

Climatology of the United States

No. 20

1971-2000

Station: HOQUIAM AP, WA

COOP ID: 453807

Climate Division: WA 1

NWS Call Sign: HQM

Elevation: 12 Feet

Lat: 46° 59N

Lon: 123° 56W

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	46.7	37.4	42.1	63	1961	20	46.5	1986	16+	1974	7	35.6	1979	712	0	.0	.0	10.2	.4	6.9	.0
Feb	49.5	38.1	43.8	72	1992	26	48.2	1992	13	1989	3	36.5	1989	594	0	.0	.0	14.4	.3	5.9	.0
Mar	52.6	39.5	46.1	77	1994	27	50.6	1992	22	1971	1	39.9	1971	589	0	.0	.0	22.8	.0	3.3	.0
Apr	56.0	42.0	49.0	83+	1987	27	51.7	1989	27	1964	17	43.8	1972	480	0	.0	.0	27.3	.0	1.0	.0
May	60.1	46.4	53.3	92	1963	20	58.1	1993	29	1954	1	50.1	1971	364	0	.0	.0	30.9	.0	@	.0
Jun	63.5	50.1	56.8	96	1982	18	60.4	1978	36	1956	21	51.6	1971	247	1	.0	.1	30.0	.0	.0	.0
Jul	67.0	53.1	60.1	98	1961	11	63.0	1996	35	1971	3	57.3	1971	156	4	.0	.2	31.0	.0	.0	.0
Aug	68.1	53.7	60.9	98	1981	9	64.5	1997	40+	1969	29	57.3	1973	137	9	.0	.3	31.0	.0	.0	.0
Sep	67.7	51.4	59.6	96	1988	2	63.3	1995	32	1972	27	55.3	1972	179	16	.0	.2	30.0	.0	@	.0
Oct	60.2	45.8	53.0	83	1987	1	56.7	1976	28	1971	28	49.9	1972	372	0	.0	.0	30.4	.0	.3	.0
Nov	51.6	40.8	46.2	70+	1970	3	50.3	1976	12	1955	15	38.4	1985	565	0	.0	.0	21.8	.2	3.2	.0
Dec	46.7	37.4	42.1	59	1977	13	47.4	1976	9	1972	8	36.2	1990	711	0	.0	.0	10.6	1.0	7.2	.0
Ann	57.5	44.6	51.1	98+	Aug 1981	9	64.5	Aug 1997	9	Dec 1972	8	35.6	Jan 1979	5106	30	.0	.8	290.4	1.9	27.8	.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: 1953-2001

(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: HOQUIAM AP, WA

COOP ID: 453807

Climate Division: WA 1

NWS Call Sign: HQM

Elevation: 12 Feet

Lat: 46°59N

Lon: 123°56W

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	9.79	10.76	3.49	1986	18	15.24	1998	.41	1985	21.2	16.1	7.4	2.6	2.82	3.75	5.15	6.37	7.55	8.79	10.15	11.76	13.85	17.12	20.15
Feb	8.40	7.96	3.94	1970	15	18.58	1999	.82	1993	19.2	14.6	5.8	2.1	2.62	3.42	4.60	5.62	6.60	7.62	8.74	10.05	11.75	14.39	16.83
Mar	7.24	6.86	3.06	1959	31	15.13	1997	1.58	1992	20.6	14.9	5.0	1.4	2.92	3.59	4.53	5.30	6.04	6.78	7.58	8.51	9.69	11.48	13.12
Apr	4.98	4.54	3.00	1959	29	10.27	1996	1.77	1977	17.1	11.9	3.1	.6	1.86	2.33	3.00	3.55	4.08	4.62	5.21	5.89	6.76	8.09	9.31
May	3.38	3.24	1.92	1968	31	6.52	1977	.51	1982	15.2	8.5	2.2	.3	.90	1.22	1.71	2.14	2.56	3.01	3.50	4.08	4.84	6.02	7.14
Jun	2.32	2.04	1.77	1956	8	4.86	1981	.53	1987	12.1	6.0	1.2	.2	.75	.97	1.30	1.57	1.84	2.12	2.42	2.78	3.23	3.95	4.60
Jul	1.30	1.15	1.45	1972	12	4.43	1983	.08+	1984	7.6	3.1	.8	.2	.12	.21	.38	.56	.76	.99	1.25	1.59	2.04	2.81	3.56
Aug	1.50	1.16	1.83	1995	6	5.96	1991	.01	1998	7.5	2.9	1.0	.3	.04	.10	.25	.43	.66	.94	1.29	1.76	2.45	3.64	4.85
Sep	2.89	2.64	2.55	1997	16	10.76	1978	.01	1990	10.0	6.2	2.0	.5	.07	.18	.45	.80	1.23	1.78	2.47	3.39	4.73	7.09	9.50
Oct	6.12	5.38	2.60	1993	19	14.16	1975	.06	1987	15.3	10.6	4.2	1.5	.90	1.41	2.30	3.14	4.03	4.99	6.11	7.47	9.31	12.30	15.18
Nov	10.30	10.32	4.78	1955	2	18.03	1990	2.51	1976	21.3	16.9	7.3	2.4	4.03	4.99	6.34	7.47	8.53	9.62	10.79	12.14	13.86	16.50	18.91
Dec	10.47	10.62	3.77	1956	9	19.64	1996	2.11	1985	22.0	16.4	7.0	3.2	4.22	5.19	6.55	7.67	8.73	9.81	10.97	12.31	14.02	16.62	18.99
Ann	68.69	70.66	4.78	Nov 1955	2	19.64	Dec 1996	.01+	Aug 1998	189.1	128.1	47.0	15.3	48.94	52.77	57.67	61.38	64.69	67.88	71.18	74.82	79.24	85.64	91.18

+ 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: 1953-2001

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

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

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Station: HOQUIAM AP, WA

COOP ID: 453807

Climate Division: WA 1

NWS Call Sign: HQM

Elevation: 12 Feet

Lat: 46° 59N

Lon: 123° 56W

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	1.9	.0	#	0	7.0	1971	12	17.2	1971	8	1971	14	1+	1980	1.0	.7	.2	.1	.0	1.1	.4	.1	.0
Feb	.7	.0	#	0	4.1	1995	14	6.0	1971	2+	1989	3	#	1999	.4	.3	.1	.0	.0	.4	.0	.0	.0
Mar	.1	#	#	0	1.0	1971	2	2.0	1971	1	1989	2	#	1989	.1	.1	.0	.0	.0	@	.0	.0	.0
Apr	.0	.0	0	0	.1	1981	11	.1	1981	0	0	0	0	0	.0	.0	.0	.0	.0	.0	.0	.0	.0
May	#	.0	#	0	#	1985	11	#	1985	0	0	0	#	1999	.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	.3	.0	#	0	3.8	1996	19	3.8	1996	3+	1985	25	1	1985	.2	.1	.1	.0	.0	.2	.2	.0	.0
Dec	.6	.0	#	0	3.0	1971	28	3.7	1994	3+	1978	31	#	1998	.6	.3	@	.0	.0	.5	.1	.0	.0
Ann	3.6	#	N/A	N/A	7.0	Jan 1971	12	17.2	Jan 1971	8	Jan 1971	14	1+	Nov 1985	2.3	1.5	.4	.1	.0	2.2	.7	.1	.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

Complete documentation available from:

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Elevation: 12 Feet

Lat: 46° 59N

Lon: 123° 56W

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	5/18	5/10	5/04	4/29	4/24	4/20	4/14	4/09	3/31
32	4/25	4/16	4/09	4/04	3/29	3/24	3/18	3/12	3/02
28	3/07	2/24	2/16	2/09	2/02	1/27	1/19	1/10	12/28
24	2/11	1/28	1/17	1/06	12/25	12/08	0/00	0/00	0/00
20	1/25	1/11	12/29	12/10	0/00	0/00	0/00	0/00	0/00
16	1/01	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	10/05	10/13	10/19	10/23	10/28	11/01	11/06	11/11	11/19
32	10/25	11/03	11/09	11/15	11/20	11/25	12/01	12/07	12/16
28	11/16	11/27	12/06	12/13	12/20	12/27	1/03	1/13	1/27
24	12/06	12/20	12/31	1/11	1/23	2/14	0/00	0/00	0/00
20	12/18	1/02	1/16	2/07	0/00	0/00	0/00	0/00	0/00
16	12/30	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	224	211	201	193	186	178	170	161	148
32	279	264	253	244	235	226	217	206	191
28	>365	361	342	329	319	309	299	287	272
24	>365	>365	>365	>365	>365	>365	>365	338	315
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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Station: HOQUIAM AP, WA

COOP ID: 453807

Climate Division: WA 1 NWS Call Sign: HQM Elevation: 12 Feet Lat: 46° 59N Lon: 123° 56W

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	712	594	589	480	364	247	156	137	179	372	565	711	5106
60	557	454	434	330	215	115	45	38	79	223	415	556	3461
57	464	370	344	245	136	59	12	10	39	145	329	463	2616
55	402	317	286	190	94	33	4	4	21	102	274	403	2130
50	260	191	158	83	24	4	0	0	3	30	154	261	1168
32	8	1	0	0	0	0	0	0	0	0	1	8	18

Base	Cooling Degree Days (1)												
Above	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
32	319	331	434	510	659	744	870	895	827	652	427	320	6988
55	0	2	8	10	40	86	161	186	158	40	10	2	703
57	0	0	4	5	20	53	107	130	115	22	5	0	461
60	0	0	0	0	6	18	47	65	66	6	0	0	208
65	0	0	0	0	0	1	4	9	16	0	0	0	30
70	0	0	0	0	0	0	0	0	2	0	0	0	2

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	115	144	205	283	423	514	633	656	596	416	209	116	115	259	464	747	1170	1684	2317	2973	3569	3985	4194	4310
45	33	51	79	140	268	364	478	501	446	264	90	34	33	84	163	303	571	935	1413	1914	2360	2624	2714	2748
50	0	5	20	48	123	214	323	346	296	125	20	0	0	5	25	73	196	410	733	1079	1375	1500	1520	1520
55	0	0	0	9	38	81	169	192	154	40	0	0	0	0	0	9	47	128	297	489	643	683	683	683
60	0	0	0	0	7	15	45	60	49	6	0	0	0	0	0	0	7	22	67	127	176	182	182	182
Base	Growing Degree Units for Corn (Monthly)												Growing Degree Units for Corn (Accumulated Monthly)											
50/86	9	33	62	108	177	239	329	352	315	181	52	15	9	42	104	212	389	628	957	1309	1624	1805	1857	1872

(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.

- | | |
|---|---|
| <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 |
|---|---|

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