

U. S. DEPARTMENT OF COMMERCE

CHARLES SAWYER, Secretary

WEATHER BUREAU

F. W. REICHELDERFER, Chief

# CLIMATOLOGICAL DATA

MARYLAND AND DELAWARE

ANNUAL SUMMARY 1949

Volume LIII No. 13



MARYLAND AND DELAWARE - 1949

G. N. Brancato, Section Director - Baltimore, Md.

WEATHER SUMMARY

Unusual warmth, record breaking in some phases, was the salient feature of the year's weather for Maryland, Delaware and the District of Columbia. However, precipitation totals varied somewhat over the two-State area and, while average amounts were fairly close to normal, some areas had an abundance of precipitation, while there was a dearth in others. Snowfall totals averaged less than one-half the usual amounts, the average for the two States being next to the lowest of record, the lowest being recorded in 1913. Thunderstorms and the average speed of the winds were below normal. Flooding was limited to local areas and was not of serious proportions in any region.

For Maryland, Delaware and the District of Columbia, as a whole, the average of mean temperatures was the highest ever recorded. Much of this can be ascribed to unusually warm weather in the first two months. January was the fourth warmest and February was the third warmest in the weather annals of the section, both months being about 8 degrees above normal. Although a few months were close to normal, September, with average temperature of 3 degrees below normal, was the only sub-normal month during the year.

Areas where departures from normal temperatures were greatest were: District of Columbia + 4.5°; Crisfield, Maryland, + 4.1°; Coleman, Md., + 3.8°; Clear Spring, Maryland, +3.4°; Chestertown and Baltimore, Md., +3.3°; and Newark, Delaware, +3.2°. Frostburg, Maryland, just one degree above normal was nearest to the normal.

Mean temperatures in Maryland and the District of Columbia varied from 62.5° at Crisfield to 50.1° at Oakland, while in Delaware, they varied from 58.7° at Milford to 55.5° at Wilmington (Porter Reservoir). Delaware's coldest temperature was 7° on February 3 at Newark, but on the same date at Hancock, Maryland, the mercury plummeted to 6 degrees below zero for Maryland's lowest temperature of the year. The year's highest temperature in Delaware was 103 at Milford on July 5, while in Maryland it was 105° at Keedysville on July 6, and at the Salisbury Police Barracks on July 29.

Precipitation totals in Delaware were about two and one-half inches below normal with the deficiency about the same throughout the State. In Maryland and the District of Columbia, however, the average was about one-half inch below normal, but amounts from the several stations varied considerably from normal. Delaware totals varied from 39.34 inches at Wilmington (City Hall) to 42.56 at Newark College Farm, but Maryland and the District of Columbia amounts ranged from 34.24 inches at the Easton Police Barracks to 53.86 inches at Sines. The area of greatest deficiency of precipitation was centered near the Chesapeake Bay north of the Patuxent and Nanticoke Rivers. It included Anne Arundel, Baltimore, Dorchester, Talbot, Caroline and portions of Calvert, Queen Annes, Kent, and Prince Georges Counties. Totals were four or more inches above normal in portions of Calvert, Washington, Allegany and Garrett Counties.

Snowfall totals for the year were unusually small, averaging about forty percent of normal amounts. Amounts in Maryland and the District of Columbia varied from none at Crisfield and Pocomoke City up to 50.9 inches at Friendsville, while in Delaware the range was from 1.4 inches at Lewes to 14.3 inches at Wilmington (New Castle Airport). Even the heavy snowfall at Friendsville was about 13 inches below normal. Most of the snow fell during January and February. Measurable snowfall in March was limited to Northern and Western Maryland and extreme Northern Delaware, and in November and December it was limited to Garrett, Allegany and Washington Counties of Maryland.

The mildness of the colder months and the paucity of snowfall combined to provide only infrequent interruptions to highway travel in Maryland, Delaware and the District of Columbia.

Although winter grains were left unprotected by the lack of a snow cover during the first of the year, the failure of severe winter weather to develop left the crops without any noticeable damage. Generally, ample soil moisture during the spring months brought fairly good returns at the summer harvest.

Although held back by dry weather in June and July in the mid-eastern portion of the section, warm, humid weather in August brought corn up to normal development by the end of August. September and October provided good weather for getting this crop, reported in some sections to be the best in years, under cover.

Pastures and hay crops were good or better, except that pastures and several cuttings of hay were short and of poor quality in Delaware and the eastern half of Maryland at mid-season due to the early summer deficiency of rainfall.

Fruit trees blossomed early under the impetus provided by the above normal weather of February and March, but escaped later damage of significance from frosts and freezes to produce good crops. The last frost in some areas came as late as April 29.

The year's weather was favorable to the growing and harvesting of a good crop of tobacco. Late planted fields responded to the late summer rains to a greater degree than did those fields which were planted early. Disease and firing were less than usual.

Seeding of winter grains during autumn and their later development were hampered somewhat by dry weather, particularly in Delaware and the eastern half of Maryland. However, it was thought that there would be no serious damage resulting therefrom.

SYNOPSIS BY MONTHS

January - The mean temperature was 8.2° above normal to provide the 4th warmest January of record. It also was decidedly different from January 1948 which was 6.5° below normal and the fifth coldest of record. Precipitation was two or more inches above normal in most of Delaware, Maryland and the District of Columbia. Snowfall was deficient in all portions of the section.

February - Above normal temperatures and precipitation continued during this month. It was the fourth consecutive month with the average mean

temperature above normal and the seventh successive month with average precipitation amounts above normal. Except in Delaware, it was the warmest February on record, while in Delaware, it was the third warmest. Snowfall was below normal in most areas and the occurrences of snowfall were followed quickly by warm weather so that the snow did not remain on the ground long.

March - Although this was the fifth month in succession with average temperatures above normal, it was the first since July 1948, in which the average precipitation was below normal. The area from Hancock westward through Allegany and Garrett Counties was the only area with below normal temperatures and even here the deficiency was less than one degree. Only a few stations on the Eastern Shore and in and near the District of Columbia were able to report precipitation totals up to the March average. Average total snowfall was well below normal and measurable amounts were restricted to Northern and Western Maryland and extreme Northern Delaware.

April - Temperatures were extremely variable during this month, as alternate warm and cool air masses drifted in with more or less regularity. The average for the section was less than one-half degree above normal. While there were scattered areas with above and below normal temperatures, the departure from normal was less than two degrees at practically all stations. Generally, deficient precipitation continued through April, as the average was three-fourths of an inch less than normal. Just a few stations in Northern Maryland reported above normal amounts. Measurable snowfall was reported only in Garrett and Northwestern Allegany Counties.

May - Mean temperatures averaged less than one degree from normal at most stations and showed relatively little variation in the Section. Precipitation totals were rather variable with the average somewhat below normal. The District of Columbia, Southern, Central and Northeastern Maryland and northern Delaware had abundant rainfall, while most other areas were generally deficient.

June - Deficient rainfall provided the main feature of the weather for this month. The average deficiency was almost two inches with Delaware and most of the eastern half of Maryland areas reporting the greatest shortages. In these latter areas damage to crops assumed critical proportions by the end of the month. Allegany County was the only area with precipitation well above normal and there the excess above normal was almost two inches. Mean temperatures averaged almost two degrees above normal, with practically all stations above normal.

July - The dry weather which began in June and which was so detrimental to truck crops in Delaware and most of the eastern half of Maryland continued in most of those sections during this month. There was abundant precipitation in Northern and Western Maryland and near normal amounts in Northern Delaware and extreme Southern and Southeastern Maryland. The average temperature in Maryland and the District of Columbia was the highest on record while in Delaware it was the second highest. Many temperatures were reported near or slightly higher than 100 degrees during the month.

August - Rainfall averaged near normal during August with the pattern of excessive or deficient precipitation presenting an erratic picture when compared to normal. Areas near the lower Chesapeake Bay section of Maryland and scattered areas in Western Maryland had amounts which were more than one inch above normal while some scattered stations in Central and Southern Maryland were more than one inch below normal. During the night of August 28-29th, the remains of a severe hurricane which caused heavy property damage as it crossed the Florida peninsula a few days earlier, passed over this region. Wind velocities near and east of the Chesapeake Bay reached 50 to 60 miles per hour with gusts up to 70 miles per hour. Heavy rains with these high winds caused a large amount of minor property and crop damage, but the rains were beneficial to crops. Mean temperatures were slightly above normal with just a few scattered stations as much as two degrees above normal.

September - This month's weather was outstanding, in that it was the first with below normal temperatures since October 1948. The average was three degrees below normal with all stations in Delaware, Maryland and the District of Columbia sharing in the deficiency. The first frost of the season was reported to be general in Western Maryland and scattered in Northern Maryland. Although rainfall averaged near normal over the section, as a whole, there was considerable variation in the amounts at the various stations. Generally, the area to the east of the Chesapeake Bay had rainfall amounts in excess of normal, while amounts to the west of the Chesapeake Bay were generally deficient compared to normal. Rainfall distribution through the month was poor with practically all of it occurring after the twelfth of the month.

October - The average of mean temperatures returned to the earlier pattern of "above normal" during the month. Almost without exception, the entire section's temperatures were from four to six degrees above normal. The first freezing temperatures of the autumn season for most stations came just before the end of the month. Precipitation totals averaged about half an inch above normal with the greatest amounts generally near and east of the Chesapeake Bay. However, the deficiencies in other areas were small. There was no snowfall during the month.

November - Except for precipitation totals slightly above normal in South-eastern and extreme Western Maryland, November's amounts were below normal, with the average deficiency being almost one inch. However, with ample soil moisture left over from October, conditions were good for germination and growth of winter grains. Snowfall was lighter than usual with amounts of one inch or more occurring only in Garrett County. Mean temperatures averaged just slightly above normal with only scattered areas greater than one degree above normal.

December - Well above normal temperatures in all portions of the section caused a warm December with averages three and one-half degrees above normal. Precipitation totals were deficient near and east of the Chesapeake Bay and generally within one inch of being normal elsewhere. Measurable snowfall was restricted to Northern and Western Maryland, and was unusually light even in those areas.

--- R.L.A. ---



# AVERAGE TEMPERATURES AND DEPARTURES FROM NORMAL

MARYLAND and DELAWARE  
1949

Table 1—Continued

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure	Temp	Departure
	UNIONVILLE	37.9	6.6	38.5	6.9	42.2	.3	48.0	- 3.4	60.1	- 2.0	70.4	.1	76.6	3.0	72.2	.8	62.1	- 3.6	58.7	3.9	44.3M	.4	36.2	3.1	53.9
U S SOLDIERS HOME DC	41.0	-	41.4M	-	44.6	-	53.1	-	63.8	-	73.6	-	79.3	-	76.0	-	65.2	-	62.0	-	47.1	-	40.0	-	57.2	-
VIENNA	-	-	-	-	-	-	-	-	-	-	-	-	80.1M	-	76.7	-	67.3	-	63.7M	-	48.7M	-	41.9M	-	-	-
WALDORF POLICE BRKS	42.9	-	43.2	-	45.3	-	53.6	-	64.1	-	72.5M	-	79.3	-	73.9	-	67.3	-	59.3M	-	44.0M	-	38.0	-	-	-
WASHINGTON WB CITY	43.3	9.9	44.6	9.3	47.2	4.6	55.5	2.2	66.6	2.9	75.8	3.6	81.5	4.7	78.2	3.1	67.1	- 1.0	64.0	6.6	48.4	3.2	42.3	5.7	59.5	4.5
WATERLOO POLICE BRKS	42.0	-	41.4	-	45.5	-	52.6	-	64.6	-	72.8	-	79.4	-	75.8	-	65.4	-	61.3	-	46.5	-	39.5M	-	57.3	-
WEST LANHAM HILLS	43.0M	-	43.1	-	46.4	-	53.6	-	66.1M	-	73.3	-	79.9M	-	76.0	-	65.7	-	64.8M	-	47.7M	-	38.6M	-	56.2	-
WESTERN PORT	40.9	9.0	41.2	8.5	42.7	.5	52.6	.8	62.6	.5	71.5	1.9	75.9	2.3	73.5	1.5	62.6	- 4.1	60.2	5.0	45.0	1.3	36.4	2.5	55.4	2.4
WESTMINSTER	39.4	7.4	40.4	7.8	43.9	2.1	51.4	.4	62.0	.8	72.1	1.3	78.1	3.1	73.7	.6	63.6	- 3.8	60.5	4.8	44.4	.6	37.0	2.0	55.5	1.9
WHALEYSVILLE	44.8	-	44.3	-	46.5	-	53.7	-	63.3	-	72.8	-	79.5	-	75.7	-	66.2M	-	61.6	-	46.8M	-	41.8M	-	58.1	-
WHITE HALL	41.0	-	39.5	-	41.5	-	47.6	-	58.3	-	67.6	-	72.6	-	66.2	-	58.0	-	55.5	-	40.0	-	34.2	-	52.0	-
WOODSTOCK COLLEGE	40.9	8.6	40.4	7.2	44.5	2.8	52.5	.3	63.0	.0	72.1M	1.2	78.6	3.5	74.7M	1.9	63.4	- 2.9	59.9	5.0	43.4	-	37.0	2.6	55.9	2.5

### ACKNOWLEDGMENTS

In addition to the climatological data from some 6,000 Weather Bureau and cooperative weather stations, this bulletin series contains records from Hydroclimatic Network Stations which were formerly reproduced in the Hydrologic Bulletin Series. The Hydroclimatic Network is a nationwide net of rain gages—mostly of the recording type which produce continuous records of precipitation. It was established in 1939 at the request of the Corps of Engineers, Department of the Army, to supplement existing precipitation stations in order to provide records of rainfall intensity which were essential to the planning of flood control and related works by the Corps of Engineers. This Network, now numbering about 2,000 recording, and 1,000 non-recording rain gages, has been maintained by the Weather Bureau through working funds transferred annually to the Weather Bureau by the Corps of Engineers. These transfers averaged about \$250,000 per year between 1940 and 1944, and nearly \$375,000 since that date. For the years 1940-42, the Department of Agriculture transferred about \$100,000 per year to provide data required in its work, and since 1947 the Bureau of Reclamation has transferred about \$25,000 per year to meet the increasing needs of their program in the Western States.

Previous to the introduction of this bulletin series, data from Hydroclimatic Network stations were presented in bulletins (Hydrologic Bulletins) which were issued monthly for each of 8 drainage areas embracing the entire United States, but since the Network was established to meet the internal requirements of the Federal agencies referred to above, no provision was made for public dissemination of the data, distribution being limited to cooperating agencies and to certain public repositories. A list of locations where reference copies of the Hydrologic Bulletin Series are available for inspection may be obtained upon application to Chief, U.S. Weather Bureau, Washington 25, D. C.

Many other records published in this bulletin have been made available through the cooperation of various public offices, private agencies, and individuals as listed in the Station Index.



Table 2—Continued

TOTAL PRECIPITATION AND DEPARTURES FROM NORMAL

MARYLAND and DELAWARE  
1949

Station	January		February		March		April		May		June		July		August		September		October		November		December		Annual	
	Precip.	Departure	Precip.	Departure	Precip.	Departure	Precip.	Departure	Precip.	Departure	Precip.	Departure	Precip.	Departure	Precip.	Departure	Precip.	Departure	Precip.	Departure	Precip.	Departure	Precip.	Departure	Precip.	Departure
SALISBURY	4.08	.40	4.50	1.35	4.50	.62	3.35	.30	3.59	.06	1.27	-2.38	2.04	-2.17	6.41	1.13	5.70	1.82	4.13	.92	3.54	.66	1.16	-2.07	44.27	.64
SALISBURY POL BRKS	4.40		3.57		4.08		3.69		3.70		1.26		1.84		4.75		5.19		5.27		2.75		1.36		41.86	
SALISBURY MUNICIPAL AP	3.72		4.74		4.68		2.29		3.19		1.67		1.82		7.73		3.61		3.67		2.73		0.95		40.80	
SAVAGE RIVER DAM	4.15		2.15		1.60		2.10		3.40		3.43		6.80		5.85		1.92		3.04		2.30		2.49			
SEAKTOWN													4.44				3.05		2.99							
SINES DEEP CREEK	6.78	3.06	4.15	.71	3.65	-.62	3.22	-1.01	3.70	-.69	4.49	-.33	9.42	4.88	5.68	1.47	2.35	-.80	3.25	-.20	3.33	.17	3.84	-.30	53.86	6.94
SNOW HILL	4.52	.75	4.40	.97											5.28	.49	4.47	-.53	3.47	.35	3.53	.64				
SOLOMONS	4.34	1.28	2.98	.12	3.26	-.02	2.36	-.82	5.98	2.84	3.76	.35	7.36	2.78	6.55	4.60	2.05	-.92	4.62	1.92	2.26	-.06	1.49	-1.26	49.01	10.81
TAKOMA PARK BALTO AVE	5.21	1.68	3.67	.77																						
TAKOMA PARK MISS AVE	5.07	2.40	3.31	.69	3.15	-.05	2.26	-.79	5.68	1.99	4.09	-.03	3.94	-.98	5.47	1.36	4.38	.56	3.28	-.20	1.04	-2.52	1.83	-1.20	43.90	1.23
TOKOLWAY	5.09	2.60	2.91	.86	1.06	-1.99	2.39	-1.08	3.45	-.13	1.98	-2.17	6.32	2.90	3.30	-.02	2.84	-.20	3.18	-.45	1.58	-.81	2.43	.03	36.53	-.46
TOWSON	7.07	3.44	3.36	.47	2.77	-.86	4.49	.63	5.23	1.64	1.54	-2.12	5.92	2.10	3.11	-1.60	2.47	-.80	5.00	1.75	2.17	-.82	3.41	.21	46.54	4.04
UNIONVILLE	5.18	2.31	3.04	1.23	1.67	-1.39	3.81	1.32	4.54	-.32	2.65	-1.96	6.49	1.27	3.25	-.67	2.81	-.11	2.90	-.48	1.31	-2.29	2.96	.06	40.61	-1.03
U S SOLDIERS HOME DC	5.00		3.53		2.95		2.59		6.42		2.64		2.35		3.69		4.53		3.28		0.79		1.64		39.41	
VIENNA													3.88		5.91		4.57		4.15		2.52		1.99			
WALDORF POLICE BRKS	5.19		3.13		2.80		2.69		5.86		2.39		5.05		3.26		3.22		2.78		1.41		1.64		39.42	
WASHINGTON WB CITY DC	5.02	1.47	3.27	.00	3.96	.21	2.01	-1.26	5.65	1.95	1.85	-2.28	4.57	-.14	4.57	.56	3.55	.31	3.21	.37	0.74	-1.63	1.72	-1.60	40.12	-2.04
WATERLOO POLICE BRKS	5.71		3.55		3.98		3.29		6.46		1.80		3.70		5.41		4.82		3.41		1.31		2.51		45.98	
WESTERN POINT	4.76	2.04	2.11	-.19	1.30	-1.68	2.13	-.95	5.20	1.55	6.19	2.20	6.38	2.68	4.81	1.09	1.93	-.89	2.63	.04	2.07	-.02	2.18	-.27	41.69	5.60
WEST LANHAM HILLS	5.51		3.38		2.98		2.00		8.00		3.25		2.73		3.67		2.54		3.41		1.50		1.88		40.85	
WEST MINSTER	6.44	3.28	3.45	.50	1.91	-1.81	4.45	1.00	4.03	.37	1.78	-2.30	8.72	4.71	2.94	-1.71	2.27	-1.48	3.28	-.02	1.30	-1.72	3.39	.17	43.93	.99
WHEATSVILLE	3.73		4.10		3.66		3.23		2.83		1.56		2.24		2.50		5.11		4.42		2.89		0.94		37.21	
WHITE HALL	6.55		3.49		2.92		4.33		3.78		1.45		7.98		2.59		2.05		3.90		1.24		3.36		43.64	
WILLIAMSPORT	5.27	2.69	2.22	.23	0.70	-2.61	3.47	.53	3.88	-.28	1.27	-3.18	7.48	4.07	4.13	.09	2.56	-.24	3.66	.11	1.24	-1.79	3.22	.07	39.10	-.31
WILLIS SCHOOL FILT PLT	4.06		3.34		2.46		2.24		6.34		3.39															
WOODSTOCK COLLEGE	5.00	1.74	2.64	-.36	2.47	-1.08	3.02	-.25	4.35	.68	1.67	-2.09	3.73	-.22	3.89	-.25	3.07	-.48	4.95	1.84	1.25	-1.59	2.96	-.07	39.00	-2.13

See reference notes following Station Index.



## TEMPERATURE EXTREMES AND FREEZE DATA

MARYLAND AND DELAWARE  
1949

Table 3—Continued.

Station	Highest	Date	Lowest	Date	Last spring minimum of			First fall minimum of			No. of days between dates		
					24° or below	28° or below	32° or below	32° or below	28° or below	24° or below	24° or below	28° or below	32° or below
DELAWARE													
BRIDGEVILLE	-	-	-	-	3-20 (24°)	3-20 (24°)	4- 5 (30°)	10-28 (27°)	10-28 (27°)	11-23 (21°)	248	222	206
DELAWARE CITY REEDY PT	99	7- 5	-	-	3-21 (22°)	3-21 (22°)	4- 5 (32°)	11- 6 (26°)	11- 6 (26°)	11-22 (23°)	246	230	215
DOVER	101	7-29	15	2-12	3-20 (22°)	3-20 (22°)	3-21 (31°)	10-28 (31°)	11-22 (27°)	11-23 (23°)	248	247	221
GEORGETOWN	99	7- 6+	12	12-17	3-20 (21°)	4-29 (28°)	4-29 (28°)	10-28 (28°)	10-28 (28°)	11-19 (22°)	244	173	182
LEWES	98	7- 5	14	12-17	3-20 (22°)	3-20 (22°)	4- 5 (29°)	10-28 (28°)	10-28 (28°)	11-22 (24°)	247	222	206
MILFORD	103	7- 5	14	2-12	3-19 (22°)	3-20 (25°)	4- 5 (31°)	10-28 (29°)	11-22 (28°)	11-23 (22°)	249	247	206
MILLSBORO	-	-	12	2- 2	3-20 (23°)	3-21 (27°)	3-21 (27°)	10-28 (29°)	11-22 (28°)	11-23 (20°)	248	246	221
NEWARK COLLEGE FARM	100	7- 5	7	2- 3+	3-21 (23°)	4- 5 (27°)	4-29 (31°)	10-27 (31°)	10-28 (27°)	11- 6 (23°)	230	206	181
SMYRNA	101	7- 5	11	2-12	3-20 (21°)	3-20 (21°)	3-20 (21°)	10-28 (31°)	11-22 (26°)	11-23 (23°)	248	247	222
WILMINGTON WB N CASTLE	100	7- 5	13	2- 3	3-20 (20°)	3-21 (28°)	3-21 (28°)	10-28 (32°)	11-22 (24°)	11-22 (24°)	247	246	221
WILMINGTON PORTER RES	97	7- 5	12	2-12	3-20 (17°)	3-20 (17°)	4- 5 (32°)	11- 6 (27°)	11- 6 (27°)	11-23 (24°)	248	231	215
† BELTSVILLE AGR RES AD 1	97	7- 7	9	12-17	3-21 (22°)	3-21 (22°)	4-29 (30°)	10-27 (31°)	11- 6 (22°)	11- 6 (22°)	230	230	181

## TOTAL EVAPORATION AND WIND MOVEMENT

Table 4

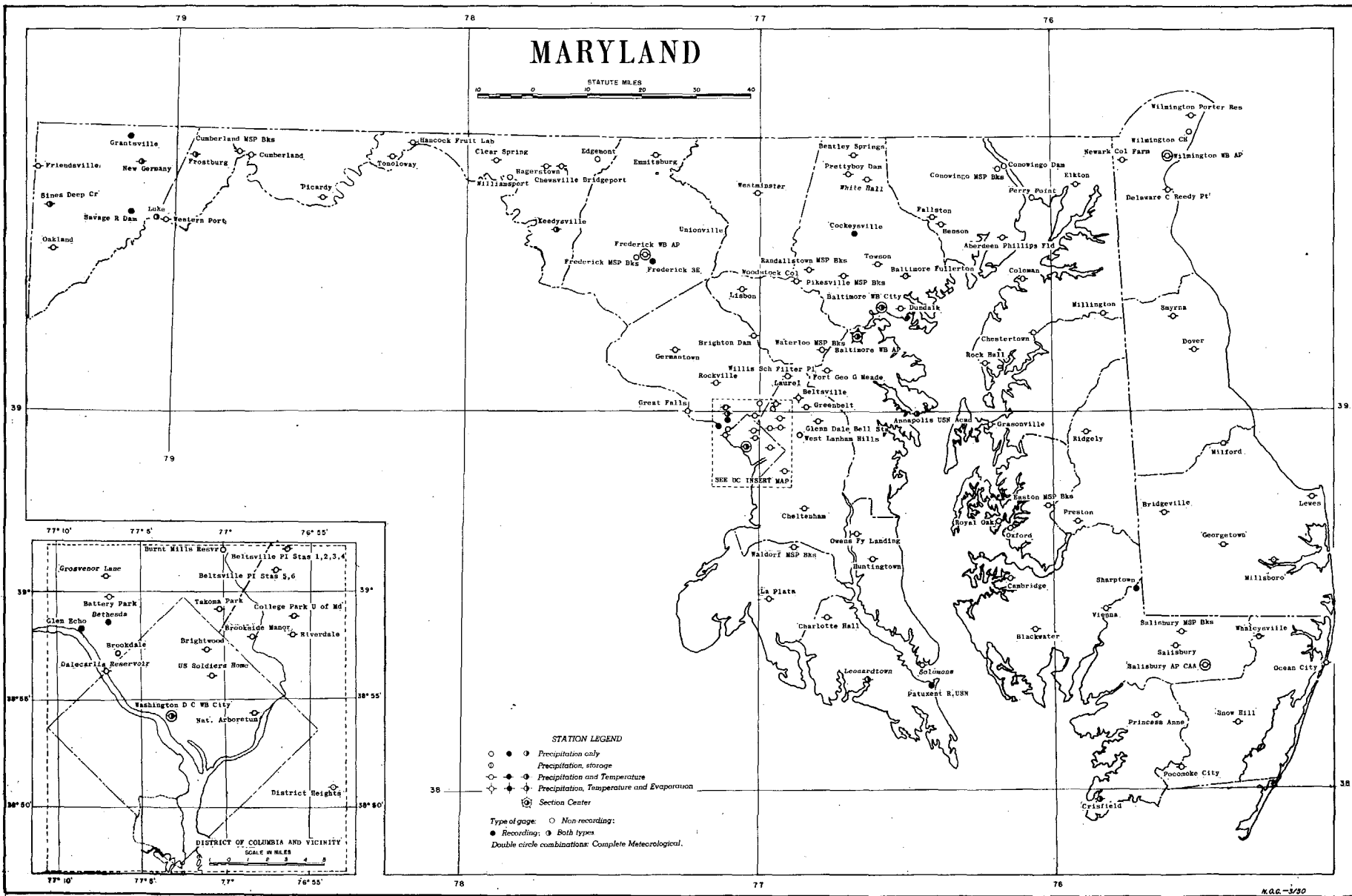
Station		Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual	Departure fr. normal
		BELTSVILLE	EVAP					6.03	6.67	6.76	5.58	4.62	3.69		
	DEP					-.13	.21	-.38	-.61	-.12	.40				
	WIND					1280	1273	1113	1034	1476	1078				

See reference notes following Station Index.



# MARYLAND

STATUTE MILES



**STATION LEGEND**

- ● ● Precipitation only
- ● ● Precipitation, storage
- ● ● Precipitation and Temperature
- ● ● Precipitation, Temperature and Evaporation
- Section Center

**Type of gage:** ○ Non recording;  
● Recording; ● Both types  
Double circle combinations: Complete Meteorological.



REFERENCE NOTES

Unless otherwise indicated, dimensional units used in this bulletin are: Temperature in °F; precipitation and evaporation in inches, and wind movement in miles. Evaporation is measured in the standard Weather Bureau type pan of 4 foot diameter unless otherwise shown by foot note following Table 4.

The four digit identification numbers in the Index are assigned on a state basis. There will be no duplication of numbers within a state. Figures and letters following the station name, such as (2 SSW) indicates distance in miles and direction from the Post Office.

Delayed data and corrections will be carried only in the June and December issues of Climatological Data.

-	No record.
+	Also later dates or months.
//	Gage is equipped with a windshield.
B	Adjusted to full month.
E	Water equivalent of snowfall wholly or partially estimated, using a ratio of 1 inch water equivalent to every 10 inches of new snowfall.
M	1 to 10 days' record missing; see monthly Climatological Data for detailed daily record.
R	Station equipped with a recording gage only.
T	Trace, an amount too small to measure.
V	Includes total for previous month.

The subscription price for this bulletin is 15 cents per copy or \$1.50 a year. (Yearly subscription includes the annual summary.) Correspondence regarding subscriptions should be addressed to: Weather Records Processing Center, 430 Post Office Building, Chattanooga 2, Tennessee.

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