38	6.85	+3.64	2.40	2.0	10	9	13	9	nw.	James R. Stewart.
Ridgely	Caroline	57	46	30.8	-4.3	57	3	-6	23	46	7.79	+4.71	2.80	1.0	11	12	9	10	nw.	Albert White.
Rock Hall	Kent	20	22	29.7	-5.3	52	13	0	23	38	6.83	+3.47	2.75	2.6	12	11	10	10	nw.	Charles Judelfind.
Salisbury	Wicomico	55	31	32.4	-5.4	58	3	5	23	40	7.12	+3.80	2.20	2.0	10	14	8	9	nw.	Homestead Dairy Farms.
Sines (Deep Creek)ii	Garrett	2,030	11	19.6		51	14	-19	23	52	4.06	+0.96	1.06	31.4	22	2	11	18		C. E. MacMurray.
Snow Hill	Worcester	20	21	32.6	-5.1	62	13	6	23	34	7.40	+4.20	1.80	2.0	10	12	10	9	nw.	Richard Leake.
Solomons	Calvert	20	45	32.8	-3.5	57	13	6	23	40	6.30	+3.48	2.14	1.5	11	10	8	13	nw.	Chesapeake Biological L'b.
State Sanatorium	Frederick	1,460	28	24.8	-6.5	48	13	-12	23	50	5.09	+1.68	1.40	22.0	14	9	12	10	nw.	Dr. V. F. Cullen.
Stevensville	Queen Annes	12	10	30.4	-6.2	55	13	0	23	39	7.05	+3.38	2.65	1.5	10	11	10	10	nw.	T. R. Price.
Takoma	Montgomery	320	38	30.6	-2.9	59	13	-2	23	45	5.73	+2.25	2.45	2.7	11	9	10	12	nw.	Guy L. Seaman.
Towson	Baltimore	475	25																	Charles E. Prince.
Western Port	Allegany	1,000	43	26.6	-5.2	54	13	-11	23	41	4.58	+1.98	1.08	21.5	15					Norris Bruce.
Westminster	Carroll	770	27	26.2	-6.2	50	13	-7	23	45	6.01	+2.58	2.15	11.0	12	9	13	9	nw.	Harry J. Mathias.
Woodstock	Baltimore	415	67	27.2	-5.2	52	13	-4	23	46	5.27	+2.02	2.23	5.8	11	8	11	12	nw.	Woodstock College.
<i>Dist. of Columbia</i>																				
Washington**		72	66	30.6	-2.8	58	13	0	23	37	5.87	+2.32	2.49	2.8	15	8	10	13	nw.	U. S. Weather Bureau.
<i>Delaware</i>																				
Bridgeville	Sussex	45	46	31.7	-3.9	58	3	3	23	39	6.68	+3.25	2.33	1.5	10	14	9	8	nw.	William M. Ray.
Delaware City	New Castle	12	50					-5	23											James E. Maden.
Dover	Kent	34	47	30.4	-5.1	56	13	1	23	43	7.95	+4.63	2.68	2.5	14	14	7	10	nw.	Arthur G. Livingston.
Milford	Sussex	20	54	31.4	-4.9	58	3	1	23	45	7.05	+3.33	2.33	1.0	11	12	11	8	nw.	Chas. J. Holzmuller.
Millsboro	do.	20	44	32.2	-3.8	61	13	3	23	42	7.17	+3.64	2.35	2.0	9	14	9	8	nw.	Wm. T. Moore.
Wilmington§§§	New Castle	42	43								7.10	+3.62	2.86	4.7	15	14	6	11	nw.	Street Department.
Wilmington§§§§	do.	260	25	28.2	-5.0	51	13	-4	23	44	7.45	+3.97	3.08	4.7	15	14	6	11	nw.	Water Department.
<i>Means and extremes:</i>																				
For Maryland and District of Columbia				27.8	-6.2	62	13	-20	25	53	5.87	+2.58	3.11	9.7	13	9	10	12	nw.	
For Delaware				30.8	-3.6	61	13	-5	23	45	7.23	+3.85	3.08	2.3	12	14	8	9	nw.	
For entire section				28.1	-5.9	62	13	-20	25	53	6.00	+2.70	3.11	9.0	13	9	10	12	nw.	

The departures from normal temperatures are computed from the averages of the entire period for stations having 10 or more years of record. Departures of precipitation with 15 years or more of record are computed from a normal or "standard mean", adjusted to a uniform 35-year period; for stations of 10 to 14 years the means for the period of record are used. Data in italics determined from surrounding stations. † Precipitation is less than 0.01 inch rain or melted snow.

††Post addresses of these stations are as follows: Of Bell, Glendale; of Coleman, Wornton; of Fallston, Bagley; of Ferry Landing, Owings; of Great Falls, Bethesda; of Picardy, Paw Paw, W. Va.; of Pleasant Hill, Owings Mills; of Sines, Oakland. *Custom House, Gay and Water Sts. **Weather Bureau Building, 24th and M Sts.

‡Also on other dates. §§Prettyboy Dam. §§§Municipal Building. §§§§Porter Reservoir.

Daily Temperatures for January, 1936

Table with columns for Stations, days 1-31, and Mean. Rows list various Maryland and Delaware locations such as 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., Richmond, Va., -4-10-36-1.050)