

U. S. DEPARTMENT OF COMMERCE
LUTHER H. HODGES, Secretary
WEATHER BUREAU
F. W. REICHELDERFER, Chief

CLIMATOLOGICAL DATA

MARYLAND AND DELAWARE

JULY 1962

Volume 66 No. 7



ASHEVILLE: 1962

MARYLAND AND DELAWARE - JULY 1962

TEMPERATURE AND PRECIPITATION EXTREMES

Highest Temperature: 96° on the 9th at Benson Police Barracks, Md.

Lowest Temperature: 38° on the 28th at Oakland 1 SE, Md.

Greatest Total Precipitation: 6.26 inches at Lewes 1 SW, Del.

Least Total Precipitation: 0.80 inch at Snow Hill, Md.

Greatest One-day Precipitation: 2.78 inches on the 21st at Lewes 1 SW, Del.

SPECIAL WEATHER SUMMARY

The dry spell, which began in mid-April, continued with most stations recording one-third to two-thirds the normal rainfall. Only in a few localities did heavy thundershowers bring the total above normal. However the coolest July in about forty years mitigated the effect somewhat. A number of violent thunderstorms were set off by troughs or weak cold fronts which moved across the area on the 21st and 23rd during the afternoon and evening. On the 21st the lightning-set fires destroyed ten barns (six in Frederick County) and damaged several houses. Lightning also set fire to a new church in Harundale and Emory Church in Bel Air built in 1849. Trees and crops were damaged. Heaviest damage (about \$300,000) was done to the Delaware State Fair at Harrington where tents, ferris wheels, etc. were blown down by gusts of less than 60MPH. A possible tornado at New Castle moved a warehouse roof half a block damaging trees, houses and seven cars.

The storms of the 23rd struck especially hard in northern Baltimore and vicinity. Maximum recorded winds were about 70MPH. Hundreds of trees and utility lines were downed. About 10,000 homes were without electricity and

6,000 telephones were out for periods of a few minutes to twenty hours. Total precipitation was not excessive, but in the area of heaviest rainfall amounts of nearly 1 inch in five minutes and 1.5 inches in ten minutes were recorded. Flash flooding resulted in one death when an automobile was swept into a stream trapping its driver. Another woman was killed and eleven people injured when two fire trucks, responding to an alarm resulting from a lightning strike, collided and one plunged into a store killing an occupant. Elsewhere, hail, wind and water damaged walls and utility lines, broke windows, and damaged trees, fruit, corn and other crops in a broad belt from Garrett County to the central Delaware Coast. Lightning struck a number of buildings and killed four steers near Frederick and fourteen beef cattle near Oakland.

A. Delbert Peterson
Weather Bureau State Climatologist
Friendship International Airport 40, Md.

CLIMATOLOGICAL DATA

MARYLAND AND DELAWARE
JULY 1962

CONTINUED

Station	Temperature										Precipitation													
	Average Maximum	Average Minimum	Average	Departure From Normal	Highest	Date	Lowest	Date	Degree Days	No. of Days				Total	Departure From Normal	Greatest Day	Date	Snow, Sleet			No. of Days			
										W ⁺ or Above	32° or Below	31° or Below	30° or Below					Total	Total	Max. Depth on Ground	Date	.10 or More	.50 or More	1.00 or More
ALLEGHENY PLATEAU																								
BITTINGER 2 NW	73.2	54.7	64.0		83	8	44	28+	59	0	0	0	0	4.08		1.65	3	.0	0		8	3	1	
OAKLAND 1 SE	75.6	52.5	64.1	- 3.9	85	8	38	28	63	0	0	0	0	5.93	1.09	2.01	15	.0	0		7	4	2	
SAVAGE RIVER DAM	77.6	55.8	66.7		90	9	46	28	25	1	0	0	0	3.47		1.38	4	.0	0		6	2	1	
SINES DEEP CREEK	76.1	50.7	63.4	- 4.3	88	8	40	29+	76	0	0	0	0	4.78	- .08	1.85	16	.0	0		7	3	1	
DIVISION																								
			64.6	- 3.3										4.57	.00			.0						
DELAWARE																								
NORTHERN																								
MIDDLETOWN 2 S														2.35				.0	0					
NEWARK UNIVERSITY FARM	84.0	60.8	72.4		94	8	49	4	0	3	0	0	0	2.25		.62	21	.0	0		5	1	0	
WILMGTON NCASTLE WB A	83.0	62.1	72.6	- 3.4	93	8	51	27	0	5	0	0	0	1.78	- 2.47	.60	23	.0	0		4	1	0	
WILMINGTON PORTER RESVR	81.0	62.2	71.6		90	8	54	27+	1	1	0	0	0	1.31	- 3.16	.42	18	.0	0		4	0	0	
DIVISION																								
			72.2	- 3.8										1.92	- 2.45			.0						
SOUTHERN																								
BRIDGEVILLE 1 NW	84.2	61.5	72.9	- 3.3	91	8	50	28	0	4	0	0	0	2.98	- 2.08	.71	22	.0	0		8	3	0	
DOVER	85.9M	63.4M	74.7M	- 2.4	93	8			0	8	0	0	0	2.48	- 2.19	.85	22	.0	0		6	2	0	
GEORGETOWN 5 SW	85.1M	62.2M	73.7M		95	8	51	28+	0	8	0	0	0	2.75		.82	22	.0	0		8	1	0	
LENES 1 SW	83.1	63.6	73.4		94	8	53	27	0	6	0	0	0	6.26		2.78	21	.0	0		8	2	2	
MILFORD 3 WNW	84.6	62.5	73.6		95	9+	52	28+	0	6	0	0	0	3.57		1.91	22	.0	0		6	2	1	
SELBYVILLE	83.9	62.4	73.2		92	8	49	27	2	6	0	0	0	1.39		.45	30	.0	0		5	0	0	
DIVISION																								
			73.6	- 3.0										3.24	- 1.60			.0						

See reference notes following Station Index.

EVAPORATION AND WIND

MARYLAND AND DELAWARE
JULY 1962

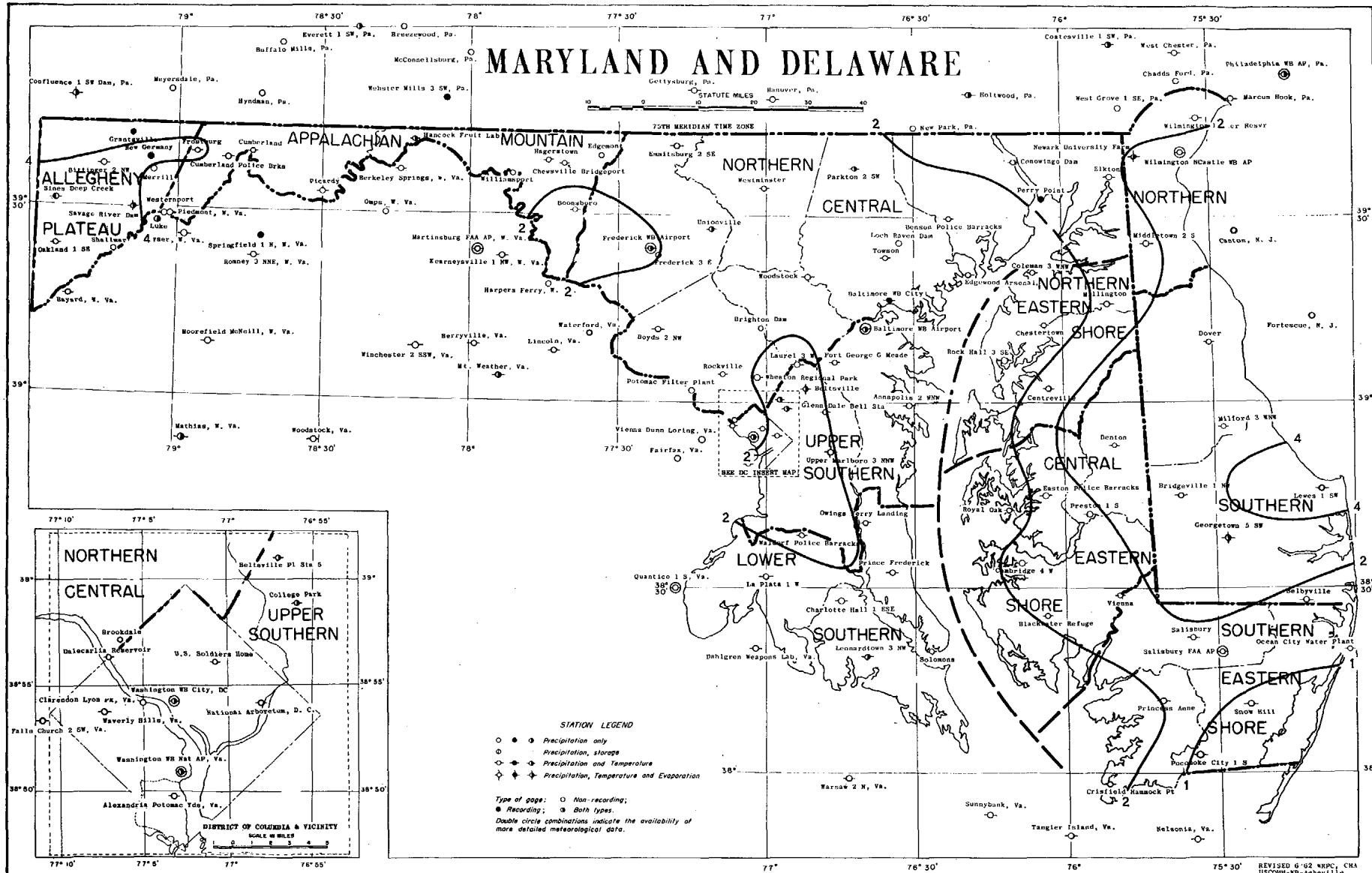
Station	Day of month																															Total or Avg.	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31		
BELTSVILLE, MD.	EVAP	.25	.38	.23	.01	.16	.26	.16	.31	.40	.46	.36	.34	.22	.43	*	.24	.02	.11	.08	.25	.02	.48	.32	.15	.37	.03	.48	.01	.24	.52	.15	7.44
	WIND	23	31	16	13	23	14	5	2	21	55	23	8	8	35	1	2	12	14	4	6	7	17	23	28	31	6	63	53	6	0	2	552
	MAX	94	91	92	77	85	92	93	96	98	91	91	94	88	91	80	90	72	78	80	93	95	93	91	94	86	76	86	84	86	75	86	87.7
	MIN	63	60	63	60	60	64	68	68	74	61	61	63	68	65	65	66	65	66	66	60	63	66	66	67	63	68	66	56	63	62	64	68
SAVAGE RIVER DAM, MD.	EVAP	.04	.19	.19	.08	.00	.27	.19	.22	.19	.31	.24	.26	.06	.28	.01	.16	.09	.17	.21	.20	.27	.05	.20	.27	.13	.06	.24	.23	.20	.05	.16	5.22
	WIND	15	29	25	71	37	25	31	23	36	97	27	16	41	26	21	25	22	25	41	32	19	30	41	68	38	21	92	55	20	20	29	1098
	MAX	89	89	83	66	71	91	92	90	97	85	93	96	85	95	75	81	71	90	89	90	92	85	90	89	83	77	79	81	90	77	90	85.5
	MIN	57	60	61	60	60	59	64	68	69	56	57	60	67	66	65	65	62	62	60	60	60	61	64	64	62	61	61	53	53	54	61	63
UPPER MARLBORO 3 NNW, MD.	EVAP	.25	.14	.22	.14	.06	.22	.43	.24	.18	.32	.10	.19	.18	.36	.16	.10	*	.80	.13	.22	.34	.50	.16	.28	.30	*	.50	.42	.26	-	-	87.70
	WIND	28	30	20	9	23	19	29	17	48	53	26	22	15	30	12	11	17	18	20	11	41	38	19	47	19	8	48	30	22	7	6	743
	MAX	85	93	92	70	87	93	93	100	99	100	100	94	89	94	83	88	75	84	81	94	95	97	95	91	90	76	85	87	91	76	88	89.2
	MIN	63	64	65	63	62	63	68	72	73	60	53	64	71	67	67	77	66	74	65	64	68	67	70	65	66	67	62	57	61	60	69	65.6
GEORGETOWN 5 SW, DEL.	EVAP	.26	.33	.13	.37	.18	.26	.34	.34	.40	.36	.33	.36	*	.18	.14	.08	.07	.12	.21	.29	.26	.37	.26	.28	.06	.18	.38	.28	.12	.11	.14	7.19
	WIND	75	48	07	103	42	29	28	61	77	39	32	76	*	19	46	19	60	25	42	36	45	55	39	84	22	67	101	32	14	49	21	1393

SUPPLEMENTAL DATA

Station	Wind direction		Wind speed m. p. h.				Relative humidity averages - percent				Number of days with precipitation						Percent of possible sunshine	Average sky cover sunrise to sunset	
	Prevailing	Percent of time from prevailing	Average	Fastest mile	Direction of fastest mile	Date of fastest mile	1:00 a EST	7:00 a EST	1:00 p EST	7:00 p EST	Trace	.01-.09	.10-.49	.50-.99	1.00-1.99	2.00 and over			Total
BALTIMORE WB AIRPORT	W	16	8.6	57	NW	21	80	82	55	63	4	3	7	1	0	0	15	59	5.6
FREDERICK WB AIRPORT	-	-	-	-	-	-	-	-	-	-	2	0	4	1	0	0	7	-	-
WASHINGTON WB CITY	SE†	19†	7.4†	27†	SW†	23†	77†	79†	56†	62†	-	1	7	0	0	0	-	64†	5.7†
WILMINGTON-NCastle WB AIRPORT	WNW	11	8.0	31++	WNW	23	82	81	51	60	5	5	3	1	0	0	14	-	6.0

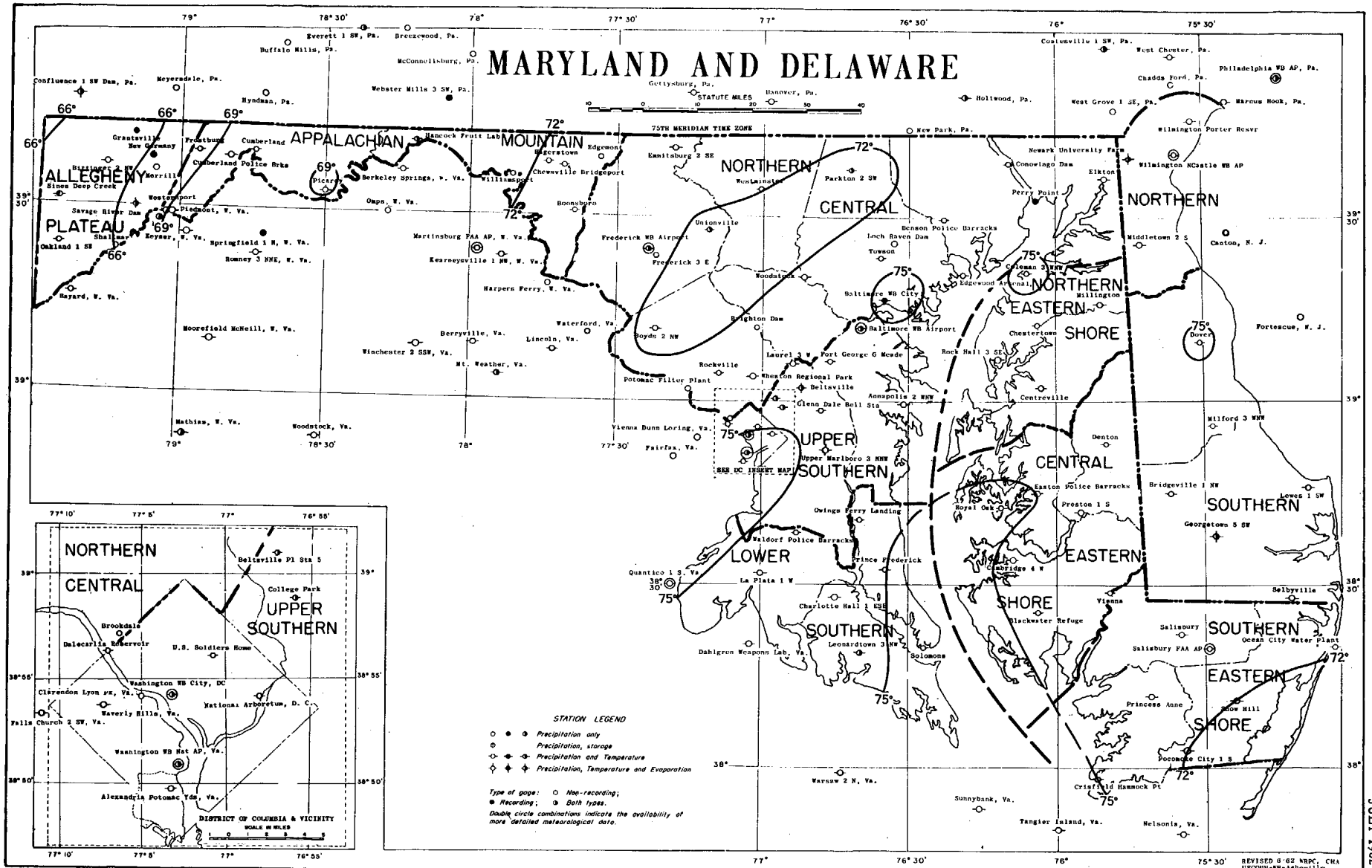
† Airport Data

TOTAL PRECIPITATION



ISOLINES ARE DRAWN THROUGH POINTS OF APPROXIMATELY EQUAL VALUE. CAUTION SHOULD BE USED IN INTERPOLATING ON THESE MAPS, PARTICULARLY IN MOUNTAINOUS AREAS.

AVERAGE TEMPERATURE



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STATION INDEX

MARYLAND AND DELAWARE
1962

STATION	INDEX NO.	COUNTY	DRAINAGE I	LATITUDE	LONGITUDE	ELEVATION	OBSERVATION TIME AND TABLES				OBSERVER		
							TEMP.	PRECIP.	EVAP.	SPECIAL INSTR.			
MARYLAND													
ANNAPOLIS 2 WW	0189	ANNE ARUNDEL	1	38 59	76 91	70	SP						
BALTIMORE WB AIRPORT	0445	ANNE ARUNDEL	2	39 11	76 40	144	MID						
BALTIMORE WB CITY	0470	BALTO CITY	3	39 17	76 37	14	MID						
BELTSVILLE	0700	PRINCE GEORGE	5	39 02	76 53	120	BA						
BELTSVILLE PLANT STA 5	0705	PRINCE GEORGE	5	39 03	76 57	100	9A						
BENSON POLICE BARRACKS	0732	HARFORD	1	39 30	76 23	365	SP						
BITTINGER 2 NW	0981	GARRETT	7	39 37	79 15	2700	7P						
BLACKWATER REFUGE	0915	DORCHESTER	1	38 26	76 08	5	AP						
BOONSBORO	0986	WASHINGTON	5	39 31	77 39	735	6P						
BOYDS 2 NW	1052	MONTGOMERY	5	39 12	77 20	580	6P						
BRIGHTON DAM	1125	MONTGOMERY	4	39 12	77 01	350	BA						
BROOKDALE	1170	MONTGOMERY	5	38 57	77 06	260	7P						
CAMBRIDGE 4 W	1385	DORCHESTER	1	38 34	76 09	5	6P						
CENTREVILLE	1627	QUEEN ANNES	1	39 03	76 03	46	6P						
CHARLOTTE HALL 1 ESE	1686	ST MARYS	4	38 28	76 45	107	5P						
CHESTERSTOWN	1750	KENT	1	39 13	76 04	35	11P						
CHEWSVILLE BRIDGEPORT	1790	WASHINGTON	5	39 38	77 41	560	SS						
COLLEMAN 3 NW	1980	KENT	1	39 21	76 08	76	6P						
COLLEGE PARK	1995	PRINCE GEORGE	6	39 39	76 10	40	MID						
CONWINGO DAM	2060	HARFORD	6	39 39	76 10	40	MID						
CRISFIELD HAMMOCK PT	2205	SOMERSET	1	37 58	75 52	7	5P						
CUMBERLAND	2280	ALLEGANY	5	39 39	78 45	945	6P						
CUMBERLAND POLICE BRKS	2285	ALLEGANY	5	39 38	78 50	970	5P						
DINTON	2323	CAROLINE	1	38 53	75 50	20	6P						
EASTON POLICE BARRACKS	2700	TALBOT	1	38 45	76 04	40	5P						
EDGEHART	2770	WASHINGTON	5	39 40	77 33	905	BA						
EDGEWOOD ARSENAL	2795	HARFORD	1	39 21	76 19	10	MID						
ELKTON	2860	CECIL	1	38 46	75 50	28	6P						
EMILSBURG 2 SE	2905	FREDERICK	5	39 41	77 18	400	5P						
FORT GEORGE G MEADE	3230	ANNE ARUNDEL	4	39 06	76 45	140	5P						
FREDERICK WB AIRPORT	3350	FREDERICK	5	39 25	77 23	294	MID						
FREDERICK 3 E	3355	FREDERICK	5	39 24	77 22	385	BA						
FROSTBURG	3415	ALLEGANY	5	39 39	78 56	2095	7A						
GLEN DALE BELL STA	3675	PRINCE GEORGE	4	38 58	76 48	151	4P						
GRANTSVILLE	3795	GARRETT	7	39 42	79 09	2380							
HAGERSTOWN	3975	WASHINGTON	5	39 39	77 44	660	6P						
HANCOCK FRUIT LAB	4030	WASHINGTON	5	39 42	78 11	428	BA						
LA PLATA 1 W	5085	CHARLES	5	38 32	77 00	140	5P						
LAUREL 3 W	5111	PRINCE GEORGE	4	39 06	76 34	400	5P						
LEONARDTOWN 3 NW	5201	ST. MARYS	5	38 19	76 40	40	5P						
LOCH RAVEN DAM	5340	BALTIMORE	1	39 26	76 33	190	5P						
LUKE	5530	ALLEGANY	5	39 28	79 04	1020	BA						
MERRILL	5894	GARRETT	5	39 36	79 05	1790	BA						
MILLINGTON	5985	KENT	1	39 16	75 51	30	6P						
NEW GERMANY	6408	GARRETT	5	39 38	79 07	2590							
OAKLAND 1 SE	6620	GARRETT	7	39 24	79 24	2420	5P						
OCEAN CITY WATER PLANT	6670	WORCESTER	2	38 20	75 05	17	4P						
OWINGS FERRY LANDING	6770	CALVERT	4	38 42	76 41	120	7P						
PARKTON 2 SW	6844	BALTIMORE	1	39 38	76 42	600	11P						
PERRY POINT	6980	CECIL	1	39 33	76 04	40							
PICARDY	7010	ALLEGANY	5	39 33	78 30	1030	6P						
POTOMAC CITY 1 S	7140	MORESTER	1	38 03	75 34	20	5P						
POTOMAC FILTER PLANT	7272	MONTGOMERY	5	39 02	77 15	270	BA						
PRESTON 1 S	7310	CAROLINE	1	38 42	75 55	50	6P						
PRINCE FREDERICK	7325	CALVERT	1	38 32	76 35	140	5P						
PRINCESS ANNE	7330	SOMERSET	1	38 12	75 41	15	5P						
ROCK HALL 3 SE	7700	KENT	1	39 07	76 12	10	6P						
ROCKVILLE	7705	MONTGOMERY	5	39 05	77 09	436	AP						
ROYAL OAK	7900	TALBOT	1	38 45	76 11	10	5P						
SALISBURY	8000	WICOMICO	1	38 22	75 35	10	5P						
SALISBURY FAA AIRPORT	8005	WICOMICO	1	38 20	75 30	52	MID						
SAVAGE RIVER DAM	8065	GARRETT	5	39 31	79 08	1495	BA						
SHALLMAR	8191	GARRETT	5	39 23	79 12	1700	BA						
SINES DEEP CREEK	8315	GARRETT	7	39 31	79 25	2038	MID						
SNOW HILL	8380	WORCESTER	2	38 11	75 24	14	6P						

1-CHESAPEAKE, 2-COASTAL, 3-PATAPSCO, 4-PATUXENT, 5-POTOMAC, 6-SUSQUEHANNA, 7-YOUGHEWENY

Additional information regarding the climate of Maryland and Delaware may be obtained by writing to the State Climatologist at Weather Bureau Airport Station, Friendship International Airport, Baltimore, Maryland, or to any Weather Bureau Office near you.

Figures and letters following the station name, such as 12 SSW, indicate distance in miles and direction from the post office.

Delayed data and corrections will be carried only in the June and December issues of this bulletin.

Monthly and seasonal snowfall and heating degree days for the 12 months ending with the preceding June data will be carried in the July issue of this bulletin.

Stations appearing in the index, but for which data are not listed in the tables, are either missing or received too late to be included in this issue.

Divisions, as used in "Climatological Data" Table and on the maps, became effective with data for October 1956.

Unless otherwise indicated, dimensional units used in this bulletin are: Temperature in °F, precipitation and evaporation in inches and wind movement in miles. Monthly degree day totals are the sums of the negative departures of average daily temperatures from 65° F.

Evaporation is measured in the standard Weather Bureau type pan of 4-foot diameter unless otherwise shown by footnote following the "Evaporation and Wind" Table. Max and Min in "Evaporation and Wind" Table refer to extremes of temperature of water in pan as recorded during 24 hours ending at time of observation.

Normals for all stations are climatological standard normals based on the period 1931-1960.

Water equivalent values published in the "Snowfall and Snow on Ground" Table are the water equivalent of snow, sleet, or ice on the ground. Samples for obtaining measurements are taken from different points for successive observations; consequently occasional drifting and other causes of local variability in the snowpack may result in apparent inconsistencies in the record.

Entries of snowfall in the "Climatological Data" Table and the "Snowfall and Snow on Ground" Table, and in the "Seasonal Snowfall" Table include snow and sleet. Entries of snow on ground include snow, sleet and ice.

Data in the "Extremes" Table; "Daily Precipitation" Table; "Daily Temperature" Table; and "Evaporation and Wind" Table; and snowfall in the "Snowfall and Snow on Ground" Table, when published, are for the 24 hours ending at time of observation. The Station Index shows observation times in local standard time. During the summer months some observers take the observations on daylight saving time.

Snow on ground in the "Snowfall and Snow on Ground" Table is at observation time for all except Weather Bureau and FAA stations. For these stations snow on ground values are at 7:00 a.m., E.S.T.

In the Station Index the letters C, G, H, and J in the "Special" column under the heading "Observation Time and Tables", indicate the following:

- C Recording Rain Gage Station. Hourly precipitation values are processed for special purposes, and are published later in "Hourly Precipitation Data" Bulletin.
- G "Soil Temperature" Table.
- H "Snowfall and Snow on Ground" Table. Omission of data in any month indicates no snowfall and/or snow on ground in that month.
- J "Supplemental Data" Table.

OTHER REFERENCE NOTES

No record in the "Climatological Data" Table and the "Daily Temperature" Table is indicated by no entry.

Interpolated values for monthly precipitation totals may be found in the annual issue of this publication.

- No record in the "Supplemental Data" Table; "Daily Precipitation" Table; "Evaporation and Wind" Table; "Snowfall and Snow on Ground" Table; and the Station Index.
- + And also on an earlier date or dates.
- ++ Fastest observed one minute wind speed. This station is not equipped with automatic wind instruments.
- * Amount included in following measurement, time distribution unknown.
- # Thermometers are generally exposed in a shelter located a few feet above sod-covered ground; however, the reference indicates that the thermometers are exposed in a shelter located on the roof of a building.
- // Gage is equipped with a windshield.
- AR This entry in time of observation column in Station Index means after rain.
- B Adjusted to a full month.
- D Water equivalent of snowfall wholly or partly estimated, using a ratio of 1 inch water equivalent to every 10 inches of new snowfall.
- M One or more days of record missing; if average value is entered, less than 10 days record is missing. See "Daily Temperature" Table for detailed daily record. Degree day data, if carried for this station, have been adjusted to represent the value for a full month.
- R Amounts from recording gage. (These amounts are essentially accurate but may vary slightly from the amounts to be published later in Hourly Precipitation Data.)
- SS This entry in time of observation column in Station Index means observation made near sunset.
- T Trace, an amount too small to measure.
- V Includes total for previous month.
- X Observation time is 1:00 a.m., E.S.T. of the following day.
- VAR This entry in time of observation column in Station Index means variable.

General weather conditions in the U. S. for each month are described in the publications MONTHLY WEATHER REVIEW, MONTHLY CLIMATOLOGICAL DATA-NATIONAL SUMMARY, and STORM DATA, all of which may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

Information concerning the history of changes in locations, elevations, exposure, etc., of substations through 1955 may be found in the publication "Substation History" for this state. That publication may be obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. for 25 cents. Similar information for regular Weather Bureau stations may be found in the latest annual issue of Local Climatological Data for the respective stations, obtained as indicated above, price 15 cents.

Subscription Price: 20 cents per copy, monthly and annual; \$2.50 per year. (Yearly subscription includes the Annual Summary). Checks and money orders should be made payable to the Superintendent of Documents. Remittance and correspondence regarding subscriptions should be sent to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.