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: MARION JUNCTION 2 NE, AL **COOP ID: 015121**

Climate Division: AL 6 **NWS Call Sign:** **Elevation: 200 Feet** **Lat: 32˚28N** **Lon: 87˚14W**

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	55.2	33.2	44.2	88	1965	4	56.3	1974	-1+	1985	22	33.4	1977	651	0	.0	.0	21.2	.7	16.6	.1
Feb	59.9	36.1	48.0	85	1962	13	55.0	1990	7	1951	3	38.2	1978	477	0	.0	.0	22.0	.4	11.7	.0
Mar	68.1	43.3	55.7	87+	1974	10	60.8	1997	14+	1980	4	49.9	1971	307	18	.0	.0	29.3	.1	4.5	.0
Apr	75.2	49.3	62.3	91	1955	17	67.4	1981	30+	1973	11	57.2	1983	129	46	.0	@	29.9	.0	.4	.0
May	82.5	58.7	70.6	97	1951	31	74.8	2000	39	1971	4	65.7	1976	25	199	.0	3.0	31.0	.0	.0	.0
Jun	88.9	66.7	77.8	104	1954	28	81.4	1981	40	1984	1	74.6	1983	0	383	.1	13.2	30.0	.0	.0	.0
Jul	91.8	70.4	81.1	108	1952	25	83.8	1980	52	1967	16	78.3	1984	0	499	.6	20.8	31.0	.0	.0	.0
Aug	91.2	69.5	80.4	106	1954	28	84.0	1980	56+	1992	29	76.8	1984	0	477	.3	18.2	31.0	.0	.0	.0
Sep	86.9	63.4	75.2	102+	1954	19	81.2	1980	36	1967	30	71.4	1984	6	310	@	9.2	30.0	.0	.0	.0
Oct	77.2	50.7	64.0	99	1954	5	71.0	1984	23	1952	30	58.7	1987	118	85	.0	.5	30.9	.0	.4	.0
Nov	67.3	41.6	54.5	89	1961	2	62.1	1985	11	1950	25	46.2	1976	333	16	.0	.0	28.6	.0	7.4	.0
Dec	58.3	35.2	46.8	83	1978	9	56.6	1984	0+	1983	27	38.4	1989	574	7	.0	.0	24.0	.4	14.6	.1
Ann	75.2	51.5	63.4	108	Jul 1952	25	84.0	Aug 1980	-1+	Jan 1985	22	33.4	Jan 1977	2620	2040	1.0	64.9	338.9	1.6	55.6	.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: 1950-2001

(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	5.85	5.50	4.55	1990	25	12.40	1972	1.51	1986
Feb	4.69	4.27	4.40	2001	25	8.47	1990	1.52	2000
Mar	6.43	5.83	6.40	1990	16	12.98	1976	1.52	1985
Apr	4.83	4.41	7.63	1964	6	12.50	1979	.24	1986
May	4.09	3.61	4.00	1997	28	8.54	1978	.42	1988
Jun	4.43	3.54	4.68	1997	30	12.47	1997	.72	1986
Jul	5.06	5.03	3.25	1960	18	12.77	1988	.84	2000
Aug	3.35	3.22	3.77	1966	17	6.82	1993	1.10	1988
Sep	3.95	3.74	4.90	1963	14	9.08	1998	.71	1990
Oct	2.97	2.61	4.32	1995	5	8.80	1995	.65+	1987
Nov	4.36	3.89	3.05	1954	16	13.15	1986	.90	1981
Dec	5.03	4.88	4.82	1961	10	9.21	1971	.98	1980
Ann	55.04	54.03	7.63	Apr 1964	6	13.15	Nov 1986	.24	Apr 1986

Mean Number of Days (3)

Daily Precipitation

Month	>= 0.01	>= 0.10	>= 0.50	>= 1.00
Jan	12.0	8.9	4.1	1.8
Feb	9.2	6.7	3.6	1.5
Mar	10.6	8.0	4.1	2.3
Apr	8.1	5.8	3.3	2.0
May	9.2	6.5	2.6	1.1
Jun	9.7	6.9	2.9	1.5
Jul	11.4	8.2	3.6	1.6
Aug	8.6	5.9	2.2	1.0
Sep	7.9	5.8	2.5	1.3
Oct	6.4	4.3	2.1	1.0
Nov	9.1	6.7	3.0	1.6
Dec	10.2	7.3	3.5	1.6
Ann	112.4	81.0	37.5	18.3

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	2.24	2.78	3.56	4.21	4.82	5.45	6.13	6.91	7.91	9.45	10.85
Feb	1.78	2.22	2.84	3.36	3.85	4.36	4.90	5.53	6.34	7.58	8.71
Mar	1.83	2.44	3.36	4.17	4.95	5.77	6.67	7.74	9.12	11.29	13.31
Apr	.71	1.12	1.81	2.48	3.18	3.94	4.82	5.90	7.35	9.71	11.98
May	.62	.97	1.56	2.13	2.71	3.36	4.10	5.00	6.21	8.18	10.08
Jun	1.02	1.43	2.08	2.66	3.24	3.86	4.55	5.37	6.46	8.19	9.81
Jul	1.39	1.87	2.60	3.23	3.86	4.51	5.24	6.10	7.22	8.97	10.61
Aug	1.07	1.39	1.86	2.26	2.65	3.05	3.49	4.01	4.67	5.71	6.66
Sep	.88	1.24	1.82	2.34	2.87	3.42	4.05	4.79	5.78	7.34	8.82
Oct	.78	1.06	1.49	1.87	2.24	2.63	3.07	3.58	4.25	5.30	6.29
Nov	1.40	1.81	2.42	2.94	3.45	3.97	4.54	5.21	6.07	7.41	8.64
Dec	1.87	2.35	3.02	3.59	4.12	4.67	5.27	5.96	6.84	8.19	9.43
Ann	40.81	43.61	47.17	49.86	52.24	54.53	56.88	59.48	62.61	67.13	71.03

\+ 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: 1950-2001
(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	#	.0	0	0	#	1985	5	#+	1985	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	#	.0	0	0	#	1984	29	#	1984	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	#	.0	0	0	#	1980	2	#+	1980	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Apr	.0	.0	0	0	.0	0	0	.0	0	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	#	1983	27	#+	1983	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	#	.0	N/A	N/A	#+	Jan 1985	5	#+	Jan 1985	0	0	0	0	0	.0	.0	.0	.0	.0	.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	4/17	4/13	4/10	4/07	4/05	4/02	3/31	3/28	3/23
32	4/09	4/02	3/29	3/25	3/22	3/18	3/15	3/10	3/04
28	3/21	3/13	3/08	3/04	2/28	2/24	2/20	2/14	2/07
24	3/13	3/04	2/26	2/21	2/16	2/11	2/06	1/31	1/22
20	3/08	2/26	2/19	2/13	2/07	2/01	1/25	1/16	12/31
16	2/19	2/09	2/02	1/26	1/19	1/09	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	10/08	10/14	10/18	10/21	10/24	10/27	10/31	11/04	11/09
32	10/25	10/30	11/03	11/06	11/09	11/11	11/14	11/18	11/23
28	11/04	11/10	11/14	11/18	11/21	11/24	11/28	12/02	12/08
24	11/16	11/25	12/02	12/08	12/13	12/19	12/24	12/31	1/09
20	11/28	12/10	12/18	12/26	1/02	1/09	1/17	1/27	2/15
16	12/12	12/25	1/04	1/14	1/24	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	221	214	209	205	202	198	194	189	183
32	254	246	240	236	231	227	222	216	208
28	290	282	275	270	265	260	255	249	240
24	329	317	309	303	297	291	285	278	268
20	>365	>365	350	335	324	315	306	297	284
16	>365	>365	>365	>365	>365	>365	342	328	315

***** 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	651	477	307	129	25	0	0	0	6	118	333	574	2620
60	507	344	188	53	5	0	0	0	1	52	213	430	1793
57	426	269	133	25	1	0	0	0	0	27	156	350	1387
55	375	223	101	14	0	0	0	0	0	17	123	302	1155
50	263	129	42	2	0	0	0	0	0	4	59	200	699
32	33	3	0	0	0	0	0	0	0	0	0	16	52

Cooling Degree Days (1)

Base Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	412	450	735	907	1196	1373	1522	1500	1294	991	673	472	11525
55	41	26	123	231	483	683	809	787	604	294	106	45	4232
57	30	16	92	182	423	623	747	725	544	243	79	32	3736
60	19	8	55	120	333	533	654	632	455	175	46	19	3049
65	0	0	18	46	199	383	499	477	310	85	16	7	2040
70	0	0	4	11	96	237	344	322	181	32	3	0	1230

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	205	272	498	669	948	1123	1260	1229	1035	735	434	252	205	477	975	1644	2592	3715	4975	6204	7239	7974	8408	8660
45	119	173	353	520	793	973	1105	1074	885	580	304	157	119	292	645	1165	1958	2931	4036	5110	5995	6575	6879	7036
50	58	98	230	375	638	823	950	919	735	426	194	90	58	156	386	761	1399	2222	3172	4091	4826	5252	5446	5536
55	29	45	134	245	483	673	795	764	585	284	107	44	29	74	208	453	936	1609	2404	3168	3753	4037	4144	4188
60	7	17	60	134	332	523	640	609	437	167	49	19	7	24	84	218	550	1073	1713	2322	2759	2926	2975	2994
Base	**Growing Degree Units for Corn (Monthly)**												**Growing Degree Units for Corn (Accumulated Monthly)**											
50/86	131	176	313	427	632	777	864	849	707	482	286	166	131	307	620	1047	1679	2456	3320	4169	4876	5358	5644	5810

(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