## 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

COOP ID: 047946

Lon: 120°28W

Station: SANTA MARIA AP, CA

Climate Division: CA 6 NWS Call Sign: SMX Elevation: 254 Feet Lat: 34°55N

|       | Temperature (°F)  Mean (1)  Extremes  Degree Days (1)  Mean Number of Days (3) |              |      |                     |             |     |                             |             |                    |             |     |                            |             |         |                    |            |           |           |           |           |          |
|-------|--|--------------|------|---------------------|-------------|-----|-----------------------------|-------------|--------------------|-------------|-----|----------------------------|-------------|---------|--------------------|------------|-----------|-----------|-----------|-----------|----------|
|       | Mea  | <b>n</b> (1) |      |                     |             |     |                             | Extr        | emes               |             |     |                            |             |         | Days (1)<br>emp 65 |            | Mean      | Numb      | er of D   | Days (3)  |          |
| Month | Daily<br>Max   | Daily<br>Min | Mean | Highest<br>Daily(2) | Year        | Day | Highest<br>Month(1)<br>Mean | Year        | Lowest<br>Daily(2) | Year        | Day | Lowest<br>Month(1)<br>Mean | Year        | Heating | Cooling            | Max >= 100 | Max >= 90 | Max >= 50 | Max <= 32 | Min <= 32 | Min <= 0 |
| Jan   | 63.9   | 39.3         | 51.6 | 86                  | 1976        | 16  | 56.6                        | 1986        | 20                 | 1976        | 2   | 47.5                       | 1973        | 419     | 0                  | .0         | .0        | 30.9      | .0        | 4.8       | .0       |
| Feb   | 64.8   | 41.4         | 53.1 | 89                  | 1995        | 2   | 57.4                        | 1992        | 22                 | 1971        | 27  | 49.0                       | 1979        | 337     | 0                  | .0         | .0        | 27.9      | .0        | 2.2       | .0       |
| Mar   | 64.8   | 42.7         | 53.8 | 95                  | 1988        | 26  | 58.7                        | 1998        | 24                 | 1971        | 2   | 48.8                       | 1973        | 333     | 0                  | .0         | .1        | 31.0      | .0        | 1.3       | .0       |
| Apr   | 67.6   | 43.4         | 55.5 | 103                 | 1989        | 6   | 60.3                        | 1996        | 31+                | 1999        | 9   | 49.8                       | 1975        | 291     | 4                  | @          | .4        | 30.0      | .0        | .4        | .0       |
| May   | 68.6   | 46.9         | 57.8 | 100                 | 1970        | 15  | 62.6                        | 1997        | 31                 | 1964        | 2   | 54.0                       | 1991        | 230     | 5                  | .0         | .4        | 31.0      | .0        | .1        | .0       |
| Jun   | 71.4   | 50.4         | 60.9 | 102+                | 1976        | 25  | 64.4                        | 1981        | 36+                | 1962        | 4   | 57.6                       | 1999        | 135     | 10                 | .1         | .7        | 30.0      | .0        | .0        | .0       |
| Jul   | 73.5   | 53.5         | 63.5 | 104+                | 1985        | 8   | 68.7                        | 1985        | 43+                | 1964        | 3   | 60.9                       | 1987        | 68      | 23                 | .0         | .4        | 31.0      | .0        | .0        | .0       |
| Aug   | 74.2   | 54.2         | 64.2 | 103                 | 1962        | 28  | 68.8                        | 1983        | 43                 | 1973        | 23  | 61.4                       | 1999        | 49      | 25                 | .0         | .2        | 31.0      | .0        | .0        | .0       |
| Sep   | 74.9   | 52.9         | 63.9 | 103                 | 1978        | 24  | 71.9                        | 1984        | 36                 | 1948        | 26  | 60.8                       | 1986        | 70      | 33                 | .1         | 1.2       | 30.0      | .0        | .0        | .0       |
| Oct   | 74.0   | 48.2         | 61.1 | 108                 | 1987        | 4   | 66.2                        | 1983        | 26                 | 1971        | 29  | 56.2                       | 1971        | 141     | 18                 | .1         | 1.3       | 31.0      | .0        | .2        | .0       |
| Nov   | 69.2   | 41.8         | 55.5 | 93+                 | 1997        | 1   | 60.4                        | 1977        | 25                 | 1958        | 17  | 50.1                       | 1994        | 288     | 3                  | .0         | .1        | 30.0      | .0        | 1.8       | .0       |
| Dec   | 64.9   | 38.2         | 51.6 | 90                  | 1958        | 3   | 57.4                        | 1977        | 20                 | 1978        | 7   | 45.9                       | 1971        | 422     | 0                  | .0         | .0        | 30.8      | .0        | 5.9       | .0       |
| Ann   | 69.3   | 46.1         | 57.7 | 108                 | Oct<br>1987 | 4   | 71.9                        | Sep<br>1984 | 20+                | Dec<br>1978 | 7   | 45.9                       | Dec<br>1971 | 2783    | 121                | .3         | 4.8       | 364.6     | .0        | 16.7      | .0       |

<sup>+</sup> Also occurred on an earlier date(s)

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

Issue Date: February 2004 209-A

- (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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

## 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

**COOP ID: 047946** 

Station: SANTA MARIA AP, CA

**Climate Division: CA 6** 

NWS Call Sign: SMX Elevation: 254 Feet Lat: 34°55N Lon: 120°28W

|       |       |             |                     |             |        |                       |             |                      |             | Pı         | recipi     | tation     | (incl      | nes)  |            |           |            |         |                      |           |         |            |          |        |
|-------|-------|-------------|---------------------|-------------|--------|-----------------------|-------------|----------------------|-------------|------------|------------|------------|------------|-------|------------|-----------|------------|---------|----------------------|-----------|---------|------------|----------|--------|
|       | Mea   | ans/        | P                   | recipi      | itatio | n Total               |             |                      |             |            | ean N of D | ays (3     | )          | Proba | ability th |           | nonthly/   | indic   | precipita<br>ated am | ntion wil |         |            | less tha | ın the |
|       | Medi  | ans(1)      |                     |             |        | Extremes              | •           |                      |             | "          | any 11co   | приано     |            |       | Th         | ese value | s were det | ermined | from the i           | ncomplet  | e gamma | distributi | on       |        |
| Month | Mean  | Med-<br>ian | Highest<br>Daily(2) | Year        | Day    | Highest<br>Monthly(1) | Year        | Lowest<br>Monthly(1) | Year        | >=<br>0.01 | >=<br>0.10 | >=<br>0.50 | >=<br>1.00 | .05   | .10        | .20       | .30        | .40     | .50                  | .60       | .70     | .80        | .90      | .95    |
| Jan   | 2.64  | 2.00        | 2.27                | 1995        | 4      | 11.78                 | 1995        | .00                  | 1976        | 8.2        | 5.4        | 1.8        | .5         | .05   | .21        | .54       | .91        | 1.33    | 1.82                 | 2.43      | 3.20    | 4.28       | 6.13     | 7.98   |
| Feb   | 3.23  | 2.55        | 2.26                | 1969        | 24     | 11.57                 | 1998        | .06                  | 1977        | 8.2        | 5.3        | 2.4        | .9         | .09   | .22        | .55       | .95        | 1.44    | 2.04                 | 2.80      | 3.81    | 5.27       | 7.81     | 10.39  |
| Mar   | 2.94  | 2.64        | 3.14                | 1991        | 18     | 9.41                  | 1991        | .01+                 | 1997        | 8.2        | 5.3        | 1.8        | .7         | .07   | .17        | .45       | .80        | 1.24    | 1.80                 | 2.50      | 3.44    | 4.82       | 7.23     | 9.70   |
| Apr   | .91   | .54         | 2.14                | 2000        | 17     | 2.96                  | 2000        | .00+                 | 1997        | 3.9        | 1.9        | .6         | .2         | .00   | .00        | .08       | .20        | .35     | .53                  | .77       | 1.08    | 1.53       | 2.31     | 3.12   |
| May   | .32   | .03         | 1.74                | 1998        | 5      | 3.17                  | 1998        | .00+                 | 1999        | 1.7        | .7         | .1         | .1         | .00   | .00        | .00       | .00        | .00     | .01                  | .07       | .22     | .49        | 1.03     | 1.63   |
| Jun   | .05   | .00         | .72                 | 1995        | 16     | .86                   | 1995        | .00+                 | 1997        | .8         | .1         | @          | .0         | .00   | .00        | .00       | .00        | .00     | .00                  | .01       | .03     | .07        | .16      | .26    |
| Jul   | .03   | .00         | .62                 | 1950        | 9      | .40                   | 1992        | .00+                 | 2000        | .5         | .1         | .0         | .0         | .00   | .00        | .00       | .00        | .00     | .00                  | .00       | .00     | .00        | .08      | .21    |
| Aug   | .05   | .00         | .84                 | 1976        | 19     | .86                   | 1976        | .00+                 | 2000        | .5         | .1         | @          | .0         | .00   | .00        | .00       | .00        | .00     | .00                  | .00       | .00     | .03        | .15      | .27    |
| Sep   | .31   | .02         | 1.74                | 1976        | 28     | 3.05                  | 1976        | .00+                 | 2000        | 1.4        | .6         | .2         | .1         | .00   | .00        | .00       | .00        | .00     | .03                  | .11       | .25     | .49        | .98      | 1.52   |
| Oct   | .45   | .38         | 1.89                | 1960        | 6      | 2.00                  | 1987        | .00+                 | 1999        | 2.6        | 1.3        | .2         | @          | .00   | .00        | .01       | .08        | .16     | .25                  | .38       | .54     | .78        | 1.18     | 1.60   |
| Nov   | 1.24  | .77         | 1.88                | 1965        | 23     | 4.37                  | 1997        | .00                  | 2000        | 5.2        | 3.0        | .8         | .2         | .01   | .04        | .15       | .30        | .49     | .72                  | 1.03      | 1.44    | 2.05       | 3.12     | 4.22   |
| Dec   | 1.84  | 1.34        | 3.04                | 1955        | 24     | 4.64                  | 1974        | .02                  | 1989        | 5.6        | 3.7        | 1.5        | .4         | .10   | .21        | .43       | .67        | .96     | 1.29                 | 1.69      | 2.21    | 2.95       | 4.19     | 5.43   |
| Ann   | 14.01 | 13.38       | 3.14                | Mar<br>1991 | 18     | 11.78                 | Jan<br>1995 | .00+                 | Nov<br>2000 | 46.8       | 27.5       | 9.4        | 3.1        | 5.19  | 6.50       | 8.38      | 9.96       | 11.45   | 12.98                | 14.64     | 16.57   | 19.02      | 22.81    | 26.27  |

<sup>+</sup> Also occurred on an earlier date(s)

Complete documentation available from:

www.ncdc.noaa.gov/oa/climate/normals/usnormals.html

<sup>#</sup> Denotes amounts of a trace

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>\*\*</sup> Statistics not computed because less than six years out of thirty had measurable precipitation

<sup>(1)</sup> From the 1971-2000 Monthly Normals

<sup>(2)</sup> Derived from station's available digital record: 1948-2001

<sup>(3)</sup> Derived from 1971-2000 serially complete daily data

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

**COOP ID: 047946** 

Station: SANTA MARIA AP, CA

Climate Division: CA 6 NWS Call Sign: SMX Elevation: 254 Feet Lat: 34°55N Lon: 120°28W

|       |                      | Snow (inches) Snow Totals |                       |                         |                                  |             |       |                                    |             |                          |             |     |   |             |     |     |       |       |      |       |               |                 |    |
|-------|----------------------|---------------------------|-----------------------|-------------------------|----------------------------------|-------------|-------|------------------------------------|-------------|--------------------------|-------------|-----|---|-------------|-----|-----|-------|-------|------|-------|---------------|-----------------|----|
|       |                      |                           |                       |                         |                                  | Sn          | ow To | tals                               |             |                          |             |     |   |             |     |     | Mea   | ın Nu | mber | of Da | <b>ys</b> (1) |                 |    |
|       | Mean                 | s/Medi                    | ans (1)               | )                       |                                  |             |       |                                    | Extre       | mes (2)                  |             |     |   |             |     |     | ow Fa |       |      |       |               | Depth<br>esholo |    |
| Month | Snow<br>Fall<br>Mean | Snow<br>Fall<br>Median    | Snow<br>Depth<br>Mean | Snow<br>Depth<br>Median | Highest<br>Daily<br>Snow<br>Fall | Year        | Day   | Highest<br>Monthly<br>Snow<br>Fall | Year        | Highest Daily Snow Depth | Year        | Day | Highest<br>Monthly<br>Mean<br>Snow<br>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                       | #                                | 1996        | 27    | #+                                 | 1996        | 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           | #+                       | 1991        | 28  | #   | 1991        | .0  | .0  | .0    | .0    | .0   | .0    | .0            | .0              | .0 |
| Aug   | .0                   | .0                        | #                     | 0                       | .0                               | 0           | 0     | .0                                 | 0           | #                        | 1992        | 17  | #   | 1992        | .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                       | #                                | 1975        | 28    | #                                  | 1975        | 0                        | 0           | 0   | 0   | 0           | .0  | .0  | .0    | .0    | .0   | .0    | .0            | .0              | .0 |
| Dec   | #                    | .0                        | 0                     | 0                       | #                                | 1990        | 21    | #                                  | 1990        | 0                        | 0           | 0   | 0   | 0           | .0  | .0  | .0    | .0    | .0   | .0    | .0            | .0              | .0 |
| Ann   | #                    | .0                        | N/A                   | N/A                     | #+                               | Feb<br>1996 | 27    | #+                                 | Feb<br>1996 | #+                       | Aug<br>1992 | 17  | #+  | Aug<br>1992 | .0  | .0  | .0    | .0    | .0   | .0    | .0            | .0              | .0 |

<sup>+</sup> Also occurred on an earlier date(s) #Denotes trace amounts

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

<sup>@</sup> Denotes mean number of days greater than 0 but less than .05

<sup>-9/-9.9</sup> represents missing values Annual statistics for Mean/Median snow depths are not appropriate

<sup>(1)</sup> Derived from Snow Climatology and 1971-2000 daily data

<sup>(2)</sup> Derived from 1971-2000 daily data

## 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

**COOP ID: 047946** 

Station: SANTA MARIA AP, CA

**Climate Division: CA 6 NWS Call Sign: SMX** 

Elevation: 254 Feet Lat: 34°55N Lon: 120°28W Franza Data

|          |       |       |                 | Freez         | e Data         |                |              |       |       |
|----------|-------|-------|-----------------|---------------|----------------|----------------|--------------|-------|-------|
|          |       |       | Spri            | ng Freeze D   | ates (Month    | /Day)          |              |       |       |
| Temp (F) |       | F     | Probability of  | later date i  | n spring (thi  | ru Jul 31) tha | n indicated  | (*)   |       |
| Temp (F) | .10   | .20   | .30             | .40           | .50            | .60            | .70          | .80   | .90   |
| 36       | 5/22  | 5/09  | 5/01            | 4/23          | 4/16           | 4/09           | 4/01         | 3/23  | 3/11  |
| 32       | 4/28  | 4/10  | 3/28            | 3/17          | 3/07           | 2/25           | 2/13         | 2/01  | 1/14  |
| 28       | 2/21  | 2/06  | 1/26            | 1/15          | 1/04           | 12/20          | 0/00         | 0/00  | 0/00  |
| 24       | 2/01  | 1/15  | 12/31           | 12/07         | 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  |
| •        |       | 1     | Fal             | ll Freeze Da  | tes (Month/I   | Day)           | •            |       | •     |
| Tomm (F) |       | Pro   | obability of ea | arlier date i | n fall (begini | ning Aug 1) t  | han indicate | ed(*) |       |
| Temp (F) | .10   | .20   | .30             | .40           | .50            | .60            | .70          | .80   | .90   |
| 36       | 10/23 | 10/30 | 11/03           | 11/07         | 11/11          | 11/15          | 11/19        | 11/23 | 11/30 |
| 32       | 11/06 | 11/14 | 11/20           | 11/26         | 11/30          | 12/05          | 12/11        | 12/17 | 12/25 |
| 28       | 11/18 | 12/03 | 12/14           | 12/24         | 1/05           | 1/20           | 0/00         | 0/00  | 0/00  |
| 24       | 12/15 | 12/30 | 1/15            | 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  |
| •        |       | 1     |                 | Freeze F      | ree Period     |                | •            |       | •     |
| Tomp (F) |       |       | Probability     | of longer th  | an indicated   | freeze free p  | eriod (Days) | )     |       |
| Temp (F) | .10   | .20   | .30             | .40           | .50            | .60            | .70          | .80   | .90   |
| 36       | 250   | 236   | 226             | 217           | 208            | 200            | 191          | 181   | 166   |
| 32       | 329   | 308   | 293             | 280           | 268            | 256            | 243          | 228   | 207   |
| 28       | >365  | >365  | >365            | >365          | >365           | >365           | 348          | 317   | 289   |
| 24       | >365  | >365  | >365            | >365          | >365           | >365           | >365         | >365  | 329   |
| 20       | >365  | >365  | >365            | >365          | >365           | >365           | >365         | >365  | >365  |
| 16       | >365  | >365  | >365            | >365          | >365           | >365           | >365         | >365  | >365  |

<sup>\*</sup> 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.

Complete documentation available from:

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**COOP ID: 047946** 

Station: SANTA MARIA AP, CA

Climate Division: CA 6 NWS Call Sign: SMX Elevation: 254 Feet Lat: 34°55N Lon: 120°28W

|       | Degree Days to Selected Base Temperatures (°F) |     |     |     |     |        |            |          |     |     |     |     |      |  |  |
|-------|--|-----|-----|-----|-----|--------|------------|----------|-----|-----|-----|-----|------|--|--|
| Base  |  |     |     |     |     | Heatin | g Degree 1 | Days (1) |     |     |     |     |      |  |  |
| Below | Jan  | Feb | Mar | Apr | May | Jun    | Jul        | Aug      | Sep | Oct | Nov | Dec | Ann  |  |  |
| 65    | 419  | 337 | 333 | 291 | 230 | 135    | 68         | 49       | 70  | 141 | 288 | 422 | 2783 |  |  |
| 60    | 266  | 202 | 213 | 164 | 110 | 40     | 18         | 11       | 30  | 47  | 164 | 271 | 1536 |  |  |
| 57    | 183  | 132 | 144 | 107 | 61  | 12     | 5          | 2        | 12  | 17  | 106 | 191 | 972  |  |  |
| 55    | 135  | 95  | 108 | 76  | 36  | 5      | 1          | 0        | 6   | 8   | 75  | 146 | 691  |  |  |
| 50    | 51   | 29  | 38  | 22  | 7   | 0      | 0          | 0        | 0   | 0   | 23  | 62  | 232  |  |  |
| 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    | 606                     | 590 | 674 | 705 | 799 | 867 | 976 | 997 | 953 | 898 | 701 | 603 | 9369 |  |  |
| 55    | 21                      | 33  | 43  | 64  | 103 | 179 | 263 | 284 | 263 | 191 | 68  | 24  | 1536 |  |  |
| 57    | 10                      | 19  | 23  | 38  | 62  | 123 | 201 | 222 | 203 | 137 | 41  | 11  | 1090 |  |  |
| 60    | 2                       | 6   | 7   | 16  | 26  | 57  | 111 | 130 | 119 | 71  | 18  | 3   | 566  |  |  |
| 65    | 0                       | 0   | 0   | 4   | 5   | 10  | 23  | 25  | 33  | 18  | 3   | 0   | 121  |  |  |
| 70    | 0                       | 0   | 0   | 1   | 1   | 3   | 4   | 3   | 8   | 3   | 0   | 0   | 23   |  |  |

|       |   |     |     |     |     |     |     |     |     | Gro | wing l | Degre | e Uni | ts (2)                                     |         |          |           |          |         |         |      |      |      |      |
|-------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-------|-------|--|---------|----------|-----------|----------|---------|---------|------|------|------|------|
| Base  |   |     |     |     |     |     |     |     |     |     |        |       |       | Growing Degree Units (Accumulated Monthly) |         |          |           |          |         |         |      |      |      |      |
|       |   |     |     |     |     |     |     |     |     |     |        |       |       | Feb  | Mar     | Apr      | May       | Jun      | Jul     | Aug     | Sep  | Oct  | Nov  | Dec  |
| 40    | 372   | 387 | 433 | 473 | 564 | 634 | 739 | 759 | 720 | 660 | 470    | 364   | 372   | 759  | 1192    | 1665     | 2229      | 2863     | 3602    | 4361    | 5081 | 5741 | 6211 | 6575 |
| 45    | 220 246 278 323 409 484 584 604 570 505 320                 |     |     |     |     |     |     |     |     |     |        |       | 220   | 466  | 744     | 1067     | 1476      | 1960     | 2544    | 3148    | 3718 | 4223 | 4543 | 4761 |
| 50    | 96 120 142 181 254 334 429 449 420 350 179                  |     |     |     |     |     |     |     |     |     |        |       | 96    | 216  | 358     | 539      | 793       | 1127     | 1556    | 2005    | 2425 | 2775 | 2954 | 3049 |
| 55    | 25  | 36  | 50  | 71  | 109 | 187 | 274 | 294 | 270 | 199 | 73     | 30    | 25    | 61   | 111     | 182      | 291       | 478      | 752     | 1046    | 1316 | 1515 | 1588 | 1618 |
| 60    | 0 3 5 20 32 61 123 139 123 75 20                            |     |     |     |     |     |     |     |     |     |        | 1     | 0     | 3  | 8       | 28       | 60        | 121      | 244     | 383     | 506  | 581  | 601  | 602  |
| Base  | se Growing Degree Units for Corn (Monthly)                  |     |     |     |     |     |     |     |     |     |        |       |       | Gr   | owing D | egree Un | its for C | orn (Acc | umulate | d Month | ly)  |      |      |      |
| 50/86 | <b>50/86</b> 225 227 245 274 305 351 432 450 427 394 297 24 |     |     |     |     |     |     |     |     |     |        |       | 225   | 452  | 697     | 971      | 1276      | 1627     | 2059    | 2509    | 2936 | 3330 | 3627 | 3867 |

(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 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

- c. Snow Tables
  - 1. Snow Climatology
  - 2. 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

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