



# CLIMATOLOGICAL DATA

## MARYLAND AND DELAWARE

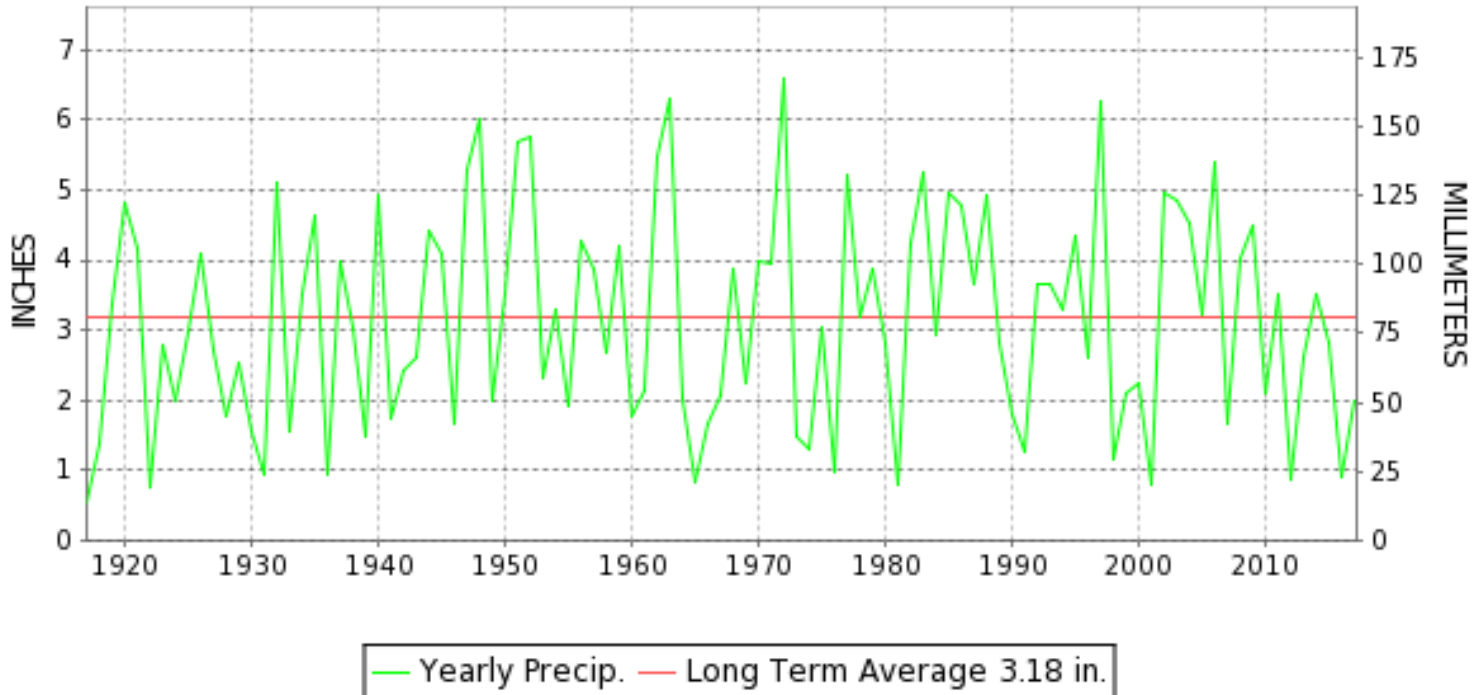
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### NOVEMBER PRECIPITATION BY YEAR



#### TEMPERATURE AND PRECIPITATION EXTREMES

##### MARYLAND

HIGHEST TEMPERATURE	80	NOVEMBER 03	SNOW HILL 4 N
LOWEST TEMPERATURE	12	NOVEMBER 11	FROSTBURG 2
GREATEST TOTAL PRECIPITATION	3.66		SINES DEEP CREEK
LEAST TOTAL PRECIPITATION	1.61		SHARPSBURG 5 S
GREATEST 1 DAY PRECIPITATION	1.20	NOVEMBER 08	DALECARLIA RSVR
GREATEST TOTAL SNOWFALL	1.8		OAKLAND 1 SE
GREATEST DEPTH OF SNOW OR ICE	2		SINES DEEP CREEK

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Asheville, North Carolina

**DELAWARE**

HIGHEST TEMPERATURE	78	NOVEMBER 03+	DOVER
LOWEST TEMPERATURE	20	NOVEMBER 11	WILMINGTON NEW CASTLE CO AP
GREATEST TOTAL PRECIPITATION	2.08		DOVER
LEAST TOTAL PRECIPITATION	1.34		WILMINGTON PORTER RSCH
GREATEST 1 DAY PRECIPITATION	1.06	NOVEMBER 07	DOVER



# MONTHLY STATION AND DIVISION SUMMARY

STATION	TEMPERATURE (°F)											PRECIPITATION (IN)												
	AVERAGE MAXIMUM	AVERAGE MINIMUM	AVERAGE	DEPARTURE FROM NORMAL	HIGHEST	DATE	LOWEST	DATE	HEATING DEG. DAYS	COOLING DEG. DAYS	NO. OF DAYS				TOTAL	DEPARTURE FROM NORMAL	GREATEST 24 HOURS	DATE	ICE PELLETS, SNOW			NO. OF DAYS		
											MAX		MIN						TOTAL	MAX DEPTH ON GROUND	DATE	.10 OR MORE	.50 OR MORE	1.00 OR MORE
											>=90	<=32	<=32	<=0										
SMITHSBURG 2NW	50.9M	31.6M	41.3M	-2.7	70	04	15	12+	704E	0	0	0	15	0	M 1.75	-1.91	0.55	19	M 0.0	0		6	6	0
--DIVISIONAL DATA----->			43.4	-1.5B											1.82	-1.80B								
APPALACHIAN MOUNTAIN 07																								
HAGERSTOWN 1 E	53.8	34.0	43.9		73	03	18	11	624	0	0	0	13	0	1.68		0.50	04	0.0	0		11	4	0
CUMBERLAND 2	52.8	32.6	42.7	-2.7	70	03	18	12+	663	0	0	0	16	0	1.76	-1.22	0.72	19	0.0	0		10	4	0
FROSTBURG 2	47.7	30.4	39.1	-1.4	68	03	12	11	771	0	0	1	17	0	2.26	-1.41	0.84	19	1.2	1	21	11	5	0
SHARPSBURG 5 S	54.5	30.9	42.7	-1.8	74	03	16	12+	659	0	0	0	18	0	1.61	-1.79	0.56	08	0.0	0		8	4	0
WILLIAMSPORT															M 1.65	-1.77	0.64	05	M			7	4	0
--DIVISIONAL DATA----->			42.1	-0.6B											1.83	-1.44B								
ALLEGHENY PLATEAU 08																								
OAKLAND 1 SE	51.2	29.8	40.5	1.2	70	06	13	11	728	0	0	1	18	0	3.61	-0.22	1.03	19	1.8	0		14	8	1
SAVAGE RIVER DAM	48.6	31.3	39.9	-1.3	68	04	17	11	745	0	0	2	16	0	2.15	-0.85	0.66	19	0.0	0		6	5	0
SINES DEEP CREEK	M	M	M		64	03	15	13	772E	0	0	0	13	0	MA 3.66		0.20	16	M	2	20	6	2	0
--DIVISIONAL DATA----->			40.2	0.6B											2.88	-0.68B								
DELAWARE NORTHERN 01																								
WILMINGTON NEW CASTLE CO AP	56.6	35.6	46.1	-0.5	76	02	20	11	558	0	0	0	13	0	1.39	-1.71	0.44	07	0.0	0		9	5	0
WILMINGTON PORTER RSCH	54.6	36.7	45.7	-0.5	73	02+	21	12+	573	0	0	0	6	0	1.34	-2.14	0.34	05	0.0	0		6	5	0
--DIVISIONAL DATA----->			45.9	0.1B											1.37	-2.01B								
SOUTHERN 02																								
DOVER	58.5	39.8	49.1	-0.1	78	03+	22	11	476	7	0	0	8	0	2.08	-1.40	1.06	07	0.0	0		6	5	1
--DIVISIONAL DATA----->			49.1	1.4B											2.08	-1.21B								

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	
<b>MARYLAND</b>																																	
<b>SOUTHERN</b>																																	
<b>EASTERN SHORE 01</b>																																	
PRINCESS ANNE	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SALISBURY 2N	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	
SALISBURY FAA AP	1.95					0.08	0.02	0.72	0.01		T		0.44		T		0.06		0.62														
SNOW HILL 4 N	1.86							0.40	0.37				0.50		0.08		0.06		0.45														
<b>CENTRAL</b>																																	
<b>EASTERN SHORE 02</b>																																	
ROYAL OAK 2 SSW	2.07				0.40		0.50	0.40	T	0.05			0.25		0.03		T	0.09		0.35													
<b>LOWER SOUTHERN 03</b>																																	
MECHANICSVILLE 5 NE	2.21					0.55	T	0.22	0.79	0.03	T		0.29		0.03		0.04		0.26	T													
SOLOMONS	A 1.97		*	0.00 <sub>a</sub>	*	*	0.14 <sub>a</sub>	0.06	0.78	0.03		*	*	0.36 <sub>a</sub>			*	*	0.20 <sub>a</sub>	*	*	*	*	*	*	*	0.40 <sub>a</sub>						
<b>UPPER SOUTHERN 04</b>																																	
BALTIMORE-WASHINGTON INTL AP	2.15				0.46	0.22	T	1.11		0.04		T	0.12		0.01		T	0.16		0.01											0.02		
BALTIMORE WASHINGTON INTL CLIM	2.15				0.46	0.22	T	1.11	T	0.04		T	0.12		0.01		T	0.16		0.01											0.02		
BELTSVILLE	2.12					0.58	0.02	0.01	1.16	0.01	0.03		0.13		T		0.17		0.01														
DALECARLIA RSVR	M 2.33					0.60	0.10		1.20	0.02	0.08		0.15				0.18										-						
MARYLAND SCI CTR	1.70				0.28	0.16		1.06					0.09				0.08															0.03	
NATL ARBORETUM DC	2.17		T			0.61	0.02	0.11	1.09	0.02	0.04		0.14				0.10		0.03														
OXON HILL	2.26		T			0.68	0.04	T	1.15	0.01	0.04		0.20			0.01		0.09		0.04													
<b>NORTHERN</b>																																	
<b>EASTERN SHORE 05</b>																																	
STEVENSVILLE 2SW	2.14					0.66			0.98		0.05		0.20		0.05			0.15		0.05													
SUDLERSVILLE 1S	2.67	T				0.50	T	T	1.10	0.10			0.32		0.10			0.41		0.14													
<b>NORTHERN CENTRAL 06</b>																																	
ABERDEEN PHILLIPS FLD	M 1.32					0.35	0.01		0.71		-		0.16		0.01		0.07		0.01														
CONOWINGO DAM	M 0.65					0.25			-				0.12				0.28																
CYLBURN	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
DAMASCUS 3 SSW	1.99				T	0.31	0.29		0.90	0.02	0.12		0.18		T		0.13		0.02	0.13												0.02	
EMMITSBURG 2 SE	1.83					0.62	0.06	0.02	0.43		0.06		0.12			0.04		0.48															
MILLERS 4 NE	1.65					0.43	0.01	0.49	0.01	0.02	0.04		0.14		0.04		0.30		0.17														
REISTERSTOWN 2 NW	M 1.79					0.55	0.05		0.73		0.05		-	0.01			0.32	0.04	0.04														
SMITHSBURG 2NW	M 1.75					0.50		0.10	0.40		0.10		0.10			-	0.55																
<b>APPALACHIAN</b>																																	
<b>MOUNTAIN 07</b>																																	
HAGERSTOWN 1 E	1.68	0.01			0.50	0.10	0.07	0.37		0.08		0.03	0.06		0.01	T		0.41	0.04													T	
CUMBERLAND 2	1.76				0.01	0.19	0.29	0.05	0.38		0.02		0.05			0.02		0.72	0.03														
FROSTBURG 2	2.26			0.01	0.09	0.19	0.41	0.09	0.43	0.01	T	T	0.04			0.03		0.84	0.12		T		T										
SHARPSBURG 5 S	1.61		T			0.42		0.04	0.56	0.02	0.30		0.08			0.06		0.13	T														
WILLIAMSPORT	M 1.65					0.64	0.04	0.12	0.36		0.07		0.07			-		0.35															
<b>ALLEGHENY PLATEAU 08</b>																																	

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	
OAKLAND 1 SE	3.61			0.03	0.17	0.05	0.90	0.25	0.60	0.02	0.03			0.11	0.08		0.10			1.03	0.22		0.02										
SAVAGE RIVER DAM	2.15			T	0.11	0.16	0.63	0.08	0.51	T						T			0.66														
SINES DEEP CREEK	MA 3.66		0.05	0.05	*	*	1.15 <sub>a</sub>	*	*	0.55 <sub>a</sub>	0.05	*	*	0.05 <sub>a</sub>	0.10	0.20		*	*	1.45 <sub>a</sub>		0.01	-	-		-	-						
<b>DELAWARE</b>																																	
<b>NORTHERN 01</b>																																	
WILMINGTON NEW CASTLE CO AP	1.39			0.05	0.24	T	0.44			0.02			0.17		T		0.04	0.31				0.10										0.02	
WILMINGTON PORTER RSCH	1.34				0.34		0.32			0.03			0.22						0.27			0.16											
<b>SOUTHERN 02</b>																																	
DOVER	2.08				0.38		1.06	0.03					0.17		T			0.26				0.18											

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						
<b>MARYLAND SOUTHERN EASTERN SHORE 01</b> PRINCESS ANNE	17	MAX MIN																							53 24										62 29	67 36	63 34	M M	
SALISBURY 2N	17	MAX MIN										40 24	49 27				55 37	61 47																			63 35	67 44	M M
SALISBURY FAA AP	24	MAX MIN	69 41	77 54	78 51	63 47	70 56	70 60	61 45	49 43	59 47	53 29	40 23	49 26	47 38	52 38	56 39	60 44	52 29	65 29	66 38	50 35	59 35	60 38	43 26	53 24	61 26	55 31	57 28	57 29	62 29	67 36	61 34		58.8 37.2				
SNOW HILL 4 N	17	MAX MIN	69 39	78 52	80 44	76 46	73 50	72 63	68 41	55 40	62 42	55 33	50 17	48 20	52 30	57 33	61 32	55 39	62 29	65 32	53 42	62 26	59 28	60 49	43 31	53 19	61 22	55 34	57 23	57 24	62 24	67 35	63 29		61.8 34.8				
<b>CENTRAL EASTERN SHORE 02</b> ROYAL OAK 2 SSW	17	MAX MIN	66 40	77 59	78 55	68 48	68 52	70 59	63 43	48 43	59 42	54 35	38 25	47 25	49 35	50 45	55 43	59 43	53 35	58 33	62 46	51 40	59 39	59 46	48 29	53 28	60 30	54 38	57 35	63 32	65 39	60 38		58.4 40.0					
<b>LOWER SOUTHERN 03</b> MECHANICSVILLE 5 NE	07	MAX MIN	59 39	65 40	73 54	76 49	56 49	63 50	70 45	47 40	48 39	57 41	48 24	38 24	46 28	50 34	49 31	52 33	60 37	53 31	63 31	53 32	51 32	61 34	57 27	44 25	53 25	63 30	54 29	54 30	62 30	69 36		56.5 35.0					
SOLOMONS	08	MAX MIN	56 48								62 48	48 43					51 43	51 47																	43 39	51 41	49 44	M M	
<b>UPPER SOUTHERN 04</b> BALTIMORE-WASHINGTON INTL AP	24	MAX MIN	60 43	76 49	77 49	57 47	61 52	72 51	51 40	49 40	56 39	46 28	39 21	46 25	50 33	50 32	52 29	60 42	53 32	63 30	63 39	50 34	61 29	57 31	44 27	54 25	62 28	52 33	58 36	63 32	63 31	67 33	56 34		56.8 35.5				
BELTSVILLE	08	MAX MIN	60 38	61 46	76 50	78 45	58 46	61 54	73 43	46 40	48 41	55 40	43 23	39 25	46 30	50 33	49 30	53 34	62 39	53 28	62 36	51 36	51 30	60 34	56 25	45 25	53 28	63 32	52 31	59 31	62 33	67 33	67 35		56.4 35.4				
DALECARLIA RSVR	08	MAX MIN	61 42	61 47	76 48	78 46	58 46	61 53	73 45		47 39	53 40	44 25	38 23	46 31	51 34	49 30	53 38	62 37	52 37	62 37	50 38	51 35	62 40	56 27	44 27	53 29	63 33	52 33	60 32	62 32	66 35		56.7 36.4					
MARYLAND SCI CTR	24	MAX MIN	62 47	76 55	77 58	59 49	63 53	73 53	53 43	51 42	57 45	49 31	41 27	47 33	52 41	51 42	54 41	63 46	53 41	64 39	64 43	51 39	62 38	58 39	45 33	53 35	60 39	54 44	59 44	60 44	54 43	59 44	61 43	55 44	57 43	57.9 42.3			
NATL ARBORETUM DC	08	MAX MIN	61 41	64 44	75 52	78 49	65 48	72 58	47 46	49 41	56 42	45 25	39 27	47 34	53 34	51 31	55 35	62 41	53 33	62 44	51 38	52 37	61 37	59 29	46 28	54 32	60 32	54 35	60 34	60 34	63 34	68 38		57.4 38.3					
OXON HILL	07	MAX MIN	61 40	62 45	75 53	77 48	63 47	63 50	70 44	45 39	48 40	57 44	45 24	37 25	46 31	51 36	49 34	53 41	62 34	51 40	63 43	52 36	51 37	60 37	59 30	45 28	53 30	60 40	55 33	60 34	62 34	67 40		56.7 37.6					
<b>NORTHERN EASTERN SHORE 05</b> STEVENSVILLE 2SW	07	MAX MIN	62 44	60 46	75 59	79 48	57 48	65 55	72 46	47 43	49 42	55 47	49 27	36 28	45 35	48 39	49 41	50 40	61 43	50 36	63 48	52 39	49 39	59 45	57 34	41 30	51 32	58 39	51 37	57 37	60 36	64 42		55.7 40.8					
<b>NORTHERN CENTRAL 06</b> ABERDEEN PHILLIPS FLD	07	MAX MIN	59 40	61 44	74 51	70 44	61 44	63 53	68 40	46 40	51 40	56 42	42 19	38 19	44 29	46 35	49 33	50 33	59 37	60 27	54 34	49 33	54 33	56 28	44 25	51 26	56 29	52 32	58 34	60 38	68 37		55.0 35.4						
CONOWINGO DAM	07	MAX MIN	57 37	60 37	69 37	63 43	56 43	60 50	65 41	45 40	50 38	54 40	43 24	36 24	42 29	44 33	47 33	50 33	48 45	48 28	58 29	57 33	46 32	55 35	51 26	40 25	47 25	52 30	52 34	57 28	55 30	56 40		52.1 34.1					

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	
CYLBURN	08	MAX MIN																																M M
DAMASCUS 3 SSW	22	MAX MIN	55 39	72 43	72 55	58 40	56 48	68 53	53 36	44 35	47 36	44 25	34 18	43 26	46 34	47 35	57 37	57 36	48 36	58 39	59 33	47 35	56 34	52 24	40 27	51 35	58 36	50 38	56 38	60 40	64 36	53 36	53.5 36.1	
EMMITSBURG 2 SE	07	MAX MIN	57 35	46 35	70 42	72 41	58 45	59 47	70 39	46 36	45 38	48 19	46 19	36 23	46 32	48 27	51 26	58 37	52 28	56 35	56 32	48 32	55 24	53 23	43 23	52 27	60 37	51 29	58 28	60 32	66 32	53.8 31.9		
MILLERS 4 NE	18	MAX MIN	54 35	73 49	69 55	65 47	57 57	68 36	59 35	45 35	48 29	46 17	37 23	45 34	47 34	44 27	50 41	56 32	48 30	46 39	56 31	45 33	56 38	53 23	41 25	53 33	59 37	52 32	55 34	60 39	63 33	53 33	53.4 35.0	
REISTERSTOWN 2 NW	08	MAX MIN	54 36	54 41	73 46	69 38	51 41	53 43	69 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	43 37	51.1 33.6	
SMITHSBURG 2NW	08	MAX MIN	54 36	48 42	69 42	70 38	56 36	59 50	66 36	42 35	47 35	45 36	36 15	34 15	45 28	45 32	44 25		48 32	58 36	45 34	45 28	54 28	48 23	40 24	51 23	58 30	46 31	55 31	57 34	61 31	50.9 31.6		
<b>APPALACHIAN MOUNTAIN 07</b>																																		
HAGERSTOWN 1 E	24	MAX MIN	48 39	72 43	73 49	59 39	58 49	67 44	44 49	46 37	46 37	36 25	48 18	48 25	46 36	51 27	56 39	52 32	55 30	57 37	49 34	56 31	50 33	44 27	55 24	61 29	50 37	60 33	61 29	63 32	53 32	53.8 34.0		
CUMBERLAND 2	07	MAX MIN	53 40	51 40	70 42	69 39	51 39	58 49	67 41	51 36	48 36	37 18	41 18	50 28	48 38	46 28	51 28	55 37	54 32	47 32	45 31	43 25	63 25	45 24	43 24	59 29	58 41	54 31	61 31	63 35	61 35	52.8 32.6		
FROSTBURG 2	07	MAX MIN	48 32	46 36	68 45	63 35	49 36	55 44	62 34	36 31	43 31	48 28	48 12	30 13	46 24	44 32	37 25	43 25	47 30	47 30	52 33	34 23	40 23	55 34	36 31	41 27	53 33	55 32	41 33	51 33	58 33	55 33	47.7 30.4	
SHARPSBURG 5 S	07	MAX MIN	58 33	51 41	74 42	73 39	56 38	60 51	72 37	43 36	49 36	45 36	39 16	37 16	48 29	47 32	53 26	60 33	51 31	60 39	48 27	51 26	60 27	50 22	44 23	56 23	63 29	51 28	60 28	63 27	66 30	54.5 30.9		
<b>ALLEGHENY PLATEAU 08</b>																																		
OAKLAND 1 SE	07	MAX MIN	51 30	58 39	69 46	63 39	63 41	70 49	63 37	38 34	44 34	51 27	31 13	34 15	56 29	43 34	38 25	48 27	49 32	47 25	64 33	34 24	41 21	58 25	38 21	43 21	59 26	57 33	42 33	55 25	68 28	60 28	51.2 29.8	
SAVAGE RIVER DAM	08	MAX MIN	49 33	47 38	67 41	68 38	49 38	58 46	63 38	41 35	44 35	51 32	32 17	32 18	47 27	45 35	41 25	46 25	49 36	46 28	54 33	38 29	40 25	57 25	41 26	41 26	48 26	56 37	43 35	53 29	56 30	55 32	48.6 31.3	
SINES DEEP CREEK	07	MAX MIN	45 29	53 37	64 42		60 44																											M M
<b>DELAWARE NORTHERN 01</b>																																		
WILMINGTON NEW CASTLE CO AP	24	MAX MIN	65 38	76 52	73 51	59 42	65 52	70 47	49 39	53 41	58 41	50 25	41 20	47 27	45 37	52 35	53 33	61 42	51 32	61 29	49 34	60 31	57 32	43 26	51 26	59 29	53 30	56 32	60 32	67 36	54 37	56.6 35.6		
WILMINGTON PORTER RSCH	24	MAX MIN	73 43	73 56	71 54	71 43	63 50	68 47	48 40	50 39	56 42	38 24	43 21	42 21	47 36	48 37	57 34	47 41	58 35	58 32	45 37	56 33	54 34	40 27	49 28	55 34	57 33	52 33	57 36	61 38	52 37	54.6 36.7		
<b>DELAWARE SOUTHERN 02</b>																																		
DOVER	16	MAX MIN	64 40	78 57	78 59	73 46	67 53	71 59	68 43	49 41	58 45	55 35	39 22	47 25	44 35	51 34	53 38	61 46	55 41	56 30	61 46	48 38	60 39	57 48	48 30	55 25	62 32	56 42	56 32	62 31	66 46	56 36	58.5 39.8	



MARYLAND AND DELAWARE  
201711

# DAILY SOIL TEMPERATURES

STATION	DEPTH	TIME	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		
MARYLAND UPPER SOUTHERN 04 BELTSVILLE (in)																																			

MARYLAND AND DELAWARE  
201711

## SOILS REFERENCE NOTES

STATION	SOIL TYPE	SOIL COVER	SLOPE	UNITS
BELTSVILLE	UNKNOWN	GRASS	0	F

## 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	
<b>MARYLAND SOUTHERN EASTERN SHORE 01</b>	PRINCESS ANNE	SNOWFALL																															
	SALISBURY 2N	SNOWFALL																															
	SALISBURY FAA AP	SNOWFALL												-			-																
<b>NORTHERN CENTRAL 06</b>	SNOW HILL 4 N	SN ON GND																															
	DAMASCUS 3 SSW	SNOWFALL												T																			
	EMMITSBURG 2 SE	SN ON GND																															
<b>APPALACHIAN MOUNTAIN 07</b>	MILLERS 4 NE	WTR EQUIV																															
	REISTERSTOWN 2 NW	SNOWFALL																															
	SMITHSBURG 2NW	SN ON GND																															
<b>WILLIAMSPORT ALLEGHENY PLATEAU 08</b>	FROSTBURG 2	SNOWFALL											T								T												
	SHARPSBURG 5 S	SN ON GND																				1.2											
	WILLIAMSPORT	WTR EQUIV																				1											
<b>WILLIAMSPORT ALLEGHENY PLATEAU 08</b>	OAKLAND 1 SE	SNOWFALL																															
	SAVAGE RIVER DAM	SN ON GND																															
	SINES DEEP CREEK	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)

## 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
<b>DELAWARE</b>																																
<b>NORTHERN 01</b>																																
WILMINGTON NEW CASTLE CO AP	SNOWFALL																															
	SN ON GND																															
WILMINGTON PORTER RSCH	SNOWFALL																															
	SN ON GND																															

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# 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	33	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M
	EVAP	0.10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M
	MAX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	N
	MIN	46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	46.0
ALLEGHENY PLATEAU 08 SAVAGE RIVER DAM	WIND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	
	EVAP	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	
	MAX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	MIN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M

Evaporation: Is measured in hundreths 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
BALTIMORE WASHINGTON INTL CLIM	0467	04	ANNE ARUNDEL	39 11	76 39W	101		24		H
BALTIMORE-WASHINGTON 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	GCH
CONOWINGO DAM	2060	06	HARFORD	39 39	76 11W	40	07	07		H
CUMBERLAND 2	2282	07	ALLEGANY	39 39	78 45W	730	07	07		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
FROSTBURG 2	3415	07	ALLEGANY	39 40	78 56W	2170	07	07		H
HAGERSTOWN 1 E	1790	07	WASHINGTON	39 38	77 42W	532	24	24		H
MARYLAND SCI CTR 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	08	08		H
OAKLAND 1 SE	6620	08	GARRETT	39 25	79 24W	2420	07	07		H
OXON HILL	6800	04	PRINCE GEORGE'S	38 48	76 60W	186	07	07		H
PRINCESS ANNE	7330	01	SOMERSET	38 13	75 41W	20	17	17		H
REISTERSTOWN 2 NW	7580	06	BALTIMORE	39 30	76 50W	737	08	08		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 //R	8005	01	WICOMICO	38 20	75 31W	47	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
STEVENSVILLE 2SW	8557	05	QUEEN ANNE'S	38 58	76 20W	10	07	07		H
SUDLERSVILLE 1S	8657	05	QUEEN ANNE'S	39 10	75 51W	100		20		H
WILLIAMSPORT	9570	07	WASHINGTON	39 37	77 51W	360		06		CH
DELAWARE										
DOVER //	2730	02	KENT	39 9	75 30W	30	16	16		H
WILMINGTON NEW CASTLE CO AP R	9595	01	NEW CASTLE	39 40	75 36W	79	24	24		HJ
WILMINGTON PORTER RSCH	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 for station departures is 1981 to 2010. The normals for National Weather Service localities have been adjusted so as to be representative for the current observation site.

The January 2011 through December 2015 publications incorrectly state the computation of divisional departures. Climate Division departures have been, and continue to be, computed from 1971-2000 Normals, not 1981-2010 as stated. Station departures are accurately described as departures from 1981-2010.

**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 NCEI 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 / SS Observation time near sunrise / Observation time near sunset, respectively.

## 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.

A Amount of precipitation is the total of observer's entries for the current month. It may include precipitation that occurred during the previous month. Refer to earlier bulletin to determine date of last

reading. (Hawaii stations)

B Divisional Departure from normals are computed using 1971-2000 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 Centers for Environmental Information. 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 Centers For Environmental Information. 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. NCEI's Products 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, 16151633. 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.

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 NCEI's nClimDiv product. Beginning in February 2014, the nClimDiv product is used by NCEI's Monitoring Branch and in its monthly climate reports. For more details on nClimDiv, please go to <http://www.ncdc.noaa.gov/monitoring-references/maps/us-climate-divisions.php>.

Effective January 2016, Alaska's Climate Divisions are updated to reflect the 13 climate divisional boundaries established by University of Alaska-Fairbanks, NWS, NCEI, Oregon State University, and University of Nebraska-Lincoln. For more details regarding the updated Alaska Climate Divisions, see: <http://journals.ametsoc.org/doi/pdf/10.1175/JAMC-D-11-0168.1> (Bienek et al., 2012).

**These and other publications are available from the National Centers for Environmental Information**

### **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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