



CLIMATOLOGICAL DATA

MARYLAND AND DELAWARE

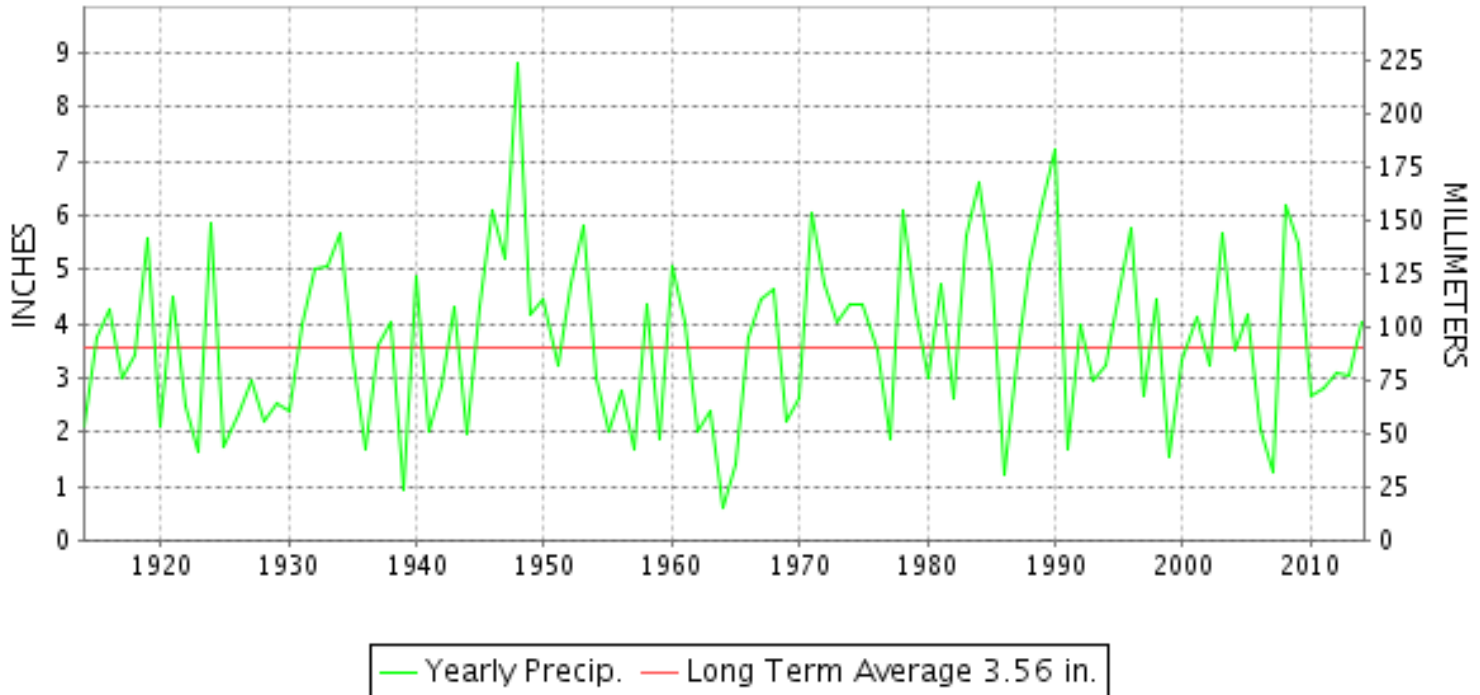
MAY 2014

VOLUME 118 NUMBER 05

ISSN 0145-0549

GHCND Ver: 3.12-upd-2014090305

MAY PRECIPITATION BY YEAR



TEMPERATURE AND PRECIPITATION EXTREMES

MARYLAND

HIGHEST TEMPERATURE	93	MAY 14	NATL ARBORETUM DC
LOWEST TEMPERATURE	30	MAY 19++	2 STATIONS
GREATEST TOTAL PRECIPITATION	9.78		BRIGHTON DAM
LEAST TOTAL PRECIPITATION	2.21		SALISBURY FAA AP
GREATEST 1 DAY PRECIPITATION	5.97	MAY 01	ABERDEEN PHILLIPS FLD

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DELAWARE

HIGHEST TEMPERATURE

89

MAY 27

DOVER

LOWEST TEMPERATURE

44

MAY 19+

2 STATIONS

GREATEST TOTAL PRECIPITATION

3.09

WILMINGTON NEW CASTLE CO AP

LEAST TOTAL PRECIPITATION

2.28

DOVER

GREATEST 1 DAY PRECIPITATION

1.65

MAY 16

WILMINGTON PORTER RES

DAILY PRECIPITATION (INCHES)

STATION	TOTAL	DAY OF MONTH																															
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
MARYLAND																																	
SOUTHERN																																	
EASTERN SHORE 01																																	
ASSATEAGUE	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PRINCESS ANNE	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SALISBURY 2N	3.51	0.12					0.02	0.05	0.01		T		0.05	0.02		1.59	0.01						0.60						0.29	0.55	0.20		
SALISBURY FAA AP	2.21	T	T			T	T	0.05	T		T	T				1.32						0.20	0.25				0.13	T	0.26	T			
SNOW HILL 4 N	3.19	0.14					0.03	0.04			T	0.06		0.02		1.64							0.33	T				0.47	0.41	0.05			
CENTRAL																																	
EASTERN SHORE 02																																	
ROYAL OAK 2 SSW	5.05	0.35	T		0.01		0.03	0.10		T	0.01		0.04			2.85						T	0.83					0.35	0.44	0.04			
LOWER SOUTHERN 03																																	
MECHANICSVILLE 5 NE	M 5.32	2.09					0.47		0.04		0.02	0.03		0.52	T	T	0.42	0.15				0.14	T					1.02	0.26	0.16	-		
SOLOMONS	MA 4.68	0.52	*	0.03 _a	*	*	0.28 _a			0.01	0.06		0.01	0.01	0.01	1.89	*	*	0.21 _a			0.18	0.31	*	*	*	0.00 _a	0.87	0.16	0.13	-		
UPPER SOUTHERN 04																																	
BALTIMORE WASH INTL AP	3.35	0.27		0.03		T	T	0.17	T	T	0.29		T		0.01	1.71					T	0.08	0.12				0.30	0.07	0.29	0.01			
BELTSVILLE	8.88	2.91					0.01		0.16			0.16		0.09		0.01	2.23	0.24					0.85					1.75	0.05	0.42			
DALECARLIA RSVR	MA 8.32	2.81					0.60			0.22	*	0.09 _a	0.09	T		2.90	0.09						0.31					0.80	0.03	0.38			
LAUREL 3 W	5.82	0.17						0.16			0.28		0.16			2.48						0.15	1.24				0.61		0.53	0.04			
MARYLAND SCIENCE CENTER	3.22	0.22					0.16				0.14		0.06			1.76						0.20	0.11				0.24	0.08	0.25				
NATL ARBORETUM DC	M 6.71	2.09					0.40		0.31	T	T	-		0.01	T	T	2.33	0.03					0.40					0.74	0.02	0.38			
OXON HILL	7.29	2.12	0.01				0.30		0.18	T	T	0.06		0.11	T	T	1.85	1.09	T			T	0.19	T			1.07	0.08	0.23				
UPPER MARLBORO 3 NNW	5.70	2.06	0.02		T		0.27		0.14			0.03	T	0.01		1.35	0.30						0.48				0.61	0.10	0.33				
NORTHERN CENTRAL 06																																	
ABERDEEN PHILLIPS FLD	8.39	5.97	0.01		0.01				0.01			0.39			T	0.01	0.01	1.30				0.01	0.25	T				0.10	0.01	0.31			
BRIGHTON DAM	9.78	4.30					0.05		0.25					0.53	T		2.34	0.45					0.45	0.25				0.55	0.20	0.41			
CONOWINGO DAM	5.48	0.70									1.80					1.75						0.70					0.15		0.38				
CYLBURN	M 8.09	4.20					0.01		0.10		0.02	-		0.24	T	0.03	1.64	0.72					0.03	0.22				0.49	0.19	0.20			
DAMASCUS 3 SSW	6.74	0.14		T	T	T	0.02	0.29			0.37		0.44	T	T	0.28	3.03					0.04	0.98				0.45		0.64	0.06			
EMMITSBURG 2 SE	7.50	1.52			0.01				0.25			0.08		0.08		0.04	3.33					0.15	0.12	0.07				1.25	0.50	0.10			
FREDERICK 2 NNE	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
MILLERS 4 NE	4.67	0.57	0.01	T	T			0.04	T		0.28	0.08			T	0.04	2.80					0.22	0.07	0.15		0.06		0.28	T	0.06	0.01		
SMITHSBURG 2NW	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
APPALACHIAN																																	
MOUNTAIN 07																																	
CUMBERLAND 2	4.75	0.20					0.42		0.49		0.06	0.62		0.40	0.24	0.08	1.63					T	0.06	0.01				0.33	0.10	0.11			
FROSTBURG 2	5.67	0.28		0.01			0.55		0.44		0.04	0.73		0.29	0.01	0.25	1.92					0.01	0.01					0.81	0.07	0.25			
SHARPSBURG 5 S	7.56	0.66	T		0.02		0.07		0.42		0.02	0.47		0.22	T	T	3.97					T	0.46					0.95	0.02	0.28			
WILLIAMSPORT	4.81	0.40							0.43		0.04	0.24		0.12			2.88	0.01					0.18			0.02		0.37		0.12			
ALLEGHENY PLATEAU 08																																	
OAKLAND 1 SE	7.52	0.15					0.04		0.10		0.09	0.04		0.07	0.15	1.36	2.63	0.05	0.03						0.01			0.40	2.00	0.21	0.19		
SAVAGE RIVER DAM	M 3.77	0.21					T				-	-				1.08	1.92											0.12	0.22	0.12	0.10	-	

DAILY PRECIPITATION (INCHES)

STATION	TOTAL	DAY OF MONTH																														
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
SINES DEEP CREEK	M 5.60	0.18			0.02		0.05		0.38		0.11	-		0.10	0.30	0.67	2.69	0.08	0.02				-						0.27	0.30	0.04	0.39
DELAWARE NORTHERN 01																																
WILMINGTON NEW CASTLE CO AP	3.09	0.34		0.04		T	T	0.01		0.47		0.12		T	T	1.31					T	0.24	0.10					0.34	0.10	0.01	0.01	
WILMINGTON PORTER RES	2.47	0.07		0.05	T		T			0.20	0.07		T	T	0.02	1.65						0.04	0.27					0.05	0.05	T		
SOUTHERN 02																																
DOVER	2.28	0.28												0.03	0.02	1.08	0.02					0.04	0.45						0.14	0.17	0.05	

DAILY TEMPERATURES (°F)

STATION	OB. TIME	MAX/MIN	DAY OF MONTH																															AVERAGE		
			01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			
BRIGHTON DAM	08	MAX	64	75	68	71	74	74	72	72	84	85	80	79	86	86	66	77	77	65	65	70	75	73	83	83	74	79	83	87	81	58	73	75.5		
		MIN	50	48	50	44	41	41	46	46	57	57	55	53	57	57	53	45	44	40	40	50	60	51	49	51	51	59	64	53	53	53	50.8			
CONOWINGO DAM	07	MAX	73	67	68	63	65	70	65	78	75	81	79	82	80	66	77	69	69	65	71	73	80	73	76	79	85	83	80	55	73	76	73.2			
		MIN	50	49	45	45	44	45	45	54	55	55	55	55	53	54	62	49	45	43	43	43	43	43	54	56	53	54	61	53	52	50	50.3			
CYLBURN	08	MAX	63	76	67	70	72	66	72	61	83	72	79	77	83	84	64	78	66	64	64	70	73	69	81	72	71	77	82	85	79	58	75	72.7		
		MIN	48	52	51	46	45	49	46	51	55	58	58	55	65	55	56	57	49	47	43	50	55	56	56	54	51	56	66	66	54	54	58	53.6		
DAMASCUS 3 SSW	22	MAX	76	66	70	69	62	69	59	84	76	78	78	86	86	65	77	66	63	62	69	74	72	82	72	72	71	81	85	80	61	71	74	72.8		
		MIN	54	49	50	46	40	46	49	50	58	61	54	57	64	57	62	52	45	44	41	49	57	62	52	49	52	62	61	53	53	54	53.1			
EMMITSBURG 2 SE	07	MAX	54	75	67	69	67	66	73	61	84	78	77	80	84	90	68	80	68	64	64	72	77	69	83	74	75	80	83	86	83	59	73	73.6		
		MIN	45	52	46	45	41	41	44	48	49	61	58	53	53	58	58	55	47	47	39	39	45	56	56	52	52	51	54	59	54	54	54	50.5		
FREDERICK 2 NNE	07	MAX																																	M	
		MIN																																	M	
MILLERS 4 NE	18	MAX	72	71	68	65	63	69	68	81	80	77	76	82	86	81	77	72	64	62	70	72	69	82	76	73	78	81	85	81	82	73	75	74.5		
		MIN	53	47	46	45	38	45	44	48	56	61	54	54	61	53	60	52	46	41	39	43	53	58	52	50	48	55	61	62	50	51	51	50.9		
SMITHSBURG 2NW	08	MAX																																	M	
		MIN																																		M
APPALACHIAN MOUNTAIN 07																																				
CUMBERLAND 2	18	MAX	54	70	62	69	73	62	77	66	91	91	73	85	88	92	69	77	67	65	68	75	75	76	84	76	80	85	89	88	87	63	77	75.9		
		MIN	48	47	45	46	41	42	44	48	56	56	50	56	58	60	65	54	50	36	38	40	46	56	56	55	50	50	52	60	58	58	55	50.8		
FROSTBURG 2	07	MAX	50	62	53	63	67	58	69	61	83	82	69	77	81	82	61	65	60	57	59	67	71	69	74	66	68	76	80	82	77	56	71	68.3		
		MIN	40	42	39	40	34	35	38	42	48	57	51	51	58	57	58	45	41	38	37	37	43	56	45	47	47	47	51	59	54	53	51	46.5		
SHARPSBURG 5 S	07	MAX	52	74	66	71	68	63	74	62	88	77	79	82	88	90	66	81	68	65	64	72	75	74	84	74	75	80	83	86	82	58	74	74.0		
		MIN	47	41	42	42	34	35	44	47	48	59	51	52	57	59	59	53	41	38	37	38	45	55	48	44	45	49	52	61	55	55	50	47.8		
WILLIAMSPORT	06	MAX	59	72	66	70	68	65	71	64	85	82	77	82	86	86	68	80	67	66	66	72	76	74	82	76	76	81	86	86	82	64	74	74.5		
		MIN	46	51	47	45	46	41	46	48	50	59	63	56	57	57	61	53	54	47	41	41	46	56	60	51	50	50	52	61	64	56	54	51.9		
ALLEGHENY PLATEAU 08																																				
OAKLAND 1 SE	07	MAX	62	59	52	59	65	54	70	71	81	81	67	76	80	86	72	67	57	54	59	66	73	73	71	67	69	75	79	79	80	71	74	69.3		
		MIN	44	44	37	46	30	35	40	40	47	49	53	48	51	54	57	46	39	32	30	32	41	63	41	44	39	41	45	63	61	57	46	45.0		
SAVAGE RIVER DAM	08	MAX	50	61	55	62		58	71		82			76	81	87	65	68	59	56	61	68	71	73	73	68		76	80	81	81	59		68.9		
		MIN	44	40	40	41		36	41		51			53	55	59	60	48	44	37	35	35	43	54	46	46		47	49	59	59	55		47.1		
SINES DEEP CREEK	07	MAX	57	60	52	61	66	56	69	72	82	80		77	80	84	70	67	57	54	57	66	72		71	66	68	75	79	79	78	68	73	68.8		
		MIN	43	37	38	39	31	31	37	43	43	48		50	50	53	53	45	38	32	30	30	39		41	41	40	40	42	51	59	56	46	42.3		
DELAWARE NORTHERN 01																																				
WILMINGTON NEW CASTLE CO AP	24	MAX	77	69	69	64	68	72	65	74	72	82	80	84	80	69	81	69	67	69	74	77	69	79	77	75	82	85	88	76	57	74	78	74.3		
		MIN	59	54	51	45	46	49	48	56	57	59	58	59	56	54	62	55	48	46	44	49	61	59	56	52	53	59	63	55	54	55	55	54.1		
WILMINGTON PORTER RES	24	MAX	77	67	68	63	65	69	64	69	71	81	76	84	77	67	82	70	70	66	71	73	74	79	74	72	79	85	87	76	56	72	74	72.8		
		MIN	60	53	50	48	47	52	50	53	55	58	59	59	53	52	60	57	49	49	48	54	55	59	56	55	56	61	66	55	52	53	58	54.6		
SOUTHERN 02																																				
DOVER	16	MAX	77	72	69	72	67	68	70	75	77	82	77	86	83	66	80	76	69	66	72	74	74	76	76	75	80	85	89	83	63	70	76	75.0		

MARYLAND AND DELAWARE
201405

DAILY TEMPERATURES (°F)

STATION	OB. TIME	MAX/MIN	DAY OF MONTH																															AVERAGE
			01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
		MIN	62	56	51	50	47	49	50	55	57	58	59	58	65	55	59	58	50	49	44	51	60	59	58	55	53	62	65	63	53	53	53	55.4

SNOWFALL AND SNOW ON GROUND (INCHES)

STATION		DAY OF MONTH																														
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
MARYLAND SOUTHERN EASTERN SHORE 01 ASSATEAGUE PRINCESS ANNE SALISBURY 2N SALISBURY FAA AP SNOW HILL 4 N	SNOWFALL																															
	SNOWFALL																															
	SNOWFALL																															
	SN ON GND																															
	SNOWFALL																															
DELAWARE NORTHERN 01 WILMINGTON NEW CASTLE CO AP WILMINGTON PORTER RES	SNOWFALL																															
	SN ON GND																															
	SNOWFALL																															
	SN ON GND																															

Snowfall: Includes snow and ice. Values for NWS stations (J index note) are Mid-Mid (LST).

Snow on ground: Includes snow, sleet, ice, and hail. Values for NWS stations (J index note) are observed at 12 UTC (GMT).

Water Equivalent: Given for NWS stations (J index note) only, when snow depth is 2 inches or more, and is measured at 18 UTC (GMT)

PAN EVAPORATION AND WIND

STATION		DAY OF MONTH																															TOTAL OR AVERAGE
		01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
MARYLAND UPPER SOUTHERN 04 BELTSVILLE	WIND	46	46	44	35	65	52	29	29	35	24	52	23	30	57	34	99	54	51	52	37	7	33	83	104	49	24	25	41	71	30	44	1405
	EVAP	-	0.20	0.21	0.19	0.22	0.15	0.19	0.07	0.16	0.10	0.15	0.20	0.23	0.27	0.03	0.29	0.20	0.22	0.23	0.21	0.16	0.17	0.30	0.27	0.24	0.22	0.20	0.36	0.22	0.00	0.15	6.00E
	MAX	74	74	70	71	70	68	78	60	86	78	74	84	86	94	66	79	75	72	72	74	79	76	86	76	80	85	86	90	84	56	75	76.3
	MIN	46	52	52	49	43	43	50	40	54	60	57	58	58	58	58	56	51	50	46	48	50	59	50	49	55	56	60	64	56	54	54	52.8
UPPER MARLBORO 3 NNW	WIND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	
	EVAP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	
	MAX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	
	MIN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	
ALLEGHENY PLATEAU 08 SAVAGE RIVER DAM	WIND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M		
	EVAP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M		
	MAX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	MIN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M		

Evaporation: Is measured in hundredths of inches.

Wind: Is measured in miles.

Max and Min: The maximum and minimum temperatures (Fahrenheit) of the water in the evaporation pan.

STATION INDEX

STATION	INDEX NO.	DIVISION	COUNTY	LATITUDE	LONGITUDE	ELEVATION (IN FEET)	OBSERVATION TIME AND TABLES			
							LOCAL STD TIME			
							TEMP	PRECIP	EVAP	SPECIAL SEE (NOTES)
MARYLAND										
ABERDEEN PHILLIPS FLD	0015	06	HARFORD	39 28	76 10W	57	07	07		CH
ASSATEAGUE	0335	01	WORCESTER	38 4	75 13W	10	VAR	VAR		H
BALTIMORE WASH INTL AP R	0465	04	ANNE ARUNDEL	39 10	76 41W	156	24	24		HJ
BELTSVILLE	0700	04	PRINCE GEORGE'S	39 2	76 56W	145	08	08	08	CH
BRIGHTON DAM	1125	06	MONTGOMERY	39 11	77 0W	330	08	08		H
CONOWINGO DAM	2060	06	HARFORD	39 39	76 11W	40	07	07		H
CUMBERLAND 2	2282	07	ALLEGANY	39 39	78 45W	730	18	18		H
CYLBURN	2308	06	BALTIMORE	39 21	76 39W	235	08	08		H
DALECARLIA RSVR	2325	04	DISTRICT OF COLUMBIA	38 56	77 7W	150	08	08		H
DAMASCUS 3 SSW	2336	06	MONTGOMERY	39 16	77 14W	700	22	22		H
EMMITSBURG 2 SE	2906	06	FREDERICK	39 41	77 17W	403	07	07		H
FREDERICK 2 NNE	3353	06	FREDERICK	39 26	77 24W	280	07	07		H
FROSTBURG 2	3415	07	ALLEGANY	39 40	78 56W	2170	07	07		H
LAUREL 3 W	5111	04	PRINCE GEORGE'S	39 5	76 54W	400	24	24		H
MARYLAND SCIENCE CENTER R	5718	04	BALTIMORE (CITY)	39 17	76 37W	20	24	24		H
MECHANICSVILLE 5 NE	5865	03	ST. MARY'S	38 28	76 42W	100	07	07		H
MILLERS 4 NE	5934	06	CARROLL	39 43	76 48W	860	18	18		CH
NATL ARBORETUM DC	6350	04	DISTRICT OF COLUMBIA	38 55	76 58W	50	07	07		H
OAKLAND 1 SE	6620	08	GARRETT	39 25	79 24W	2420	07	07		H
OXON HILL	6800	04	PRINCE GEORGE'S	38 47	76 60W	120	08	08		H
PRINCESS ANNE	7330	01	SOMERSET	38 13	75 41W	20	17	17		H
ROYAL OAK 2 SSW	7806	02	TALBOT	38 43	76 11W	10	17	17		H
SALISBURY 2N	8004	01	WICOMICO	38 24	75 36W	20	17	17		H
SALISBURY FAA AP	8005	01	WICOMICO	38 20	75 31W	48	24	24		H
SAVAGE RIVER DAM	8065	08	GARRETT	39 31	79 8W	1495	08	08	08	CH
SHARPSBURG 5 S	8207	07	WASHINGTON	39 24	77 43W	500	07	07		H
SINES DEEP CREEK	8315	08	GARRETT	39 31	79 25W	2040	07	07		H
SMITHSBURG 2NW	8371	06	WASHINGTON	39 40	77 35W	670	08	08		H
SNOW HILL 4 N	8380	01	WORCESTER	38 14	75 23W	30	17	17		H
SOLOMONS	8405	03	CALVERT	38 19	76 27W	12	08	08		H
UPPER MARLBORO 3 NNW	9070	04	PRINCE GEORGE'S	38 51	76 46W	130	08	08	08	H
WILLIAMSPORT	9570	07	WASHINGTON	39 37	77 51W	360	06	06		H
DELAWARE										
DOVER	2730	02	KENT	39 15	75 31W	30	16	16		H
MILTON #	6102	02	SUSSEX	38 49	75 12W	4		08		H
WILMINGTON NEW CASTLE CO AP R	9595	01	NEW CASTLE	39 40	75 36W	79	24	24		HJ
WILMINGTON PORTER RES	9605	01	NEW CASTLE	39 46	75 32W	270	24	24		H

REFERENCE NOTES

STATION NAMES: Name of the city, town or locality. Figures and letters following the station names indicate the distance in miles and direction from the post office or town community center.

DIVISIONS: Areas within a state of similar climatological characteristics. Division averages are calculated using data from stations that record temperature and/or precipitation. Station Precipitation totals flagged with an 'F' or 'M' are excluded from the Divisional Average calculations of precipitation. Stations with monthly Temperature averages flagged with an 'F' or 'M' are included in the Divisional Average if there are no more than 9 flagged or missing daily values in the month, else they are excluded from the divisional average for temperature.

NORMALS: The average value of the meteorological element over a time period. Effective 1 January 2012, the averaging period is 1981 to 2010. The normals for National Weather Service localities have been adjusted so as to be representative for the current observation site.

MONTHLY DEGREE DAY TOTALS: One heating (cooling) degree day is accumulated for each whole degree that the daily mean temperature is below (above) 65 degrees Fahrenheit.

PRECIPITATION: Values shown in hundredths of inches are water equivalent totals, i.e., total of liquid and melted frozen precipitation. In the "Monthly Summarized Data" table the total snow and sleet values shown in tenths of inches are unmelted amounts. The max depth on ground values of snow and sleet shown in whole inches are cumulative unmelted amounts. The number of days with .10, .50, 1.00 or more refers to water equivalents.

PRECIPITATION QUALITY CONTROL: The NCDC quality control process may flag precipitation data that are spatially inconsistent, exceed climatological limits, or are inconsistent with prevailing weather patterns.

TEMPERATURE: Original temperature values are given in the "Daily Temperature" table. Summary temperature information (averages, departures, extremes, monthly degree day totals) is based on the values labeled MAX/MIN.

WIND: (As shown in the "Evaporation and Wind" table) the total wind movement in miles over the evaporation pan as determined by an anemometer recorder located 6-8 inches above the pan.

SYMBOLS AND LETTERS USED IN THE STATION INDEX TABLE

- C Station is equipped with recording rain gage (R) but values in this bulletin are from a non-recording rain gage unless indicated by an R.
- G Observations appear in the "Soil Temperatures" table.
- H Observations appear in the "Snowfall and Snow on the Ground" table.
- J Station also published as a Local Climatological Data publication.
- VAR Observation time varies.
- SR Observation time near sunrise.
- SS Observation time near sunset.

SYMBOLS AND LETTERS USED IN THE DATA TABLES

(DAILY DATA ARE FOR THE 24 HOURS IMMEDIATELY PRECEDING OBSERVATION TIME.)
BLANK Entries in the "Monthly Summarized Data" table indicate no record.
BLANK Entries in the "Daily Precipitation" and "Snowfall and Snow on the Ground" tables indicate zero.
BLANK Entries in the "Daily Temperature" table indicate a missing record

- No record. Data not recorded or not received in time for publication.
- + Precipitation or temperature extremes occurred on one or more previous dates during the month.
- * Rain gage not read. Precipitation is included in the amount following the asterisks.
Time distribution may not be known. A * preceding the monthly total indicates precipitation amount is being carried forward to next month's total, and may include amounts from the previous month(s).
- a As a subscript, indicates accumulated total.

by NCDC's Climate Prediction Branch. Entries for the report. If the data is not in the report, please contact the office for more information. For stations that determine date of last reading. (Hawaii stations)

- B Divisional Departure from normals are computed using 1981-2010 normals.
- E Normalized HDD/CDD Calculation. E is appended to the HDD/CDD Calculation when 1-9 individual daily TMAX and/or TMIN values are missing and a Normalized HDD/CDD Calculation is provided. M appears alone if 10 or more daily values are missing.
- F Monthly calculation flagged value. F is appended to average and/or total values computed which exclude one or more daily data values that have been flagged by the GHCN-Daily Dataset
- M Insufficient or partial data. M is appended to average and/or total values computed with 1-9 daily values missing. M appears alone if 10 or more daily values are missing, (8 or more for wind and evaporation).
- N Indicates snow fall or Snowdepth totals are computed with one or more missing days.
- R Amounts from recording rain gage.
- T Trace. An amount too small to measure.

SEASONAL TABLES: Monthly and seasonal snowfall and heating degree days for the 12 months ending with the June data are published in the July issue of this bulletin. Cooling degree days for the calendar year are published in the "Climatological Data Annual Summary."

Information concerning the history of changes in locations, exposure, etc. of substations is kept on file at the National Climatic Data Center. Historical information of regular National Weather Service Offices may be obtained from the "Local Climatological Data" annual publication. The contents of this publication may be reprinted or otherwise used freely, with proper credit to the National Climatic Data Center. The data are also available digitally.

Effective with the January 2011 Data-Month, COOP Observer Names are no longer included in the Monthly and Annual Climatological Data Publications. This information is not published to ensure the privacy of personal information pursuant to Section 208 of the E-Government Act of 2002 (44 USC 3601).

As of the 2011 Data-Year, Station and Climate Division Maps are no longer being included in the CD Publications. NCDC's Product Development Branch provides updated Station Maps for various data networks via the Historical Observing Metadata Repository: <http://www.ncdc.noaa.gov/homr>.

The GHCN-Daily Quality Control Flags shown below are displayed as superscripts with the data. For more Information on Global Historical Climatology Network - Daily and flags, see: <http://www.ncdc.noaa.gov/oa/climate/ghcn-daily/> and Comprehensive Automated Quality Assurance of Daily Surface Observations. Durre, Imke, Matthew J. Menne, Byron E. Gleason, Tamara G. Houston, Russell S. Vose, 2010: J. Appl. Meteor. Climatol., 49, 1615-1633. doi: 10.1175/2010JAMC2375.1

- | | |
|---|---|
| Blank = Passed All checks | N = failed naught check |
| D = failed duplicate check | O = failed climatological outlier check |
| G = failed gap check | R = failed lagged range check |
| I = failed internal consistency check | S = failed spatial consistency check |
| K = failed streak/frequent-value check | T = failed temporal consistency check |
| L = failed check on length of multiday period | W = temperature too warm for snow |
| M = failed megaconsistency check | X = failed bounds check |
| | Z = flagged as a result of an official Datzilla investigation |

Beginning with the January 2013 CD Publication, monthly mean temperature calculations have changed to the National Data Stewardship Team standard. Monthly maximum and minimum temperatures are not rounded until after the monthly mean temperature is calculated. This is the most accurate outcome, but may be slightly different from the mean derived from rounded monthly maximum and minimum.

Processing Updates and Errata: The CD Publications are periodically reproduced to include the addition of late reports and reported corrections. The GHCND data version noted on the cover of the publication provides the generation date.

The climate division temperature and precipitation values in this publication are based on simple averages from the current set of NWS-Designated Open and Published COOP and First Order Sites within each division. These values differ from those found in NCDC's nClimDiv product. Beginning in February 2014, the nClimDiv product is used

These and other publications are available from the National Climatic Data Center

Hourly Precipitation Data

This publication contains hourly precipitation amounts obtained from recording rain gages located at National Weather Service, Federal Aviation Administration, and cooperative observer stations. Published data are displayed in inches and tenths or inches and hundredths at local standard time. HPD includes maximum precipitation for nine (9) time periods from 15 minutes to 24 hours, for selected stations.

Climatological Data

Monthly editions contain station daily maximum and minimum temperatures and precipitation. Some Stations provide daily snowfall, snow depth, evaporation, and soil temperature data. Each edition also contains monthly summaries for heating and cooling degree days (65 degree F base). The July issue contains a recap of monthly heating degree days and snow data for the preceding July through June.

The Annual issue contains monthly and annual averages of temperature, precipitation, temperature extremes, freeze data, soil temperatures, evaporation, and a recap of monthly cooling degree days.

Storm Data

Monthly issues contain a chronological listing, by states, of occurrences of storms and unusual weather phenomena. Reports contain information on storm paths, deaths, injuries, and property damage. An "Outstanding storms of the month" section highlights severe weather events with photographs, illustrations, and narratives. The December issue includes annual tornado, lightning, flash flood, and tropical cyclone summaries.

Monthly Climatic Data for the World

This publication contains monthly means for temperature, pressure, precipitation, vapor pressure, and sunshine for approximately 2,000 surface data collection stations worldwide and monthly mean upper air temperatures, dew point depressions, and wind velocities for approximately 500 observing sites.

Local Climatological Data

LCD publications summarize temperature, relative humidity, precipitation, cloudiness, wind speed and direction observations for several hundred cities in the U.S. and its territories. Each monthly publication also contains 3 hourly weather observations for that month and a hourly summary of precipitation. Annual LCD publications contain a summary of the past calendar year as well as historical averages and extremes.

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NCDC now offers free online access to the *Climatological Data* publication.
Go to : www.ncdc.noaa.gov and choose Most Popular.