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: LAKE CHARLES AP, LA **COOP ID: 165078**

Climate Division: LA 7 **NWS Call Sign: LCH** **Elevation: 15 Feet** **Lat: 30˚07N** **Lon: 93˚14W**

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	60.6	41.2	50.9	82+	1989	3	57.1	1989	15+	1962	10	42.4	1978	434	9	.0	.0	25.9	.1	5.4	.0
Feb	64.5	44.3	54.4	83	1972	26	60.8	2000	17	1996	5	45.0	1978	304	13	.0	.0	25.6	.0	2.4	.0
Mar	71.3	50.8	61.0	86	1974	12	65.9	2000	25+	1980	2	56.6	1996	163	49	.0	.0	30.5	.0	.6	.0
Apr	77.4	57.2	67.3	95	1987	28	72.1	1999	34	1971	7	63.0	1983	47	126	.0	.2	30.0	.0	.0	.0
May	84.1	65.7	74.9	96+	1984	3	77.9	2000	49+	1978	4	72.2	1973	1	312	.0	2.8	31.0	.0	.0	.0
Jun	88.9	72.1	80.5	99	1990	19	83.3	1998	56	1984	1	78.3	1983	0	467	.0	13.8	30.0	.0	.0	.0
Jul	91.0	74.3	82.6	102+	1980	16	84.9	1998	61	1967	15	80.1	1972	0	544	.2	23.3	31.0	.0	.0	.0
Aug	91.3	73.6	82.4	107	2000	31	85.9	1999	59	1992	29	79.6	1973	0	534	.3	22.9	31.0	.0	.0	.0
Sep	87.7	69.1	78.4	105	2000	4	82.1	1998	47	1967	29	75.1	1974	1	399	.2	12.6	30.0	.0	.0	.0
Oct	80.5	58.6	69.5	94	1998	1	74.6	1971	30	1993	31	62.3	1976	38	178	.0	1.1	31.0	.0	.1	.0
Nov	70.6	49.7	60.1	87+	1978	1	66.2	1973	23	1976	30	52.3	1976	191	54	.0	.0	29.4	.0	.9	.0
Dec	63.3	43.3	53.3	82+	1966	8	62.0	1984	11	1989	23	44.5	1989	367	20	.0	.0	27.8	.1	4.1	.0
Ann	77.6	58.3	67.9	107	Aug 2000	31	85.9	Aug 1999	11	Dec 1989	23	42.4	Jan 1978	1546	2705	.7	76.7	353.2	.2	13.5	.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: 1962-2001

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

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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	5.52	5.09	5.05	1991	10	14.29	1991	.78	1971
Feb	3.28	2.78	3.39	1997	12	7.46	1997	.62	1989
Mar	3.54	3.05	3.60	1987	17	9.01	1980	.27	1971
Apr	3.64	2.88	5.50	1973	17	10.95	1973	.40	1999
May	6.06	5.83	15.67	1980	16	20.71	1980	.04	1998
Jun	6.07	5.13	6.92	1989	27	25.33	1989	.93	1972
Jul	5.13	4.85	6.36	1979	25	13.19	1979	1.28	1974
Aug	4.85	4.96	10.22	1962	29	11.52	1977	.00	1999
Sep	5.95	5.38	9.64	1979	20	19.96	1973	.43	1989
Oct	3.94	3.17	7.20	1970	27	12.75	1985	.18	1978
Nov	4.61	4.08	3.48	1966	11	11.85	2000	.99	1999
Dec	4.60	3.94	5.89	1967	9	10.76	1982	2.02	2000
Ann	57.19	58.01	15.67	May 1980	16	25.33	Jun 1989	.00	Aug 1999

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.2	7.1	3.2	1.6
Feb	8.4	4.9	2.1	1.0
Mar	8.6	5.2	2.4	1.2
Apr	7.3	4.3	2.1	.9
May	7.7	5.6	2.9	1.8
Jun	9.9	6.7	3.6	2.1
Jul	11.3	7.5	3.2	1.5
Aug	10.3	6.8	2.9	1.4
Sep	9.6	6.1	2.8	1.7
Oct	6.6	4.1	2.2	1.4
Nov	8.6	6.2	3.1	1.4
Dec	9.3	6.0	3.0	1.3
Ann	107.8	70.5	33.5	17.3

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	1.33	1.85	2.65	3.37	4.08	4.84	5.68	6.69	8.00	10.09	12.05
Feb	.72	1.02	1.51	1.94	2.38	2.84	3.36	3.98	4.81	6.12	7.35
Mar	.84	1.17	1.69	2.15	2.61	3.10	3.64	4.29	5.15	6.50	7.77
Apr	.44	.72	1.24	1.75	2.29	2.89	3.59	4.45	5.63	7.56	9.44
May	.63	1.07	1.91	2.75	3.66	4.68	5.89	7.39	9.44	12.85	16.17
Jun	1.11	1.64	2.53	3.36	4.20	5.11	6.15	7.40	9.07	11.75	14.31
Jul	1.53	2.02	2.75	3.38	3.99	4.62	5.33	6.15	7.21	8.88	10.42
Aug	.78	1.42	2.25	2.92	3.58	4.27	5.04	5.95	7.14	9.02	10.78
Sep	1.13	1.67	2.54	3.35	4.16	5.04	6.05	7.25	8.85	11.43	13.87
Oct	.50	.82	1.38	1.93	2.51	3.15	3.89	4.81	6.06	8.10	10.08
Nov	1.41	1.85	2.50	3.06	3.61	4.17	4.79	5.52	6.46	7.93	9.29
Dec	1.51	1.95	2.59	3.13	3.66	4.20	4.80	5.49	6.39	7.78	9.06
Ann	41.55	44.60	48.50	51.45	54.06	56.59	59.19	62.06	65.53	70.55	74.88

\+ 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

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(2) Derived from station's available digital record: 1962-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Extremes (2)

Mean Number of Days (1)

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	.2	.0	#	0	4.0	1973	11	4.0	1973	4	1973	12	#	1973	.1	.1	@	.0	.0	@	@	.0	.0
Feb	.1	.0	0	0	1.6	1988	7	1.6	1988	#	1973	9	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1985	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1997	.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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	#	.0	0	0	#	1976	29	#	1976	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.0	.0	0	0	.2	1989	22	.2	1989	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.3	.0	N/A	N/A	4.0	Jan 1973	11	4.0	Jan 1973	4	Jan 1973	12	#+	Jun 1997	.1	.1	@	.0	.0	.0	.0	.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	3/29	3/20	3/14	3/09	3/04	2/27	2/22	2/15	2/07
32	3/16	3/07	3/01	2/24	2/19	2/14	2/08	2/02	1/24
28	3/02	2/19	2/10	2/03	1/27	1/19	1/10	12/28	0/00
24	1/31	1/20	1/12	1/03	12/24	0/00	0/00	0/00	0/00
20	1/14	12/30	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	12/27	0/00	0/00	0/00	0/00	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	10/31	11/06	11/11	11/15	11/19	11/22	11/26	12/01	12/07
32	11/09	11/17	11/23	11/28	12/03	12/07	12/12	12/18	12/26
28	11/27	12/06	12/12	12/18	12/23	12/28	1/04	1/13	0/00
24	12/12	12/23	12/31	1/08	1/19	0/00	0/00	0/00	0/00
20	1/02	1/17	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	1/14	0/00	0/00	0/00	0/00	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	290	280	272	265	259	253	246	238	228
32	320	308	300	293	286	280	273	264	253
28	>365	>365	>365	341	329	320	311	302	290
24	>365	>365	>365	>365	>365	>365	>365	346	324
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

***** 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	434	304	163	47	1	0	0	0	1	38	191	367	1546
60	318	191	68	9	0	0	0	0	0	9	113	250	958
57	250	136	35	2	0	0	0	0	0	3	73	188	687
55	210	106	20	1	0	0	0	0	0	2	52	152	543
50	128	46	4	0	0	0	0	0	0	0	19	78	275
32	5	0	0	0	0	0	0	0	0	0	0	0	5

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	604	642	913	1068	1337	1458	1568	1559	1389	1163	851	674	13226
55	78	103	232	381	624	768	855	846	699	453	210	105	5354
57	57	77	185	324	562	708	793	784	639	393	169	81	4772
60	33	46	124	243	469	618	700	691	549	306	118	52	3949
65	9	13	49	126	312	467	544	534	399	178	54	20	2705
70	1	2	11	44	170	318	390	381	257	81	15	4	1674

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	379	454	675	837	1096	1226	1329	1318	1156	926	621	440	379	833	1508	2345	3441	4667	5996	7314	8470	9396	10017	10457
45	256	321	525	687	941	1076	1174	1163	1006	772	475	308	256	577	1102	1789	2730	3806	4980	6143	7149	7921	8396	8704
50	155	208	376	537	786	926	1019	1008	856	617	339	192	155	363	739	1276	2062	2988	4007	5015	5871	6488	6827	7019
55	79	116	241	389	631	776	864	853	706	463	217	109	79	195	436	825	1456	2232	3096	3949	4655	5118	5335	5444
60	37	55	130	250	476	626	709	698	556	317	125	52	37	92	222	472	948	1574	2283	2981	3537	3854	3979	4031
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	216	261	416	547	775	877	935	927	813	618	377	260	216	477	893	1440	2215	3092	4027	4954	5767	6385	6762	7022

(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