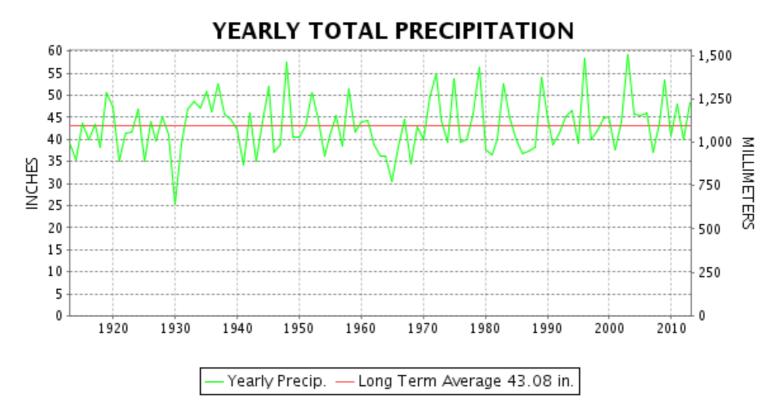


## CLIMATOLOGICAL DATA ANNUAL SUMMARY MARYLAND AND DELAWARE



#### 2013

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#### MARYLAND AND DELAWARE PRECIPITATION 1913-2013

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DIRECTOR

hum R. Karl

NATIONAL CLIMATIC DATA CENTER

STATION	J	AN	Fl	EB	MA	AR	AF	PR	M	AY	JU	N
	PRECIP.	DEPART.										
MARYLAND												
SOUTHERN EASTERN SHORE 01												
ASSATEAGUE	M		M		M		M		M		M	
PRINCESS ANNE	M 2.96	-0.62	M 3.50	0.59	M		M		M		MA 5.95	2.42
SALISBURY 2N	3.53	0.02	4.10	0.57	5.17		4.53		2.93		8.96	2.12
SALISBURY FAA AP	3.00	-0.61	3.70	0.35	4.85	0.43	3.78	0.23	3.32	-0.30	9.92	6.21
SNOW HILL 4 N	2.76	-0.81	4.43	1.29	5.71	1.19	M 3.85	0.37	3.59	0.07	6.45	2.98
DIVISIONAL DATA>	3.10	-0.90	4.08	0.66	5.24	0.76	4.16	0.90	3.28	-0.34	8.44	5.06
CENTRAL EASTERN SHORE 02												
ROYAL OAK 2 SSW	2.73		2.45		3.49		3.89		3.00		9.23	
DIVISIONAL DATA>	2.73	-1.25	2.45	-0.86	3.49	-0.80	3.89	0.50	3.00	-0.91	9.23	5.68
LOWER COLUMNERS AS												
LOWER SOUTHERN 03	2.02		2.20		2.06		4.40		2.52		7.00	
MECHANICSVILLE 5 NE	3.03		2.20		3.96		4.49		2.52		7.09	
SOLOMONS	3.64	0.20	1.70	1.07	3.25	0.70	4.50	1.20	MA 2.59	1.60	7.12	2.22
DIVISIONAL DATA>	3.34	-0.38	1.95	-1.07	3.61	-0.70	4.50	1.30	2.52	-1.62	7.11	3.33
UPPER SOUTHERN 04												
BALTIMORE WASH INTL AP	3.64		1.95		2.64		2.20		3.43		7.81	
BELTSVILLE	2.71	-0.15	1.74	-0.86	2.31	-1.37	2.00	-1.35	3.66	-0.66	7.60	3.90
DALECARLIA RSVR	3.33	0.31	3.31	0.28	3.38	-0.62	1.97	-1.69	3.83	-0.61	8.40	4.19
LAUREL 3 W	4.38	1.22	1.34	-1.69	3.04	-1.06	2.77	-1.04	3.89	-0.67	5.76	1.53
MARYLAND SCIENCE CENTER	3.90	0.98	1.95	-0.65	2.27	-1.59	2.21	-1.01	3.83	0.34	8.68	5.41
NATL ARBORETUM DC	2.60	-0.49	1.68	-1.22	2.67	-1.05	M 2.89	-0.62	2.15	-2.13	8.76	4.68
OXON HILL	2.61	-0.41	2.00	-0.93	2.95	-0.83	2.84	-0.56	2.47	-1.89	10.92	6.56
UPPER MARLBORO 3 NNW	2.70	-0.18	1.68	-1.04	2.99	-0.77	2.77	-0.78	2.40	-1.92	9.05	4.98
DIVISIONAL DATA>	3.23	-0.32	1.96	-0.96	2.78	-1.24	2.39	-0.95	3.21	-1.23	8.37	4.71
NORTHERN CENTRAL 06												
ABERDEEN PHILLIPS FLD	3.30		1.77		2.94		2.60		2.67		9.44	
BRIGHTON DAM	FA 0.94		2.37		2.74		2.89		4.58		8.03	
CONOWINGO DAM	6.17	2.73	1.94	-0.91	3.11	-1.14	2.30	-1.63	3.89	-0.07	8.74	4.56
CYLBURN	MA 5.99		MA 2.25		MA 2.28		2.82		3.80		MA 7.69	
DAMASCUS 3 SSW	5.57	2.20	2.01	-1.16	M 2.84	-0.85	2.47	-1.16	5.18	1.01	9.93	5.79
EMMITSBURG 2 SE	3.84	0.66	2.05	-0.65	2.40	-1.65	1.76	-2.15	3.03	-1.31	3.86	-0.06
FREDERICK 2 NNE	5.55	2.56	2.16	-0.66	M		M		M		M	
MILLERS 4 NE	5.32	2.11	2.04	-1.15	3.24	-0.48	2.51	-1.20	2.88	-1.38	5.64	2.25
SMITHSBURG 2NW	MA 2.61	-0.05	M		M		M		M		M	
WESTMINSTER	5.40	2.52	MA 1.54	-0.95	MA 2.66	-0.93	MA 2.79	-0.71	2.32	-1.83	MA 4.47	0.55
DIVISIONAL DATA>	5.02	1.42	2.05	-0.87	2.89	-1.14	2.48	-1.05	3.54	-1.08	7.61	3.56
APPALACHIAN MOUNTAIN 07												
CUMBERLAND 2	2.71		1.52		1.99		2.61		2.77		3.96	
FROSTBURG 2	3.09	-0.23	2.00	-1.12	3.05	-0.89	3.27	-0.60	4.23	-0.65	4.22	0.22
SHARPSBURG 5 S	3.97	1.09	1.77	-0.79	M 2.52	-1.15	2.15	-1.47	3.39	-0.77	3.83	-0.05
WILLIAMSPORT	MA 2.82	-0.18	1.41	-0.56	1.43	-2.80	M 2.51	-0.69	2.68	-1.47	4.13	0.35
DIVISIONAL DATA>	3.26	0.16	1.68	-0.94	2.16	-1.26	2.68	-0.71	3.27	-0.94	4.04	0.52

STATION	Л	JL	A	UG	SE	P	OC	CT	NO	VC	DE	EC	ANNU	JAL
	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.
MARYLAND														
SOUTHERN EASTERN SHORE 01														
ASSATEAGUE	M		M		M		M		M		M			
PRINCESS ANNE	M		M 4.76	0.10	M		MA 6.42	3.12	M		M			
SALISBURY 2N	M	0.57	6.26	2.07	1.35	2.21	6.28	0.10	2.94	1.05	6.11	0.52	40.70	1.75
SALISBURY FAA AP SNOW HILL 4 N	3.81	-0.57 0.93	7.30 5.42	2.87 0.52	0.77	-3.21 -3.02	3.68	0.19	1.48 2.79	-1.95 -0.73	3.18	-0.53 0.71	48.79	1.75 4.71
DIVISIONAL DATA>	5.32 4.57	0.93	6.33	1.59	1.38 1.17	-3.02 -2.59	4.81 4.92	1.28 1.55	2.79	-0.73	4.38 4.56	1.16	M 50.89 52.25	7.33
CENTRAL EASTERN SHORE 02														
ROYAL OAK 2 SSW	3.32		2.84		2.43		3.33		3.32		5.33		45.36	-0.51
DIVISIONAL DATA>	3.32	-0.87	2.84	-1.42	2.43	-1.39	3.33	0.09	3.32	0.03	5.33	1.84	45.36	0.64
LOWER SOUTHERN 03														
MECHANICSVILLE 5 NE	3.06		6.99		0.89		4.74		3.37		5.66		48.00	0.48
SOLOMONS	MA 8.11		MA 3.94		1.15		4.63		2.86		5.43		M 48.92	
DIVISIONAL DATA>	3.06	-1.16	6.99	2.86	1.02	-3.15	4.69	1.21	3.12	-0.15	5.55	2.24	47.46	2.71
UPPER SOUTHERN 04														
BALTIMORE WASH INTL AP	2.77		1.13		1.65		7.62		2.82		5.27		42.93	0.99
BELTSVILLE	2.95	-0.99	3.14	-0.13	1.94	-2.14	MA 5.38	1.71	2.80	-0.44	4.97	1.84	M 41.20	-2.56
DALECARLIA RSVR	6.44	1.85	M 2.80	-1.06	2.01	-2.16	M 7.91	4.07	2.90	-0.72	6.80	3.58	M 53.08	7.97
LAUREL 3 W	3.18	-0.87	1.96	-1.47	1.73	-2.87	5.69	1.71	2.01	-2.20	5.28	1.51	41.03	-5.37
MARYLAND SCIENCE CENTER NATL ARBORETUM DC	3.47 3.30	-1.15 -1.02	1.67 M 2.51	-1.72 -0.90	1.67 1.65	-2.42 -2.11	4.69 6.49	1.64 2.70	2.62 2.99	-0.35 -0.48	5.06 MA 4.91	1.65 1.71	42.02 M 42.60	-1.10
OXON HILL	4.50	0.15	2.08	-1.54	1.03	-2.75	6.04	2.70	2.99	-0.48	5.56	2.29	46.22	-1.10
UPPER MARLBORO 3 NNW	7.74	3.72	2.43	-1.29	2.73	-1.26	7.33	3.73	M 2.73	-0.73	4.78	1.64	M 49.33	5.64
DIVISIONAL DATA>	4.29	0.15	2.07	-1.88	1.85	-2.33	6.31	2.83	2.72	-0.66	5.39	2.00	44.57	0.12
NORTHERN CENTRAL 06														
ABERDEEN PHILLIPS FLD	6.41		6.68		2.32		4.97		3.21		5.45		51.76	7.54
BRIGHTON DAM	4.04		2.63		0.92		6.35		2.99		5.16		43.64	-1.04
CONOWINGO DAM	8.41	4.12	7.38	3.47	1.14	-3.81	5.05	0.93	2.88	-0.66	2.94	-1.09	53.95	5.86
CYLBURN	4.96		3.13		1.57		5.88		2.58		M 5.54		M 48.49	
DAMASCUS 3 SSW	3.84	-0.28	M 2.10	-2.19	1.36	-3.15	7.50	3.78	2.76	-1.16	5.65	2.02	M 51.21	
EMMITSBURG 2 SE	2.83	-0.82	2.35	-1.05	1.17	-3.07	6.51	3.13	2.79	-0.82	5.15	1.82	37.74	-7.60
FREDERICK 2 NNE	M	0.74	M 5 22	1.61	M	2.00	M	4.20	M	0.71	M	2.02	10.95	6.10
MILLERS 4 NE SMITHSBURG 2NW	4.73 M	0.74	5.33 M	1.61	1.58 M	-2.89	8.05	4.30	2.88 M	-0.71	5.66	2.02 1.00	49.86	6.19
WESTMINSTER	M M		M M		M M		M M		M M		FA 4.35 M	1.00		
DIVISIONAL DATA>	5.03	1.07	4.58	0.74	1.44	-2.89	6.33	2.82	2.87	-0.75	5.00	1.50	48.84	3.33
APPALACHIAN MOUNTAIN 07														
CUMBERLAND 2	2.33		5.07		0.79		2.36		1.92		3.59		31.62	-5.59
FROSTBURG 2	3.89	-0.11	5.64	2.04	3.01	-0.67	3.25	0.21	1.91	-1.76	4.13	0.84	41.69	-2.87
SHARPSBURG 5 S	2.88	-1.22	M 3.60	0.37	0.73	-3.27	6.35	2.94	2.58	-0.82	M 5.74	2.59	M 39.51	
WILLIAMSPORT	3.27	-0.63	2.86	-0.06	2.15	-1.71	7.67	4.61	M 2.13	-1.29	4.87	1.77	M 37.93	
DIVISIONAL DATA>	3.09	-0.55	4.52	1.07	1.67	-1.82	4.91	1.83	2.14	-1.13	4.20	1.33	37.62	-2.44

STATION	JA	AN	Fl	EB	MA	AR	AF	PR	M	AY	JU	N
	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.
ALLEGHENY PLATEAU 08 OAKLAND 1 SE SAVAGE RIVER DAM SINES DEEP CREEKDIVISIONAL DATA>	3.38 M 2.36 M 4.10 3.38	-0.39 -0.17	3.88 M 1.13 3.35 3.62	-1.30 0.53	5.38 M 1.86 M 4.06 5.38	-1.54 1.51	3.38 M 2.44 M 3.05 3.38	-0.89 -0.46	5.80 M 4.04 4.47 5.14	-0.48 0.60	6.37 M 3.88 4.98 5.68	-0.02 1.47
DELAWARE												
NORTHERN 01 BEAR 2 SW WILMINGTON NEW CASTLE CO AP WILMINGTON PORTER RESDIVISIONAL DATA>	M 3.70 4.01 3.86	0.69 0.30 0.16	M 2.31 1.84 2.08	-0.37 -1.15 -0.76	M 2.54 2.40 2.47	-1.38 -2.12 -1.64	M 2.69 1.62 2.16	-0.81 -2.59 -1.47	M 2.16 3.05 2.61	-1.79 -1.33 -1.81	M 13.66 12.23 12.95	9.78 8.04 9.05
SOUTHERN 02 DOVER DIVISIONAL DATA>	2.39 2.39	-1.60	2.39 2.39	-0.79	2.71 2.71	-1.69	4.24 4.24	0.77	4.00 4.00	-0.12	M 9.41 M	M

STATION	JI	UL	A	UG	SE	P	OC	СТ	NO	OV	DI	EC	ANNU	JAL
	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.	PRECIP.	DEPART.
ALLEGHENY PLATEAU 08 OAKLAND 1 SE SAVAGE RIVER DAM SINES DEEP CREEKDIVISIONAL DATA>	4.66 M 4.77 M 5.65 4.66	0.45	8.49 M 9.67 9.08	5.17	0.83 M M 1.22 0.83	-2.77	1.76 M 0.89 M 2.05 1.76	-1.77 -1.27	M 2.43 M 1.37 2.89 2.89	-1.63 -0.67	5.28 M 3.89 5.58 5.43	1.09 1.85	M 51.64 M 51.07 51.23	4.08 5.58
DELAWARE														
NORTHERN 01 BEAR 2 SW WILMINGTON NEW CASTLE CO AP WILMINGTON PORTER RESDIVISIONAL DATA>	M 4.05 M 4.49 4.05	-0.52 -0.87 -0.45	M 5.22 4.55 4.89	1.97 0.88 1.17	M 1.92 2.15 2.04	-2.40 -2.75 -2.28	M 1.97 3.45 2.71	-1.45 -0.36 -0.65	M 2.91 2.03 2.47	-0.19 -1.45 -0.91	M 5.22 4.69 4.96	1.74 0.59 1.34	48.35 M 46.51 47.25	5.54 1.75
SOUTHERN 02 DOVER DIVISIONAL DATA>	MA 9.05 M	M	4.29 4.29	-0.60	0.66 0.66	-3.49	5.80 5.80	2.42	2.36 2.36	-0.93	5.28 5.28	1.74	M 52.58	6.30 -4.29

## AVERAGE TEMPERATURES AND DEPARTURES FROM NORMAL(°F) MARYLAND AND DELAWARE

STATION	JA	AN	FE	ЕВ	М	AR	API	2	M	AY	JU	N	JU	IJL	AU	JG	SE	P	O	СТ	NO	OV	DI	EC	ANN	UAL
	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.
MARYLAND																										
SOUTHERN EASTERN SHORE 01 ASSATEAGUE PRINCESS ANNE SALISBURY 2N SALISBURY FAA AP SNOW HILL 4 NDIVISIONAL DATA>	M 41.8M 39.8 40.1 39.7 40.4	5.5 4.4 2.7 4.4	M 41.9M 38.4 39.3 38.7 39.6	3.4 1.4 -0.3 1.8	M MM 41.9 42.3 41.7 42.0	-3.2 -4.8 -3.3	M MM 56.7 57.2 56.3M 56.7	2.9 0.8 2.6	M MM 65.1 65.8 65.4 65.4	2.4 0.6 2.2	M MM 74.3 75.9 74.9 75.0	3.7 2.0 3.2	M MM M 81.0 79.9 80.5	3.7 2.9 3.8	M 76.3M 73.7 75.4 74.1 74.9	1.5 -0.1 -1.2 -0.4	M MM 68.0 69.5 68.5F 68.7	0.4 -1.1 -0.6	M MM 61.2 62.4 61.2 61.6	4.8 2.8 3.3	M MM 46.7 47.8 46.9 47.1	-0.8 -2.5 -1.7	M MM 43.1 43.3 43.3 43.2	3.3 2.3 2.9	M M 55.4 58.3 M 57.6 57.9	1.9 0.4 18.2
CENTRAL EASTERN SHORE 02 ROYAL OAK 2 SSW DIVISIONAL DATA>	39.0 39.0	4.2	37.2 37.2	0.3	42.4 42.4	-2.9	55.8 55.8	1.3	64.7 64.7	0.4	74.5 74.5	1.6	80.6 80.6	2.9	74.2 74.2	-1.7	67.2 67.2	-2.0	59.6 59.6	1.4	46.2 46.2	-1.9	40.7 40.7	1.4	56.8 56.8	-1.1 5.0
LOWER SOUTHERN 03 MECHANICSVILLE 5 NE SOLOMONSDIVISIONAL DATA>	36.5 39.8 38.2	4.2	35.2 37.4 36.3	-0.6	39.6 41.2 40.4	-4.8	54.4 56.4 55.4	1.2	63.0 65.4M 64.2	0.8	72.0 76.1 74.1	2.4	77.1 80.6 78.9	2.6	70.9 75.5 73.2	-1.5	64.7 70.4M 67.6	-0.5	57.2 61.3M 59.3	2.4	43.3 48.2M 45.8	-1.5	39.4 42.7M 41.1	2.3	54.4 M 57.9 56.2	-1.8 7.0
UPPER SOUTHERN 04 BALTIMORE WASH INTL AP BELTSVILLE DALECARLIA RSVR LAUREL 3 W MARYLAND SCIENCE CENTER NATL ARBORETUM DC OXON HILL UPPER MARLBORO 3 NNWDIVISIONAL DATA>	36.9 36.4 37.5 37.6 41.5 38.1 37.8 37.1 37.9	3.8 3.5 4.5 4.6 4.6 4.6	35.0 34.5 35.7 35.2 39.7 36.8 35.8 34.9 36.0	-0.9 -1.7 -1.1 0.6 -0.5 -0.3	40.6 40.4 41.1 41.0 45.5 42.7M 41.6 40.4 41.7	-3.4 -4.6 -3.9 -1.7 -3.4 -2.8	55.3 55.1 56.6 56.4 60.3 57.5M 56.4 55.3 56.6	1.8 1.0 1.5 3.4 1.9 2.5	63.7 63.0 62.9 64.4 68.8 65.6F 64.1 63.1 64.5	0.0 -2.0 -0.2 1.5 0.4 0.9	73.9 73.7 73.9 74.4 78.7 76.1M 74.4 74.0 74.9	1.6 0.7 1.6 3.0 2.7 2.6	79.0 78.3 79.3 79.7 83.4 81.0 79.2 78.3 79.8	1.4 1.7 1.9 3.1 2.4 2.7	74.2 73.5 73.8M 75.1 79.1 75.7M 74.0 73.1M 74.8	-1.8 -2.4 -1.4 -0.4 -1.0 -0.6	67.7 67.3 67.2M 69.4 72.9 69.7 68.4 67.3 68.7	-1.1 -2.1 0.3 1.0 0.1 0.4	58.8 MM 58.8M 60.4 64.0 61.0 59.5 58.4 60.1	1.5 2.8 4.4 3.1 3.7	43.6 43.3 44.3 44.3 48.3 45.5 44.5 44.5 44.9	-3.4 -2.9 -3.2 -1.4 -1.2 -1.8	43.2M 42.3M 40.3 39.7	1.7 4.3	M 60.5 M 57.7 56.3 M 55.6	1.1 -0.1 -0.5 0.4 1.9
NORTHERN CENTRAL 06 ABERDEEN PHILLIPS FLD BRIGHTON DAM CONOWINGO DAM CYLBURN DAMASCUS 3 SSW EMMITSBURG 2 SE FREDERICK 2 NNE MILLERS 4 NE SMITHSBURG 2NW WESTMINSTERDIVISIONAL DATA>	35.2 M 32.6 35.4 35.2 33.6 35.4 34.3 32.1M MM 34.2	1.7 2.6 3.9 3.0	33.7 M M 33.4 32.7 31.9 33.4 32.0 MM MM 32.9	-2.2 -1.4	39.9 40.0M 37.4 39.4 37.7M 38.5 MM 38.2 M MM 38.7	-5.0 -4.5 -3.5	53.5 53.2 51.4 54.4 53.8 52.0 M 53.5 M MM 53.1	-1.0 -0.8 1.7	63.6M 60.6 60.6 61.5 61.9 59.7 M 61.9 M MM 61.4	-2.0 -2.5 0.6	73.6 71.4 71.2 72.2 70.7 70.6 M 70.5 M MM 71.5	-0.3 0.1 0.8	78.5 76.1 76.5 76.7 75.4 75.8M M 75.6 M MM 76.4	0.3 0.8 1.7	73.0 71.1 70.8 72.0 70.5M 70.9 M 70.5 M MM 71.3	-4.0 -2.4 -2.0	66.2 64.6M 64.3 65.6 64.6 63.7 M 64.0 M M	-3.4 -2.7 -1.6	58.4 56.2 56.7 57.3 56.5 56.3 M 56.1 M	1.1 1.4 1.1	43.8 42.0M 40.9 43.1 41.4 41.8 M 41.4 M 42.1	-4.0 -3.0 -3.4 -2.8	38.1 36.8M 34.1 MM 37.1 35.7 M 35.6 32.9M M 35.8	-1.7 -0.2 0.2	55.5 M 53.1 M 52.5 M 52.8 M M	-1.1 0.2 -1.2 -0.2
APPALACHIAN MOUNTAIN 07 CUMBERLAND 2 FROSTBURG 2 SHARPSBURG 5 S WILLIAMSPORT	34.0 29.4 34.3 33.4M	4.9	32.4 25.4 32.2 32.2M	-1.9	38.5 31.2 37.0 38.9M	-4.1	55.2 48.7 52.4 53.3M	2.8	62.4 56.6 59.8M 60.7M	0.4	72.6 66.3 70.8 72.4M	2.1	77.8 69.9M 75.8 76.0M	1.4	72.9 65.7 70.1 71.8M	-1.5	65.7 59.9 63.8 65.8	-0.4	57.0 51.8 55.4 57.0	2.5	41.5 35.2 40.1M 42.0M	-3.9	36.6 31.7 35.0M 36.4		53.9 M 47.7 M 52.2 M 53.3	0.8 0.4

## AVERAGE TEMPERATURES AND DEPARTURES FROM NORMAL(°F) MARYLAND AND DELAWARE

2013

STATION	JA	AN	FE	EB	М	AR	API	₹	M	AY	JU	N	JI	UL	Αl	JG	SE	P	OC	СТ	NO	ΟV	DE	EC	ANN	UAL
	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.	TEMPERATURE	DEPARTURE.
DIVISIONAL DATA>	32.8	3.8	30.6	-1.5	36.4	-4.3	52.4	1.7	59.9	-0.4	70.5	2.0	74.9	2.1	70.1	-1.1	63.8	-0.3	55.3	2.6	39.7	-3.0	34.9	1.4	51.8	3.0
ALLEGHENY PLATEAU 08 OAKLAND 1 SE SAVAGE RIVER DAM SINES DEEP CREEKDIVISIONAL DATA>	30.1 30.4M 27.2M 29.2	4.2 3.4	26.1 28.1M 25.1 26.4	-0.5 -2.1	30.7 33.1M 30.2M 31.3	-4.0 -5.7	47.9 51.0M 47.6M 48.8	3.6 1.8	57.0 57.4M 55.4 56.6	0.1	66.4 66.9M 64.2 65.8	1.4	69.9 71.6M 68.7M 70.1	1.9 1.5	65.5 66.6M 64.0 65.4	-1.7 -1.7	59.3F MM 58.4M 58.9	-1.6	50.7 50.5M 50.1M 50.4	0.5	37.1M 36.6M 34.3 36.0	-3.8 -3.6	30.8	2.3	M 47.9 M 47.8 M 46.3 47.6	-0.4 -0.8 -3.1
DELAWARE																										
NORTHERN 01 BEAR 2 SW WILMINGTON NEW CASTLE CO AP WILMINGTON PORTER RESDIVISIONAL DATA>	M 35.6 34.5 35.1	4.1	M 34.5 32.9 33.7	0.3	M 40.3 39.3 39.8	-2.4 -2.9	M 54.0 MM 54.0	1.6 1.6	62.2M	1.2	M 73.2 72.5 72.9	1.7 1.5	M 79.5 79.1 79.3	2.9	M 73.5 72.8 73.2	-1.5 -1.3	M 66.1 66.0M 66.1	-1.6 -1.3	M 59.0 57.8 58.4	3.2	M 43.9 44.2MF 44.1	-2.0 -1.7	36.7	1.2 0.6	M 55.1 M 54.4 54.7	0.7 5.4
SOUTHERN 02 DOVER DIVISIONAL DATA>	37.7 37.7	3.1	35.9 35.9	-0.5	40.6 40.6	-3.8	55.5 55.5	2.3	64.0 64.0	1.1	73.5 73.5	1.8	79.3 79.3	2.8	73.9 73.9	-0.9	67.7 67.7	-0.6	59.7 59.7	2.4	45.9 45.9	-1.8	41.2 41.2	2.2	56.2 56.2	-0.6 8.1

## TEMPERATURE EXTREMES AND FREEZE DATA (°F)

## MARYLAND AND DELAWARE 2013

STATION						I	AST S	PRIN	G MIN	IMU	M OF						FI	RST	FALL I	MINI	MUM	OF					ER OF		3
	ST	ex	ST		16° ( BEL(		20° C BELO		24° O BELO		28° ( BELC	- I	32° C BELC		32° ( BEL(		28° BEL	-	24° ( BELC		20° ( BEL0		16° C BELC		BELOW	BELOW	BELOW	том	BELOW
	HIGHEST	DATE	LOWEST	DATE	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	16° OR BE	20° OR BE	24° OR BE	28° OR BELOW	32° OR BE
MARYLAND SOUTHERN EASTERN SHORE 01	ı																												
ASSATEAGUE PRINCESS ANNE SALISBURY 2N SALISBURY FAA AP SNOW HILL 4 N	90 97	07/18 06/25 07/18 07/19	9 11 8 4	01/25	MSG 01/25 02/02 01/27 02/02	9 16 15 16	MSG 01/25 02/02 02/02 02/17	9 16 18 19	MSG 02/18 02/21 02/18 03/23	24 24 24 24	MSG 04/03 04/04 04/04 04/07	27 26 27 26	MSG 04/04 04/22 04/04 04/07	29 32 27 26	NONE 11/13 12/01 10/26 12/01	28 27 30 25	NONE 11/13 12/01 11/13 12/01	28 27 28 25	NONE 11/25 12/11 11/14 12/02	24 23 24 23	NONE NONE 12/13 NONE 12/11	20 20	NONE NONE NONE NONE			314 297	280 293 269 254	224 241 223 238	223 223 205 238
CENTRAL EASTERN SHORE 02 ROYAL OAK 2 SSW	96	07/17	15	01/24	01/24	15	02/10	20	02/21	24	04/04	26	04/04	26	10/26	29	11/09	28	11/25	24	12/13	19	NONE			306	277	219	205
LOWER SOUTHERN 03 MECHANICSVILLE 5 NE SOLOMONS		07/20 07/19	10 17	01/25 01/23	02/02 MSG	15	02/19 02/02	19 19	04/04 02/18	24 24	04/05 03/23	26 28	04/22 03/25	31 32	10/25 11/24	31 26	11/09 11/24	28 26	11/14 11/25	24 24	11/25 NONE	18	NONE NONE			279	224 280	218 246	186 244
UPPER SOUTHERN 04 BALTIMORE WASH INTL AP BELTSVILLE DALECARLIA RSVR LAUREL 3 W MARYLAND SCIENCE CENTER NATL ARBORETUM DC OXON HILL UPPER MARLBORO 3 NNW	95 98 99 100 97 95	07/18 07/20 07/20 07/18 07/19 07/18 07/20 09/13	12 15 10 17 15 14	01/24 01/23 01/23 01/23	01/25 01/25 01/25 02/02 MSG 01/24 02/03 02/03	16 16	02/18 02/10 02/18 02/18 01/24 02/02 02/03 02/11	20 19 20 18 20 17 16	02/21 04/04 02/21 02/21 02/18 02/18 02/21 04/04	23 23 24 22 24 22 24 22 24 23	04/04 04/04 04/04 04/04 02/21 04/04 04/04	25 23 26 27 27 27 27 27 28	04/04 04/04 04/05 04/04 03/22 04/05 04/05 04/22	25 23 30 27 31 32 30 32	10/26 10/26 10/26 11/04 11/24 10/26 10/26	30 29 30 31 28 32 32 32	11/12 11/09 11/13 11/13 11/24 11/14 11/14 10/26	28 27 28 27 28 27 26 28	11/24 11/14 11/14 11/24 12/25 11/25 11/24 11/14	22 23 24 21 22 23 24 22	11/25 11/25 11/25 11/25 NONE NONE 12/25 11/25	19 19 20 18	NONE NONE NONE NONE NONE NONE			280 288 280 280 325 287	276 224 266 276 310 280 276 224	222 219 223 223 276 224 224 204	205 205 204 214 247 204 204 187
NORTHERN CENTRAL 06 ABERDEEN PHILLIPS FLD BRIGHTON DAM CONOWINGO DAM CYLBURN DAMASCUS 3 SSW EMMITSBURG 2 SE FREDERICK 2 NNE MILLERS 4 NE SMITHSBURG 2NW WESTMINSTER	95 94 93 93 95 70 94 68	07/16 07/19 07/19 07/20 07/19 09/12 01/31 07/18 12/24 07/10	16 9 11 8 11 11 7 8	01/24 01/24 01/23 01/24 01/23	02/03 MSG 01/28 02/03 02/02 02/11 02/02 02/18 02/04 02/19	14 12 16 11 16 15 15 15	02/19 MSG 01/28 02/18 02/18 04/05 02/19 02/21 02/09 04/05	19 12 18 17 19 20 19 17 20	03/15 04/05 03/25 02/22 04/04 04/05 02/21 04/04 02/10 04/05	24 22 24 23 22 19 24 21 23 20	04/05 04/05 04/05 04/05 04/04 04/05 03/10 04/04 02/10 04/05	27 22 25 26 22 19 27 21 23 20	04/05 05/16 04/05 04/05 05/14 05/14 03/11 05/14 02/10 05/14	27 32 25 26 32 32 29 31 23 32	11/09 10/26 10/27 11/04 10/26 10/26 NONE 10/26 12/08 NONE	28 27 31 30 30 31 29 21	11/09 10/26 11/13 11/13 11/04 11/09 NONE 11/04 12/08 NONE	28 27 28 28 27 28 27 28	11/25 11/14 11/25 11/24 11/24 11/21 NONE 11/21 12/08 NONE	21 23 18 22 20 24 23 21	12/11 11/25 11/25 11/25 11/24 11/25 NONE 11/24 12/11 NONE	20 18 18 20 20 19	NONE 12/13 12/12 NONE 11/25 12/12 NONE 11/25 12/11 NONE	16 16 15 16 16	296	295 301 280 279 234 276 305	255 223 245 275 234 230 231 301	218 204 222 222 214 218 214 301	218 163 205 213 165 165 165
APPALACHIAN MOUNTAIN 07 CUMBERLAND 2 FROSTBURG 2 SHARPSBURG 5 S WILLIAMSPORT	89 96	07/20 07/19 07/19 07/19	10 0 7 10	02/02	02/19 03/22 02/19 02/19	16 15 13 16	02/19 04/05 04/05 02/19	16 18 20 16	04/05 04/07 04/05 04/05	22 24 20 22	05/13 05/14 04/07 04/05	28 28 27 22	05/14 05/15 05/15 04/07	32 29 32 31	10/26 10/24 10/25 10/26	26 32 26 32	10/26 10/26 10/25 11/05	26 27 26 27	11/20 11/04 11/05 11/15	24 23 24 24	11/24 11/13 11/25 11/25	20 20 13 20	11/25 11/24 11/25 NONE	15 11 13	279 247 279	278 222 234 279	229 211 214 224	166 165 201 214	165 162 163 202
ALLEGHENY PLATEAU 08 OAKLAND 1 SE SAVAGE RIVER DAM SINES DEEP CREEK	90	07/20 07/18 07/20	5	02/02 02/02 02/02 02/02	04/04 02/19 03/22	11	04/05 04/05 04/04	18 20 17	04/21 04/05 04/07	23 20 23	05/14 04/21 05/16	25 28 28	05/26 05/15 05/27	31 30 31	10/19 10/21 09/24	31 32 32	10/21 10/26 10/26	28 28 25	11/04 11/20 11/04	22 23 24	11/09 11/24 11/14	20 17 20	11/25 11/25 11/24	7 13 12		218 233 224	197 229 211	160 188 163	146 159 120

## TEMPERATURE EXTREMES AND FREEZE DATA (°F)

## MARYLAND AND DELAWARE 2013

DELAWARE  NORTHERN 01  BEAR 2 SW  WILMINGTON NEW CASTLE CO AP  WILMINGTON PORTER RES  98 07/19 10 01/23 02/02 16 02/18 18 02/22 24 04/04 28 04/04 28 10/27 32 11/12 28 11/24 22 11/25 17 NONE  DELAWARE  NONE  NON	STATION						L	LAST S	PRIN	G MIN	IIMU	M OF						FII	RST	FALL I	MINI	MUM	OF			N B	UMBI ETWI	ER OF EEN D	DAY ATES	S
DELAWARE         NORTHERN 01           BEAR 2 SW         MSG         MSG         MSG         MSG         MSG         NONE		ST	m	ST	m		-			_			- 1				- 1		-		-					ELOW	HOTE	ELOW	ELOW	HOM
NORTHERN 01 BEAR 2 SW WILMINGTON NEW CASTLE CO AP WILMINGTON PORTER RES 98 07/19 10 01/23 02/02 16 02/18 18 02/22 24 04/04 28 04/04 28 10/27 32 11/12 28 11/24 22 11/25 19 12/13 16 314 280 223 2 SOUTHERN 02		HIGHE	DATE	LOWE	DATE	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	DATE	TEMP.	16° OR BE	20° OR BI	24° OR BI	28° OR BELOW	32° OR BELOW
	NORTHERN 01 BEAR 2 SW WILMINGTON NEW CASTLE CO AP WILMINGTON PORTER RES SOUTHERN 02	98	07/19	10	01/23	MSG 02/02 02/02	16 16	MSG 02/18 02/18	20 18	MSG 04/04 02/22	24 24	MSG 04/04 04/04	24 28	MSG 04/04 04/04	24 28	NONE 11/04 10/27	31 32	NONE 11/09 11/12	28 28	NONE 11/13 11/24	24 22	NONE 11/25 11/25	19 17	NONE 12/13 NONE			280 280	223 275	219 222 219	214 206 205

### MONTHLY AND SEASONAL COOLING DEGREE DAYS BASE = 65 DEGREES FAHENHEIT

MARYLAND AND DELAWARE 2013

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	SEASONAL NORM
MARYLAND SOUTHERN EASTERN SHORE 01 ASSATEAGUE PRINCESS ANNE SALISBURY 2N SALISBURY FAA AP	0 0 0	0 0 0	0 0 0	- 26E 38 46	187E 125 145	321E 283 333	502E - 506	357E 279 333	- 204E 147 169	100E 64 88	- 8E 0 8	0 3 5	1705E - 1633	1092 1155
SNOW HILL 4 N  CENTRAL EASTERN SHORE 02  ROYAL OAK 2 SSW	0	0	0	33E 25	129 114	304 291	471 489	290 292	173 137	67 47	7	0	1476E 1397	1194
LOWER SOUTHERN 03 MECHANICSVILLE 5 NE SOLOMONS	0	0 0	0 0	28 18	83 117E	222 341	381 494	194 332	94 178E	30 72E	0 1E	0	1032 1553E	1093
UPPER SOUTHERN 04 BALTIMORE WASH INTL AP BELTSVILLE DALECARLIA RSVR LAUREL 3 W MARYLAND SCIENCE CENTER NATL ARBORETUM DC OXON HILL UPPER MARLBORO 3 NNW	0 0 0 0 0 0	0 0 0 0 0 0	0 0 0 0 0 0	26 23 34 36 51 41E 33 34	105 98 109 114 179 135 113 105	277 272 274 288 420 342E 290 279	445 419 453 461 579 502 447 420	292 274 279E 317 445 341E 289 261E	143 132 127E 173 247 179 149 140	51 4E 60E 67 98 76 56 48	0 0 1 2 4 0 0	2 0 1E 0 0 2E 2	1341 1222E 1338E 1458 2023 1618E 1379 1288E	1147 1109 1258 1271 1243
NORTHERN CENTRAL 06 ABERDEEN PHILLIPS FLD BRIGHTON DAM CONOWINGO DAM CYLBURN DAMASCUS 3 SSW EMMITSBURG 2 SE FREDERICK 2 NNE MILLERS 4 NE SMITHSBURG 2NW WESTMINSTER	0 0 0 0 0 0 0	0 - - 0 0 0 0 0	0 0 0 0 0 0 0 0	14 6 8 27 21 16 - 19 - 27E	98E 56 51 68 83 47 - 78 - 105E	264 202 194 224 183 181 - 175 - 201E	430 353 364 371 329 342E - 337	255 197 193 225 182E 198 - 189 - 93E	116 92E 87 117 90 97 - 86	44 31 28 42 34 33 - 37	0 0 0 0 0 0	0 0 0 0 0 0	1221E - 1074 922E 914E - 921	1153 918 790
APPALACHIAN MOUNTAIN 07 CUMBERLAND 2 FROSTBURG 2 SHARPSBURG 5 S WILLIAMSPORT	0 0 0 0	0 0 0 0	0 0 0 0	36 8 15 10E	91 33 56E 55E	236 88 186 233E	405 173E 343 353E	257 73 178 220E	103 46 95 108	47 22 36 40	0 0 0 0	0 0 0 0	1175 443E 909E 1019E	877 344
ALLEGHENY PLATEAU 08 OAKLAND 1 SE SAVAGE RIVER DAM SINES DEEP CREEK	0 0 0	0 0 0	0 0 0	3 4E 2E	28 30E 18	90 93E 43	181 217E 149E	73 86E 45	42 48E 31E	8 3E 5E	0 0 0	0 0 0	425 481E 293E	316 414
DELAWARE  NORTHERN 01 BEAR 2 SW WILMINGTON NEW CASTLE CO AP WILMINGTON PORTER RES SOUTHERN 02	0 0	0 0	0 0	17 28E	90 74E	253 233	455 446	270 250	107 94E	49 46	0 0	0	- 1241 1171E	1125

## MARYLAND AND DELAWARE 2013

### MONTHLY AND SEASONAL COOLING DEGREE DAYS BASE = 65 DEGREES FAHENHEIT

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	SEASONAL NORM
DOVER	0	0	0	31	101	263	450	282	131	54	0	1	1313	1262

## MARYLAND AND DELAWARE 2013

### TOTAL PAN EVAPORATION AND WIND MOVEMENT

STATION		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
MARYLAND UPPER SOUTHERN 04 BELTSVILLE	WIND EVAP	- -	- -		1958 4.82	1710 5.33	1647 6.29E	1562 9.10	1350 5.28	1308 5.38		- -	- -	- -
UPPER MARLBORO 3 NNW	MAX TEMP MIN TEMP WIND EVAP MAX TEMP MIN TEMP	- - - - -	- - - - -	47.0 47.0 - - -	70.5 45.4 - -	76.9 53.7 - - -	85.8 64.4 - - -	90.6 69.7 - - -	80.4 64.0 - - -	78.3 55.2 - - -	77.0 50.0 - - -	- - - - -	- - - - -	- - - -
ALLEGHENY PLATEAU 08 SAVAGE RIVER DAM	WIND EVAP MAX TEMP MIN TEMP	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - - -	- - -

## MARYLAND AND DELAWARE 2013

### STATION INDEX

		Ö						EARS OF ECORD		OPENE OR CLC DURING	OSED	SEE
STATION	INDEX NO.	DIVISION NO	COUNTY	LATITUDE	LONGITUDE	ELEVATION FEET	TEMP.	PRECIP.	EVAP.	MONTH	MONTH	REFERENCE NOTES
MARYLAND ABERDEEN PHILLIPS FLD ASSATEAGUE BALTIMORE WASH INTL AP R BELTSVILLE BRIGHTON DAM CONOWINGO DAM CUMBERLAND 2 CYLBURN DALECARLIA RSVR DAMASCUS 3 SSW EMMITSBURG 2 SE FREDERICK 2 NNE FROSTBURG 2 LAUREL 3 W MARYLAND SCIENCE CENTER R MECHANICSVILLE 5 NE MILLERS 4 NE NATL ARBORETUM DC OAKLAND 1 SE OXON HILL PRINCESS ANNE ROYAL OAK 2 SSW SALISBURY 2N SALISBURY FAA AP SAVAGE RIVER DAM SHARPSBURG 5 S SINES DEEP CREEK SMITHSBURG 2NW SNOW HILL 4 N SOLOMONS UPPER MARLBORO 3 NNW WESTMINSTER WILLIAMSPORT	0015 0335 0465 0700 1125 2060 2282 2308 2325 2336 2906 3353 3415 5111 5718 5865 5934 6350 6620 6800 7330 7806 8004 8005 8065 8207 8315 8371 8380 8405 99440 9570	06 01 04 04 06 06 06 06 06 06 07 04 04 04 08 04 01 02 01 01 08 06 01 01 02 01 01 01 01 01 01 01 01 01 01 01 01 01	HARFORD WORCESTER ANNE ARUNDEL PRINCE GEORGE'S MONTGOMERY HARFORD ALLEGANY BALTIMORE DISTRICT OF COLUMBIA MONTGOMERY FREDERICK FREDERICK ALLEGANY PRINCE GEORGE'S BALTIMORE (CITY) ST. MARY'S CARROLL DISTRICT OF COLUMBIA GARRETT PRINCE GEORGE'S SOMERSET TALBOT WICOMICO WICOMICO GARRETT WASHINGTON GARRETT PRINCE GEORGE'S CARROLL DISTRICT OF COLUMBIA GARRETT PRINCE GEORGE'S SOMERSET CALBOT WICOMICO GARRETT WASHINGTON GARRETT WASHINGTON WORCESTER CALVERT PRINCE GEORGE'S CARROLL WASHINGTON	39 28 38 4 39 10 39 2 39 11 39 39 39 39 39 39 39 39 39 21 38 56 39 16 39 41 39 26 39 40 39 5 39 17 38 28 39 43 38 55 39 25 38 47 38 13 38 43 38 24 38 20 39 31 39 24 39 31 39 24 39 31 39 40 38 14 38 29 39 31 39 39 39 39 39 39 39 40 39 5 39 17 38 28 39 40 39 5 39 40 38 55 39 17 38 28 39 40 38 55 39 25 38 47 38 13 38 43 38 24 38 29 39 31 39 40 39 31 39 39 40 39 31 39 31 39 31 39 40 39 31 39 31 39 31 39 40 39 31 39 31 39 31 39 31 39 40 39 31 39 31 39 31 39 30 30 31 30 3	76 10W 75 13W 76 41W 76 56W 77 0W 76 11W 78 45W 76 39W 77 14W 77 14W 77 17W 77 24W 78 56W 76 54W 76 54W 76 58W 79 24W 76 60W 75 41W 76 11W 75 36W 75 31W 79 8W 77 43W 79 25W 77 35W 77 23W 76 46W 76 59W 77 51W	57 10 156 145 330 40 730 235 150 700 403 280 2170 400 20 100 860 50 2420 120 20 10 20 48 1495 500 2040 670 30 12 130 750 360	87 45 75 73 13 78 40 11 66 21 58 10 42 113 16 40 26 66 115 12 118 66 2 2 66 63 16 39 13 98 103 57 31 11 11 11 11 11 11 11 11 11 11 11 11	87 45 75 73 50 78 40 11 66 21 58 10 42 116 15 49 26 66 115 12 118 66 2 2 66 69 16 39 13 98 103 57 31 48	0 0 0 72 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			CH H H H H H H H H H H H H H H H H H H
DELAWARE BEAR 2 SW DOVER WILMINGTON NEW CASTLE CO AP R WILMINGTON PORTER RES	1200 2730 9595 9605	01 02 01 01	NEW CASTLE KENT NEW CASTLE NEW CASTLE	39 36 39 15 39 40 39 46	75 44W 75 31W 75 36W 75 32W	80 30 79 270	10 111 66 82	10 111 66 83	0 0 0 0		FEB	Н Н НЈ Н

#### 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 2002, the averaging period is 1971 to 2000. The normals for National Weather Service localities have been adjusted so as to be representative for the current observation site.

TEMPERATURE EXTREMES AND FREEZE DATA: Spring minimum dates are obtained from data for January through June; Fall dates are from July through December data. "NONE" indicates temperature threshold not reached. "MSG" indicates available data insufficient to determine date.

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.

SOIL TEMPERATURE EXTREMES: The highest and lowest Max and Min temperature for each month and the year.

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 DATA TABLES

- No record. Data not recorded, determined unreliable by quality control checks, or not received in time for publication.
- \* Equipment gage not read. Precipitation is included in the amount following asterisks. Time distribution not known.
- // Equipment gage equipped with a windshield.
- 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 monthly bulletins to determine date of last reading.
- 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 are missing or flagged.
- F Monthly Calculation Flagged Value. F is appended to the average of the monthly station values when 1-9 daily observations were determined to be invalid during the Quality Control process.
- 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 or flagged.
- R Amounts from recording rain gage.
- T Trace. An amount too small to measure.

#### SYMBOLS AND LETTERS USED IN THE STATION INDEX TABLE

- # Thermometers located in rooftop shelter.
- C Station is equipped with a 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 "Soil Temperatures" table.
- H Observations appear in "Snowfall and Snow on the Ground" table in monthly "Climatological Data" publication.
- J Station also published as a "Local Climatological Data" bulletin.

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 "Climatological Data".

Cooling degree days for the calendar year are published in the "Climatological Data Annual Summary".

Additional precipitation data are contained in the "Hourly Precipitation Data" bulletin for each state.

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.

#### **ERRATA**

Beginning in January of 2011, CD Publications are produced from the Global Historical Climatology Network data set. (http://www.ncdc.noaa.gov/oa/climate/ghcn-daily/) The GHCND data Version is printed on first page of the publication.

New flags were added to indicate:

E Normalized HDD/CDD, Evap, and Wind Movement Calculations in 2011, previously was B. F Monthly calculation flagged value.

Station metadata is provided by NCDC's Product Development Branch from the Historical Observing Metadata Repository: http://www.ncdc.noaa.gov/homr

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.

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 by NCDC's Climate 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 .

#### 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 summmarize 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.