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: CLAYTON, AL **COOP ID: 011725**

Climate Division: AL 7 **NWS Call Sign:** **Elevation: 500 Feet** **Lat: 31˚53N** **Lon: 85˚29W**

Temperature (˚F)

Month	Mean (1) Daily Max	Mean (1) Daily Min	Mean (1) Mean	Extremes Highest Daily(2)	Extremes Year	Extremes Day	Extremes Highest Month(1) Mean	Extremes Year	Extremes Lowest Daily(2)	Extremes Year	Extremes Day	Extremes Lowest Month(1) Mean	Extremes Year	Degree Days (1) Base Temp 65 Heating	Degree Days (1) Base Temp 65 Cooling	Mean Number of Days (3) Max >= 100	Max >= 90	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	56.9	35.3	46.1	82+	1975	10	60.2	1974	-6	1985	21	36.1	1977	600	0	.0	.0	23.2	.5	13.6	.1
Feb	61.5	37.4	49.5	84	1957	7	56.4	1990	11	1979	10	40.5	1978	436	1	.0	.0	23.5	.2	9.1	.0
Mar	69.3	44.3	56.8	88	1974	11	62.2	1976	13	1980	3	50.8	1983	280	26	.0	.0	29.6	.1	3.1	.0
Apr	76.0	50.1	63.1	94	1987	23	67.9	1991	27	1983	19	57.3	1983	114	55	.0	.2	29.9	.0	.5	.0
May	82.4	58.7	70.6	98	1962	20	74.3	1991	36	1997	5	66.7	1971	17	190	.0	2.8	31.0	.0	.0	.0
Jun	88.1	65.7	76.9	101+	1998	4	81.9	1998	48	1956	3	72.2	1983	0	358	.4	11.5	30.0	.0	.0	.0
Jul	90.4	68.9	79.7	104+	2000	22	83.1	1986	57+	1983	10	77.3	1994	0	454	.6	18.9	31.0	.0	.0	.0
Aug	89.7	68.3	79.0	105+	2000	20	83.2	1990	56+	2000	15	76.9	1984	0	434	.6	17.2	31.0	.0	.0	.0
Sep	85.9	63.4	74.7	102	1957	2	79.3	1972	42+	2001	27	70.5	1983	5	296	.0	8.8	30.0	.0	.0	.0
Oct	77.4	52.7	65.1	97	1959	4	71.8	1985	28	2001	28	59.6	1976	103	106	.0	.6	31.0	.0	.4	.0
Nov	68.7	44.2	56.5	87	1971	3	64.1	1985	17+	1970	25	48.8	1976	281	25	.0	.0	29.2	.0	4.2	.0
Dec	60.2	37.8	49.0	84	1987	27	58.2	1971	4	1962	13	40.7	1989	504	7	.0	.0	25.5	.2	10.2	.0
Ann	75.5	52.2	63.9	105+	Aug 2000	20	83.2	Aug 1990	-6	Jan 1985	21	36.1	Jan 1977	2340	1952	1.6	60.0	344.9	1.0	41.1	.1

\+ 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: 1948-2001

(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	4.91	4.90	3.82	1978	25	10.92	1991	1.00	1981
Feb	5.05	4.50	8.34	1975	17	16.12	1995	1.09	1980
Mar	6.56	6.23	11.20	1990	17	16.68	1990	2.07	1985
Apr	3.77	3.22	4.60	1955	14	8.59	1979	.40	1987
May	3.85	3.72	3.55	1957	4	8.45+	1978	.10	2000
Jun	4.75	3.97	4.27	1975	10	13.40	1989	1.01	1984
Jul	5.27	4.14	8.00	1994	4	21.90	1994	1.14	1972
Aug	4.01	3.64	4.20	1977	3	7.64	1971	.35	1990
Sep	3.76	2.52	8.55	1956	25	11.70	1996	.21	1978
Oct	2.68	1.62	6.02	1993	30	9.03	1975	.00+	1982
Nov	3.93	3.33	5.30	2001	25	11.41	1992	1.20	1990
Dec	4.36	3.72	5.42	1972	6	12.18	1972	.92	1980
Ann	52.90	51.86	11.20	Mar 1990	17	21.90	Jul 1994	.00+	Oct 1982

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	8.7	7.2	3.5	1.5
Feb	7.2	6.0	3.2	1.8
Mar	7.4	6.9	3.9	2.2
Apr	5.7	5.1	2.8	1.4
May	6.5	5.7	2.7	1.2
Jun	7.7	6.6	3.2	1.6
Jul	9.1	7.8	3.5	1.6
Aug	7.6	6.1	2.7	1.1
Sep	6.5	5.0	2.2	1.2
Oct	4.2	3.4	1.5	.7
Nov	6.3	5.3	2.7	1.4
Dec	6.7	5.6	2.6	1.4
Ann	83.6	70.7	34.5	17.1

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	1.67	2.13	2.81	3.38	3.93	4.50	5.12	5.84	6.77	8.21	9.53
Feb	1.21	1.68	2.42	3.07	3.73	4.42	5.19	6.11	7.32	9.23	11.03
Mar	2.66	3.26	4.11	4.82	5.48	6.15	6.88	7.71	8.78	10.40	11.88
Apr	.81	1.16	1.71	2.21	2.71	3.25	3.85	4.57	5.53	7.04	8.48
May	.75	1.10	1.66	2.18	2.71	3.28	3.92	4.69	5.72	7.36	8.93
Jun	1.26	1.71	2.39	3.00	3.59	4.22	4.91	5.73	6.80	8.49	10.07
Jul	1.06	1.54	2.31	3.02	3.73	4.50	5.37	6.41	7.79	10.00	12.10
Aug	1.07	1.44	2.02	2.53	3.04	3.56	4.15	4.84	5.74	7.16	8.48
Sep	.27	.51	.98	1.50	2.08	2.74	3.54	4.56	5.97	8.36	10.71
Oct	.00	.13	.50	.89	1.34	1.85	2.48	3.27	4.39	6.28	8.16
Nov	1.19	1.57	2.12	2.60	3.07	3.55	4.08	4.71	5.52	6.78	7.95
Dec	1.23	1.64	2.27	2.81	3.35	3.90	4.52	5.24	6.19	7.66	9.04
Ann	38.71	41.48	45.02	47.70	50.07	52.35	54.70	57.29	60.43	64.97	68.87

\+ 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: 1948-2001
(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)

Snow Totals

Means/Medians (1)

Month	Snow Fall Mean	Snow Fall Median	Snow Depth Mean	Snow Depth Median
Jan	.0	.0	0	0
Feb	#	.0	0	0
Mar	.0	.0	0	0
Apr	.0	.0	0	0
May	.0	.0	0	0
Jun	.0	.0	0	0
Jul	.0	.0	0	0
Aug	.0	.0	0	0
Sep	.0	.0	0	0
Oct	.0	.0	0	0
Nov	.0	.0	0	0
Dec	.0	.0	#	0
Ann	#	.0	N/A	N/A

Extremes (2)

Month	Highest Daily Snow Fall	Year	Day	Highest Monthly Snow Fall	Year	Highest Daily Snow Depth	Year	Day	Highest Monthly Mean Snow Depth	Year
Jan	.3	1987	22	.3	1987	0	0	0	0	0
Feb	#	1979	19	#	1979	12	1973	10	1	1973
Mar	.0	0	0	.0	0	0	0	0	0	0
Apr	.0	0	0	.0	0	0	0	0	0	0
May	.0	0	0	.0	0	0	0	0	0	0
Jun	.0	0	0	.0	0	0	0	0	0	0
Jul	.0	0	0	.0	0	0	0	0	0	0
Aug	.0	0	0	.0	0	0	0	0	0	0
Sep	.0	0	0	.0	0	0	0	0	0	0
Oct	.0	0	0	.0	0	0	0	0	0	0
Nov	.0	0	0	.0	0	0	0	0	0	0
Dec	1.0	1980	27	1.0	1980	1	1980	27	#	1980
Ann	1.0	Dec 1980	27	1.0	Dec 1980	12	Feb 1973	10	1	Feb 1973

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.1	.0	.0	.0	.0
Feb	.0	.0	.0	.0	.0
Mar	.0	.0	.0	.0	.0
Apr	.0	.0	.0	.0	.0
May	.0	.0	.0	.0	.0
Jun	.0	.0	.0	.0	.0
Jul	.0	.0	.0	.0	.0
Aug	.0	.0	.0	.0	.0
Sep	.0	.0	.0	.0	.0
Oct	.0	.0	.0	.0	.0
Nov	.0	.0	.0	.0	.0
Dec	@	@	.0	.0	.0
Ann	.1	@	.0	.0	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.0	.0	.0	.0
Mar	.0	.0	.0	.0
Apr	.0	.0	.0	.0
May	.0	.0	.0	.0
Jun	.0	.0	.0	.0
Jul	.0	.0	.0	.0
Aug	.0	.0	.0	.0
Sep	.0	.0	.0	.0
Oct	.0	.0	.0	.0
Nov	.0	.0	.0	.0
Dec	@	.0	.0	.0
Ann	@	.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	4/13	4/09	4/06	4/03	3/30	3/27	3/23	3/18
32	4/06	3/29	3/24	3/19	3/14	3/10	3/05	2/28	2/20
28	3/25	3/16	3/10	3/04	2/27	2/22	2/17	2/11	2/02
24	3/09	3/01	2/24	2/19	2/15	2/11	2/06	2/01	1/24
20	3/02	2/20	2/13	2/07	2/02	1/27	1/20	1/12	12/27
16	2/13	2/03	1/27	1/20	1/11	12/27	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	10/16	10/22	10/27	10/31	11/04	11/08	11/12	11/16	11/23
32	10/23	10/30	11/04	11/08	11/12	11/16	11/20	11/25	12/01
28	11/06	11/15	11/21	11/26	12/01	12/06	12/11	12/18	12/26
24	11/23	12/03	12/09	12/15	12/21	12/26	1/01	1/07	1/17
20	12/01	12/14	12/23	12/31	1/08	1/16	1/24	2/04	2/25
16	12/20	12/29	1/06	1/13	1/22	2/06	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	243	233	226	220	215	209	203	196	186
32	272	261	254	248	242	236	229	222	212
28	311	299	290	283	276	269	262	253	241
24	342	328	320	312	306	299	293	285	274
20	>365	>365	>365	345	331	322	313	304	292
16	>365	>365	>365	>365	>365	>365	>365	342	327

***** 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	600	436	280	114	17	0	0	0	5	103	281	504	2340
60	461	307	169	45	2	0	0	0	0	44	173	362	1563
57	385	234	118	21	0	0	0	0	0	23	122	285	1188
55	338	192	88	12	0	0	0	0	0	14	93	240	977
50	239	107	35	2	0	0	0	0	0	3	39	148	573
32	30	2	0	0	0	0	0	0	0	0	0	6	38

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	467	491	769	932	1196	1348	1477	1457	1280	1026	733	533	11709
55	62	37	144	253	483	658	764	744	590	326	136	54	4251
57	47	23	111	203	421	598	702	682	530	273	105	37	3732
60	31	11	70	136	330	508	609	589	441	201	66	21	3013
65	0	1	26	55	190	358	454	434	296	106	25	7	1952
70	0	0	7	14	84	217	299	280	167	43	7	0	1118

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	250	321	547	715	964	1123	1243	1225	1055	789	511	315	250	571	1118	1833	2797	3920	5163	6388	7443	8232	8743	9058
45	150	213	397	566	809	973	1088	1070	905	635	371	200	150	363	760	1326	2135	3108	4196	5266	6171	6806	7177	7377
50	78	124	267	418	654	823	933	915	755	480	247	112	78	202	469	887	1541	2364	3297	4212	4967	5447	5694	5806
55	34	59	154	278	500	673	778	760	605	330	149	59	34	93	247	525	1025	1698	2476	3236	3841	4171	4320	4379
60	12	22	76	158	347	523	623	605	455	201	70	26	12	34	110	268	615	1138	1761	2366	2821	3022	3092	3118
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	151	201	338	457	651	779	855	847	719	513	322	196	151	352	690	1147	1798	2577	3432	4279	4998	5511	5833	6029

(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