

Climatology of the United States

No. 20

1971-2000

Station: LOUISVILLE, MS

COOP ID: 225247

Climate Division: MS 6

NWS Call Sign:

Elevation: 581 Feet

Lat: 33°08N

Lon: 89°04W

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	52.7	31.3	42.0	84	1943	23	49.7	1974	-3	1985	21	31.2	1977	714	0	.0	.0	18.5	1.8	17.3	.1
Feb	57.8	34.3	46.1	87	1996	24	52.9	1990	-2	1951	2	35.5	1978	532	0	.0	.0	20.6	1.0	12.3	.0
Mar	66.3	42.0	54.2	88	1995	24	59.3	1997	12+	1980	3	48.6	1971	348	11	.0	.0	28.6	.1	5.3	.0
Apr	73.6	48.8	61.2	92+	1937	17	67.3	1981	26	1987	4	57.0	1983	150	36	.0	.1	29.8	.0	.7	.0
May	80.3	58.0	69.2	101	1951	31	73.2	1996	37	1944	7	63.6	1976	34	162	.0	1.2	31.0	.0	.0	.0
Jun	86.8	65.4	76.1	105+	1953	19	80.0	1998	46	1956	3	72.8	1974	0	333	@	10.2	30.0	.0	.0	.0
Jul	89.5	68.8	79.2	107+	1930	13	82.2	1998	52+	1947	23	76.4	1972	0	438	.3	17.4	31.0	.0	.0	.0
Aug	89.2	68.0	78.6	107	1943	27	81.8	2000	52+	1956	22	75.0	1992	0	420	.2	16.9	31.0	.0	.0	.0
Sep	84.1	62.3	73.2	106	1951	1	79.3	1998	37	1967	29	68.0	1974	13	258	.1	7.1	30.0	.0	.0	.0
Oct	75.0	50.4	62.7	96	1954	5	68.1	1998	28+	1989	20	57.2	1976	135	65	.0	.5	30.9	.0	.2	.0
Nov	64.8	42.1	53.5	85+	1935	1	59.6	1985	10	1950	25	45.2	1976	358	11	.0	.0	27.3	@	5.8	.0
Dec	56.0	34.2	45.1	82+	1978	4	53.6	1984	-3	1989	23	35.8	1989	618	1	.0	.0	21.6	.7	14.4	.1
Ann	73.0	50.5	61.8	107+	Aug 1943	27	82.2	Jul 1998	-3+	Dec 1989	23	31.2	Jan 1977	2902	1735	.6	53.4	330.3	3.6	56.0	.2

+ 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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1930-2000

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

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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

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NWS Call Sign:

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Lon: 89°04W

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	6.11	5.46	5.59	1950	6	18.15	1974	.78	1986	10.3	8.3	4.2	2.1	1.57	2.15	3.04	3.82	4.59	5.40	6.31	7.38	8.78	10.99	13.06
Feb	5.03	4.68	4.95	1950	14	10.26	1983	.72	2000	8.4	6.9	3.7	1.9	1.46	1.93	2.65	3.28	3.89	4.52	5.22	6.05	7.12	8.80	10.35
Mar	6.57	5.80	5.22	1951	28	13.82	1980	2.06	1985	9.3	7.3	4.2	2.4	2.57	3.18	4.04	4.76	5.44	6.13	6.88	7.74	8.84	10.52	12.06
Apr	5.83	4.59	10.25	1979	13	24.10	1979	1.20	1978	7.4	6.0	3.4	1.8	.90	1.39	2.24	3.04	3.88	4.79	5.84	7.12	8.83	11.62	14.29
May	5.13	4.01	5.44	1983	19	13.61	1983	2.25	1996	9.4	7.4	3.4	1.8	1.77	2.25	2.96	3.55	4.12	4.71	5.35	6.10	7.06	8.54	9.90
Jun	3.91	3.43	3.44	1983	18	10.87	1989	.23	1977	8.1	6.4	2.8	1.0	.57	.89	1.46	2.00	2.56	3.18	3.90	4.77	5.95	7.87	9.72
Jul	5.32	4.71	6.44	1946	30	11.40	1971	.33	2000	10.4	8.0	3.8	1.7	.95	1.42	2.20	2.92	3.67	4.47	5.38	6.49	7.97	10.35	12.62
Aug	3.23	3.18	4.74	1964	16	7.05	1979	.81	1983	7.5	5.3	2.2	.9	.72	1.01	1.49	1.92	2.34	2.80	3.31	3.93	4.73	6.02	7.23
Sep	3.70	2.80	7.47	1977	7	11.28	1977	.00	1998	6.9	5.3	2.3	1.0	.42	.88	1.50	2.03	2.57	3.14	3.79	4.56	5.59	7.24	8.80
Oct	3.55	3.16	6.32	1975	17	9.73	1986	.24	1978	5.6	4.1	2.1	1.3	.31	.55	1.02	1.51	2.05	2.67	3.40	4.32	5.59	7.71	9.79
Nov	4.92	4.45	4.30	1948	28	10.11	1973	1.19	1971	8.9	6.8	3.7	1.8	1.58	2.05	2.74	3.33	3.89	4.48	5.12	5.87	6.84	8.35	9.74
Dec	5.56	4.73	5.95	1990	23	14.79	1990	1.15	1980	8.9	7.0	3.6	1.7	1.73	2.25	3.04	3.71	4.37	5.04	5.79	6.66	7.78	9.54	11.17
Ann	58.86	55.11	10.25	Apr 1979	13	24.10	Apr 1979	.00	Sep 1998	101.1	78.8	39.4	19.4	37.98	41.87	46.93	50.83	54.34	57.75	61.31	65.27	70.12	77.23	83.44

+ 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: 1930-2000

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

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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	.5	.0	#	0	3.3	1982	14	4.2	1977	#	1984	15	#	1984	.6	.2	.2	.0	.0	.0	.0	.0	.0
Feb	.2	.0	#	0	1.5	1985	2	2.0	1985	#+	1989	8	#+	1989	.2	.1	.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	.2	.0	#	0	2.8	1987	3	2.8	1987	3	1987	3	#	1987	.1	.1	.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	.4	.0	0	0	5.0	1997	15	5.0	1997	0	0	0	0	0	.1	.1	.1	.1	.0	.0	.0	.0	.0
Ann	1.3	.0	N/A	N/A	5.0	Dec 1997	15	5.0	Dec 1997	3	Apr 1987	3	#+	Feb 1989	1.0	.5	.3	.1	.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	4/18	4/14	4/11	4/09	4/06	4/04	4/02	3/30	3/26
32	4/14	4/09	4/06	4/03	3/31	3/28	3/25	3/21	3/16
28	3/27	3/21	3/17	3/13	3/09	3/06	3/02	2/25	2/19
24	3/17	3/09	3/03	2/27	2/22	2/18	2/13	2/08	1/31
20	3/10	3/01	2/22	2/17	2/11	2/06	1/31	1/24	1/13
16	2/26	2/16	2/09	2/03	1/28	1/21	1/14	1/04	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	10/12	10/17	10/21	10/25	10/28	10/31	11/04	11/08	11/13
32	10/28	11/02	11/06	11/09	11/11	11/14	11/17	11/21	11/25
28	11/03	11/09	11/13	11/16	11/20	11/23	11/27	12/01	12/07
24	11/16	11/24	11/30	12/05	12/09	12/14	12/19	12/25	1/02
20	11/28	12/09	12/16	12/23	12/29	1/04	1/11	1/19	2/01
16	12/04	12/15	12/23	12/30	1/05	1/12	1/20	1/31	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	226	218	213	208	204	199	195	189	182
32	247	240	234	229	225	220	216	210	203
28	279	271	265	260	255	250	245	239	230
24	316	307	300	295	289	284	278	272	263
20	>365	347	330	321	314	307	300	293	283
16	>365	>365	>365	353	339	329	321	312	300

* 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	714	532	348	150	34	0	0	0	13	135	358	618	2902
60	570	399	219	66	7	0	0	0	2	60	232	475	2030
57	485	323	157	33	2	0	0	0	0	32	171	391	1594
55	430	275	122	19	1	0	0	0	0	19	136	339	1341
50	306	173	55	3	0	0	0	0	0	4	67	227	835
32	42	8	0	0	0	0	0	0	0	0	0	20	70

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	351	401	686	876	1151	1322	1461	1443	1235	953	643	426	10948
55	26	23	95	205	439	632	748	730	545	259	89	32	3823
57	18	15	68	159	379	572	686	668	485	210	64	23	3347
60	11	8	37	102	291	482	593	575	397	145	36	13	2690
65	0	0	11	36	162	333	438	420	258	65	11	1	1735
70	0	0	1	8	70	188	283	267	142	21	1	0	981

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	181	256	473	657	929	1106	1236	1214	1014	715	420	230	181	437	910	1567	2496	3602	4838	6052	7066	7781	8201	8431
45	104	160	336	508	774	956	1081	1059	864	562	294	138	104	264	600	1108	1882	2838	3919	4978	5842	6404	6698	6836
50	50	91	216	366	619	806	926	904	714	412	187	77	50	141	357	723	1342	2148	3074	3978	4692	5104	5291	5368
55	25	42	123	238	464	656	771	749	564	269	105	36	25	67	190	428	892	1548	2319	3068	3632	3901	4006	4042
60	2	14	61	132	313	506	616	594	417	159	46	11	2	16	77	209	522	1028	1644	2238	2655	2814	2860	2871
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	110	162	289	416	617	767	857	840	691	458	256	143	110	272	561	977	1594	2361	3218	4058	4749	5207	5463	5606

(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.
Complete documentation for the 1971-2000 Normals is available on the internet from:
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 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.

- | | |
|---|---|
| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
|---|---|

References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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