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: HIGHLAND HOME, AL **COOP ID: 013816**

Climate Division: AL 7 **NWS Call Sign:** **Elevation: 594 Feet** **Lat: 31˚57N** **Lon: 86˚19W**

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	56.6	34.9	45.8	84	1949	12	58.1	1974	-3+	1985	22	35.8	1977	609	0	.0	.0	23.3	.5	14.1	.1
Feb	61.1	37.6	49.4	86	1956	19	55.9	1990	7+	1996	6	40.9	1978	439	0	.0	.0	23.4	.2	9.7	.0
Mar	68.8	44.4	56.6	88	1955	12	63.3	1997	14	1980	3	50.4	1996	280	21	.0	.0	29.6	@	3.4	.0
Apr	75.4	50.4	62.9	94	1987	23	67.1	1999	24	1987	4	58.0	1983	111	48	.0	.2	29.9	.0	.3	.0
May	82.3	59.0	70.7	98	1962	22	74.8	2000	40	1981	13	65.9	1976	19	194	.0	3.3	31.0	.0	.0	.0
Jun	87.8	66.0	76.9	104+	1985	7	81.0	1998	45	1984	1	73.6	1997	0	356	.2	14.5	30.0	.0	.0	.0
Jul	90.0	69.1	79.6	105	1980	15	82.5	2000	54	1967	15	77.0	1994	0	451	.6	20.3	31.0	.0	.0	.0
Aug	89.5	68.4	79.0	103	1954	9	81.9	1999	56	1992	29	76.3	1992	0	433	.4	19.5	31.0	.0	.0	.0
Sep	85.7	63.7	74.7	102	1980	11	78.7	1980	37+	1967	30	70.7	1975	4	294	.1	10.8	30.0	.0	.0	.0
Oct	77.3	52.5	64.9	94	1954	6	70.6	1984	29	1987	16	59.8	1976	95	93	.0	1.0	31.0	.0	.2	.0
Nov	67.8	44.1	56.0	88+	1984	1	62.2	1978	10	1950	25	48.7	1976	288	17	.0	.0	28.9	.0	4.3	.0
Dec	59.5	37.4	48.5	83	1951	8	58.3	1971	4+	1983	26	41.1	2000	522	9	.0	.0	25.4	.3	11.4	.0
Ann	75.2	52.3	63.8	105	Jul 1980	15	82.5	Jul 2000	-3+	Jan 1985	22	35.8	Jan 1977	2367	1916	1.3	69.6	344.5	1.0	43.4	.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

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	5.48	5.04	4.02	1978	25	10.49	1978	.92	1981
Feb	5.35	4.87	5.33	1975	17	10.78	1975	1.20	1980
Mar	6.95	6.24	8.13	1960	30	13.84	1973	2.92	1984
Apr	4.39	4.60	7.57	1964	27	9.89	1979	.43	1986
May	4.05	3.86	4.46	1978	4	9.61	1976	.44	2000
Jun	4.70	4.09	4.30	1970	3	12.90	1983	1.22	1971
Jul	4.93	4.93	3.15	1948	8	10.79	1994	1.19	1978
Aug	4.30	4.24	3.65	1986	12	8.28	1984	.89	1997
Sep	4.03	2.84	6.35	1953	26	13.19	1975	.50	1984
Oct	2.67	2.41	6.10	1965	1	12.13	1995	.00	1973
Nov	4.71	4.35	3.20	1948	28	11.87	1997	.73	1999
Dec	4.60	3.99	4.00+	1992	17	9.05	1972	1.59	1998
Ann	56.16	54.97	8.13	Mar 1960	30	13.84	Mar 1973	.00	Oct 1973

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	10.4	7.9	3.9	1.7
Feb	8.3	6.4	3.6	1.8
Mar	9.3	7.6	4.0	2.2
Apr	7.5	5.8	2.8	1.4
May	7.8	5.6	2.7	1.3
Jun	9.3	6.9	3.5	1.4
Jul	12.0	8.6	3.3	1.3
Aug	9.3	6.8	2.9	1.2
Sep	7.7	5.5	2.4	1.3
Oct	5.3	3.4	1.5	.6
Nov	8.0	5.8	3.2	1.9
Dec	8.6	6.5	2.9	1.5
Ann	103.5	76.8	36.7	17.6

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	2.19	2.70	3.41	4.01	4.56	5.13	5.74	6.45	7.35	8.72	9.97
Feb	1.54	2.05	2.81	3.48	4.13	4.80	5.55	6.43	7.57	9.36	11.02
Mar	2.75	3.40	4.31	5.06	5.77	6.50	7.28	8.18	9.33	11.09	12.69
Apr	.85	1.24	1.89	2.48	3.08	3.73	4.47	5.35	6.52	8.41	10.20
May	1.05	1.43	2.02	2.54	3.05	3.59	4.19	4.90	5.82	7.28	8.65
Jun	1.22	1.66	2.35	2.95	3.54	4.16	4.86	5.68	6.75	8.45	10.03
Jul	1.64	2.11	2.79	3.38	3.94	4.51	5.15	5.89	6.84	8.31	9.67
Aug	1.39	1.80	2.41	2.92	3.41	3.92	4.48	5.14	5.98	7.29	8.50
Sep	.53	.85	1.42	1.99	2.58	3.23	3.99	4.92	6.19	8.26	10.27
Oct	.12	.35	.74	1.13	1.55	2.03	2.59	3.29	4.24	5.84	7.39
Nov	1.34	1.78	2.46	3.05	3.62	4.22	4.88	5.66	6.67	8.26	9.74
Dec	1.70	2.13	2.75	3.27	3.76	4.27	4.81	5.45	6.26	7.51	8.65
Ann	40.66	43.68	47.55	50.47	53.07	55.57	58.15	61.00	64.45	69.45	73.76

\+ 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)

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	.2	.0	#	0	3.0	1977	31	4.9	1977	4	1977	31	#+	2000	.1	.1	@	.0	.0	.0	.0	.0	.0
Feb	.7	.0	0	0	15.8	1973	10	15.8	1973	12	1973	10	1	1973	@	@	@	@	@	.0	.0	.0	.0
Mar	.3	.0	#	0	6.0	1993	13	6.0	1993	6	1993	13	#+	1993	.1	.1	@	@	.0	@	@	@	.0
Apr	#	.0	0	0	#	1987	3	#	1987	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	.1	1973	21	.1	1973	5	1993	23	#+	1996	@	.0	.0	.0	.0	.0	.0	.0	.0
Ann	1.2	.0	N/A	N/A	15.8	Feb 1973	10	15.8	Feb 1973	12	Feb 1973	10	1	Feb 1973	.2	.2	@	@	@	@	@	@	.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	4/17	4/12	4/09	4/06	4/03	3/31	3/28	3/25	3/20
32	4/03	3/27	3/22	3/18	3/14	3/10	3/06	3/01	2/22
28	3/21	3/14	3/09	3/04	2/28	2/24	2/20	2/14	2/07
24	3/15	3/05	2/27	2/21	2/16	2/10	2/04	1/29	1/19
20	2/28	2/19	2/12	2/06	2/01	1/26	1/18	1/04	0/00
16	2/16	2/06	1/29	1/21	1/12	12/28	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	10/21	10/25	10/29	11/01	11/04	11/06	11/09	11/13	11/18
32	10/27	11/03	11/07	11/11	11/15	11/18	11/22	11/27	12/03
28	11/06	11/13	11/19	11/23	11/27	12/01	12/06	12/11	12/18
24	11/21	12/02	12/09	12/16	12/22	12/28	1/04	1/11	1/22
20	12/03	12/14	12/22	12/29	1/05	1/12	1/22	2/08	0/00
16	12/22	12/31	1/07	1/15	1/23	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	235	228	222	218	214	210	205	200	193
32	274	264	257	251	245	239	233	226	216
28	300	290	283	277	271	265	259	252	242
24	>365	326	316	308	302	296	290	282	272
20	>365	>365	>365	>365	337	325	315	306	294
16	>365	>365	>365	>365	>365	>365	357	341	326

***** 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	609	439	280	111	19	0	0	0	4	95	288	522	2367
60	468	307	167	40	3	0	0	0	0	37	174	381	1577
57	390	234	114	18	0	0	0	0	0	17	121	304	1198
55	341	190	84	9	0	0	0	0	0	10	91	259	984
50	239	104	32	1	0	0	0	0	0	2	37	165	580
32	28	1	0	0	0	0	0	0	0	0	0	10	39

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	453	487	764	927	1198	1346	1474	1456	1280	1020	719	519	11643
55	54	32	135	246	485	656	761	743	590	317	120	55	4194
57	40	20	103	195	423	596	699	681	530	263	90	39	3679
60	25	9	62	128	333	506	606	588	441	189	53	22	2962
65	0	0	21	48	194	356	451	433	294	93	17	9	1916
70	0	0	5	11	89	210	296	278	162	33	3	0	1087

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	247	317	538	704	969	1122	1249	1228	1058	790	494	310	247	564	1102	1806	2775	3897	5146	6374	7432	8222	8716	9026
45	150	209	392	554	814	972	1094	1073	908	635	356	198	150	359	751	1305	2119	3091	4185	5258	6166	6801	7157	7355
50	81	120	261	411	659	822	939	918	758	481	236	115	81	201	462	873	1532	2354	3293	4211	4969	5450	5686	5801
55	40	62	156	272	504	672	784	763	608	333	139	61	40	102	258	530	1034	1706	2490	3253	3861	4194	4333	4394
60	16	22	77	157	353	522	629	608	459	206	64	28	16	38	115	272	625	1147	1776	2384	2843	3049	3113	3141
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	154	202	337	447	649	774	858	847	719	515	312	191	154	356	693	1140	1789	2563	3421	4268	4987	5502	5814	6005

(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