

Climatography of the United States

No. 20

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

Station: GUNTERSVILLE, AL

1971-2000

COOP ID: 013573

Climate Division: AL 2

NWS Call Sign:

Elevation: 578 Feet Lat: 34° 20N Lon: 86° 20W

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	50.0	29.9	40.0	75+	1990	17	50.2	1990	-11	1985	21	29.7	1977	776	0	.0	.0	18.3	1.3	16.8	.2
Feb	54.9	32.0	43.5	82	1962	13	55.5	1990	-2	1958	17	33.2	1978	604	0	.0	.0	20.0	.7	13.8	.0
Mar	64.0	39.6	51.8	87+	1990	13	58.8	1974	11	1980	3	46.2	1978	419	11	.0	.0	29.0	.1	6.1	.0
Apr	72.0	46.3	59.2	94	1986	26	64.8	1999	25+	1992	3	54.7	1983	195	20	.0	@	29.9	.0	1.0	.0
May	79.6	55.8	67.7	99	1962	17	72.3	2000	36	1963	2	63.0	1976	56	140	.0	1.7	31.0	.0	.0	.0
Jun	86.6	64.2	75.4	103	1988	26	79.4	1998	44	1956	4	71.9	1974	2	313	.2	11.0	30.0	.0	.0	.0
Jul	90.0	68.2	79.1	106	1980	17	82.9	1980	47	1970	1	75.2	1972	0	437	.9	19.4	31.0	.0	.0	.0
Aug	89.3	67.0	78.2	105	1983	21	81.9	1999	48	1992	29	73.1	1986	0	409	.9	17.6	31.0	.0	.0	.0
Sep	83.3	61.1	72.2	102	1954	4	78.5	1998	38	1967	30	67.9	1974	20	235	.1	6.4	30.0	.0	.0	.0
Oct	72.9	49.3	61.1	95	1954	5	67.2	1998	26	1957	28	54.7	1976	177	55	.0	.2	30.9	.0	.3	.0
Nov	62.4	40.2	51.3	85	1989	12	56.4	1985	7	1979	30	42.4	1976	417	6	.0	.0	27.9	.0	5.7	.0
Dec	52.6	32.7	42.7	78	1998	6	50.4	1971	-2	1989	23	34.8	1989	694	0	.0	.0	21.7	.5	14.7	.1
Ann	71.5	48.9	60.2	106	Jul 1980	17	82.9	Jul 1980	-11	Jan 1985	21	29.7	Jan 1977	3360	1626	2.1	56.3	330.7	2.6	58.4	.3

+ 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

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1927-2001

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

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No. 20
1971-2000**

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NWS Call Sign:

Elevation: 578 Feet Lat: 34°20N

Lon: 86°20W

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	5.08	5.11	4.85	1949	5	9.37	1982	.93	1986	10.7	7.8	4.0	1.5	1.61	2.10	2.81	3.42	4.01	4.62	5.29	6.07	7.08	8.65	10.10
Feb	5.01	5.21	5.57	1994	11	10.84	1990	.39	1978	9.3	6.3	3.5	1.7	1.28	1.75	2.48	3.12	3.76	4.43	5.17	6.06	7.21	9.04	10.75
Mar	6.20	5.29	4.30	1977	12	17.49	1980	1.89	1974	10.9	8.1	4.2	1.8	1.93	2.52	3.40	4.15	4.87	5.62	6.45	7.42	8.67	10.62	12.42
Apr	4.81	4.47	5.01	1963	29	10.45	1979	.77	1986	8.5	6.2	3.7	1.4	1.54	2.00	2.67	3.25	3.81	4.38	5.01	5.75	6.71	8.19	9.56
May	4.47	4.27	4.73	1997	3	8.31	1973	1.07	1982	9.6	6.5	3.0	1.3	1.49	1.91	2.53	3.06	3.57	4.09	4.66	5.33	6.19	7.52	8.75
Jun	3.85	3.31	4.20+	1976	19	9.94	1999	.19	1988	8.3	5.9	2.7	1.2	.58	.91	1.46	2.00	2.55	3.15	3.85	4.70	5.84	7.70	9.49
Jul	4.28	3.70	6.30	1946	9	13.09	1985	1.26	1980	9.6	6.8	2.7	1.2	.98	1.38	2.00	2.57	3.13	3.72	4.39	5.19	6.24	7.91	9.49
Aug	3.36	2.98	5.76	1981	30	10.33	1981	.33	1990	8.4	5.8	2.1	1.0	.71	1.02	1.51	1.96	2.41	2.89	3.44	4.09	4.95	6.33	7.63
Sep	4.23	3.35	4.06	1988	12	11.07	1977	.12	1984	8.4	5.3	2.3	1.2	.54	.88	1.47	2.06	2.69	3.37	4.18	5.16	6.50	8.70	10.82
Oct	3.06	2.36	4.00	1934	10	7.65	1977	.03	1991	6.3	4.4	2.3	.9	.41	.66	1.10	1.52	1.97	2.47	3.04	3.74	4.69	6.25	7.75
Nov	4.45	3.89	3.62	1948	19	8.74	1983	1.31	1971	8.9	6.3	3.1	1.5	1.94	2.34	2.90	3.35	3.78	4.21	4.67	5.20	5.86	6.88	7.80
Dec	4.76	4.30	5.95	1942	28	11.10	1983	1.03	1980	9.2	6.8	3.5	1.6	1.44	1.89	2.57	3.15	3.72	4.30	4.95	5.71	6.69	8.23	9.65
Ann	53.56	52.61	6.30	Jul 1946	9	17.49	Mar 1980	.03	Oct 1991	108.1	76.2	37.1	16.3	41.80	44.16	47.14	49.37	51.33	53.21	55.13	57.24	59.78	63.42	66.53

+ 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: 1927-2001

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

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Station: GUNTERSVILLE, AL

COOP ID: 013573

Climate Division: AL 2

NWS Call Sign:

Elevation: 578 Feet

Lat: 34° 20N

Lon: 86° 20W

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	.0	.0	#	0	.5	1978	26	.5	1978	9	1988	7	#+	2000	.1	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.1	.0	#	0	1.3	1995	6	1.3	1995	#	1997	10	#	1997	.1	.1	.0	.0	.0	.0	.0	.0	.0
Mar	.4	.0	0	0	8.0	1993	13	8.0	1993	0	0	0	0	0	.1	.1	.1	.1	.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	#	1993	31	#	1993	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	#	1993	25	#+	1993	#	1996	19	#	1996	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.5	.0	N/A	N/A	8.0	Mar 1993	13	8.0	Mar 1993	9	Jan 1988	7	#+	Jan 2000	.3	.2	.1	.1	.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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COOP ID: 013573

Climate Division: AL 2

NWS Call Sign:

Elevation: 578 Feet

Lat: 34°20N

Lon: 86°20W

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	4/25	4/21	4/17	4/15	4/12	4/09	4/06	4/03	3/29
32	4/16	4/10	4/06	4/03	3/30	3/27	3/24	3/20	3/14
28	4/02	3/25	3/19	3/14	3/10	3/05	2/28	2/22	2/14
24	3/21	3/12	3/06	2/28	2/23	2/18	2/13	2/07	1/29
20	3/13	3/04	2/25	2/20	2/14	2/09	2/03	1/27	1/16
16	2/27	2/17	2/10	2/04	1/29	1/23	1/16	1/06	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	10/11	10/16	10/20	10/23	10/26	10/29	11/01	11/05	11/10
32	10/26	10/31	11/03	11/06	11/09	11/12	11/15	11/18	11/23
28	11/08	11/14	11/18	11/21	11/24	11/28	12/01	12/05	12/10
24	11/11	11/19	11/25	11/29	12/04	12/08	12/13	12/19	12/26
20	11/22	12/03	12/12	12/19	12/26	1/02	1/09	1/18	2/01
16	12/04	12/15	12/23	12/31	1/07	1/14	1/22	2/03	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	217	210	205	200	196	192	188	183	176
32	243	236	231	227	223	219	215	210	203
28	285	276	270	264	259	254	248	242	232
24	321	308	298	290	283	275	267	258	245
20	>365	345	326	316	308	300	293	284	272
16	>365	>365	>365	353	338	328	318	308	296

* 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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Climate Division: AL 2 NWS Call Sign: Elevation: 578 Feet Lat: 34° 20N Lon: 86° 20W

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	776	604	419	195	56	2	0	0	20	177	417	694	3360
60	632	471	284	94	16	0	0	0	4	91	284	546	2422
57	546	393	217	53	6	0	0	0	1	55	215	459	1945
55	490	343	178	33	3	0	0	0	0	37	175	403	1662
50	362	232	98	8	0	0	0	0	0	11	94	278	1083
32	69	21	2	0	0	0	0	0	0	0	1	30	123

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	316	342	617	816	1107	1301	1460	1432	1206	901	580	359	10437
55	25	19	79	159	397	611	747	719	516	225	64	20	3581
57	18	13	56	119	338	551	685	657	457	181	44	14	3133
60	11	7	31	70	255	461	592	564	370	124	23	8	2516
65	0	0	11	20	140	313	437	409	235	55	6	0	1626
70	0	0	0	3	61	177	283	262	127	18	0	0	931

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	150	220	440	629	908	1100	1242	1204	999	694	402	198	150	370	810	1439	2347	3447	4689	5893	6892	7586	7988	8186
45	80	131	300	481	753	950	1087	1049	849	540	269	111	80	211	511	992	1745	2695	3782	4831	5680	6220	6489	6600
50	36	63	186	337	598	800	932	894	699	390	165	53	36	99	285	622	1220	2020	2952	3846	4545	4935	5100	5153
55	12	26	94	214	443	650	777	739	549	246	81	24	12	38	132	346	789	1439	2216	2955	3504	3750	3831	3855
60	0	3	36	114	293	500	622	584	402	131	32	3	0	3	39	153	446	946	1568	2152	2554	2685	2717	2720
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	89	143	279	404	600	755	852	822	674	443	244	115	89	232	511	915	1515	2270	3122	3944	4618	5061	5305	5420

(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 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/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