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: PICO DEL ESTE, PR 1971-2000 COOP ID: 666992

Climate Division: PR 5 NWS Call Sign: Elevation: 3,448 Feet Lat: 18°16N Lon: 65°46W

									r	Гетр	eratur	re (°F)									
	Mea	n (1)						Extr	emes					Degree Base To	•		Mean	Numb	er of I	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	66.4	57.8	62.1	82	1986	8	64.9	1995	44	1982	19	59.5	1975	101	11	.0	5.0	31.0	.0	.0	.0
Feb	66.5	57.8	62.2	78	1985	8	64.8	1995	44	1980	19	60.1	1976	86	6	.0	4.0	28.3	.0	.0	.0
Mar	67.6	57.9	62.8	82+	1995	27	66.5	1981	49	1987	17	59.8	1976	76	20	.0	7.5	31.0	.0	.0	.0
Apr	68.6	59.1	63.9	79	1970	25	66.7	1995	50	1985	27	61.2	1974	59	25	.0	11.1	30.0	.0	.0	.0
May	69.9	61.4	65.7	83+	1995	21	69.8	1995	51	1985	9	64.2+	1975	34	53	.0	15.5	31.0	.0	.0	.0
Jun	70.7	63.2	67.0	84	1994	20	69.0	1980	54	1978	15	65.1	1976	7	65	.0	20.9	30.0	.0	.0	.0
Jul	71.1	63.5	67.3	88	1985	23	68.7	1980	56	1986	14	66.3	1972	2	74	.0	26.2	31.0	.0	.0	.0
Aug	71.9	63.7	67.8	81	1980	20	69.2	1980	54	1979	30	66.6	1972	1	88	.0	28.6	31.0	.0	.0	.0
Sep	72.5	63.4	68.0	82+	1981	5	69.3	1980	52+	1987	26	66.4	1992	0	89	.0	27.4	30.0	.0	.0	.0
Oct	71.9	62.8	67.4	82	1974	1	69.4	1980	57+	1998	6	65.7	1985	5	76	.0	26.6	31.0	.0	.0	.0
Nov	69.9	61.0	65.5	79+	1987	30	67.2	1981	52	1981	28	63.6	1973	24	37	.0	14.1	30.0	.0	.0	.0
Dec	67.3	58.9	63.1	79	1969	5	65.4	1997	48+	1984	20	60.0	1975	79	20	.0	5.5	31.0	.0	.0	.0
Ann	69.5	60.9	65.2	88	Jul 1985	23	69.8	May 1995	44+	Jan 1982	19	59.5	Jan 1975	474	564	.0	192.4	365.3	.0	.0	.0

⁺ Also occurred on an earlier date(s)

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

Issue Date: May 2005 039-A

[@] Denotes mean number of days greater than 0 but less than .05

⁽¹⁾ From the 1971-2000 Monthly Normals

⁽²⁾ Derived from station's available digital record: 1969-2001

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

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										Pı	recipi	tation	(incl	nes)											
			P	recip	itatio	n Total	s			M	ean N	lumbo ays (3		Proba	ability th		nonthly/	annual j indic	precipita ated an		ll be equ		less tha	ın the	
	Mea Medi					Extremes	i			D	aily Pre	cipitatio	n	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	11.97	11.09	10.10	1992	6	29.83	1996	6.08	1978	27.8	20.9	8.4	2.7	5.69	6.72	8.15	9.29	10.36	11.42	12.56	13.85	15.48	17.93	20.13	
Feb	10.52	10.28	5.50	1998	5	22.52	1991	4.06	1983	24.5	17.4	6.9	2.3	4.66	5.60	6.90	7.96	8.96	9.96	11.03	12.26	13.81	16.16	18.28	
Mar	10.27	9.14	5.50	1974	6	22.03	1990	4.39	2000	25.4	16.8	6.5	2.4	4.55	5.47	6.74	7.78	8.75	9.72	10.77	11.97	13.48	15.78	17.85	
Apr	11.54	10.71	10.50	1983	21	22.42	1983	3.75	1995	25.2	17.7	6.5	3.0	4.89	5.94	7.40	8.61	9.73	10.87	12.10	13.51	15.30	18.01	20.48	
May	18.36	17.14	8.53	1982	10	40.40	1987	4.28	1973	28.1	21.0	10.2	5.4	6.14	7.88	10.43	12.59	14.67	16.81	19.15	21.89	25.40	30.84	35.86	
Jun	12.30	11.71	5.50	1987	22	20.42	1996	2.68	1985	28.4	20.7	8.4	3.6	5.38	6.48	8.02	9.27	10.45	11.63	12.90	14.36	16.20	18.99	21.52	
Jul	12.85	13.17	5.70	1996	9	20.23	1993	6.85	1976	29.7	22.8	8.6	2.9	7.19	8.18	9.52	10.56	11.52	12.46	13.45	14.57	15.96	18.02	19.85	
Aug	14.66	13.81	8.40	2000	22	23.02	1973	4.91	1975	29.4	23.7	9.9	3.8	7.46	8.68	10.34	11.66	12.87	14.09	15.37	16.83	18.65	21.38	23.82	
Sep	16.04	15.68	10.00	1975	16	34.91	1996	6.44	1983	26.9	20.9	9.7	4.1	7.80	9.17	11.05	12.55	13.95	15.34	16.83	18.52	20.63	23.82	26.68	
Oct	17.48	14.66	9.45	1997	14	38.16	1985	6.54	1991	28.0	22.1	11.3	4.8	7.33	8.92	11.15	12.98	14.70	16.45	18.32	20.48	23.21	27.37	31.15	
Nov	18.61	17.10	9.75	1987	27	35.75	1977	7.94	1976	27.9	22.4	11.9	5.3	7.04	8.78	11.27	13.33	15.30	17.30	19.48	22.00	25.21	30.14	34.65	
Dec	14.87	13.01	9.00	1987	8	30.88	1981	3.03	1989	27.8	21.9	9.9	4.0	5.74	7.12	9.09	10.73	12.28	13.86	15.57	17.55	20.06	23.93	27.46	
Ann	169.47	169.46	10.50	Apr 1983	21	40.40	May 1987	2.68	Jun 1985	329.1	248.3	108.2	44.3	134.43	141.51	150.41	157.06	162.90	168.49	174.20	180.45	187.95	198.70	207.87	

⁺ Also occurred on an earlier date(s)

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

[#] 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: 1969-2001

⁽³⁾ Derived from 1971-2000 daily data

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Climate Division: PR 5 NWS Call Sign: Elevation: 3,448 Feet Lat: 18°16N Lon: 65°46W

										Snov	w (inc	hes)											
						Sn	ow To	tals									Mea	ın Nu	mber	of Da	ys (1)		
	Mean	s/Medi	ans (1)	1					Extre	mes (2)							ow Fa					Depth esholo	
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

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

[@] 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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Lon: 65°46W

Lat: 18°16N

Station: PICO DEL ESTE, PR

Climate Division: PR 5 NWS Call Sign:

S Call Sign: Elevation: 3,448 Feet

				Freez	e Data				
			Spri	ng Freeze D	ates (Month/	(Day)			
Temp (F)		P	robability of	later date i	n spring (thr	u Jul 31) tha	n indicated(*)	
Temp (r)	.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
'			Fal	l Freeze Da	tes (Month/D	ay)			
To (E)		Pro	bability of ea	arlier date ii	n fall (beginn	ing Aug 1) t	han indicate	d(*)	
Temp (F)	.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
<u> </u>			J	Freeze F	ree Period		l		I.
Town (F)			Probability	of longer th	an indicated	freeze free p	eriod (Days)		
Temp (F)	.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 daily data

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

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				Deg	ree Days t	o Selected	Base Tem	peratures	(°F)				
Base						Heatin	g Degree l	Days (1)					
Below	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
65	101	86	76	59	34	7	2	1	0	5	24	79	474
60	17	10	14	5	2	0	0	0	0	0	0	11	59
57	3	0	3	0	0	0	0	0	0	0	0	2	8
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						Coolin	g Degree l	Days (1)					
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	933	844	953	957	1043	1049	1095	1110	1079	1094	1003	965	12125
55	220	200	240	267	330	359	382	397	389	381	313	252	3730
57	161	144	180	207	268	299	320	335	329	319	253	191	3006
60	82	69	99	122	176	209	227	242	239	226	163	108	1962
65	11	6	20	25	53	65	74	88	89	76	37	20	564
70	0	0	0	0	4	2	1	2	2	3	0	0	14

			Growing Degree Units (2) Crowing Degree Units (Monthly) Crowing Degree Units (Accompleted Monthly)																					
Base														Growing Degree Units (Accumulated Monthly)										
	Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec														Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
40	714	659	722	730	812	827	868	880	856	869	788	743	714	1373	2095	2825	3637	4464	5332	6212	7068	7937	8725	9468
45													559	1073	1640	2220	2877	3554	4267	4992	5698	6412	7050	7638
50	404 369 412 430 502 527 558 570 556 559 488 4												404	773	1185	1615	2117	2644	3202	3772	4328	4887	5375	5808
55	249	224	257	280	347	377	403	415	406	404	338	278	249	473	730	1010	1357	1734	2137	2552	2958	3362	3700	3978
60	97	82	104	130	192	227	248	260	256	249	188	124	97	179	283	413	605	832	1080	1340	1596	1845	2033	2157
Base	ase Growing Degree Units for Corn (Monthly)														Gr	owing D	egree Un	its for C	orn (Acc	umulate	d Month	ly)	•	
50/86	10/86 404 369 412 430 502 527 558 570 556 559 488 433												404	773	1185	1615	2117	2644	3202	3772	4328	4887	5375	5808

(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 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 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. 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
- 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