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: MINDEN, LA **COOP ID: 166244**

Climate Division: LA 1 **NWS Call Sign:** **Elevation: 185 Feet** **Lat: 32˚36N** **Lon: 93˚18W**

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	55.5	33.0	44.3	82+	1950	25	50.1	1998	0	1962	12	35.2	1977	643	0	.0	.0	20.4	.8	16.6	.0
Feb	60.8	36.5	48.7	85+	1977	26	56.1	1976	4	1951	1	38.0	1978	458	0	.0	.0	22.8	.6	11.3	.0
Mar	68.3	43.8	56.1	91	1995	24	62.0	1974	17	1996	9	51.3	1996	287	10	.0	@	29.4	.0	4.2	.0
Apr	75.6	51.1	63.4	94	1987	21	70.1	1981	25	1987	1	57.5	1983	116	67	.0	.2	29.9	.0	.6	.0
May	82.4	60.5	71.5	97+	1977	31	75.9	1996	39	1960	12	67.2	1976	16	215	.0	3.2	31.0	.0	.0	.0
Jun	88.9	68.1	78.5	102+	1969	29	84.3	1998	49	1984	1	74.9	1974	0	405	.4	15.9	30.0	.0	.0	.0
Jul	92.1	71.7	81.9	107	1980	18	87.6	1998	57+	1967	15	79.1	1972	0	524	2.2	24.5	31.0	.0	.0	.0
Aug	92.3	70.5	81.4	108	1951	18	85.3	1999	52	1986	30	77.4	1992	0	508	2.2	24.4	31.0	.0	.0	.0
Sep	86.7	64.2	75.5	108	2000	1	81.2	1980	37+	1967	29	68.9	1974	6	319	.5	13.2	30.0	.0	.0	.0
Oct	77.6	52.0	64.8	97	1954	6	69.5	1971	27+	1989	20	58.2	1976	88	81	.0	1.5	30.9	.0	.3	.0
Nov	66.8	42.6	54.7	88	1955	14	60.7	1973	12	1959	28	47.8	1976	319	11	.0	.0	28.1	@	5.4	.0
Dec	58.1	35.2	46.7	83	1998	7	57.1	1984	2+	1989	23	37.6	1989	572	3	.0	.0	23.6	.6	14.2	.0
Ann	75.4	52.4	64.0	108+	Sep 2000	1	87.6	Jul 1998	0	Jan 1962	12	35.2	Jan 1977	2505	2143	5.3	82.9	338.1	2.0	52.6	.0

\+ 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

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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	5.28	4.62	5.90	1999	29	16.43	1999	.46	1986
Feb	4.68	4.55	4.37	1991	19	10.67	1983	.45	1996
Mar	4.97	5.00	5.06	1974	12	9.88	1997	1.19	1986
Apr	5.20	3.44	12.87	1991	13	33.91	1991	.44	1987
May	5.32	4.19	6.72	1989	5	11.67	1989	.86	1998
Jun	4.88	4.09	3.90	1999	25	10.82	1989	.61	1988
Jul	4.08	3.24	4.77	1989	1	9.76	1989	.00	1986
Aug	2.69	2.48	3.40	1978	29	7.43	1998	.35	1999
Sep	3.75	3.59	3.94	1968	16	9.88	1974	.51	1994
Oct	4.06	3.10	6.00	1949	5	13.13	1985	.52	1983
Nov	5.33	4.96	6.30	1969	18	15.23	1986	1.06	1981
Dec	4.96	4.74	3.17	1965	12	11.53	1982	.70	1980
Ann	55.20	55.49	12.87	Apr 1991	13	33.91	Apr 1991	.00	Jul 1986

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.2	7.1	3.3	1.7
Feb	7.6	5.9	3.4	1.6
Mar	9.0	7.2	3.4	1.5
Apr	7.0	5.6	2.8	1.4
May	8.4	6.9	3.4	1.7
Jun	8.1	6.2	3.0	1.7
Jul	7.6	5.7	3.0	1.2
Aug	5.9	4.5	1.8	.7
Sep	6.6	5.0	2.5	1.3
Oct	6.5	5.0	2.6	1.4
Nov	8.0	6.5	3.4	1.9
Dec	8.9	7.0	3.5	1.8
Ann	92.8	72.6	36.1	17.9

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	.86	1.31	2.08	2.81	3.56	4.37	5.31	6.44	7.96	10.43	12.79
Feb	1.03	1.46	2.14	2.76	3.39	4.05	4.79	5.68	6.85	8.72	10.49
Mar	1.69	2.16	2.85	3.43	3.98	4.56	5.19	5.92	6.86	8.32	9.66
Apr	.61	1.02	1.75	2.47	3.24	4.10	5.11	6.35	8.04	10.82	13.52
May	1.28	1.78	2.55	3.25	3.93	4.66	5.47	6.44	7.71	9.73	11.62
Jun	.91	1.34	2.06	2.72	3.40	4.12	4.95	5.95	7.28	9.41	11.45
Jul	.52	1.03	1.73	2.31	2.89	3.51	4.20	5.03	6.12	7.87	9.52
Aug	.47	.70	1.10	1.46	1.84	2.25	2.72	3.29	4.04	5.26	6.43
Sep	.62	.95	1.49	2.01	2.54	3.12	3.78	4.58	5.65	7.39	9.05
Oct	.56	.89	1.47	2.04	2.63	3.28	4.03	4.96	6.20	8.24	10.21
Nov	1.41	1.91	2.69	3.36	4.03	4.73	5.51	6.43	7.63	9.53	11.29
Dec	1.42	1.89	2.60	3.22	3.82	4.45	5.15	5.97	7.03	8.70	10.25
Ann	35.81	39.43	44.15	47.77	51.02	54.20	57.50	61.17	65.67	72.26	78.01

\+ 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
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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	.8	.0	#	0
Feb	.1	.0	#	0
Mar	.0	.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	0
Nov	.1	.0	#	0
Dec	.0	.0	#	0
Ann	1.0	.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	4.5	1977	31	4.5	1977	5	1982	14	#+	1997
Feb	1.2	1985	2	1.9	1985	2	1985	3	#+	1996
Mar	.5	1971	3	.5	1971	1+	1993	13	#+	1993
Apr	#	1987	2	#	1987	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	1.0	1980	27	1.0	1980	1	1980	27	#	1980
Dec	.3	1996	16	.3	1996	3	1983	17	#+	2000
Ann	4.5	Jan 1977	31	4.5	Jan 1977	5	Jan 1982	14	#+	Dec 2000

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.6	.4	.1	.0	.0
Feb	.2	.1	.0	.0	.0
Mar	.1	.0	.0	.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	.1	.0	.0	.0
Dec	.1	.0	.0	.0	.0
Ann	1.1	.6	.1	.0	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.3	@	@	.0
Feb	.1	.0	.0	.0
Mar	@	.0	.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	.4	@	@	.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	4/15	4/11	4/07	4/05	4/02	3/31	3/28	3/25	3/21
32	4/09	4/03	3/29	3/26	3/22	3/18	3/15	3/10	3/04
28	3/25	3/18	3/13	3/08	3/04	2/28	2/23	2/18	2/11
24	3/15	3/06	2/27	2/22	2/17	2/12	2/06	1/31	1/22
20	2/27	2/17	2/09	2/03	1/27	1/20	1/13	1/02	0/00
16	2/03	1/24	1/16	1/07	12/23	0/00	0/00	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	10/17	10/22	10/26	10/30	11/02	11/05	11/08	11/12	11/17
32	10/27	11/02	11/06	11/09	11/12	11/16	11/19	11/23	11/29
28	11/08	11/15	11/20	11/25	11/29	12/03	12/08	12/13	12/20
24	11/13	11/25	12/04	12/11	12/18	12/25	1/01	1/09	1/21
20	12/02	12/12	12/20	12/26	1/01	1/08	1/15	1/25	0/00
16	12/17	12/27	1/04	1/13	1/28	0/00	0/00	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	235	227	222	217	213	208	204	198	191
32	262	253	246	240	235	229	223	217	207
28	300	289	282	275	269	263	257	249	239
24	339	321	312	304	298	291	285	277	266
20	>365	>365	>365	349	336	326	317	308	297
16	>365	>365	>365	>365	>365	>365	>365	344	325

***** 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	643	458	287	116	16	0	0	0	6	88	319	572	2505
60	498	329	162	47	3	0	0	0	0	30	197	429	1695
57	414	257	105	22	0	0	0	0	0	12	139	348	1297
55	360	213	74	13	0	0	0	0	0	6	107	298	1071
50	242	125	24	2	0	0	0	0	0	1	48	193	635
32	21	3	0	0	0	0	0	0	0	0	0	12	36

Base — Cooling Degree Days (1)

Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	401	469	746	941	1222	1395	1547	1531	1304	1016	682	467	11721
55	27	35	107	263	509	705	834	818	614	309	99	39	4359
57	19	22	76	213	448	645	772	756	554	253	71	27	3856
60	11	11	40	148	357	555	679	663	464	178	39	15	3160
65	0	0	10	67	215	405	524	508	319	81	11	3	2143
70	0	0	1	21	104	258	369	354	191	26	1	0	1325

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	211	297	517	711	985	1171	1320	1305	1081	780	453	254	211	508	1025	1736	2721	3892	5212	6517	7598	8378	8831	9085
45	125	192	373	561	830	1021	1165	1150	931	626	316	152	125	317	690	1251	2081	3102	4267	5417	6348	6974	7290	7442
50	65	109	243	416	675	871	1010	995	781	474	205	86	65	174	417	833	1508	2379	3389	4384	5165	5639	5844	5930
55	29	58	141	279	520	721	855	840	631	328	116	45	29	87	228	507	1027	1748	2603	3443	4074	4402	4518	4563
60	11	23	66	162	367	571	700	685	482	205	58	18	11	34	100	262	629	1200	1900	2585	3067	3272	3330	3348
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	142	201	328	457	667	808	897	878	728	512	286	168	142	343	671	1128	1795	2603	3500	4378	5106	5618	5904	6072

(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:
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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