

# Climatology of the United States

No. 20

1971-2000

Station: MAYAGUEZ CITY, PR

COOP ID: 666073

Climate Division: PR 4

NWS Call Sign:

Elevation: 74 Feet

Lat: 18° 11N

Lon: 67° 08W

## 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 >= 90	Max >= 70	Max >= 50	Max <= 32	Min <= 32	Min <= 0
Jan	86.2	64.3	75.3	97	1924	18	77.1	1979	51	1918	21	72.6	1976	0	318	2.5	31.0	31.0	.0	.0	.0
Feb	86.3	63.9	75.1	96	1980	20	77.5	1979	52	1910	5	72.5	1975	0	282	3.2	28.3	28.3	.0	.0	.0
Mar	87.2	64.6	75.9	96+	1964	11	77.9	1981	55+	1929	31	72.4	1976	0	338	6.1	31.0	31.0	.0	.0	.0
Apr	87.8	66.5	77.2	98	1905	19	80.5	1987	57+	1974	9	74.4	1974	0	366	8.3	30.0	30.0	.0	.0	.0
May	89.1	68.6	78.9	98	1977	31	81.4	1987	57	1910	1	75.9	1974	0	429	13.3	31.0	31.0	.0	.0	.0
Jun	90.6	69.6	80.1	98	1969	18	82.4	1992	60	1996	26	77.0	1976	0	453	20.7	30.0	30.0	.0	.0	.0
Jul	90.6	70.0	80.3	96+	1995	2	82.5	1993	58	1930	8	77.9	1974	0	475	23.1	31.0	31.0	.0	.0	.0
Aug	90.8	69.8	80.3	98	1999	7	82.7	1990	58	1903	31	77.7	1996	0	474	23.1	31.0	31.0	.0	.0	.0
Sep	90.5	70.1	80.3	98	1939	23	82.6	1999	59	1930	4	77.0	1996	0	458	22.0	30.0	30.0	.0	.0	.0
Oct	90.0	69.9	80.0	99+	1916	30	83.3	1998	61+	1929	2	77.5	1974	0	462	19.7	31.0	31.0	.0	.0	.0
Nov	88.5	68.3	78.4	98	1923	3	80.5	1987	59+	1945	26	76.2	1974	0	402	11.6	30.0	30.0	.0	.0	.0
Dec	86.6	66.3	76.5	96	1923	10	80.0	1998	55+	1917	31	73.8	1973	0	355	5.3	31.0	31.0	.0	.0	.0
Ann	88.7	67.7	78.2	99+	Oct 1916	30	83.3	Oct 1998	51	Jan 1918	21	72.4	Mar 1976	0	4812	158.9	365.3	365.3	.0	.0	.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](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

Issue Date: May 2005

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1900-2001

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

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# 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: MAYAGUEZ CITY, PR**

**COOP ID: 666073**

**Climate Division: PR 4**

**NWS Call Sign:**

**Elevation: 74 Feet**

**Lat: 18°11N**

**Lon: 67°08W**

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	1.59	1.15	4.60	1970	14	6.26	1993	.08	1985	4.9	2.8	.7	.3	.12	.22	.42	.64	.88	1.16	1.50	1.93	2.52	3.52	4.50
Feb	2.52	2.24	2.70	1935	4	5.99	1996	.01	1977	7.2	4.5	2.0	.5	.12	.25	.54	.88	1.27	1.73	2.30	3.03	4.07	5.85	7.63
Mar	3.05	2.26	17.40	1933	3	10.29	1989	.00	1997	7.5	4.8	1.7	.6	.14	.41	.87	1.32	1.80	2.34	2.97	3.76	4.83	6.61	8.35
Apr	4.04	3.45	4.07	1902	20	10.15	1996	.41	1997	9.5	6.4	2.3	1.0	.68	1.03	1.62	2.17	2.74	3.36	4.07	4.94	6.09	7.95	9.73
May	7.26	6.62	8.50	1928	7	15.00	1986	.60	1999	13.0	9.4	4.4	2.4	1.90	2.59	3.64	4.57	5.48	6.44	7.50	8.77	10.42	13.01	15.44
Jun	6.32	7.13	4.20	1969	12	15.19	1981	.84	1982	12.2	9.5	4.3	2.0	1.52	2.12	3.04	3.86	4.68	5.54	6.51	7.66	9.16	11.55	13.79
Jul	8.68	8.44	5.50	1926	23	20.90	1977	1.00	1999	13.7	11.6	5.7	2.8	2.91	3.74	4.94	5.96	6.94	7.95	9.06	10.35	12.01	14.57	16.94
Aug	9.16	9.71	6.68	1988	25	17.47	1975	1.25	1999	15.0	11.7	5.6	2.9	2.66	3.54	4.85	5.98	7.09	8.24	9.51	11.01	12.95	16.00	18.83
Sep	10.61	10.08	21.30	1998	22	27.02	1998	1.25	1996	16.9	13.0	6.1	3.1	2.85	3.86	5.39	6.74	8.06	9.44	10.98	12.80	15.18	18.90	22.38
Oct	8.93	8.44	4.03	1968	21	17.22	1985	.51	1996	16.3	12.1	6.1	2.8	1.96	2.78	4.09	5.28	6.46	7.72	9.14	10.84	13.08	16.65	20.03
Nov	4.70	4.28	5.27	1942	4	8.17	1972	1.07	1998	10.6	7.8	2.8	1.3	1.67	2.11	2.76	3.29	3.81	4.34	4.91	5.58	6.44	7.76	8.98
Dec	1.80	1.30	2.93	1935	3	7.69	1981	.03	1999	6.0	3.6	1.1	.5	.19	.32	.57	.82	1.09	1.39	1.75	2.20	2.80	3.81	4.79
Ann	68.66	70.88	21.30	Sep 1998	22	27.02	Sep 1998	.00	Mar 1997	132.8	97.2	42.8	20.2	39.75	44.92	51.77	57.13	62.00	66.80	71.84	77.51	84.50	94.87	104.03

+ 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: 1900-2001

(3) Derived from 1971-2000 daily data

Complete documentation available from:  
[www.ncdc.noaa.gov/oa/climate/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

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Station: MAYAGUEZ CITY, PR

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Climate Division: PR 4

NWS Call Sign:

Elevation: 74 Feet

Lat: 18°11N

Lon: 67°08W

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	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
32	0/00	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	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
32	0/00	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

Complete documentation available from:

[www.ncdc.noaa.gov/oa/climate/normal/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normal/usnormals.html)

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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	0	0	0	0	0	0	0	0	0	0	0	0	0
60	0	0	0	0	0	0	0	0	0	0	0	0	0
57	0	0	0	0	0	0	0	0	0	0	0	0	0
55	0	0	0	0	0	0	0	0	0	0	0	0	0
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	1341	1206	1361	1356	1452	1443	1498	1497	1448	1485	1392	1378	16857
55	628	562	648	666	739	753	785	784	758	772	702	665	8462
57	566	506	586	606	677	693	723	722	698	710	642	603	7732
60	473	422	493	516	584	603	630	629	608	617	552	510	6637
65	318	282	338	366	429	453	475	474	458	462	402	355	4812
70	163	144	186	216	274	303	320	319	308	307	252	201	2993

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	1104	1023	1127	1128	1208	1209	1261	1262	1219	1248	1167	1145	1104	2127	3254	4382	5590	6799	8060	9322	10541	11789	12956	14101
45	949	878	972	978	1053	1059	1106	1107	1069	1093	1017	990	949	1827	2799	3777	4830	5889	6995	8102	9171	10264	11281	12271
50	794	733	817	828	898	909	951	952	919	938	867	835	794	1527	2344	3172	4070	4979	5930	6882	7801	8739	9606	10441
55	639	588	662	678	743	759	796	797	769	783	717	680	639	1227	1889	2567	3310	4069	4865	5662	6431	7214	7931	8611
60	484	443	507	528	588	609	641	642	619	628	567	525	484	927	1434	1962	2550	3159	3800	4442	5061	5689	6256	6781
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	779	722	789	792	852	840	872	871	841	874	821	808	779	1501	2290	3082	3934	4774	5646	6517	7358	8232	9053	9861

(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](http://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/normals/usnormals.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormals.html)

f. Mean "number of days statistics" for temperature were calculated from a serially complete daily data set. A serial dataset was not available for precipitation,

To ensure that a station's data was adequate to estimate these statistics, the following criteria were used:

1. A station must have 80% of its data for the 1971-2000 time period.
2. Only months with at least 21 days are used.
3. There must be a least 21 months (meeting criteria 2.) in the sample.

g. Snowfall and snow depth statistics were derived daily values quality controlled to be consistent with 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 differences 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. Other inconsistencies may appear from comparing statistically modeled values such as degree days to observed temperatures.

### 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. 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](http://www.ncdc.noaa.gov/normals.html)

U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normals/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normals/usnormalsprods.html)

Snow Climatology Project Description, [www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html](http://www.ncdc.noaa.gov/oa/climate/monitoring/snowclim/mainpage.html)