U. S. DEPARTMENT OF AGRICULTURE.

REPORT FOR JANUARY, 1899.

MARYLAND AND DELAWARE SECTION

OF THE

CLIMATE AND CROP SERVICE

OF THE

WEATHER BUREAU.

IN COOPERATION WITH THE

MARYLAND STATE WEATHER SERVICE.

(Prof. Wm. B. Clark, Director; Prof. Milton Whitney, Secretary and Treasurer.)

PREPARED UNDER DIRECTION OF

WILLIS L. MOORE,

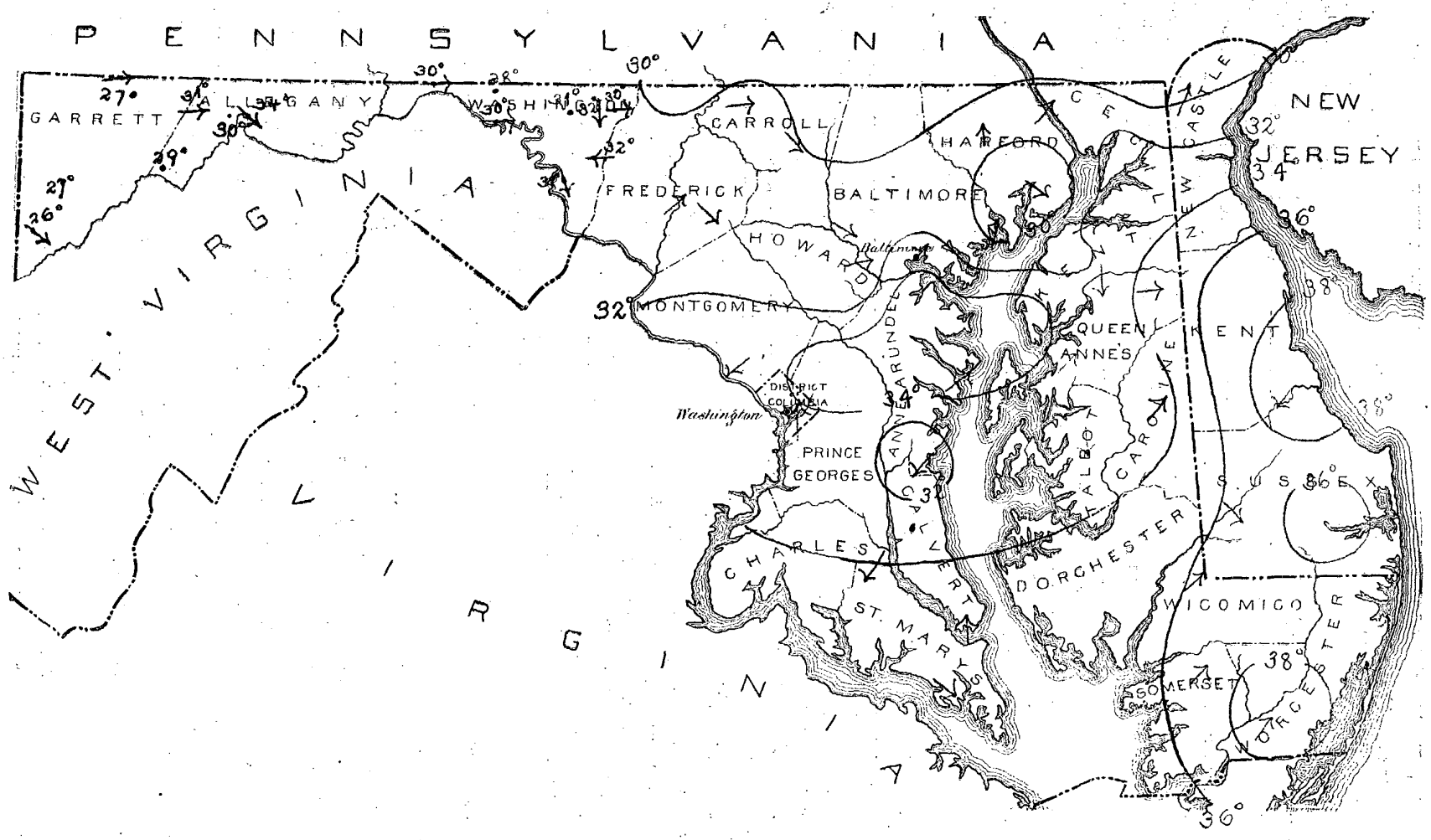
CHIEF OF WEATHER BUREAU.

BY

F. J. WALZ,
SECTION DIRECTOR.

BALTIMORE, MD.:
WEATHER BUREAU OFFICE.
JOHNS HOPKINS UNIVERSITY.

MONTHLY MEAN ISOTHERMS AND PREVAILING WINDS, JANUARY, 1899.



U. S. DEPARTMENT OF AGRICULTURE,

CLIMATE AND CROP SERVICE

OF THE

WEATHER BUREAU.

CENTRAL OFFICE: WASHINGTON, D. C.

BALTIMORE, MD.

VOL. IV. BALTIMORE, MD. No. 1.

THE WEST INDIES CLIMATE AND CROP SERVICE.

The first bulletin of the Puerto Rican Section of the Climate and Crop Service of the Weather Bureau, has been received. This bulletin is to be issued regularly hereafter at San Juan, by the Section Director, Prof. Mark W. Harrington, formerly Chief of the U. S. Weather Bureau. A similar publication will at an early date be issued for the island of Cuba from Habana. These bulletins are to be printed in the original in Spanish for local distribution in their respective islands, but copies translated into English, will be published simultaneously in the United States.

The first bulletin gives a brief summary relative to the coffee, sugar cane, tobacco, and rice crops, and minor products. This is followed by quotations, or remarks from the various correspondents. As to coffee, the bulletin says: "The harvest ended early in December; the future crop looks well." The cutting season of sugar cane is approaching. Tobacco plants are developing favorably on account of frequent showers. The crop will be gathered in April.

Decided work has been already performed by the Weather Bureau in the matter of establishing sections of its Climate and Crop Service in Puerto Rico and Cuba. Twenty voluntary stations have been established in the first-named island, and the work of establishing a larger number of stations in Cuba is well advanced.

* * *

WARM WINTER OF 1792--'93.

The following interesting bit of gossip about the weather and its consequences during the winter of 1792-'93 is given by Martha Washington in a letter written to Mrs. Frances Washington, dated Philadelphia, February the 3d, 1793. "The winter has been remarkably warm, which occasions the season to be very sickly. Mr. Blair has arrived here and tells his friends that a great number of our acquaintances are dead below. The winter has been so warm here that the farmers have been plowing all winter, and we are in fear that there will not be ice to fill the ice houses in the city, which will be a great disappointment to us in the warm season. Ice is the most agreeable thing we can have here."

It might be of interest to state in connection with what this letter says about ice, that ice was first shipped from the Northern States to Baltimore (Thomas W. Griffith's Annals of Baltimore) in the summer of 1828. Several cargoes were brought to this port during that summer and the ice sold for about a dollar a bushel, or about a dollar and thirty-five cents per hundred pounds.

DESTRUCTIVE STORM OF DECEMBER 4, 1898.

One of the severest wind and rain storms that has visited this vicinity for a great many years, passed over this section Sunday, December 4th, 1898. The local tempestuous conditions were caused primarily by the passage to the northeast of a storm area which had its inception in the west Gulf some two to three days before. This storm center entered the United States near Galveston, Texas, and moved northeastward across the Mississippi to the Ohio Valley, and Sunday morning at eight o'clock was centered in Kentucky and had increased very decidedly in energy. From this point it continued in its northeast course, with augmented force, crossing Maryland in the afternoon, then bending sharply to the north reached the region of eastern Lake Erie by 8 a. m. the 5th.

The local conditions at Baltimore, as shown by the self-recording instruments were as follows: The wind freshened perceptibly in the morning, with a prevailing direction of east to northeast, and became high about noon, after which it blew with a steady velocity of twenty-five to thirty miles per hour until four o'clock. At this time the wind subsided to gentle breezes from the southeast and southwest, which prevailed until 4.45 p. m., when a sudden shift to southeast and east was followed by an immediate and marked increase in velocity. The highest rate of movement, sixty miles per hour, was reached at 4.45 p. m., and was maintained for four consecutive minutes, after which the storm rapidly abated, and was practically over by 5 p. m. The barometer began to fall about 8 o'clock in the morning, and continued falling very rapidly throughout the morning and afternoon. From 8 o'clock a. m. when it was 29.60 inches to 6.30 p. m. when it reached the lowest point, 29.05 inches, the total fall was 0.55 inch, while between 12 o'clock and 2 o'clock it fell one-fourth of an inch.

The damage during the height of the storm was great, a moderate estimate placing the loss at $100,000. About 220 houses were partly or wholly unroofed, and innumerable signs, awnings, and shutters were blown away or wrecked. Local telephone companies experienced losses of some $15,000, while street car and telegraph companies suffered through damage to wires and poles.

A brilliant effect, and one really alarming until explained, followed the destruction of a large gas tank, which, being damaged by the storm, caught fire and blew up at 4.43 p. m. and illuminated with a reddish glare the low flying clouds, increasing at the same time the apprehension of the more timid, already excited by the developing storm.

There was but one fatality from the storm, and that indirect, a colored man being instantly killed by treading on a fallen electric wire. Fortunately the storm occurred on Sunday, and the inclemant weather of the entire forenoon had detained nearly every one indoors, otherwise there would undoubtedly have been considerable loss of life.

The storm seems to have been most violent in the northwest section of the city, among the substancial residences. Although the damage and destruction was not at all local, all sections suffering. In the harbor, while shipping escaped

injury to any great extent, the sea was very high, and on the west side the waves occasionally swept over the wharves in great splashes, and the high tide and winds hurled the tops of waves on the decks of vessels that were low in the water. All vessels at anchorage secured themselves with hooks down, while those at the pier put out extra lines. Only one boat, the Chester River liner, "Gratitude," ventured to leave her moorings. She made her way bravely, but with great difficulty, until well past North Point where the gale had full sweep, and drove her toward shore staving in one of her bulkheads. Then her captain, deciding it prudent not to try to proceed further, made about and ran safely back to port.

Storm warnings were received and sent out to all shipping interests Saturday afternoon; these warnings were supplemented by further warning between 1 and 2 p. m. Sunday.

Careful observation made during and after the storm failed to disclose any evidences of tornado formation, nor was anything like a funnel-shaped cloud apparent at the time. The damage was produced by the direct force of the wind, aided by the driving sheets of rain. This is evident from the fact that houses on the west side of the street suffered most. These not only presented a fell front to the wind, but gave it additional leverage from the broad projecting cornices facing eastward. On the other hand, the houses across the street presented a lesser surface to the winds, through the downward slope of the roofs, and thus, as was to be expected, escaped with but slight damage.

* * *

CLIMATOLOGY OF THE MONTH.

ATMOSPHERIC PRESSURE—IN INCHES AND HUNDREDTHS.

Monthly mean at Washington, D. C., 30.19; at Baltimore, 30.18; average, 30.18; highest, 30.98 at Washington, D. C., and at Baltimore, on the 2d; lowest, 29.31 at Baltimore, on the 24th.

TEMPERATURE—IN DEGREES FAHRENHEIT.

The monthly mean (entire territory), 32.9, is 1.3 above the normal.

The highest monthly mean was 39.3, at Pocomoke City.

The lowest monthly mean was 26.4, at Sunnyside.

The highest temperature recorded during the month was 70, at Ocean City, on the 15th.

The lowest temperature recorded during the month was —24, at Sunnyside, on the 2d.

The greatest local monthly range was 82, at Deer Park.

The least local monthly range was 46, at Solomons.

The greatest daily range was 57, at Sunnyside, on the 2d.

The least daily range was 0, at Mardela Springs, on the 14th and 28th, and at Md. Agricultural College, on the 13th.

PRECIPITATION—IN INCHES AND HUNDREDTHS.

The monthly average (entire territory) 3.30, was 0.62 above the normal.

The greatest amount was 6.59, at Sunnyside.

The least amount was 1.31, at Boettcherville.

The greatest amount in twenty-four hours was 1.78, at Coleman, on the 6th.

The average number of rainy days, 10.

WIND.

The prevailing direction was from the southwest.

The total movement was 3,840 miles, at Baltimore, and 4,863 miles, at Washington, D. C.

The maximum wind velocity was 32 miles per hour from the northwest, at Washington, D. C., on the 7th.

MISCELLANEOUS.

The following are dates on which various miscellaneous phenomena occurred:

Snow.—Annapolis, 12, 31; Bachman's Valley, 1, 12, 31; Baltimore, 12, 31; Boetcherville, 6, 31; Boonsboro *b*, 31; Charlotte Hall, 1, 28, 31; Chase, 1, 31; Chestertown, 12, 31; Chewsville, 1, 31; Clear Spring *a*, 12, 31; Cherryfields, 1, 11, 28, 31; Coleman, 3, 31; Cumberland, 1, 6, 24, 31; Darlington, 31; Denton, 1, 28, 31; Easton, 1, 28, 31; Fallston, 1, 7, 12, 31; Frederick, 1, 12, 31; Frostburg, 6, 7, 12, 18, 26, 27, 31; Grantsville, 1, 6, 24, 27, 31; Great Falls, 1, 31; Green Spring Furnace, 1, 12, 31; Hagerstown, 31; Hancock, 1, 6, 11, 12; Jewell, 1, 28, 31; Laurel, 13, 31; Mardela Springs, 31; Maryland Agricultural College, 12, 31; Milford, Del., 31; Millsboro, Del., 1, 12, 28, 31; Mt. St. Mary's, 1, 12, 18, 31; Newark, Del., 1, 31; New Market, 1, 7, 12, 31; Ocean City, 1, 28, 31; Pocomoke City, 1, 28, 31; Port Deposit, 31; Princes Anne, 1, 28, 31; Queenstown, 28, 31; Rock Hall *a*, 1, 31; Rock Hall *b*, 1, 31; Sandy Point, 1, 28, 31; Seaford, Del., 28, 31; Sharpsburg, 1, 7, 12, 31; Smithsburg *a*, 6, 12, 31; Smithsburg *b*, 1, 7, 12, 18, 31; Solomons, 1, 12, 28, 31; St. Charles College, 1, 7, 12, 31; Sudlersville, 12, 31; Sunnyside, 3, 6, 7, 10, 14, 18, 25, 27, 29, 30, 31; Taneytown, 31; Washington, 1, 12, 28. 31; Western Md. College, 1, 7, 12, 18, 31; Westernport, 5, 30. 31; Woodstock, 31.

Hail.—Annapolis, 12; Boettcherville, 12; Chestertown, 12, 13; Hancock, 12; Milford, Del., 12; Millsboro, Del., 1, 6, 12; Mt. St. Mary's, 6, 13; Queenstown, 12; Rock Hall *b*, 1, 12; Solomons, 12; Sunnyside, 6.

Sleet.—Bachman's Valley, 6, 7; Baltimore, 13; Boettcherville, 13; Charlotte Hall, 12, 13; Chestertown, 12, 13; Chewsville, 13, 15; Clear Spring *a*, 6; Coleman, 13; Denton, 12, 13; Easton, 13; Fallston, 12, 31; Frostburg, 6, 12; Grantsville, 12; Green Spring Furnace, 6; Hancock, 13; Jewell, 12, 13; Laurel, 12; Millsboro, Del., 1, 13; New Market, 13; Queenstown, 12; Rock Hall *a*, 12, 13; Rock Hall *b*, 13; Sharpsburg, 5, 13; Smithsburg *b*, 6; Solomons, 12, 13; St. Charlses College, 7; Sunnyside, 6, 7, 12; Western Md. College, 13, 31; Woodstock, 6, 12.

Thunderstorms.—On the night of the 24th at Annapolis, Baltimore, Charlotte Hall, Chase, Chestertown, Cherryfields, Coleman, Easton, Fallston, Jewell, Laurel, Mardela Springs, Md. Agricultural College, Newark, Del., Pocomoke City, Port Deposit, Princess Anne, Queenstown, Rock Hall *a*, Rock Hall *b*, Seaford, Del., Solomons, Sudlersville, Washington, Van Bibber, Woodstock and Darlington.

Lightning, distant.—Charlotte Hall, on the 14th.

Sun dog.—Bachman's Valley, 1, 2; Rock Hall *b*, 23.

Halos, lunar.—Bachman's Valley, 20; Charlotte Hall, 27; Clear Spring *a*, 20, 28; Cumberland, 19, 20, 27; Hancock, 20; Jewell, 20; Laurel, 20, 27; Mt. St. Mary's, 15, 20; Rock Hall *b*, 20, 27; Smithsburg *b*, 20; Solomons, 20; St. Charles College, 20; Western Md. College, 3, 15, 20.

Coronæ, lunar.—Millsboro, Del., 15; Smithsburg *b*, 15, 27; Western Md. College, 22.

Halos, solar.—Green Spring Furnace, 10, 20.

Fog.—Cherryfields, 5; Easton, 14, 17; Jewell, 13, 14, 17; Millsboro, Del., 13; Mt. St. Mary's, 13, 14; Princess Anne, 16, 23, 30; Queenstown, 5. 12, 13, 14, 15, 16; Rock Hall *a*, 14, 17; Solomons, 13, 14; St. Charles College, 13; Western Md. College, 24.

Climatological data for Maryland and Delaware, January, 1899.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.					Sky.			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).	Number rainy days.	Number clear days.	Number partly cloudy days.	Number cloudy days.		
WESTERN MARYLAND.																				
Boettcherville	Allegany	780	9	30.5	+3.0	60	5	−14	2	37	1.31	−1.12	0.60	5.0	4	.....	.....	.....	.....	F. F. Brown.
Boonsboro 1	Washington	600	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. E. Huntzbery.
Boonsboro 2	Washington	800	1	31.5	.....	57	5	− 2	2	31	2.72	.....	1.30	2.0	6	14	6	11	E	Samuel L. Ford.
Chewsville	Washington	530	1	31.9	.....	56	4	.....	....	33	2.00	... .	0.64	2.0	8	15	8	8	N	E. I. Oswald.
Clear Spring 1	Washington	500	1	28.0	.....	55	16	− 2	2	48	1.42	.....:	0.50	2.2	8	18	6	5	.....	W. E. Loose, Jr.
Clear Spring 2	Washington	650	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. W. Frantz.
Cumberland	Allegany	722	40	34.5	+0.4	67	24	− 7	3	46	2.60	+0.37	1.00	11.0	9	14	2	15	NW	Howard Shriver.
Deer Park	Garrett	2,457	8	27.0	+1.8	59	4	−23	2	56	2.33	−0.51	1.60	.....	6	.....	.....	.....	.....	S. P. Specht.
Frostburg	Allegany	2,200	4	30.8	.....	61	4	− 2	2	37	4.53	.....	1.35	7.2	15	16	0	15	W	G. G. Townsend.
Grantsville	Garrett	2,400	6	26.8	+2.7	61	4	−10	2	45	1.90	−1.83	0.50	13.0	6	8	3	20	W	J. S. Miller.
Green Spring Furnace	Washington	450	7	30.2	+2.1	58	5	− 9	2	30	3.31	−0.20	0.89	6.7	11	20	2	9	E&W	E. G. Kinsell.
Hagerstown	Washington	552	8	30.8	−0.5	55	5	− 8	2	30	1.71	−1.28	0.60	2.5	5	18	3	10	.....	Prof. C. E. Carl.
Hancock	Washington	455	1	29.8	.....	58	14	− 7	2	41	2 84	.....	1.15	.....	7	13	4	14	W	J. D. Stotlemeyer.
Sharpsburg	Washington	420	5	31.1	+2.9	55	14	− 8	2	35	3.40	+0.67	0.82	8.0	10	15	6	10	NW	R. L. Hiberger.
Smithsburg 1	Washington	750	2	30.4	.....	57	5	−11	2	34	2.70	.....	1.09	3.5	8	17	3	11	W	Joseph L. Miller.
Smithsburg 2	Washington	900	1	31.1	.....	58	5	− 2	2	33	3.54	.....	1.12	9.8	10	17	1	13	S	Dr. D. W. Crowther.
Sunnyside	Garrett	2,440	7	26.4	+3.4	56	23	−24	2	57	6.59	+3.27	1.59	12.2	20	8	6	17	NW	J. G. Knauer.
Westernport	Allegany	1,000	5	29.1	+2.8	56	14	− 3	2	38	1.80	−0.32	0.40	3.0	10	.....	.....	.....	.....	Prof. O. H. Bruce.
Average				30.0	+2.1	.....	.....	.....	.....	.....	2.79	−0.11	.....	6.0	9	15	4	12	W	
NORTHERN-CENTRAL MD.																				
Bachman's Valley	Carroll	860	6	28.4	+0.3	55	5	−11	2	31	4.32	+2.06	1.50	7.5	8	17	2	12	NW	J. M. Myers.
Baltimore	Baltimore	123	65	33.6	0	59	5	6	2	27	3.50	+0.36	0.75	5.3	14	15	5	11	SW	U. S. Weather Bureau.
Baltimore, J. H. Hospital	Baltimore	112	5	31.2	0	59	5	6	2	42	4.17	.....*	1.24	4.9	11	11	6	14	N	W. L. Woods.
Chase	Baltimore	25	1	30.2	.....	54	15	−10	2	36	3.41	.....	0.95	4.0	9	15	4	12	NW	J. W. Crouch.
Darlington Academy	Harford	300	10	30.6	+1.6	53	5	0	2	27	3.32	+0.32	1.36	3.0	8	18	10	3	SW	Prof. A. F. Galbreath.
Fallston School	Harford	450	31	30.8	+0.5	55	5	0	2	23	2.97	+0.16	0.94	3.2	12	7	16	8	S	G. G. Curtiss, A. M.
Frederick	Frederick	275	27	31.4	−0.3	56	5	− 7	2	37	2.72	+0.04	0.82	6.5	9	14	5	12	SW	McClintock Young.
Great Falls	Montgomery	200	11	32.7	+2.1	58	5	− 3	2	29	3.81	+1.28	1.00	.....	10	13	0	18	NE	Washington Aqueduct.
Mt. St. Mary's College	Frederick	720	39	30.0	+0.1	53	5	−14	2	51	2.45	−0.07	0.80	12.2	10	11	12	8	SW	J. A. Mitchell, Ph. D.
New Market	Frederick	550	16	30.6	+0.4	55	5	− 2	2	30	3.37	+0.91	0.83	7.5	9	12	9	10	NW	H. H. Hopkins, M. D.
St. Charles College	Howard	500	5	30.8	−1.6	56	22	− 8	2	33	4.74	+2.13	1.32	5.5	11	12	6	13	W	Rev. George L. Harig.
Taneytown	Carroll	490	7	30.8	+2.8	55	4	− 9	2	36	1.98	.....	1.20	2.0	8	12	2	8	W.	Prof. H. Meier.
Van Bibber	Harford	22	4	29.4	−0.8	53	5	− 1	2	24	3.50	+1.44	1.20	.....	10	18	3	10	NW	H. A. Wroth.
Western Maryland Coll.	Carroll	720	5	31.5	+1.6	56	5	.....	....	29	3.32	+0.56	1.35	9.0	11	12	2	17	NW	Dr. Cleveland Abbe, Jr.
Woodstock College	Baltimore	392	30	31.2	−0.3	58	5	− 6	2	42	2.54	+0.14	1.14	1.8	10	16	5	10	NW	T. J. A. Freeman, S. J.
Average				30.9	+0.5	.....	.....	.....	.....	.....	3.34	+0.78	.....	4.8	10	14	6	11	NW	
SOUTHERN MARYLAND.																				
Annapolis	Anne Arundel	45	26	34.8	+0.8	57	5	8	2	32	3.83	+1.61	0.89	8.5	14	12	9	10	SW	J. E. Abbott.
Charlotte Hall School	St. Mary's	167	6	31.2	+0.4	60	22	− 1	2	36	4.15	+1.47	1.16	6.0	11	14	11	6	NE	J. F. Coad.
Cherryfields *	St. Mary's	7	6	31.8	+0.5	.....	.....	.....	.....	.....	2.96	+0.91	0.55	8.5	11	14	11	6	NW	Col. J. E. Coad.
Distributing Reservoir †	Dist. of Columbia	120	9	33.3	+2.2	52	4	0	2	.....	3.41	+0.95	0.90	.....	11	.....	.....	.....	.....	Washington Aqueduct.
Jewell	Anne Arundel	165	12	32.2	−1.8	66	22	1	2	36	3.02	+0.02	1.10	5.0	6	14	2	7	NE	J. Plummer.
Laurel	Prince George's	150	5	32.3	.....	56	17	− 4	2	31	3.13	+0.46	0.95	5.0	7	12	7	12	.....	Dr. T. M. Baldwin.
Md. Agricultural College	Prince George's	170	8	35.3	.....	57	22	.....	....	34	3.57	+1.17	1.10	2.5	7	17	3	11	.....	Prof. J. H. Patterson.
Receiving Reservoir †	Dist. of Columbia	160	9	32.8	+1.7	54	22	0	2	.....	3.57	+0.77	0.97	.....	10	.....	.....	.....	.....	Washington Aqueduct.
Solomon's	Calvert	20	8	35.3	+1.7	57	4	11	2	23	3.41	+0.80	0.62	7.8	13	8	6	17	S	W. H. Marsh, M. D.
Washington	Dist. of Columbia	112	29	33.6	+1.0	60	5	− 1	2	31	4.12	+0.72	1.07	.....	14	15	3	13	S	U. S. Weather Bureau.
Average				32.9	+0.8	.....	.....	.....	.....	.....	3.52	+0.89	....	5.4	10	14	6	10	NE. S	
EASTERN MARYLAND.																				
Berlin	Worcester	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. E. J. Dirickson.
Chestertown	Kent	80	15	31.8	−0.5	56	4	5	2	30	3.66	+0.88	1.60	3.5	7	17	4	10	N	Hon. M. de K. Smith.
Coleman	Kent	80	1	32.6	.....	54	5	4	2	32	4.21	.....	1.78	5.0	8	19	3	9	SW	James S. Harris.
Denton	Caroline	42	10	32.8	+2.3	64	24	1	2	23	4.62	+2.23	1.62	6.0	8	0	22	9	SW	F. C. Ramsdell.
Easton	Talbot	35	10	33.0	+0.4	59	24	6	2	34	3.53	+0.87	0.77	4.0	12	14	8	9	S	Henry Shreve.
Mardela Springs	Wicomico	25	12	36.2	+0.7	63	6	10	11	34	2.70	+0.10	0.86	.....	8	3	13	9	SW	A. E. Acworth.
Ocean City	Worcester	10	1	37.4	.....	70	15	10	2	30	3.27	.....	0.65	10.0	9	9	5	16	S	E. M. Scott.
Pocomoke City	Worcester	37	6	39.3	+1.7	69	5	8	2	35	2.48	+0.60	0.90	5.2	9	11	11	9	SW	R. M. Stevenson.
Port Deposit	Cecil	25	2	31.6	.....	55	5	2	2	26	3.28	.....	1.18	2.0	5	15	3	13	NW	J. I. France.
Princess Anne	Somerset	20	25	36.0	−1.6	63	6	1	29	37	2.73	+0.52	0.42	6.8	12	7	15	9	SW	J. R. Stewart.
Queenstown	Queen Anne	20	1	32.8	.....	57	24	2	1	27	3.58	.....	1.00	6.2	11	15	5	11	SW	Dr. W. K. Carroll.
Rock Hall 1	Kent	20	1	31.8	.....	54	22	.....	....	25	3.77	.....	1.20	4.0	12	15	6	10	S	Chas. N. Satterfield.
Rock Hall 2	Kent	25	1	33.0	.....	54	5	1	2	26	3.77	.....	1.24	4.5	11	16	3	11	SW	Isaac L. Leary.
Sandy Point	Worcester	12	1	.....	.....	.....	.....	.....	.....	.....	2.79	.....	0.80	4.5	9	17	0	14	S	J. B. Dirickson.
Suddlersville	Queen Anne	.....	1	35.3	.....	65	18	5	2	33	3.30	.....	1.63	1.0	7	17	0	13	W	J. S. Barwick.
Average				34.3	+0.5	.....	.....	.....	.....	.....	3.40	+0.87	.....	4.8	9	12	7	11	SW	
DELAWARE.																				
Milford	Kent	20	20	39.2	+3.5	65	30	6	2	30	3.81	+1.27	1.36	.....	12	18	2	11	NE	J. Y. Foulk.
Millsboro	Sussex	23	7	35.4	+3.3	63	14	7	2	45	3.00	+0.10	1.04	.....	10	17	3	11	SW	Rev. L. W. Wells.
Newark (Delaware Coll.)	Newcastle	136	6	30.2	+1.2	54	5	− 1	2	34	3.89	+1.69	0.88	9.5	11	15	4	12	SW	Prof. W. H. Bishop.
Seaford	Sussex	40	9	36.0	+3.2	63	6	4	2	30	3.17	+0.24	0.57	6.0	10	18	2	11	NW	W. T. Wallace.
Average				35.2	+2.8	.....	.....	.....	.....	.....	3.47	+0.68	.....	7.8	11	17	3	11	SW	
General average				32.9	+1.3	.....	.....	.....	.....	.....	3.30	+0.62	.....	5.6	10	14	5	11	SW	

NOTE.—All records are used in determining State or district means, but State and district departures are determined by comparison of current data of only such stations as have normals.

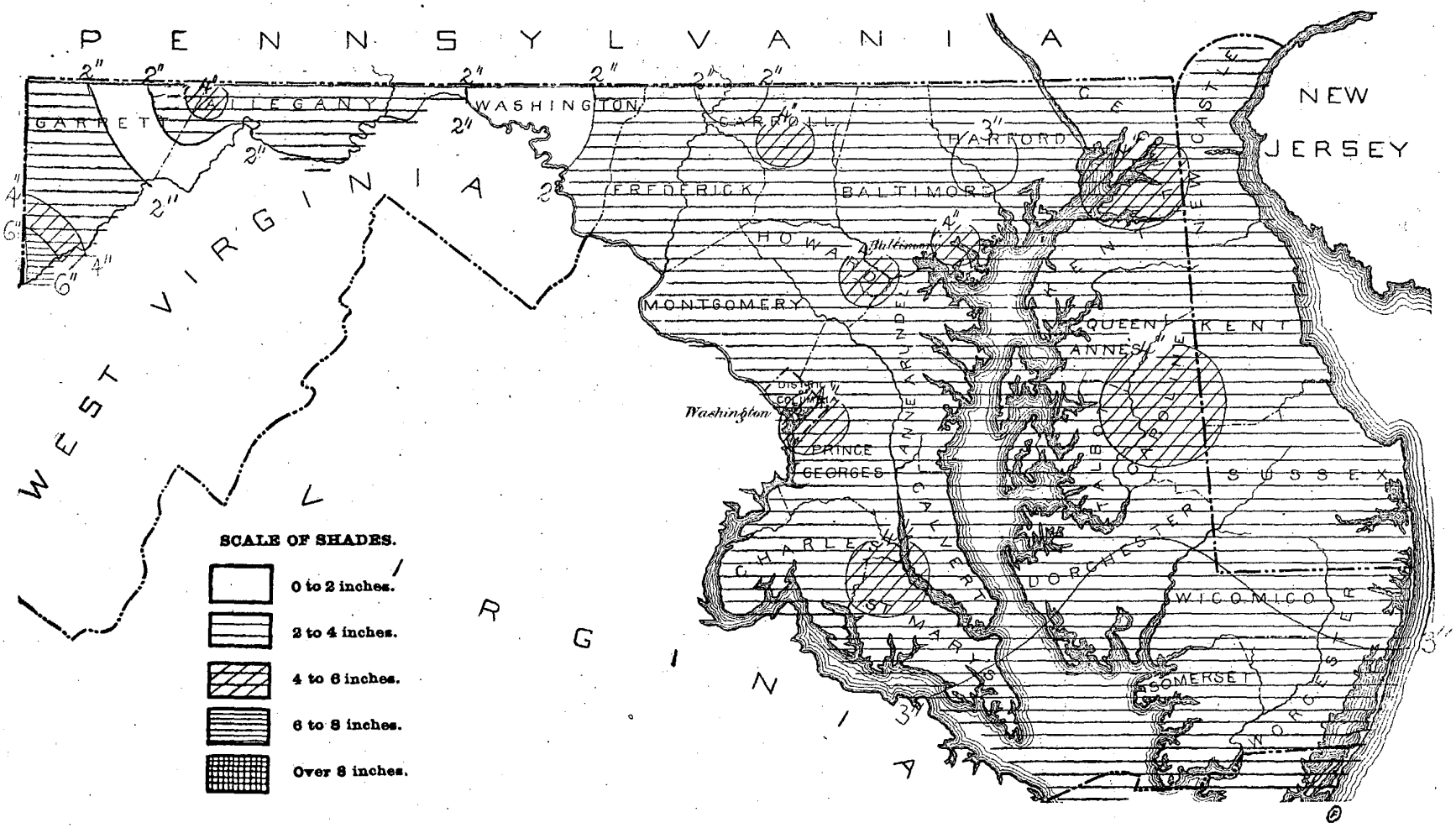
* Mean of 8 a. m. + 8 p. m. ÷ 2.

† Mean of 7 a. m. + 2 p. m. ÷ 2.

Maximum and minimum temperatures for Maryland and Delaware, January, 1899.

Stations.	1.		2.		3.		4.		5.		6.		7.		8.		9.		10.		11.		12.		13.		14.		15.		16.		17.		18.		19.		20.		21.		22.		23.		24.		25.		26.		27.		28.		29.		30.		31.		Monthly mean.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
Annapolis	21	11	27	8	45	18	48	22	57	40	45	34	39	26	41	25	45	24	44	30	42	10	34	21	35	26	54	34	53	30	51	32	48	36	52	36	36	30	43	22	49	29	55	38	47	35	45	33	48	30	47	30	46	28	30	19	37	24	44	23	30	19	43.2	26,5
Bachman's Valley	27	-4	19	-11	35	8	53	25	55	37	39	30	35	19	34	15	38	22	38	14	20	3	25	8	34	24	44	31	45	34	42	31	46	28	40	24	31	14	38	8	42	22	47	32	46	28	44	34	40	24	48	24	44	14	24	14	30	14	35	12	30	15	37.7	19.1
Baltimore	19	9	24	6	43	16	58	36	59	41	41	33	37	24	40	23	42	32	42	16	27	10	27	19	36	27	51	33	53	36	48	35	53	36	49	26	37	20	42	20	45	28	54	36	46	36	48	34	39	30	55	31	40	20	25	18	36	20	40	23	30	20	41.5	25,6
Baltimore, J.H.Hp'l.	24	14	14	6	44	13	59	17	59	41	41	30	32	22	41	22	41	23	28	23	18	7	32	8	36	29	51	28	53	36	46	31	53	32	40	33	37	16	41	17	45	18	56	36	54	22	48	27	39	27	55	27	28	24	25	15	30	20	40	17	24	19	39.8	22,6
Boettcherville	17	9	20	-14	35	-2	46	25	60	35	45	29	38	14	40	8	47	18	44	21	26	4	31	14	38	26	58	32	54	38	47	28	48	31	40	28	45	10	42	8	51	22	51	37	52	28	44	31	46	26	55	18	40	16	31	12	32	12	35	11	35	15	41.7	19.3
Boonsboro 1	...	..	..	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	49	25	53	38	52	31	48	37	42	26	54	27	24	18	23	15	30	14	37	17	24	20	....	....
Boonsboro 2	28	7	20	-2	43	13	55	33	57	41	42	30	33	16	36	20	44	34	41	20	24	5	25	13	33	22	53	30	52	36	...	..	49	31	44	28	34	17	42	14	46	27	51	40	50	34	46	33	46	25	51	26	49	18	22	9	38	18	36	16	34	18	40.8	22.2
Charlotte Hall	30	11	30	-1	45	19	58	39	59	39	40	35	37	26	43	15	53	25	40	21	30	11	30	21	34	29	57	30	58	35	54	28	55	35	45	30	38	15	47	11	52	27	60	38	54	28	60	29	55	28	57	28	47	20	25	15	40	8	44	16	31	15	45.4	23.1
Chase	30	10	26	-10	48	20	49	20	51	40	41	32	35	24	36	19	39	31	35	20	28	5	28	10	34	25	45	32	54	33	43	25	39	29	41	30	39	19	36	9	40	18	51	25	45	26	45	30	49	28	48	22	46	21	23	10	35	11	34	14	30	20	39.5	20.9
Chestertown	16	13	20	5	41	11	56	32	55	53	40	33	33	25	38	22	43	21	30	14	31	9	32	17	37	26	47	33	50	36	51	33	47	33	39	34	34	18	33	17	43	26	50	33	46	30	56	30	37	30	51	28	30	28	28	18	35	12	32	21	24	22	38.9	24.6
Chewsville	40	..	36	9	55	23	56	40	46	31	37	12	38	9	40	31	42	20	31	4	33	0	33	32	51	33	53	35	45	30	49	32	41	30	36	12	40	11	47	22	52	37	50	29	45	33	40	27	51	23	46	17	35	10	32	20	31	19	37	15	40	18	42.2	21.6
Clear Spring 1	...	..	15	-2	19	0	36	19	43	32	...	..	51	11	28	6	37	27	41	24	24	4	23	5	33	32	32	30	53	31	55	33	50	31	49	32	35	4	35	4	39	17	49	28	51	33	47	32	39	25	37	24	53	5	24	13	24	13	31	7	37	16	37.6	18.4
Clear Spring 2	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	....	....
Coleman	33	13	24	4	45	13	50	29	55	44	45	33	41	24	38	25	40	31	37	20	25	8	28	6	34	25	44	32	51	37	47	31	50	32	45	32	35	19	42	17	43	24	51	34	47	30	44	30	49	29	52	28	50	23	24	18	36	18	37	19	32	19	41.0	24.1
Cumberland	42	12	39	-5	39	-7	38	7	64	36	53	35	40	16	34	16	49	20	55	30	46	13	50	13	38	26	40	32	57	35	65	33	44	33	58	35	40	19	53	18	52	18	56	28	61	34	67	36	48	27	45	21	62	16	36	16	28	19	35	18	39	18	47.5	21.5
Darlington	30	6	23	0	38	12	48	32	53	37	58	31	35	23	36	18	39	30	36	14	23	6	28	13	34	25	45	32	50	32	45	33	53	33	41	24	34	17	41	14	41	25	50	34	44	29	52	32	40	28	49	27	44	27	23	11	30	14	35	18	27	18	38.9	22.4
Deer Park	16	-1	33	-23	42	-5	59	37	55	33	35	25	34	5	46	7	39	24	34	23	23	7	34	16	39	27	52	36	45	32	46	32	43	35	32	20	33	-4	32	-1	42	21	43	34	52	23	45	36	36	16	46	13	43	6	23	0	23	11	24	8	23	12	37.8	16.3
Denton	30	14	34	1	40	10	56	35	57	36	45	33	40	28	41	20	46	30	35	20	35	9	32	13	34	25	35	32	45	33	40	34	41	35	35	34	32	13	45	20	40	25	40	34	55	40	64	50	40	28	55	30	32	25	26	20	40	14	38	20	26	20	40.5	25.2
Easton	19	15	25	6	43	9	57	25	57	42	45	35	35	28	39	20	41	22	31	30	30	11	33	11	36	23	54	32	53	35	54	33	51	35	41	35	35	19	40	17	46	17	55	29	50	31	59	31	38	31	52	28	32	31	31	20	37	16	38	22	24	23	41.3	24.6
Fallston School	29	11	21	0	36	15	45	30	55	41	43	31	34	22	34	19	38	30	38	21	23	6	27	13	33	24	43	32	48	32	43	34	50	32	44	30	32	16	39	16	39	24	49	31	45	32	46	32	49	28	46	27	41	23	22	15	33	14	34	18	31	19	38.4	23.2
Frederick	18	14	22	-7	37	2	52	25	56	48	48	33	33	23	39	22	40	31	31	24	26	9	30	16	36	26	43	33	51	37	43	31	53	33	40	33	36	19	42	5	46	25	52	34	51	32	40	32	39	29	53	26	36	21	27	18	33	17	40	15	26	21	39.3	23.5
Frostburg	29	4	26	-2	45	-9	61	38	56	37	37	25	35	8	42	8	45	30	36	12	28	5	20	15	33	23	56	30	55	34	43	33	53	35	42	22	42	13	49	14	50	30	49	37	57	32	47	36	39	19	56	24	46	9	20	8	27	13	33	12	25	10	41.5	20.1
Grantsville	10	0	35	-10	43	11	61	41	41	31	36	25	25	5	39	9	41	29	36	25	25	0	33	12	40	26	51	35	42	30	47	29	44	35	35	11	35	4	41	9	45	29	43	29	53	27	45	26	29	16	47	20	12	6	24	4	20	8	22	9	20	9	36.1	17.4
Great Falls	..	14	12	-3	43	14	57	..	58	55	58	33	36	23	41	14	41	17	42	31	33	10	26	9	33	22	45	30	53	30	53	29	49	31	51	32	39	18	37	10	44	19	54	25	54	27	50	29	48	28	51	23	55	27	29	19	34	11	38	14	41	14	43.9	21.2
Green Sp. Furnace	30	7	21	-9	32	2	51	29	58	43	44	31	35	17	38	16	40	22	36	21	22	7	28	13	34	24	52	32	52	37	37	28	48	32	44	29	34	14	38	12	48	20	52	40	47	28	44	32	40	27	51	21	30	18	26	15	32	13	39	18	33	20	39.2	21.3
Hagerstown	30	9	22	-8	29	9	51	26	55	42	44	30	35	12	33	17	40	29	40	22	19	5	27	11	33	19	52	30	54	39	52	31	43	31	48	32	34	15	38	14	47	25	51	37	51	31	50	32	38	21	48	26	53	17	24	14	30	14	35	18	38	17	40.1	21.5
Hancock	27	8	23	-17	30	-5	45	25	51	35	42	29	35	17	40	13	48	20	28	18	30	4	25	11	33	24	58	31	55	40	42	28	48	32	45	30	40	12	43	8	55	18	53	44	52	28	46	32	40	26	56	20	20	18	25	13	31	11	38	16	34	10	40.1	19.6
Jewell	32	11	25	1	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	45	9	26	19	23	21	35	29	55	35	54	36	53	34	45	32	35	16	41	14	47	25	66	35	52	32	54	35	40	27	55	35	35	22	22	18	37	13	45	19	24	20	41.1	23.4
Laurel	23	16	24	-4	45	14	50	37	55	41	45	34	34	23	42	23	43	26	40	20	26	9	27	16	35	26	50	33	54	29	49	28	56	34	41	35	36	18	44	12	47	22	55	29	50	35	47	28	46	29	55	23	29	27	26	19	37	14	42	14	24	21	41.2	23.4
Mardela Springs	31	11	44	12	56	53	...	..	58	34	63	37	44	27	43	17	49	30	37	22	28	10	35	19	40	11	46	46	58	30	51	35	50	38	46	32	35	19	43	12	47	24	39	33	52	30	63	38	63	29	52	28	48	23	33	33	39	26	41	22	36	20	45.7	26.8
Maryland Ag. Coll.	...	..	..	...	...	..	...	..	...	..	...	..	...	..	...	..	44	36	37	24	30	13	...	..	35	35	48	33	56	34	48	30	54	36	39	32	38	17	47	13	48	24	57	35	57	29	46	34	43	30	...	..	...	..	41	11	26	22	42	18	...	..	44.0	26,6
Milford, Del	38	18	31	6	49	19	55	38	61	45	57	38	48	28	48	22	51	34	39	24	30	8	34	19	47	32	58	34	55	38	57	41	58	49	49	34	40	21	45	19	50	29	56	31	45	31	61	34	45	32	55	32	34	28	32	23	55	32	65	48	62	35	48.7	29.7
Millsboro, Del	61	16	16	7	27	7	47	20	60	47	62	36	61	29	44	15	40	16	51	31	32	10	26	10	40	24	63	35	63	35	55	34	57	39	53	34	53	19	35	16	48	16	45	24	55	27	53	30	57	32	57	26	55	31	52	20	48	7	36	11	33	8	47.9	23.0
Mt. St. Marys Coll	31	..	37	...	39	..	50	..	53	..	41	..	30	..	35	..	36	..	38	..	22	2	24	11	33	22	49	30	52	37	41	33	50	35	42	25	34	14	39	15	43	25	51	35	47	32	40	32	40	26	49	26	44	15	22	13	31	16	35	17	31	17	39.0	21.1
Newark, Del. Coll	24	6	21	-1	35	1	50	25	54	45	45	32	36	24	37	21	38	31	34	16	25	6	27	13	35	26	44	33	50	32	44	29	49	34	38	25	35	16	41	13	42	20	47	30	44	28	42	32	48	30	47	23	43	18	24	16	33	16	35	16	29	..	38.6	21.8
New Market	31	9	21	-2	35	9	54	31	55	43	45	31	35	9	37	19	38	29	37	19	32	5	28	12	33	25	51	31	49	31	45	33	49	31	45	31	33	15	39	11	45	23	51	34	49	31	46	30	36	25	52	22	30	20	23	15	32	14	40	15	36	19	39.7	21.6
Ocean City	40	17	27	10	43	20	49	35	52	42	48	38	52	28	45	25	45	30	39	29	29	14	38	20	47	35	58	35	70	40	65	40	55	43	49	36	38	23	40	23	43	28	58	35	52	35	45	38	54	33	48	36	36	27	32	22	38	14	43	24	36	30	45.6	29.2
Pocomoke City	39	14	43	8	50	19	65	45	49	47	69	39	53	32	46	24	53	33	42	25	40	10	42	21	57	36	62	42	56	38	56	36	48	36	51	35	37	20	46	20	48	27	58	37	52	34	61	39	42	32	55	34	52	25	29	21	38	15	43	23	43	25	49.8	28.8
Port Deposit	18	8	20	2	46	26	54	29	55	46	49	35	52	24	38	23	39	23	25	21	23	6	33	18	40	30	45	29	51	32	46	30	48	32	38	32	36	17	33	15	42	22	50	30	43	25	53	32	37	30	50	28	34	24	33	18	30	14	35	12	24	20	39.3	23.8
Princess Anne	35	12	30	6	44	12	59	41	60	45	63	37	40	29	42	17	50	28	37	21	28	10	36	20	49	33	60	34	57	33	52	30	48	42	43	31	37	19	44	16	48	24	58	33	56	28	62	31	59	27	54	29	49	23	29	21	38	1	40	13	57	21	47.2	24.7
Queenstown	20	2	30	14	44	28	55	42	55	33	41	25	33	18	39	26	44	25	29	9	28	10	33	21	37	31	51	35	52	34	51	32	46	34	41	18	34	15	41	21	45	28	52	29	49	27	57	30	39	26	52	28	30	18	24	17	36	19	37	21	24	8	40.3	23.4
Rock Hall 1	...	..	..	...	43	18	49	33	51	43	44	34	36	25	39	25	41	32	39	24	31	10	33	17	35	28	46	32	52	34	48	35	48	33	44	32	38	18	41	16	45	27	54	34	52	30	46	32	52	30	50	27	48	26	27	19	38	21	38	19	35	21	42.9	26.7
Rock Hall 2	34	14	24	1	42	16	51	34	54	45	45	34	36	25	38	21	41	32	39	23	27	10	28	15	35	26	46	32	52	36	48	36	47	32	44	33	34	19	39	14	43	25	53	33	48	23	47	29	52	30	51	26	49	25	26	19	36	21	36	18	35	21	41.3	24.8
Seaford, Del	34	18	31	4	46	16	57	35	59	52	63	39	41	28	45	21	51	30	38	22	31	10	33	18	44	32	60	34	57	34	52	33	52	38	42	30	40	18	47	15	50	24	58	35	53	29	62	34	60	29	56	28	50	21	28	20	43	11	43	21	32	20	47.0	25.1
Sharpsburg	20	12	24	-8	39	4	54	27	52	43	34	32	30	21	41	21	41	31	31	30	30	8	30	15	34	26	55	32	52	34	43	31	49	31	37	32	35	18	40	15	47	24	53	36	49	30	44	35	38	28	53	25	25	21	25	17	33	16	41	17	25	21	38.8	23.4
Smithsburg 1	...	8	23	-11	37	12	53	31	57	41	42	30	33	16	35	15	41	32	39	20	22	3	26	13	35	24	50	31	51	36	46	33	48	32	41	27	33	12	39	14	47	25	49	37	49	31	44	33	38	26	50	..	28	16	23	13	30	14	35	16	32	17	39.2	21.6
Smithsburg 2	22	5	22	-2	42	12	55	33	58	39	40	30	30	13	34	26	42	32	41	17	20	1	26	11	34	24	52	30	51	38	49	36	47	34	43	22	33	12	38	15	47	27	49	40	50	34	46	36	47	25	51	28	49	16	22	12	29	13	34	15	33	16	39.9	22.4
Solomons	26	15	29	11	44	21	57	39	57	30	57	36	36	28	40	23	51	31	40	24	26	15	32	23	35	32	55	32	57	36	47	35	45	38	40	32	35	21	42	21	49	27	57	39	49	31	56	35	43	30	54	33	40	23	26	21	36	17	42	23	34	21	43.1	27.5
St. Charles College	21	1	23	-8	40	7	54	31	55	42	52	31	35	21	38	16	40	19	38	18	26	6	25	14	33	24	45	31	50	33	45	32	50	31	42	28	35	16	43	11	44	24	56	35	46	31	45	32	45	26	51	24	46	20	22	16	32	14	35	15	34	18	40.2	21.3
Suddlersville	37	14	27	5	47	14	54	33	60	45	45	34	40	28	42	21	44	30	47	24	32	10	29	17	36	28	50	32	56	36	53	35	54	34	65	35	39	20	46	18	47	28	54	35	...	..	57	30	43	31	48	39	35	25	30	19	42	18	40	21	40	22	44.6	26.0
Sunnyside	9	-1	33	-24	43	1	61	38	39	33	37	24	24	3	37	4	41	25	35	16	27	7	36	18	46	30	51	36	45	39	44	36	43	31	31	20	35	-6	39	-1	45	19	45	33	56	24	45	22	34	16	46	23	23	5	26	1	25	8	23	6	19	11	36.9	16.0
Taneytown	14	10	19	-9	45	9	55	28	38	46	40	26	38	28	48	26	40	30	30	23	38	4	40	19	47	31	49	37	43	36	45	32	54	30	39	34	32	15	...	19	...	..	...	..	...	..	...	..	...	..	...	..	...	..	...	..	33	..	36	17	24	19	38.5	23.2
Van Bibber	17	-1	22	-1	37	17	46	37	53	33	36	26	31	22	35	22	39	27	28	8	24	8	31	22	35	30	48	33	50	32	43	33	48	32	39	18	34	16	39	15	39	24	49	31	44	32	49	30	37	26	48	28	28	17	24	17	34	19	34	18	23	6	36.9	21.8
Washington, D. C.	27	10	26	-1	49	18	57	39	60	39	39	33	36	24	41	20	44	32	40	19	28	10	27	21	36	27	54	32	55	38	49	32	51	34	41	26	35	19	45	14	48	29	56	34	50	34	48	31	42	29	55	30	44	20	24	20	38	15	41	19	31	19	42.5	24.6
Western Md. Coll	...	..	..	...	...	..	53	31	56	42	42	29	32	17	35	15	38	28	36	16	22	2	24	10	33	22	43	30	47	35	44	32	42	31	43	26	35	13	40	15	47	24	48	34	48	33	42	30	44	25	52	35	46	17	21	14	30	14	35	16	34	16	39.7	23.3
Westernport	18	-2	23	-3	36	10	54	33	53	31	38	15	28	15	42	17	47	21	39	13	25	12	31	22	35	30	56	33	52	31	40	31	49	31	32	16	37	15	46	15	50	39	50	30	51	31	44	25	35	21	55	17	21	14	26	15	27	16	33	16	23	0	38.6	19.7
Woodstock Coll	18	12	22	-6	43	1	57	20	58	41	43	32	32	23	40	21	42	[illegible]	30	..	26	..	34	..	37	..	53	.	53	35	48	31	53	32	39	33	35	18	43	12	46	23	54	22	48	31	52	31	38	28	53	25	26	24	26	17	33	17	39	16	25	16	40.2	22.2

TOTAL PRECIPITATION, JANUARY, 1899.



Daily precipitation for Maryland and Delaware, January, 1899.

Stations.	Day of month.																													Total.
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.	24.	25.	26.	27.	28.	29.	30.	31.	
WESTERN MARYLAND.																															
Boettcherville	....	....	....	....	....	.60	....	....	....	....	....	†	.26	....	....	....	....	....	....	....	....	....	....	.35	....	....	....	....	....	....	.10	1.31
Boonsboro 1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.35	....	....	....	....	....	....	.30	.....
Boonsboro 2	....	....	....	....	....	1.30	.27	....	....	....	....	....	.46	....	....	.14	....	....	....	....	....	....	....	.35	....	....	....	....	....	....	.20	2.72
Chewsville	.60	....	....	....	....	....	....	....	....	....	....	....	.44	....	....	.12	....	....	....	....	....	....	....	.64	....	....	....	....	....	....	.20	2.00
Clear Spring 1	....	....	....	....	....	....	.01	....	....	....	....	.15	....	.50	.02	....	....	.06	....	....	....	....	....	.10	.50	....	....	....	....	....	.08	1.42
Clear Spring 2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Cumberland	.75	....	....	....	....	1.00	....	....	....	....	....	....	.52	....	....	.05	....	....	....	....	....	....	....	.16	....	....	....	....	†	....	.12	2.60
Deer Park	....	....	....	....	....	.30	....	....	....	....	....	.10	.08	1.60	....	.09	....	....	....	....	....	....	....	.16	....	....	....	....	....	....	....	2.33
Frostburg	.29	....	....	.01	....	1.35	.15	....	....	....	....	.07	.47	.16	....	.08	.08	.02	....	....	....	....	....	.43	.13	.05	.05	....	....	....	.19	4.53
Grantsville	.20	....	....	....	....	.50	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.20	....	.50	....	....	.30	....	....	....	.20	1.90
Green Spring Furnace	.31	....	....	....	....	.89	.06	....	....	....	....	.14	.75	.08	....	....	.11	....	....	....	....	....	....	.80	.07	....	....	....	....	....	.10	3.31
Hagerstown	....	....	....	....	....	....	....	....	....	....	....	....	.47	.30	....	.09	....	....	....	....	....	....	....	.60	....	....	....	....	....	....	.25	1.71
Hancock	.40	....	....	....	....	1.15	....	....	....	....	....	....	....	.55	....	....	....	....	....	....	....	....	....	.64	.10	....	....	....	....	....	....	2.84
Sharpsburg	1.17	....	....	....	....	.82	.28	....	....	....	....	†	.46	.05	....	....	.09	....	....	....	....	....	....	.32	....	....	....	....	....	....	.21	3.40
Smithsburg 1	....	....	....	....	....	1.09	....	....	....	....	....	.15	.50	.07	....	.10	....	....	....	....	....	....	....	.69	....	....	....	....	....	....	.10	2.70
Smithsburg 2	.41	....	....	....	....	1.12	.43	....	....	....	....	.15	.48	.06	....	†	.11	†	....	....	....	....	....	.61	.11	....	....	....	....	....	.07	3.54
Sunnyside	....	....	†	.42	.12	1.47	.10	....	†	.06	....	.45	.26	.38	1.04	....	.29	.20	....	....	....	.34	....	.57	.38	....	.10	....	.06	.27	.08	6.59
Westernport	....	....	....	.11	.12	.06	....	....	....	....	....	....	.40	.32	....	.06	....	....	....	....	.05	....	....	.50	....	....	....	....	....	.10	.08	1.80
NORTHERN-CENTRAL MARYLAND.																															
Bachman's Valley	.50	....	....	.14	†	1.40	.10	....	....	....	....	†	.51	.07	....	†	....	....	....	....	....	....	....	1.45	....	....	....	....	....	....	.15	4.32
Baltimore	.28	....	....	.03	.08	.75	.39	....	....	....	....	.26	.34	.02	....	.14	.10	.03	....	....	....	....	....	.69	.24	....	....	....	....	....	.15	3.50
Baltimore, Johns Hopkins Hospital	.30	....	....	....	.03	.38	1.02	....	....	....	....	.05	.30	.30	.03	....	.38	....	....	....	....	....	....	....	1.24	....	....	....	....	....	.14	4.17
Chase	.30	....	....	....	.37	.95	....	....	....	....	....	....	.50	.30	....	.09	....	....	....	....	....	....	....	.53	.28	....	....	....	....	....	.10	3.42
Darlington Academy	....	....	....	.04	....	1.36	....	....	....	....	....	....	....	....	.37	.22	....	....	....	....	....	....	....	1.09	....	....	....	....	....	....	.24	3.32
Fallston School	.10	....	....	†	.07	.94	.31	....	....	....	....	†	.23	.02	....	.01	.20	....	....	....	....	....	....	.63	.34	....	....	....	....	....	.12	2.97
Frederick	.47	....	....	....	....	.82	.28	....	....	....	....	†	.39	.04	....	....	.14	....	....	....	....	....	....	.47	....	....	....	....	....	....	.11	2.72
Great Falls	.60	....	....	....	....	.53	1.00	....	....	....	....	....	.03	.40	.04	....	.25	.11	....	....	....	....	....	....	.83	....	....	....	....	....	.02	3.81
Mt. St. Mary's College	.80	....	....	....	....	.28	.05	....	....	....	....	.12	.27	.09	....	.04	.06	....	....	....	....	....	....	.44	....	....	....	....	....	....	.30	2.45
New Market	.62	....	....	†	†	.83	.50	....	....	....	....	.08	.30	.10	....	.14	....	....	....	....	....	....	....	.52	....	....	....	....	....	....	.28	3.37
St. Charles College	.35	....	....	.49	.09	.91	.74	....	....	....	....	.02	.47	†	....	†	.11	....	....	....	....	....	....	1.32	.07	....	....	....	....	....	.17	4.74
Taneytown *	....	....	....	....	....	....	....	1.20	....	....	....	.50	....	....	....	....	.15	....	....	....	....	....	....	....	....	....	....	....	....	....	.13	.....
Van Bibber	....	....	....	.03	.34	.93	....	....	....	....	....	.12	.22	.06	....	.28	....	....	....	....	....	....	....	1.20	....	....	....	....	....	....	.32	3.50
Western Maryland College	.60	....	....	†	†	1.35	.08	....	....	....	....	.04	.34	†	....	....	.10	†	....	....	....	....	....	.61	....	....	....	....	....	....	.20	3.32
Woodstock College	....	....	....	†	....	....	1.15	....	....	....	....	.26	....	†	....	.16	.04	....	....	....	....	....	†	.83	....	....	....	....	....	....	.11	2.54
SOUTHERN MARYLAND.																															
Annapolis	.23	....	....	.30	.06	.58	.41	....	....	....	....	.39	.31	.01	....	.12	.11	.04	....	....	....	....	....	.89	.21	....	....	....	....	....	.17	3.85
Charlotte Hall School	.20	....	....	†	.54	1.16	....	....	....	....	....	.25	.31	.02	....	.31	†	†	....	....	....	....	....	.40	.56	....	....	.10	....	....	.30	4.15
Cherryfields	.10	....	....	....	.20	....	.33	....	....	....	.23	.07	.28	....	.55	.21	.07	....	....	....	....	....	....	.24	....	....	....	.25	....	....	.50	2.96
Distributing Reservoir, D. C.	.60	....	....	....	....	.50	.90	....	....	....	....	....	.26	.17	.17	.02	.12	.05	....	....	....	....	....	....	.60	....	....	....	....	....	.02	3.41
Jewell	.40	....	....	....	....	1.10	....	....	....	....	....	....	....	.60	....	....	.37	†	....	....	....	....	....	.45	....	....	....	†	....	....	.10	3.02
Laurel	....	....	....	....	....	1.43	....	....	....	....	....	....	.42	....	....	.25	.08	....	....	....	....	....	....	.95	....	....	....	....	....	....	?	3.13
Maryland Agricultural College	....	....	....	....	.61	.96	....	....	....	....	....	.05	.45	....	....	.20	....	....	....	....	....	....	....	1.10	....	....	....	....	....	....	.20	3.57
Receiving Reservoir, D. C.	.64	....	....	....	....	.43	.97	....	....	....	....	....	.27	.26	.02	.12	.19	.15	....	....	....	....	....	....	.52	....	....	....	....	....	....	3.57
Solomon's	.26	....	....	....	.30	.62	.20	....	....	....	....	.15	.38	.16	....	.53	.04	.12	....	....	....	....	....	.20	....	....	....	.10	....	....	.35	3.41
Washington, D. C	.45	....	....	†	.23	1.07	.38	....	....	....	....	.15	.23	.02	....	.10	.06	.16	....	....	....	....	....	.46	.54	....	....	.02	....	....	.25	4.12
EASTERN MARYLAND.																															
Berlin	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Chestertown	....	....	†	.10	.24	1.60	....	....	....	....	....	†	.45	....	....	.27	....	....	....	....	....	....	....	.70	....	....	....	....	....	.30	3.66
Coleman	.46	....	....	†	.05	1.78	....	....	....	....	....	....	.45	.10	....	.29	....	....	....	....	....	....	....	.95	....	....	....	....	....	.13	4.21
Denton	.25	....	....	....	1.50	1.62	....	....	....	....	....	....	.20	.10	....	....	....	.40	....	....	....	....	....	.20	....	....	....	†	....	.35	4.62
Easton	.77	....	....	....	....	....	1.47	....	....	....	....	....	....	.58	....	....	.30	....	....	....	....	....	....	....	.21	....	....	†	....	.20	3.53
Mardela Springs	....	....	....	....	....	....	....	....	....	....	....	....	....	.88	....	....	.86	.10	....	....	....	....	....	....	....	....	....	.86	....	?	2.70
Ocean City	.25	....	....	....	....	.36	....	....	....	....	....	.06	.65	.50	....	.50	....	....	....	....	....	....	....	.40	....	....	....	.25	....	....	.30	3.27
Pocomoke City	.08	....	....	....	....	....	.05	....	....	....	....	....	....	.90	....	....	.70	....	....	....	....	....	....	....	.30	....	....	.40	....	....	.05	2.48
Port Deposit	....	....	....	.25	....	....	1.18	....	....	....	....	....	....	.55	....	....	....	....	....	....	....	....	....	....	1.10	....	....	....	....	....	.20	3.28
Princess Anne	.30	....	....	....	†	.17	.20	....	....	....	....	.18	.38	.11	....	.15	.15	.13	....	....	....	....	....	†	.42	....	....	.25	....	....	.29	2.73
Queenstown	....	....	....	†	.80	1.00	....	....	....	....	....	.35	.24	.12	....	.26	.04	....	....	....	....	....	....	.48	....	....	....	.01	....	.11	.17	3.58
Rock Hall 1	.75	....	....	†	.11	1.20	.46	....	....	....	....	.05	.26	.09	....	.05	.24	....	....	....	....	....	....	.23	.21	....	....	....	....	....	.12	3.77
Rock Hall 2	.77	....	....	†	.10	1.24	.47	..	....	....	....	.05	.22	.08	....	†	.30	.02	....	....	....	....	....	.20	.24	....	....	....	....	....	.08	3.77
Sandy Point	.05	....	....	....	....	.44	.20	....	....	....	....	....	.80	.30	....	.60	....	....	....	....	....	....	....	....	....	....	....	.30	....	.10	....	2.79
Sudlersville	....	....	....	....	....	1.63	....	....	....	....	....	....	.45	....	....	.30	....	....	....	....	....	....	....	.65	....	....	....	....	....	....	.27	3.30
DELAWARE.																															
Milford	.59	....	....	....	....	....	1.36	....	....	....	....	....	....	.84	....	.19	.08	....	....	....	....	....	....	.32	....	....	....	.08	....	.35	3.81
Millsboro	.15	....	....	....	.22	.26	.20	....	....	....	....	.19	.49	.30	....	....	1.04	....	....	....	....	....	....	....	....	....	....	.15	....	?	3.00
Newark (Delaware College)	.56	....	....	.02	.06	.88	.32	....	....	....	....	....	.32	.08	....	....	.35	....	....	....	....	....	....	.30	.80	....	....	....	....	....	.20	3.89
Seaford	....	....	....	†	....	....	.76	....	....	....	....	....	....	.89	....	.57	.03	....	....	....	....	....	....	.31	....	....	....	.18	....	....	.43	3.17

† Trace, when precipitation is less than 0.01 inch.

* No observation at Taneytown from the 20th to 28th inclusive.