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: ALEXANDER CITY, AL **COOP ID: 010160**

Climate Division: AL 5 **NWS Call Sign:** **Elevation: 640 Feet** **Lat: 32˚57N** **Lon: 85˚57W**

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	54.4	31.6	43.0	80	1975	30	54.2	1974	-6	1985	21	32.0	1977	686	0	.0	.0	22.0	.8	18.2	.1
Feb	59.3	33.8	46.6	81+	1996	27	52.9	1990	5	1996	5	39.0	1978	516	0	.0	.0	22.3	.3	13.5	.0
Mar	67.6	40.9	54.3	89	1995	24	60.6	1997	12	1980	3	47.5	1971	344	11	.0	.0	29.5	.1	5.6	.0
Apr	74.9	47.3	61.1	92+	1987	23	65.8	1999	27	1987	1	55.7	1983	150	33	.0	.3	29.9	.0	1.1	.0
May	81.3	56.5	68.9	96	1996	25	73.6	1998	35	1971	4	63.3	1976	42	162	.0	2.5	31.0	.0	.0	.0
Jun	87.5	64.5	76.0	102+	1985	7	80.5	1998	42	1984	1	71.9	1983	1	331	.2	13.3	30.0	.0	.0	.0
Jul	90.6	68.4	79.5	104+	1980	14	82.9	1993	55	1970	6	76.5	1975	0	450	.8	20.4	31.0	.0	.0	.0
Aug	89.7	67.4	78.6	102+	2000	19	81.9	1995	54	1992	29	75.7	1992	0	419	.7	18.0	31.0	.0	.0	.0
Sep	85.0	61.8	73.4	99	1980	17	77.1	1980	38	1983	22	69.8	1975	7	258	.0	8.3	30.0	.0	.0	.0
Oct	76.0	49.5	62.8	93	1983	4	69.2	1984	26	1976	29	57.1	1976	136	65	.0	.5	31.0	.0	.5	.0
Nov	66.2	41.1	53.7	86	2000	1	61.6	1985	14	1970	25	45.6	1976	353	11	.0	.0	28.7	.0	7.2	.0
Dec	57.2	34.1	45.7	81	1971	17	54.0	1971	-1	1983	25	38.0	2000	600	1	.0	.0	24.6	.3	15.1	@
Ann	74.1	49.7	62.0	104+	Jul 1980	14	82.9	Jul 1993	-6	Jan 1985	21	32.0	Jan 1977	2835	1741	1.7	63.3	341.0	1.5	61.2	.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: 1969-2001

(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	6.01	6.59	3.57	1972	10	12.13	1972	1.01	1986
Feb	5.23	4.63	3.50	1981	11	9.12	1975	1.70	1976
Mar	6.56	5.63	4.16	1970	20	15.00	1980	1.97	1982
Apr	4.60	3.90	4.50	1975	3	11.65	1979	.37	1986
May	4.31	3.82	3.36	1973	28	12.29	1973	1.24	1992
Jun	4.48	3.94	3.55	1989	19	14.67	1989	.49	1988
Jul	5.37	5.43	2.90	1994	28	9.87	1975	1.25	1993
Aug	4.05	3.66	3.40	1984	2	7.83	1984	1.20	1988
Sep	4.05	3.51	3.62	1980	18	9.61	1988	.80	1981
Oct	2.84	2.80	3.20	1970	14	6.67	1995	.23	1991
Nov	4.56	4.13	3.02	1983	24	11.70	1992	.69	1981
Dec	5.07	5.02	4.17	1983	3	12.50	1983	1.04	1980
Ann	57.13	55.46	4.50	Apr 1975	3	15.00	Mar 1980	.23	Oct 1991

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.1	8.8	4.1	1.9
Feb	8.8	6.7	3.9	1.8
Mar	10.0	8.3	4.5	2.4
Apr	8.0	6.1	3.1	1.7
May	8.9	6.7	3.4	1.3
Jun	8.9	6.8	3.4	1.5
Jul	11.2	9.0	3.8	1.5
Aug	9.7	7.1	3.1	1.1
Sep	7.9	5.7	2.6	1.3
Oct	5.5	3.8	1.8	.8
Nov	8.5	6.8	3.3	1.6
Dec	9.5	6.9	3.3	1.5
Ann	108.0	82.7	40.3	18.4

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	2.29	2.85	3.65	4.31	4.94	5.59	6.28	7.09	8.12	9.71	11.15
Feb	2.11	2.59	3.27	3.83	4.36	4.90	5.48	6.15	6.99	8.29	9.47
Mar	2.03	2.65	3.58	4.38	5.15	5.95	6.83	7.86	9.19	11.27	13.19
Apr	1.07	1.50	2.17	2.77	3.37	4.01	4.72	5.57	6.69	8.46	10.12
May	1.49	1.90	2.49	2.99	3.47	3.96	4.50	5.12	5.93	7.17	8.31
Jun	.84	1.24	1.90	2.50	3.12	3.79	4.54	5.45	6.66	8.61	10.46
Jul	1.82	2.33	3.08	3.71	4.31	4.93	5.61	6.40	7.42	8.99	10.44
Aug	1.60	1.98	2.51	2.95	3.36	3.78	4.24	4.77	5.44	6.46	7.39
Sep	.76	1.12	1.72	2.27	2.83	3.43	4.11	4.94	6.04	7.80	9.48
Oct	.52	.77	1.19	1.57	1.97	2.39	2.87	3.46	4.24	5.49	6.68
Nov	1.52	1.95	2.58	3.12	3.64	4.17	4.76	5.44	6.32	7.68	8.93
Dec	1.80	2.28	2.97	3.55	4.10	4.67	5.29	6.01	6.94	8.36	9.67
Ann	42.03	44.99	48.76	51.61	54.13	56.55	59.05	61.81	65.14	69.95	74.09

\+ 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: 1969-2001
(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
Feb	#	.0	#	0
Mar	.3	.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
Ann	.7	.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	5.0	1992	19	5.0	1992	#+	2000	28	#	2000
Feb	#	1981	12	#+	1981	#	1971	13	#	1971
Mar	6.5	1993	13	6.5	1993	7	1993	13	#+	1993
Apr	.7	1987	3	.7	1987	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	2.0	1996	19	2.0	1996	#+	2000	20	#+	2000
Ann	6.5	Mar 1993	13	6.5	Mar 1993	7	Mar 1993	13	#+	Dec 2000

Mean Number of Days (1)

Snow Fall >= Thresholds

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

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.0	.0	.0	.0
Mar	@	@	@	.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

+ 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	4/22	4/18	4/15	4/12	4/10	4/07	4/05	4/01	3/28
32	4/17	4/11	4/06	4/03	3/30	3/27	3/23	3/19	3/13
28	3/25	3/19	3/14	3/11	3/07	3/04	2/28	2/24	2/18
24	3/14	3/06	2/28	2/22	2/17	2/12	2/07	2/01	1/23
20	3/05	2/25	2/19	2/14	2/09	2/04	1/30	1/24	1/16
16	2/24	2/15	2/07	2/01	1/25	1/17	1/05	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	10/07	10/13	10/16	10/19	10/22	10/25	10/29	11/01	11/07
32	10/24	10/29	11/02	11/05	11/08	11/11	11/14	11/17	11/22
28	11/04	11/09	11/13	11/16	11/19	11/22	11/26	11/29	12/05
24	11/20	11/28	12/03	12/08	12/12	12/16	12/21	12/27	1/03
20	12/03	12/12	12/19	12/24	12/30	1/04	1/09	1/16	1/25
16	12/07	12/20	12/29	1/07	1/15	1/25	2/09	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	211	205	201	198	195	192	188	185	179
32	245	237	231	226	222	217	212	206	199
28	282	273	267	261	256	251	246	239	231
24	324	315	308	302	297	292	286	279	270
20	>365	349	337	328	320	313	305	296	284
16	>365	>365	>365	>365	>365	348	331	317	301

***** 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	686	516	344	150	42	1	0	0	7	136	353	600	2835
60	542	379	216	64	11	0	0	0	1	62	227	458	1960
57	457	301	154	32	4	0	0	0	0	34	165	375	1522
55	404	251	119	18	1	0	0	0	0	21	131	323	1268
50	285	146	52	3	0	0	0	0	0	5	62	213	766
32	37	3	0	0	0	0	0	0	0	0	0	16	56

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	377	410	690	873	1143	1320	1473	1442	1241	953	648	439	11009
55	31	15	96	201	432	630	760	729	551	260	89	33	3827
57	22	9	69	155	372	570	698	667	491	211	64	23	3351
60	14	2	38	97	286	480	605	574	402	146	35	13	2692
65	0	0	11	33	162	331	450	419	258	65	11	1	1741
70	0	0	2	7	74	191	295	265	135	21	1	0	991

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	186	253	471	655	918	1101	1244	1213	1017	717	430	237	186	439	910	1565	2483	3584	4828	6041	7058	7775	8205	8442
45	103	153	331	506	763	951	1089	1058	867	562	295	133	103	256	587	1093	1856	2807	3896	4954	5821	6383	6678	6811
50	49	81	209	359	608	801	934	903	717	408	179	73	49	130	339	698	1306	2107	3041	3944	4661	5069	5248	5321
55	23	35	112	232	454	651	779	748	568	269	94	32	23	58	170	402	856	1507	2286	3034	3602	3871	3965	3997
60	1	8	46	124	306	501	624	593	419	151	42	8	1	9	55	179	485	986	1610	2203	2622	2773	2815	2823
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	122	174	308	424	610	754	854	835	689	471	283	160	122	296	604	1028	1638	2392	3246	4081	4770	5241	5524	5684

(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.
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