

Climatography of the United States No. 20

National Climatic Data Center
Federal Building
151 Patton Avenue
Asheville, North Carolina 28801
www.ncdc.noaa.gov

Station: WEST PALM BEACH INTL AP, FL

1971-2000

COOP ID: 089525

Climate Division: FL 6

NWS Call Sign: PBI

Elevation: 18 Feet

Lat: 26°41N

Lon: 80°06W

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	75.1	57.3	66.2	87+	1991	31	73.4	1974	27	1977	20	58.6	1977	87	109	.0	.0	31.0	.0	.3	.0
Feb	76.3	58.2	67.2	90	1949	10	73.9	1982	32+	1989	24	60.7	1978	60	121	.0	.0	28.2	.0	.1	.0
Mar	79.2	61.9	70.6	94	1977	22	74.6	1997	30	1980	3	66.2	1971	27	195	.0	.3	31.0	.0	@	.0
Apr	82.1	65.4	73.8	99	1971	30	77.0	1994	43	1987	5	68.8	1987	4	266	.0	1.7	30.0	.0	.0	.0
May	85.9	70.5	78.2	96+	2000	29	80.8	1995	51	1992	8	75.7	1992	0	408	.0	4.4	31.0	.0	.0	.0
Jun	88.5	73.8	81.2	98+	1998	15	84.5	1998	61	1984	1	78.2	1976	0	485	.0	11.0	30.0	.0	.0	.0
Jul	90.1	75.0	82.5	99+	1983	26	84.2	1981	68+	1975	6	79.9	1975	0	544	.0	19.2	31.0	.0	.0	.0
Aug	90.1	75.4	82.8	98	1963	14	84.7	1987	66	1950	8	81.3	1976	0	549	.0	20.0	31.0	.0	.0	.0
Sep	88.7	74.7	81.7	96	1951	3	82.9	1989	67	1983	29	79.8	1984	0	499	.0	11.1	30.0	.0	.0	.0
Oct	85.0	71.2	78.1	95+	1989	2	80.6+	1995	46	1968	30	75.5	1977	0	408	.0	2.3	31.0	.0	.0	.0
Nov	80.4	65.8	73.1	91+	1992	6	78.5	1986	36	1950	26	68.0	1981	10	255	.0	.1	30.0	.0	.0	.0
Dec	76.4	60.1	68.3	88+	1989	19	73.6	1971	28+	1989	25	62.2	1989	58	160	.0	.0	31.0	.0	.1	.0
Ann	83.2	67.4	75.3	99+	Jul 1983	26	84.7	Aug 1987	27	Jan 1977	20	58.6	Jan 1977	246	3999	.0	70.1	365.2	.0	.5	.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

084-A

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Precipitation (inches)

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	3.75	2.84	6.78	1991	15	11.18	1998	.43	1981	8.8	5.2	1.9	.9	.34	.60	1.10	1.62	2.19	2.84	3.61	4.57	5.90	8.11	10.28
Feb	2.55	2.19	2.90	1952	26	8.71	1983	.42	1974	7.9	4.7	1.7	.7	.37	.58	.95	1.31	1.68	2.08	2.55	3.12	3.89	5.15	6.35
Mar	3.68	2.62	5.58	1993	21	16.78	1982	.53	1977	8.1	5.0	2.2	1.0	.49	.79	1.32	1.83	2.37	2.96	3.65	4.50	5.64	7.51	9.32
Apr	3.57	2.73	6.49	1979	25	12.62	1972	.33	1986	6.8	4.4	2.0	1.0	.31	.56	1.03	1.53	2.07	2.69	3.43	4.35	5.62	7.75	9.84
May	5.39	5.07	7.04	1958	5	15.22	1976	.40	2000	10.8	6.9	3.4	1.7	.79	1.24	2.02	2.77	3.54	4.40	5.38	6.58	8.20	10.83	13.36
Jun	7.58	7.32	4.88	1969	20	16.08	1992	1.68	1998	14.6	10.4	5.1	2.6	2.66	3.38	4.41	5.29	6.12	6.98	7.91	9.00	10.39	12.55	14.53
Jul	5.97	5.54	5.29	1972	19	13.25	1972	1.67	1976	14.9	9.7	3.9	1.4	1.67	2.24	3.10	3.85	4.58	5.34	6.19	7.18	8.48	10.51	12.41
Aug	6.65	5.84	8.01	1995	23	20.12	1995	1.73	1987	16.7	10.6	4.1	1.7	2.00	2.63	3.58	4.39	5.18	6.01	6.91	7.98	9.35	11.51	13.50
Sep	8.10	7.38	5.70	1952	8	19.63	1979	1.77	1988	16.7	11.7	5.1	2.5	3.13	3.88	4.96	5.85	6.69	7.55	8.48	9.56	10.93	13.04	14.96
Oct	5.46	4.81	7.10+	1999	15	15.56	1999	.56	1997	12.2	7.6	3.5	1.4	1.08	1.57	2.37	3.11	3.85	4.65	5.56	6.65	8.09	10.40	12.60
Nov	5.55	4.38	7.41	1984	22	14.63	1982	.54	1985	9.8	6.0	2.6	1.5	.80	1.26	2.06	2.83	3.64	4.52	5.54	6.78	8.46	11.20	13.83
Dec	3.14	2.01	6.45	1994	21	11.69	1994	.13	1984	8.9	5.0	1.9	.9	.41	.66	1.11	1.54	2.00	2.51	3.10	3.83	4.82	6.43	7.99
Ann	61.39	61.66	8.01	Aug 1995	23	20.12	Aug 1995	.13	Dec 1984	136.2	87.2	37.4	17.3	42.49	46.11	50.77	54.32	57.48	60.55	63.73	67.24	71.52	77.74	83.13

+ 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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Lat: 26°41N

Lon: 80°06W

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	#	1977	19	#	1977	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	N/A	N/A	#	Jan 1977	19	#	Jan 1977	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	2/24	2/11	2/01	1/22	1/09	0/00	0/00	0/00	0/00
32	2/08	1/23	1/04	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	12/23	1/05	1/15	1/26	2/08	0/00	0/00	0/00	0/00
32	1/12	1/31	2/26	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	348	329	315
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

Complete documentation available from:

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Climate Division: FL 6 NWS Call Sign: PBI Elevation: 18 Feet Lat: 26°41N Lon: 80°06W

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	87	60	27	4	0	0	0	0	0	0	10	58	246
60	47	21	3	0	0	0	0	0	0	0	0	12	83
57	27	10	0	0	0	0	0	0	0	0	0	4	41
55	18	5	0	0	0	0	0	0	0	0	0	2	25
50	6	0	0	0	0	0	0	0	0	0	0	0	6
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	1060	985	1193	1252	1432	1475	1567	1573	1489	1429	1233	1124	15812
55	360	348	482	562	719	785	854	860	799	716	543	419	7447
57	305	296	422	502	657	725	792	798	739	654	483	362	6735
60	229	224	333	413	564	635	699	705	649	561	394	280	5686
65	109	121	195	266	408	485	544	549	499	408	255	160	3999
70	41	44	82	133	254	335	389	395	349	253	128	63	2466

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	821	795	953	1022	1195	1246	1327	1334	1258	1190	1002	887	821	1616	2569	3591	4786	6032	7359	8693	9951	11141	12143	13030
45	666	650	799	872	1040	1096	1172	1179	1108	1035	852	733	666	1316	2115	2987	4027	5123	6295	7474	8582	9617	10469	11202
50	516	505	644	722	885	946	1017	1024	958	880	702	579	516	1021	1665	2387	3272	4218	5235	6259	7217	8097	8799	9378
55	368	365	489	572	730	796	862	869	808	725	552	428	368	733	1222	1794	2524	3320	4182	5051	5859	6584	7136	7564
60	236	238	344	422	575	646	707	714	658	570	403	287	236	474	818	1240	1815	2461	3168	3882	4540	5110	5513	5800
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	532	519	647	713	860	900	953	961	919	868	702	592	532	1051	1698	2411	3271	4171	5124	6085	7004	7872	8574	9166

(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/normals/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.

- 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/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