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: HAMILTON 3 S, AL **COOP ID: 013645**

Climate Division: AL 3 **NWS Call Sign:** **Elevation: 435 Feet** **Lat: 34˚06N** **Lon: 87˚59W**

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	51.8	26.1	39.0	78+	1999	27	48.9	1974	-19	1966	30	28.3	1977	808	0	.0	.0	18.0	1.9	22.7	.3
Feb	57.5	28.5	43.0	87	1996	24	49.9	1990	-1	1966	1	33.1	1978	616	0	.0	.0	19.7	1.1	19.4	.1
Mar	66.8	35.7	51.3	88+	1998	31	57.6	1974	5+	1980	4	45.5	1971	433	7	.0	.0	28.3	.2	13.6	.0
Apr	75.3	42.2	58.8	95	1987	22	64.5	1999	21	1987	1	53.7	1983	208	21	.0	.3	29.7	.0	6.6	.0
May	82.2	52.5	67.4	98	1996	26	72.5	1987	30+	1976	5	61.6	1976	65	136	.0	2.9	31.0	.0	.1	.0
Jun	88.7	61.1	74.9	102	1988	27	79.1	1998	37+	1984	1	70.6	1974	2	298	.2	13.1	30.0	.0	.0	.0
Jul	92.0	66.1	79.1	107+	1980	18	82.6	1980	48+	1972	8	76.4	1972	0	436	1.1	21.4	31.0	.0	.0	.0
Aug	91.9	64.4	78.2	108	2000	30	81.6	2000	46+	1986	30	74.4	1992	0	409	1.9	20.4	31.0	.0	.0	.0
Sep	86.5	57.8	72.2	104	2000	5	76.7	1998	30	1967	29	67.6+	1975	19	234	.7	10.5	30.0	.0	.0	.0
Oct	76.3	44.1	60.2	95	1998	1	66.7	1984	21	1962	26	53.5	1987	201	52	.0	.7	30.9	.0	5.3	.0
Nov	64.9	35.4	50.2	88	2000	1	57.2	1985	9	1976	30	41.3	1976	449	4	.0	.0	27.2	@	14.4	.0
Dec	55.1	28.9	42.0	81	1998	6	51.1	1971	-5+	1989	24	32.0	1989	714	0	.0	.0	21.4	1.0	20.2	.2
Ann	74.1	45.2	59.7	108	Aug 2000	30	82.6	Jul 1980	-19	Jan 1966	30	28.3	Jan 1977	3515	1597	3.9	69.3	328.2	4.2	102.3	.6

\+ 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: 1962-2001

(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	5.78	5.74	3.98	1968	10	10.36	1982	.78	1986
Feb	5.12	4.55	4.18	1994	11	10.85	1991	1.00	1978
Mar	6.40	5.20	9.06	1973	16	17.12	1980	2.49	1982
Apr	5.47	4.81	3.62+	1983	6	17.50	1991	.35	1986
May	6.01	5.89	5.43	1997	3	16.20	1991	.40	1992
Jun	4.68	4.81	3.41	1975	10	10.86	1989	.26	1988
Jul	4.74	4.75	4.22	1994	26	9.90	1994	.57	1993
Aug	3.41	3.01	3.82	1965	28	8.27	1993	.13	1999
Sep	4.50	4.24	5.14	1979	14	12.15	1988	.04	1984
Oct	3.39	2.98	4.01	1975	17	11.54	1984	.24	2000
Nov	5.32	4.51	3.33	2000	9	10.94	1977	1.66	1971
Dec	5.85	4.96	6.07	1991	2	16.60	1990	.93	1980
Ann	60.67	61.95	9.06	Mar 1973	16	17.50	Apr 1991	.04	Sep 1984

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.6	8.1	4.4	1.8
Feb	9.9	6.7	3.7	1.8
Mar	11.4	7.7	4.1	2.1
Apr	8.9	6.6	3.9	1.9
May	10.1	6.9	3.8	1.9
Jun	10.2	7.3	3.3	1.5
Jul	10.5	7.0	3.4	1.5
Aug	8.1	5.4	2.2	1.1
Sep	8.4	5.7	2.9	1.6
Oct	7.2	4.8	2.3	1.0
Nov	9.9	6.7	3.7	1.7
Dec	11.0	7.6	4.0	1.8
Ann	117.2	80.5	41.7	19.7

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	1.76	2.31	3.13	3.83	4.52	5.23	6.01	6.93	8.12	9.98	11.70
Feb	1.59	2.07	2.80	3.42	4.02	4.64	5.33	6.13	7.17	8.79	10.29
Mar	2.16	2.77	3.66	4.41	5.13	5.87	6.68	7.62	8.84	10.72	12.45
Apr	1.00	1.49	2.29	3.03	3.79	4.61	5.54	6.67	8.17	10.58	12.89
May	1.25	1.80	2.68	3.49	4.30	5.16	6.14	7.31	8.85	11.33	13.67
Jun	.84	1.26	1.94	2.58	3.23	3.94	4.74	5.71	7.00	9.09	11.07
Jul	1.23	1.68	2.36	2.97	3.57	4.20	4.90	5.73	6.81	8.52	10.11
Aug	.55	.85	1.35	1.82	2.30	2.83	3.43	4.17	5.15	6.75	8.28
Sep	.52	.86	1.49	2.12	2.79	3.54	4.41	5.50	6.97	9.40	11.77
Oct	.66	.97	1.46	1.92	2.39	2.89	3.45	4.13	5.04	6.48	7.86
Nov	1.93	2.43	3.15	3.75	4.33	4.92	5.56	6.30	7.26	8.72	10.07
Dec	1.61	2.16	3.00	3.74	4.46	5.22	6.06	7.05	8.34	10.36	12.25
Ann	41.47	45.13	49.86	53.47	56.68	59.81	63.04	66.63	71.00	77.36	82.89

\+ 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: 1962-2001
(3) Derived from 1971-2000 serially complete daily data

Complete documentation available from:
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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	.8	.0	#	#
Feb	.7	.0	#	#
Mar	.2	.0	#	0
Apr	.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
Nov	.1	.0	#	0
Dec	.1	.0	#	0
Ann	1.9	.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	4.1	1988	7	4.1	1988	4+	2000	28	1	1988
Feb	5.4	1985	2	10.1	1985	3	1985	12	1	1985
Mar	4.8	1993	13	4.8	1993	3	1993	13	#+	1998
Apr	.8	1987	3	.8	1987	#	1987	3	#	1987
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	#	1993	31	#	1993	#	1993	31	#	1993
Nov	1.1	1974	15	1.1	1974	#+	2000	19	#+	2000
Dec	.6	1985	21	.6	1985	1	1985	21	#+	2000
Ann	5.4	Feb 1985	2	10.1	Feb 1985	4+	Jan 2000	28	1+	Jan 1988

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.7	.3	.1	.0	.0
Feb	.5	.3	@	@	.0
Mar	.1	@	@	.0	.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	.1	@	.0	.0	.0
Dec	.2	.0	.0	.0	.0
Ann	1.6	.6	.1	@	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.7	.1	.0	.0
Feb	.5	.1	.0	.0
Mar	.1	@	.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	1.3	.2	.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	5/16	5/10	5/06	5/03	4/30	4/27	4/23	4/19	4/14
32	4/30	4/26	4/23	4/20	4/18	4/15	4/12	4/09	4/05
28	4/19	4/14	4/11	4/08	4/05	4/02	3/30	3/27	3/22
24	4/03	3/28	3/24	3/21	3/17	3/14	3/11	3/07	3/01
20	3/17	3/10	3/05	3/01	2/25	2/21	2/16	2/11	2/04
16	3/13	3/05	2/28	2/23	2/19	2/15	2/10	2/05	1/28

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	9/27	10/01	10/04	10/06	10/08	10/10	10/13	10/15	10/19
32	10/03	10/08	10/11	10/13	10/16	10/18	10/21	10/24	10/28
28	10/12	10/18	10/22	10/26	10/29	11/02	11/05	11/10	11/16
24	10/27	11/02	11/06	11/09	11/13	11/16	11/19	11/23	11/29
20	11/07	11/15	11/20	11/24	11/28	12/02	12/06	12/12	12/19
16	11/20	11/29	12/05	12/10	12/15	12/20	12/26	1/01	1/09

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	181	174	169	165	161	157	152	147	141
32	197	191	187	184	181	177	174	170	164
28	228	220	215	211	207	202	198	193	186
24	262	255	249	244	240	235	230	224	217
20	304	294	287	281	276	270	264	257	247
16	325	314	308	302	297	292	286	280	272

***** 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	808	616	433	208	65	2	0	0	19	201	449	714	3515
60	660	477	295	105	21	0	0	0	4	110	313	567	2552
57	573	399	223	62	9	0	0	0	1	71	240	480	2058
55	516	347	182	40	5	0	0	0	1	50	197	425	1763
50	382	229	98	10	0	0	0	0	0	17	110	298	1144
32	72	15	1	0	0	0	0	0	0	0	2	38	128

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	287	323	597	803	1095	1286	1459	1432	1205	874	546	347	10254
55	18	11	65	153	386	596	746	719	515	211	51	21	3492
57	13	7	45	115	329	536	684	657	456	170	34	15	3061
60	7	1	23	68	248	446	591	564	369	116	18	8	2459
65	0	0	7	21	136	298	436	409	234	52	4	0	1597
70	0	0	0	3	60	162	281	258	124	18	0	0	906

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	119	176	368	561	844	1044	1208	1182	965	629	327	166	119	295	663	1224	2068	3112	4320	5502	6467	7096	7423	7589
45	63	102	241	415	689	894	1053	1027	815	474	208	94	63	165	406	821	1510	2404	3457	4484	5299	5773	5981	6075
50	33	52	144	282	534	744	898	872	665	330	126	48	33	85	229	511	1045	1789	2687	3559	4224	4554	4680	4728
55	8	23	70	170	380	594	743	717	515	204	63	21	8	31	101	271	651	1245	1988	2705	3220	3424	3487	3508
60	0	3	29	85	244	445	588	562	370	111	24	1	0	3	32	117	361	806	1394	1956	2326	2437	2461	2462
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	95	149	275	394	558	698	810	785	633	439	240	126	95	244	519	913	1471	2169	2979	3764	4397	4836	5076	5202

(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