# 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

COOP ID: 010252

Lon: 86°31W

Station: ANDALUSIA 3 W, AL

Climate Division: AL 7 NWS Call Sign:

Temperature (°F) Degree Days (1) Mean (1) Mean Number of Days (3) **Extremes** Base Temp 65 Max Max Max Max Min Min Highest Lowest Daily Daily Highest Lowest Month(1) Month(1) Cooling >= >= >= <= <= <= Month Mean Year Day Year Year Day Year Heating Max Min Daily(2) Daily(2) Mean Mean 100 90 50 32 32 0 61.1 35.7 48.4 84 1949 12 60.3 1974 0 1985 21 38.8 1977 527 0 .0 .0 25.5 15.9 **(**a) Jan 2 65.1 37.8 51.5 87 1962 28 57.8 1990 10 +1996 5 42.6 1978 382 .0 .0 25.4 .2 12.0 0. Feb Mar 72.6 44.1 58.4 89+ 1982 18 63.9 1997 16+ 1993 14 53.2 1996 233 27 .0 .0 30.4 .0 6.2 0. 27+ 1983 73 Apr 79.2 49.7 64.5 94 +1987 24 69.4 1991 1987 6 60.0 90 .0. .4 30.0 .0 1.2 0. May 85.6 58.5 72.1 100 1953 29 75.8 1991 34 1971 4 68.7 1976 9 227 .0 5.2 31.0 .0 .0 .0 78.6 1954 44+ 1984 2 409 18.3 Jun 91.0 66.2 105 29 82.6 1998 76.1 1997 0 .4 30.0 .0 .0 .0 Jul 92.8 69.5 81.2 105 1952 25 83.9 54+ 1974 78.4 1994 500 .7 22.8 31.0 0. 1986 0 .0 .0 1992 92.4 68.9 80.7 105 1954 14 82.9 1990 54 1968 30 78.5 0 485 .3 21.4 31.0 .0 .0 .0 Aug 7 34 2 Sep 89.1 64.5 76.8 101 1954 81.7 1978 1967 30 73.7 1975 355 @ 12.0 30.0 .0 .0 .0 7 72.2 +59.9 1987 87 Oct 81.1 51.4 66.3 99 1954 1985 28 +1981 20 125 .0 .9 31.0 .0 .9 .0 72.0 43.3 57.7 88+ 2000 2 66.1 1985 16+ 1970 25 51.1 1976 252 31 .0 .0 29.4 .0 7.3 .0 Nov Dec 63.8 37.7 50.8 84 1982 2 59.9 1971 2 1983 27 43.3 1989 453 11 .0 .0 27.2 .1 13.3 .0 Aug Jul Jan Jan 78.8 52.3 65.6 105 +1954 14 83.9 1986 0 1985 21 38.8 1977 2035 2245 1.4 81.0 351.9 .5 56.8 @ Ann

Complete documentation available from: www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

Issue Date: February 2004 003-A

Elevation: 250 Feet Lat: 31°18N

<sup>+</sup> Also occurred on an earlier date(s)

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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Climate Division: AL 7 NWS Call Sign: Elevation: 250 Feet Lat: 31°18N Lon: 86°31W

										Pı	recipi	tation	(incl	nes)										
	Mea	Precipitation Totals  Means/ Medians(1)  Extremes										ays (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										
	Medi	ans(1)				Extremes	3			Daily Precipitation				These values were determined from the incomplete gamma distribution										
Month	Mean	Med- ian	Highest Daily(2)	Year	Day	Highest Monthly(1)	Year	Lowest Monthly(1)	Year	>= 0.01	>= 0.10	>= 0.50	>= 1.00	.05	.10	.20	.30	.40	.50	.60	.70	.80	.90	.95
Jan	5.95	5.55	5.60	1978	25	11.46	1991	1.52	1989	10.7	8.0	4.3	1.9	2.67	3.20	3.93	4.53	5.08	5.64	6.24	6.93	7.79	9.10	10.28
Feb	5.40	5.28	7.76	1981	10	11.57	1981	.77	1980	8.7	6.5	3.6	1.9	1.62	2.14	2.90	3.56	4.21	4.87	5.61	6.47	7.59	9.34	10.96
Mar	7.20	6.41	12.34	1990	17	17.55	1990	2.21	1997	9.7	7.4	4.1	2.5	2.55	3.23	4.21	5.04	5.83	6.64	7.52	8.55	9.86	11.89	13.75
Apr	4.53	4.06	12.28	1975	10	18.16	1975	.00	1987	7.3	5.4	2.8	1.4	.43	.96	1.71	2.37	3.04	3.77	4.60	5.60	6.94	9.10	11.16
May	4.94	4.12	5.44	1953	6	12.41	1978	.50	1998	8.2	6.3	3.2	1.6	1.24	1.71	2.43	3.06	3.69	4.35	5.09	5.97	7.12	8.93	10.63
Jun	5.20	4.74	8.58	1970	4	13.90	1989	1.27	1998	10.6	8.3	3.6	1.5	1.36	1.85	2.61	3.27	3.92	4.61	5.38	6.28	7.46	9.33	11.07
Jul	6.49	6.33	5.25	1994	7	16.30	1994	2.83	2000	13.0	10.1	4.7	2.0	2.65	3.24	4.08	4.77	5.42	6.08	6.80	7.62	8.66	10.25	11.69
Aug	4.87	4.63	4.53	1950	31	9.81	1991	1.39	1985	11.0	8.0	3.3	1.2	1.63	2.09	2.77	3.34	3.89	4.46	5.08	5.80	6.73	8.17	9.50
Sep	4.76	3.77	17.88	1998	29	28.54	1998	.32	1984	8.3	5.8	3.0	1.3	.55	.92	1.58	2.24	2.95	3.74	4.66	5.81	7.36	9.93	12.43
Oct	3.08	2.63	12.80	1995	4	16.70	1995	.00	1987	5.2	3.3	1.7	.7	.07	.26	.66	1.09	1.58	2.15	2.85	3.74	4.99	7.10	9.21
Nov	4.75	4.17	3.54	1992	5	11.14	1992	1.36	1990	8.0	6.3	3.4	1.5	1.60	2.05	2.71	3.27	3.80	4.36	4.96	5.66	6.57	7.97	9.26
Dec	4.72	4.31	5.44	1972	21	11.39	1972	1.06	1980	9.2	6.7	2.9	1.4	1.57	2.02	2.68	3.23	3.77	4.32	4.92	5.62	6.53	7.93	9.23
Ann	61.89	60.73	17.88	Sep 1998	29	28.54	Sep 1998	.00+	Oct 1987	109.9	82.1	40.6	18.9	43.87	47.35	51.81	55.20	58.21	61.13	64.14	67.46	71.50	77.35	82.41

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

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**COOP ID: 010252** 

Station: ANDALUSIA 3 W, AL

Climate Division: AL 7 NWS Call Sign: Elevation: 250 Feet Lat: 31°18N Lon: 86°31W

										Snov	w (incl	hes)													
						Sno	ow To	tals							Mean Number of Days (1)										
	Mean	s/Medi	ans (1)	)	Extremes (2)											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	#	1977	25	#	1977	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Feb	.0	.0	#	0	.0	0	0	.0	0	1	1988	5	#	1988	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Mar	.3	.0	0	0	6.0	1993	13	6.0	1993	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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0		
Ann	.3	.0	N/A	N/A	6.0	Mar 1993	13	6.0	Mar 1993	1	Feb 1988	5	#	Feb 1988	@	@	@	@	.0	.0	.0	.0	.0		

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

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Call Sign: Elevation: 250 Feet Lat: 31°18N Lon: 86°31W

				Freez	ze Data										
			Spri	ng Freeze D	ates (Month	/Day)									
Temp (F)		P	robability of	later date i	n spring (thr	ru Jul 31) tha	n indicated	(*)							
temp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	4/28	4/22	4/19	4/15	4/12	4/09	4/06	4/02	3/28						
32	4/18	4/12	4/08	4/04	4/01	3/29	3/25	3/21	3/16						
28	3/28	3/21	3/17	3/12	3/08	3/05	2/28	2/23	2/17						
24	3/11	3/04	2/27	2/23	2/19	2/15	2/10	2/05	1/29						
20	3/06	2/26	2/19	2/14	2/09	2/03	1/29	1/22	1/11						
16	2/16	2/06	1/28	1/20	1/09	0/00	0/00	0/00	0/00						
			Fa	ll Freeze Da	tes (Month/I	Day)									
Temp (F)	Probability of earlier date in fall (beginning Aug 1) than indicated(*)														
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	10/02	10/09	10/13	10/17	10/21	10/25	10/29	11/02	11/09						
32	10/18	10/25	10/29	11/02	11/06	11/10	11/14	11/19	11/26						
28	10/31	11/07	11/12	11/16	11/20	11/24	11/28	12/03	12/10						
24	11/15	11/25	12/01	12/07	12/12	12/18	12/23	12/30	1/08						
20	11/27	12/10	12/19	12/27	1/03	1/10	1/18	1/28	2/12						
16	12/21	1/03	1/14	1/25	2/07	0/00	0/00	0/00	0/00						
				Freeze F	ree Period				•						
Temp (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)	)							
remp (r)	.10	.20	.30	.40	.50	.60	.70	.80	.90						
36	215	207	201	196	191	186	181	175	167						
32	245	236	229	224	218	213	207	201	192						
28	285	275	268	261	256	250	244	236	226						
24	323	312	305	299	294	289	283	276	267						
20	>365	>365	342	330	320	312	304	294	282						
16	>365	>365	>365	>365	>365	>365	>365	347	329						

<sup>\*</sup> 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.

Complete documentation available from:

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	Degree Days to Selected Base Temperatures (°F)														
Base						Heatin	g Degree l	Days (1)							
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann		
65	527	382	233	90	9	0	0	0	2	87	252	453	2035		
60	390	254	129	31	1	0	0	0	0	35	151	317	1308		
57	316	186	82	13	0	0	0	0	0	17	103	247	964		
55	272	148	57	7	0	0	0	0	0	10	77	206	777		
50	181	74	18	1	0	0	0	0	0	2	30	123	429		
32	14	0	0	0	0	0	0	0	0	0	0	4	18		

Base						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	524	545	817	974	1241	1399	1523	1508	1343	1062	769	585	12290
55	68	49	161	290	528	709	810	795	653	359	156	74	4652
57	50	31	124	237	466	649	748	733	593	304	123	53	4111
60	31	15	78	164	374	559	655	640	503	228	80	30	3357
65	0	2	27	73	227	409	500	485	355	125	31	11	2245
70	0	0	7	21	107	260	345	330	215	54	10	0	1349

	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	270	333	550	705	964	1125	1237	1222	1057	769	491	325	270	603	1153	1858	2822	3947	5184	6406	7463	8232	8723	9048	
45	167	214	401	555	809	975	1082	1067	907	614	351	206	167	381	782	1337	2146	3121	4203	5270	6177	6791	7142	7348	
50	93	125	272	406	654	825	927	912	757	462	230	119	93	218	490	896	1550	2375	3302	4214	4971	5433	5663	5782	
55	42	63	161	270	500	675	772	757	607	315	136	63	42	105	266	536	1036	1711	2483	3240	3847	4162	4298	4361	
60	17	28	76	155	348	525	617	602	457	189	66	28	17	45	121	276	624	1149	1766	2368	2825	3014	3080	3108	
Base				Gro	wing De	gree Unit	s for Co	rn (Mont	thly)	l .	l .				Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)			
50/86	189	237	376	477	646	760	836	832	715	518	336	227	189	426	802	1279	1925	2685	3521	4353	5068	5586	5922	6149	

(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

#### 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

- c. Snow Tables
  - 1. Snow Climatology
  - 2. Cooperative Summary of the Day
- d. Freeze Data Table

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

#### 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