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: GRENADA 5 NNE, MS **COOP ID: 223645**

Climate Division: MS 2 **NWS Call Sign:** **Elevation: 280 Feet** **Lat: 33˚53N** **Lon: 89˚47W**

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	51.6	30.0	40.8	83	1972	24	48.3	1999	-12	1966	30	30.8	1977	750	0	.0	.0	17.4	1.8	18.8	@
Feb	57.0	33.1	45.1	84	1977	26	53.0	1976	4+	1996	4	34.3	1978	559	0	.0	.0	20.3	1.1	14.3	.0
Mar	65.8	41.0	53.4	89	1963	31	59.5	1974	12	1996	9	48.1	1978	369	9	.0	.0	28.3	.1	6.9	.0
Apr	73.8	48.5	61.2	93	1987	22	67.4	1981	22	1987	4	55.9	1983	157	42	.0	.1	29.8	.0	1.1	.0
May	80.7	57.7	69.2	98+	1977	31	74.1	1977	37	1976	4	62.7	1997	41	172	.0	2.0	31.0	.0	.0	.0
Jun	87.7	65.7	76.7	105	1954	28	80.2	1977	44	1966	1	71.0	1997	1	352	.2	12.2	30.0	.0	.0	.0
Jul	91.3	69.4	80.4	104+	1954	1	83.4	1980	52	1967	15	77.4	1994	0	475	.6	21.8	31.0	.0	.0	.0
Aug	90.6	67.6	79.1	105+	1954	28	83.2	2000	51	1986	29	74.5	1992	0	437	.6	20.5	31.0	.0	.0	.0
Sep	85.4	61.0	73.2	105+	1954	4	78.5	1998	35	1967	29	68.7	1974	12	259	.1	9.1	30.0	.0	.0	.0
Oct	75.7	48.4	62.1	98	1954	3	68.5	1971	25	1987	22	55.3	1987	156	63	.0	.9	30.9	.0	1.3	.0
Nov	64.3	39.8	52.1	87+	1955	14	57.1	1985	15+	1970	24	44.5	1976	395	7	.0	.0	27.0	.1	8.3	.0
Dec	55.1	33.0	44.1	83	1962	1	53.9	1984	1	1983	25	34.4	2000	651	1	.0	.0	21.0	.9	16.2	.1
Ann	73.3	49.6	61.5	105+	Sep 1954	4	83.4	Jul 1980	-12	Jan 1966	30	30.8	Jan 1977	3091	1817	1.5	66.6	327.7	4.0	66.9	.1

\+ 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: 1930-2001

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Issue Date: February 2004

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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	5.65	5.30	5.17	1932	12	12.42	1974	.59	1986
Feb	4.81	4.17	6.13	1991	19	11.37	1991	1.00	1972
Mar	6.21	5.25	7.43	1973	16	17.47	1973	2.03	1982
Apr	5.72	5.74	5.22	1979	12	16.75	1991	1.25	1981
May	5.09	4.60	4.20	1997	3	12.33	1978	.87	1992
Jun	5.15	5.31	3.80	1996	12	11.89	1974	.07	1988
Jul	4.67	3.71	6.29	1957	1	17.23	1994	1.05	2000
Aug	2.95	2.39	3.70	1940	10	11.38	1985	.01	1983
Sep	4.04	3.25	7.05	1958	20	8.38	1996	.33	1995
Oct	3.41	3.22	3.50	1977	25	10.04	1984	.16	1987
Nov	5.43	4.56	8.21	1948	19	12.78	1977	1.54	1981
Dec	5.93	4.68	6.47	1982	26	21.24	1982	.68	1980
Ann	59.06	59.84	8.21	Nov 1948	19	21.24	Dec 1982	.01	Aug 1983

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.9	8.2	3.7	1.5
Feb	9.1	6.7	3.3	1.5
Mar	10.4	7.7	4.1	1.9
Apr	8.6	6.3	3.6	1.9
May	9.7	7.1	3.3	1.6
Jun	8.6	6.6	3.3	1.8
Jul	8.7	6.2	3.0	1.5
Aug	6.3	4.6	2.0	1.0
Sep	7.7	5.3	2.4	1.2
Oct	6.3	4.5	2.0	1.1
Nov	9.0	6.9	3.5	1.8
Dec	9.6	7.7	3.6	1.8
Ann	104.9	77.8	37.8	18.6

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	1.58	2.12	2.93	3.64	4.33	5.06	5.86	6.81	8.04	9.97	11.77
Feb	1.40	1.86	2.55	3.14	3.72	4.33	4.99	5.78	6.79	8.38	9.86
Mar	2.22	2.80	3.65	4.36	5.04	5.74	6.49	7.37	8.50	10.24	11.83
Apr	1.25	1.78	2.62	3.37	4.14	4.95	5.86	6.95	8.39	10.68	12.85
May	1.15	1.62	2.36	3.04	3.71	4.42	5.22	6.18	7.44	9.44	11.33
Jun	.81	1.25	2.00	2.71	3.44	4.24	5.16	6.28	7.78	10.22	12.56
Jul	1.23	1.67	2.34	2.94	3.53	4.14	4.83	5.64	6.69	8.36	9.92
Aug	.36	.59	1.00	1.41	1.85	2.34	2.91	3.61	4.56	6.13	7.65
Sep	.81	1.17	1.77	2.31	2.86	3.45	4.11	4.92	5.98	7.68	9.29
Oct	.38	.64	1.12	1.59	2.10	2.67	3.34	4.17	5.30	7.16	8.97
Nov	1.55	2.07	2.85	3.52	4.18	4.87	5.63	6.53	7.69	9.52	11.21
Dec	1.22	1.76	2.63	3.42	4.22	5.08	6.04	7.21	8.75	11.21	13.54
Ann	39.76	43.42	48.15	51.77	55.00	58.15	61.41	65.03	69.44	75.89	81.49

+ 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: 1930-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	.3	.0	#	0
Feb	.4	.0	#	0
Mar	.2	.0	#	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	0
Nov	.0	.0	#	0
Dec	.0	.0	#	0
Ann	.9	.0	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	5.5	2000	28	5.5	2000	4	1992	20	#+	1997
Feb	2.5	1971	8	2.5	1971	2	1995	12	#+	1996
Mar	3.5	1993	13	3.5	1993	4	1993	13	#+	1996
Apr	.0	0	0	.0	0	0	0	0	0	0
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	.0	0	0	.0	0	0	0	0	0	0
Nov	.8	1991	8	.8	1991	1	1991	8	#	1991
Dec	.1	1985	20	.1	1985	#+	1996	19	#+	1996
Ann	5.5	Jan 2000	28	5.5	Jan 2000	4+	Mar 1993	13	#+	Jan 1997

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.2	.2	.1	.1	.0
Feb	.2	.2	.0	.0	.0
Mar	.1	.1	.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	.0	.0
Nov	.1	.0	.0	.0	.0
Dec	.1	.0	.0	.0	.0
Ann	.7	.5	.2	.1	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.1	.0	.0	.0
Feb	.1	.0	.0	.0
Mar	@	@	.0	.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	.0
Nov	@	.0	.0	.0
Dec	.0	.0	.0	.0
Ann	.2	@	.0	.0

+ 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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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	4/21	4/18	4/15	4/13	4/11	4/09	4/07	4/04	3/31
32	4/17	4/12	4/08	4/05	4/02	3/30	3/26	3/23	3/17
28	3/31	3/25	3/20	3/16	3/12	3/08	3/04	2/27	2/21
24	3/16	3/09	3/04	2/28	2/23	2/19	2/15	2/10	2/03
20	3/11	3/02	2/23	2/18	2/13	2/07	2/02	1/26	1/17
16	2/23	2/14	2/07	2/01	1/26	1/19	1/10	0/00	0/00

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	10/06	10/11	10/14	10/17	10/19	10/22	10/25	10/28	11/01
32	10/12	10/19	10/23	10/27	10/31	11/03	11/07	11/12	11/18
28	10/26	11/02	11/08	11/12	11/16	11/21	11/25	11/30	12/08
24	11/09	11/16	11/21	11/25	11/30	12/04	12/08	12/13	12/20
20	11/22	12/01	12/07	12/12	12/17	12/22	12/27	1/02	1/11
16	12/09	12/18	12/25	1/01	1/07	1/14	1/23	0/00	0/00

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	206	201	197	194	191	188	184	181	175
32	234	226	220	216	211	207	202	196	189
28	280	270	262	255	249	243	236	228	217
24	307	297	290	284	278	273	267	260	250
20	342	325	317	309	303	297	291	283	273
16	>365	>365	>365	>365	345	334	325	316	305

***** 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)

Heating Degree Days (1)

Base Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	750	559	369	157	41	1	0	0	12	156	395	651	3091
60	604	426	237	73	11	0	0	0	2	76	263	508	2200
57	518	348	172	39	4	0	0	0	0	44	196	424	1745
55	462	299	135	24	2	0	0	0	0	28	157	371	1478
50	333	192	64	5	0	0	0	0	0	7	81	255	937
32	51	11	0	0	0	0	0	0	0	0	1	28	91

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	324	376	663	875	1153	1341	1498	1460	1236	931	603	400	10860
55	21	20	85	208	442	651	785	747	546	246	70	31	3852
57	15	13	60	164	382	591	723	685	487	199	48	22	3389
60	9	7	32	108	296	501	630	592	398	138	25	13	2749
65	0	0	9	42	172	352	475	437	259	63	7	1	1817
70	0	0	0	11	81	211	320	284	142	22	0	0	1071

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	160	234	448	649	919	1115	1261	1224	1011	700	390	210	160	394	842	1491	2410	3525	4786	6010	7021	7721	8111	8321
45	92	141	315	500	764	965	1106	1069	861	547	264	126	92	233	548	1048	1812	2777	3883	4952	5813	6360	6624	6750
50	47	77	201	361	609	815	951	914	711	396	165	71	47	124	325	686	1295	2110	3061	3975	4686	5082	5247	5318
55	20	36	115	234	455	665	796	759	562	260	91	35	20	56	171	405	860	1525	2321	3080	3642	3902	3993	4028
60	7	14	53	127	307	515	641	604	416	149	41	9	7	21	74	201	508	1023	1664	2268	2684	2833	2874	2883
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	108	158	283	414	609	767	864	832	680	461	251	138	108	266	549	963	1572	2339	3203	4035	4715	5176	5427	5565

(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