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: TROY, AL **COOP ID: 018323**

Climate Division: AL 7 **NWS Call Sign:** **Elevation: 542 Feet** **Lat: 31˚48N** **Lon: 85˚58W**

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	57.1	36.2	46.7	83	1949	12	59.6	1974	-1	1985	21	36.7	1977	581	0	.0	.0	24.7	.2	12.1	@
Feb	61.6	38.9	50.3	85+	2001	17	56.9	1990	10+	1996	6	41.4	1978	416	2	.0	.0	24.4	.2	8.3	.0
Mar	69.1	44.9	57.0	89	1955	12	63.7	1997	13	1980	3	52.0	1971	266	19	.0	.0	30.2	@	2.6	.0
Apr	75.9	50.8	63.4	94	1942	30	68.4	1999	29	1940	13	58.7	1983	102	53	.0	.1	29.9	.0	.2	.0
May	82.8	59.6	71.2	99	1937	30	76.3	2000	38	1971	4	66.1	1976	20	212	.0	3.6	31.0	.0	.0	.0
Jun	88.3	66.6	77.5	105	1933	19	82.0	1998	43	2000	9	73.6	1974	0	374	.3	14.2	30.0	.0	.0	.0
Jul	90.4	70.5	80.5	107	1936	7	84.9	2000	56	1967	15	76.9	1975	0	478	.7	20.5	31.0	.0	.0	.0
Aug	90.0	70.3	80.2	106	1954	28	83.4	1987	55	1946	31	77.6	1976	0	468	.3	18.7	31.0	.0	.0	.0
Sep	85.9	65.7	75.8	104	1954	8	80.2	1980	38	1967	30	71.2	1975	2	326	.2	8.7	30.0	.0	.0	.0
Oct	77.0	54.0	65.5	103	1954	5	71.0	1984	28	1937	24	59.6	1976	91	107	.0	.7	31.0	.0	.1	.0
Nov	67.6	44.8	56.2	89	1935	2	62.7	1986	12	1950	25	47.9	1976	288	25	.0	.0	29.3	.0	3.6	.0
Dec	59.5	38.6	49.1	81+	1998	5	57.1	1971	4	1962	13	41.2	1989	502	7	.0	.0	26.1	.2	9.3	.0
Ann	75.4	53.4	64.5	107	Jul 1936	7	84.9	Jul 2000	-1	Jan 1985	21	36.7	Jan 1977	2268	2071	1.5	66.5	348.6	.6	36.2	@

\+ 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/normals/usnormals.html

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1930-2001

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

Issue Date: February 2004

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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	5.11	4.56	5.43	1936	19	9.81	1978	.98	1981
Feb	4.83	4.22	5.60	1981	11	10.87	1975	.93	2000
Mar	6.56	6.20	8.56	1990	17	13.75	1990	1.81	1982
Apr	4.25	4.44	4.52	1934	15	8.41	1979	.73	1986
May	3.73	3.52	4.65	1953	6	9.57	1976	.14	1977
Jun	4.78	4.24	4.36	1970	4	12.63	1989	1.04	1986
Jul	5.80	5.21	4.55	1964	1	15.59	1994	1.66	2000
Aug	3.56	3.78	6.75	1961	31	8.38	1996	.55	1989
Sep	3.52	2.92	7.46	1937	1	13.29	1998	.63	1978
Oct	2.84	2.19	6.50	1995	4	12.19	1995	.06	1987
Nov	4.44	3.86	6.12	1943	8	10.53	1992	1.33	1990
Dec	4.40	3.49	6.67	1972	6	14.95	1972	1.21	1988
Ann	53.82	54.01	8.56	Mar 1990	17	15.59	Jul 1994	.06	Oct 1987

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	9.4	6.9	3.8	1.5
Feb	8.4	6.6	3.4	1.7
Mar	8.2	7.2	3.9	2.5
Apr	6.8	5.6	2.8	1.4
May	7.7	5.7	2.5	1.2
Jun	8.7	7.1	3.0	1.5
Jul	11.2	8.6	3.8	1.8
Aug	8.3	6.0	2.4	1.0
Sep	7.5	5.3	2.3	1.1
Oct	4.6	3.4	1.6	.8
Nov	7.2	5.5	3.3	1.5
Dec	8.7	6.4	3.0	1.4
Ann	96.7	74.3	35.8	17.4

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	1.88	2.36	3.05	3.62	4.17	4.73	5.34	6.05	6.95	8.34	9.61
Feb	1.44	1.90	2.58	3.18	3.75	4.35	5.01	5.79	6.80	8.37	9.83
Mar	2.56	3.17	4.03	4.75	5.43	6.12	6.87	7.74	8.84	10.53	12.06
Apr	1.17	1.58	2.19	2.72	3.25	3.80	4.40	5.12	6.05	7.52	8.89
May	.71	1.04	1.59	2.09	2.61	3.16	3.79	4.54	5.55	7.16	8.69
Jun	1.33	1.79	2.47	3.07	3.66	4.27	4.95	5.75	6.79	8.42	9.94
Jul	1.85	2.40	3.22	3.91	4.58	5.28	6.04	6.93	8.08	9.87	11.52
Aug	.90	1.23	1.75	2.21	2.66	3.14	3.68	4.31	5.14	6.45	7.67
Sep	.62	.93	1.45	1.93	2.42	2.95	3.55	4.29	5.26	6.84	8.35
Oct	.11	.24	.55	.92	1.35	1.88	2.54	3.39	4.61	6.73	8.86
Nov	1.68	2.09	2.68	3.18	3.65	4.13	4.65	5.25	6.02	7.20	8.28
Dec	1.23	1.64	2.28	2.83	3.37	3.93	4.56	5.30	6.26	7.76	9.16
Ann	38.54	41.51	45.30	48.18	50.73	53.20	55.74	58.56	61.96	66.90	71.17

\+ 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: 1930-2001
(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	.2	.0	0	0
Feb	.5	.0	0	0
Mar	.2	.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	.2	.0	0	0
Ann	1.1	.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	3.0	1977	31	4.0	1977	0	0	0	0	0
Feb	11.0	1973	10	11.0	1973	0	0	0	0	0
Mar	4.0	1993	13	4.0	1993	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	4.0	1993	23	4.0	1993	0	0	0	0	0
Ann	11.0	Feb 1973	10	11.0	Feb 1973	0	0	0	0	0

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.1	.1	@	.0	.0
Feb	@	@	@	@	@
Mar	@	@	@	.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	.1	.1	@	.0	.0
Ann	.2	.2	@	@	@

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	.0
Ann	.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	4/16	4/10	4/05	4/02	3/29	3/26	3/22	3/18	3/12
32	4/01	3/26	3/22	3/18	3/15	3/12	3/08	3/04	2/26
28	3/16	3/09	3/04	2/27	2/23	2/19	2/15	2/10	2/03
24	3/08	2/28	2/22	2/18	2/13	2/09	2/04	1/29	1/22
20	2/28	2/19	2/13	2/07	2/02	1/27	1/20	1/10	0/00
16	2/08	1/28	1/19	1/08	0/00	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	10/25	10/29	11/01	11/04	11/06	11/09	11/11	11/15	11/19
32	10/31	11/07	11/12	11/16	11/20	11/24	11/29	12/04	12/11
28	11/13	11/20	11/25	11/30	12/04	12/08	12/13	12/18	12/26
24	11/27	12/08	12/16	12/23	12/29	1/05	1/12	1/20	1/31
20	12/08	12/20	12/29	1/06	1/14	1/22	2/01	2/16	0/00
16	12/29	1/07	1/15	1/25	0/00	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	245	237	231	226	221	217	212	206	198
32	273	265	259	254	250	245	240	234	226
28	311	302	295	289	283	278	272	265	255
24	>365	333	324	317	311	305	299	293	284
20	>365	>365	>365	>365	337	327	319	311	300
16	>365	>365	>365	>365	>365	>365	>365	>365	336

***** 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	581	416	266	102	20	0	0	0	2	91	288	502	2268
60	441	287	153	35	4	0	0	0	0	37	179	360	1496
57	364	216	102	14	0	0	0	0	0	18	128	283	1125
55	318	175	73	7	0	0	0	0	0	11	98	238	920
50	220	95	26	1	0	0	0	0	0	2	43	146	533
32	23	1	0	0	0	0	0	0	0	0	0	5	29

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	478	511	776	941	1215	1364	1501	1491	1313	1039	727	534	11890
55	60	41	136	258	502	674	788	778	623	336	135	53	4384
57	44	26	102	205	441	614	726	716	563	282	105	37	3861
60	28	13	61	136	351	524	633	623	473	207	66	20	3135
65	0	2	19	53	212	374	478	468	326	107	25	7	2071
70	0	0	4	12	106	228	323	313	190	42	7	0	1225

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	275	345	567	728	988	1143	1264	1251	1081	808	513	334	275	620	1187	1915	2903	4046	5310	6561	7642	8450	8963	9297
45	169	229	414	578	833	993	1109	1096	931	653	369	214	169	398	812	1390	2223	3216	4325	5421	6352	7005	7374	7588
50	88	135	280	431	678	843	954	941	781	498	246	125	88	223	503	934	1612	2455	3409	4350	5131	5629	5875	6000
55	45	68	167	290	523	693	799	786	631	348	143	64	45	113	280	570	1093	1786	2585	3371	4002	4350	4493	4557
60	14	29	79	165	371	543	644	631	482	210	70	30	14	43	122	287	658	1201	1845	2476	2958	3168	3238	3268
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	166	214	354	467	670	786	875	870	745	524	317	199	166	380	734	1201	1871	2657	3532	4402	5147	5671	5988	6187

(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