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: PARMA EXPERIMENT STN, ID **COOP ID: 106844**

Climate Division: ID 5 **NWS Call Sign:** **Elevation: 2,290 Feet** **Lat: 43˚48N** **Lon: 116˚57W**

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	35.5	18.8	27.2	65+	1953	9	35.3	1998	-33	1930	22	13.1	1979	1174	0	.0	.0	1.5	11.1	28.5	2.8
Feb	43.6	24.3	34.0	67+	1995	26	41.1	1995	-25	1989	7	16.1	1989	868	0	.0	.0	8.0	3.6	24.2	.9
Mar	55.7	30.1	42.9	84	1978	30	47.9	1986	2	1993	1	37.3+	1985	686	0	.0	.0	24.4	.3	20.4	.0
Apr	64.5	35.7	50.1	94	1946	25	55.6	1990	13	1936	1	43.7	1975	448	2	.0	.1	29.0	.0	10.1	.0
May	72.8	43.6	58.2	100+	2001	25	63.5	1992	22	1970	11	53.4	1977	230	20	@	1.8	30.9	.0	1.4	.0
Jun	81.5	49.8	65.7	106+	1974	18	71.2+	1986	31	1976	26	61.6	1980	78	98	.6	6.8	30.0	.0	.1	.0
Jul	90.6	54.2	72.4	109+	1934	28	78.4	1998	33	1948	30	65.3	1993	16	246	3.8	18.7	31.0	.0	.0	.0
Aug	90.4	52.0	71.2	107	1929	13	77.1	1971	34+	1992	25	65.9	1976	26	219	3.6	18.8	31.0	.0	.0	.0
Sep	79.7	43.1	61.4	102+	1998	3	68.5	1998	15	1926	25	54.8	1985	167	59	.1	5.3	30.0	.0	1.8	.0
Oct	66.6	33.5	50.1	95	1997	2	58.0	1988	14	1971	28	45.5	1985	464	1	.0	.1	30.4	.0	14.0	.0
Nov	48.5	26.5	37.5	78	1924	2	42.9	1999	-9	1955	15	27.6	1985	825	0	.0	.0	14.3	1.3	23.2	.3
Dec	36.9	19.7	28.3	68+	1964	22	36.4	1977	-35	1924	25	11.1	1985	1138	0	.0	.0	2.4	8.1	28.1	2.5
Ann	63.9	35.9	49.9	109+	Jul 1934	28	78.4	Jul 1998	-35	Dec 1924	25	11.1	Dec 1985	6120	645	8.1	51.6	262.9	24.4	151.8	6.5

\+ 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: 1922-2001

(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: PARMA EXPERIMENT STN, ID **COOP ID: 106844**

Climate Division: ID 5 **NWS Call Sign:** **Elevation: 2,290 Feet** **Lat: 43˚48N** **Lon: 116˚57W**

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	1.38	1.35	1.70	1999	26	3.62	1978	.00	1985
Feb	1.01	1.08	.71+	1981	14	2.12	1999	.03	1988
Mar	1.25	1.16	.92	1981	21	3.05	1983	.07	1994
Apr	.96	.85	.86	1933	29	3.36	1978	.02	1987
May	1.13	.88	1.45	1958	12	4.22	1998	.16	1978
Jun	.84	.64	1.13	1975	19	2.70	1972	.02	1973
Jul	.35	.18	1.22	1965	9	1.34	1997	.00+	2000
Aug	.41	.22	1.57	1979	14	2.08	1979	.00+	2000
Sep	.65	.47	1.55	1959	14	2.55	1980	.00+	1999
Oct	.67	.59	1.20	1923	4	2.07	2000	.00+	1988
Nov	1.23	1.09	.83	1993	30	2.45	1988	.29	1976
Dec	1.27	1.14	1.13	1968	24	2.74	1982	.05	1989
Ann	11.15	10.45	1.70	Jan 1999	26	4.22	May 1998	.00+	Aug 2000

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.8	4.7	.4	.1
Feb	8.6	3.6	.1	.0
Mar	10.0	4.1	.2	.0
Apr	8.3	3.7	.1	.0
May	7.4	3.6	.4	@
Jun	5.3	2.4	.3	@
Jul	2.9	1.3	.1	.0
Aug	3.0	1.2	.1	.1
Sep	4.1	2.1	.3	.0
Oct	5.2	2.3	.3	.0
Nov	10.3	3.8	.3	.0
Dec	9.9	4.2	.3	.0
Ann	84.8	37.0	2.9	.2

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	.26	.45	.69	.88	1.06	1.25	1.45	1.69	2.01	2.50	2.96
Feb	.15	.24	.38	.52	.67	.83	1.01	1.23	1.53	2.02	2.49
Mar	.29	.40	.59	.75	.92	1.09	1.29	1.52	1.83	2.31	2.77
Apr	.15	.23	.37	.51	.64	.79	.97	1.18	1.46	1.91	2.35
May	.12	.21	.37	.52	.69	.88	1.10	1.38	1.75	2.37	2.97
Jun	.07	.13	.24	.35	.48	.63	.80	1.02	1.32	1.82	2.31
Jul	.00	.00	.00	.10	.17	.25	.34	.45	.60	.84	1.07
Aug	.00	.01	.04	.09	.15	.23	.34	.48	.68	1.05	1.43
Sep	.00	.00	.05	.14	.25	.39	.56	.79	1.11	1.66	2.22
Oct	.00	.00	.18	.30	.41	.54	.68	.85	1.08	1.45	1.81
Nov	.31	.43	.61	.77	.92	1.09	1.27	1.49	1.77	2.22	2.64
Dec	.19	.29	.48	.65	.83	1.03	1.27	1.55	1.93	2.55	3.15
Ann	7.61	8.28	9.15	9.82	10.41	10.99	11.58	12.25	13.05	14.23	15.25

\+ 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: 1922-2001
(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: PARMA EXPERIMENT STN, ID **COOP ID: 106844**

Climate Division: ID 5 **NWS Call Sign:** **Elevation: 2,290 Feet** **Lat: 43°48N** **Lon: 116°57W**

Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	7.3	8.0	3	1
Feb	1.3	.3	1	#
Mar	.8	.0	#	0
Apr	#	.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	1.7	.0	#	#
Dec	6.1	5.8	1	1
Ann	17.2	14.1	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	8.5	1977	3	14.6	1987	19	1993	19	12	1982
Feb	6.0	1989	16	8.5	1993	13	1989	17	9	1989
Mar	3.5	1976	1	5.5	1976	5	1993	4	1	1993
Apr	#	1984	25	#+	1984	#	1975	4	#	1975
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	1971	27	1.0	1971	1+	1991	29	#+	1991
Nov	7.0	1977	22	10.0+	1994	11	1985	28	3	1994
Dec	7.0	1988	25	14.8	1988	21	1983	31	7	1983
Ann	8.5	Jan 1977	3	14.8	Dec 1988	21	Dec 1983	31	12	Jan 1982

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	3.3	2.3	.7	.2	.0
Feb	1.0	.8	.1	@	.0
Mar	.6	.4	.1	.0	.0
Apr	.0	.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	1.3	1.1	.3	@	.0
Dec	2.3	1.8	.6	.1	.0
Ann	8.5	6.4	1.8	.3	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	11.1	7.6	5.4	1.5
Feb	3.5	1.9	1.1	.1
Mar	.8	.4	.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	1.8	.9	.6	.0
Dec	6.2	5.1	1.4	.2
Ann	23.4	15.9	8.6	1.8

+ 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: PARMA EXPERIMENT STN, ID **COOP ID: 106844**

Climate Division: ID 5 **NWS Call Sign:** **Elevation: 2,290 Feet** **Lat: 43˚48N** **Lon: 116˚57W**

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	6/16	6/09	6/03	5/30	5/26	5/21	5/17	5/11	5/04
32	5/29	5/22	5/17	5/13	5/09	5/05	4/30	4/25	4/18
28	5/08	4/30	4/25	4/21	4/16	4/12	4/07	4/02	3/26
24	4/18	4/11	4/06	4/02	3/29	3/25	3/21	3/16	3/10
20	4/05	3/27	3/21	3/16	3/11	3/06	2/28	2/22	2/13
16	3/07	2/27	2/21	2/15	2/11	2/06	1/31	1/25	1/17

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	9/01	9/06	9/10	9/13	9/16	9/19	9/22	9/26	10/01
32	9/16	9/20	9/22	9/25	9/27	9/29	10/02	10/04	10/08
28	9/24	9/29	10/03	10/07	10/10	10/13	10/16	10/20	10/26
24	10/04	10/11	10/16	10/20	10/24	10/28	11/01	11/06	11/13
20	10/19	10/26	10/30	11/03	11/07	11/10	11/14	11/19	11/25
16	11/05	11/12	11/17	11/21	11/25	11/29	12/03	12/07	12/14

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	143	132	125	118	113	107	100	93	83
32	161	154	149	145	140	136	132	127	120
28	202	193	186	181	176	171	165	159	150
24	237	227	220	214	208	202	196	189	179
20	276	264	255	247	240	233	226	217	205
16	320	308	300	293	286	280	273	265	253

***** 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: PARMA EXPERIMENT STN, ID **COOP ID: 106844**

Climate Division: ID 5 **NWS Call Sign:** **Elevation: 2,290 Feet** **Lat: 43˚48N** **Lon: 116˚57W**

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	1174	868	686	448	230	78	16	26	167	464	825	1138	6120
60	1019	728	531	308	121	25	2	6	84	314	675	983	4796
57	927	649	438	231	74	11	0	2	49	232	585	890	4088
55	867	597	378	186	50	5	0	1	32	182	525	828	3651
50	724	467	238	95	14	0	0	0	9	84	387	683	2701
32	282	130	9	0	0	0	0	0	0	0	59	240	720

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	131	186	346	544	813	1009	1253	1216	882	560	224	126	7290
55	3	9	2	39	150	324	540	504	224	29	1	0	1825
57	0	5	0	25	112	270	478	443	181	16	0	0	1530
60	0	0	0	11	66	195	387	354	126	6	0	0	1145
65	0	0	0	2	20	98	246	219	59	1	0	0	645
70	0	0	0	0	3	36	133	115	21	0	0	0	308

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	1	30	135	313	573	778	1015	979	652	329	58	8	1	31	166	479	1052	1830	2845	3824	4476	4805	4863	4871
45	0	6	52	189	419	628	860	824	502	190	15	1	0	6	58	247	666	1294	2154	2978	3480	3670	3685	3686
50	0	0	13	94	278	478	705	669	355	92	0	0	0	0	13	107	385	863	1568	2237	2592	2684	2684	2684
55	0	0	0	41	158	334	550	515	222	31	0	0	0	0	0	41	199	533	1083	1598	1820	1851	1851	1851
60	0	0	0	13	80	210	395	362	118	6	0	0	0	0	0	13	93	303	698	1060	1178	1184	1184	1184
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	0	22	112	229	365	490	619	592	440	272	48	4	0	22	134	363	728	1218	1837	2429	2869	3141	3189	3193

(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