

# Climatology of the United States

## No. 20

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

Station: LIBERTY 5 W, MS

1971-2000

COOP ID: 225070

Climate Division: MS 7

NWS Call Sign:

Elevation: 345 Feet

Lat: 31° 10N

Lon: 90° 54W

### 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	58.0	34.8	46.4	86	1955	12	54.8	1974	4+	1985	21	37.8	1977	585	0	.0	.0	22.9	.4	14.4	.0
Feb	62.3	37.4	49.9	85	1977	26	55.4	1999	4	1996	5	40.6	1978	427	2	.0	.0	24.0	.4	10.5	.0
Mar	69.9	44.5	57.2	88	1963	18	62.4	2000	15	1980	3	51.1	1996	260	18	.0	.0	29.8	.0	4.1	.0
Apr	76.0	50.3	63.2	91+	1987	22	70.0	1981	26+	1987	5	58.3	1993	114	58	.0	.2	29.9	.0	.6	.0
May	82.9	59.1	71.0	98	1977	31	74.4	2000	38+	1970	4	66.3	1976	18	204	.0	3.2	31.0	.0	.0	.0
Jun	89.0	66.2	77.6	103+	1969	29	81.6	1998	42	1984	1	72.9	1989	0	379	.2	16.5	30.0	.0	.0	.0
Jul	90.9	69.1	80.0	103+	1980	16	83.1	1998	53	1967	15	75.1	1989	0	466	.6	22.7	31.0	.0	.0	.0
Aug	91.1	68.0	79.6	102+	1954	30	83.7	1999	51	1989	10	75.1	1989	0	451	.5	22.6	31.0	.0	.0	.0
Sep	87.2	62.8	75.0	106	2000	2	80.0	1980	33	1967	30	69.3	1995	8	308	.2	12.1	30.0	.0	.0	.0
Oct	79.0	50.8	64.9	95+	1986	1	70.9	1984	25	1989	21	58.6	1995	109	106	.0	1.7	31.0	.0	.3	.0
Nov	69.3	43.0	56.2	89	1956	3	62.1	1978	15	1976	30	48.1	1976	289	24	.0	.0	28.8	.0	6.0	.0
Dec	61.2	36.8	49.0	83	1978	8	58.8	1984	3+	1989	23	38.2	1989	510	13	.0	.0	26.2	.2	13.4	.0
Ann	76.4	51.9	64.2	106	Sep 2000	2	83.7	Aug 1999	3+	Dec 1989	23	37.8	Jan 1977	2320	2029	1.5	79.0	345.6	1.0	49.3	.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/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1949-2001

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

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Lon: 90°54W

Precipitation (inches)																								
	Precipitation Totals									Mean Number of Days (3)				Precipitation Probabilities (1) Probability that the monthly/annual precipitation will be equal to or less than the indicated amount										
	Means/ Medians(1)		Extremes							Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels These values were determined from the incomplete gamma distribution										
Month	Mean	Med- ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	6.80	6.65	7.10	1990	25	17.42	1990	1.49	1981	9.6	7.8	4.4	2.0	1.97	2.62	3.59	4.43	5.25	6.11	7.06	8.17	9.62	11.88	13.98
Feb	5.54	5.17	6.80	1990	16	12.88	1997	1.10	2000	7.4	6.2	3.5	2.0	1.31	1.83	2.64	3.36	4.08	4.84	5.70	6.71	8.05	10.17	12.16
Mar	6.80	6.15	6.27	1980	28	16.25	1980	2.13	1978	8.4	6.9	4.4	2.4	2.30	2.95	3.89	4.69	5.45	6.24	7.10	8.11	9.39	11.39	13.23
Apr	5.46	5.33	7.85	1977	21	13.00	1977	.56	1999	6.3	5.2	2.8	1.7	.59	1.00	1.76	2.52	3.34	4.26	5.33	6.67	8.49	11.51	14.44
May	5.24	5.24	5.17	1968	9	10.69	1987	1.04	1988	7.5	6.2	3.5	2.0	1.15	1.63	2.40	3.09	3.79	4.53	5.37	6.37	7.68	9.78	11.77
Jun	4.97	4.16	7.34	2001	8	12.68	1975	.58	1979	8.2	6.5	3.4	1.4	1.06	1.51	2.24	2.90	3.57	4.28	5.08	6.04	7.30	9.32	11.23
Jul	4.97	4.31	4.96	1964	3	11.36	1994	1.67	1983	10.4	8.2	3.2	1.4	1.87	2.33	3.00	3.55	4.08	4.62	5.20	5.88	6.75	8.08	9.29
Aug	4.66	4.62	5.87	1983	2	8.49	1978	.00	1999	8.4	6.5	2.8	1.3	1.18	1.85	2.61	3.20	3.76	4.33	4.94	5.65	6.56	7.96	9.25
Sep	4.59	3.45	6.54	1988	12	13.85	1988	.29	1982	7.2	5.5	2.7	1.1	.62	1.00	1.65	2.29	2.96	3.70	4.55	5.61	7.03	9.35	11.59
Oct	3.30	3.03	6.10	1964	4	13.29	1985	.00	1989	4.6	3.8	2.1	1.2	.25	.60	1.13	1.61	2.11	2.66	3.30	4.07	5.11	6.81	8.44
Nov	4.93	4.95	4.60	1993	15	11.15	1977	.25	1999	7.2	5.7	3.1	1.9	.73	1.14	1.85	2.53	3.24	4.02	4.92	6.02	7.50	9.91	12.22
Dec	5.86	4.98	5.83	1971	6	15.50	1971	1.10	2000	8.2	6.4	3.8	2.0	2.04	2.60	3.40	4.08	4.72	5.39	6.12	6.96	8.05	9.72	11.27
Ann	63.12	65.34	7.85	Apr 1977	21	17.42	Jan 1990	.00+	Aug 1999	93.4	74.9	39.7	20.4	43.74	47.46	52.23	55.88	59.12	62.26	65.52	69.12	73.50	79.87	85.40

+ 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: 1949-2001

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

Complete documentation available from:  
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**COOP ID: 225070**

**Climate Division: MS 7**

**NWS Call Sign:**

**Elevation: 345 Feet**

**Lat: 31°10N**

**Lon: 90°54W**

Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (1)					Extremes (2)										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	1.5	1977	31	2.0	1977	2	1977	31	#+	1982	.2	.1	.0	.0	.0	@	.0	.0	.0
Feb	#	.0	#	0	#	1989	7	#+	1989	#	1989	7	#	1989	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.1	1980	2	.1	1980	0	0	0	0	0	.1	.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	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Jun	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.2	.0	N/A	N/A	1.5	Jan 1977	31	2.0	Jan 1977	2	Jan 1977	31	#+	Feb 1989	.3	.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

Complete documentation available from:

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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	4/18	4/14	4/10	4/07	4/04	4/01	3/29	3/26	3/21
32	4/09	4/02	3/29	3/25	3/21	3/18	3/14	3/09	3/03
28	3/27	3/20	3/15	3/10	3/06	3/02	2/25	2/20	2/13
24	3/13	3/04	2/25	2/19	2/14	2/09	2/03	1/27	1/18
20	3/01	2/20	2/12	2/06	1/31	1/24	1/17	1/05	0/00
16	2/13	2/01	1/23	1/13	12/31	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	10/08	10/15	10/20	10/24	10/27	10/31	11/04	11/09	11/16
32	10/27	11/01	11/04	11/07	11/10	11/13	11/16	11/20	11/25
28	11/02	11/08	11/12	11/16	11/19	11/23	11/27	12/01	12/07
24	11/12	11/22	11/29	12/06	12/12	12/17	12/24	12/31	1/10
20	12/02	12/12	12/19	12/26	1/01	1/08	1/16	1/28	0/00
16	12/14	12/26	1/06	1/17	2/05	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	227	220	214	210	205	201	197	191	184
32	256	248	243	238	233	229	224	218	210
28	290	279	271	264	258	251	245	237	226
24	332	319	311	303	297	291	284	276	265
20	>365	>365	>365	346	332	323	314	305	293
16	>365	>365	>365	>365	>365	>365	>365	335	318

\* 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:  
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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	585	427	260	114	18	0	0	0	8	109	289	510	2320
60	442	299	147	44	3	0	0	0	1	48	180	372	1536
57	362	228	96	20	0	0	0	0	0	25	129	299	1159
55	313	187	68	11	0	0	0	0	0	15	100	256	950
50	210	105	23	1	0	0	0	0	0	3	44	166	552
32	18	1	0	0	0	0	0	0	0	0	0	11	30

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	464	500	782	935	1210	1369	1489	1474	1290	1020	725	536	11794
55	46	42	137	256	497	679	776	761	600	322	134	69	4319
57	33	27	103	205	435	619	714	699	540	270	104	50	3799
60	20	14	60	139	344	529	621	606	451	199	65	30	3078
65	0	2	18	58	204	379	466	451	308	106	24	13	2029
70	0	0	3	16	96	233	311	297	182	44	8	1	1191

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	252	321	550	708	981	1144	1262	1241	1059	774	482	309	252	573	1123	1831	2812	3956	5218	6459	7518	8292	8774	9083
45	157	209	402	559	826	994	1107	1086	909	619	348	197	157	366	768	1327	2153	3147	4254	5340	6249	6868	7216	7413
50	88	121	272	412	671	844	952	931	759	465	229	116	88	209	481	893	1564	2408	3360	4291	5050	5515	5744	5860
55	41	62	160	278	516	694	797	776	609	322	134	62	41	103	263	541	1057	1751	2548	3324	3933	4255	4389	4451
60	17	24	77	162	363	544	642	621	460	196	68	29	17	41	118	280	643	1187	1829	2450	2910	3106	3174	3203
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	167	214	355	468	663	784	863	838	719	519	315	206	167	381	736	1204	1867	2651	3514	4352	5071	5590	5905	6111

(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.  
Complete documentation for the 1971-2000 Normals is available on the internet from:  
[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/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 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.

- |   |   |
|---|---|
| <ol style="list-style-type: none"><li>a. Temperature/ Precipitation Tables<ol style="list-style-type: none"><li>1. 1971-2000 Monthly Normals</li><li>2. Cooperative Summary of the Day</li><li>3. National Weather Service station records</li><li>4. 1971-2000 serially complete daily data</li></ol></li><li>b. Degree Day Table<ol style="list-style-type: none"><li>1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals</li><li>2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data</li></ol></li></ol> | <ol style="list-style-type: none"><li>c. Snow Tables<ol style="list-style-type: none"><li>1. Snow Climatology</li><li>2. Cooperative Summary of the Day</li></ol></li><li>d. Freeze Data Table<br/>1971-2000 serially complete daily data</li></ol> |
|---|---|

## References

U.S. Climate Normals 1971-2000, [www.ncdc.noaa.gov/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html)  
Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)