

Climatology of the United States

No. 20

1971-2000

Station: MIAMI INTL AP, FL

COOP ID: 085663

Climate Division: FL 6

NWS Call Sign: MIA

Elevation: 35 Feet

Lat: 25°49N

Lon: 80°18W

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	76.5	59.6	68.1	88+	1987	19	74.2	1974	30	1985	22	59.2	1981	52	133	.0	.0	31.0	.0	.1	.0
Feb	77.7	60.5	69.1	89+	1994	25	74.3	1997	35	1958	5	63.2	1978	39	154	.0	.0	28.2	.0	.0	.0
Mar	80.7	64.0	72.4	92	1977	22	76.3	1997	32	1980	3	68.1	1983	15	236	.0	.3	31.0	.0	@	.0
Apr	83.8	67.6	75.7	96	1971	30	78.4	1991	42	1950	7	70.7	1987	1	315	.0	1.7	30.0	.0	.0	.0
May	87.2	72.0	79.6	96	1995	15	82.2	1995	55	1963	6	77.0	1982	0	442	.0	4.8	31.0	.0	.0	.0
Jun	89.5	75.2	82.4	98	1985	4	85.4	1998	60	1984	3	79.9	1976	0	510	.0	10.8	30.0	.0	.0	.0
Jul	90.9	76.5	83.7	98+	1998	3	85.4	1983	69+	1985	20	81.4	1985	0	568	.0	18.0	31.0	.0	.0	.0
Aug	90.6	76.5	83.6	98+	1990	1	85.2	1987	68	1950	8	82.1	1973	0	568	.0	16.9	31.0	.0	.0	.0
Sep	89.0	75.7	82.4	97	1987	8	84.6	1974	68+	1983	30	80.2	1984	0	517	.0	10.8	30.0	.0	.0	.0
Oct	85.4	72.2	78.8	95	1980	1	81.0	1995	53	1989	21	76.5	1976	0	433	.0	2.6	31.0	.0	.0	.0
Nov	81.2	67.5	74.4	89+	1997	2	79.3	1986	39	1950	26	70.8	1981	4	291	.0	.0	30.0	.0	.0	.0
Dec	77.5	62.2	69.9	87+	1989	18	74.1	1971	30	1989	25	64.6	1989	38	194	.0	.0	31.0	.0	.1	.0
Ann	84.2	69.1	76.7	98+	Jul 1998	3	85.4+	Jun 1998	30+	Dec 1989	25	59.2	Jan 1981	149	4361	.0	65.9	365.2	.0	.2	.0

+ 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: 1948-2001

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

048-A

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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

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Climate Division: FL 6

NWS Call Sign: MIA

Elevation: 35 Feet

Lat: 25°49N

Lon: 80°18W

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	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	1.88	1.60	2.40	1973	11	5.36	1983	.18	1984	7.5	3.8	1.0	.4	.22	.37	.63	.90	1.18	1.49	1.85	2.30	2.91	3.91	4.89	
Feb	2.07	1.45	4.54	1966	22	8.07	1983	.06	1985	6.8	3.8	1.1	.5	.14	.27	.53	.82	1.13	1.50	1.95	2.51	3.29	4.61	5.93	
Mar	2.56	2.17	7.07	1949	20	10.57	1986	.23	1976	6.2	3.7	1.5	.8	.19	.35	.68	1.04	1.43	1.88	2.42	3.11	4.07	5.68	7.27	
Apr	3.36	2.55	14.85	1979	25	11.78	1979	.05	1981	6.1	4.0	1.8	.9	.20	.39	.80	1.26	1.78	2.38	3.12	4.06	5.37	7.61	9.84	
May	5.52	4.92	11.51	1977	4	15.82	1977	.55	1992	10.3	7.4	3.1	1.4	.88	1.36	2.16	2.92	3.70	4.56	5.54	6.74	8.34	10.93	13.42	
Jun	8.54	7.82	6.60	1977	1	20.33	1995	3.02	1980	15.6	10.8	5.0	2.7	3.49	4.27	5.37	6.28	7.14	8.01	8.95	10.03	11.40	13.49	15.39	
Jul	5.79	5.27	4.51	1952	3	11.23	1985	2.69	1978	16.0	10.5	3.7	1.6	2.72	3.22	3.92	4.48	5.00	5.52	6.08	6.71	7.51	8.71	9.80	
Aug	8.63	7.78	6.57	1994	12	16.64	1994	3.24	1987	18.9	12.5	5.8	2.5	3.65	4.43	5.53	6.43	7.28	8.13	9.05	10.11	11.44	13.48	15.33	
Sep	8.38	7.55	6.07	1960	10	14.79	1981	3.09	1988	17.4	12.5	5.5	2.7	3.43	4.19	5.28	6.17	7.01	7.86	8.78	9.83	11.18	13.23	15.09	
Oct	6.19	4.62	12.56	2000	3	21.64	1991	1.25	1977	13.4	8.4	3.7	1.7	1.07	1.61	2.51	3.36	4.23	5.17	6.24	7.55	9.29	12.10	14.78	
Nov	3.43	2.73	7.56	1992	18	13.84	1992	.46	1973	9.0	5.0	2.0	.9	.40	.66	1.14	1.62	2.13	2.70	3.37	4.19	5.31	7.16	8.96	
Dec	2.18	1.96	5.06	2000	10	6.15	2000	.12	1988	7.3	3.6	1.3	.5	.15	.29	.56	.86	1.20	1.58	2.05	2.64	3.46	4.85	6.23	
Ann	58.53	57.57	14.85	Apr 1979	25	21.64	Oct 1991	.05	Apr 1981	134.5	86.0	35.5	16.6	42.48	45.61	49.61	52.63	55.31	57.90	60.57	63.51	67.07	72.22	76.67	

+ 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: 1948-2001

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

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NWS Call Sign: MIA

Elevation: 35 Feet

Lat: 25°49N

Lon: 80°18W

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	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Feb	.0	.0	0	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Mar	.0	.0	0	0	.0	0	0	.0	0	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	0	.0	0	0	.0	0	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
Ann	.0	.0	N/A	N/A	.0	0	0	.0	0	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	1/27	1/10	0/00	0/00	0/00	0/00	0/00	0/00	0/00
32	1/16	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
28	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
24	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	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	1/07	1/31	0/00	0/00	0/00	0/00	0/00	0/00	0/00
32	1/29	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
28	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
24	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
20	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
16	0/00	0/00	0/00	0/00	0/00	0/00	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	>365	>365	>365	>365	>365	>365	>365	>365	>365
32	>365	>365	>365	>365	>365	>365	>365	>365	>365
28	>365	>365	>365	>365	>365	>365	>365	>365	>365
24	>365	>365	>365	>365	>365	>365	>365	>365	>365
20	>365	>365	>365	>365	>365	>365	>365	>365	>365
16	>365	>365	>365	>365	>365	>365	>365	>365	>365

* 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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Climate Division: FL 6 NWS Call Sign: MIA Elevation: 35 Feet Lat: 25° 49N Lon: 80° 18W

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	52	39	15	1	0	0	0	0	0	0	4	38	149
60	31	8	1	0	0	0	0	0	0	0	0	5	45
57	17	3	0	0	0	0	0	0	0	0	0	1	21
55	11	1	0	0	0	0	0	0	0	0	0	0	12
50	0	0	0	0	0	0	0	0	0	0	0	0	0
32	0	0	0	0	0	0	0	0	0	0	0	0	0

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	1121	1039	1247	1304	1466	1500	1592	1591	1508	1455	1276	1178	16277
55	415	398	535	614	753	810	879	878	818	742	586	470	7898
57	357	344	473	554	691	750	817	816	758	680	526	410	7176
60	275	267	383	464	598	660	724	723	668	587	437	324	6110
65	133	154	236	315	442	510	568	568	517	433	291	194	4361
70	62	65	113	173	289	360	414	413	368	278	157	85	2777

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	884	848	1006	1072	1227	1268	1355	1350	1279	1217	1044	938	884	1732	2738	3810	5037	6305	7660	9010	10289	11506	12550	13488
45	729	703	851	922	1072	1118	1200	1195	1129	1062	894	783	729	1432	2283	3205	4277	5395	6595	7790	8919	9981	10875	11658
50	574	558	696	772	917	968	1045	1040	979	907	744	631	574	1132	1828	2600	3517	4485	5530	6570	7549	8456	9200	9831
55	425	418	542	622	762	818	890	885	829	752	594	480	425	843	1385	2007	2769	3587	4477	5362	6191	6943	7537	8017
60	284	286	389	472	607	668	735	730	679	597	445	331	284	570	959	1431	2038	2706	3441	4171	4850	5447	5892	6223
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	582	571	698	766	896	929	983	983	934	894	743	636	582	1153	1851	2617	3513	4442	5425	6408	7342	8236	8979	9615

(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/normal/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 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.

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| <ol style="list-style-type: none">a. Temperature/ Precipitation Tables<ol style="list-style-type: none">1. 1971-2000 Monthly Normals2. Cooperative Summary of the Day3. National Weather Service station records4. 1971-2000 serially complete daily datab. Degree Day Table<ol style="list-style-type: none">1. Monthly and Annual Heating and Cooling Degree Days Normals to Selected Bases derived from 1971-2000 Monthly Normals2. Daily Normal Growing Degree Units to Selected Base Temperatures derived from 1971-2000 serially complete daily data | <ol style="list-style-type: none">c. Snow Tables<ol style="list-style-type: none">1. Snow Climatology2. Cooperative Summary of the Dayd. Freeze Data Table
1971-2000 serially complete daily data |
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References

U.S. Climate Normals 1971-2000, www.ncdc.noaa.gov/normal.html
U.S. Climate Normals 1971-2000-Products Clim20, www.ncdc.noaa.gov/oa/climate/normal/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