

Climatology of the United States

No. 20

1971-2000

Station: DONORA 1 SW, PA

COOP ID: 362190

Climate Division: PA 9

NWS Call Sign:

Elevation: 762 Feet Lat: 40° 10N Lon: 79° 52W

Temperature (°F)																					
Mean (1)				Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
Month	Daily Max	Daily Min	Mean	Highest Daily(2)	Year	Day	Highest Month(1) Mean	Year	Lowest Daily(2)	Year	Day	Lowest Month(1) Mean	Year	Heating	Cooling	Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	38.3	20.2	29.3	78	1950	26	38.6	1998	-19	1982	12	13.4	1977	1109	0	.0	.0	6.7	8.8	26.6	1.5
Feb	41.7	21.4	31.6	78	2000	27	39.5	1998	-14	1934	28	19.0	1978	937	0	.0	.0	8.8	5.5	22.6	.8
Mar	51.7	29.1	40.4	88	1929	25	47.4	1973	-2	1960	9	34.5	1984	762	0	.0	.0	18.9	1.2	18.1	@
Apr	62.4	37.5	50.0	92+	1930	11	54.7	1985	11	1975	6	44.2	1975	453	1	.0	.1	26.8	.0	8.3	.0
May	72.7	48.9	60.8	96	1939	26	68.2	1991	25	1978	1	55.6	1997	183	54	.0	.7	30.9	.0	.8	.0
Jun	80.5	58.0	69.3	101+	1933	8	74.0	1994	37	1990	5	63.9	1972	31	158	.0	3.2	30.0	.0	.0	.0
Jul	84.5	63.1	73.8	105	1930	20	78.2	1999	40+	1983	11	70.2	1976	4	277	.1	6.9	31.0	.0	.0	.0
Aug	83.2	61.9	72.6	103	1930	5	77.8	1995	34	1935	25	68.5	1992	6	239	.0	5.1	31.0	.0	.0	.0
Sep	77.1	55.2	66.2	103	1953	4	69.9	1978	31	1942	29	62.0	1975	54	88	.0	1.3	30.0	.0	.0	.0
Oct	66.2	42.9	54.6	95	1953	1	61.6	1984	17	1965	29	48.7	1988	335	12	.0	.0	29.9	.0	3.3	.0
Nov	53.7	33.8	43.8	85	1961	3	50.0	1994	-1	1958	30	35.2	1976	637	0	.0	.0	19.3	.4	13.8	.0
Dec	43.1	25.6	34.4	75	2001	6	42.4	1984	-11	1989	22	20.6	1989	951	0	.0	.0	9.6	4.9	23.5	.5
Ann	62.9	41.5	52.2	105	Jul 1930	20	78.2	Jul 1999	-19	Jan 1982	12	13.4	Jan 1977	5462	829	.1	17.3	272.9	20.8	117.0	2.8

+ Also occurred on an earlier date(s)

@ Denotes mean number of days greater than 0 but less than .05

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1926-2001

(3) Derived from 1971-2000 serially complete daily data

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No. 20 1971-2000

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: DONORA 1 SW, PA

COOP ID: 362190

Climate Division: PA 9

NWS Call Sign:

Elevation: 762 Feet Lat: 40°10N

Lon: 79°52W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med-ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	2.54	2.21	1.95	1994	4	5.67	1999	.44	1981	12.9	6.1	1.6	.2	.58	.82	1.19	1.52	1.86	2.21	2.60	3.07	3.69	4.68	5.60
Feb	2.19	1.89	1.98	1966	13	4.00	1979	.27	1978	10.8	5.6	1.2	.3	.58	.79	1.10	1.38	1.65	1.94	2.26	2.64	3.13	3.91	4.63
Mar	3.33	3.11	2.59	1945	6	6.01	1989	1.36	1990	13.8	8.2	2.0	.5	1.47	1.77	2.18	2.52	2.83	3.15	3.49	3.88	4.37	5.12	5.79
Apr	3.21	3.31	2.14	1942	9	5.44	1973	.74	1982	14.0	8.0	1.7	.5	1.19	1.49	1.92	2.28	2.63	2.98	3.36	3.80	4.37	5.24	6.04
May	3.85	3.53	3.00	1971	6	6.63	1997	1.52	1991	13.4	8.7	2.4	.6	1.64	1.99	2.48	2.88	3.25	3.63	4.03	4.50	5.09	5.99	6.80
Jun	3.79	3.40	3.56	1972	23	10.61	1972	1.23	1999	12.2	7.9	2.6	.6	1.37	1.72	2.24	2.67	3.08	3.50	3.96	4.49	5.17	6.22	7.19
Jul	3.87	3.46	3.45	1999	29	6.73	1992	1.57	1987	11.0	7.3	2.6	.8	1.56	1.92	2.42	2.84	3.23	3.63	4.06	4.55	5.18	6.14	7.02
Aug	3.81	3.25	3.72	2000	7	9.80	1975	1.50	1972	10.1	6.4	2.4	1.0	1.45	1.81	2.31	2.74	3.13	3.54	3.98	4.49	5.14	6.14	7.06
Sep	3.10	2.85	2.96	1962	2	5.53	1974	.97	1984	9.9	6.1	2.3	.6	1.20	1.49	1.90	2.24	2.56	2.89	3.25	3.66	4.18	4.99	5.72
Oct	2.41	2.50	3.12	1954	16	5.02	1976	.54	1994	10.4	5.7	1.7	.3	.73	.96	1.31	1.60	1.89	2.18	2.51	2.89	3.39	4.16	4.87
Nov	2.90	2.70	2.06	1950	4	10.61	1985	.25	1976	13.0	6.9	1.5	.6	.69	.96	1.39	1.76	2.14	2.54	2.98	3.51	4.20	5.30	6.34
Dec	2.65	2.61	2.00	1991	3	6.16	1990	.90	1989	13.8	6.7	1.6	.2	1.09	1.33	1.67	1.96	2.22	2.49	2.78	3.11	3.53	4.18	4.76
Ann	37.65	37.01	3.72	Aug 2000	7	10.61+	Nov 1985	.25	Nov 1976	145.3	83.6	23.6	6.2	29.04	30.76	32.93	34.56	35.99	37.37	38.77	40.32	42.18	44.85	47.14

+ Also occurred on an earlier date(s)

Denotes amounts of a trace

@ Denotes mean number of days greater than 0 but less than .05

** Statistics not computed because less than six years out of thirty had measurable precipitation

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1926-2001

(3) Derived from 1971-2000 serially complete daily data

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Station: DONORA 1 SW, PA

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Climate Division: PA 9

NWS Call Sign:

Elevation: 762 Feet

Lat: 40°10N

Lon: 79°52W

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										Snow Fall >= Thresholds					Snow Depth >= Thresholds			
Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year	0.1	1.0	3.0	5.0	10.0	1	3	5	10
Jan	4.2	2.2	2	#	7.4	1996	8	18.3	1996	26	1978	20	10	1994	2.9	1.7	.6	.3	.0	3.7	1.9	1.0	.5
Feb	2.2	1.5	1	#	6.0	1983	11	7.7	1986	7	1985	3	2	1993	1.7	.8	.1	.1	.0	2.4	1.2	.3	.0
Mar	4.2	.6	#	#	20.0	1993	13	20.0	1993	20	1993	13	2	1993	1.3	1.0	.5	.2	.1	1.8	1.2	.5	.1
Apr	.1	.0	#	0	1.0	1987	4	1.2	1996	1+	1997	9	#+	1997	.2	@	.0	.0	.0	.1	.0	.0	.0
May	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jul	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Aug	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Sep	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Oct	#	.0	0	0	#	1980	25	#+	1980	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.5	#	#	0	3.2	1987	10	5.2	1995	3	1987	10	2	1980	.5	.3	@	.0	.0	.5	@	.0	.0
Dec	3.1	1.5	#	#	8.2	1992	10	10.2	1992	10	1992	11	3	1989	2.4	1.3	.3	@	.0	1.9	.6	.3	.1
Ann	14.3	5.8	N/A	N/A	20.0	Mar 1993	13	20.0	Mar 1993	26	Jan 1978	20	10	Jan 1994	9.0	5.1	1.5	.6	.1	10.4	4.9	2.1	.7

+ Also occurred on an earlier date(s) #Denotes trace amounts

@ Denotes mean number of days greater than 0 but less than .05

-9/-9.9 represents missing values

Annual statistics for Mean/Median snow depths are not appropriate

(1) Derived from Snow Climatology and 1971-2000 daily data

(2) Derived from 1971-2000 daily data

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Lat: 40° 10N

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Freeze Data									
Spring Freeze Dates (Month/Day)									
Temp (F)	Probability of later date in spring (thru Jul 31) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	5/29	5/24	5/20	5/17	5/14	5/11	5/07	5/03	4/28
32	5/14	5/09	5/06	5/03	4/30	4/28	4/25	4/21	4/17
28	5/02	4/27	4/23	4/20	4/17	4/14	4/11	4/07	4/02
24	4/20	4/14	4/10	4/06	4/03	3/31	3/27	3/23	3/17
20	4/11	4/04	3/31	3/27	3/23	3/19	3/15	3/11	3/04
16	3/31	3/24	3/19	3/15	3/12	3/08	3/04	2/27	2/21
Fall Freeze Dates (Month/Day)									
Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	9/27	10/01	10/04	10/06	10/09	10/11	10/14	10/17	10/21
32	10/06	10/11	10/15	10/17	10/20	10/23	10/26	10/29	11/03
28	10/17	10/22	10/26	10/29	11/01	11/04	11/07	11/11	11/16
24	10/27	11/02	11/06	11/09	11/13	11/16	11/20	11/24	11/29
20	11/10	11/16	11/21	11/24	11/28	12/01	12/05	12/09	12/15
16	11/21	11/28	12/04	12/08	12/12	12/16	12/21	12/26	1/02
Freeze Free Period									
Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	167	160	156	151	148	144	140	135	128
32	191	185	180	176	172	168	164	160	153
28	222	213	207	202	197	192	187	181	172
24	250	241	234	228	223	218	212	206	196
20	274	266	260	254	249	244	239	233	224
16	302	292	286	280	275	269	264	257	248

* Probability of observing a temperature as cold, or colder, later in the spring or earlier in the fall than the indicated date.

0/00 Indicates that the probability of occurrence of threshold temperature is less than the indicated probability.

Derived from 1971-2000 serially complete daily data

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Degree Days to Selected Base Temperatures (°F)

Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	1109	937	762	453	183	31	4	6	54	335	637	951	5462
60	954	797	607	309	95	7	0	0	14	210	488	796	4277
57	861	713	516	230	57	2	0	0	5	148	403	706	3641
55	799	657	459	183	38	1	0	0	2	114	349	650	3252
50	656	525	319	88	11	0	0	0	0	52	225	506	2382
32	223	145	34	0	0	0	0	0	0	0	13	133	548

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	136	132	294	538	893	1118	1296	1256	1024	700	366	204	7957
55	0	0	6	31	219	428	583	543	336	101	12	8	2267
57	0	0	2	19	175	370	521	481	279	73	7	3	1930
60	0	0	0	7	120	284	428	388	198	41	2	0	1468
65	0	0	0	1	54	158	277	239	88	12	0	0	829
70	0	0	0	0	17	68	141	114	24	2	0	0	366

Growing Degree Units (2)

Base	Growing Degree Units (Monthly)												Growing Degree Units (Accumulated Monthly)											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	37	54	171	371	682	903	1060	1026	800	473	201	63	37	91	262	633	1315	2218	3278	4304	5104	5577	5778	5841
45	13	23	98	246	529	753	905	871	650	326	115	30	13	36	134	380	909	1662	2567	3438	4088	4414	4529	4559
50	1	5	51	145	379	603	750	716	500	199	55	10	1	6	57	202	581	1184	1934	2650	3150	3349	3404	3414
55	0	0	23	73	244	454	595	561	356	106	21	0	0	0	23	96	340	794	1389	1950	2306	2412	2433	2433
60	0	0	5	32	139	313	440	406	225	46	6	0	0	0	5	37	176	489	929	1335	1560	1606	1612	1612
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	29	38	123	243	432	604	721	697	519	292	118	41	29	67	190	433	865	1469	2190	2887	3406	3698	3816	3857

(1) Derived from the 1971-2000 Monthly Normals

(2) Derived from 1971-2000 serially complete daily data

Note: For corn, temperatures below 50 are set to 50, and temperatures above 86 are set to 86

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Notes

- a. The monthly means are simple arithmetic averages computed by summing the monthly values for the period 1971-2000 and dividing by thirty. Prior to averaging, the data are adjusted if necessary to compensate for data quality issues, station moves or changes in station reporting practices. Missing months are replaced by estimates based on neighboring stations.
- b. The median is defined as the middle value in an ordered set of values. The median is being provided for the snow and precipitation elements because the mean can be a misleading value for precipitation normals.
- c. Only observed validated values were used to select the extreme daily values.
- d. Extreme monthly temperature/precipitation means were selected from the monthly normals data.
Monthly snow extremes were calculated from daily values quality controlled to be consistent with the Snow Climatology.
- e. Degree Days were derived using the same techniques as the 1971-2000 normals.
Complete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normal/usnormals.html
- f. Mean "number of days statistics" for temperature and precipitation were calculated from a serially complete daily data set.
Documentation of the serially complete data set is available from the link below:
- g. Snowfall and snow depth statistics were derived from the Snow Climatology.
Documentation for the Snow Climatology project is available from the link under references.

Data Sources for Tables

Several different data sources were used to create the Clim20 climate summaries. In some cases the daily extremes appear inconsistent with the monthly extremes and or the mean number of days statistics. For example, a high daily extreme value may not be reflected in the highest monthly value or the mean number of days threshold that is less than and equal to the extreme value. Some of these difference are caused by different periods of record. Daily extremes are derived from the station's entire period of record while the serial data and normals data were for the 1971-2000 period. Therefore extremes observed before 1971 would not be included in the 1971-2000 normals or the 1971-2000 serial daily data set. Inconsistencies can also occur when monthly values are adjusted to reflect the current observing conditions or were replaced during the 1971-2000 Monthly Normals processing and are not reconciled with the Summary of the Day data.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html
Snow Climatology Project Description, www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html
Eischeid, J. K., P. Pasteris, H. F. Diaz, M. Plantico, and N. Lott, 2000: Creating a serially complete, national daily time series of temperature and precipitation for the Western United States. J. Appl. Meteorol., 39, 1580-1591,
www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf