



NOAA TECHNICAL MEMORANDUM
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CLIMATE OF ASTORIA, OREGON

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National Weather Service Office
Astoria, Oregon

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CLIMATE OF ASTORIA, OREGON

Mark A. McInerney

ABSTRACT

This publication was written to summarize basic climatological data for Astoria, Oregon and surrounding areas. The purpose is to bring information together for both the public and for weather forecasters. Most data was obtained from surface observations collected between 1953 through 1994.

I. Geographical and Climatological Summary¹

Astoria is boarded by low mountains on the north, east, and south. To the west of Astoria, the area is open to the Pacific Ocean at the mouth of the Columbia River. North of the station, 8 to 10 miles, the Washington hills rise to 1,000 to 1,200 feet. Maximum visibility is 19 miles north-northeast to the Willapa Hills. Two to four miles east-northeastward, the Astoria hills rise to 600 feet. Four to 14 miles to the east-southeast rise other ridges of the Coast Ranges. The most prominent landmark, Saddle Mountain at 3,283 feet high is to the southeast of Astoria. Forest covers most of the uplands. From Seaside northward to the south bank of the Columbia are 18 miles of sandy beaches, and a 2 to 3 mile wide stretch of sand dunes.

The National Weather Service Office was established on January 15, 1953 at Clatsop County Airport. On February 11, 1976 the Weather Service Office was moved 400 feet south of the previous location at an elevation of 8 feet. Before this, climate data was recorded at various places around the downtown Astoria area. The airport sits on the south bank of the Columbia estuary and

west of Young's Bay on the flood plain or "tide flats". Low dikes prevent flooding and increase the bog-like characteristics of the area. When the air temperature falls below the water temperature, fog forms rather easily or rolls in from the ocean, river, or bay. This usually begins from late afternoon to early morning, and may persist well into the following day.

During the summer, sea breezes commonly blow eastward up the river and limit the diurnal rise in temperature. Cold air in the winter occasionally flows westward down the Columbia river from the interior and cause the temperature to be lower than other points along the coast.

The most common weather hazards critical to aviation are fog and gales. Even with moderate surface velocities, wind and turbulence at 800 feet may be severe enough to upset a heavy plane. Wind and wave may combine to produce a wave formation referred to as a breaker or sometimes called a widow-maker, capable of swamping a boat. Heavy rains inundate lowlands, and high tides aggravated by gales may push seawater across highways or up beaches. Rains may cause earthslides, mostly in highway cuts. Lightning strikes are rare. Showers of ice pellets may briefly whiten the ground during many months. Occasionally in the winter there may be rather brief periods of freezing temperatures, with snow or ice.

¹ Local Climatological Data, Annual Summary, Astoria, Oregon, pg. 7

The climate is generally healthful, except for dampness and a lack of sunshine in winter. Heat waves are uncommon and usually brief. Soil leaching necessitates supplementary mineral diets for both animals and plants.

II. ASOS

The Automated Surface Observing System (ASOS) was installed at the Clatsop County Airport in June of 1992. It was commissioned on March 1, 1993, nine months after the installation date. The atmospheric parameters measured by ASOS are; temperature, dew point, wind speed and direction, visibility, weather conditions, precipitation, cloud cover and atmospheric pressure -- for ASOS location see Fig. 1.

III. Climatological Summary By Months.

January

January is generally the coldest month in Astoria's climate. The average daily maximum temperature is 47.8 degrees Fahrenheit. The average daily minimum is 35.9 degrees with a monthly average of 41.9. The warmest temperature recorded was 67 degrees which occurred in 1986, and the coldest temperature recorded was 11 degrees in 1980.

Due to the mild temperatures, precipitation is generally in the form of rain. As part of the rainy season, January, on average, receives approximately 10.00 inches of rain. The greatest amount of rain recorded for the month was 18.94 inches occurring in 1954. This amount is the second largest rainfall total on record for any given month. The lowest amount was 0.69 inches

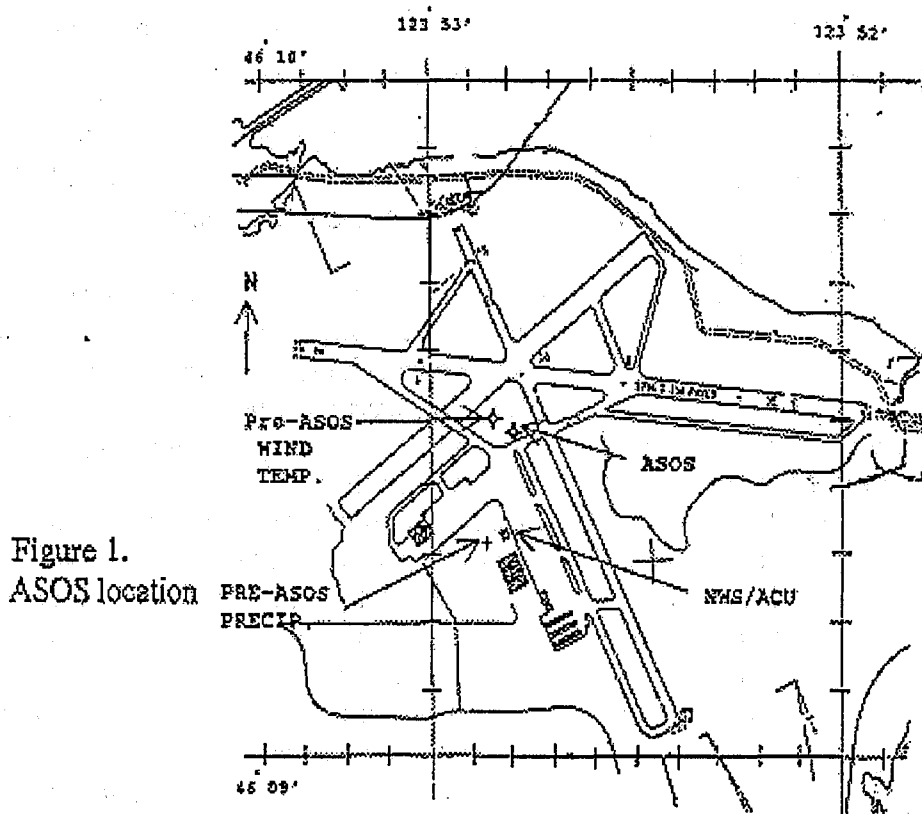


Figure 1.
ASOS location

observed in 1985. The greatest amount of rain that fell within one day was 5.14 inches occurring on the 9th in 1990. The greatest amount of snowfall for January was 26.3 inches in 1969 with the maximum 24 hour snow amount of 10.8 inches which occurred in 1971. This 24 hour amount was also the greatest all time 24 hour snowfall total. Precipitation in the form of snow does not occur very often. Ice pellets are among the more common form of frozen precipitation.

Due to the great number of strong winter storms, powerful winds are usually observed during the month of January. The average wind speed for January is 9.2 mph and the prevailing direction is from the east. The fastest one minute mile observed was 55 mph from the south occurring in 1971, which is also the all time fastest one minute mile on record. The strongest peak gust for the month was 80 mph.

Since a large number of storms move through the area, cloud cover is generally expected. The month of January is the second cloudiest month behind December. The average sky cover consists of partly cloudy to cloudy conditions recorded as 27.9 average days out of the month, thus leaving only 3.1 days with clear conditions.

February

Temperatures for the month of February rise slightly, but as mentioned earlier the yearly temperature is generally moderate. The normal high temperature is 51, normal low is 37.3 with a normal monthly temperature of 44.2 degrees. The highest daily temperature recorded occurred in 1968 at 72 degrees. The lowest recorded daily temperature was 9 degrees which occurred in 1989. This low temperature is also the all time second coldest day on record for Astoria.

Statistically, February is not part of the peak rainy season, although heavy amounts of rain are not uncommon during this month. The normal rainfall is 7.59 inches with a highest monthly maximum of 21.89 inches in 1961. This amount is also the all time greatest rainfall amount for any given month on record. During the last 40 years, the greatest amount of snowfall occurred in 1962 with a total of 4.0 inches. This amount all fell within a 24-hour period, thus making it the highest 24-hour snow total for February.

March

The normal temperature for the month of March is 45.7 degrees. The highest daily temperature recorded is 73 degrees set in 1979 and the lowest is 22 degrees set in 1971.

Out of the 31 days in March, on the average, 22.9 of them are categorized as cloudy, 5.3 as partly cloudy and 2.8 as clear. This ties November for the second cloudiest month of the year, after December.

The normal precipitation amount for the month is 7.07 inches. The highest monthly maximum is 13.47 inches, which occurred in 1956 and the lowest 0.93 set in 1965. The greatest amount of precipitation that fell within a 24 hour period was 2.66 inches in 1956.

April

Generally, April is a month of significant rainfall amounts. Although April has a high normal monthly rainfall of 4.60 inches, it is generally not the rainiest month. The highest monthly maximum rainfall amount for April was set in 1991 with 9.47 inches observed. The lowest monthly minimum amount fell in 1956 with 1.33 inches officially recorded. The greatest daily amount fell on the 4th in 1991 with a total of 2.73 inches. Snow has been

known to fall during April, although measurable amounts remain small. Generally if snow occurs, a trace is all that is recorded. The greatest snowfall for April was recorded as 1.1 inches in 1975.

The normal daily maximum temperature is 56 degrees and the minimum is 40.3 degrees. The highest and lowest daily temperatures on record are 73 and 29 degrees respectively. The normal temperature for the month is 48.2 degrees.

Sky conditions, on average, contain 3.0 clear, 5.9 partly cloudy, and 21.0 cloudy days for the month of April. This month contains considerably less fog than the winter months, although this weather hazard does occasionally occur. In fact 26 consecutive days containing fog were observed between April 13 through May 8 in 1993. This is the second longest stretch of all time for fog like conditions on record.

May

Temperatures for May rise slightly, but tend to stay cool. The monthly normal is 52.5 degrees and the normal daily maximum is 60.1 degrees. Eighty-seven degrees is the highest daily maximum set in 1985 and 30 degrees is the lowest set in 1954. The normal daily minimum is 44.8 degrees.

Precipitation totals for May indicate the beginning of a trend toward drier months. The typical rainfall amount is around 3.02 inches. The greatest monthly precipitation amount recorded was 6.60 inches in 1960 and the lowest 0.37 inches occurring in 1982. On May 31, 1968 1.74 inches of precipitation fell to give it the greatest amount of precipitation for one day.

June

June is relatively a dry month in Astoria with a normal monthly precipitation total of around 2.40

inches. This amount ranks third when compared to the months of January and February. The greatest monthly precipitation maximum is 5.48 inches occurring in 1954. The lowest monthly minimum is 0.55 inches set in 1992. On June 1, 1958 2.07 inches of rain fell in one day giving it the greatest recorded amount for a day in June. The normal for that particular day was 0.09 inches.

Temperatures, as expected, continue to remain moderate. The monthly normal is 56.9, which is 4.4 degrees higher than the month of May. In a relative comparison to all the other monthly normals, this is the greatest temperature increase between any other months of the year. The greatest daily maximum temperature recorded for the month is 93 degrees set in 1955 and the lowest on record is 37 degrees set in 1980.

Sky cover for June remains on the cloudy side with average skies containing cloudy to partly cloudy conditions for 26.7 days out of the month. This only leaves 3.3 days that remain clear. Fog is a rather common occurrence for June, although records only show on the average 1.5 days containing dense fog.

July

July is typically the driest month in Astoria. The normal monthly precipitation total is 1.15 inches. In comparison to December, the month of greatest precipitation, there is a 9.4 inch difference between the two monthly normals. The highest monthly maximum total is only 4.39 inches. In regards to monthly maximums, this amount is also the lowest monthly maximum on record for all time. The lowest monthly minimum for July is 0.01 inches. This is not only the lowest for the month, but is also the all time lowest rainfall amount on record. The greatest daily precipitation amount of 1.72 inches fell on the 7th in 1976. The normal daily total for that day was 0.05 inches.

The normal monthly temperature increases approximately 3.1 degrees from the previous month of June, thus giving a normal of 60.0 degrees. The highest daily temperature maximum for July is 100 degrees set on the 11th in 1961 which is also the all time high temperature on record for the Astoria airport. The lowest daily minimum temperature recorded for the month was 39 degrees set on the 7th in 1971, which is 13.4 degrees below its normal of 52.4.

Although July has typically less rainfall, cloud cover is still dominate. In a typical July, the skies contain only 5.8 clear days and around 25 days that are cloudy to partly cloudy. Dense fog amounts increase slightly to an average 2.1 days per month.

August

August contains the highest monthly normal temperature of all other months with 60.7 degrees. The normal daily maximum is 68.8 degrees and has a highest daily maximum temperature of 96 degrees, set in 1981. The normal daily minimum is 52.6 and the lowest is 39 degrees set on the 19th in 1973.

August is a month of very little precipitation. The normal amount is 1.33 inches which is only 0.18 inches greater than the driest month of July. The lowest monthly precipitation amount that fell was 0.08 inches occurring in 1960.

Sky condition averages do not improve very much from July. Skies remain cloudy to partly cloudy for most of the month with the combined average number at 24.9 days. According to recorded weather data, fog is a regular occurrence for the month of August. The average number of dense fog days is only 4.2, but its not uncommon to have persistent conditions reported for a number of days. In fact, on the 3rd through the 17th of August in 1977, just over two weeks of fog like conditions

were observed. At the end of August, beginning on the 23 through September 6 in 1980, 16 consecutive days of fog conditions were recorded.

September

Compared to any other month September, on the average, contains the most days of clear sky conditions at 8.1. Unfortunately there are still around 22 days containing cloudy to partly cloudy conditions. Fog also continues to remain a factor through this month. The average number of days containing dense fog is 5.7, which is the second greatest amount out of the year.

Precipitation remains low with a monthly normal of 2.91 inches. The greatest amount of precipitation recorded in one day was 2.41 inches which occurs on the 30th in 1953. This amount was only under the monthly normal by a half inch and was over the daily normal, of 0.13 inches, by 2.28 inches.

Temperatures remain pleasant with a normal daily maximum of 67.8 degrees. The greatest recorded daily maximum was obtained in 1972 at 95 degrees set on the 2nd and the lowest daily minimum was 33 degrees set on the 18th in 1983. The normal daily minimum is 49 degrees.

October

According to statistical data, the end of October is the beginning of the rainy season in Astoria. The normal monthly total is 5.73 inches, with a record monthly maximum of 12.56 inches set in 1975. The lowest monthly amount recorded was 0.52 inches set in 1987. October 28, 1982 is the record for greatest daily precipitation event. The amount was 3.52 inches which is 3.27 above the normal 0.25 inches for that day. Normally, precipitation in October in the form of rain, but on a rare occasion snow is observed. The monthly snowfall average is only a trace.

Temperatures drop slightly with a monthly normal of 58.4 degrees. The highest daily maximum temperature was 85 degrees which occurred on the 2nd in 1987. The normal daily maximum is 61.1 degrees. The normal daily minimum is 44.0 degrees with the lowest daily minimum occurring on the 28th in 1971 at 26 degrees.

With the rainy season at hand, strong winds usually accompany the large storms that move over the Pacific Ocean. The greatest wind gust ever recorded occurred in 1962, 96 mph from the southwesterly direction. The prevailing wind direction for October is generally from the southeast with a mean wind speed of 7.5 mph.

With a greater contrast in air and ground temperatures, fog becomes an even larger problem than previous months. In fact, October is known as the month reporting the greatest number of dense fog events. Just under 25 percent of the month dense fog, measured at 1/4 mile or less visibility, was reported. From October 10 through the 27 of 1985, eighteen consecutive days reported fog. During that same period, 8 of those days were consecutively observed reporting dense fog. On another occasion, from October 23 into November 8 of 1992, seventeen consecutive fog days were observed.

In correlation to the increased rainfall, cloudy sky conditions tend to increase as well. The average number of days that remain clear are only 5.3 and leaving the majority of the month under cloudy to partly cloudy conditions.

November

With the start of November brings the normal beginning to the rainy season. The monthly precipitation normal increases to 4.32 inches, raising the monthly normal to 10.05 inches. In 1983, 16.75 inches of precipitation fell giving it the

highest maximum amount for the month. The minimum occurred in 1976 with 1.45 inches. The greatest amount of rainfall, 3.10 inches, for one day was observed on the 30th of 1975. Snow is more likely to be observed, although remain rare. The monthly snowfall average is 0.02 inches. In 1985, 4.6 inches of snow was reported, the greatest snowfall for the month of November.

The prevailing wind direction for the month is from the southeast and the mean velocity is around 8.7 mph. Although the prevailing winds are from the southeast, the strongest winds generally blow from the south or southwest. For example, the second fastest all time wind gust recorded occurred in this month at a speed of 85 mph from the southwest.

With winter approaching temperatures drop slightly, but continue to remain moderate with a normal of 46.9 degrees. The highest daily maximum is 71 degrees set in 1970 with a normal daily maximum of 53.5. Minimum daily temperatures usually remain around 40 degrees. The lowest daily minimum of 15 degrees occurred on the 14th in 1955.

As might be expected, November is one of the top three months containing the greatest cloud cover. On the average, 27.2 days are either cloudy or partly cloudy. Having only 2.8 days of clear conditions makes November one of the least likely months to see clear skies. Fog conditions for the month remain rather high. On five separate occasions the amount of consecutive days containing fog greater than or equal to 15 days were observed. On two of the occurrences 18 consecutive days were recorded.

December

On average, December is the rainiest month, with 10.55 inches reported. The highest monthly

maximum amount is only two tenths of an inch greater than the monthly normal, which was 10.57 inches occurring in 1955. The lowest monthly precipitation amount fell in 1985 with 2.67 inches observed. On the 26th in 1974, 3.59 inches of rain fell within that day making it the second greatest amount of rainfall to occur in one day. December is the mostly likely month for snow to fall in Astoria. Snowfall amounts remain low with a mean of only 1.1 inches. The greatest snowfall amount occurred in 1964 with 19.0 inches. Rain is the dominate precipitation type for December. The normal temperature is 42.4 degrees. The highest daily maximum occurred on the 26th in 1980 at 64 degrees. The lowest daily minimum recorded was 6 degrees set on the 21st in 1990. This 6 degree temperature was also the lowest all time temperature recorded at the Astoria Regional Airport.

Sky conditions continue on the cloudy side with only an average number of clear days around 2.7. This leaves just over 28 days or approximately 92 percent of the month under cloudy to partly cloudy sky conditions.

STATION LOCATION

ASTORIA, OREGON

| LOCATION | OCCUPIED FROM | OCCUPIED TO | AIRLINE DISTANCES AND DIRECTIONS FROM PREVIOUS LOCATION | LATITUDE NORTH | LONGITUDE WEST | ELEVATION ABOVE | | | | | | | | AUTOMATIC OBSERVING EQUIPMENT * | * Type M = AMOS T = AUTOB S = ASOS W = AWOS | REMARKS | |
|--|---------------|-------------|---|----------------|----------------|-----------------|--------------------|------------------|-----------------------|--------------|-----------------|----------------|-----------|---------------------------------|--|---------|------------|
| | | | | | | SEA LEVEL | GROUND | | | | | | | | | | HYGROMETER |
| | | | | | | | GROUND TEMPERATURE | WIND INSTRUMENTS | EXTERIOR THERMOMETERS | PSYCHROMETER | SUNSHINE SWITCH | TIPPING BUCKET | RAIN GAGE | | | | |
| <u>COOPERATIVE</u> | | | | | | | | | | | | | | | | | |
| 1 Pythian Building | 12/1/83 | 2/28/97 | NA | 46° 11' | 123°50' | 15 | 60 | 39 | | | | | | | Third order station. | | |
| 2 Savings Bank Building | 11/9/10 | 7/18/16 | Unk | 46° 11' | 123°50' | 16 | 10 | 64 | | | | | | | Top of building 60 feet above ground. | | |
| 3 530 Bond Street | 7/19/16 | 11/26/17 | Unk | 46° 11' | 123°50' | 24 | 11 | | | | | | | | Roof of one-story building. | | |
| 4 Kinney Building 510 Commercial Street | 1/15/18 | 5/11/19 | Unk | 46° 11' | 123°50' | 36 | 12 | | | | | | | | Instruments on 3rd story balcony | | |
| 5 Exchange St., near 12th | 6/26/30 | 8/1/42 | Unk | 46° 11' | 123°50' | 10 | 18 | 14 | | | | | | | Instruments were located in vacant city lot. | | |
| 6 212 Harrison Avenue | 11/5/45 | 1/1/61 | app. 0.5 mi. W | 46° 11' | 123°50' | 220 | 22 | | | | | | | | | | |
| <u>AIRPORT</u> | | | | | | | | | | | | | | | | | |
| 7 Clatsop Airport 3 miles SW of Post Office Building | 11/15/46 | 1/15/53 | NA | 46° 09' | 123°53' | | 67 | 5 | 4 | | | 4 | 4 | | SAIRS station. | | |
| 8 Clatsop County Airport | 1/15/53 | 2/11/76 | No Change | 46° 09' | 123°53' | 8 | 46 c20 | 6 | 5 | | | a4 | 4 | b4 | Weather Bureau Station established. a - Shielded 11/18/60. b - Commissioned 545 feet NE of thermometer site 10/7/64. c - Effective 10/7/64. | | |
| 9 National Weather Service Building Clatsop County Airport+ + - Port of Astoria Airport effective 7/24/84. | 2/11/76 | Present | 400 ft. S | 46° 09' | 123°53' | 8 | c20 | 5 | 5 | NA | 5 | 5 | 4 | d4 c4 f4 | NA d - Not moved 2/11/76. e - Type change 10/25/79. f - Type change 10/4/85. | | |

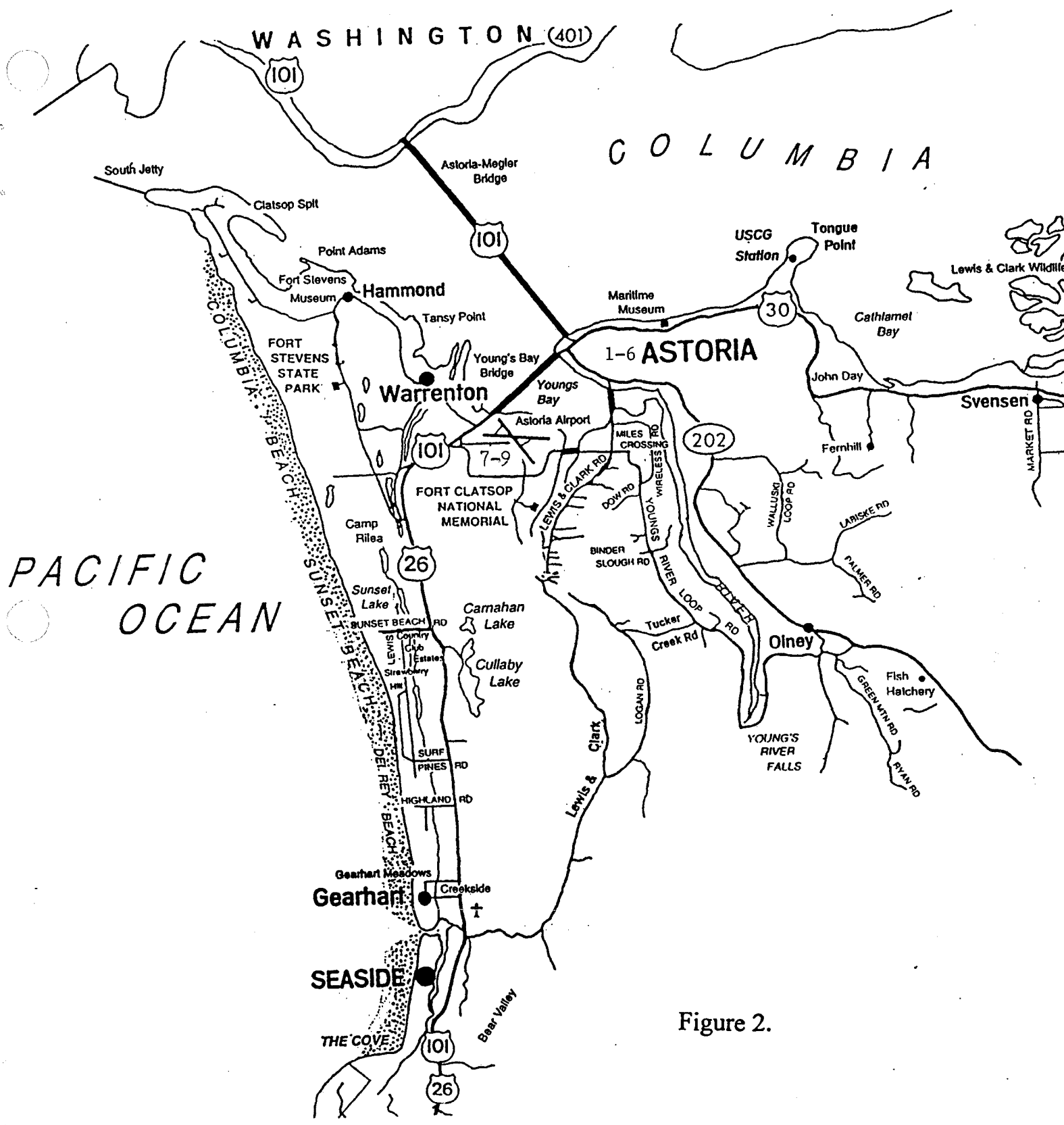


Figure 2.

EXTREME MONTHLY PEAK GUST MAXIMUMS
(1953-1994)

| <u>MONTH</u> | <u>DIR</u> | <u>VEL MPH</u> | <u>YEAR</u> |
|--------------|------------|----------------|-------------|
| JANUARY | S | 80 | M |
| FEBRUARY | SE | 76 | M |
| MARCH | SW | 83 | M |
| APRIL | W | 71 | M |
| MAY | SE | 61 | M |
| JUNE | SW | 44 | M |
| JULY | W | 45 | 1979 |
| AUGUST | S | 46 | 1991 |
| SEPTEMBER | SW | 60 | M |
| OCTOBER | SW | 96 | 1962 |
| NOVEMBER | SW | 85 | M |
| DECEMBER | S | 79 | 1982 |

MEAN WIND SPEED & PREVAILING DIRECTION

| <u>MONTH</u> | <u>SPEED (MPH)</u> | <u>DIRECTION THROUGH 1963</u> |
|--------------|------------------------|-----------------------------------|
| JANUARY | 9.2 | EAST |
| FEBRUARY | 9.0 | EAST-SOUTHEAST |
| MARCH | 8.8 | SOUTHEAST |
| APRIL | 8.7 | WEST-NORTHWEST |
| MAY | 8.5 | NORTHWEST |
| JUNE | 8.6 | NORTHWEST |
| JULY | 8.7 | NORTHWEST |
| AUGUST | 8.1 | NORTHWEST |
| SEPTEMBER | 7.5 | SOUTHEAST |
| OCTOBER | 7.5 | SOUTHEAST |
| NOVEMBER | 8.7 | SOUTHEAST |
| DECEMBER | 9.0 | EAST-SOUTHEAST |
| YEAR | 8.5 | SOUTHEAST |

M - MISSING DATA

**FASTEST ONE MINUTE WIND OBSERVATIONS
(1953-1993)**

| <u>MONTH</u> | <u>DIRECTION</u> | <u>SPEED (MPH)</u> | <u>YEAR</u> |
|--------------|------------------|--------------------|-------------|
| JANUARY | 170 | 55 | 1971 |
| FEBRUARY | 190 | 47 | 1979 |
| MARCH | 190 | 44 | 1964 |
| APRIL | 200 | 52 | 1964 |
| MAY | 220 | 37 | 1975 |
| JUNE | 230 | 29 | 1993 |
| JULY | 190 | 29 | 1988 |
| AUGUST | 200 | 30 | 1991 |
| SEPTEMBER | 200 | 35 | 1959 |
| OCTOBER | 200 | 44 | 1962 |
| NOVEMBER | 200 | 46 | 1962 |
| DECEMBER | 250 | 52 | 1961 |

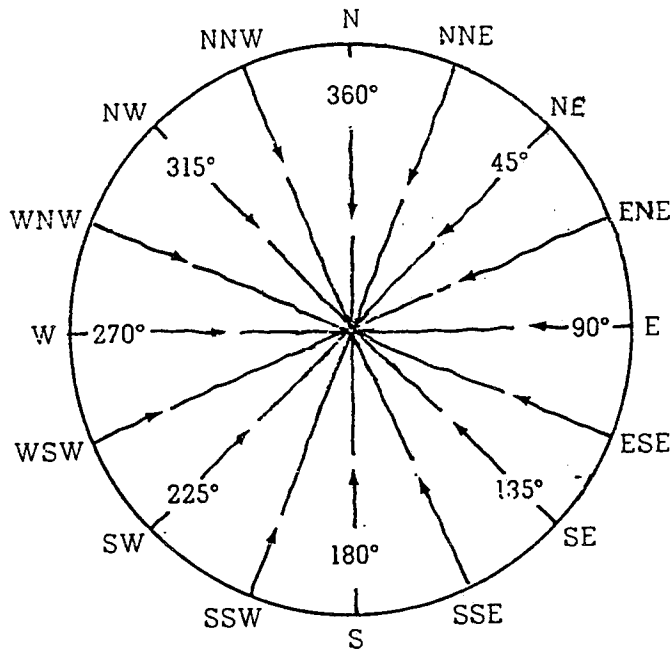


Figure 3.

WIND DIRECTION

Ahrews, Donald, 1991: *Meteorology Today*, West Publishing Company, 4th edition, p.279.

GREATEST OCCURRENCE

STRONGEST WIND GUSTS OF 50 KNOTS OR GREATER
1985 - 1995

| <u>YEAR</u> | <u>DAY</u> | <u>VEL/DIR</u> | <u>YEAR</u> | <u>DAY</u> | <u>VEL/DIR</u> | <u>YEAR</u> | <u>DAY</u> | <u>VEL/DIR</u> |
|-------------|------------|----------------|-------------|------------|----------------|-------------|------------|----------------|
| 1985 | FEB 11 | 59 S | 1989 | JAN 16 | 51 S | 1993 | JAN 20 | 73 S |
| | MAR 23 | 62 S | | FEB 17 | 51 S | | DEC 8 | 61 S |
| | | | | MAR 5 | 55 S | | DEC 9 | 72 S |
| 1986 | JAN 16 | 75 SW | | MAR 9 | 67 S | | DEC 10 | 56 SW |
| | FEB 15 | 58 S | | DEC 3 | 55 S | | DEC 11 | 55 W |
| | MAR 7 | 64 S | | DEC 4 | 56 S | | DEC 31 | 51 S |
| | NOV 23 | 62 S | | | | | | |
| | DEC 29 | 53 S | 1990 | JAN 6 | 62 S | 1994 | MAR 20 | 58 SW |
| | | | | JAN 9 | 64 S | | OCT 26 | 63 S |
| 1987 | JAN 28 | 62 SW | | JAN 28 | 58 SW | | OCT 31 | 67 S |
| | JAN 31 | 69 S | | FEB 2 | 55 S | | NOV 16 | 54 NW |
| | FEB 1 | 70 S | | NOV 23 | 53 S | | NOV 29 | 53 S |
| | FEB 22 | 52 NW | | NOV 24 | 59 S | | NOV 30 | 56 S |
| | MAR 3 | 60 SW | | DEC 3 | 51 S | | DEC 15 | 56 S |
| | NOV 30 | 55 S | | DEC 4 | 64 S | | DEC 17 | 59 S |
| | DEC 1 | 67 S | | DEC 18 | 51 W | | DEC 19 | 67 S |
| | DEC 2 | 60 S | | | | | DEC 20 | 54 S |
| | DEC 3 | 51 S | 1991 | JAN 12 | 56 S | | DEC 25 | 51 S |
| | DEC 5 | 58 S | | FEB 3 | 58 S | | DEC 26 | 59 S |
| | DEC 9 | 61 SW | | FEB 4 | 59 S | | DEC 27 | 62 S |
| | | | | MAR 3 | 59 S | | | |
| 1988 | JAN 10 | 51 S | | APR 3 | 52 S | 1995 | JAN 30 | 52 S |
| | JAN 13 | 53 S | | APR 4 | 54 S | | JAN 31 | 51 S |
| | JAN 14 | 71 S | | NOV 16 | 66 S | | FEB 17 | 52 S |
| | FEB 12 | 52 W | | NOV 19 | 61 S | | FEB 18 | 55 S |
| | MAR 22 | 66 S | | DEC 5 | 56 S | | MAR 9 | 60 S |
| | MAR 23 | 52 W | | | | | MAR 20 | 55 SE |
| | APR 2 | 63 S | 1992 | JAN 23 | 59 S | | | |
| | SEP 25 | 56 S | | JAN 27 | 59 S | | | |
| | NOV 2 | 62 S | | JAN 31 | 67 S | | | |
| | NOV 5 | 54 S | | FEB 21 | 53 S | | | |
| | NOV 11 | 51 S | | APR 16 | 52 S | | | |
| | NOV 12 | 60 S | | NOV 21 | 53 S | | | |
| | DEC 29 | 56 SW | | DEC 10 | 56 SW | | | |
| | DEC 30 | 58 S | | | | | | |

SUNRISE AND SUNSET AT ASTORIA, OREGON PACIFIC STANDARD TIME

| DAY | JAN. | | FEB. | | MAR. | | APR. | | MAY | | JUNE | | JULY | | AUG. | | SEPT. | | OCT. | | NOV. | | DEC. | |
|-----|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|--------------|-------------|
| | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. | Rise A.M. | Set P.M. |
| 1 | 7 58 | 4 40 | 7 39 | 5 20 | 6 55 | 6 02 | 5 56 | 6 44 | 5 02 | 7 24 | 4 28 | 7 59 | 4 28 | 8 11 | 4 57 | 7 46 | 5 36 | 6 55 | 6 14 | 5 56 | 6 56 | 5 02 | 7 37 | 4 32 |
| 2 | 7 58 | 4 41 | 7 37 | 5 22 | 6 53 | 6 03 | 5 54 | 6 45 | 5 01 | 7 25 | 4 27 | 8 00 | 4 28 | 8 10 | 4 58 | 7 44 | 5 37 | 6 53 | 6 15 | 5 54 | 6 58 | 5 00 | 7 38 | 4 31 |
| 3 | 7 58 | 4 42 | 7 36 | 5 23 | 6 51 | 6 04 | 5 52 | 6 47 | 4 59 | 7 26 | 4 27 | 8 01 | 4 29 | 8 10 | 4 59 | 7 43 | 5 38 | 6 51 | 6 16 | 5 52 | 6 59 | 4 59 | 7 40 | 4 31 |
| 4 | 7 58 | 4 43 | 7 35 | 5 25 | 6 50 | 6 06 | 5 50 | 6 48 | 4 58 | 7 27 | 4 26 | 8 02 | 4 30 | 8 10 | 5 01 | 7 42 | 5 39 | 6 49 | 6 18 | 5 50 | 7 00 | 4 57 | 7 41 | 4 31 |
| 5 | 7 58 | 4 44 | 7 33 | 5 26 | 6 48 | 6 07 | 5 48 | 6 49 | 4 56 | 7 29 | 4 26 | 8 03 | 4 30 | 8 09 | 5 02 | 7 40 | 5 41 | 6 47 | 6 19 | 5 48 | 7 02 | 4 56 | 7 42 | 4 30 |
| 6 | 7 58 | 4 45 | 7 32 | 5 28 | 6 46 | 6 09 | 5 46 | 6 51 | 4 55 | 7 30 | 4 25 | 8 03 | 4 31 | 8 09 | 5 03 | 7 39 | 5 42 | 6 45 | 6 20 | 5 46 | 7 03 | 4 55 | 7 43 | 4 30 |
| 7 | 7 58 | 4 46 | 7 31 | 5 29 | 6 44 | 6 10 | 5 44 | 6 52 | 4 54 | 7 31 | 4 25 | 8 04 | 4 32 | 8 09 | 5 04 | 7 37 | 5 43 | 6 43 | 6 21 | 5 45 | 7 05 | 4 53 | 7 44 | 4 30 |
| 8 | 7 57 | 4 48 | 7 29 | 5 31 | 6 42 | 6 11 | 5 42 | 6 53 | 4 52 | 7 33 | 4 25 | 8 05 | 4 32 | 8 08 | 5 06 | 7 36 | 5 44 | 6 41 | 6 23 | 5 43 | 7 06 | 4 52 | 7 45 | 4 30 |
| 9 | 7 57 | 4 49 | 7 28 | 5 32 | 6 40 | 6 13 | 5 41 | 6 55 | 4 51 | 7 34 | 4 24 | 8 05 | 4 33 | 8 08 | 5 07 | 7 34 | 5 46 | 6 39 | 6 24 | 5 41 | 7 08 | 4 51 | 7 46 | 4 30 |
| 10 | 7 57 | 4 50 | 7 26 | 5 34 | 6 38 | 6 14 | 5 39 | 6 56 | 4 49 | 7 35 | 4 24 | 8 06 | 4 34 | 8 07 | 5 08 | 7 33 | 5 47 | 6 37 | 6 25 | 5 39 | 7 09 | 4 49 | 7 47 | 4 30 |
| 11 | 7 56 | 4 51 | 7 25 | 5 35 | 6 36 | 6 16 | 5 37 | 6 57 | 4 48 | 7 36 | 4 24 | 8 07 | 4 35 | 8 06 | 5 09 | 7 31 | 5 48 | 6 35 | 6 27 | 5 37 | 7 10 | 4 48 | 7 48 | 4 30 |
| 12 | 7 56 | 4 52 | 7 24 | 5 37 | 6 35 | 6 17 | 5 35 | 6 59 | 4 47 | 7 38 | 4 24 | 8 07 | 4 36 | 8 06 | 5 10 | 7 30 | 5 49 | 6 33 | 6 28 | 5 35 | 7 12 | 4 47 | 7 49 | 4 30 |
| 13 | 7 55 | 4 54 | 7 22 | 5 38 | 6 33 | 6 18 | 5 33 | 7 00 | 4 46 | 7 39 | 4 23 | 8 08 | 4 37 | 8 05 | 5 12 | 7 28 | 5 51 | 6 31 | 6 30 | 5 33 | 7 13 | 4 46 | 7 50 | 4 30 |
| 14 | 7 55 | 4 55 | 7 20 | 5 40 | 6 31 | 6 20 | 5 31 | 7 01 | 4 44 | 7 40 | 4 23 | 8 08 | 4 38 | 8 04 | 5 13 | 7 26 | 5 52 | 6 29 | 6 31 | 5 32 | 7 15 | 4 45 | 7 50 | 4 30 |
| 15 | 7 54 | 4 56 | 7 19 | 5 41 | 6 29 | 6 21 | 5 30 | 7 02 | 4 43 | 7 41 | 4 23 | 8 09 | 4 39 | 8 04 | 5 14 | 7 25 | 5 53 | 6 27 | 6 32 | 5 30 | 7 16 | 4 44 | 7 51 | 4 30 |
| 16 | 7 54 | 4 58 | 7 17 | 5 43 | 6 27 | 6 22 | 5 28 | 7 04 | 4 42 | 7 42 | 4 23 | 8 09 | 4 39 | 8 03 | 5 15 | 7 23 | 5 54 | 6 25 | 6 34 | 5 28 | 7 18 | 4 43 | 7 52 | 4 30 |
| 17 | 7 53 | 4 59 | 7 16 | 5 44 | 6 25 | 6 24 | 5 26 | 7 05 | 4 41 | 7 44 | 4 23 | 8 09 | 4 40 | 8 02 | 5 17 | 7 21 | 5 56 | 6 23 | 6 35 | 5 26 | 7 19 | 4 42 | 7 53 | 4 31 |
| 18 | 7 52 | 5 00 | 7 14 | 5 46 | 6 23 | 6 25 | 5 24 | 7 06 | 4 40 | 7 45 | 4 23 | 8 10 | 4 41 | 8 01 | 5 18 | 7 20 | 5 57 | 6 21 | 6 36 | 5 24 | 7 20 | 4 41 | 7 53 | 4 31 |
| 19 | 7 52 | 5 02 | 7 12 | 5 47 | 6 21 | 6 26 | 5 22 | 7 08 | 4 39 | 7 46 | 4 24 | 8 10 | 4 42 | 8 00 | 5 19 | 7 18 | 5 58 | 6 20 | 6 38 | 5 23 | 7 22 | 4 40 | 7 54 | 4 31 |
| 20 | 7 51 | 5 03 | 7 11 | 5 49 | 6 19 | 6 28 | 5 21 | 7 09 | 4 38 | 7 47 | 4 24 | 8 10 | 4 44 | 7 59 | 5 21 | 7 16 | 6 00 | 6 18 | 6 39 | 5 21 | 7 23 | 4 39 | 7 55 | 4 32 |
| 21 | 7 50 | 5 04 | 7 09 | 5 50 | 6 17 | 6 29 | 5 19 | 7 10 | 4 37 | 7 48 | 4 24 | 8 11 | 4 45 | 7 58 | 5 22 | 7 15 | 6 01 | 6 16 | 6 41 | 5 19 | 7 25 | 4 38 | 7 55 | 4 32 |
| 22 | 7 49 | 5 06 | 7 07 | 5 52 | 6 15 | 6 31 | 5 17 | 7 12 | 4 36 | 7 49 | 4 24 | 8 11 | 4 46 | 7 57 | 5 23 | 7 13 | 6 02 | 6 14 | 6 42 | 5 17 | 7 26 | 4 37 | 7 56 | 4 33 |
| 23 | 7 48 | 5 07 | 7 06 | 5 53 | 6 13 | 6 32 | 5 15 | 7 13 | 4 35 | 7 50 | 4 24 | 8 11 | 4 47 | 7 56 | 5 24 | 7 11 | 6 03 | 6 12 | 6 43 | 5 16 | 7 27 | 4 36 | 7 56 | 4 33 |
| 24 | 7 47 | 5 09 | 7 04 | 5 54 | 6 11 | 6 33 | 5 14 | 7 14 | 4 34 | 7 51 | 4 25 | 8 11 | 4 48 | 7 55 | 5 26 | 7 09 | 6 05 | 6 10 | 6 45 | 5 14 | 7 29 | 4 36 | 7 56 | 4 34 |
| 25 | 7 46 | 5 10 | 7 02 | 5 56 | 6 09 | 6 35 | 5 12 | 7 16 | 4 33 | 7 52 | 4 25 | 8 11 | 4 49 | 7 54 | 5 27 | 7 07 | 6 06 | 6 08 | 6 46 | 5 12 | 7 30 | 4 35 | 7 57 | 4 35 |
| 26 | 7 45 | 5 12 | 7 00 | 5 57 | 6 07 | 6 36 | 5 10 | 7 17 | 4 32 | 7 53 | 4 25 | 8 11 | 4 50 | 7 53 | 5 28 | 7 06 | 6 07 | 6 06 | 6 48 | 5 11 | 7 31 | 4 34 | 7 57 | 4 35 |
| 27 | 7 44 | 5 13 | 6 59 | 5 59 | 6 06 | 6 37 | 5 09 | 7 18 | 4 31 | 7 54 | 4 26 | 8 11 | 4 51 | 7 52 | 5 29 | 7 04 | 6 08 | 6 04 | 6 49 | 5 09 | 7 32 | 4 34 | 7 57 | 4 36 |
| 28 | 7 43 | 5 14 | 6 57 | 6 00 | 6 04 | 6 39 | 5 07 | 7 20 | 4 30 | 7 55 | 4 26 | 8 11 | 4 52 | 7 51 | 5 31 | 7 02 | 6 10 | 6 02 | 6 50 | 5 08 | 7 34 | 4 33 | 7 58 | 4 37 |
| 29 | 7 42 | 5 16 | 6 56 | 6 01 | 6 02 | 6 40 | 5 06 | 7 21 | 4 30 | 7 56 | 4 27 | 8 11 | 4 54 | 7 50 | 5 32 | 7 00 | 6 11 | 6 00 | 6 52 | 5 06 | 7 35 | 4 33 | 7 58 | 4 37 |
| 30 | 7 41 | 5 17 | | | 6 00 | 6 41 | 5 04 | 7 22 | 4 29 | 7 57 | 4 27 | 8 11 | 4 55 | 7 48 | 5 33 | 6 58 | 6 12 | 5 58 | 6 53 | 5 05 | 7 36 | 4 32 | 7 58 | 4 38 |
| 31 | 7 40 | 5 19 | | | 5 58 | 6 43 | | | 4 28 | 7 58 | | | 4 56 | 7 47 | 5 34 | 6 56 | | | 6 55 | 5 03 | | | 7 58 | 4 39 |

Add one hour for Daylight Saving Time if and when in use.

AVERAGE NUMBER OF CLEAR, PARTLY CLOUDY, CLOUDY AND
DENSE FOG DAYS BY MONTH
(1953-1993)

| <u>MONTH</u> | <u>CLEAR</u> | <u>PARTLY CLOUDY</u> | <u>CLOUDY</u> | <u>DENSE FOG</u> |
|--------------|--------------|----------------------|---------------|------------------|
| JANUARY | 3.0 | 3.7 | 24.2 | 3.7 |
| FEBRUARY | 3.4 | 3.3 | 21.5 | 3.0 |
| MARCH | 2.8 | 5.3 | 22.9 | 2.7 |
| APRIL | 3.0 | 5.9 | 21.0 | 2.2 |
| MAY | 3.1 | 8.2 | 19.7 | 1.5 |
| JUNE | 3.3 | 7.4 | 19.3 | 1.4 |
| JULY | 5.8 | 9.8 | 15.3 | 2.1 |
| AUGUST | 6.2 | 9.6 | 15.3 | 4.2 |
| SEPTEMBER | 8.1 | 7.5 | 14.5 | 5.7 |
| OCTOBER | 5.3 | 6.7 | 19.0 | 6.9 |
| NOVEMBER | 2.8 | 4.9 | 22.3 | 4.1 |
| DECEMBER | 2.7 | 4.2 | 24.2 | 3.9 |

CONSECUTIVE DAYS CONTAINING FOG
15 DAYS OR GREATER
(1954-1994)

| | |
|---------|--------------------------------------|
| 15 Days | August 03 - August 17, 1977 |
| 15 Days | February 09 - February 23, 1991 |
| 15 Days | November 04 - November 20, 1991 |
| 15 Days | December 13 - December 27, 1994 |
| 16 Days | February 04 - February 19, 1972 |
| 16 Days | January 09 - January 24, 1975 |
| 16 Days | August 23 - September 06, 1980 |
| 16 Days | February 21 - March 08, 1986 |
| 17 Days | December 11 - December 27, 1980 |
| 17 Days | November 05 - November 22, 1993 |
| 17 Days | November 4 - November 20, 1991 |
| 17 Days | October 23 - November 08, 1992 |
| 18 Days | October 10 - October 27, 1985 |
| 18 Days | November 02 - November 19, 1990 |
| 18 Days | November 6 - November 22, 1993 |
| 19 Days | November 11 - November 29, 1986 |
| 20 Days | March 22 - April 10, 1993 |
| 23 Days | November 18 - December 11, 1994 |
| 26 Days | April 13 - May 8, 1993 |
| 32 Days | December 29, 1993 - January 29, 1994 |
| 32 Days | October 16 - November 16, 1994 |

GREATEST NUMBER OF CONSECUTIVE DAYS CONTAINING DENSE FOG**
5 DAYS OR GREATER FROM 1954 - 1994

| <u>DURATION</u> | <u>DATE</u> |
|-----------------|---------------------------------|
| 5 DAYS | FEBRUARY 5 - FEBRUARY 9, 1956 |
| 5 DAYS | DECEMBER 3 - DECEMBER 7, 1959 |
| 5 DAYS | FEBRUARY 19 - FEBRUARY 23, 1978 |
| 5 DAYS | SEPTEMBER 28 - OCTOBER 2, 1993 |
| 6 DAYS | NOVEMBER 19 - NOVEMBER 24, 1980 |
| 6 DAYS | OCTOBER 5 - OCTOBER 10, 1988 |
| 7 DAYS | DECEMBER 17 - DECEMBER 23, 1962 |
| 8 DAYS | OCTOBER 12 - OCTOBER 19, 1974 |

LONGEST PERIODS WITHOUT MEASURABLE PRECIPITATION (INCHES)
21 DAYS OR GREATER (3 WEEKS)
(1954-1994)

| <u>DURATION</u> | <u>DATE</u> |
|-----------------|-----------------------------------|
| 21 DAYS | JUNE 28 - JULY 18, 1967 |
| 21 DAYS | SEPTEMBER 10 - SEPTEMBER 30, 1974 |
| 21 DAYS | SEPTEMBER 12 - OCTOBER 2, 1993 |
| 22 DAYS | JULY 10 - JULY 31, 1956 |
| 22 DAYS | AUGUST 8 - AUGUST 29, 1993 |
| 23 DAYS | JULY 2 - JULY 24, 1970 |
| 23 DAYS | DECEMBER 8 - DECEMBER 30, 1985 |
| 24 DAYS | JULY 30 - AUGUST 22, 1977 |
| 25 DAYS | JUNE 30 - JUNE 24, 1984 |
| 26 DAYS | JULY 23 - AUGUST 17, 1963 |
| 27 DAYS | JULY 23 - AUGUST 18, 1974 |
| 27 DAYS | SEPTEMBER 1 - OCTOBER 27, 1975 |
| 27 DAYS | JULY 11 - AUGUST 7, 1980 |
| 32 DAYS | JULY 12 - AUGUST 12, 1979 |
| 33 DAYS | JULY 13 - AUGUST 14, 1988 |
| 34 DAYS | SEPTEMBER 26 - OCTOBER 29, 1987 |
| 35 DAYS | JUNE 26 - JULY 30, 1960 |
| 36 DAYS | AUGUST 8 - SEPTEMBER 12, 1955 |
| 45 DAYS | JUNE 15 - JULY 30, 1985 |

** DENSE FOG - VISIBILITY 1/4 MILE OR LESS

LONGEST CONSECUTIVE DAYS OF RAINFALL GREATER THAN .50 INCH
5 DAYS OR GREATER FOR 1954 - 1994

| <u>DURATION</u> | <u>DATE</u> | <u>DURATION</u> | <u>DATE</u> | |
|-----------------|-----------------------|-----------------|-----------------------|----------------------|
| 5 DAYS | FEB 28 - MAR 3, 1956 | 6 DAYS | JAN 2 - JAN 7, 1956 | |
| | NOV 3 - NOV 7, 1958 | | DEC 16 - DEC 21, 1957 | |
| | NOV 9 - NOV 13, 1958 | | NOV 29 - DEC 4, 1966 | |
| | JAN 26 - JAN 30, 1965 | | NOV 28 - DEC 3, 1967 | |
| | JAN 16 - JAN 20, 1970 | | NOV 10 - NOV 15, 1973 | |
| | JAN 12 - JAN 16, 1971 | | NOV 12 - NOV 17, 1983 | |
| | DEC 11 - DEC 15, 1973 | | JAN 4 - JAN 9, 1990 | |
| | NOV 17 - NOV 21, 1974 | | | |
| | JAN 12 - JAN 16, 1975 | | 7 DAYS | JAN 6 - JAN 12, 1959 |
| | OCT 25 - OCT 29, 1975 | | | DEC 26 - JAN 1, 1966 |
| | JAN 3 - JAN 7, 1983 | | | |
| | FEB 9 - FEB 13, 1983 | | | |
| | NOV 20 - NOV 24, 1986 | | | |
| | FEB 7 - FEB 11, 1990 | | | |

LONGEST CONSECUTIVE DAYS OF RAINFALL GREATER THAN 1.00 INCHES
3 DAYS OR GREATER FOR 1954 - 1994

| <u>DURATION</u> | <u>DATE</u> | <u>DURATION</u> | <u>DATE</u> |
|-----------------|-----------------------|-----------------|---------------------|
| 3 DAYS | MAR 6 - MAR 8, 1957 | 5 DAYS | JAN 2 - JAN 6, 1954 |
| | DEC 28 - DEC 30, 1970 | | JAN 2 - JAN 6, 1956 |
| | JAN 18 - JAN 20, 1972 | | JAN 3 - JAN 7, 1983 |
| 4 DAYS | FEB 18 - FEB 21, 1961 | | |
| | JAN 12 - JAN 15, 1975 | | |
| | OCT 26 - OCT 29, 1975 | | |
| | NOV 30 - DEC 3, 1975 | | |
| | DEC 12 - DEC 15, 1977 | | |

LONGEST CONSECUTIVE DAYS OF RAINFALL GREATER THAN 1.50 AND 2.00 INCHES
1954 - 1994

1.50 INCH
3 DAYS OR GREATER

2.00 INCH
2 DAYS OR GREATER

| <u>DURATION</u> | <u>DATE</u> | <u>DURATION</u> | <u>DATE</u> |
|-----------------|-----------------------|-----------------|-----------------------|
| 3 DAYS | JAN 12 - JAN 14, 1975 | 2 DAYS | JAN 24 - JAN 25, 1964 |
| | JAN 5 - JAN 7, 1983 | | JAN 22 - JAN 23, 1982 |
| | DEC 2 - DEC 4, 1989 | | |

EXTREME MONTHLY MAXIMUM AND MINIMUM PRECIPITATION
(INCHES)
(Records for 1953-1993)

| <u>MONTH</u> | <u>NORMAL MONTHLY TOTAL</u> | <u>HIGHEST MONTHLY MAXIMUM</u> | <u>YEAR</u> | <u>LOWEST MONTHLY MINIMUM</u> | <u>YEAR</u> |
|--------------|-------------------------------------|--|-------------|---------------------------------------|-------------|
| JANUARY | 10.00 | 18.94 | 1954 | 0.69 | 1985 |
| FEBRUARY | 7.59 | 21.89 | 1961 | 1.35 | 1993 |
| MARCH | 7.07 | 13.47 | 1956 | 0.93 | 1965 |
| APRIL | 4.60 | 9.47 | 1991 | 1.33 | 1956 |
| MAY | 3.02 | 6.60 | 1960 | 0.37 | 1982 |
| JUNE | 2.40 | 5.48 | 1954 | 0.55 | 1992 |
| JULY | 1.15 | 4.39 | 1983 | 0.01 | 1960 |
| AUGUST | 1.33 | 5.22 | 1968 | 0.08 | 1970 |
| SEPTEMBER | 2.91 | 6.93 | 1978 | 0.04 | 1975 |
| OCTOBER | 5.73 | 12.56 | 1975 | 0.52 | 1987 |
| NOVEMBER | 10.05 | 16.75 | 1983 | 1.45 | 1976 |
| DECEMBER | 10.55 | 10.57 | 1955 | 2.67 | 1985 |

GREATEST DAILY PRECIPITATION
(INCHES)
(MIDNIGHT TO MIDNIGHT FOR 1953-1993)

| <u>DATE</u> | <u>GREATEST DAILY AMOUNT</u> | <u>NORMAL DAILY TOTAL</u> |
|-------------------------|--------------------------------------|-----------------------------------|
| JANUARY 09, 1990 | 4.53 | 0.33 |
| FEBRUARY 21, 1954 | 3.33 | 0.26 |
| MARCH 07, 1956 | 2.50 | 0.25 |
| APRIL 04, 1991 | 2.73 | 0.18 |
| MAY 31, 1968 | 1.74 | 0.09 |
| JUNE 01, 1958 | 2.07 | 0.09 |
| JULY 07, 1976 | 1.72 | 0.05 |
| AUGUST 02, 1956 | 1.64 | 0.03 |
| SEPTEMBER 30, 1953 | 2.41 | 0.13 |
| OCTOBER 28, 1982 | 3.52 | 0.25 |
| NOVEMBER 30, 1975 | 3.10 | 0.36 |
| DECEMBER 26, 1974 | 3.59 | 0.33 |

GREATEST OR LEAST AMOUNT RECORDED

PROBABILITY THAT THE MONTHLY PRECIPITATION WILL BE
EQUAL TO OR LESS THAN THE INDICATED AMOUNT

MONTHLY PRECIPITATION (INCHES)

| PROB | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|------|-------|-------|-------|-------|------|------|------|------|-------|-------|-------|-------|--------|
| .005 | 1.07 | 1.76 | 1.68 | 1.40 | 0.52 | 0.27 | 0.01 | 0.02 | 0.08 | 0.41 | 2.40 | 2.62 | 41.52 |
| .010 | 1.39 | 2.07 | 1.97 | 1.59 | 0.64 | 0.35 | 0.02 | 0.03 | 0.12 | 0.56 | 2.81 | 3.06 | 43.55 |
| .050 | 2.65 | 3.12 | 2.95 | 2.22 | 1.05 | 0.65 | 0.09 | 0.11 | 0.36 | 1.21 | 4.20 | 4.52 | 49.43 |
| .100 | 3.60 | 3.81 | 3.59 | 2.61 | 1.34 | 0.88 | 0.16 | 0.20 | 0.59 | 1.74 | 5.12 | 5.47 | 52.78 |
| .200 | 5.04 | 4.79 | 4.50 | 3.16 | 1.75 | 1.23 | 0.31 | 0.37 | 1.00 | 2.58 | 6.40 | 6.80 | 57.03 |
| .300 | 6.32 | 5.60 | 5.24 | 3.59 | 2.10 | 1.53 | 0.47 | 0.56 | 1.40 | 3.35 | 7.46 | 7.89 | 60.24 |
| .400 | 7.57 | 6.36 | 5.94 | 4.00 | 2.43 | 1.83 | 0.65 | 0.76 | 1.83 | 4.11 | 8.45 | 8.92 | 63.08 |
| .500 | 8.88 | 7.13 | 6.65 | 4.40 | 2.78 | 2.14 | 0.85 | 1.00 | 2.31 | 4.93 | 9.45 | 9.95 | 65.81 |
| .600 | 10.34 | 7.96 | 7.41 | 4.83 | 3.15 | 2.49 | 1.10 | 1.27 | 2.87 | 5.86 | 10.53 | 11.06 | 68.62 |
| .700 | 12.07 | 8.91 | 8.29 | 5.32 | 3.59 | 2.89 | 1.40 | 1.62 | 3.55 | 6.97 | 11.78 | 12.33 | 71.71 |
| .800 | 14.33 | 10.12 | 9.40 | 5.94 | 4.15 | 3.43 | 1.83 | 2.11 | 4.48 | 8.43 | 13.35 | 13.95 | 75.45 |
| .900 | 17.88 | 11.97 | 11.09 | 6.86 | 5.02 | 4.26 | 2.54 | 2.92 | 6.01 | 10.77 | 15.75 | 16.40 | 80.84 |
| .950 | 21.20 | 13.66 | 12.63 | 7.69 | 5.81 | 5.04 | 3.25 | 3.71 | 7.49 | 12.98 | 17.93 | 18.62 | 85.47 |
| .990 | 28.40 | 17.20 | 15.87 | 9.42 | 7.51 | 6.73 | 4.87 | 5.54 | 10.83 | 17.85 | 22.51 | 23.29 | 94.63 |
| .995 | 31.37 | 18.63 | 17.17 | 10.11 | 8.20 | 7.42 | 5.56 | 6.32 | 12.24 | 19.86 | 24.35 | 25.16 | 98.14 |

PRECIPITATION QUINTILES 1961-1990 (INCHES)

| LVL | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|-----|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|
| 0 < | 0.69 | 2.60 | 0.93 | 1.65 | 0.37 | 0.65 | 0.05 | 0.08 | 0.04 | 0.52 | 1.45 | 2.67 |
| 1 | 0.69 | 2.60 | 0.93 | 1.65 | 0.37 | 0.65 | 0.05 | 0.08 | 0.04 | 0.52 | 1.45 | 2.67 |
| | 5.04 | 4.79 | 4.50 | 3.16 | 1.75 | 1.23 | 0.31 | 0.37 | 1.00 | 2.58 | 6.40 | 6.8 |
| 2 | 5.05 | 4.80 | 4.51 | 3.17 | 1.76 | 1.24 | 0.32 | 0.38 | 1.01 | 2.59 | 6.41 | 6.81 |
| | 7.57 | 6.36 | 5.94 | 4.00 | 2.43 | 1.83 | 0.65 | 0.76 | 1.83 | 4.11 | 8.45 | 8.92 |
| 3 | 7.58 | 6.37 | 5.95 | 4.01 | 2.44 | 1.84 | 0.66 | 0.77 | 1.84 | 4.12 | 8.46 | 8.93 |
| | 10.34 | 7.96 | 7.41 | 4.83 | 3.15 | 2.49 | 1.10 | 1.27 | 2.87 | 5.86 | 10.53 | 11.06 |
| 4 | 10.35 | 7.97 | 7.42 | 4.84 | 3.16 | 2.50 | 1.11 | 1.28 | 2.88 | 5.87 | 10.54 | 11.07 |
| | 14.33 | 10.12 | 9.40 | 5.94 | 4.15 | 3.43 | 1.83 | 2.11 | 4.48 | 8.43 | 13.35 | 13.95 |
| 5 | 14.34 | 10.13 | 9.41 | 5.95 | 4.16 | 3.44 | 1.84 | 2.12 | 4.49 | 8.44 | 13.36 | 13.96 |
| | 18.50 | 21.89 | 10.73 | 7.74 | 6.00 | 5.47 | 4.39 | 5.22 | 6.93 | 12.56 | 16.75 | 15.93 |
| 6 > | 18.50 | 21.89 | 10.73 | 7.74 | 6.00 | 5.47 | 4.39 | 5.22 | 6.93 | 12.56 | 13.75 | 15.93 |

0 = LESS THAN 30 YEAR MINIMUM
 1 = FIRST QUINTILE
 2 = SECOND QUINTILE
 3 = THIRD QUINTILE

4 = FOURTH QUINTILE
 5 = FIFTH QUINTILE
 6 = MORE THAN 30 YEAR MAXIMUM

THESE VALUES WERE DETERMINED FROM THE INCOMPLETE GAMMA DISTRIBUTION

MONTHLY PRECIPITATION AVERAGES (INCHES)

(1955-1993)

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|------|-------|-------|-------|------|------|------|------|------|------|-------|-------|-------|--------|
| 1955 | 5.96 | 6.33 | 8.64 | 8.04 | 1.62 | 2.73 | 3.42 | 0.10 | 3.57 | 12.24 | 14.64 | 16.57 | 83.86 |
| 1956 | 17.09 | 9.32 | 13.47 | 1.33 | 1.43 | 4.64 | 0.18 | 2.15 | 3.76 | 11.37 | 2.57 | 9.02 | 76.33 |
| 1957 | 4.76 | 6.90 | 9.73 | 3.94 | 2.82 | 3.31 | 1.63 | 1.34 | 0.82 | 5.43 | 7.68 | 11.97 | 60.33 |
| 1958 | 9.61 | 10.96 | 4.62 | 7.03 | 1.03 | 2.80 | 0.09 | 0.52 | 1.94 | 7.33 | 14.14 | 12.17 | 72.24 |
| 1959 | 13.24 | 8.04 | 7.88 | 4.40 | 3.45 | 3.77 | 0.91 | 0.92 | 5.56 | 6.48 | 11.40 | 8.36 | 74.41 |
| 1960 | 10.09 | 8.47 | 7.40 | 5.92 | 6.60 | 1.87 | 0.01 | 1.84 | 1.69 | 7.33 | 13.91 | 6.12 | 71.25 |
| 1961 | 9.03 | 21.89 | 10.69 | 5.47 | 2.90 | 1.10 | 0.50 | 1.30 | 1.45 | 7.32 | 8.34 | 10.40 | 80.39 |
| 1962 | 6.53 | 5.61 | 5.18 | 7.44 | 2.88 | 1.87 | 0.34 | 2.49 | 3.50 | 7.40 | 14.21 | 6.78 | 64.23 |
| 1963 | 4.76 | 6.44 | 6.13 | 5.76 | 1.91 | 1.80 | 1.52 | 1.20 | 2.20 | 9.58 | 13.16 | 9.12 | 63.58 |
| 1964 | 18.5 | 4.06 | 7.41 | 3.59 | 2.27 | 2.70 | 2.59 | 2.21 | 2.73 | 2.61 | 11.15 | 13.67 | 73.49 |
| 1965 | 16.59 | 6.77 | 0.93 | 5.47 | 2.74 | 0.75 | 0.46 | 1.95 | 0.51 | 3.97 | 11.82 | 11.78 | 63.74 |
| 1966 | 8.61 | 5.53 | 8.79 | 2.90 | 2.18 | 2.13 | 0.54 | 1.01 | 2.18 | 5.83 | 10.00 | 14.07 | 63.77 |
| 1967 | 14.95 | 6.07 | 8.38 | 5.52 | 1.37 | 1.14 | 0.22 | 0.19 | 3.07 | 11.06 | 5.94 | 9.04 | 66.95 |
| 1968 | 9.57 | 9.57 | 10.42 | 4.22 | 3.91 | 4.81 | 1.23 | 5.22 | 4.60 | 8.03 | 11.96 | 13.85 | 87.39 |
| 1969 | 12.02 | 5.67 | 3.16 | 3.84 | 3.92 | 3.63 | 0.56 | 0.62 | 6.55 | 5.28 | 5.77 | 11.69 | 62.71 |
| 1970 | 14.46 | 5.29 | 4.28 | 7.74 | 1.92 | 1.19 | 0.31 | 0.08 | 3.65 | 5.80 | 9.86 | 15.93 | 70.51 |
| 1971 | 16.69 | 6.67 | 9.96 | 4.09 | 2.30 | 2.97 | 1.55 | 1.14 | 4.65 | 6.34 | 9.08 | 13.83 | 79.27 |
| 1972 | 10.62 | 8.58 | 10.04 | 6.82 | 1.22 | 0.92 | 2.01 | 0.37 | 4.72 | 1.96 | 6.90 | 13.28 | 67.44 |
| 1973 | 5.72 | 2.60 | 5.71 | 2.38 | 3.16 | 4.26 | 0.07 | 0.46 | 4.19 | 5.92 | 14.93 | 15.75 | 65.15 |
| 1974 | 12.47 | 8.38 | 10.73 | 4.88 | 4.37 | 2.33 | 4.20 | 0.29 | 0.67 | 1.85 | 8.95 | 13.84 | 72.96 |
| 1975 | 15.21 | 8.03 | 5.66 | 3.90 | 2.41 | 1.99 | 0.22 | 2.82 | 0.04 | 12.56 | 12.28 | 15.66 | 80.78 |
| 1976 | 11.67 | 7.78 | 7.17 | 3.55 | 2.20 | 1.27 | 2.46 | 2.55 | 1.58 | 2.96 | 1.45 | 4.20 | 48.92 |
| 1977 | 3.20 | 5.22 | 9.74 | 1.65 | 6.00 | 1.36 | 0.44 | 3.85 | 5.44 | 4.38 | 12.37 | 14.34 | 67.99 |
| 1978 | 8.66 | 5.43 | 4.40 | 6.35 | 4.75 | 3.07 | 0.90 | 2.61 | 6.93 | 1.01 | 8.43 | 4.99 | 57.53 |
| 1979 | 3.83 | 11.76 | 4.52 | 4.38 | 4.19 | 1.82 | 0.92 | 0.81 | 4.35 | 8.46 | 7.87 | 13.18 | 66.09 |
| 1980 | 7.21 | 9.6 | 6.31 | 4.84 | 1.45 | 1.57 | 0.64 | 1.24 | 2.51 | 2.79 | 12.02 | 12.44 | 62.63 |
| 1981 | 2.63 | 8.69 | 5.80 | 7.30 | 2.97 | 5.47 | 1.06 | 0.62 | 2.77 | 8.67 | 10.66 | 11.8 | 68.44 |
| 1982 | 13.98 | 10.87 | 7.19 | 6.52 | 0.37 | 1.22 | 0.75 | 0.63 | 3.72 | 8.31 | 9.62 | 12.14 | 75.32 |
| 1983 | 13.52 | 8.66 | 8.84 | 4.26 | 3.59 | 4.53 | 4.39 | 1.14 | 1.83 | 1.87 | 16.75 | 9.44 | 78.82 |
| 1984 | 6.60 | 8.34 | 5.90 | 5.02 | 5.34 | 3.90 | 0.05 | 0.52 | 3.16 | 8.10 | 15.19 | 6.51 | 68.63 |
| 1985 | 0.69 | 4.09 | 7.00 | 2.95 | 1.90 | 3.09 | 0.78 | 1.11 | 3.23 | 8.11 | 5.96 | 2.67 | 40.89 |
| 1986 | 11.19 | 8.93 | 6.11 | 3.58 | 3.30 | 0.94 | 1.69 | 0.14 | 3.62 | 5.54 | 11.42 | 7.34 | 63.71 |
| 1987 | 10.38 | 5.08 | 8.52 | 3.02 | 3.97 | 0.65 | 1.10 | 0.16 | 0.95 | 0.52 | 4.33 | 8.85 | 47.53 |
| 1988 | 6.57 | 3.60 | 7.86 | 3.99 | 4.09 | 3.50 | 0.96 | 0.88 | 1.23 | 2.14 | 13.06 | 7.32 | 55.20 |
| 1989 | 8.20 | 6.61 | 10.09 | 2.27 | 3.01 | 2.58 | 1.64 | 0.84 | 0.50 | 5.30 | 6.73 | 7.40 | 55.17 |
| 1990 | 16.09 | 11.83 | 5.15 | 4.44 | 4.00 | 3.47 | 0.54 | 1.57 | 0.67 | 8.44 | 11.28 | 5.11 | 72.59 |
| 1991 | 6.76 | 8.57 | 5.65 | 9.47 | 2.68 | 1.86 | 0.33 | 2.31 | 0.07 | 2.44 | 10.53 | 6.60 | 57.27 |
| 1992 | 9.34 | 5.69 | 1.19 | 7.49 | 0.52 | 0.55 | 0.24 | 0.77 | 2.66 | 4.10 | 10.11 | 5.99 | 48.65 |
| 1993 | 6.27 | 1.35 | 6.93 | 9.01 | 4.74 | 3.70 | 1.81 | 0.57 | 0.12 | 2.23 | 6.68 | 9.59 | 53.00 |

Annual Precipitation Totals (1954-1993)

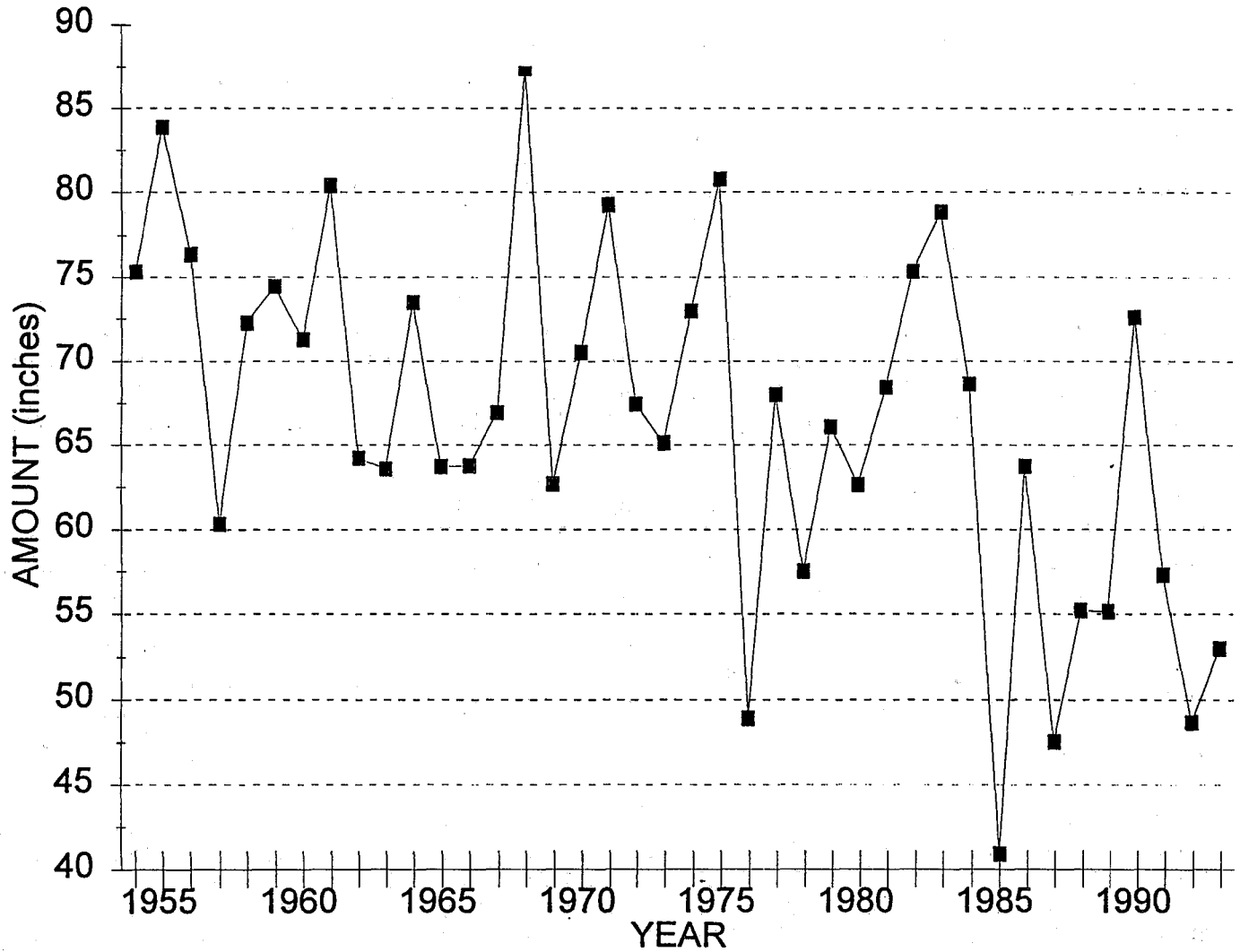


Figure 4.

FROZEN PRECIPITATION EXTREMES (INCHES)
 SNOW, ICE PELLETS, HAIL
 (Records for 1953-1993)

| <u>MONTH</u> | <u>MAXIMUM MONTHLY</u> | | <u>MAXIMUM IN 24 HOURS</u> | |
|--------------|------------------------|-------------|----------------------------|-------------|
| | <u>AMOUNT</u> | <u>YEAR</u> | <u>AMOUNT</u> | <u>YEAR</u> |
| JANUARY | 26.3 | 1969 | 10.8 | 1971 |
| FEBRUARY | 4.0 | 1962 | 4.0 | 1962 |
| MARCH | 6.7 | 1966 | 5.9 | 1960 |
| APRIL | 1.1 | 1975 | 1.0 | 1975 |
| MAY | T | 1991 | T | 1991 |
| JUNE | T | 1989 | T | 1989 |
| JULY | 0.0 | 0.0 | 0.0 | 0.0 |
| AUGUST | 0.0 | 0.0 | 0.0 | 0.0 |
| SEPTEMBER | T | 1972 | T | 1972 |
| OCTOBER | T | 1992 | T | 1992 |
| NOVEMBER | 4.6 | 1985 | 4.3 | 1985 |
| DECEMBER | 19.0 | 1964 | 7.2 | 1964 |

MEAN NUMBER OF DAYS...
 (Records for 1953-1993)

| <u>MONTH</u> | <u>PRECIPITATION</u> | <u>SNOW, ICE PELLETS, HAIL</u> |
|--------------|--------------------------|--------------------------------|
| | <u>0.01 INCH OR MORE</u> | <u>1.0 INCHES OR MORE</u> |
| JANUARY | 21.6 | 0.06 |
| FEBRUARY | 19.0 | 0.1 |
| MARCH | 20.3 | 0.3 |
| APRIL | 18.3 | ** |
| MAY | 15.1 | 0.0 |
| JUNE | 12.7 | 0.0 |
| JULY | 7.7 | 0.0 |
| AUGUST | 7.8 | 0.0 |
| SEPTEMBER | 9.9 | 0.0 |
| OCTOBER | 15.6 | 0.0 |
| NOVEMBER | 20.4 | 0.1 |
| DECEMBER | 22.0 | 0.3 |

**** - THE VALUE IS BETWEEN 0.0 AND 0.05
 GREATEST AMOUNT RECORDED**

SNOWFALL TOTALS BY MONTH FOR SEASONS 1952-53 TO 1993-94 (INCHES)

| SEASON | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | ANNUAL |
|---------|-----|-----|-----|-----|-----|------|------|-----|-----|-----|-----|-----|--------|
| 1952-53 | - | - | - | - | - | - | - | 0.0 | T | 0.0 | 0.0 | 0.0 | - |
| 1953-54 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 6.4 | 0.0 | 1.0 | 0.0 | 0.0 | 0.0 | 7.4 |
| 1954-55 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | 0.0 | 0.2 | T | T | 0.0 | 0.0 | 0.3 |
| 1955-56 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 | 0.2 | 1.1 | 0.7 | 2.9 | 0.0 | 0.0 | 0.0 | 7.1 |
| 1956-57 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 2.2 | 4.2 | 0.2 | 0.0 | 0.0 | 0.0 | 0.0 | 6.6 |
| 1957-58 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 1958-59 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | T | T | 0.0 | 0.0 | 0.0 | 1.1 |
| 1959-60 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.1 | 0.0 | 5.9 | 0.0 | 0.0 | 0.0 | 7.0 |
| 1960-61 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | T | 0.4 | 0.0 | 0.0 | 0.0 | 0.4 |
| 1961-62 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 4.0 | 1.6 | 0.0 | 0.0 | 0.0 | 5.6 |
| 1962-63 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.3 | 0.0 | 0.0 | T | 0.0 | 0.0 | 0.3 |
| 1963-64 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | T | 0.0 | 0.0 | 0.0 | T |
| 1964-65 | 0.0 | 0.0 | 0.0 | 0.0 | T | 19.0 | 10.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 29.7 |
| 1965-66 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 3.4 | 0.7 | T | 6.7 | T | 0.0 | 0.0 | 10.8 |
| 1966-67 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 0.7 | T | 0.0 | 0.0 | 0.7 |
| 1967-68 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.8 | 3.7 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 |
| 1968-69 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 4.5 | 26.3 | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 31.8 |
| 1969-70 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 0.0 | T |
| 1970-71 | 0.0 | 0.0 | 0.0 | T | T | 1.8 | 16.1 | 0.2 | 1.5 | 0.2 | T | 0.0 | 19.8 |
| 1971-72 | 0.0 | 0.0 | 0.0 | T | 0.0 | 3.4 | 1.7 | T | T | 0.2 | 0.0 | 0.0 | 5.3 |
| 1972-73 | 0.0 | 0.0 | T | 0.0 | 0.0 | 5.4 | T | 0.0 | T | T | T | 0.0 | 5.4 |
| 1973-74 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 0.4 | T | 1.7 | 0.0 | T | 0.0 | 2.1 |
| 1974-75 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 0.3 | 0.2 | T | 1.1 | T | 0.0 | 1.6 |
| 1975-76 | 0.0 | 0.0 | 0.0 | T | 1.1 | T | T | 0.1 | T | T | 0.0 | 0.0 | 1.2 |
| 1976-77 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | T | T | 0.0 | T | 0.0 | T |
| 1977-78 | 0.0 | 0.0 | 0.0 | 0.0 | 0.1 | T | T | T | 0.0 | T | 0.0 | 0.0 | 0.1 |
| 1978-79 | 0.0 | 0.0 | 0.0 | T | 0.1 | 2.5 | 0.3 | T | T | T | 0.0 | 0.0 | 2.9 |
| 1979-80 | 0.0 | 0.0 | 0.0 | T | 0.3 | 0.2 | 0.5 | 1.7 | 0.5 | T | 0.0 | 0.0 | 3.2 |
| 1980-81 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 0.0 | 0.0 | 0.0 | T | 0.0 | 0.0 | T |
| 1981-82 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 6.1 | T | T | T | 0.0 | 0.0 | 6.1 |
| 1982-83 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | T | 0.0 | T | T | T | 0.0 | T |
| 1983-84 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | 0.0 | T | T | T | T | 0.0 | T |
| 1984-85 | 0.0 | 0.0 | 0.0 | T | T | T | 0.0 | 1.1 | T | T | T | 0.0 | 1.1 |
| 1985-86 | 0.0 | 0.0 | 0.0 | 0.0 | 4.6 | 0.4 | T | T | T | T | 0.0 | 0.0 | 5.0 |
| 1986-87 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | T | 0.0 | T | T | 0.0 | 0.0 | T |
| 1987-88 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | T | 0.0 | T | T | 0.0 | 0.0 | T |
| 1988-89 | 0.0 | 0.0 | 0.0 | 0.0 | T | T | T | 1.5 | T | T | T | T | 1.5 |
| 1989-90 | 0.0 | 0.0 | 0.0 | T | T | 0.0 | T | 1.8 | T | T | 0.0 | 0.0 | 1.8 |
| 1990-91 | 0.0 | 0.0 | 0.0 | 0.0 | T | 1.4 | 0.0 | 0.0 | T | T | T | 0.0 | 1.4 |
| 1991-92 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | T | T | 0.0 | T | 0.0 | 0.0 | T |
| 1992-93 | 0.0 | 0.0 | 0.0 | T | 0.0 | T | 5.2 | 3.4 | 0.0 | 0.0 | 0.0 | 0.0 | 8.6 |
| 1993-94 | 0.0 | 0.0 | 0.0 | 0.0 | T | 0.0 | T | T | T | T | 0.0 | 0.0 | T |

NORMAL AND EXTREME DAILY MAXIMUM, MINIMUM
TEMPERATURES BY MONTH IN DEGREES
FAHRENHEIT
(Records for 1953-1993)

| <u>MONTH</u> | <u>NORMAL DAILY MAXIMUM</u> | <u>HIGHEST DAILY MAXIMUM</u> | <u>YEAR</u> |
|--------------|-------------------------------------|--------------------------------------|-------------|
| JANUARY | 47.8 | 67 | 1986 |
| FEBRUARY | 51.0 | 72 | 1968 |
| MARCH | 53.2 | 73 | 1979 |
| APRIL | 56.0 | 83 | 1987 |
| MAY | 60.1 | 87 | 1985 |
| JUNE | 64.1 | 93 | 1955 |
| JULY | 67.5 | 100 | 1961 |
| AUGUST | 68.8 | 96 | 1981 |
| SEPTEMBER | 67.8 | 95 | 1972 |
| OCTOBER | 61.1 | 85 | 1987 |
| NOVEMBER | 53.5 | 71 | 1970 |
| DECEMBER | 48.2 | 64 | 1980 |

| <u>MONTH</u> | <u>NORMAL DAILY MINIMUM</u> | <u>LOWEST DAILY MINIMUM</u> | <u>YEAR</u> |
|--------------|-------------------------------------|-------------------------------------|-------------|
| JANUARY | 35.9 | 11 | 1980 |
| FEBRUARY | 37.3 | 09 | 1989 |
| MARCH | 38.1 | 22 | 1971 |
| APRIL | 40.3 | 29 | 1968 |
| MAY | 44.8 | 30 | 1954 |
| JUNE | 49.5 | 37 | 1980 |
| JULY | 52.4 | 39 | 1971 |
| AUGUST | 52.6 | 39 | 1973 |
| SEPTEMBER | 49.0 | 33 | 1983 |
| OCTOBER | 44.0 | 26 | 1971 |
| NOVEMBER | 40.2 | 15 | 1955 |
| DECEMBER | 36.6 | 06 | 1990 |

LAST OF SEVERAL OCCURRENCES

NORMAL MONTHLY TEMPERATURES (DEGREES FAHRENHEIT)

| JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|------|------|------|------|------|------|------|------|------|------|------|------|
| 41.9 | 44.2 | 45.7 | 48.2 | 52.5 | 56.9 | 60.0 | 60.7 | 58.4 | 52.6 | 46.9 | 42.4 |

NORMAL HEATING AND COOLING DEGREE DAYS BASED ON 65 DEGREES FAHRENHEIT

| | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | YEAR |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|
| HEATING | 716 | 582 | 598 | 504 | 388 | 243 | 157 | 141 | 201 | 384 | 543 | 701 | 5158 |
| COOLING | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 8 |

COOLING DEGREE DAY TOTALS BY MONTH

1969 - 1993

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-------|
| 1969 | 0 | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 1970 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 1 | 0 | 0 | 0 | 8 |
| 1971 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 11 | 4 | 2 | 0 | 0 | 19 |
| 1972 | 0 | 0 | 0 | 0 | 0 | 1 | 19 | 23 | 16 | 0 | 0 | 0 | 59 |
| 1973 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 7 | 0 | 0 | 0 | 13 |
| 1974 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 11 | 13 | 0 | 0 | 0 | 29 |
| 1975 | 0 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 17 | 0 | 0 | 0 | 23 |
| 1976 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 8 | 8 | 1 | 0 | 0 | 24 |
| 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 18 |
| 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 8 | 0 | 0 | 0 | 0 | 14 |
| 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 11 | 1 | 0 | 0 | 27 |
| 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 7 | 8 | 0 | 0 | 28 |
| 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 36 | 2 | 0 | 0 | 0 | 42 |
| 1982 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 4 | 1 | 1 | 0 | 0 | 12 |
| 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 0 | 0 | 5 |
| 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 5 | 0 | 0 | 0 | 9 |
| 1985 | 0 | 0 | 0 | 0 | 3 | 11 | 1 | 6 | 0 | 0 | 0 | 0 | 21 |
| 1986 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 7 |
| 1987 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 5 | 5 | 3 | 0 | 0 | 20 |
| 1988 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 3 | 6 | 0 | 0 | 0 | 19 |
| 1989 | 0 | 0 | 0 | 1 | 0 | 15 | 0 | 1 | 17 | 0 | 0 | 0 | 34 |
| 1990 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 12 | 10 | 0 | 0 | 0 | 32 |
| 1991 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 24 | 1 | 0 | 0 | 32 |
| 1992 | 0 | 0 | 0 | 0 | 0 | 6 | 1 | 18 | 1 | 0 | 0 | 0 | 26 |
| 1993 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 16 | 2 | 0 | 0 | 0 | 20 |

HEATING DEGREE DAY TOTALS BY MONTH
1964 - 1993

| SEASON | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | ANNUAL |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|
| 1964-65 | 174 | 179 | 222 | 345 | 598 | 768 | 696 | 576 | 542 | 466 | 432 | 259 | 5257 |
| 1965-66 | 144 | 98 | 235 | 295 | 476 | 760 | 697 | 621 | 658 | 472 | 443 | 267 | 5166 |
| 1966-67 | 160 | 142 | 169 | 405 | 514 | 595 | 651 | 603 | 697 | 623 | 404 | 194 | 5157 |
| 1967-68 | 118 | 68 | 135 | 369 | 500 | 731 | 705 | 500 | 557 | 560 | 387 | 260 | 4890 |
| 1968-69 | 124 | 151 | 216 | 438 | 531 | 782 | 944 | 687 | 633 | 540 | 351 | 161 | 5558 |
| 1969-70 | 193 | 188 | 226 | 423 | 551 | 637 | 710 | 518 | 617 | 584 | 416 | 250 | 5313 |
| 1970-71 | 170 | 142 | 264 | 428 | 531 | 743 | 746 | 632 | 703 | 549 | 415 | 310 | 5633 |
| 1971-72 | 165 | 85 | 212 | 420 | 538 | 728 | 768 | 623 | 526 | 545 | 313 | 196 | 5119 |
| 1972-73 | 99 | 65 | 230 | 388 | 525 | 810 | 755 | 574 | 635 | 473 | 357 | 246 | 5157 |
| 1973-74 | 164 | 225 | 213 | 421 | 614 | 611 | 803 | 639 | 623 | 503 | 445 | 257 | 5518 |
| 1974-75 | 174 | 97 | 130 | 398 | 502 | 596 | 678 | 606 | 653 | 598 | 373 | 273 | 5078 |
| 1975-76 | 133 | 155 | 183 | 429 | 558 | 624 | 642 | 640 | 651 | 483 | 374 | 269 | 5141 |
| 1976-77 | 117 | 105 | 128 | 361 | 503 | 660 | 774 | 504 | 628 | 475 | 453 | 238 | 4946 |
| 1977-78 | 190 | 82 | 231 | 403 | 606 | 646 | 634 | 524 | 551 | 482 | 389 | 161 | 4908 |
| 1978-79 | 125 | 110 | 202 | 324 | 693 | 843 | 910 | 641 | 543 | 467 | 338 | 243 | 5439 |
| 1979-80 | 91 | 92 | 111 | 305 | 537 | 540 | 807 | 529 | 617 | 459 | 388 | 279 | 4755 |
| 1980-81 | 140 | 186 | 183 | 309 | 439 | 533 | 513 | 507 | 518 | 458 | 354 | 211 | 4351 |
| 1981-82 | 139 | 107 | 173 | 372 | 474 | 604 | 714 | 581 | 610 | 538 | 391 | 212 | 4915 |
| 1982-83 | 171 | 112 | 152 | 288 | 546 | 661 | 543 | 407 | 430 | 438 | 282 | 149 | 4179 |
| 1983-84 | 109 | 98 | 249 | 445 | 485 | 834 | 658 | 559 | 509 | 541 | 433 | 276 | 5196 |
| 1984-85 | 160 | 155 | 199 | 452 | 542 | 780 | 788 | 686 | 683 | 493 | 383 | 252 | 5573 |
| 1985-86 | 131 | 172 | 259 | 438 | 769 | 788 | 551 | 577 | 481 | 520 | 373 | 194 | 5253 |
| 1986-87 | 188 | 120 | 273 | 308 | 505 | 635 | 654 | 517 | 519 | 431 | 306 | 229 | 4685 |
| 1987-88 | 171 | 139 | 194 | 321 | 455 | 741 | 713 | 552 | 601 | 476 | 382 | 273 | 5018 |
| 1988-89 | 159 | 173 | 250 | 289 | 520 | 663 | 703 | 773 | 612 | 399 | 363 | 199 | 5103 |
| 1989-90 | 157 | 135 | 150 | 371 | 464 | 643 | 621 | 606 | 533 | 435 | 365 | 221 | 4701 |
| 1990-91 | 82 | 74 | 127 | 424 | 510 | 863 | 727 | 469 | 667 | 537 | 435 | 309 | 5224 |
| 1991-92 | 170 | 155 | 147 | 420 | 523 | 631 | 607 | 479 | 491 | 416 | 309 | 188 | 4536 |
| 1992-93 | 129 | 144 | 253 | 379 | 555 | 747 | 803 | 641 | 541 | 469 | 268 | 218 | 5147 |
| 1993-94 | 182 | 144 | 247 | 331 | 674 | 688 | - | - | - | - | - | - | - |

MEAN NUMBER OF DAYS PER MONTH WITH MAXIMUM TEMPERATURES.
FOR 1953 - 1993 IN DEGREES FAHRENHEIT

| <u>MONTH</u> | <u>90 degrees or higher</u> | <u>32 degrees or below</u> |
|--------------|---------------------------------|--------------------------------|
| JANUARY | 0.0 | 0.6 |
| FEBRUARY | 0.0 | 0.1 |
| MARCH | 0.0 | 0.0 |
| APRIL | 0.0 | 0.0 |
| MAY | 0.0 | 0.0 |
| JUNE | 0.1 | 0.0 |
| JULY | 0.1 | 0.0 |
| AUGUST | 0.1 | 0.0 |
| SEPTEMBER | 0.1 | 0.0 |
| OCTOBER | 0.0 | 0.0 |
| NOVEMBER | 0.0 | 0.2 |
| DECEMBER | 0.0 | 0.7 |

MEAN NUMBER OF DAYS PER MONTH WITH MINIMUM TEMPERATURES
FOR 1953 - 1993 IN DEGREES FAHRENHEIT

| <u>MONTH</u> | <u>32 degrees or below</u> | <u>0 degrees or below</u> |
|--------------|--------------------------------|-------------------------------|
| JANUARY | 9.6 | 0.0 |
| FEBRUARY | 6.6 | 0.0 |
| MARCH | 6.0 | 0.0 |
| APRIL | 1.9 | 0.0 |
| MAY | 0.1 | 0.0 |
| JUNE | 0.0 | 0.0 |
| JULY | 0.0 | 0.0 |
| AUGUST | 0.0 | 0.0 |
| SEPTEMBER | 0.0 | 0.0 |
| OCTOBER | 0.5 | 0.0 |
| NOVEMBER | 4.5 | 0.0 |
| DECEMBER | 8.2 | 0.0 |

GREATEST NUMBER OF CONSECUTIVE DAYS MAXIMUM TEMPERATURES WERE
GREATER THAN 90 DEGREES FAHRENHEIT
(1954-1993)

| <u>DURATION</u> | <u>DATE</u> |
|-----------------|---------------------------------|
| 2 DAYS | SEPTEMBER 1 - SEPTEMBER 2, 1972 |

** NOTE: FROM 1954 - 1993 ONLY 14 OCCASIONS WERE RECORDED HAVING TEMPERATURES
GREATER OR EQUAL TO 90 DEGREES FAHRENHEIT.

GREATEST NUMBER OF CONSECUTIVE DAYS MINIMUM TEMPERATURES WERE
LESS THAN 32 DEGREES FAHRENHEIT FOR MORE THAN 7 DAYS.
(1954-1993)

| <u>DURATION</u> | <u>DATE</u> |
|-----------------|--------------------------------------|
| 8 DAYS | NOVEMBER 13 - NOVEMBER 20, 1964 |
| 8 DAYS | NOVEMBER 26 - DECEMBER 3, 1976 |
| 8 DAYS | DECEMBER 18 - DECEMBER 25, 1990 |
| 8 DAYS | JANUARY 6 - JANUARY 13, 1993 |
| 9 DAYS | MARCH 6 - MARCH 14, 1969 |
| 9 DAYS | DECEMBER 18 - DECEMBER 26, 1983 |
| 9 DAYS | DECEMBER 12 - DECEMBER 20, 1987 |
| 10 DAYS | JANUARY 25 - FEBRUARY 3, 1972 |
| 10 DAYS | FEBRUARY 1 - FEBRUARY 10, 1989 |
| 10 DAYS | DECEMBER 17 - DECEMBER 26, 1993 |
| 11 DAYS | JANUARY 24 - JANUARY 22, 1974 |
| 12 DAYS | DECEMBER 3 - DECEMBER 14, 1972 |
| 12 DAYS | DECEMBER 30, 1976 - JANUARY 10, 1977 |
| 13 DAYS | JANUARY 18 - JANUARY 30, 1963 |
| 13 DAYS | JANUARY 18 - JANUARY 30, 1969 |
| 14 DAYS | DECEMBER 25 - JANUARY 7, 1979 |
| 14 DAYS | JANUARY 21 - FEBRUARY 3, 1979 |
| 16 DAYS | JANUARY 15 - JANUARY 30, 1957 |
| 18 DAYS | JANUARY 21 - FEBRUARY 7, 1985 |

DAILY MAXIMUM AVERAGES BY MONTH
FOR 1955 - 1993 IN DEGREES FAHRENHEIT

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 1955 | 46.7 | 47.9 | 47.7 | 51.2 | 56.7 | 62.0 | 63.8 | 66.6 | 66.2 | 59.1 | 48.6 | 47.5 | 55.3 |
| 1956 | 47.0 | 43.6 | 49.3 | 56.8 | 61.9 | 61.3 | 68.5 | 67.0 | 66.5 | 57.9 | 53.4 | 48.4 | 56.8 |
| 1957 | 42.4 | 49.6 | 52.2 | 56.2 | 61.6 | 65.6 | 67.6 | 68.6 | 72.5 | 61.5 | 54.6 | 51.1 | 58.6 |
| 1958 | 51.8 | 55.5 | 53.3 | 56.7 | 63.7 | 67.4 | 70.5 | 71.1 | 68.5 | 64.4 | 53.3 | 53.2 | 60.8 |
| 1959 | 48.8 | 48.7 | 52.1 | 56.8 | 60.9 | 63.7 | 68.7 | 67.4 | 64 | 61.6 | 54.4 | 49.3 | 58.0 |
| 1960 | 45.9 | 50.7 | 51.9 | 56.6 | 58.4 | 64.0 | 67.7 | 66.4 | 67.6 | 61.2 | 53.6 | 50.2 | 57.9 |
| 1961 | 53.8 | 51.8 | 52.7 | 54.3 | 60.0 | 67.2 | 69.3 | 69.1 | 65.5 | 59.7 | 52.0 | 47.6 | 58.6 |
| 1962 | 47.1 | 50.5 | 50.9 | 55.6 | 56.6 | 62.1 | 65.0 | 68.3 | 67.1 | 61.1 | 55.1 | 51.5 | 57.6 |
| 1963 | 43.7 | 57.1 | 52.5 | 54.9 | 61.5 | 62.5 | 67.4 | 68.3 | 70.6 | 62.3 | 53.8 | 51.4 | 58.8 |
| 1964 | 49.2 | 50.8 | 51.3 | 53.3 | 57.3 | 62.0 | 66.4 | 67.4 | 65.8 | 63.2 | 51.6 | 45.3 | 57.0 |
| 1965 | 48.0 | 49.4 | 58.0 | 56.8 | 57.6 | 63.6 | 68.1 | 69.6 | 66.0 | 64.1 | 54.5 | 46.0 | 58.5 |
| 1966 | 47.9 | 49.1 | 51.4 | 56.7 | 59.4 | 65.1 | 67.2 | 70.7 | 68.8 | 60.2 | 54.3 | 50.1 | 58.4 |
| 1967 | 48.8 | 50.3 | 49.2 | 52.9 | 60.0 | 65.3 | 69.9 | 73.1 | 70.9 | 60.7 | 54.6 | 45.8 | 58.5 |
| 1968 | 47.7 | 55.8 | 53.6 | 53.9 | 59.9 | 63.9 | 69.1 | 68.2 | 66.2 | 58.4 | 53.4 | 45.0 | 57.9 |
| 1969 | 39.7 | 47.5 | 53.5 | 54.1 | 62.5 | 65.7 | 65.8 | 68.4 | 64.9 | 59.6 | 54.2 | 49.9 | 57.2 |
| 1970 | 47.7 | 55.4 | 54.0 | 52.7 | 60.3 | 65.3 | 67.4 | 69.3 | 65.8 | 59.3 | 53.6 | 46.3 | 58.1 |
| 1971 | 45.3 | 48.8 | 49.2 | 54.7 | 58.8 | 61.5 | 66.1 | 71.1 | 67.8 | 59.4 | 52.5 | 46.3 | 56.8 |
| 1972 | 44.9 | 49.3 | 54.1 | 54.5 | 62.3 | 65.3 | 71.5 | 73.8 | 67.4 | 61.9 | 53.8 | 43.9 | 58.6 |
| 1973 | 46.2 | 53.1 | 51.9 | 57.5 | 62.3 | 63.6 | 68.5 | 65.4 | 67.9 | 59.3 | 50.3 | 50.4 | 58.0 |
| 1974 | 44.6 | 47.7 | 51.2 | 55.2 | 57.5 | 63.1 | 67.5 | 68.5 | 71.2 | 62.0 | 54.2 | 50.5 | 57.8 |
| 1975 | 47.6 | 49.3 | 50.9 | 53.0 | 60.3 | 62.2 | 68.0 | 66.0 | 69.9 | 56.5 | 51.5 | 50.3 | 57.1 |
| 1976 | 50.2 | 49.3 | 50.7 | 56.9 | 60.5 | 63.2 | 69.0 | 68.0 | 69.1 | 61.8 | 56.3 | 49.9 | 58.7 |
| 1977 | 46.7 | 53.3 | 50.8 | 56.9 | 58.1 | 64.5 | 67.1 | 70.4 | 65.8 | 61.5 | 51.1 | 48.6 | 57.0 |
| 1978 | 49.0 | 51.7 | 55.9 | 56.4 | 61.0 | 67.8 | 68.3 | 68.8 | 65.5 | 64.6 | 49.6 | 43.9 | 58.5 |
| 1979 | 41.9 | 47.6 | 55.7 | 56.4 | 62.7 | 65.2 | 70.5 | 69.2 | 71.6 | 62.5 | 54.3 | 53.2 | 59.2 |
| 1980 | 45.8 | 52.6 | 51.2 | 58.8 | 59.1 | 62.2 | 67.2 | 64.6 | 66.6 | 65.1 | 56.9 | 53.0 | 58.6 |
| 1981 | 55.2 | 54.2 | 56.7 | 56.9 | 60.3 | 64.4 | 67.2 | 70.8 | 68.0 | 61.8 | 56.5 | 51.6 | 60.3 |
| 1982 | 46.9 | 50.1 | 52.8 | 55.1 | 60.1 | 64.4 | 66.4 | 69.7 | 68.8 | 63.7 | 53.8 | 49.6 | 58.5 |
| 1983 | 53.0 | 56.1 | 58.1 | 60.1 | 63.2 | 67.2 | 68.1 | 69.7 | 66.6 | 60.4 | 54.2 | 43.8 | 60.0 |
| 1984 | 49.6 | 52.4 | 55.5 | 54.4 | 58.1 | 61.1 | 67.8 | 69.7 | 67.6 | 57.5 | 53.0 | 45.8 | 57.7 |
| 1985 | 47.5 | 47.4 | 50.8 | 55.6 | 60.5 | 65.3 | 68.9 | 68.3 | 64.9 | 58.7 | 45.2 | 47.7 | 57.6 |
| 1986 | 54.2 | 50.5 | 57.3 | 55.8 | 60.6 | 66.7 | 65.4 | 68.5 | 64.2 | 62.4 | 54.1 | 50.3 | 59.2 |
| 1987 | 49.8 | 53.6 | 56.2 | 58.8 | 62.6 | 65.5 | 65.9 | 68.9 | 67.7 | 66.1 | 56.8 | 48.0 | 60.0 |
| 1988 | 48.0 | 53.6 | 54.0 | 56.6 | 60.5 | 64.5 | 68.6 | 67.9 | 66.4 | 62.6 | 53.4 | 49.6 | 58.8 |
| 1989 | 47.7 | 44.3 | 51.4 | 61.2 | 61.5 | 66.0 | 66.9 | 67.6 | 72.4 | 61.2 | 55.0 | 50.5 | 58.8 |
| 1990 | 50.4 | 50.1 | 55.2 | 57.6 | 60.1 | 64.7 | 70.1 | 70.3 | 69.5 | 59.7 | 54.4 | 42.6 | 58.7 |
| 1991 | 47.6 | 55.6 | 50.7 | 53.9 | 56.1 | 60.5 | 67.1 | 65.6 | 71.3 | 61.5 | 53.2 | 49.4 | 57.7 |
| 1992 | 50.7 | 56.0 | 58.0 | 58.6 | 64.6 | 65.8 | 68.0 | 69.6 | 65.6 | 60.9 | 53.0 | 45.8 | 59.7 |
| 1993 | 44.7 | 50.4 | 54.4 | 55.2 | 63.4 | 63.8 | 64.3 | 68.2 | 65.3 | 61.6 | 50.5 | 48.8 | 57.6 |

DAILY MINIMUM AVERAGES BY MONTH
FOR 1955 - 1993 IN DEGREES FAHRENHEIT

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 1955 | 35.3 | 34.6 | 35.0 | 35.8 | 41.8 | 48.5 | 51.8 | 50.0 | 47.2 | 45.2 | 37.1 | 35.5 | 41.5 |
| 1956 | 36.7 | 33.2 | 36.2 | 40.1 | 45.8 | 49.0 | 53.2 | 52.7 | 47.9 | 42.7 | 36.1 | 36.3 | 42.5 |
| 1957 | 29.3 | 35.2 | 39.0 | 41.4 | 46.7 | 49.9 | 50.3 | 51.7 | 51.4 | 44.7 | 37.2 | 38.9 | 43.0 |
| 1958 | 40.0 | 43.0 | 36.2 | 40.2 | 47.4 | 54.3 | 54.7 | 52.8 | 49.2 | 45.7 | 39.4 | 42.0 | 45.4 |
| 1959 | 38.6 | 37.2 | 37.8 | 42.0 | 43.5 | 49.9 | 51.9 | 50.2 | 48.7 | 45.6 | 38.7 | 35.0 | 43.3 |
| 1960 | 34.7 | 36.6 | 37.7 | 41.6 | 43.6 | 48.5 | 50.3 | 53.2 | 46.9 | 45.8 | 40.2 | 36.7 | 43.0 |
| 1961 | 40.8 | 41.3 | 38.8 | 40.7 | 45.2 | 50.1 | 54.4 | 53.5 | 47.2 | 42.3 | 35.4 | 37.0 | 43.9 |
| 1962 | 33.0 | 36.9 | 35.6 | 41.0 | 43.9 | 47.6 | 51.4 | 52.6 | 50.0 | 45.6 | 42.4 | 37.6 | 43.1 |
| 1963 | 30.1 | 42.2 | 37.5 | 41.1 | 44.5 | 49.1 | 53.1 | 53.8 | 51.7 | 47.5 | 41.7 | 37.5 | 44.2 |
| 1964 | 38.1 | 33.7 | 37.2 | 38.3 | 41.6 | 48.4 | 52.0 | 51.1 | 49.0 | 44.4 | 38.0 | 34.6 | 42.2 |
| 1965 | 36.6 | 39.0 | 36.3 | 41.7 | 44.1 | 48.7 | 52.3 | 53.7 | 47.9 | 46.5 | 43.1 | 34.6 | 43.7 |
| 1966 | 36.6 | 36.0 | 35.9 | 41.3 | 41.6 | 47.2 | 52.0 | 49.9 | 49.6 | 43.2 | 41.2 | 40.9 | 43.0 |
| 1967 | 38.7 | 36.0 | 35.2 | 35.1 | 43.4 | 51.2 | 52.2 | 52.5 | 50.0 | 45.1 | 41.5 | 36.6 | 43.1 |
| 1968 | 36.3 | 39.1 | 39.8 | 38.2 | 44.5 | 48.3 | 52.8 | 51.9 | 49.6 | 42.8 | 40.7 | 34.0 | 43.2 |
| 1969 | 28.8 | 33.1 | 35.1 | 39.5 | 44.4 | 53.4 | 51.3 | 48.9 | 49.5 | 42.3 | 38.7 | 38.3 | 41.9 |
| 1970 | 36.2 | 37.2 | 35.7 | 37.8 | 42.4 | 47.9 | 51.1 | 51.0 | 46.2 | 42.7 | 40.5 | 35.2 | 42.0 |
| 1971 | 36.1 | 35.6 | 34.8 | 38.2 | 43.9 | 47.7 | 52.7 | 53.6 | 47.9 | 43.1 | 41.1 | 36.1 | 42.6 |
| 1972 | 35.1 | 37.1 | 41.5 | 38.7 | 47.0 | 51.2 | 52.8 | 53.0 | 47.8 | 42.6 | 40.7 | 33.3 | 43.4 |
| 1973 | 34.7 | 35.5 | 36.8 | 40.3 | 44.4 | 49.5 | 50.8 | 49.7 | 47.9 | 43.0 | 38.2 | 39.9 | 42.6 |
| 1974 | 33.2 | 36.2 | 38.1 | 40.8 | 43.5 | 49.1 | 51.0 | 55.6 | 50.5 | 41.8 | 41.8 | 40.6 | 43.5 |
| 1975 | 38.1 | 36.9 | 36.6 | 36.8 | 45.2 | 49.0 | 53.3 | 53.4 | 48.4 | 45.3 | 40.8 | 39.0 | 43.6 |
| 1976 | 38.0 | 35.9 | 36.7 | 40.4 | 45.0 | 48.5 | 53.1 | 55.3 | 42.4 | 44.5 | 39.7 | 37.0 | 43.9 |
| 1977 | 33.0 | 40.2 | 38.3 | 40.8 | 42.2 | 49.1 | 50.2 | 54.9 | 48.2 | 41.9 | 38.1 | 39.2 | 43.0 |
| 1978 | 39.0 | 40.3 | 38.0 | 41.1 | 43.5 | 51.0 | 53.4 | 54.1 | 50.6 | 44.8 | 33.7 | 31.3 | 43.3 |
| 1979 | 28.7 | 35.9 | 38.9 | 41.9 | 44.9 | 48.3 | 54.2 | 54.4 | 51.2 | 47.4 | 39.4 | 41.5 | 43.9 |
| 1980 | 31.6 | 40.2 | 38.4 | 40.1 | 45.5 | 48.6 | 54.2 | 52.9 | 51.1 | 44.9 | 43.3 | 42.0 | 44.4 |
| 1981 | 41.1 | 39.0 | 39.4 | 42.1 | 46.4 | 51.0 | 53.6 | 54.0 | 50.1 | 43.6 | 41.5 | 38.9 | 45.1 |
| 1982 | 36.4 | 37.8 | 37.5 | 38.5 | 44.3 | 51.2 | 52.1 | 52.9 | 50.6 | 47.3 | 39.3 | 37.4 | 43.8 |
| 1983 | 41.5 | 44.3 | 43.6 | 40.2 | 48.2 | 52.4 | 54.3 | 53.6 | 46.4 | 40.4 | 43.0 | 31.9 | 45.0 |
| 1984 | 37.4 | 38.4 | 41.3 | 39.0 | 43.5 | 50.0 | 51.4 | 50.1 | 49.2 | 43.0 | 40.3 | 33.4 | 43.1 |
| 1985 | 31.0 | 33.1 | 34.7 | 41.1 | 44.4 | 48.3 | 52.3 | 50.5 | 47.4 | 42.6 | 33.1 | 30.8 | 41.7 |
| 1986 | 39.6 | 37.6 | 41.2 | 39.1 | 44.9 | 50.0 | 51.9 | 53.6 | 47.2 | 47.3 | 41.6 | 38.5 | 44.4 |
| 1987 | 37.5 | 39.0 | 39.8 | 42.0 | 47.0 | 49.2 | 52.5 | 51.9 | 49.0 | 42.9 | 42.3 | 33.7 | 43.9 |
| 1988 | 35.5 | 38.0 | 36.7 | 41.1 | 44.4 | 46.8 | 51.2 | 50.5 | 46.8 | 48.3 | 41.3 | 37.0 | 43.1 |
| 1989 | 36.5 | 29.8 | 38.7 | 41.7 | 44.7 | 51.3 | 52.6 | 53.3 | 48.3 | 44.3 | 43.3 | 37.5 | 43.5 |
| 1990 | 39.0 | 36.1 | 39.9 | 42.9 | 45.7 | 50.5 | 54.5 | 55.1 | 52.1 | 42.5 | 41.2 | 31.2 | 44.2 |
| 1991 | 35.0 | 40.4 | 35.8 | 39.7 | 45.4 | 48.4 | 52.0 | 53.8 | 49.9 | 40.9 | 41.3 | 39.5 | 43.5 |
| 1992 | 39.6 | 40.6 | 39.9 | 43.2 | 44.9 | 51.4 | 53.3 | 51.6 | 47.0 | 44.3 | 39.5 | 35.5 | 44.2 |
| 1993 | 33.0 | 33.3 | 40.3 | 43.1 | 49.0 | 51.2 | 53.6 | 53.1 | 47.9 | 46.6 | 34.0 | 36.5 | 43.5 |

**MONTHLY TEMPERATURE AVERAGES
FOR 1955 - 1993 IN DEGREES FAHRENHEIT**

| YEAR | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | ANNUAL |
|------|------|------|------|------|------|------|------|------|------|------|------|------|--------|
| 1955 | 41.0 | 41.3 | 41.4 | 43.5 | 49.3 | 55.3 | 57.8 | 58.3 | 56.7 | 52.2 | 42.9 | 41.5 | 48.4 |
| 1956 | 41.9 | 38.4 | 42.8 | 48.5 | 53.9 | 55.2 | 60.9 | 59.9 | 57.2 | 50.3 | 44.8 | 42.2 | 49.7 |
| 1957 | 35.9 | 42.2 | 45.6 | 48.8 | 54.2 | 57.8 | 59.0 | 60.2 | 62.0 | 53.1 | 45.9 | 45.0 | 50.8 |
| 1958 | 45.9 | 49.3 | 44.8 | 48.5 | 55.6 | 60.9 | 62.6 | 62.0 | 58.9 | 55.1 | 46.4 | 47.6 | 53.1 |
| 1959 | 43.7 | 43.0 | 45.0 | 49.4 | 52.2 | 56.8 | 60.3 | 58.8 | 56.4 | 53.6 | 46.6 | 42.2 | 50.7 |
| 1960 | 40.3 | 43.7 | 44.8 | 49.1 | 51.0 | 56.3 | 59.0 | 59.8 | 57.3 | 53.5 | 46.9 | 43.5 | 50.5 |
| 1961 | 47.3 | 46.6 | 45.8 | 47.5 | 52.6 | 58.7 | 61.9 | 61.3 | 56.4 | 51.0 | 43.7 | 42.3 | 51.3 |
| 1962 | 40.1 | 43.7 | 43.3 | 48.3 | 50.3 | 54.9 | 58.2 | 60.5 | 58.6 | 53.4 | 48.8 | 44.6 | 50.4 |
| 1963 | 36.9 | 49.7 | 45.0 | 48.0 | 53.0 | 55.8 | 60.3 | 61.1 | 61.2 | 54.9 | 47.8 | 44.5 | 51.5 |
| 1964 | 43.7 | 42.3 | 44.3 | 45.8 | 49.5 | 55.2 | 59.2 | 59.3 | 57.4 | 53.8 | 44.8 | 40.0 | 49.6 |
| 1965 | 42.3 | 44.2 | 47.2 | 49.3 | 50.9 | 56.2 | 60.2 | 61.7 | 57.0 | 55.3 | 48.8 | 40.3 | 51.1 |
| 1966 | 42.3 | 42.6 | 43.7 | 49.0 | 50.5 | 56.2 | 59.3 | 60.3 | 59.2 | 51.7 | 47.8 | 45.5 | 50.7 |
| 1967 | 43.8 | 43.2 | 42.2 | 44.0 | 51.7 | 58.3 | 61.1 | 62.8 | 60.5 | 52.9 | 48.1 | 41.2 | 50.8 |
| 1968 | 42.0 | 47.5 | 46.7 | 46.1 | 52.2 | 56.1 | 61.0 | 60.1 | 57.9 | 50.6 | 47.1 | 39.5 | 50.6 |
| 1969 | 34.3 | 40.3 | 44.3 | 46.8 | 53.5 | 59.6 | 58.6 | 58.7 | 57.2 | 51.0 | 46.0 | 44.1 | 49.6 |
| 1970 | 41.8 | 46.8 | 44.9 | 45.3 | 51.4 | 56.6 | 59.3 | 60.2 | 56.0 | 51.0 | 47.1 | 40.8 | 50.1 |
| 1971 | 40.7 | 42.2 | 42.0 | 46.5 | 51.4 | 54.6 | 59.4 | 62.4 | 57.9 | 51.3 | 46.8 | 41.2 | 49.7 |
| 1972 | 40.0 | 43.2 | 47.8 | 46.6 | 54.7 | 58.3 | 62.2 | 63.4 | 57.6 | 52.3 | 47.3 | 38.6 | 51.0 |
| 1973 | 40.5 | 44.3 | 44.4 | 48.9 | 53.4 | 56.6 | 59.7 | 57.6 | 57.9 | 51.2 | 44.3 | 45.2 | 50.3 |
| 1974 | 38.9 | 42.0 | 44.7 | 48.0 | 50.5 | 56.1 | 59.3 | 62.1 | 60.9 | 51.9 | 48.0 | 45.6 | 50.7 |
| 1975 | 42.9 | 43.1 | 43.8 | 44.9 | 52.8 | 55.6 | 60.7 | 59.7 | 59.2 | 50.9 | 46.2 | 44.7 | 50.4 |
| 1976 | 44.1 | 42.6 | 43.7 | 48.7 | 52.8 | 55.9 | 61.1 | 61.7 | 60.8 | 53.2 | 48.0 | 43.5 | 51.3 |
| 1977 | 39.9 | 46.8 | 44.6 | 48.9 | 50.2 | 56.8 | 58.7 | 62.7 | 57.0 | 51.7 | 44.6 | 43.9 | 50.5 |
| 1978 | 44.0 | 46.0 | 47.0 | 48.8 | 52.3 | 59.4 | 60.9 | 61.5 | 58.1 | 54.3 | 41.7 | 37.6 | 50.9 |
| 1979 | 35.3 | 41.8 | 47.3 | 49.2 | 53.8 | 56.8 | 62.4 | 61.8 | 61.4 | 55.0 | 46.9 | 47.4 | 51.6 |
| 1980 | 38.7 | 46.4 | 44.8 | 49.5 | 52.3 | 55.4 | 60.7 | 58.8 | 58.9 | 55.0 | 50.1 | 47.5 | 51.5 |
| 1981 | 48.2 | 46.6 | 48.1 | 49.5 | 53.4 | 57.7 | 60.4 | 62.4 | 59.1 | 52.7 | 49.0 | 45.3 | 52.7 |
| 1982 | 41.7 | 44.0 | 45.2 | 46.8 | 52.2 | 57.8 | 59.3 | 61.3 | 59.7 | 55.5 | 46.6 | 43.5 | 51.2 |
| 1983 | 47.3 | 50.2 | 50.9 | 50.2 | 55.7 | 59.8 | 61.2 | 61.7 | 56.6 | 50.4 | 48.6 | 37.9 | 52.5 |
| 1984 | 43.5 | 45.4 | 48.4 | 56.7 | 50.8 | 55.6 | 59.6 | 59.9 | 58.4 | 50.3 | 46.7 | 39.6 | 50.4 |
| 1985 | 39.3 | 40.3 | 42.8 | 48.4 | 52.5 | 56.8 | 60.6 | 59.4 | 56.2 | 50.7 | 39.2 | 39.3 | 49.7 |
| 1986 | 46.9 | 44.1 | 49.3 | 47.5 | 52.8 | 58.4 | 58.7 | 61.1 | 55.7 | 54.9 | 47.9 | 44.4 | 51.8 |
| 1987 | 43.7 | 46.3 | 48.0 | 50.4 | 55.0 | 57.4 | 59.2 | 60.4 | 58.4 | 54.4 | 49.6 | 40.9 | 52.0 |
| 1988 | 41.8 | 45.8 | 45.5 | 48.9 | 52.5 | 55.7 | 59.9 | 59.2 | 56.6 | 55.5 | 47.4 | 43.3 | 51.0 |
| 1989 | 42.1 | 37.1 | 45.1 | 51.5 | 53.1 | 58.7 | 59.8 | 60.5 | 60.4 | 52.8 | 49.2 | 44.0 | 51.2 |
| 1990 | 44.7 | 43.1 | 47.6 | 50.3 | 52.9 | 57.6 | 62.3 | 62.7 | 60.8 | 51.1 | 47.8 | 36.9 | 51.5 |
| 1991 | 41.3 | 48.0 | 43.3 | 46.8 | 50.8 | 45.5 | 59.6 | 59.7 | 60.6 | 51.2 | 47.3 | 44.5 | 50.6 |
| 1992 | 45.2 | 48.3 | 49.0 | 50.9 | 54.8 | 58.6 | 60.7 | 60.6 | 56.3 | 52.6 | 46.3 | 40.7 | 52.0 |
| 1993 | 38.9 | 41.9 | 47.4 | 49.2 | 56.2 | 57.5 | 59.0 | 60.7 | 56.6 | 54.1 | 42.3 | 42.7 | 50.5 |

MAXIMUM AND MINIMUM ANNUAL
TEMPERATURE AVERAGES
(1954-1993)

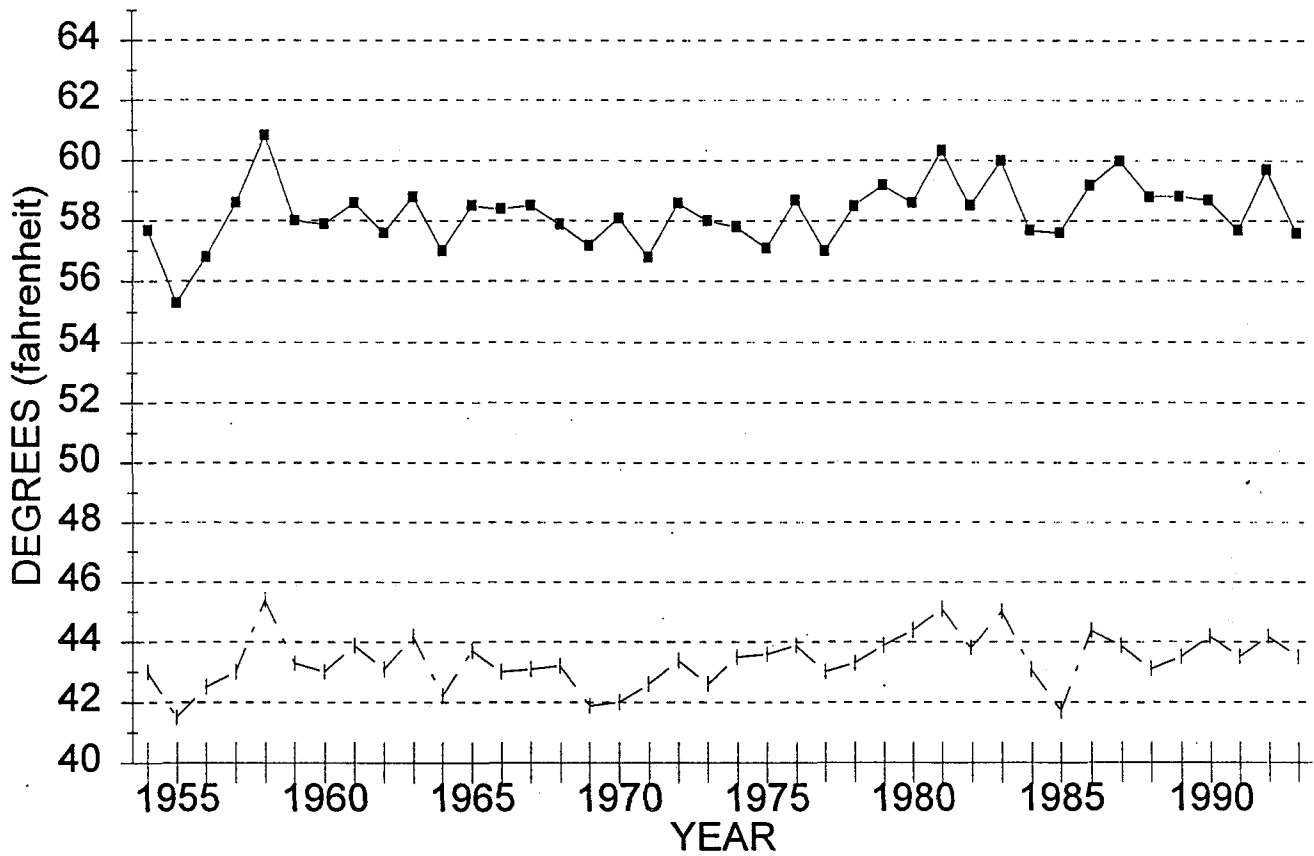


Figure 5.

—■— MAX TEMP —▲— MIN TEMP

CLIMATOGRAPHY OF THE UNITED STATES NO. 84

DAILY NORMALS OF TEMPERATURE, HEATING AND COOLING DEGREE DAYS, AND PRECIPITATION 1961-90

350328 ASTORIA WSO AP

LATITUDE: 46 09N

LONGITUDE: 123 53W

ELEVATION:

8 FT.

| DAILY | DECEMBER | | | | | | JANUARY | | | | | | FEBRUARY | | | | | |
|---------|--------------------|--------------------|--------------------|------------|------------|-------|--|--------------------|--------------------|------------|------------|-------|--------------------|--------------------|--------------------|------------|------------|------|
| | TEMPERATURE MAX | TEMPERATURE MIN | TEMPERATURE AVG | DEG HDD | DAY CDD | PCP | TEMPERATURE MAX | TEMPERATURE MIN | TEMPERATURE AVG | DEG HDD | DAY CDD | PCP | TEMPERATURE MAX | TEMPERATURE MIN | TEMPERATURE AVG | DEG HDD | DAY CDD | PCP |
| 1 | 50 | 38 | 44 | 21 | 0 | .36 | 47 | 36 | 41 | 24 | 0 | .33 | 49 | 37 | 43 | 22 | 0 | .30 |
| 2 | 50 | 38 | 44 | 21 | 0 | .35 | 47 | 36 | 41 | 24 | 0 | .34 | 50 | 37 | 43 | 22 | 0 | .29 |
| 3 | 50 | 38 | 44 | 21 | 0 | .35 | 47 | 36 | 41 | 24 | 0 | .33 | 50 | 37 | 43 | 22 | 0 | .29 |
| 4 | 50 | 38 | 44 | 21 | 0 | .35 | 47 | 36 | 41 | 24 | 0 | .33 | 50 | 37 | 43 | 22 | 0 | .29 |
| 5 | 49 | 38 | 44 | 21 | 0 | .35 | 47 | 35 | 41 | 24 | 0 | .33 | 50 | 37 | 43 | 22 | 0 | .29 |
| 6 | 49 | 37 | 43 | 22 | 0 | .35 | 47 | 35 | 41 | 24 | 0 | .33 | 50 | 37 | 44 | 21 | 0 | .29 |
| 7 | 49 | 37 | 43 | 22 | 0 | .35 | 47 | 35 | 41 | 24 | 0 | .33 | 50 | 37 | 44 | 21 | 0 | .28 |
| 8 | 49 | 37 | 43 | 22 | 0 | .35 | 47 | 36 | 41 | 24 | 0 | .33 | 50 | 37 | 44 | 21 | 0 | .28 |
| 9 | 49 | 37 | 43 | 22 | 0 | .34 | 47 | 36 | 42 | 23 | 0 | .33 | 50 | 37 | 44 | 21 | 0 | .28 |
| 10 | 49 | 37 | 43 | 22 | 0 | .34 | 47 | 36 | 42 | 23 | 0 | .33 | 51 | 37 | 44 | 21 | 0 | .28 |
| 11 | 49 | 37 | 43 | 22 | 0 | .34 | 47 | 36 | 42 | 23 | 0 | .33 | 51 | 37 | 44 | 21 | 0 | .28 |
| 12 | 48 | 37 | 43 | 22 | 0 | .34 | 47 | 36 | 42 | 23 | 0 | .33 | 51 | 37 | 44 | 21 | 0 | .27 |
| 13 | 48 | 37 | 42 | 23 | 0 | .34 | 47 | 36 | 42 | 23 | 0 | .33 | 51 | 37 | 44 | 21 | 0 | .27 |
| 14 | 48 | 37 | 42 | 23 | 0 | .34 | 48 | 36 | 42 | 23 | 0 | .33 | 51 | 37 | 44 | 21 | 0 | .27 |
| 15 | 48 | 36 | 42 | 23 | 0 | .34 | 48 | 36 | 42 | 23 | 0 | .33 | 51 | 37 | 44 | 21 | 0 | .27 |
| 16 | 48 | 36 | 42 | 23 | 0 | .34 | 48 | 36 | 42 | 23 | 0 | .33 | 51 | 37 | 44 | 21 | 0 | .27 |
| 17 | 48 | 36 | 42 | 23 | 0 | .34 | 48 | 36 | 42 | 23 | 0 | .33 | 51 | 37 | 44 | 21 | 0 | .27 |
| 18 | 48 | 36 | 42 | 23 | 0 | .34 | 48 | 36 | 42 | 23 | 0 | .32 | 52 | 37 | 45 | 20 | 0 | .26 |
| 19 | 48 | 36 | 42 | 23 | 0 | .34 | 48 | 36 | 42 | 23 | 0 | .32 | 52 | 37 | 45 | 20 | 0 | .26 |
| 20 | 48 | 36 | 42 | 23 | 0 | .34 | 48 | 36 | 42 | 23 | 0 | .32 | 52 | 37 | 45 | 20 | 0 | .26 |
| 21 | 48 | 36 | 42 | 23 | 0 | .34 | 48 | 36 | 42 | 23 | 0 | .32 | 52 | 38 | 45 | 20 | 0 | .26 |
| 22 | 48 | 36 | 42 | 23 | 0 | .34 | 48 | 36 | 42 | 23 | 0 | .32 | 52 | 38 | 45 | 20 | 0 | .26 |
| 23 | 47 | 36 | 42 | 23 | 0 | .34 | 48 | 36 | 42 | 23 | 0 | .32 | 52 | 38 | 45 | 20 | 0 | .26 |
| 24 | 47 | 36 | 42 | 23 | 0 | .33 | 48 | 36 | 42 | 23 | 0 | .32 | 52 | 38 | 45 | 20 | 0 | .26 |
| 25 | 47 | 36 | 42 | 23 | 0 | .33 | 49 | 36 | 42 | 23 | 0 | .31 | 52 | 38 | 45 | 20 | 0 | .25 |
| 26 | 47 | 36 | 42 | 23 | 0 | .33 | 49 | 36 | 42 | 23 | 0 | .31 | 52 | 38 | 45 | 20 | 0 | .25 |
| 27 | 47 | 36 | 41 | 24 | 0 | .33 | 49 | 36 | 43 | 22 | 0 | .31 | 52 | 38 | 45 | 20 | 0 | .25 |
| 28 | 47 | 36 | 41 | 24 | 0 | .33 | 49 | 36 | 43 | 22 | 0 | .31 | 52 | 38 | 45 | 20 | 0 | .25 |
| 29 | 47 | 36 | 41 | 24 | 0 | .33 | 49 | 36 | 43 | 22 | 0 | .30 | | | | | | |
| 30 | 47 | 36 | 41 | 24 | 0 | .33 | 49 | 36 | 43 | 22 | 0 | .30 | | | | | | |
| 31 | 47 | 36 | 41 | 24 | 0 | .33 | 49 | 36 | 43 | 22 | 0 | .30 | | | | | | |
| MONTHLY | 48.2 | 36.6 | 42.4 | 701 | 0 | 10.55 | 47.8 | 35.9 | 41.9 | 716 | 0 | 10.00 | 51.0 | 37.3 | 44.2 | 582 | 0 | 7.59 |
| WINTER | 49.0 | 36.6 | 42.8 | 1999 | 0 | 28.14 | NOTES: DEGREE DAYS BASE TEMPERATURE = 65 DEG F; TEMPERATURE UNITS = DEG F; PRECIPITATION UNITS = INCHES; * = LESS THAN 1 BUT GREATER THAN 0 | | | | | | | | | | | |
| ANNUAL | 58.3 | 43.4 | 50.9 | 5158 | 8 | 66.40 | | | | | | | | | | | | |

THE DAILY VALUES PRESENTED IN THESE TABLES ARE NOT SIMPLE MEANS OF OBSERVED VALUES. THEY ARE INTERPOLATED FROM THE MUCH LESS VARIABLE MONTHLY NORMALS BY USE OF THE NATURAL SPLINE FUNCTION. IN LEAP YEARS USE THE FEBRUARY 28TH VALUES FOR THE 29TH AND ADJUST THE DEGREE DAY MONTHLY TOTALS ACCORDINGLY. DAILY PRECIPITATION NORMALS WERE ALSO COMPUTED USING THE NATURAL SPLINE FUNCTION AND DO NOT EXHIBIT THE TYPICAL DAILY RANDOM PATTERNS. HOWEVER, THEY MAY BE USED TO COMPUTE NORMAL PRECIPITATION OVER TIME INTERVALS.

CLIMATOGRAPHY OF THE UNITED STATES NO. 84

DAILY NORMALS OF TEMPERATURE, HEATING AND COOLING DEGREE DAYS, AND PRECIPITATION 1961-90

350328 ASTORIA WSO AP

LATITUDE: 46 09N

LONGITUDE: 123 53W

ELEVATION:

8 FT.

| DAILY | MARCH | | | | | | APRIL | | | | | | MAY | | | | | |
|---------|-------------|------|------|------|-----|-------|--|------|------|-----|-----|------|-------------|------|------|-----|-----|------|
| | TEMPERATURE | | | DEG | DAY | PCP | TEMPERATURE | | | DEG | DAY | PCP | TEMPERATURE | | | DEG | DAY | PCP |
| MAX | MIN | AVG | HDD | CDD | MAX | | MIN | AVG | HDD | CDD | MAX | | MIN | AVG | HDD | CDD | | |
| 1 | 52 | 38 | 45 | 20 | 0 | .25 | 54 | 39 | 47 | 18 | 0 | .19 | 58 | 42 | 50 | 15 | 0 | .12 |
| 2 | 52 | 38 | 45 | 20 | 0 | .25 | 54 | 39 | 47 | 18 | 0 | .19 | 58 | 43 | 50 | 15 | 0 | .11 |
| 3 | 52 | 38 | 45 | 20 | 0 | .25 | 55 | 39 | 47 | 18 | 0 | .19 | 58 | 43 | 51 | 14 | 0 | .11 |
| 4 | 52 | 38 | 45 | 20 | 0 | .25 | 55 | 39 | 47 | 18 | 0 | .18 | 58 | 43 | 51 | 14 | 0 | .11 |
| 5 | 52 | 38 | 45 | 20 | 0 | .25 | 55 | 39 | 47 | 18 | 0 | .18 | 59 | 43 | 51 | 14 | 0 | .11 |
| 6 | 53 | 38 | 45 | 20 | 0 | .25 | 55 | 39 | 47 | 18 | 0 | .18 | 59 | 43 | 51 | 14 | 0 | .11 |
| 7 | 53 | 38 | 45 | 20 | 0 | .25 | 55 | 39 | 47 | 18 | 0 | .17 | 59 | 43 | 51 | 14 | 0 | .11 |
| 8 | 53 | 38 | 45 | 20 | 0 | .24 | 55 | 39 | 47 | 18 | 0 | .17 | 59 | 44 | 51 | 14 | 0 | .10 |
| 9 | 53 | 38 | 45 | 20 | 0 | .24 | 55 | 40 | 47 | 18 | 0 | .17 | 59 | 44 | 51 | 14 | 0 | .10 |
| 10 | 53 | 38 | 45 | 20 | 0 | .24 | 55 | 40 | 47 | 18 | 0 | .17 | 59 | 44 | 52 | 13 | 0 | .10 |
| 11 | 53 | 38 | 45 | 20 | 0 | .24 | 55 | 40 | 48 | 17 | 0 | .16 | 59 | 44 | 52 | 13 | 0 | .10 |
| 12 | 53 | 38 | 45 | 20 | 0 | .24 | 56 | 40 | 48 | 17 | 0 | .16 | 60 | 44 | 52 | 13 | 0 | .10 |
| 13 | 53 | 38 | 46 | 19 | 0 | .24 | 56 | 40 | 48 | 17 | 0 | .16 | 60 | 44 | 52 | 13 | 0 | .10 |
| 14 | 53 | 38 | 46 | 19 | 0 | .23 | 56 | 40 | 48 | 17 | 0 | .16 | 60 | 44 | 52 | 13 | 0 | .10 |
| 15 | 53 | 38 | 46 | 19 | 0 | .23 | 56 | 40 | 48 | 17 | 0 | .15 | 60 | 45 | 52 | 13 | 0 | .10 |
| 16 | 53 | 38 | 46 | 19 | 0 | .23 | 56 | 40 | 48 | 17 | 0 | .15 | 60 | 45 | 52 | 13 | 0 | .09 |
| 17 | 53 | 38 | 46 | 19 | 0 | .23 | 56 | 40 | 48 | 17 | 0 | .15 | 60 | 45 | 53 | 12 | 0 | .09 |
| 18 | 53 | 38 | 46 | 19 | 0 | .23 | 56 | 40 | 48 | 17 | 0 | .15 | 60 | 45 | 53 | 12 | 0 | .09 |
| 19 | 53 | 38 | 46 | 19 | 0 | .22 | 56 | 41 | 49 | 16 | 0 | .14 | 61 | 45 | 53 | 12 | 0 | .09 |
| 20 | 53 | 38 | 46 | 19 | 0 | .22 | 56 | 41 | 49 | 16 | 0 | .14 | 61 | 45 | 53 | 12 | 0 | .09 |
| 21 | 54 | 38 | 46 | 19 | 0 | .22 | 57 | 41 | 49 | 16 | 0 | .14 | 61 | 46 | 53 | 12 | 0 | .09 |
| 22 | 54 | 38 | 46 | 19 | 0 | .22 | 57 | 41 | 49 | 16 | 0 | .14 | 61 | 46 | 53 | 12 | 0 | .09 |
| 23 | 54 | 38 | 46 | 19 | 0 | .22 | 57 | 41 | 49 | 16 | 0 | .13 | 61 | 46 | 54 | 11 | 0 | .09 |
| 24 | 54 | 38 | 46 | 19 | 0 | .21 | 57 | 41 | 49 | 16 | 0 | .13 | 61 | 46 | 54 | 11 | 0 | .09 |
| 25 | 54 | 38 | 46 | 19 | 0 | .21 | 57 | 41 | 49 | 16 | 0 | .13 | 61 | 46 | 54 | 11 | 0 | .09 |
| 26 | 54 | 38 | 46 | 19 | 0 | .21 | 57 | 42 | 49 | 16 | 0 | .13 | 61 | 46 | 54 | 11 | 0 | .09 |
| 27 | 54 | 38 | 46 | 19 | 0 | .21 | 57 | 42 | 50 | 15 | 0 | .13 | 62 | 47 | 54 | 11 | 0 | .09 |
| 28 | 54 | 38 | 46 | 19 | 0 | .20 | 58 | 42 | 50 | 15 | 0 | .12 | 62 | 47 | 54 | 11 | 0 | .09 |
| 29 | 54 | 39 | 47 | 18 | 0 | .20 | 58 | 42 | 50 | 15 | 0 | .12 | 62 | 47 | 54 | 11 | 0 | .09 |
| 30 | 54 | 39 | 47 | 18 | 0 | .20 | 58 | 42 | 50 | 15 | 0 | .12 | 62 | 47 | 55 | 10 | 0 | .09 |
| 31 | 54 | 39 | 47 | 18 | 0 | .19 | | | | | | | 62 | 47 | 55 | 10 | 0 | .09 |
| MONTHLY | 53.2 | 38.1 | 45.7 | 598 | 0 | 7.07 | 56.0 | 40.3 | 48.2 | 504 | 0 | 4.60 | 60.1 | 44.8 | 52.5 | 388 | 0 | 3.02 |
| SPRING | 56.5 | 41.1 | 48.9 | 1490 | 0 | 14.69 | NOTES: DEGREE DAYS BASE TEMPERATURE = 65 DEG F; TEMPERATURE UNITS = DEG F; PRECIPITATION UNITS = INCHES; * = LESS THAN 1 BUT GREATER THAN 0 | | | | | | | | | | | |
| ANNUAL | 58.3 | 43.4 | 50.9 | 5158 | 8 | 66.40 | | | | | | | | | | | | |

THE DAILY VALUES PRESENTED IN THESE TABLES ARE NOT SIMPLE MEANS OF OBSERVED VALUES. THEY ARE INTERPOLATED FROM THE MUCH LESS VARIABLE MONTHLY NORMALS BY USE OF THE NATURAL SPLINE FUNCTION. IN LEAP YEARS USE THE FEBRUARY 28TH VALUES FOR THE 29TH AND ADJUST THE DEGREE DAY MONTHLY TOTALS ACCORDINGLY. DAILY PRECIPITATION NORMALS WERE ALSO COMPUTED USING THE NATURAL SPLINE FUNCTION AND DO NOT EXHIBIT THE TYPICAL DAILY RANDOM PATTERNS. HOWEVER, THEY MAY BE USED TO COMPUTE NORMAL PRECIPITATION OVER TIME INTERVALS.

CLIMATOGRAPHY OF THE UNITED STATES NO. 84

DAILY NORMALS OF TEMPERATURE, HEATING AND COOLING DEGREE DAYS, AND PRECIPITATION 1961-90

350328 ASTORIA WSO AP

LATITUDE: 46 09N

LONGITUDE: 123 53W

ELEVATION:

8 FT.

| DAILY | JUNE | | | | | | JULY | | | | | | AUGUST | | | | | |
|---------|--------------------|--------------------|--------------------|------------|------------|-------|--|--------------------|--------------------|------------|------------|------|--------------------|--------------------|--------------------|------------|------------|------|
| | TEMPERATURE MAX | TEMPERATURE MIN | TEMPERATURE AVG | DEG HDD | DAY CDD | PCP | TEMPERATURE MAX | TEMPERATURE MIN | TEMPERATURE AVG | DEG HDD | DAY CDD | PCP | TEMPERATURE MAX | TEMPERATURE MIN | TEMPERATURE AVG | DEG HDD | DAY CDD | PCP |
| 1 | 62 | 47 | 55 | 10 | 0 | .09 | 66 | 51 | 59 | 6 | 0 | .06 | 68 | 53 | 61 | 4 | 0 | .03 |
| 2 | 62 | 48 | 55 | 10 | 0 | .09 | 66 | 51 | 59 | 6 | 0 | .05 | 68 | 53 | 61 | 4 | 0 | .03 |
| 3 | 62 | 48 | 55 | 10 | 0 | .09 | 66 | 51 | 59 | 6 | 0 | .05 | 68 | 53 | 61 | 4 | 0 | .03 |
| 4 | 63 | 48 | 55 | 10 | 0 | .09 | 67 | 52 | 59 | 6 | 0 | .05 | 68 | 53 | 61 | 4 | 0 | .03 |
| 5 | 63 | 48 | 56 | 9 | 0 | .09 | 67 | 52 | 59 | 6 | 0 | .05 | 68 | 53 | 61 | 4 | 0 | .03 |
| 6 | 63 | 48 | 56 | 9 | 0 | .09 | 67 | 52 | 59 | 6 | 0 | .05 | 68 | 53 | 61 | 4 | 0 | .03 |
| 7 | 63 | 48 | 56 | 9 | 0 | .09 | 67 | 52 | 59 | 6 | 0 | .05 | 69 | 53 | 61 | 4 | 0 | .03 |
| 8 | 63 | 49 | 56 | 9 | 0 | .09 | 67 | 52 | 59 | 6 | 0 | .04 | 69 | 53 | 61 | 4 | 0 | .03 |
| 9 | 63 | 49 | 56 | 9 | 0 | .09 | 67 | 52 | 60 | 5 | 0 | .04 | 69 | 53 | 61 | 4 | 0 | .03 |
| 10 | 63 | 49 | 56 | 9 | 0 | .09 | 67 | 52 | 60 | 5 | 0 | .04 | 69 | 53 | 61 | 4 | 0 | .03 |
| 11 | 64 | 49 | 56 | 9 | 0 | .09 | 67 | 52 | 60 | 5 | 0 | .04 | 69 | 53 | 61 | 4 | 0 | .04 |
| 12 | 64 | 49 | 56 | 9 | 0 | .09 | 67 | 52 | 60 | 5 | 0 | .04 | 69 | 53 | 61 | 4 | 0 | .04 |
| 13 | 64 | 49 | 57 | 8 | 0 | .08 | 67 | 52 | 60 | 5 | 0 | .04 | 69 | 53 | 61 | 4 | 0 | .04 |
| 14 | 64 | 49 | 57 | 8 | 0 | .08 | 68 | 52 | 60 | 5 | 0 | .04 | 69 | 53 | 61 | 4 | 0 | .04 |
| 15 | 64 | 50 | 57 | 8 | 0 | .08 | 68 | 52 | 60 | 5 | 0 | .03 | 69 | 53 | 61 | 5 | 1 | .04 |
| 16 | 64 | 50 | 57 | 8 | 0 | .08 | 68 | 52 | 60 | 5 | 0 | .03 | 69 | 53 | 61 | 5 | 1 | .04 |
| 17 | 64 | 50 | 57 | 8 | 0 | .08 | 68 | 53 | 60 | 5 | 0 | .03 | 69 | 53 | 61 | 5 | 1 | .04 |
| 18 | 64 | 50 | 57 | 8 | 0 | .08 | 68 | 53 | 60 | 5 | 0 | .03 | 69 | 53 | 61 | 5 | 1 | .04 |
| 19 | 65 | 50 | 57 | 8 | 0 | .08 | 68 | 53 | 60 | 5 | 0 | .03 | 69 | 53 | 61 | 5 | 1 | .04 |
| 20 | 65 | 50 | 58 | 7 | 0 | .08 | 68 | 53 | 60 | 5 | 0 | .03 | 69 | 53 | 61 | 5 | 1 | .05 |
| 21 | 65 | 50 | 58 | 7 | 0 | .08 | 68 | 53 | 60 | 5 | 0 | .03 | 69 | 52 | 61 | 5 | 1 | .05 |
| 22 | 65 | 50 | 58 | 7 | 0 | .07 | 68 | 53 | 60 | 5 | 0 | .03 | 69 | 52 | 61 | 5 | 1 | .05 |
| 23 | 65 | 50 | 58 | 7 | 0 | .07 | 68 | 53 | 60 | 5 | 0 | .03 | 69 | 52 | 60 | 5 | 0 | .05 |
| 24 | 65 | 51 | 58 | 7 | 0 | .07 | 68 | 53 | 60 | 5 | 0 | .03 | 69 | 52 | 60 | 5 | 0 | .05 |
| 25 | 65 | 51 | 58 | 7 | 0 | .07 | 68 | 53 | 61 | 5 | 0 | .03 | 69 | 52 | 60 | 5 | 0 | .05 |
| 26 | 65 | 51 | 58 | 7 | 0 | .07 | 68 | 53 | 61 | 4 | 0 | .03 | 69 | 52 | 60 | 5 | 0 | .06 |
| 27 | 66 | 51 | 58 | 7 | 0 | .07 | 68 | 53 | 61 | 4 | 0 | .03 | 69 | 52 | 60 | 5 | 0 | .06 |
| 28 | 66 | 51 | 58 | 7 | 0 | .06 | 68 | 53 | 61 | 4 | 0 | .03 | 69 | 52 | 60 | 5 | 0 | .06 |
| 29 | 66 | 51 | 59 | 6 | 0 | .06 | 68 | 53 | 61 | 4 | 0 | .03 | 69 | 52 | 60 | 5 | 0 | .06 |
| 30 | 66 | 51 | 59 | 6 | 0 | .06 | 68 | 53 | 61 | 4 | 0 | .03 | 69 | 52 | 60 | 5 | 0 | .06 |
| 31 | | | | | | | 68 | 53 | 61 | 4 | 0 | .03 | 69 | 51 | 60 | 5 | 0 | .07 |
| MONTHLY | 64.1 | 49.5 | 56.9 | 243 | 0 | 2.40 | 67.5 | 52.4 | 60.0 | 157 | 0 | 1.15 | 68.8 | 52.6 | 60.7 | 141 | 8 | 1.33 |
| SUMMER | 66.9 | 51.6 | 59.3 | 541 | 8 | 4.88 | NOTES: DEGREE DAYS BASE TEMPERATURE = 65 DEG F; TEMPERATURE UNITS = DEG F; PRECIPITATION UNITS = INCHES; * = LESS THAN 1 BUT GREATER THAN 0 | | | | | | | | | | | |
| ANNUAL | 58.3 | 43.4 | 50.9 | 5158 | 8 | 66.40 | | | | | | | | | | | | |

THE DAILY VALUES PRESENTED IN THESE TABLES ARE NOT SIMPLE MEANS OF OBSERVED VALUES. THEY ARE INTERPOLATED FROM THE MUCH LESS VARIABLE MONTHLY NORMALS BY USE OF THE NATURAL SPLINE FUNCTION. IN LEAP YEARS USE THE FEBRUARY 28TH VALUES FOR THE 29TH AND ADJUST THE DEGREE DAY MONTHLY TOTALS ACCORDINGLY. DAILY PRECIPITATION NORMALS WERE ALSO COMPUTED USING THE NATURAL SPLINE FUNCTION AND DO NOT EXHIBIT THE TYPICAL DAILY RANDOM PATTERNS. HOWEVER, THEY MAY BE USED TO COMPUTE NORMAL PRECIPITATION OVER TIME INTERVALS.

CLIMATOGRAPHY OF THE UNITED STATES NO. 84

DAILY NORMALS OF TEMPERATURE, HEATING AND COOLING DEGREE DAYS, AND PRECIPITATION 1961-90

350328 ASTORIA WSO AP

LATITUDE: 46 09N

LONGITUDE: 123 53W

ELEVATION:

8 FT.

| DAILY | SEPTEMBER | | | | | | | OCTOBER | | | | | | | NOVEMBER | | | | | | |
|---------|-------------|------|------|------|-----|-------|--|---------|------|-----|-----|------|-------------|------|----------|-----|-----|-------|--|--|--|
| | TEMPERATURE | | | DEG | DAY | PCP | TEMPERATURE | | | DEG | DAY | PCP | TEMPERATURE | | | DEG | DAY | PCP | | | |
| MAX | MIN | AVG | HDD | CDD | MAX | | MIN | AVG | HDD | CDD | MAX | | MIN | AVG | HDD | CDD | | | | | |
| 1 | 69 | 51 | 60 | 5 | 0 | .07 | 65 | 46 | 56 | 9 | 0 | .13 | 57 | 42 | 49 | 16 | 0 | .27 | | | |
| 2 | 69 | 51 | 60 | 5 | 0 | .07 | 65 | 46 | 55 | 10 | 0 | .13 | 57 | 42 | 49 | 16 | 0 | .28 | | | |
| 3 | 69 | 51 | 60 | 5 | 0 | .07 | 65 | 46 | 55 | 10 | 0 | .13 | 56 | 42 | 49 | 16 | 0 | .29 | | | |
| 4 | 69 | 51 | 60 | 5 | 0 | .07 | 64 | 46 | 55 | 10 | 0 | .14 | 56 | 42 | 49 | 16 | 0 | .29 | | | |
| 5 | 69 | 51 | 60 | 5 | 0 | .08 | 64 | 46 | 55 | 10 | 0 | .14 | 56 | 41 | 49 | 16 | 0 | .30 | | | |
| 6 | 69 | 51 | 60 | 5 | 0 | .08 | 64 | 46 | 55 | 10 | 0 | .14 | 56 | 41 | 49 | 16 | 0 | .30 | | | |
| 7 | 69 | 50 | 60 | 6 | 0 | .08 | 63 | 45 | 54 | 11 | 0 | .14 | 55 | 41 | 48 | 17 | 0 | .31 | | | |
| 8 | 69 | 50 | 60 | 6 | 0 | .08 | 63 | 45 | 54 | 11 | 0 | .15 | 55 | 41 | 48 | 17 | 0 | .32 | | | |
| 9 | 69 | 50 | 59 | 6 | 0 | .08 | 63 | 45 | 54 | 11 | 0 | .15 | 55 | 41 | 48 | 17 | 0 | .32 | | | |
| 10 | 69 | 50 | 59 | 6 | 0 | .09 | 63 | 45 | 54 | 11 | 0 | .15 | 55 | 41 | 48 | 17 | 0 | .33 | | | |
| 11 | 69 | 50 | 59 | 6 | 0 | .09 | 62 | 45 | 54 | 11 | 0 | .16 | 54 | 41 | 48 | 17 | 0 | .33 | | | |
| 12 | 69 | 50 | 59 | 6 | 0 | .09 | 62 | 45 | 53 | 12 | 0 | .16 | 54 | 41 | 48 | 17 | 0 | .33 | | | |
| 13 | 68 | 49 | 59 | 6 | 0 | .09 | 62 | 44 | 53 | 12 | 0 | .16 | 54 | 41 | 47 | 18 | 0 | .34 | | | |
| 14 | 68 | 49 | 59 | 6 | 0 | .09 | 62 | 44 | 53 | 12 | 0 | .17 | 54 | 40 | 47 | 18 | 0 | .34 | | | |
| 15 | 68 | 49 | 59 | 6 | 0 | .10 | 61 | 44 | 53 | 12 | 0 | .17 | 54 | 40 | 47 | 18 | 0 | .34 | | | |
| 16 | 68 | 49 | 58 | 7 | 0 | .10 | 61 | 44 | 53 | 12 | 0 | .18 | 53 | 40 | 47 | 18 | 0 | .35 | | | |
| 17 | 68 | 49 | 58 | 7 | 0 | .10 | 61 | 44 | 52 | 13 | 0 | .18 | 53 | 40 | 47 | 18 | 0 | .35 | | | |
| 18 | 68 | 49 | 58 | 7 | 0 | .10 | 61 | 44 | 52 | 13 | 0 | .19 | 53 | 40 | 46 | 19 | 0 | .35 | | | |
| 19 | 68 | 48 | 58 | 7 | 0 | .10 | 60 | 43 | 52 | 13 | 0 | .19 | 53 | 40 | 46 | 19 | 0 | .35 | | | |
| 20 | 67 | 48 | 58 | 7 | 0 | .11 | 60 | 43 | 52 | 13 | 0 | .20 | 52 | 40 | 46 | 19 | 0 | .36 | | | |
| 21 | 67 | 48 | 58 | 7 | 0 | .11 | 60 | 43 | 52 | 13 | 0 | .20 | 52 | 40 | 46 | 19 | 0 | .36 | | | |
| 22 | 67 | 48 | 57 | 8 | 0 | .11 | 60 | 43 | 51 | 14 | 0 | .21 | 52 | 39 | 46 | 19 | 0 | .36 | | | |
| 23 | 67 | 48 | 57 | 8 | 0 | .11 | 59 | 43 | 51 | 14 | 0 | .21 | 52 | 39 | 46 | 19 | 0 | .36 | | | |
| 24 | 67 | 48 | 57 | 8 | 0 | .11 | 59 | 43 | 51 | 14 | 0 | .22 | 52 | 39 | 45 | 20 | 0 | .36 | | | |
| 25 | 66 | 47 | 57 | 8 | 0 | .12 | 59 | 43 | 51 | 14 | 0 | .23 | 51 | 39 | 45 | 20 | 0 | .36 | | | |
| 26 | 66 | 47 | 57 | 8 | 0 | .12 | 58 | 43 | 51 | 14 | 0 | .23 | 51 | 39 | 45 | 20 | 0 | .36 | | | |
| 27 | 66 | 47 | 57 | 8 | 0 | .12 | 58 | 42 | 50 | 15 | 0 | .24 | 51 | 39 | 45 | 20 | 0 | .36 | | | |
| 28 | 66 | 47 | 56 | 9 | 0 | .12 | 58 | 42 | 50 | 15 | 0 | .25 | 51 | 39 | 45 | 20 | 0 | .36 | | | |
| 29 | 66 | 47 | 56 | 9 | 0 | .12 | 58 | 42 | 50 | 15 | 0 | .25 | 51 | 38 | 45 | 20 | 0 | .36 | | | |
| 30 | 65 | 47 | 56 | 9 | 0 | .13 | 57 | 42 | 50 | 15 | 0 | .26 | 50 | 38 | 44 | 21 | 0 | .36 | | | |
| 31 | | | | | | | 57 | 42 | 50 | 15 | 0 | .27 | | | | | | | | | |
| MONTHLY | 67.8 | 49.0 | 58.4 | 201 | 0 | 2.91 | 61.1 | 44.0 | 52.6 | 384 | 0 | 5.73 | 53.5 | 40.2 | 46.9 | 543 | 0 | 10.05 | | | |
| AUTUMN | 60.9 | 44.4 | 52.7 | 1128 | 0 | 18.69 | NOTES: DEGREE DAYS BASE TEMPERATURE = 65 DEG F; TEMPERATURE UNITS = DEG F; PRECIPITATION UNITS = INCHES; * = LESS THAN 1 BUT GREATER THAN 0 | | | | | | | | | | | | | | |
| ANNUAL | 58.3 | 43.4 | 50.9 | 5158 | 8 | 66.40 | | | | | | | | | | | | | | | |

THE DAILY VALUES PRESENTED IN THESE TABLES ARE NOT SIMPLE MEANS OF OBSERVED VALUES. THEY ARE INTERPOLATED FROM THE MUCH LESS VARIABLE MONTHLY NORMALS BY USE OF THE NATURAL SPLINE FUNCTION. IN LEAP YEARS USE THE FEBRUARY 28TH VALUES FOR THE 29TH AND ADJUST THE DEGREE DAY MONTHLY TOTALS ACCORDINGLY. DAILY PRECIPITATION NORMALS WERE ALSO COMPUTED USING THE NATURAL SPLINE FUNCTION AND DO NOT EXHIBIT THE TYPICAL DAILY RANDOM PATTERNS. HOWEVER, THEY MAY BE USED TO COMPUTE NORMAL PRECIPITATION OVER TIME INTERVALS.

Calendar Day Records
JANUARY 1953 THROUGH 1995

| DAY | MAX | | MIN | | MAX | | (PEAK GUST) | | |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|------|
| | TEMP | YEAR | TEMP | YEAR | PCPN | YEAR | DIR | VEL MPH | YEAR |
| 01 | 60 | 1981 | 14 | 1979 | 1.67 | 1964 | SE | 67 | |
| 02 | 61 | 1981 | 21 | 1974 | 1.65 | 1956 | SW | 56 | |
| 03 | 59 | 1984 | 17 | 1959 | 1.67 | 1956 | SW | 60 | |
| 04 | 59 | 1984 | 21 | 1974 | 2.11 | 1954 | SW | 56 | |
| 05 | 56 | 1981 | 16 | 1974 | 1.93 | 1983 | S | 63 | |
| 06 | 56 | 1981 | 15 | 1982 | 1.74 | 1983 | S | 62 | 1990 |
| 07 | 67 | 1986 | 15 | 1974 | 2.15 | 1983 | S | 70 | |
| 08 | 56 | 1981 | 16 | 1974 | 1.82 | 1971 | W | 62 | |
| 09 | 56 | 1961 | 15 | 1974 | 4.53 | 1990 | S | 64 | 1990 |
| 10 | 61 | 1986 | 16 | 1993 | 1.25 | 1991 | SW | 51 | 1988 |
| 11 | 58 | 1956 | 15 | 1963 | 0.94 | 1972 | S | 67 | |
| 12 | 61 | 1986 | 17 | 1963 | 1.77 | 1975 | S | 62 | |
| 13 | 58 | 1981 | 23 | 1963 | 2.88 | 1975 | S | 65 | |
| 14 | 59 | 1981 | 27 | 1971 | 2.04 | 1956 | SE | 80 | |
| 15 | 61 | 1965 | 24 | 1987 | 1.39 | 1956 | S | 80 | |
| 16 | 57 | 1958 | 20 | 1984 | 2.39 | 1982 | SW | 75 | |
| 17 | 60 | 1986 | 25 | 1987 | 1.26 | 1953 | W | 61 | |
| 18 | 61 | 1986 | 22 | 1957 | 1.73 | 1986 | S | 72 | |
| 19 | 63 | 1961 | 24 | 1969 | 2.23 | 1967 | W | 63 | |
| 20 | 65 | 1961 | 20 | 1962 | 1.69 | 1972 | S | 72 | 1993 |
| 21 | 61 | 1981 | 14 | 1962 | 3.33 | 1954 | SE | 65 | |
| 22 | 62 | 1981 | 17 | 1962 | 2.80 | 1953 | SE | 56 | |
| 23 | 60 | 1968 | 19 | 1969 | 3.84 | 1982 | S | 59 | 1992 |
| 24 | 57 | 1983 | 22 | 1969 | 2.33 | 1964 | SW | 60 | |
| 25 | 60 | 1986 | 18 | 1969 | 2.88 | 1971 | S | 56 | |
| 26 | 63 | 1983 | 16 | 1957 | 1.73 | 1970 | SE | 52 | |
| 27 | 60 | 1988 | 15 | 1957 | 1.68 | 1992 | S | 59 | 1992 |
| 28 | 59 | 1988 | 11 | 1969 | 2.51 | 1965 | SW | 62 | 1987 |
| 29 | 63 | 1960 | 11 | 1980 | 0.86 | 1965 | SW | 69 | |
| 30 | 63 | 1962 | 21 | 1980 | 1.03 | 1974 | SW | 69 | |
| 31 | 63 | 1976 | 19 | 1979 | 2.70 | 1987 | S | 69 | 1987 |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
FEBRUARY 1953 THROUGH 1995

| DAY | MAX | YEAR | MIN | YEAR | MAX | YEAR | (PEAK GUST) | | |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|------|
| | TEMP | | TEMP | | PCPN | | DIR | VEL MPH | YEAR |
| 01 | 61 | 1991 | 21 | 1979 | 0.85 | 1980 | S | 70 | 1987 |
| 02 | 60 | 1962 | 14 | 1989 | 1.51 | 1963 | S | 60 | |
| 03 | 61 | 1992 | 11 | 1989 | 1.94 | 1968 | S | 60 | |
| 04 | 65 | 1984 | 13 | 1989 | 1.03 | 1965 | SW | 69 | |
| 05 | 60 | 1987 | 09 | 1989 | 0.84 | 1957 | S | 49 | 1990 |
| 06 | 65 | 1954 | 21 | 1989 | 1.86 | 1979 | S | 59 | |
| 07 | 66 | 1963 | 22 | 1989 | 1.56 | 1955 | SW | 53 | |
| 08 | 66 | 1987 | 21 | 1994 | 1.30 | 1958 | SW | 48 | |
| 09 | 65 | 1963 | 26 | 1982 | 2.72 | 1990 | SE | 55 | |
| 10 | 68 | 1963 | 24 | 1982 | 1.45 | 1990 | S | 50 | |
| 11 | 63 | 1983 | 26 | 1978 | 1.12 | 1975 | SW | 63 | |
| 12 | 66 | 1963 | 27 | 1959 | 1.80 | 1984 | SE | 76 | |
| 13 | 60 | 1981 | 25 | 1995 | 2.31 | 1994 | SW | 67 | |
| 14 | 60 | 1991 | 22 | 1990 | 1.44 | 1960 | S | 54 | |
| 15 | 62 | 1962 | 21 | 1956 | 2.80 | 1970 | SE | 59 | |
| 16 | 58 | 1957 | 20 | 1956 | 2.32 | 1989 | SW | 62 | |
| 17 | 62 | 1957 | 25 | 1985 | 1.52 | 1958 | S | 60 | |
| 18 | 67 | 1958 | 23 | 1955 | 1.67 | 1968 | S | 55 | 1955 |
| 19 | 62 | 1978 | 27 | 1955 | 2.45 | 1991 | S | 63 | |
| 20 | 62 | 1970 | 25 | 1955 | 2.30 | 1961 | S | 52 | |
| 21 | 68 | 1973 | 27 | 1957 | 1.85 | 1961 | S | 53 | 1992 |
| 22 | 64 | 1981 | 29 | 1988 | 1.33 | 1986 | NW | 52 | 1987 |
| 23 | 64 | 1988 | 27 | 1953 | 2.62 | 1986 | S | 70 | |
| 24 | 64 | 1970 | 23 | 1962 | 2.46 | 1961 | S | 52 | |
| 25 | 67 | 1992 | 24 | 1993 | 1.07 | 1963 | SW | 60 | |
| 26 | 71 | 1992 | 19 | 1962 | 1.55 | 1980 | SE | 53 | |
| 27 | 71 | 1968 | 21 | 1962 | 1.06 | 1972 | S | 62 | |
| 28 | 72 | 1968 | 22 | 1960 | 1.17 | 1974 | SW | 62 | |
| 29 | 65 | 1988 | 26 | 1960 | 0.92 | 1964 | SW | 64 | |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
MARCH 1953 THROUGH 1995

| DAY | MAX | | MIN | | MAX | | (PEAK GUST) | | |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|------|
| | TEMP | YEAR | TEMP | YEAR | PCPN | YEAR | DIR | VEL MPH | YEAR |
| 01 | 63 | 1981 | 22 | 1971 | 1.65 | 1972 | S | 44 | |
| 02 | 70 | 1986 | 26 | 1985 | 1.42 | 1987 | S | 52 | |
| 03 | 67 | 1965 | 24 | 1989 | 1.68 | 1987 | SW | 60 | 1987 |
| 04 | 66 | 1965 | 27 | 1955 | 1.46 | 1979 | S | 55 | |
| 05 | 67 | 1965 | 26 | 1955 | 1.45 | 1972 | SW | 58 | |
| 06 | 66 | 1965 | 27 | 1956 | 1.55 | 1957 | SE | 47 | |
| 07 | 64 | 1982 | 25 | 1974 | 2.50 | 1956 | S | 64 | 1986 |
| 08 | 68 | 1953 | 27 | 1974 | 1.32 | 1957 | S | 55 | |
| 09 | 68 | 1979 | 27 | 1969 | 1.32 | 1995 | S | 67 | 1989 |
| 10 | 72 | 1965 | 25 | 1969 | 1.05 | 1971 | S | 59 | |
| 11 | 68 | 1965 | 28 | 1985 | 1.09 | 1991 | SW | 83 | |
| 12 | 67 | 1994 | 27 | 1962 | 0.83 | 1972 | S | 66 | 1980 |
| 13 | 73 | 1979 | 25 | 1969 | 1.15 | 1968 | S | 58 | 1983 |
| 14 | 65 | 1994 | 27 | 1969 | 1.11 | 1961 | W | 51 | 1980 |
| 15 | 61 | 1990 | 28 | 1988 | 1.24 | 1989 | S | 51 | |
| 16 | 65 | 1990 | 29 | 1977 | 1.09 | 1974 | S | 62 | |
| 17 | 67 | 1956 | 29 | 1971 | 0.90 | 1975 | S | 53 | |
| 18 | 64 | 1983 | 27 | 1971 | 1.12 | 1973 | S | 40 | 1984 |
| 19 | 68 | 1960 | 26 | 1965 | 0.57 | 1961 | SE | 48 | |
| 20 | 68 | 1968 | 28 | 1955 | 0.92 | 1966 | SW | 58 | 1994 |
| 21 | 66 | 1992 | 29 | 1971 | 0.92 | 1955 | SW | 47 | |
| 22 | 61 | 1978 | 28 | 1966 | 2.20 | 1993 | S | 66 | 1988 |
| 23 | 67 | 1979 | 29 | 1973 | 0.98 | 1985 | S | 62 | 1985 |
| 24 | 65 | 1960 | 27 | 1964 | 1.73 | 1988 | SW | 58 | |
| 25 | 68 | 1969 | 30 | 1993 | 1.22 | 1978 | S | 43 | 1988 |
| 26 | 72 | 1994 | 29 | 1991 | 1.34 | 1988 | S | 70 | |
| 27 | 73 | 1994 | 29 | 1991 | 2.05 | 1968 | W | 50 | |
| 28 | 70 | 1964 | 28 | 1987 | 1.94 | 1955 | S | 43 | |
| 29 | 73 | 1964 | 30 | 1973 | 1.26 | 1983 | S | 71 | |
| 30 | 68 | 1987 | 28 | 1954 | 1.31 | 1981 | SW | 43 | 1985 |
| 31 | 72 | 1987 | 30 | 1970 | 1.27 | 1959 | S | 44 | |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
APRIL 1953 THROUGH 1994

| DAY | MAX | YEAR | MIN | YEAR | MAX | YEAR | (PEAK GUST) | | YEAR |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|------|
| | TEMP | | TEMP | | PCPN | | DIR | VEL MPH | |
| 01 | 70 | 1992 | 29 | 1953 | 0.93 | 1961 | S | 38 | |
| 02 | 63 | 1987 | 30 | 1980 | 1.01 | 1954 | S | 63 | 1988 |
| 03 | 70 | 1966 | 30 | 1967 | 1.69 | 1991 | S | 52 | 1991 |
| 04 | 78 | 1966 | 30 | 1955 | 2.73 | 1991 | S | 54 | 1991 |
| 05 | 68 | 1960 | 30 | 1955 | 0.78 | 1963 | S | 55 | |
| 06 | 70 | 1985 | 32 | 1978 | 1.23 | 1962 | SW | 54 | |
| 07 | 67 | 1959 | 32 | 1988 | 1.00 | 1972 | SW | 41 | 1987 |
| 08 | 72 | 1959 | 30 | 1988 | 1.43 | 1993 | S | 44 | 1980 |
| 09 | 77 | 1959 | 32 | 1982 | 1.46 | 1971 | S | 46 | |
| 10 | 71 | 1990 | 31 | 1982 | 0.65 | 1955 | SW | 46 | |
| 11 | 69 | 1980 | 31 | 1991 | 1.21 | 1966 | S | 52 | 1982 |
| 12 | 76 | 1980 | 30 | 1968 | 1.16 | 1954 | S | 53 | |
| 13 | 76 | 1980 | 29 | 1968 | 0.61 | 1967 | SE | 53 | |
| 14 | 71 | 1981 | 31 | 1975 | 1.10 | 1968 | SW | 60 | |
| 15 | 68 | 1983 | 30 | 1967 | 1.20 | 1958 | S | 43 | 1984 |
| 16 | 69 | 1983 | 32 | 1970 | 1.19 | 1973 | S | 52 | 1992 |
| 17 | 81 | 1983 | 30 | 1967 | 0.80 | 1958 | SW | 39 | 1992 |
| 18 | 68 | 1982 | 31 | 1966 | 1.69 | 1970 | SW | 40 | |
| 19 | 74 | 1952 | 30 | 1967 | 2.42 | 1965 | S | 48 | |
| 20 | 83 | 1956 | 33 | 1987 | 0.67 | 1972 | SW | 37 | |
| 21 | 77 | 1982 | 31 | 1985 | 0.69 | 1978 | NW | 33 | 1987 |
| 22 | 64 | 1968 | 32 | 1960 | 1.00 | 1978 | S | 43 | 1985 |
| 23 | 70 | 1977 | 34 | 1992 | 0.90 | 1990 | S | 38 | |
| 24 | 71 | 1978 | 31 | 1986 | 0.89 | 1975 | SW | 49 | |
| 25 | 68 | 1992 | 29 | 1955 | 0.73 | 1990 | S | 38 | 1990 |
| 26 | 83 | 1987 | 31 | 1984 | 0.84 | 1962 | W | 41 | 1991 |
| 27 | 71 | 1983 | 30 | 1954 | 1.12 | 1962 | W | 71 | |
| 28 | 73 | 1989 | 32 | 1985 | 0.64 | 1959 | SW | 41 | 1982 |
| 29 | 78 | 1989 | 31 | 1975 | 0.70 | 1959 | S | 46 | |
| 30 | 71 | 1977 | 32 | 1986 | 0.61 | 1965 | S | 36 | |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
MAY 1953 THROUGH 1994

| DAY | MAX | YEAR | MIN | YEAR | MAX | YEAR | (PEAK GUST) | | |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|------|
| | TEMP | | TEMP | | PCPN | | DIR | VEL | MPH |
| 01 | 70 | 1971 | 30 | 1954 | 0.83 | 1984 | SW | 47 | |
| 02 | 68 | 1971 | 35 | 1965 | 0.94 | 1975 | SE | 61 | |
| 03 | 81 | 1992 | 35 | 1980 | 0.85 | 1993 | SW | 48 | |
| 04 | 86 | 1953 | 33 | 1969 | 1.60 | 1979 | S | 35 | |
| 05 | 74 | 1994 | 35 | 1988 | 0.80 | 1966 | S | 38 | |
| 06 | 80 | 1987 | 31 | 1965 | 0.62 | 1988 | NW | 32 | 1990 |
| 07 | 83 | 1987 | 33 | 1985 | 1.09 | 1983 | S | 36 | 1991 |
| 08 | 75 | 1987 | 34 | 1990 | 0.73 | 1983 | SW | 37 | |
| 09 | 70 | 1960 | 35 | 1955 | 0.53 | 1961 | NW | 33 | 1990 |
| 10 | 76 | 1994 | 34 | 1967 | 0.64 | 1978 | SE | 35 | |
| 11 | 75 | 1988 | 35 | 1985 | 0.70 | 1987 | S | 35 | |
| 12 | 86 | 1959 | 31 | 1985 | 0.77 | 1978 | SW | 37 | 1986 |
| 13 | 84 | 1973 | 33 | 1958 | 0.76 | 1978 | S | 35 | |
| 14 | 72 | 1958 | 35 | 1964 | 0.93 | 1959 | S | 30 | 1983 |
| 15 | 76 | 1976 | 35 | 1985 | 0.51 | 1971 | S | 53 | |
| 16 | 87 | 1985 | 35 | 1986 | 0.72 | 1960 | SW | 45 | |
| 17 | 83 | 1958 | 33 | 1974 | 1.32 | 1989 | W | 39 | 1989 |
| 18 | 79 | 1961 | 36 | 1966 | 1.07 | 1953 | S | 39 | |
| 19 | 81 | 1978 | 37 | 1977 | 1.60 | 1960 | NW | 33 | |
| 20 | 83 | 1963 | 38 | 1975 | 1.18 | 1990 | SW | 38 | |
| 21 | 81 | 1969 | 36 | 1973 | 1.04 | 1990 | SW | 35 | 1990 |
| 22 | 81 | 1969 | 37 | 1960 | 0.54 | 1984 | SW | 33 | |
| 23 | 79 | 1993 | 34 | 1966 | 1.48 | 1973 | SW | 38 | 1989 |
| 24 | 84 | 1993 | 39 | 1966 | 0.93 | 1974 | NW | 36 | 1993 |
| 25 | 77 | 1979 | 34 | 1967 | 0.69 | 1977 | S | 36 | |
| 26 | 78 | 1972 | 37 | 1973 | 0.48 | 1977 | SW | 35 | 1988 |
| 27 | 78 | 1983 | 39 | 1984 | 0.91 | 1969 | S | 35 | 1988 |
| 28 | 76 | 1984 | 38 | 1973 | 0.41 | 1976 | S | 44 | 1994 |
| 29 | 76 | 1973 | 37 | 1966 | 1.25 | 1969 | NW | 37 | 1986 |
| 30 | 78 | 1986 | 39 | 1979 | 0.97 | 1987 | S | 45 | 1987 |
| 31 | 81 | 1978 | 35 | 1953 | 1.74 | 1968 | S | 33 | |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
JUNE 1953 THROUGH 1994

| DAY | MAX | | MIN | | MAX | | (PEAK GUST) | | |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|-------------|
| | TEMP | YEAR | TEMP | YEAR | PCPN | YEAR | DIR | VEL MPH | YEAR |
| 01 | 90 | 1970 | 38 | 1966 | 2.07 | 1968 | S | 41 | |
| 02 | 79 | 1970 | 39 | 1987 | 0.85 | 1962 | S | 41 | 1988 |
| 03 | 84 | 1987 | 38 | 1976 | 0.96 | 1974 | SW | 37 | |
| 04 | 89 | 1989 | 37 | 1980 | 1.34 | 1974 | SW | 40 | 1987 |
| 05 | 87 | 1958 | 40 | 1988 | 0.61 | 1981 | SE | 35 | |
| 06 | 73 | 1977 | 40 | 1962 | 1.48 | 1985 | NW | 32 | 1987 |
| 07 | 77 | 1955 | 42 | 1987 | 1.60 | 1988 | N | 30 | |
| 08 | 93 | 1955 | 40 | 1988 | 1.42 | 1981 | SW | 44 | |
| 09 | 73 | 1975 | 40 | 1977 | 0.69 | 1993 | S | 37 | 1992 |
| 10 | 73 | 1986 | 39 | 1973 | 0.64 | 1983 | NW | 33 | 1986 |
| 11 | 72 | 1985 | 40 | 1988 | 0.85 | 1959 | S | 32 | 1976 |
| 12 | 78 | 1986 | 41 | 1979 | 0.70 | 1973 | S | 45 | 1994 |
| 13 | 76 | 1983 | 41 | 1959 | 0.94 | 1957 | SW | 37 | 1986 |
| 14 | 79 | 1988 | 43 | 1976 | 0.94 | 1957 | SW | 39 | 1986 |
| 15 | 91 | 1966 | 41 | 1959 | 1.11 | 1954 | SW | 35 | |
| 16 | 87 | 1958 | 40 | 1955 | 0.73 | 1973 | SW | 32 | 1991 |
| 17 | 88 | 1985 | 41 | 1987 | 0.66 | 1964 | SW | 38 | 1983 |
| 18 | 91 | 1982 | 41 | 1991 | 0.60 | 1981 | S | 38 | |
| 19 | 71 | 1973 | 38 | 1955 | 1.07 | 1954 | NW | 31 | 1988 |
| 20 | 79 | 1973 | 43 | 1989 | 0.71 | 1991 | NW | 30 | 1992 |
| 21 | 89 | 1990 | 42 | 1956 | 0.63 | 1993 | SW | 30 | 1987 |
| 22 | 89 | 1992 | 41 | 1965 | 0.86 | 1969 | NW | 31 | 1992 |
| 23 | 85 | 1989 | 44 | 1987 | 0.67 | 1969 | NW | 35 | 1986 |
| 24 | 87 | 1989 | 41 | 1988 | 1.23 | 1973 | SE | 41 | 1971 |
| 25 | 78 | 1987 | 39 | 1966 | 0.53 | 1973 | SW | 40 | |
| 26 | 73 | 1986 | 41 | 1976 | 0.74 | 1984 | S | 33 | 1982 |
| 27 | 78 | 1978 | 42 | 1965 | 0.70 | 1966 | S | 31 | 1982 |
| 28 | 72 | 1967 | 40 | 1985 | 1.06 | 1955 | NW | 28 | |
| 29 | 80 | 1974 | 42 | 1966 | 0.50 | 1963 | S | 31 | 1979 |
| 30 | 75 | 1965 | 40 | 1985 | 1.05 | 1989 | S | 38 | 1989 |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
JULY 1953 THROUGH 1994

| DAY | MAX | YEAR | MIN | YEAR | MAX | YEAR | (PEAK GUST) | | |
|-----|------------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|-------------|
| | TEMP | | TEMP | | PCPN | | DIR | VEL MPH | YEAR |
| 01 | 88 | 1967 | 43 | 1985 | 0.56 | 1983 | W | 45 | 1979 |
| 02 | 88 | 1972 | 42 | 1955 | 0.28 | 1966 | NW | 31 | |
| 03 | 89 | 1972 | 43 | 1962 | 0.53 | 1980 | S | 32 | 1980 |
| 04 | 84 | 1975 | 45 | 1957 | 0.19 | 1963 | S | 37 | 1987 |
| 05 | 83 | 1960 | 44 | 1989 | 0.31 | 1961 | SW | 31 | |
| 06 | 83 | 1953 | 43 | 1977 | 0.48 | 1959 | NW | 35 | 1986 |
| 07 | 76 | 1977 | 39 | 1971 | 1.72 | 1976 | NW | 32 | 1988 |
| 08 | 86 | 1956 | 44 | 1982 | 0.88 | 1974 | NW | 31 | 1990 |
| 09 | 80 | 1985 | 47 | 1964 | 0.50 | 1974 | S | 37 | 1979 |
| 10 | 77 | 1990 | 44 | 1967 | 0.91 | 1986 | S | 35 | |
| 11 | 100 | 1961 | 45 | 1973 | 0.43 | 1968 | NW | 33 | |
| 12 | 79 | 1961 | 44 | 1971 | 1.10 | 1983 | SW | 41 | 1988 |
| 13 | 79 | 1973 | 44 | 1954 | 1.25 | 1983 | S | 31 | 1983 |
| 14 | 82 | 1958 | 42 | 1970 | 1.06 | 1957 | NW | 32 | 1987 |
| 15 | 86 | 1979 | 45 | 1974 | 0.38 | 1978 | NW | 33 | 1990 |
| 16 | 87 | 1979 | 44 | 1969 | 0.95 | 1974 | W | 31 | 1984 |
| 17 | 85 | 1972 | 46 | 1955 | 1.06 | 1974 | NW | 30 | 1988 |
| 18 | 88 | 1956 | 43 | 1986 | 0.31 | 1987 | SW | 30 | |
| 19 | 93 | 1988 | 42 | 1977 | 0.57 | 1983 | NW | 31 | 1986 |
| 20 | 82 | 1990 | 45 | 1977 | 0.53 | 1954 | NW | 31 | 1986 |
| 21 | 92 | 1980 | 44 | 1966 | 0.42 | 1993 | SW | 36 | 1982 |
| 22 | 85 | 1984 | 44 | 1977 | 0.40 | 1993 | NW | 31 | |
| 23 | 81 | 1965 | 44 | 1977 | 0.08 | 1957 | NW | 27 | |
| 24 | 80 | 1984 | 44 | 1973 | 0.20 | 1991 | NW | 32 | |
| 25 | 85 | 1988 | 48 | 1992 | 0.65 | 1955 | NW | 32 | |
| 26 | 81 | 1981 | 44 | 1969 | 0.80 | 1955 | NW | 36 | 1988 |
| 27 | 90 | 1958 | 46 | 1976 | 0.33 | 1983 | NW | 29 | 1980 |
| 28 | 81 | 1974 | 45 | 1954 | 0.13 | 1975 | NW | 30 | 1980 |
| 29 | 79 | 1990 | 44 | 1959 | 0.30 | 1955 | NW | 33 | 1988 |
| 30 | 92 | 1959 | 47 | 1986 | 0.78 | 1985 | NW | 30 | 1988 |
| 31 | 82 | 1968 | 46 | 1970 | 0.56 | 1964 | NW | 36 | 1986 |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
AUGUST 1953 THROUGH 1994

| DAY | MAX | | MIN | | MAX | | (PEAK GUST) | | |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|-------------|
| | TEMP | YEAR | TEMP | YEAR | PCPN | YEAR | DIR | VEL MPH | YEAR |
| 01 | 75 | 1993 | 43 | 1987 | 0.42 | 1989 | NW | 36 | 1987 |
| 02 | 81 | 1993 | 45 | 1969 | 1.64 | 1956 | NW | 37 | 1986 |
| 03 | 87 | 1993 | 43 | 1969 | 0.36 | 1962 | NW | 32 | 1987 |
| 04 | 86 | 1990 | 43 | 1982 | 0.09 | 1962 | SW | 31 | 1990 |
| 05 | 76 | 1958 | 45 | 1982 | 0.09 | 1962 | NW | 28 | |
| 06 | 88 | 1972 | 44 | 1959 | 0.69 | 1992 | S | 32 | 1992 |
| 07 | 94 | 1978 | 48 | 1990 | 0.49 | 1985 | S | 37 | |
| 08 | 88 | 1981 | 45 | 1988 | 1.27 | 1994 | S | 39 | 1991 |
| 09 | 96 | 1981 | 44 | 1975 | 0.10 | 1964 | NW | 28 | |
| 10 | 88 | 1977 | 46 | 1970 | 0.25 | 1957 | W | 28 | |
| 11 | 95 | 1992 | 47 | 1966 | 0.45 | 1978 | NW | 29 | 1979 |
| 12 | 80 | 1977 | 43 | 1966 | 0.75 | 1965 | SW | 28 | 1989 |
| 13 | 86 | 1985 | 45 | 1955 | 0.76 | 1976 | W | 35 | |
| 14 | 77 | 1962 | 44 | 1984 | 0.25 | 1993 | NW | 30 | |
| 15 | 85 | 1967 | 45 | 1982 | 0.65 | 1976 | NW | 30 | |
| 16 | 87 | 1985 | 44 | 1973 | 0.52 | 1976 | S | 35 | 1984 |
| 17 | 74 | 1982 | 41 | 1973 | 0.36 | 1990 | S | 30 | 1980 |
| 18 | 80 | 1972 | 40 | 1973 | 0.58 | 1968 | NW | 31 | 1987 |
| 19 | 79 | 1967 | 39 | 1973 | 0.55 | 1965 | NW | 30 | 1984 |
| 20 | 89 | 1966 | 45 | 1984 | 0.12 | 1971 | NW | 31 | 1987 |
| 21 | 76 | 1988 | 42 | 1973 | 0.46 | 1960 | NW | 33 | 1987 |
| 22 | 88 | 1988 | 41 | 1987 | 0.31 | 1968 | S | 40 | 1993 |
| 23 | 82 | 1985 | 44 | 1959 | 1.50 | 1968 | SE | 30 | |
| 24 | 86 | 1964 | 45 | 1992 | 1.58 | 1953 | S | 43 | |
| 25 | 85 | 1967 | 43 | 1992 | 0.36 | 1977 | S | 31 | |
| 26 | 81 | 1986 | 42 | 1991 | 0.24 | 1953 | NW | 30 | 1992 |
| 27 | 85 | 1972 | 43 | 1955 | 1.09 | 1975 | SW | 31 | 1991 |
| 28 | 76 | 1978 | 42 | 1985 | 0.74 | 1983 | E | 37 | 1983 |
| 29 | 80 | 1976 | 42 | 1985 | 1.02 | 1977 | S | 46 | 1991 |
| 30 | 84 | 1968 | 46 | 1973 | 1.18 | 1954 | S | 32 | 1990 |
| 31 | 86 | 1972 | 43 | 1973 | 0.94 | 1961 | SW | 43 | |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
SEPTEMBER 1953 THROUGH 1994

| DAY | MAX | YEAR | MIN | YEAR | MAX | YEAR | (PEAK GUST) | | YEAR |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|------|
| | TEMP | | TEMP | | PCPN | | DIR | VEL MPH | |
| 01 | 90 | 1972 | 38 | 1973 | 1.14 | 1971 | S | 46 | |
| 02 | 95 | 1972 | 41 | 1984 | 0.42 | 1977 | S | 36 | |
| 03 | 85 | 1953 | 39 | 1956 | 1.83 | 1979 | SW | 32 | |
| 04 | 92 | 1955 | 41 | 1956 | 1.68 | 1959 | SW | 48 | |
| 05 | 87 | 1975 | 43 | 1969 | 0.92 | 1984 | SW | 40 | |
| 06 | 90 | 1958 | 40 | 1992 | 1.13 | 1984 | SW | 43 | |
| 07 | 87 | 1958 | 38 | 1992 | 0.38 | 1964 | S | 37 | 1979 |
| 08 | 83 | 1960 | 40 | 1988 | 1.46 | 1979 | NW | 31 | 1988 |
| 09 | 85 | 1960 | 38 | 1970 | 1.15 | 1956 | SE | 36 | |
| 10 | 89 | 1973 | 38 | 1970 | 1.44 | 1962 | S | 48 | |
| 11 | 85 | 1975 | 37 | 1988 | 0.88 | 1982 | NW | 30 | 1986 |
| 12 | 86 | 1975 | 38 | 1986 | 0.43 | 1962 | S | 35 | 1985 |
| 13 | 91 | 1957 | 33 | 1970 | 0.54 | 1976 | NW | 40 | |
| 14 | 89 | 1967 | 37 | 1986 | 0.68 | 1987 | S | 38 | 1987 |
| 15 | 77 | 1991 | 38 | 1969 | 1.92 | 1955 | W | 30 | 1987 |
| 16 | 85 | 1994 | 41 | 1978 | 0.87 | 1969 | SW | 35 | 1985 |
| 17 | 86 | 1991 | 36 | 1965 | 1.26 | 1969 | NW | 29 | 1987 |
| 18 | 82 | 1991 | 38 | 1988 | 0.86 | 1978 | S | 40 | 1988 |
| 19 | 83 | 1974 | 36 | 1983 | 1.22 | 1973 | S | 38 | 1980 |
| 20 | 79 | 1953 | 40 | 1985 | 1.10 | 1969 | S | 48 | |
| 21 | 85 | 1994 | 39 | 1993 | 1.07 | 1972 | SW | 47 | |
| 22 | 89 | 1989 | 39 | 1956 | 0.71 | 1978 | S | 38 | 1992 |
| 23 | 82 | 1974 | 38 | 1993 | 1.21 | 1992 | S | 55 | 1986 |
| 24 | 85 | 1991 | 36 | 1970 | 0.98 | 1960 | S | 33 | 1988 |
| 25 | 80 | 1980 | 38 | 1972 | 0.53 | 1966 | S | 56 | 1988 |
| 26 | 85 | 1967 | 39 | 1972 | 0.75 | 1956 | S | 37 | 1988 |
| 27 | 82 | 1970 | 33 | 1972 | 0.70 | 1953 | SW | 46 | |
| 28 | 83 | 1989 | 33 | 1983 | 0.85 | 1981 | SW | 60 | |
| 29 | 84 | 1987 | 34 | 1983 | 0.55 | 1977 | SW | 32 | 1984 |
| 30 | 86 | 1987 | 34 | 1985 | 2.41 | 1953 | S | 50 | |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
OCTOBER 1953 THROUGH 1994

| DAY | MAX | YEAR | MIN | YEAR | MAX | YEAR | (PEAK GUST) | | YEAR |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|-------------|
| | TEMP | | TEMP | | PCPN | | DIR | VEL MPH | |
| 01 | 77 | 1988 | 35 | 1983 | 1.74 | 1967 | SW | 41 | |
| 02 | 85 | 1980 | 34 | 1968 | 0.87 | 1967 | S | 39 | |
| 03 | 73 | 1966 | 34 | 1977 | 0.60 | 1975 | S | 48 | 1975 |
| 04 | 80 | 1980 | 33 | 1973 | 1.32 | 1955 | S | 52 | |
| 05 | 81 | 1964 | 34 | 1992 | 1.77 | 1981 | SE | 52 | 1981 |
| 06 | 85 | 1987 | 38 | 1970 | 1.42 | 1981 | SW | 46 | |
| 07 | 78 | 1976 | 32 | 1983 | 1.35 | 1958 | SW | 44 | |
| 08 | 81 | 1971 | 33 | 1985 | 2.80 | 1962 | S | 69 | |
| 09 | 78 | 1979 | 31 | 1985 | 1.43 | 1955 | SW | 40 | |
| 10 | 83 | 1991 | 34 | 1983 | 1.36 | 1959 | SE | 40 | |
| 11 | 78 | 1987 | 33 | 1969 | 0.49 | 1962 | SW | 56 | |
| 12 | 76 | 1982 | 34 | 1981 | 0.80 | 1957 | SW | 96 | 1962 |
| 13 | 79 | 1982 | 33 | 1966 | 0.71 | 1984 | SW | 44 | 1984 |
| 14 | 78 | 1978 | 35 | 1992 | 0.94 | 1990 | S | 38 | |
| 15 | 78 | 1954 | 32 | 1992 | 0.64 | 1968 | S | 41 | 1988 |
| 16 | 75 | 1960 | 33 | 1983 | 0.74 | 1956 | SW | 44 | 1991 |
| 17 | 76 | 1959 | 31 | 1984 | 1.60 | 1975 | SW | 40 | |
| 18 | 79 | 1978 | 33 | 1987 | 2.94 | 1958 | S | 53 | |
| 19 | 75 | 1964 | 35 | 1963 | 1.42 | 1966 | S | 65 | 1971 |
| 20 | 70 | 1964 | 35 | 1976 | 1.34 | 1985 | S | 45 | 1994 |
| 21 | 71 | 1965 | 33 | 1957 | 1.48 | 1966 | SW | 74 | |
| 22 | 75 | 1965 | 34 | 1961 | 1.39 | 1970 | S | 59 | 1982 |
| 23 | 77 | 1965 | 34 | 1991 | 1.01 | 1960 | S | 51 | |
| 24 | 73 | 1964 | 32 | 1954 | 1.77 | 1979 | S | 60 | 1977 |
| 25 | 68 | 1964 | 33 | 1970 | 2.23 | 1986 | S | 47 | 1994 |
| 26 | 66 | 1993 | 32 | 1978 | 2.41 | 1994 | S | 63 | 1994 |
| 27 | 69 | 1953 | 29 | 1971 | 1.85 | 1960 | S | 54 | |
| 28 | 72 | 1962 | 26 | 1971 | 3.52 | 1982 | S | 44 | 1982 |
| 29 | 72 | 1958 | 27 | 1971 | 1.38 | 1975 | SW | 47 | |
| 30 | 67 | 1954 | 29 | 1972 | 1.09 | 1986 | S | 47 | 1986 |
| 31 | 70 | 1954 | 34 | 1984 | 2.96 | 1994 | S | 67 | 1994 |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
NOVEMBER 1953 THROUGH 1994

| DAY | MAX | YEAR | MIN | YEAR | MAX | YEAR | (PEAK GUST) | | |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|------|
| | TEMP | | TEMP | | PCPN | | DIR | VEL MPH | YEAR |
| 01 | 71 | 1969 | 29 | 1973 | 1.30 | 1977 | S | 59 | 1984 |
| 02 | 71 | 1970 | 30 | 1973 | 2.01 | 1955 | SW | 62 | 1988 |
| 03 | 68 | 1970 | 30 | 1957 | 2.59 | 1983 | SE | 75 | |
| 04 | 66 | 1980 | 29 | 1961 | 2.12 | 1969 | W | 46 | |
| 05 | 69 | 1987 | 29 | 1971 | 2.14 | 1988 | S | 54 | 1988 |
| 06 | 64 | 1980 | 30 | 1957 | 1.89 | 1980 | S | 59 | 1980 |
| 07 | 65 | 1980 | 30 | 1993 | 1.32 | 1968 | SE | 46 | |
| 08 | 65 | 1976 | 29 | 1977 | 2.53 | 1973 | S | 52 | |
| 09 | 64 | 1953 | 29 | 1978 | 1.77 | 1961 | SE | 54 | |
| 10 | 63 | 1976 | 29 | 1978 | 2.23 | 1984 | SW | 48 | |
| 11 | 63 | 1990 | 24 | 1978 | 1.89 | 1981 | S | 51 | 1988 |
| 12 | 63 | 1976 | 21 | 1955 | 2.16 | 1955 | SW | 51 | |
| 13 | 63 | 1974 | 21 | 1955 | 1.84 | 1966 | S | 55 | 1983 |
| 14 | 62 | 1979 | 15 | 1955 | 1.41 | 1981 | SW | 68 | 1981 |
| 15 | 60 | 1981 | 17 | 1955 | 1.27 | 1973 | S | 63 | 1981 |
| 16 | 65 | 1978 | 24 | 1955 | 1.46 | 1953 | S | 66 | 1991 |
| 17 | 63 | 1967 | 28 | 1994 | 3.41 | 1959 | S | 52 | |
| 18 | 59 | 1980 | 24 | 1994 | 2.19 | 1958 | S | 60 | 1986 |
| 19 | 64 | 1987 | 24 | 1977 | 2.51 | 1962 | S | 61 | 1991 |
| 20 | 63 | 1987 | 27 | 1961 | 2.37 | 1959 | S | 64 | |
| 21 | 66 | 1954 | 25 | 1985 | 2.32 | 1961 | S | 62 | 1980 |
| 22 | 60 | 1954 | 22 | 1985 | 2.35 | 1959 | S | 60 | 1988 |
| 23 | 62 | 1956 | 21 | 1985 | 2.73 | 1986 | SW | 62 | 1986 |
| 24 | 61 | 1956 | 19 | 1985 | 2.94 | 1990 | S | 67 | |
| 25 | 60 | 1956 | 25 | 1985 | 2.16 | 1972 | SW | 85 | |
| 26 | 59 | 1980 | 27 | 1985 | 2.31 | 1955 | S | 59 | 1986 |
| 27 | 61 | 1980 | 25 | 1976 | 1.59 | 1984 | SW | 51 | |
| 28 | 57 | 1989 | 27 | 1985 | 1.04 | 1971 | SW | 60 | |
| 29 | 60 | 1964 | 26 | 1985 | 1.33 | 1968 | SW | 55 | |
| 30 | 61 | 1958 | 24 | 1985 | 3.10 | 1975 | S | 56 | 1994 |

INDICATES RECORD FOR THE MONTH

Calendar Day Records
DECEMBER 1953 THROUGH 1994

| DAY | MAX | YEAR | MIN | YEAR | MAX | YEAR | (PEAK GUST) | | YEAR |
|-----|-----------|-------------|-----------|-------------|-------------|-------------|-------------|-----------|-------------|
| | TEMP | | TEMP | | PCPN | | DIR | VEL MPH | |
| 01 | 62 | 1958 | 22 | 1985 | 2.33 | 1979 | S | 67 | 1987 |
| 02 | 60 | 1958 | 27 | 1976 | 2.62 | 1977 | S | 60 | 1987 |
| 03 | 63 | 1979 | 28 | 1994 | 1.95 | 1975 | S | 67 | 1982 |
| 04 | 60 | 1981 | 24 | 1994 | 2.30 | 1989 | S | 64 | 1990 |
| 05 | 57 | 1987 | 24 | 1972 | 2.14 | 1981 | S | 65 | |
| 06 | 57 | 1987 | 16 | 1972 | 1.43 | 1970 | S | 54 | |
| 07 | 57 | 1962 | 10 | 1972 | 1.35 | 1975 | SW | 51 | |
| 08 | 60 | 1962 | 06 | 1972 | 1.45 | 1953 | S | 61 | 1993 |
| 09 | 61 | 1981 | 17 | 1972 | 1.92 | 1953 | S | 72 | 1993 |
| 10 | 62 | 1957 | 15 | 1972 | 1.99 | 1977 | S | 67 | |
| 11 | 57 | 1980 | 25 | 1972 | 2.91 | 1955 | SE | 65 | |
| 12 | 58 | 1960 | 12 | 1972 | 1.45 | 1973 | S | 69 | |
| 13 | 59 | 1969 | 11 | 1972 | 1.44 | 1977 | SW | 58 | |
| 14 | 62 | 1962 | 25 | 1967 | 1.62 | 1964 | S | 56 | |
| 15 | 62 | 1980 | 26 | 1965 | 1.41 | 1970 | S | 79 | 1982 |
| 16 | 61 | 1980 | 15 | 1964 | 1.67 | 1994 | S | 67 | |
| 17 | 60 | 1979 | 15 | 1964 | 2.39 | 1972 | NW | 72 | |
| 18 | 58 | 1979 | 25 | 1992 | 1.20 | 1955 | SW | 70 | |
| 19 | 57 | 1994 | 21 | 1990 | 1.98 | 1994 | S | 67 | 1994 |
| 20 | 57 | 1980 | 09 | 1990 | 1.73 | 1955 | SW | 77 | |
| 21 | 60 | 1980 | 06 | 1990 | 2.69 | 1955 | SW | 55 | |
| 22 | 58 | 1963 | 15 | 1983 | 1.60 | 1964 | S | 54 | |
| 23 | 58 | 1963 | 13 | 1983 | 2.28 | 1975 | SW | 52 | |
| 24 | 63 | 1963 | 18 | 1983 | 1.58 | 1973 | SW | 65 | |
| 25 | 63 | 1980 | 24 | 1987 | 1.72 | 1986 | S | 51 | 1994 |
| 26 | 64 | 1980 | 24 | 1985 | 3.59 | 1974 | S | 59 | 1994 |
| 27 | 58 | 1980 | 23 | 1985 | 1.16 | 1994 | S | 67 | |
| 28 | 60 | 1980 | 18 | 1978 | 1.29 | 1986 | S | 51 | |
| 29 | 60 | 1963 | 16 | 1990 | 2.70 | 1988 | SW | 61 | |
| 30 | 60 | 1980 | 19 | 1990 | 1.40 | 1954 | S | 58 | 1988 |
| 31 | 60 | 1963 | 11 | 1978 | 2.60 | 1968 | W | 56 | |

INDICATES RECORD FOR THE MONTH

ANNUAL NORMALS, MEANS, AND EXTREMES

Temperature (F)

| | |
|---------------------------|----------------------------------|
| Mean Annual Temperature | 50.9 |
| Mean Daily Maximum | 58.9 |
| Mean Daily Minimum | 43.4 |
| All-Time High Temperature | 100 Jul 11, 1961 |
| All-Time Low Temperature | 06 Dec 8, 1990 & Dec 21, 1972 |

Normal Degree Days (based on 65)

| | |
|---------|------|
| Heating | 5158 |
| Cooling | 8 |

Mean Number of Days

| | |
|--|-------|
| Sunrise to Sunset | |
| Clear | 49.5 |
| Partly Cloudy | 76.5 |
| Cloudy | 239.2 |
| Precipitation .01 Inch or More | 190.3 |
| Snow, Ice Pellets, Hail 1.0 Inch or More | 1.4 |
| Thunderstorms | 7.1 |
| Maximum | |
| 90 degrees and above | 0.5 |
| 32 degrees and below | 1.5 |
| Minimum | |
| 32 degrees and below | 37.4 |
| 0 degrees and below | 0.0 |

Precipitation (inches)

| | |
|-------------------------|----------------|
| Water Equivalent | |
| Average Annual Normal | 66.40 |
| Maximum Monthly | 21.89 Feb 1961 |
| Minimum Monthly | 0.01 Jul 1960 |
| Maximum in 24 hours | 5.14 Jan 1990 |
| Snow, Ice Pellets, Hail | |
| Maximum Monthly | 26.30 Jan 1969 |
| Maximum in 24 hours | 10.80 Jan 1971 |

Wind

| | |
|------------------------|--------------------|
| Mean Speed (mph) | 8.5 |
| Prevailing Direction | SE |
| Fastest 1 Minute (mph) | South 55, Jan 1971 |
| Peak Gust (mph) | South 83, Dec 1993 |

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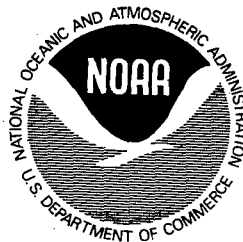
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