U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

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

Station: DOVER, DE **COOP ID: 072730**

Climate Division: DE 2 **NWS Call Sign:** **Elevation: 30 Feet** **Lat: 39˚09N** **Lon: 75˚31W**

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	43.7	26.9	35.3	76	1950	26	42.9	1998	-5	1985	21	25.2	1977	920	0	.0	.0	9.1	4.7	22.5	.2
Feb	46.8	28.5	37.7	77	1985	24	45.3	1990	-1	1979	18	26.2	1979	767	0	.0	.0	10.7	3.1	19.2	.1
Mar	55.2	35.6	45.4	86+	1990	12	51.1	1977	8	1960	7	39.8	1984	608	0	.0	.0	21.2	.3	12.1	.0
Apr	65.4	43.8	54.6	97+	1990	26	59.1	1994	17	1982	7	49.5	1975	316	4	.0	.3	28.6	.0	2.2	.0
May	74.8	53.8	64.3	97+	1991	30	70.9	1991	34+	1962	10	60.4	1992	100	77	.0	1.4	31.0	.0	.0	.0
Jun	82.9	62.8	72.9	100+	1952	26	76.8	1987	43+	1967	1	68.4	1979	7	243	@	5.3	30.0	.0	.0	.0
Jul	87.4	68.2	77.8	102+	1966	3	81.5	1987	45	1963	9	72.8	2000	0	396	.5	11.7	31.0	.0	.0	.0
Aug	85.5	66.9	76.2	102	1977	6	79.4	1980	45	1986	29	72.6	1992	0	348	.1	7.8	31.0	.0	.0	.0
Sep	79.5	60.3	69.9	99	1953	1	73.6	1980	38+	1963	24	67.1	2000	16	162	.0	2.0	30.0	.0	.0	.0
Oct	69.1	48.5	58.8	92	1959	5	64.9	1971	25	1969	24	53.1	1988	223	31	.0	.1	30.9	.0	1.2	.0
Nov	58.7	39.7	49.2	85	1950	1	55.6	1985	16	1976	30	43.2	1996	476	1	.0	.0	23.9	.0	7.7	.0
Dec	48.4	31.4	39.9	75+	1966	10	46.3	1984	1	1983	25	27.8	1989	779	0	.0	.0	13.5	2.1	18.2	.0
Ann	66.5	47.2	56.8	102+	Aug 1977	6	81.5	Jul 1987	-5	Jan 1985	21	25.2	Jan 1977	4212	1262	.6	28.6	290.9	10.2	83.1	.3

\+ 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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1948-2001

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

Issue Date: February 2004

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

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

Station: DOVER, DE

COOP ID: 072730

Climate Division: DE 2 **NWS Call Sign:** **Elevation: 30 Feet** **Lat: 39˚09N** **Lon: 75˚31W**

Precipitation (inches)

Precipitation Totals

Month	Means/ Medians(1) Mean	Means/ Medians(1) Median	Extremes Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year
Jan	3.94	3.54	2.68	1976	1	7.67	1979	.35	1981
Feb	3.04	2.82	2.58	1979	25	6.27	1971	.66	1978
Mar	4.40	4.22	3.33	2000	22	9.24	1994	1.59	1981
Apr	3.47	3.69	2.41	1970	14	8.13	1983	.65	1985
May	4.29	4.54	4.01	1984	30	7.81	1990	.90	1999
Jun	3.77	3.17	3.81	1983	21	9.90	1996	.95	1993
Jul	4.16	3.68	8.50	1975	13	14.24	1975	1.07	1974
Aug	4.73	4.19	6.03	1967	4	10.93	1971	1.17	1972
Sep	4.56	3.88	6.33	1960	12	10.52	1971	1.00	1978
Oct	3.26	2.75	3.76	1966	19	8.09	1976	.26	2000
Nov	3.16	2.93	3.35	1950	25	6.55	1997	.54	1991
Dec	3.50	2.96	2.94	1969	26	8.39	1996	.80	1980
Ann	46.28	43.79	8.50	Jul 1975	13	14.24	Jul 1975	.26	Oct 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.7	7.0	2.7	1.0
Feb	9.1	6.1	2.2	.6
Mar	10.5	7.3	3.4	1.2
Apr	10.9	7.4	2.5	.6
May	10.9	7.8	2.8	1.0
Jun	9.3	6.5	2.6	.8
Jul	9.7	7.0	2.4	1.0
Aug	8.4	6.5	2.8	1.4
Sep	8.3	6.1	2.8	1.4
Oct	7.8	5.0	2.3	1.2
Nov	8.3	5.9	2.1	.8
Dec	10.1	6.6	2.3	.8
Ann	114.0	79.2	30.9	11.8

Precipitation Probabilities (1)

Probability that the monthly/annual precipitation will be equal to or less than the indicated amount

Monthly/Annual Precipitation vs Probability Levels
These values were determined from the incomplete gamma distribution

Month	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	1.16	1.53	2.09	2.58	3.05	3.55	4.09	4.73	5.56	6.86	8.07
Feb	.88	1.17	1.60	1.98	2.35	2.73	3.15	3.65	4.29	5.30	6.24
Mar	1.51	1.93	2.53	3.05	3.54	4.04	4.59	5.24	6.06	7.34	8.51
Apr	1.12	1.45	1.94	2.35	2.75	3.17	3.62	4.15	4.83	5.89	6.87
May	1.23	1.64	2.25	2.79	3.31	3.85	4.45	5.16	6.08	7.51	8.85
Jun	1.04	1.39	1.94	2.41	2.88	3.36	3.90	4.54	5.37	6.67	7.88
Jul	1.21	1.60	2.20	2.71	3.22	3.74	4.32	5.00	5.89	7.27	8.56
Aug	1.71	2.15	2.79	3.33	3.85	4.37	4.94	5.61	6.46	7.77	8.97
Sep	1.51	1.94	2.58	3.12	3.63	4.17	4.75	5.44	6.31	7.68	8.93
Oct	.83	1.14	1.61	2.03	2.45	2.88	3.36	3.94	4.69	5.87	6.98
Nov	.71	1.00	1.46	1.88	2.29	2.74	3.24	3.83	4.61	5.86	7.04
Dec	.91	1.24	1.74	2.19	2.63	3.10	3.61	4.22	5.02	6.28	7.46
Ann	33.86	36.29	39.39	41.73	43.81	45.81	47.87	50.14	52.88	56.85	60.28

\+ 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: 1948-2001
(3) Derived from 1971-2000 serially complete daily data

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Services

Climatography of the United States No. 20 1971-2000

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

Station: DOVER, DE **COOP ID: 072730**

Climate Division: DE 2 **NWS Call Sign:** **Elevation: 30 Feet** **Lat: 39°09N** **Lon: 75°31W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	4.5	2.3	1	#
Feb	6.9	3.4	1	#
Mar	.9	.0	#	0
Apr	.0	.0	#	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.0	.0	#	0
Nov	.1	.0	#	0
Dec	1.5	.0	#	0
Ann	13.9	5.7	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	12.0	1987	26	16.0	2000	16	1987	26	3	1996
Feb	25.0	1979	19	36.5	1979	25	1979	19	5	1979
Mar	6.0	1980	2	8.7	1978	5	1978	3	#+	1996
Apr	.3	1972	8	.3	1972	#	1972	8	#	1972
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	1.0	1979	10	1.0	1979	1	1979	10	#	1979
Nov	1.5	1978	27	1.5	1978	5	1989	23	#+	1989
Dec	5.6	1989	13	12.9	1989	9	1989	13	3	1989
Ann	25.0	Feb 1979	19	36.5	Feb 1979	25	Feb 1979	19	5	Feb 1979

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	2.1	1.5	.6	.3	.1
Feb	1.8	1.5	.8	.4	.1
Mar	.6	.3	.1	.1	.0
Apr	@	.0	.0	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	@	@	.0	.0	.0
Nov	@	@	.0	.0	.0
Dec	.8	.5	.2	.1	.0
Ann	5.3	3.8	1.7	.9	.2

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	3.6	2.3	1.2	.4
Feb	2.9	1.8	.8	.1
Mar	.6	.1	.1	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	@	.0	.0	.0
Nov	.0	.0	.0	.0
Dec	1.5	.9	.4	.0
Ann	8.6	5.1	2.5	.5

+ 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

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

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

Station: DOVER, DE **COOP ID: 072730**

Climate Division: DE 2 **NWS Call Sign:** **Elevation: 30 Feet** **Lat: 39˚09N** **Lon: 75˚31W**

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	5/01	4/27	4/24	4/22	4/20	4/17	4/15	4/12	4/08
32	4/20	4/16	4/13	4/10	4/08	4/05	4/03	3/31	3/26
28	4/10	4/06	4/03	3/31	3/28	3/26	3/23	3/20	3/16
24	3/29	3/24	3/21	3/18	3/15	3/13	3/10	3/06	3/02
20	3/25	3/17	3/11	3/06	3/01	2/24	2/19	2/13	2/05
16	3/07	3/01	2/25	2/21	2/18	2/14	2/11	2/06	1/30

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	10/04	10/09	10/13	10/16	10/18	10/21	10/24	10/28	11/01
32	10/14	10/20	10/24	10/27	10/30	11/03	11/06	11/10	11/16
28	10/28	11/03	11/06	11/10	11/13	11/16	11/19	11/23	11/28
24	11/13	11/18	11/22	11/25	11/28	12/01	12/05	12/09	12/14
20	11/29	12/04	12/08	12/11	12/14	12/16	12/19	12/23	12/28
16	12/08	12/15	12/21	12/25	12/30	1/03	1/08	1/14	1/22

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	203	195	190	185	181	177	172	167	159
32	225	218	213	209	205	201	196	191	184
28	249	242	237	233	229	224	220	215	208
24	277	270	265	261	257	254	249	245	238
20	316	306	299	293	287	281	275	268	258
16	347	333	325	319	314	308	303	296	288

***** 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

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

U.S. Department of Commerce
National Oceanic & Atmospheric Administration
National Environmental Satellite, Data,
and Information Service

Climatography of the United States No. 20 1971-2000

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

Station: DOVER, DE **COOP ID: 072730**

Climate Division: DE 2 **NWS Call Sign:** **Elevation: 30 Feet** **Lat: 39˚09N** **Lon: 75˚31W**

Degree Days to Selected Base Temperatures (˚F)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	920	767	608	316	100	7	0	0	16	223	476	779	4212
60	765	627	453	184	36	1	0	0	2	122	334	624	3148
57	672	543	366	120	16	0	0	0	1	78	255	538	2589
55	617	493	309	85	8	0	0	0	0	55	208	481	2256
50	472	364	184	27	1	0	0	0	0	18	112	344	1522
32	102	59	6	0	0	0	0	0	0	0	1	48	216

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	205	217	421	678	1000	1226	1419	1371	1137	832	517	292	9315
55	7	7	11	73	295	536	706	658	447	174	33	12	2959
57	0	0	6	48	241	476	644	596	387	135	20	8	2561
60	0	0	0	22	169	386	551	503	299	85	9	1	2025
65	0	0	0	4	77	243	396	348	162	31	1	0	1262
70	0	0	0	0	25	122	244	200	59	8	0	0	658

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	67	94	217	444	756	988	1169	1120	891	580	295	115	67	161	378	822	1578	2566	3735	4855	5746	6326	6621	6736
45	29	45	120	304	601	838	1014	965	741	430	178	55	29	74	194	498	1099	1937	2951	3916	4657	5087	5265	5320
50	6	21	60	180	447	688	859	810	591	284	99	24	6	27	87	267	714	1402	2261	3071	3662	3946	4045	4069
55	0	4	30	97	299	538	704	655	442	165	44	6	0	4	34	131	430	968	1672	2327	2769	2934	2978	2984
60	0	0	7	45	172	389	549	500	300	79	12	0	0	0	7	52	224	613	1162	1662	1962	2041	2053	2053
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	36	55	124	258	464	671	813	781	592	345	166	58	36	91	215	473	937	1608	2421	3202	3794	4139	4305	4363

(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.
Compete documentation for the 1971-2000 Normals is available on the internet from:
www.ncdc.noaa.gov/oa/climate/normals/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 are 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.

a. Temperature/ Precipitation Tables
   1. 1971-2000 Monthly Normals
   2. Cooperative Summary of the Day
   3. National Weather Service station records
   4. 1971-2000 serially complete daily data

b. Degree Day Table
   1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals
   2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data

c. Snow Tables
   1. Snow Climatology
   2. Cooperative Summary of the Day

d. Freeze Data Table
   1971-2000 serially complete daily data

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normals.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normals/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