

Climatology of the United States

No. 20

1971-2000

Station: HUNTSVILLE INTL AP, AL

COOP ID: 014064

Climate Division: AL 1

NWS Call Sign: HSV

Elevation: 624 Feet

Lat: 34° 39N

Lon: 86° 47W

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	48.9	30.7	39.8	76	1972	13	48.4	1974	-11+	1985	21	28.3	1977	780	0	.0	.0	15.5	2.8	18.1	.2
Feb	54.6	34.0	44.3	83	1996	23	51.9	1990	1	1996	4	33.7	1978	587	1	.0	.0	19.0	1.1	12.7	.0
Mar	63.4	41.2	52.3	88	1963	31	57.5	1973	6	1980	3	47.1	1971	404	8	.0	.0	27.6	.1	6.1	.0
Apr	72.3	48.4	60.4	92	1967	16	66.1	1981	26+	1992	3	55.4	1983	180	40	.0	.1	29.7	.0	.8	.0
May	79.6	57.5	68.6	96+	1996	24	73.4	1987	36+	1971	4	63.2	1976	41	142	.0	1.2	31.0	.0	.0	.0
Jun	86.5	65.4	76.0	101+	1988	26	80.5	1998	45	1972	1	70.5	1974	1	326	@	9.1	30.0	.0	.0	.0
Jul	89.4	69.5	79.5	104+	1993	27	83.2	1993	53	1967	15	75.8	1972	0	446	.5	16.5	31.0	.0	.0	.0
Aug	89.0	68.1	78.6	103	1990	20	82.8	1983	52	1992	29	74.2	1992	0	417	.6	14.8	31.0	.0	.0	.0
Sep	83.0	61.7	72.4	101+	1999	5	78.2	1998	37	1967	30	68.0	1975	18	238	.2	5.5	30.0	.0	.0	.0
Oct	72.9	49.6	61.3	91+	1963	12	68.5	1984	28	1961	27	54.7	1976	165	47	.0	.1	30.9	.0	.5	.0
Nov	61.6	40.7	51.2	84+	2000	1	58.1	1985	15+	1976	30	42.3	1976	417	5	.0	.0	26.0	@	7.6	.0
Dec	52.4	33.8	43.1	79+	1998	5	51.8	1984	-3+	1989	23	33.7	1989	669	1	.0	.0	19.4	1.3	15.5	.1
Ann	71.1	50.1	60.6	104+	1993	27	83.2	1993	-11+	1985	21	28.3	1977	3262	1671	1.3	47.3	321.1	5.3	61.3	.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/normal/usnormals.html

Issue Date: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1959-2001

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Precipitation (inches)

		Precipitation Totals								Mean Number of Days (3)				Precipitation Probabilities (1)											
														Probability that the monthly/annual precipitation will be equal to or less than the indicated amount											
Means/Medians(1)		Extremes								Daily Precipitation				Monthly/Annual Precipitation vs Probability Levels											
														These values were determined from the incomplete gamma distribution											
Month	Mean	Median	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	5.52	5.44	4.83	1982	3	10.92	1982	1.32	1986	12.1	8.1	4.0	1.7	1.98	2.50	3.25	3.88	4.48	5.10	5.77	6.55	7.54	9.08	10.49	
Feb	4.95	4.64	4.04	1994	10	10.14	1994	.59	1978	9.8	7.0	3.5	1.5	1.41	1.88	2.59	3.20	3.81	4.44	5.13	5.95	7.02	8.69	10.24	
Mar	6.68	5.81	5.24	1973	16	17.00	1980	2.70	1982	11.9	8.4	4.4	2.0	2.44	3.07	3.97	4.73	5.45	6.18	6.99	7.92	9.11	10.94	12.62	
Apr	4.54	3.66	3.85	1983	5	10.29	1991	.42	1986	9.9	6.7	3.2	1.5	1.18	1.61	2.27	2.85	3.42	4.02	4.69	5.48	6.52	8.15	9.67	
May	5.24	4.38	4.64	1980	16	11.88	1983	1.29	2000	10.3	6.8	3.6	1.6	1.77	2.26	2.99	3.60	4.19	4.80	5.46	6.24	7.23	8.77	10.19	
Jun	4.22	3.25	4.46	1969	14	14.99	1989	.17	1988	10.0	6.3	2.7	1.3	.68	1.04	1.65	2.23	2.83	3.49	4.24	5.15	6.37	8.36	10.26	
Jul	4.40	4.25	4.81	2001	5	9.44	1973	.79	1983	10.4	7.0	3.4	1.1	1.36	1.78	2.40	2.93	3.45	3.99	4.58	5.27	6.16	7.56	8.85	
Aug	3.32	3.40	4.29	1986	10	9.81	1986	.58	1998	8.3	5.5	2.0	.9	.66	.96	1.45	1.90	2.35	2.83	3.38	4.04	4.92	6.32	7.65	
Sep	4.29	4.16	3.93	1980	25	9.78	1980	.48	1998	8.4	5.7	3.0	1.5	.65	1.02	1.64	2.23	2.84	3.52	4.29	5.23	6.50	8.57	10.55	
Oct	3.54	2.68	4.86	1975	7	12.06	1975	.01	2000	7.0	4.6	2.6	1.2	.36	.62	1.11	1.60	2.13	2.73	3.44	4.32	5.52	7.52	9.48	
Nov	5.22	5.22	3.33	1973	27	11.53	1977	1.82	1971	9.8	6.9	3.5	1.7	2.11	2.59	3.27	3.83	4.36	4.89	5.47	6.14	6.99	8.28	9.46	
Dec	5.59	4.55	9.07	1990	22	18.68	1990	.91	1980	11.0	7.6	3.9	1.6	1.39	1.92	2.73	3.45	4.17	4.92	5.77	6.77	8.07	10.14	12.08	
Ann	57.51	55.92	9.07	Dec 1990	22	18.68	Dec 1990	.01	Oct 2000	118.9	80.6	39.8	17.6	42.81	45.71	49.39	52.16	54.62	56.98	59.41	62.08	65.31	69.97	73.97	

+ 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: 1959-2001

(3) Derived from 1971-2000 serially complete daily data

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Snow (inches)																							
Snow Totals															Mean Number of Days (1)								
Means/Medians (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	1.3	.2	#	0	7.1	1988	7	9.6	1988	9	1988	8	1	1988	1.3	.4	.1	@	.0	1.1	.3	.2	.0
Feb	.7	.0	#	0	3.0	1996	2	4.2	1985	3	1985	12	#	1985	.8	.4	.0	.0	.0	.4	@	.0	.0
Mar	.4	#	#	0	4.9	1993	13	7.3	1993	7	1993	13	#	1993	.2	.1	@	.0	.0	.2	.1	.1	.0
Apr	#	.0	0	0	#	1993	25	#+	1993	#+	1987	3	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	.0	.0	#	0	.0	0	0	.0	0	0	0	0	#	1993	.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	#	1993	31	#+	1993	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Nov	.0	.0	0	0	.8	1974	14	.8	1974	#+	1976	29	0	0	.1	.0	.0	.0	.0	.0	.0	.0	.0
Dec	.1	#	#	0	1.0	1974	1	1.0	1974	1	1985	20	#	1985	.3	.0	.0	.0	.0	@	.0	.0	.0
Ann	2.5	.2	N/A	N/A	7.1	Jan 1988	7	9.6	Jan 1988	9	Jan 1988	8	1	Jan 1988	2.7	.9	.1	@	.0	1.7	.4	.3	.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	4/24	4/20	4/17	4/14	4/11	4/09	4/06	4/03	3/30
32	4/12	4/07	4/04	4/02	3/30	3/28	3/25	3/22	3/17
28	4/02	3/26	3/22	3/18	3/14	3/10	3/06	3/01	2/22
24	3/15	3/10	3/05	3/02	2/26	2/23	2/20	2/15	2/10
20	3/08	2/28	2/22	2/17	2/13	2/08	2/03	1/28	1/20
16	2/27	2/17	2/10	2/03	1/28	1/22	1/14	1/02	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	10/06	10/11	10/15	10/18	10/21	10/24	10/27	10/31	11/05
32	10/21	10/26	10/29	11/01	11/04	11/07	11/10	11/14	11/19
28	11/04	11/08	11/11	11/13	11/16	11/18	11/20	11/23	11/27
24	11/11	11/18	11/23	11/27	12/01	12/05	12/09	12/14	12/21
20	11/21	11/30	12/07	12/12	12/18	12/23	12/28	1/04	1/13
16	12/03	12/13	12/20	12/27	1/02	1/08	1/16	1/28	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	209	203	199	195	192	189	185	181	175
32	239	232	227	222	218	214	210	205	197
28	266	259	254	250	246	242	238	233	227
24	300	292	286	281	277	272	268	262	254
20	340	327	319	312	306	300	293	286	275
16	>365	>365	>365	350	333	324	316	307	297

* 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)													
Base	Heating Degree Days (1)												
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	780	587	404	180	41	1	0	0	18	165	417	669	3262
60	637	442	263	80	14	0	0	0	3	95	290	535	2359
57	550	365	194	43	5	0	0	0	1	59	220	449	1886
55	494	314	154	26	2	0	0	0	0	41	180	394	1605
50	364	202	76	5	0	0	0	0	0	13	98	272	1030
32	67	12	0	0	0	0	0	0	0	0	1	30	110

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	292	368	634	848	1130	1317	1470	1442	1211	908	578	370	10568
55	10	22	83	198	418	627	757	729	521	224	68	21	3678
57	6	14	59	156	357	567	695	667	461	178	48	14	3222
60	2	6	32	103	271	477	602	574	374	119	25	7	2592
65	0	1	8	40	142	326	446	417	238	47	5	1	1671
70	0	0	1	7	56	187	292	266	124	12	1	0	946

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	132	207	403	615	895	1089	1232	1204	981	672	358	188	132	339	742	1357	2252	3341	4573	5777	6758	7430	7788	7976
45	66	121	271	469	740	939	1077	1049	831	518	239	105	66	187	458	927	1667	2606	3683	4732	5563	6081	6320	6425
50	32	64	164	330	585	789	922	894	681	365	142	53	32	96	260	590	1175	1964	2886	3780	4461	4826	4968	5021
55	9	24	88	207	430	639	767	739	532	233	73	25	9	33	121	328	758	1397	2164	2903	3435	3668	3741	3766
60	0	4	35	108	282	489	612	584	386	124	26	5	0	4	39	147	429	918	1530	2114	2500	2624	2650	2655
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	76	125	239	382	582	750	853	830	663	423	213	105	76	201	440	822	1404	2154	3007	3837	4500	4923	5136	5241

(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/normal/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.
Complete 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