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: BREWTON 3 SSE, AL **COOP ID: 011084**

Climate Division: AL 7 **NWS Call Sign:** **Elevation: 85 Feet** **Lat: 31˚03N** **Lon: 87˚03W**

Temperature (˚F)

Month	Mean (1)			Extremes										Degree Days (1) Base Temp 65		Mean Number of Days (3)					
	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	61.2	34.1	47.7	85	1949	12	61.0	1974	3	1985	21	38.8	1978	549	0	.0	.0	27.2	.1	14.2	.0
Feb	65.6	36.3	51.0	87	1962	13	56.3	1975	11+	1970	4	42.7	1978	396	1	.0	.0	26.6	.2	10.5	.0
Mar	72.7	42.5	57.6	91	1978	31	65.0	1997	10	1980	3	51.2	1993	257	26	.0	@	30.6	.0	4.8	.0
Apr	78.8	48.1	63.5	95	1943	30	69.3	1999	25	1950	7	58.9	1993	110	64	.0	.9	30.0	.0	1.1	.0
May	85.1	56.7	70.9	100	1933	26	74.7	1991	34	1971	4	65.7	1993	19	201	.0	7.2	31.0	.0	.0	.0
Jun	90.1	64.5	77.3	109	1933	18	81.5	1998	40	1956	3	73.1	1990	0	368	.6	17.5	30.0	.0	.0	.0
Jul	91.7	68.5	80.1	106	1952	24	83.0	2000	51	1967	15	77.5	1992	0	469	.8	23.1	31.0	.0	.0	.0
Aug	91.2	68.1	79.7	104+	1954	13	82.2	1999	53+	1968	30	74.4	1992	0	454	.3	22.4	31.0	.0	.0	.0
Sep	87.1	63.1	75.1	101+	1972	15	80.6	1980	32	1967	30	71.2	1975	4	307	.1	12.0	30.0	.0	.0	.0
Oct	79.0	49.9	64.5	97+	1954	5	71.1	1984	21	1952	30	57.3	1987	114	97	.0	1.5	31.0	.0	1.1	.0
Nov	70.3	41.7	56.0	89+	1961	1	63.7	1985	15	1938	28	48.3	1991	295	25	.0	.0	29.5	.0	7.5	.0
Dec	62.9	36.1	49.5	84	1998	9	58.7	1971	7	1962	13	41.4	1989	491	9	.0	.0	28.2	.1	12.4	.0
Ann	78.0	50.8	64.4	109	Jun 1933	18	83.0	Jul 2000	3	Jan 1985	21	38.8	Jan 1978	2235	2021	1.8	84.6	356.1	.4	51.6	.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: 1928-2001

(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	6.19	6.42	6.45	1978	25	12.55	1991	1.46	1981
Feb	5.67	5.47	8.18	1981	11	12.19	1982	1.45	1980
Mar	7.01	6.10	13.00	1929	15	15.82	1990	2.80	1985
Apr	4.50	4.25	9.60	1955	14	11.13	1975	.50	1981
May	5.56	5.27	5.00+	1995	10	15.97	1991	.85	1988
Jun	5.97	5.75	6.45	1970	3	13.80	1989	1.90	1998
Jul	7.04	6.67	7.88	1975	31	19.08	1975	1.66	2000
Aug	5.64	4.53	7.20	1995	4	14.69	1977	1.67	1980
Sep	5.51	4.01	9.30	1998	28	25.20	1998	.90	1995
Oct	3.09	2.64	7.50	1995	5	14.95	1995	.05	1998
Nov	5.16	4.60	4.52	1989	8	13.01	1989	1.20	1993
Dec	4.78	3.84	6.23	1972	21	14.96	1972	1.13	1980
Ann	66.12	65.60	13.00	Mar 1929	15	25.20	Sep 1998	.05	Oct 1998

Mean Number of Days (3)

Month	Daily Precipitation >= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.1	8.2	4.1	2.1
Feb	7.6	6.8	3.6	1.9
Mar	8.1	7.4	3.8	2.4
Apr	5.8	5.5	2.9	1.6
May	7.5	6.6	3.4	2.0
Jun	9.9	8.7	4.0	2.0
Jul	12.5	10.7	4.5	2.2
Aug	10.4	9.3	3.6	1.8
Sep	8.4	7.5	3.2	1.7
Oct	4.4	4.0	1.9	.8
Nov	7.0	6.5	3.6	2.0
Dec	7.6	6.6	3.1	1.4
Ann	98.3	87.8	41.7	21.9

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	2.67	3.23	4.01	4.65	5.24	5.85	6.50	7.24	8.18	9.61	10.90
Feb	1.71	2.25	3.06	3.75	4.43	5.12	5.89	6.80	7.97	9.80	11.49
Mar	2.55	3.21	4.16	4.95	5.71	6.49	7.33	8.31	9.57	11.50	13.27
Apr	.87	1.27	1.93	2.54	3.16	3.82	4.57	5.48	6.68	8.61	10.44
May	1.16	1.67	2.48	3.22	3.97	4.77	5.67	6.76	8.19	10.47	12.64
Jun	2.15	2.71	3.52	4.20	4.85	5.51	6.24	7.08	8.15	9.81	11.33
Jul	2.60	3.26	4.21	5.00	5.75	6.53	7.37	8.34	9.58	11.49	13.25
Aug	1.73	2.26	3.06	3.75	4.42	5.11	5.87	6.76	7.91	9.71	11.38
Sep	.89	1.36	2.16	2.92	3.70	4.56	5.53	6.72	8.32	10.90	13.37
Oct	.12	.26	.59	.99	1.47	2.04	2.75	3.68	5.01	7.32	9.64
Nov	1.59	2.08	2.81	3.44	4.04	4.67	5.37	6.18	7.23	8.88	10.40
Dec	1.59	2.04	2.71	3.27	3.81	4.37	4.98	5.70	6.62	8.04	9.35
Ann	49.30	52.61	56.83	60.01	62.82	65.52	68.30	71.36	75.05	80.38	84.97

+ 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: 1928-2001
(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	#	.0	0	0	#	1985	20	#	1985	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.2	.0	0	0	6.0	1973	10	6.0	1973	0	0	0	0	0	@	@	@	@	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.2	1993	13	.2	1993	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	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	#	1993	22	#	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.2	.0	N/A	N/A	6.0	Feb 1973	10	6.0	Feb 1973	0	0	0	0	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	4/26	4/21	4/18	4/15	4/13	4/10	4/07	4/04	3/30
32	4/21	4/14	4/09	4/04	3/31	3/27	3/23	3/18	3/10
28	3/27	3/20	3/16	3/12	3/08	3/04	3/01	2/24	2/18
24	3/11	3/04	2/27	2/22	2/18	2/14	2/09	2/04	1/28
20	3/02	2/22	2/15	2/10	2/05	1/30	1/24	1/17	1/03
16	2/12	2/02	1/26	1/17	1/03	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	10/06	10/10	10/14	10/17	10/19	10/22	10/25	10/28	11/02
32	10/12	10/20	10/25	10/30	11/03	11/07	11/12	11/17	11/24
28	10/30	11/05	11/10	11/14	11/17	11/21	11/25	11/30	12/06
24	11/13	11/23	11/29	12/05	12/11	12/16	12/22	12/28	1/07
20	11/23	12/06	12/16	12/24	1/01	1/08	1/17	1/28	2/19
16	12/19	12/31	1/10	1/21	2/07	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	207	201	196	193	189	186	182	178	172
32	245	235	228	222	216	210	204	197	187
28	281	272	265	259	253	248	242	235	225
24	324	312	305	299	293	288	282	275	265
20	>365	>365	352	332	321	312	303	293	281
16	>365	>365	>365	>365	>365	>365	>365	358	324

***** 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	549	396	257	110	19	0	0	0	4	114	295	491	2235
60	415	267	149	43	3	0	0	0	0	51	186	352	1466
57	341	197	100	20	0	0	0	0	0	28	134	277	1097
55	296	157	72	11	0	0	0	0	0	17	104	234	891
50	203	80	26	2	0	0	0	0	0	5	47	145	508
32	20	0	0	0	0	0	0	0	0	0	0	6	26

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	505	530	793	943	1206	1358	1492	1477	1293	1006	721	547	11871
55	68	43	152	265	493	668	779	764	603	311	135	62	4343
57	51	27	117	214	431	608	717	702	543	259	105	44	3818
60	32	13	74	147	341	518	624	609	453	190	66	25	3092
65	0	1	26	64	201	368	469	454	307	97	25	9	2021
70	0	0	7	18	95	223	314	300	175	38	8	0	1178

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	314	376	599	734	990	1146	1264	1245	1069	785	513	358	314	690	1289	2023	3013	4159	5423	6668	7737	8522	9035	9393
45	203	255	450	584	835	996	1109	1090	919	630	368	237	203	458	908	1492	2327	3323	4432	5522	6441	7071	7439	7676
50	117	155	308	437	680	846	954	935	769	476	246	146	117	272	580	1017	1697	2543	3497	4432	5201	5677	5923	6069
55	58	85	189	296	525	696	799	780	619	328	149	81	58	143	332	628	1153	1849	2648	3428	4047	4375	4524	4605
60	28	37	98	175	370	546	644	625	470	198	77	40	28	65	163	338	708	1254	1898	2523	2993	3191	3268	3308
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	220	263	406	503	667	769	858	845	729	532	350	246	220	483	889	1392	2059	2828	3686	4531	5260	5792	6142	6388

(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