

# Climatology of the United States

## No. 20

### 1971-2000

**Station: NEWPORT BEACH HARBOR, CA**

**COOP ID: 046175**

**Climate Division: CA 6**

**NWS Call Sign: 3L3**

**Elevation: 10 Feet**

**Lat: 33° 36N**

**Lon: 117° 53W**

### 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	63.6	48.2	55.9	87	1983	11	59.7	1981	29	1937	22	51.6	1972	284	3	.0	.0	31.0	.0	.1	.0
Feb	63.8	49.6	56.7	89	1954	7	60.2	1980	28	1966	26	52.9	1990	236	3	.0	.0	28.1	.0	@	.0
Mar	63.6	51.2	57.4	91	1951	14	61.1	1978	33	1953	2	54.3	1991	224	3	.0	.0	31.0	.0	.0	.0
Apr	65.5	53.5	59.5	98	1989	5	63.0	1992	38+	1970	29	55.2	1975	171	5	.0	.1	30.0	.0	.0	.0
May	66.1	57.3	61.7	90	1967	14	66.0	1984	40	1970	9	58.0	1991	128	25	.0	.0	31.0	.0	.0	.0
Jun	68.4	60.2	64.3	102	1981	15	70.4	1981	48+	1967	3	60.7	1991	76	55	.0	.1	30.0	.0	.0	.0
Jul	71.4	63.1	67.3	106	1960	21	71.5	1984	49	1940	9	64.0	1991	25	95	.0	.0	31.0	.0	.0	.0
Aug	73.0	64.4	68.7	94+	1991	13	74.3	1998	52	1941	8	65.2	1975	30	143	.0	.1	31.0	.0	.0	.0
Sep	72.9	63.2	68.1	107	1963	26	75.6	1984	49+	1954	20	64.8	1991	34	126	.0	.5	30.0	.0	.0	.0
Oct	71.2	59.0	65.1	96	1965	21	70.0	1983	32	1971	30	62.0	1971	66	68	.0	.4	31.0	.0	@	.0
Nov	67.7	52.2	60.0	94	1950	3	63.7	1976	34	1958	17	55.5	1994	167	15	.0	.0	30.0	.0	.0	.0
Dec	64.2	48.0	56.1	94	1998	16	59.7	1977	32	1971	30	51.6	1971	278	2	.0	.1	31.0	.0	@	.0
Ann	67.6	55.8	61.7	107	Sep 1963	26	75.6	Sep 1984	28	Feb 1966	26	51.6+	Jan 1972	1719	543	.0	1.3	365.1	.0	.1	.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: February 2004

(1) From the 1971-2000 Monthly Normals

(2) Derived from station's available digital record: 1934-2001

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

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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	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	2.60	1.46	3.07	1956	26	11.07	1995	.00+	1976	6.5	4.7	1.9	.7	.00	.12	.47	.85	1.28	1.79	2.40	3.18	4.28	6.14	8.00
Feb	2.54	1.88	3.82	1969	24	12.22	1998	.01	1984	6.0	4.4	1.8	.7	.06	.15	.39	.69	1.07	1.55	2.16	2.97	4.16	6.25	8.39
Mar	2.25	1.59	2.41	1978	1	7.75	1983	.00	1997	6.1	4.3	1.5	.6	.02	.11	.35	.64	.99	1.42	1.97	2.68	3.71	5.50	7.31
Apr	.70	.34	2.47	1958	7	4.27	1983	.00+	1997	2.9	1.7	.5	.1	.00	.00	.02	.10	.22	.37	.57	.83	1.20	1.86	2.55
May	.18	.02	1.03	1977	8	1.77	1977	.00+	2000	1.1	.4	.1	@	.00	.00	.00	.00	.00	.00	.05	.14	.29	.60	.92
Jun	.08	.00	.82	1993	5	.82+	1995	.00+	2000	.5	.2	.1	.0	.00	.00	.00	.00	.00	.00	.00	.00	.04	.25	.51
Jul	.02	.00	.11	1992	8	.26	1992	.00+	2000	.4	.1	.0	.0	.00	.00	.00	.00	.00	.00	.00	.00	.02	.08	.13
Aug	.09	.00	1.67	1977	17	1.82	1977	.00+	1999	.4	.2	@	@	.00	.00	.00	.00	.00	.00	.00	.00	.00	.16	.54
Sep	.30	.02	2.77	1939	25	2.23	1976	.00+	1999	1.3	.6	.3	.1	.00	.00	.00	.00	.00	.01	.08	.23	.48	.98	1.53
Oct	.28	.12	1.12	1996	30	1.81	1987	.00+	1999	2.0	.7	.2	@	.00	.00	.00	.01	.05	.11	.19	.30	.48	.79	1.12
Nov	1.02	.70	3.12	1963	20	2.98	1985	.00+	1992	3.2	2.1	.7	.2	.00	.00	.05	.15	.30	.50	.77	1.15	1.72	2.75	3.82
Dec	1.59	.83	6.00	1997	6	6.84	1997	.00+	2000	4.7	2.8	.9	.3	.00	.00	.21	.44	.71	1.03	1.43	1.94	2.64	3.86	5.09
Ann	11.65	10.37	6.00	Dec 1997	6	12.22	Feb 1998	.00+	Dec 2000	35.1	22.2	8.0	2.7	3.65	4.76	6.40	7.81	9.17	10.58	12.13	13.95	16.29	19.95	23.33

+ 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: 1934-2001

(3) 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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**Lat: 33°36N**

**Lon: 117°53W**

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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<b>Freeze Data</b>									
<b>Spring Freeze Dates (Month/Day)</b>									
<b>Temp (F)</b>	<b>Probability of later date in spring (thru Jul 31) than indicated(*)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	1/30	1/13	12/21	0/00	0/00	0/00	0/00	0/00	0/00
<b>32</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>28</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>24</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>20</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>16</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>Fall Freeze Dates (Month/Day)</b>									
<b>Temp (F)</b>	<b>Probability of earlier date in fall (beginning Aug 1) than indicated(*)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	12/13	1/08	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>32</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>28</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>24</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>20</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>16</b>	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00	0/00
<b>Freeze Free Period</b>									
<b>Temp (F)</b>	<b>Probability of longer than indicated freeze free period (Days)</b>								
	<b>.10</b>	<b>.20</b>	<b>.30</b>	<b>.40</b>	<b>.50</b>	<b>.60</b>	<b>.70</b>	<b>.80</b>	<b>.90</b>
<b>36</b>	>365	>365	>365	>365	>365	>365	>365	>365	332
<b>32</b>	>365	>365	>365	>365	>365	>365	>365	>365	>365
<b>28</b>	>365	>365	>365	>365	>365	>365	>365	>365	>365
<b>24</b>	>365	>365	>365	>365	>365	>365	>365	>365	>365
<b>20</b>	>365	>365	>365	>365	>365	>365	>365	>365	>365
<b>16</b>	>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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### 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
65	284	236	224	171	128	76	25	30	34	66	167	278	1719
60	148	116	107	60	42	18	1	6	7	14	69	141	729
57	88	67	55	21	15	6	0	0	0	3	31	82	368
55	57	40	29	8	7	2	0	0	0	1	16	51	211
50	11	7	3	0	0	0	0	0	0	0	2	9	32
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
32	741	692	787	825	921	969	1093	1137	1082	1025	838	747	10857
55	85	88	104	143	214	281	380	424	392	313	164	85	2673
57	54	59	68	96	160	225	318	362	332	254	120	53	2101
60	21	24	27	45	95	147	226	274	249	171	67	20	1366
65	3	3	3	5	25	55	95	143	126	68	15	2	543
70	0	0	0	0	3	10	21	58	47	15	1	0	155

### 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	505	496	547	600	685	745	860	898	850	785	604	514	505	1001	1548	2148	2833	3578	4438	5336	6186	6971	7575	8089
45	350	351	392	450	530	595	705	743	700	630	454	359	350	701	1093	1543	2073	2668	3373	4116	4816	5446	5900	6259
50	200	207	237	300	375	445	550	588	550	476	304	208	200	407	644	944	1319	1764	2314	2902	3452	3928	4232	4440
55	72	80	94	153	220	295	395	433	400	322	163	79	72	152	246	399	619	914	1309	1742	2142	2464	2627	2706
60	17	16	13	42	76	148	240	278	250	168	50	16	17	33	46	88	164	312	552	830	1080	1248	1298	1314
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	243	233	253	304	376	445	550	588	548	476	321	252	243	476	729	1033	1409	1854	2404	2992	3540	4016	4337	4589

(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:

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## 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](http://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 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/normal.html](http://www.ncdc.noaa.gov/normal.html)  
U.S. Climate Normals 1971-2000-Products Clim20, [www.ncdc.noaa.gov/oa/climate/normal/usnormalsprods.html](http://www.ncdc.noaa.gov/oa/climate/normal/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)  
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](http://www1.ncdc.noaa.gov/pub/data/special/serialcomplete_jam_0900.pdf)