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: SAINT BERNARD, AL **COOP ID: 017157**

Climate Division: AL 2 **NWS Call Sign:** **Elevation: 800 Feet** **Lat: 34˚10N** **Lon: 86˚49W**

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	52.3	28.5	40.4	80	1949	11	50.2	1974	-16	1940	28	30.6	1977	764	0	.0	.0	18.8	1.6	21.0	.2
Feb	57.7	31.8	44.8	85	1996	23	53.2	2000	-7+	1966	1	36.7	1978	567	0	.0	.0	19.4	.9	16.8	.0
Mar	66.6	39.0	52.8	88+	1995	23	58.9	1973	5	1980	3	47.6	1971	389	10	.0	.0	28.5	.1	9.6	.0
Apr	74.7	45.1	59.9	90+	2001	28	66.4	1981	21+	1992	3	53.0	1983	187	33	.0	.2	29.8	.0	3.5	.0
May	81.3	53.9	67.6	96+	1941	29	72.5	2000	32+	1976	5	62.7	1976	60	139	.0	1.8	31.0	.0	.1	.0
Jun	87.6	61.4	74.5	103+	1952	29	77.9	1977	40	1998	7	69.8	1974	4	288	.1	9.9	30.0	.0	.0	.0
Jul	91.4	65.5	78.5	110	1952	30	82.3	1977	50+	1983	7	76.1+	1984	0	417	1.0	18.4	31.0	.0	.0	.0
Aug	91.2	63.8	77.5	106	2000	17	82.9	1995	48	1992	29	73.1	1992	0	388	.9	17.1	31.0	.0	.0	.0
Sep	85.9	57.6	71.8	105	1954	5	75.8	1972	34	1982	23	67.0	1974	18	221	.3	7.3	30.0	.0	.0	.0
Oct	75.7	45.6	60.7	96	1954	6	68.3	1984	21	1987	22	54.6	1987	193	58	.0	.3	30.9	.0	3.2	.0
Nov	64.5	37.3	50.9	87+	2000	1	57.3	1985	2	1950	26	42.9	1976	426	4	.0	.0	27.4	@	11.0	.0
Dec	55.5	30.9	43.2	80+	1998	5	52.4	1984	-5	1989	23	34.7	1989	676	0	.0	.0	21.1	.7	18.4	.1
Ann	73.7	46.7	60.2	110	Jul 1952	30	82.9	Aug 1995	-16	Jan 1940	28	30.6	Jan 1977	3284	1558	2.3	55.0	328.9	3.3	83.6	.3

\+ 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	5.95	6.26	5.00	1982	3	10.05	1972	1.25	1986
Feb	5.46	5.47	4.10	1990	15	12.73	1990	.48	1978
Mar	6.61	5.88	4.72	2000	19	18.14	1980	2.73	1974
Apr	5.01	4.41	5.10	1967	26	13.30	1979	.43	1986
May	5.13	5.07	3.80	1930	18	10.44	1973	1.52	1977
Jun	4.51	4.48	3.20	1965	8	12.52	1997	.54	1988
Jul	4.78	4.45	5.14	1985	27	10.29	1985	.91	2000
Aug	3.29	3.06	4.42	1941	1	7.58	1992	.36	1990
Sep	4.95	4.50	9.03	1980	25	14.20	1980	.08	1984
Oct	3.65	2.77	6.15	1932	16	10.21	1995	.33	2000
Nov	4.94	4.68	5.56	2000	8	12.86	2000	1.61	1971
Dec	5.68	5.10	5.62	1973	25	13.04	1990	1.23	1980
Ann	59.96	61.19	9.03	Sep 1980	25	18.14	Mar 1980	.08	Sep 1984

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	11.7	8.0	4.6	1.8
Feb	8.9	6.3	3.6	2.0
Mar	11.4	8.0	4.5	2.0
Apr	8.6	6.3	3.5	1.6
May	9.3	6.8	3.2	1.5
Jun	9.9	7.1	3.4	1.2
Jul	9.7	6.7	3.0	1.3
Aug	8.1	5.5	2.7	.8
Sep	8.0	5.9	3.0	1.5
Oct	6.5	4.2	2.3	1.1
Nov	9.0	6.6	3.4	1.5
Dec	10.6	7.7	4.0	1.5
Ann	111.7	79.1	41.2	17.8

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	1.87	2.43	3.27	3.99	4.69	5.40	6.19	7.12	8.32	10.18	11.90
Feb	1.54	2.06	2.85	3.53	4.20	4.89	5.66	6.57	7.75	9.60	11.32
Mar	2.32	2.94	3.85	4.61	5.34	6.09	6.91	7.86	9.08	10.96	12.69
Apr	1.17	1.64	2.37	3.03	3.68	4.37	5.15	6.07	7.29	9.22	11.03
May	1.91	2.39	3.08	3.65	4.20	4.76	5.37	6.07	6.97	8.35	9.62
Jun	1.05	1.47	2.13	2.72	3.31	3.94	4.64	5.47	6.57	8.31	9.94
Jul	1.36	1.82	2.50	3.10	3.68	4.29	4.96	5.75	6.78	8.39	9.89
Aug	.83	1.14	1.62	2.04	2.46	2.90	3.40	3.98	4.75	5.96	7.09
Sep	.65	1.05	1.75	2.44	3.17	3.97	4.91	6.05	7.61	10.15	12.61
Oct	.61	.92	1.46	1.96	2.47	3.04	3.68	4.46	5.50	7.19	8.81
Nov	1.93	2.38	3.04	3.58	4.09	4.61	5.17	5.82	6.65	7.92	9.08
Dec	1.67	2.21	3.02	3.72	4.40	5.12	5.90	6.83	8.02	9.90	11.64
Ann	44.61	47.64	51.49	54.39	56.96	59.43	61.97	64.77	68.15	73.03	77.23

\+ 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	.3	.0	#	0
Feb	.2	#	#	0
Mar	.2	.0	#	0
Apr	.1	.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
Nov	#	.0	#	0
Dec	.0	.0	#	0
Ann	.8	#	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	1992	18	3.0	1992	2	1982	12	#+	2000
Feb	2.0	1985	12	3.2	1971	3	1996	3	#+	1999
Mar	3.8	1993	12	3.8	1993	10	1993	13	#+	1998
Apr	2.0	1987	3	2.0	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	#	1997	25	#	1997
Nov	#	1995	15	#+	1995	#	1995	15	#	1995
Dec	.2	1971	4	.2	1971	#+	1995	24	#+	1995
Ann	3.8	Mar 1993	12	3.8	Mar 1993	10	Mar 1993	13	#+	Jan 2000

Mean Number of Days (1)

Snow Fall >= Thresholds

Month	0.1	1.0	3.0	5.0	10.0
Jan	.3	.2	@	.0	.0
Feb	.2	.1	.0	.0	.0
Mar	.1	.1	@	.0	.0
Apr	@	@	.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	.0	.0	.0	.0
Ann	.7	.4	@	.0	.0

Snow Depth >= Thresholds

Month	1	3	5	10
Jan	.0	.0	.0	.0
Feb	.1	.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	.1	.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	5/11	5/06	5/02	4/28	4/25	4/22	4/18	4/14	4/09
32	4/29	4/24	4/19	4/16	4/12	4/09	4/05	4/01	3/26
28	4/18	4/12	4/07	4/03	3/30	3/26	3/22	3/17	3/10
24	4/08	3/31	3/24	3/19	3/14	3/09	3/04	2/25	2/17
20	3/19	3/11	3/05	3/01	2/24	2/19	2/15	2/09	2/01
16	3/08	2/28	2/23	2/18	2/14	2/10	2/05	1/31	1/24

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	9/28	10/02	10/05	10/07	10/09	10/11	10/14	10/16	10/20
32	10/06	10/10	10/14	10/17	10/19	10/22	10/25	10/29	11/02
28	10/21	10/26	10/29	11/01	11/04	11/07	11/10	11/14	11/19
24	10/29	11/04	11/08	11/12	11/16	11/19	11/23	11/27	12/03
20	11/06	11/14	11/20	11/25	11/29	12/04	12/08	12/14	12/22
16	11/22	12/01	12/07	12/13	12/18	12/23	12/29	1/05	1/14

Freeze Free Period

Temp (F)	Probability of longer than indicated freeze free period (Days)								
	.10	.20	.30	.40	.50	.60	.70	.80	.90
36	183	177	173	170	166	163	160	155	150
32	206	201	196	193	189	186	182	178	172
28	246	237	230	224	219	213	208	201	192
24	279	267	259	252	246	239	232	224	213
20	312	300	291	284	277	270	263	255	243
16	335	320	313	307	302	297	291	285	276

***** 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	764	567	389	187	60	4	0	0	18	193	426	676	3284
60	612	431	256	95	18	0	0	0	4	105	290	529	2340
57	526	354	190	56	7	0	0	0	1	66	218	443	1861
55	469	304	152	36	4	0	0	0	0	47	176	387	1575
50	335	194	77	10	0	0	0	0	0	16	92	263	987
32	45	10	0	0	0	0	0	0	0	0	1	25	81

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	304	368	644	836	1102	1274	1440	1411	1192	888	568	372	10399
55	15	17	83	182	393	584	727	698	502	222	54	21	3498
57	10	11	59	142	335	524	665	636	443	179	36	14	3054
60	3	4	32	92	253	434	572	543	356	125	18	8	2440
65	0	0	10	33	139	288	417	388	221	58	4	0	1558
70	0	0	1	9	60	157	262	241	112	20	0	0	862

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	122	195	391	586	846	1031	1192	1160	939	627	329	168	122	317	708	1294	2140	3171	4363	5523	6462	7089	7418	7586
45	59	115	261	438	691	881	1037	1005	789	474	212	93	59	174	435	873	1564	2445	3482	4487	5276	5750	5962	6055
50	27	61	155	302	537	731	882	850	639	326	121	45	27	88	243	545	1082	1813	2695	3545	4184	4510	4631	4676
55	2	23	75	187	386	581	727	695	489	198	53	18	2	25	100	287	673	1254	1981	2676	3165	3363	3416	3434
60	0	6	34	94	243	431	572	540	341	98	16	0	0	6	40	134	377	808	1380	1920	2261	2359	2375	2375
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	91	145	266	393	558	695	802	782	621	419	228	117	91	236	502	895	1453	2148	2950	3732	4353	4772	5000	5117

(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