NOAA TECHNICAL MEMORANDUM
NWS WR-239

CLIMATE OF PORTLAND, OREGON
First Revision

Clinton C. D. Rockey
National Weather Service Forecast Office
Portland, Oregon

PROPERTY OF
NOAA Library E/OC43
7600 Sand Point Way NE
Seattle WA 98115-0070

October 1999

QC
995
.U68
no.239
1st
Rev.
1999

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service

NOAA TECHNICAL MEMORANDA
National Weather Service, Western Region Subseries

The National Weather Service (NWS) Western Region (WR) Subseries provides an informal medium for the documentation and quick dissemination of results not appropriate, or not yet ready, for formal publication. The series is used to report on work in progress, to describe technical procedures and practices, or to relate progress to a limited audience. These Technical Memoranda will report on investigations devoted primarily to regional and local problems of interest mainly to personnel, and hence will not be widely distributed.

Papers 1 to 25 are in the former series, ESSA Technical Memoranda, Western Region Technical Memoranda (WRTM); papers 24 to 59 are in the former series, ESSA Technical Memoranda, Weather Bureau Technical Memoranda (WBTM). Beginning with 60, the papers are part of the series, NOAA Technical Memoranda NWS. Out-of-print memoranda are not listed.

Papers 2 to 22, except for 5 (revised edition), are available from the National Weather Service Western Region, Scientific Services Division, 125 South State Street - Rm 1311, Salt Lake City, Utah 84138-1102. Paper 5 (revised edition), and all others beginning with 25 are available from the National Technical Information Service, U.S. Department of Commerce, Sills Building, 5285 Port Royal Road, Springfield, Virginia 22161. Prices vary for all paper copies; microfiche are $3.50. Order by accession number shown in parentheses at end of each entry.

ESSA Technical Memoranda (WRTM)

2 Climatological Precipitation Probabilities. Compiled by Lucianne Miller, December 1965.
3 Western Region Pre- and Post-FP-3 Program, December 1, 1965, to February 20, 1966. Edward D. Diemer, March 1966.
5 Station Descriptions of Local Effects on Synoptic Weather Patterns. Philip Williams, Jr., April 1966 (Revised November 1967, October 1969). (PB-17800)
8 Interpreting the RAREP. Herbert P. Benner, May 1966 (Revised January 1967).
11 Some Electrical Processes in the Atmosphere. J. Latham, June 1966.
17 A Digitalized Summary of Radar Echoes within 100 Miles of Sacramento, California. J. A. Youngberg and L. B. Overaas, December 1966.
21 An Objective Aid for Forecasting the End of East Winds in the Columbia Gorge, July through October. D. John Coparanis, April 1967.
22 Derivation of Radar Horizons in Mountainous Terrain. Roger G. Pappas, April 1967.

ESSA Technical Memoranda, Weather Bureau Technical Memoranda (WBTM)

25 Verification of Operation Probability of Precipitation Forecasts, April 1966-March 1967. W. W. Dickey, October 1967. (PB-176240)
26 A Study of Winds in the Lake Mead Recreation Area. R. P. Augulis, January 1968. (PB-177830)
28 Weather Extremes. R. J. Schmidli, April 1968 (Revised March 1986). (PB86 177672/AS). (Revised October 1991 - PB92-115062/AS)
29 Small-Scale Analysis and Prediction. Philip Williams, Jr., May 1968. (PB178425)
30 Numerical Weather Prediction and Synoptic Meteorology. CPT Thomas D. Murphy, USAF, May 1968. (AD 673365)
31 Precipitation Detection Probabilities by Salt Lake ARTC Radars. Robert K. Belesky, July 1968. (PB 179084)
32 Probability Forecasting--A Problem Analysis with Reference to the Portland Fire Weather District. Harold S. Ayer, July 1968. (PB 179289)
36 Temperature Trends in Sacramento--Another Heat Island. Anthony D. Lentini, February 1969. (PB 183055)
37 Disposal of Logging Residues Without Damage to Air Quality. Owen P. Cramer, March 1969. (PB 183057)
39 Upper-Air Lows Over Northwestern United States. A.L. Jacobson, April 1969. PB 184296)
40 The Man-Machine Mix in Applied Weather Forecasting in the 1970s. L.W. Snellman, August 1969. (PB 185068)
43 Forecasting Maximum Temperatures at Helena, Montana. David E. Olsen, October 1969. (PB 185762)
44 Estimated Return Periods for Short-Duration Precipitation in Arizona. Paul C. Kangieser, October 1969. (PB 187763)
46 Applications of the Net Radiometer to Short-Range Fog and Stratus Forecasting at Eugene, Oregon. L. Yee and E. Bates, December 1969. (PB 190476)
47 Statistical Analysis as a Flood Routing Tool. Robert J.C. Burnash, December 1969. (PB 188744)
48 Tsunami. Richard P. Augulis, February 1970. (PB 190157)
49 Predicting Precipitation Type. Robert J.C. Burnash and Floyd E. Hug, March 1970. (PB 190962)
50 Statistical Report on Aeroallergens (Pollens and Molds) Fort Huachuca, Arizona, 1969. Wayne S. Johnson, April 1970. (PB 191743)
51 Western Region Sea State and Surf Forecaster's Manual. Gordon C. Shields and Gerald B. Burdwell, July 1970. (PB 193102)
52 Sacramento Weather Radar Climatology. R.G. Pappas and C. M. Veliquette, July 1970. (PB 193347)
54 A Refinement of the Vorticity Field to Delineate Areas of Significant Precipitation. Barry B. Aronovitch, August 1970.
55 Application of the SSARR Model to a Basin without Discharge Record. Vail Schermerhorn and Donal W. Kuehl, August 1970. (PB 194394)
56 Areal Coverage of Precipitation in Northwestern Utah. Philip Williams, Jr., and Werner J. Heck, September 1970. (PB 194389)
57 Preliminary Report on Agricultural Field Burning vs. Atmospheric Visibility in the Willamette Valley of Oregon. Earl M. Bates and David O. Chilcote, September 1970. (PB 194710)
58 Air Pollution by Jet Aircraft at Seattle-Tacoma Airport. Wallace R. Donaldson, October 1970. (COM 71 00017)
59 Application of PE Model Forecast Parameters to Local-Area Forecasting. Leonard W. Snellman, October 1970. (COM 71 00016)
60 An Aid for Forecasting the Minimum Temperature at Medford, Oregon, Arthur W. Fritz, October 1970. (COM 71 00120)
63 700-mb Warm Air Advection as a Forecasting Tool for Montana and Northern Idaho. Norris E. Woerner, February 1971. (COM 71 00349)
64 Wind and Weather Regimes at Great Falls, Montana. Warren B. Price, March 1971.
65 Climate of Sacramento, California. Laura Masters-Bevan. NWSO Sacramento, November 1998 (6th Revision. (PB99-118424)
66 A Preliminary Report on Correlation of ARTCC Radar Echoes and Precipitation. Wilbur K. Hall, June 1971. (COM 71 00829)
69 National Weather Service Support to Soaring Activities. Ellis Burton, August 1971. (COM 71 00956)
71 Western Region Synoptic Analysis-Problems and Methods. Philip Williams, Jr., February 1972. (COM 72 10433)
74 Thunderstorms and Hail Days Probabilities in Nevada. Clarence M. Sakamoto, April 1972. (COM 72 10554)
75 A Study of the Low Level Jet Stream of the San Joaquin Valley. Ronald A. Willis and Philip Williams, Jr., May 1972. (COM 72 10707)
76 Monthly Climatological Charts of the Behavior of Fog and Low Stratus at Los Angeles International Airport. Donald M. Gales, July 1972. (COM 72 11140)
77 A Study of Radar Echo Distribution in Arizona During July and August. John E. Hales, Jr., July 1972. (COM 72 11136)
78 Forecasting Precipitation at Bakersfield, California, Using Pressure Gradient Vectors. Earl T. Riddiough, July 1972. (COM 72 11146)
79 Climate of Stockton, California. Robert C. Nelson, July 1972. (COM 72 10920)
80 Estimation of Number of Days Above or Below Selected Temperatures. Clarence M. Sakamoto, October 1972. (COM 72 10021)
81 An Aid for Forecasting Summer Maximum Temperatures at Seattle, Washington. Edgar G. Johnson, November 1972. (COM 73 10150)
82 Flash Flood Forecasting and Warning Program in the Western Region. Philip Williams, Jr., Chester L. Glenn, and Roland L. Raetz, December 1972, (Revised March 1978). (COM 73 10251)
83 A comparison of Manual and Semiautomatic Methods of Digitizing Analog Wind Records. Glenn E. Rasch, March 1973. (COM 73 10669)
86 Conditional Probabilities for Sequences of Wet Days at Phoenix, Arizona. Paul C. Kangieser, June 1973. (COM 73 11264)
87 A Refinement of the Use of K-Values in Forecasting Thunderstorms in Washington and Oregon. Robert Y.G. Lee, June 1973. (COM 73 11276)
89 Objective Forecast Precipitation Over the Western Region of the United States. Julia N. Paegle and Larry P. Kierulff, September 1973. (COM 73 11946/3AS)
91 Arizona "Eddy" Tornadoes. Robert S. Ingram, October 1973. (COM 73 10485)
92 Smoke Management in the Willamette Valley. Earl M. Bates, May 1974. (COM 74 11277/AS)
93 An Operational Evaluation of 500-mb Type Regression Equations. Alexander E. MacDonald, June 1974. (COM 74 11407/AS)
94 Conditional Probability of Visibility Less than One-Half Mile in Radiation Fog at Fresno, California. John D. Thomas, August 1974. (COM 74 11555/AS)
95 Climate of Flagstaff, Arizona. Paul W. Sorenson, and updated by Reginald W. Preston, January 1987. (PB87 143160/AS)
96 Map type Precipitation Probabilities for the Western Region. Glenn E. Rasch and Alexander E. MacDonald, February 1975. (COM 75 10428/AS)
97 Eastern Pacific Cut-Off Low of April 21-28, 1974. William J. Alder and George R. Miller, January 1976. (PB 250 711/AS)
98 Study on a Significant Precipitation Episode in Western United States. Ira S. Brenner, April 1976. (COM 75 10719/AS)
99 A Study of Flash Flood Susceptibility-A Basin in Southern Arizona. Gerald Williams, August 1975. (COM 75 11360/AS)
102 A Set of Rules for Forecasting Temperatures in Napa and Sonoma Counties. Wesley L. Tuft, October 1975. (PB 246 902/AS)
103 Application of the National Weather Service Flash-Flood Program in the Western Region. Gerald Williams, January 1976. (PB 253 053/AS)
104 Objective Aids for Forecasting Minimum Temperatures at Reno, Nevada, During the Summer Months. Christopher D. Hill, January 1976. (PB 252 866/AS)
105 Forecasting the Mono Wind. Charles P. Ruscha, Jr., February 1976. (PB 254 650)
106 Use of MOS Forecast Parameters in Temperature Forecasting. John C. Plankinton, Jr., March 1976. (PB 254 649)
107 Map Types as Aids in Using MOS PoPs in Western United States. Ira S. Brenner, August 1976. (PB 259 594)
108 Other Kinds of Wind Shear. Christopher D. Hill, August 1976. (PB 260 437/AS)
109 Forecasting North Winds in the Upper Sacramento Valley and Adjoining Forests. Christopher E. Fontana, September 1976. (PB 273 677/AS)
110 Cool Inflow as a Weakening Influence on Eastern Pacific Tropical Cyclones. William J. Denney, November 1976. (PB 264 655/AS)
112 The MAN/MOS Program. Alexander E. MacDonald, February 1977. (PB 265 941/AS)
113 Winter Season Minimum Temperature Formula for Bakersfield, California, Using Multiple Regression. Michael J. Oard, February 1977. (PB 273 694/AS)
114 Tropical Cyclone Kathleen. James R. Fors, February 1977. (PB 273 676/AS)
116 A Study of Wind Gusts on Lake Mead. Bradley Colman, April 1977. (PB 268 847)
117 The Relative Frequency of Cumulonimbus Clouds at the Nevada Test Site as a Function of K-Value. R.F. Quiring, April 1977. (PB 272 831)
118 Moisture Distribution Modification by Upward Vertical Motion. Ira S. Brenner, April 1977. (PB 268 740)
119 Relative Frequency of Occurrence of Warm Season Echo Activity as a Function of Stability Indices Computed from the Yucca Flat, Nevada, Rawinsonde. Darryl Randerson, June 1977. (PB 271 290/AS)
121 Climatological Prediction of Cumulonimbus Clouds in the Vicinity of the Yucca Flat Weather Station. R.F. Quiring, June 1977. (PB 271 704/AS)
122 A Method for Transforming Temperature Distribution to Normality. Morris S. Webb, Jr., June 1977. (PB 271 742/AS)
124 Statistical Guidance for Prediction of Eastern North Pacific Tropical Cyclone Motion - Part I. Charles J. Neumann and Preston W. Leftwich, August 1977. (PB 272 661)
125 Statistical Guidance on the Prediction of Eastern North Pacific Tropical Cyclone Motion - Part II. Preston W. Leftwich and Charles J. Neumann, August 1977. (PB 273 155/AS)
126 Climate of San Francisco. E. Jan Null, February 1978. (Revised by George T. Pericht, April 1988 and January 1995). (PB88 208624/AS)
127 Development of a Probability Equation for Winter-Type Precipitation Patterns in Great Falls, Montana. Kenneth B. Mielke, February 1978. (PB 281 387/AS)
128 Hand Calculator Program to Compute Parcel Thermal Dynamics. Dan Gudgel, April 1978. (PB 283 080/AS)
129 Fire whirls. David W. Goens, May 1978. (PB 283 866/AS)
130 Flash-Flood Procedure. Ralph C. Hatch and Gerald Williams, May 1978. (PB 286 014/AS)
131 Automated Fire-Weather Forecasts. Mark A. Mollner and David E. Olsen, September 1978. (PB 289 916/AS)
132 Estimates of the Effects of Terrain Blocking on the Los Angeles WSR-74C Weather Radar. R.G. Pappas, R.Y. Lee, B.W. Finke, October 1978. (PB 289767/AS)
133 Spectral Techniques in Ocean Wave Forecasting. John A. Jannuzzi, October 1978. (PB291317/AS)
134 Solar Radiation. John A. Jannuzzi, November 1978. (PB291195/AS)
135 Application of a Spectrum Analyzer in Forecasting Ocean Swell in Southern California Coastal Waters. Lawrence P. Kierulff, January 1979. (PB292716/AS)
136 Basic Hydrologic Principles. Thomas L. Dietrich, January 1979. (PB292247/AS)
137 LFM 24-Hour Prediction of Eastern Pacific Cyclones Refined by Satellite Images. John R. Zimmerman and Charles P. Ruscha, Jr., January 1979. (PB294324/AS)
138 A Simple Analysis/Diagnosis System for Real Time Evaluation of Vertical Motion. Scott Heflick and James R. Fors, February 1979. (PB294216/AS)
139 Aids for Forecasting Minimum Temperature in the Wenatchee Frost District. Robert S. Robinson, April 1979. (PB298339/AS)
140 Influence of Cloudiness on Summertime Temperatures in the Eastern Washington Fire Weather district. James Holcomb, April 1979. (PB298674/AS)
141 Comparison of LFM and MFM Precipitation Guidance for Nevada During Doreen. Christopher Hill, April 1979. (PB298613/AS)
142 The Usefulness of Data from Mountaintop Fire Lookout Stations in Determining Atmospheric Stability. Jonathan W. Corey, April 1979. (PB298899/AS)
143 The Depth of the Marine Layer at San Diego as Related to Subsequent Cool Season Precipitation Episodes in Arizona. Ira S. Brenner, May 1979. (PB298817/AS)
144 Arizona Cool Season Climatological Surface Wind and Pressure Gradient Study. Ira S. Brenner, May 1979. (PB298900/AS)
146 The BART Experiment. Morris S. Webb, October 1979. (PB80 155112)
147 Occurrence and Distribution of Flash Floods in the Western Region. Thomas L. Dietrich, December 1979. (PB80 160344)
149 Misinterpretations of Precipitation Probability Forecasts. Allan H. Murphy, Sarah Lichtenstein, Baruch Fischhoff, and Robert L. Winkler, February 1980. (PB80 174576)
150 Annual Data and Verification Tabulation - Eastern and Central North Pacific Tropical Storms and Hurricanes 1979. Emil B. Gunther and Staff, EPHC, April 1980. (PB80 220486)

NOAA TECHNICAL MEMORANDUM
NWS WR-239

CLIMATE OF PORTLAND, OREGON
First Revision

Clinton C. D. Rockey
National Weather Service Forecast Office
Portland, Oregon

October 1999

UNITED STATES
DEPARTMENT OF COMMERCE
William M. Daley, Secretary

National Oceanic and
Atmospheric Administration
D. James Baker, Under
Secretary and Administrator

National Weather Service
John J. Kelly, Jr., Assistant
Administrator for Weather Services

This publication has been reviewed and is approved for publication by Scientific Services Division, Western Region

Delain A. Edman, Chief
Scientific Services Division
Salt Lake City, Utah

TABLE OF CONTENTS

Climate of Portland, Oregon 1

Station History 2

Portland Observing Station Location and History 3

Map of North Willamette Valley and the Portland Metropolitan Area 4

TEMPERATURE RECORDS AND DATA 5

Monthly Average and Extreme Temperature Graphs 6

Daily Temperature Normals and Records 7

Number of Days Per Month With Max Temp of 90 Deg or More and 32 Deg or Less 19

Number of Days Per Month with Min Temp of 32 Deg or Less and 15 Deg or Less 19

Cumulative Frequency of Maximum and Minimum Temperatures 20

Longest Hot Spells and Cold Snaps 21

Average Annual Temperature Graphs 22

Monthly Average Maximum Temperatures 23

Monthly Average Maximum Temperature Graphs 26

Monthly Average Minimum Temperatures 28

Monthly Average Minimum Temperature Graphs 31

Monthly Average Mean Temperatures 33

Monthly Average Mean Temperature Graphs 36

Five Warmest and Coldest Months and Years 38

Monthly Extreme Maximum Temperatures 40

Monthly Extreme Minimum Temperatures 43

First and Last Occurrence of High Temperatures of 70, 80, 90, and 100 Deg 46

Monthly and Seasonal Heating Degree Days 49

Daily Cumulative Heating Degree Days 51

Monthly and Seasonal Cooling Degree Days 52

Daily Cumulative Cooling Degree Days 53

Latest Freeze in Spring, Earliest Freeze in Autumn, and Length of Freeze-Free Period 54

Historical Freeze Data 55

Average Occurrence of Last and First Temps and Length of Time Between Temps 55

PRECIPITATION RECORDS AND DATA 57

Annual Precipitation Totals (1890-1996) Graph 58

Monthly Precipitation Extremes and Climatic Normals Graph 58

Daily Precipitation Normals and Records for each Month 59

Monthly and Annual Precipitation Data 65

Five Wettest and Driest Months and Years 68

PRECIPITATION RECORDS AND DATA *(continued)*

Water Year Precipitation Totals 70
Greatest Short Duration Rainfall Records 71
Greatest Daily and 24-Hour Rainfall Records 72
Days with Measurable Rainfall (of at least 0.01 inch and 0.10") 74
Days with Consecutive Rainfall (of at least a Trace and 0.01") 74
Days per month of Rain, Trace, and No Rain 75
10 Wettest Calendar Days on Record per month and Since 1940 78
Days in a Month with No Measurable Rainfall 78
Longest Rainy Periods and Droughts 80
Daily Frequencey of Precipitation of at Least 0.01 Inch 81
Daily Probability of Precipitation of 0.01 Inch Graph 82
Daily Probability of Measurable Precipitation of at Least 0.01 Inch 83
Snowfall Records and Extremes 84
Earliest and Latest Snowfall of the Winter Season 84
History of a White Christmas in the Portland Metropolitan Area 84
Most Consecutive Days with Various Snow Depths 85
Monthly and Seasonal Snowfall Data 86

OTHER CLIMATIC DATA AND RECORDS 89
Monthly Dense Fog Records 90
Most Consecutive Days with Dense and Light Fog 90
Monthly Normal and Extreme Pressure Graph and Records 91
Relative Humidity Based on Time of Day 92
Wind Records and Data 93
Five Windiest Months and Years 93
Frequency of Wind Direction based on the Time of Day 94
Average Wind Speed based on Direction and Time of Day 95
Monthly Wind Direction Roses 96
Days Clear, Partly Cloudy, and Clear 98
Monthly and Annual Sunshine Received 98
Percent Frequency of Hourly Total Sky Cover Amounts 99
Major Holiday Weather Statistics 101
Rose Parade Weather 102

SUNRISE/SUNSET TABLE 104

CONDENSED 1961-90 CLIMATIC NORMALS 105

Climate of Portland Oregon[1]

Clinton C. D. Rockey

I. INTRODUCTION

This first revision of the Climate of Portland updates the weather records and offers minor revisions in the presentation of those records. New additions to this study include wind roses, water year data, a normals/record sheet, cloud cover frequency tables, and a sunrise/sunset table.

Portland weather records began in the 1870s, but the records in this study are based the weather observations that began in 1941 at the International Airport on Marine Drive. This provides over 50 years of continuous weather data. Prior to this date, weather records exist for various downtown locations. These downtown observations contain Portland records that have exceeded those collected since 1941 at the airport location. As a result, when available, special tables highlighting the downtown location (1871-1940) data will be included to illustrate how the records differ.

II. GEOGRAPHICAL SUMMARY

Portland is situated at 20 feet above sea level, near the confluence of the Columbia and Willamette Rivers, about 65 miles inland from the Pacific Ocean. Portland lies midway between the lower Coast Range to the west and the high Cascades Range to the east, each about 30 miles distant. The skyline is dominated by two Cascades Range volcanoes, Mount St. Helens (8,300 feet high) about 40 miles northeast of Portland, and Mt. Hood (11,385 feet) about 40 miles to the east.

Portland is also located at the northern end of the Willamette Valley, a rich and diverse agricultural region. The long growing season and mild temperatures of the Willamette Valley are favorable for a diversity of agricultural products. Due to the high ground water level, irrigation is widely used to raise cannery crops, berries, and pastures. Table beets, green beans, sweet corn, carrots, and pumpkins are grown in large quantities, then processed at the many processing centers in the Willamette Valley. Peaches, pears, cherries, plums, berries, and rhubarb are canned, with cherries and pears being the most numerous. Other agricultural products are apples, prunes, peppermint, spearmint, tomatoes, and cucumbers. Non-irrigated ranches and farms produce large amounts of hay, grain, grass seed, livestock, tree fruits, and nuts.

Portland is internationally known as the Rose City because Portland is home to test rose gardens. Every June, Portland residents celebrate their floral heritage with the Rose Festival and Parade.

III. CLIMATOLOGICAL SUMMARY

The Coast Range provides the Portland area limited shielding from the Pacific Ocean storms. The Cascades offer a steep slope for orographic lift of moisture-laden westerly winds, resulting in moderate rainfall for the region. The Cascades also act as a barrier, preventing the colder continental air masses originating in the arctic areas of Canada from invading western Oregon. Occasionally, however, cold air does work its way into western Oregon through the Columbia River Gorge.

Rain is a part of life during the winter months in the Portland area. Nearly 90 percent of the annual rainfall occurs from October through May. Only 9 percent of the annual rainfall occurs between June and September, with 3 percent in July and August combined! Precipitation falls predominantly as rain, with an average of only five days per year recording measurable snow.

[1] Climatic Summary of Portland drawn in part from the Annual Local Climatological Data of Portland Oregon, 1994. Provided by the National Climatic Data Center, Asheville, North Carolina.

Snowfall accumulations are rarely more than two inches, and often melt within a day or two. Portland essentially has three seasons: winter, spring/autumn, and a short summer.

The winter season is characterized by mild temperatures, cloudy skies, and rain. Winds are predominately either southerly with mild rainy spells, or easterly during colder dry spells. Outbreaks of cold arctic air from east of the Cascades will occasionally spill into the Portland area, bringing cold blustery east winds. If the east winds occur when the rain is falling over the metropolitan area, a shallow layer of cold air forms along the Columbia River. In and near this cold sub-freezing air, freezing rain and even snow will occur over eastern and northern Portland.

The cold easterly winds also bring the coldest air to the Portland area. Temperatures below zero degrees are rare, occurring only six times over the last 125 years! Most temperatures during the winter reach the 40s during the day and fall back into the low to middle 30s at night.

Spring is a transitional time as the weather patterns shift from winter to summer. As a result, March and April are wet and cool, while May and June turn drier. Temperatures during May and June often take a roller coaster ride, ranging predominantly in the 60s and 70s, occasionally reaching the 90s for a day or two. Even though the number of rain days decreases in May and June, there are still many cloudy days.

Summer finally arrives in middle to late June, when the temperature is finally able the reach the 80s on a daily basis. Northwesterly winds bring cool air from the Pacific Ocean down along the Columbia River. Summer can be quite warm, with the temperatures frequently reaching the middle 90s, although these warm days do not last long before the cool marine air arrives with temperatures in the 70s. Temperatures above 100 degrees are rare.

Autumn is the reverse of spring, with many warm days in September. By the middle of October, the rains are beginning to arrive. In addition, cooler temperatures arrive, with afternoon highs in the 50s and 60s. Fog begins to occur on a nightly basis during late October and November, with visibilities often under one mile. During this time, fog can be persistent for several days.

Destructive storms are infrequent in the Portland area. Surface winds seldom exceed gale force (wind speeds sustained at 50 mph or greater) and have rarely exceeded 75 mph. Thunderstorms can occur during any month, but are not common. Thunderstorms during the winter and spring are weak, producing brief gusty winds and small hail. Thunderstorms during the summer tend to be stronger, with frequent lightning, strong winds, and hail. Occasionally, thunderstorms produce funnel clouds, but tornadoes are exceedingly rare. The most famous tornado occurred in June of 1972, producing damage and injuring many people as it moved from near Jantzen Beach across the Columbia River into south Vancouver.

On average, the last occurrence of 32 degrees in the spring is March 30, while the first occurrence of 32 degrees in the autumn occurs on November 8. This provides for a long growing season.

IV. STATION HISTORY

Official weather records in Portland began on November 1, 1871 when the Signal Corps of the United States Army established a station near the present location of downtown Portland. Prior to 1871, weather records were fragmentary. The Signal Corps made weather observations until the end of June 1891. On July 1, 1891, the weather observations and meteorological work of the federal government was taken over by the United States Weather Bureau, under the Department of Agriculture (*On July 1, 1940, the Weather Bureau was transferred from the Department of Agriculture to the Department of Commerce*).

On November 1, 1871, the first weather station was established in the Gilman building, located at what is presently the corner of SW First Avenue and Alder Street.

Nearly a year later on December 21, 1872, the weather station was moved to the Parish Building, located at Front Avenue and Washington Street.

Several years later, on January 1, 1878, the station moved again, this time to the Oregon and Washington Trust Company's bank building at 48 (*old number*) SW First Avenue.

On August 1, 1885, the weather station moved to the Kamm Building at SW First Avenue and Pine Street. However, on October 5, 1892, a fire in the Kamm Building forced a move to the Oregonian Building at SW Sixth Avenue and Alder Street.

Finally, on June 8, 1902, the weather station moved to the United States Custom House at 220 NW Eighth Avenue. A map on page 4 shows the location of the downtown offices in relationship to the later two locations.

At first, the thermometers were mounted in a shelter attached to a north window, but when the move was made to the Kamm Building, the shelter was placed on the roof, and subsequent exposures of the shelter have been roof exposures. Throughout the period of record, the rain gauges have also been on roofs. The table below displays the elevation of the roofs above ground level (AGL).

Building	Height AGL
Parish Building	47 feet
Oregon/Wash. Trust	51 feet
Kamm Building	76 feet
Oregonian Building	196 feet
Custom House	63 feet

A self-recording weighing type rain gauge was installed on February 11, 1890. It was replaced by a bucket-type gauge on June 8, 1902. Exposure of wind instruments was similar to that of the rain gauges, only about ten feet higher.

Self-registering thermometers, which indicate the daily maximum and minimum temperatures, were installed in July 1874. A thermograph was installed in June 1888, allowing a continuous written record of temperature data. Recorded relative humidity data began in January 1872 while a sunshine recorder arrived in January 1891.

On July 16, 1928, the Portland Airport opened near what is presently the Swan Island shipyards. The need for aviation weather support prompted a move of the downtown weather office to the new airport. Pilot weather briefings became a high priority for the new office. The weather recording instruments were moved to the roof of the administration building.

On September 30, 1940, the weather station moved to NE Marine Drive on the north side of the Portland International Airport, located along the Columbia River about nine miles northeast of downtown Portland. At this location, the thermometers and rain gauges were at ground level. The wind instruments were placed on the roof of the United Airlines hangar until February 1, 1949, when they were moved about 250 feet west of the hangar on the roof of the service building.

During the summer of 1948, the famous Vanport flood occurred. It was the greatest flood on the Columbia River since 1894. Heavy rainfall and a large snowmelt had swollen the Columbia River, eventually collapsing a river dike near Vanport, presently known as the Delta Park area. The flood waters inundated the town of Vanport and the river valley for over 40 days, forcing the weather office to move temporarily back to the Custom House. The office returned to operations at the airport on Marine Drive in August 1948.

In July 1994, the Weather Service Office moved to NE 122nd Avenue, about four miles east of the Marine Drive location. However, the weather observations continued at the airport location. On November 1, 1995, ASOS, the Automated Surface Observation System, became operational.

V. UPDATING THIS STUDY

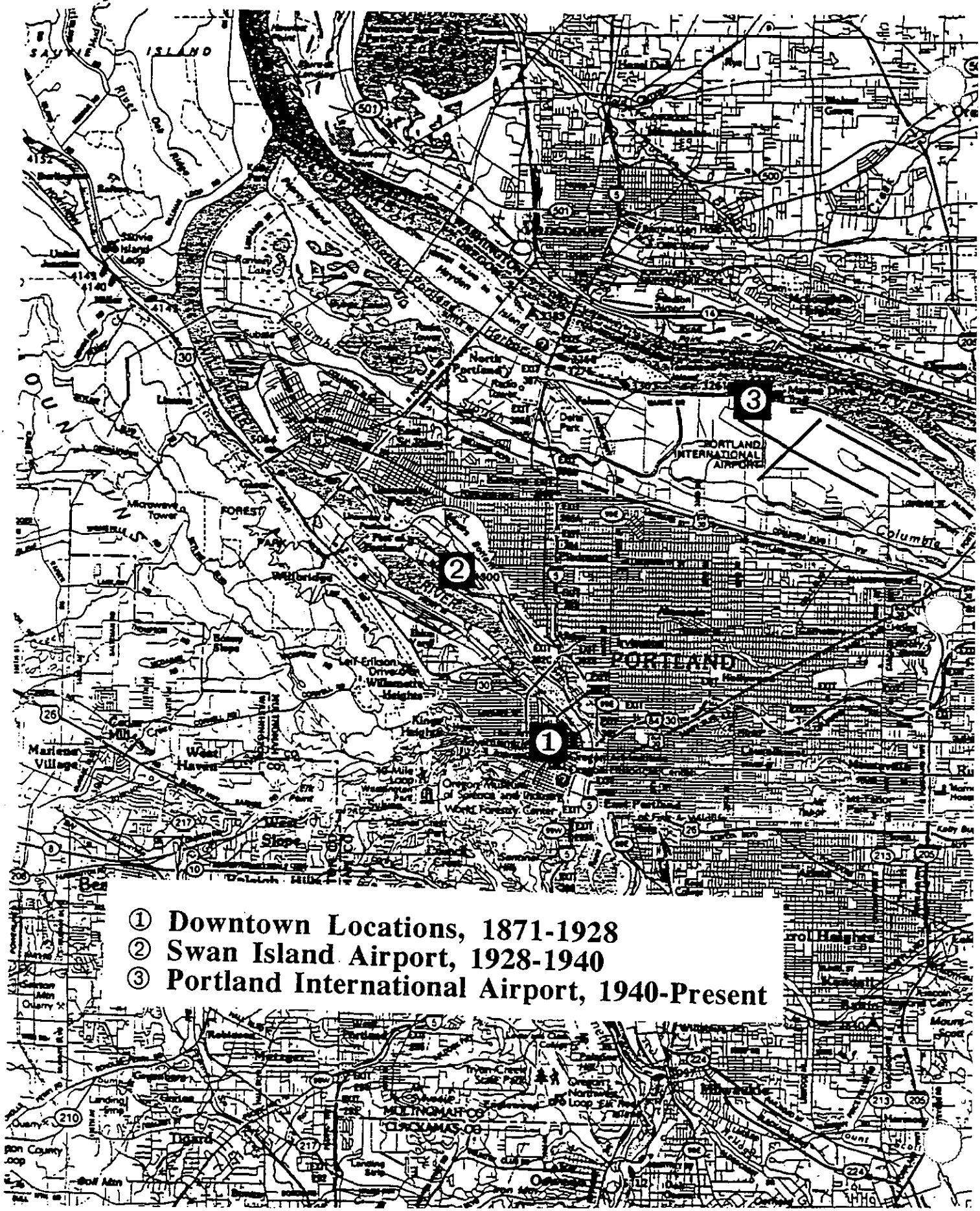
For updates to the weather data contained in this study, refer to the latest climate data published by the National Climatic Data Center, or contact the National Weather Service Forecast Office in Portland. Portland weather data are also available on the Internet, in the extensive climate section of the Portland NWS Office URL:

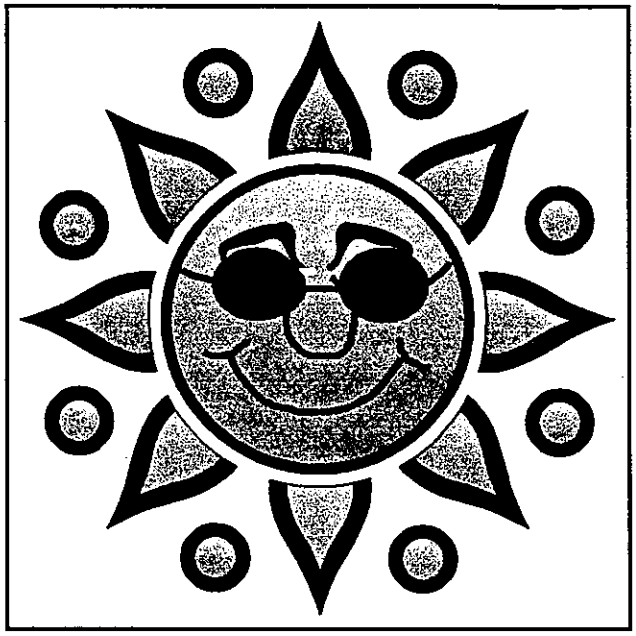
nimbo.wrh.noaa.gov/Portland/clipdx.html

VI. ACKNOWLEDGMENTS

I would like to thank the many dedicated National Weather Service employees and cooperative observers that diligently took observations and maintained climate records over the past 125 years. Special thanks to Harold Payne for his hard work and dedication to the close scrutiny of climate records for the past 17 years.

PORTLAND OBS SITES

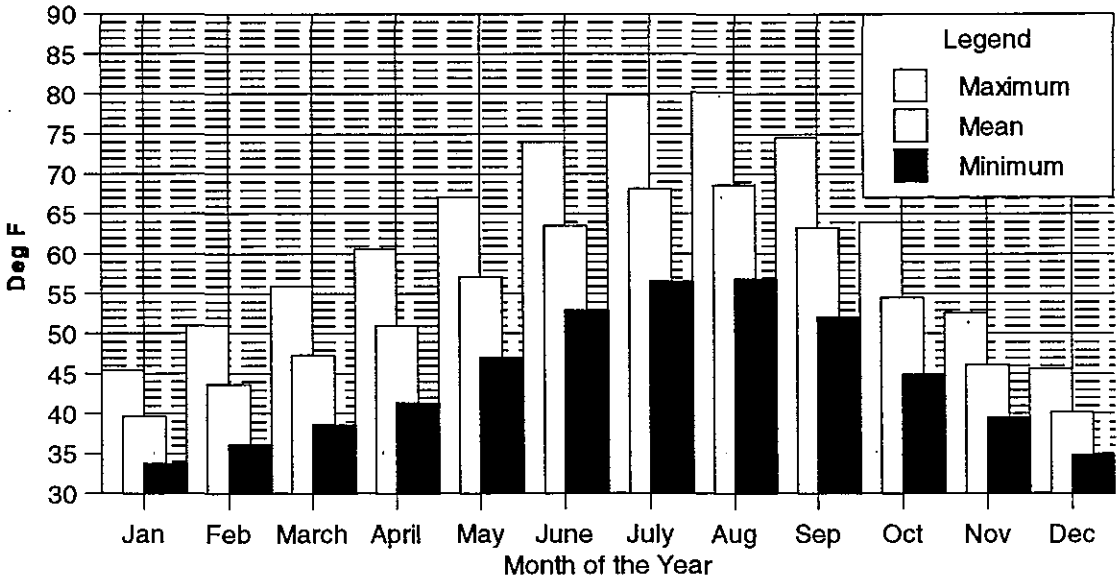




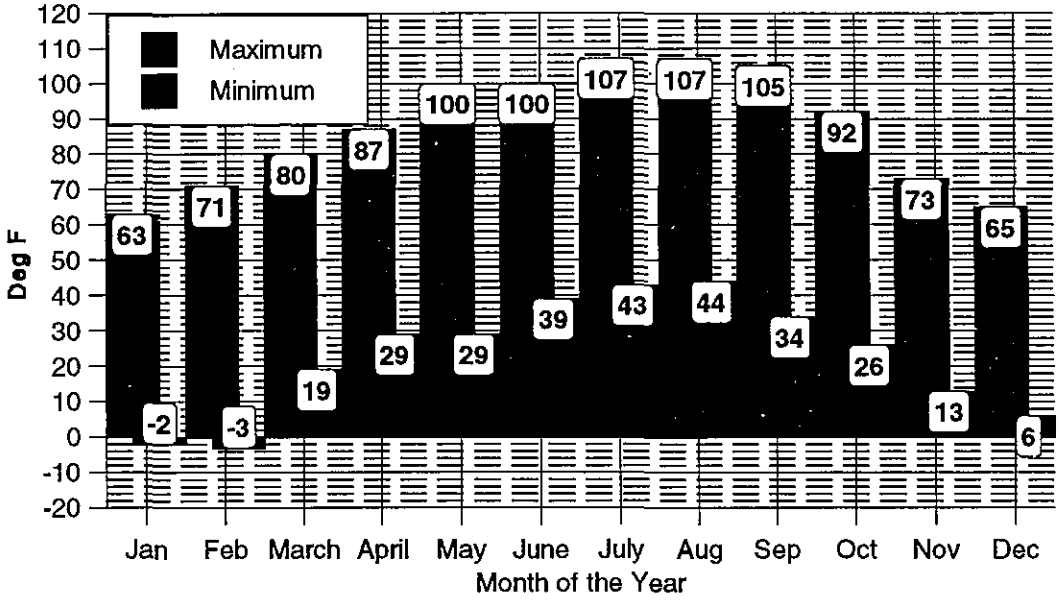
Temperature Records and Data

MONTHLY AVERAGE AND EXTREME TEMPERATURES

Monthly Average Temperatures



Extreme Temperatures (1941-97)



JANUARY DAILY TEMPERATURE DATA
(1941- 1999)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	21	1979	60	1981	14	1979	50	1997	44	34	39	26	0
2	25	1979	58	1996	16	1979	47	1963	44	34	39	26	0
3	26	1952	60	1989	16	1959	48	1989	44	33	39	26	0
4	26	1959	59	1984	19	1974	50	1983	44	33	39	26	0
5	28	1974	58	1954	19	1982	48	1990	44	33	39	26	0
6	29	1982	57	1956	14	1982	46	1990	44	33	39	26	0
7	29	1979	62	1945	14	1974	51	1983	44	33	39	26	0
8	28	1974	57	1990	14	1974	45	1990	44	33	39	26	0
9	29	1974	61	1990	12	1974	47	1994	44	33	39	26	0
10	26	1974	57	1945	16	1949	45	1997	44	33	39	26	0
11	21	1963	57	1953	11	1963	48	1994	45	33	39	26	0
12	30	1963	62	1991	13	1963	52	1953	45	33	39	26	0
13	31	1963	61	1991	14	1950	49	1967	45	33	39	26	0
14	24	1950	60	1974	9	1950	50	1961	45	34	39	26	0
15	33	1947	62	1958	18	1947	54	1974	45	34	39	26	0
16	21	1950	60	1971	8	1950	48	1953	45	34	39	26	0
17	22	1950	59	1975	8	1950	51	1953	45	34	39	26	0
18	22	1950	63	1986	10	1943	48	1953	45	34	40	25	0
19	26	1957	60	1971	18	1950	50	1972	45	34	40	25	0
20	24	1954	56	1961	15	1949	51	1972	46	34	40	25	0
21	28	1949	59	1970	9	1962	45	1981	46	34	40	25	0
22	31	1969	61	1970	9	1949	46	1981	46	34	40	25	0
23	27	1943	60	1953	10	1943	50	1992	46	34	40	25	0
24	27	1969	61	1984	3	1943	52	1984	46	34	40	25	0
25	26	1957	59	1993	11	1949	47	1951	47	34	40	25	0
26	23	1949	58	1971	6	1957	48	1962	47	34	40	25	0
27	22	1957	56	1984	8	1957	49	1976	47	34	41	24	0
28	24	1969	59	1992	10	1957	50	1965	47	34	41	24	0
29	20	1950	62	1984	8	1950	52	1965	47	34	41	24	0
30	23	1996	62	1995	10	1950	47	1995	48	35	41	24	0
31	16	1950	61	1995	- 2	1950	52	1995	48	35	41	24	0
	JANUARY EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	16	1950	63	1986	- 2	1950	54	1974	45.4	33.7	39.6	787	0

[1]HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2]HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

FEBRUARY DAILY TEMPERATURE DATA
(1941- 1999)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	25	1950	61	1986	1	1950	47	1995	48	35	41	24	0
2	18	1989	61	1991	-3	1950	45	1991	48	35	42	23	0
3	15	1989	64	1963	4	1950	49	1963	49	35	42	23	0
4	27	1989	60	1992	14	1989	48	1991	49	35	42	23	0
5	34	1972	58	1995	9	1989	48	1961	49	35	42	23	0
6	38	1948	59	1998	15	1989	48	1953	49	35	42	23	0
7	39	1989	62	1996	21	1982	48	1955	49	36	43	22	0
8	38	1975	64	1995	25	1994	51	1963	50	36	43	22	0
9	36	1975	62	1963	25	1986	51	1951	50	36	43	22	0
10	36	1989	65	1963	22	1982	49	1990	50	36	43	22	0
11	38	1981	62	1971	24	1948	47	1951	51	36	43	22	0
12	35	1990	62	1947	24	1948	48	1972	51	36	43	22	0
13	31	1995	60	1996	23	1990	47	1947	51	36	43	21	0
14	34	1990	63	1977	16	1995	52	1982	51	36	44	21	0
15	31	1956	63	1996	19	1956	50	1982	51	36	44	21	0
16	30	1956	62	1981	18	1956	51	1982	51	36	44	21	0
17	39	1993	65	1948	24	1985	47	1983	52	36	44	21	0
18	37	1949	68	1977	20	1955	50	1968	52	36	44	21	0
19	33	1993	66	1977	26	1955	52	1991	52	37	44	21	0
20	30	1957	63	1982	23	1955	52	1961	52	37	44	21	0
21	37	1957	66	1958	25	1955	49	1968	52	37	45	20	0
22	34	1957	60	1981	28	1964	49	1968	53	37	45	20	0
23	41	1942	67	1995	25	1993	50	1983	53	37	45	20	0
24	38	1994	68	1986	25	1969	53	1986	53	37	45	20	0
25	40	1994	66	1991	23	1969	48	1986	53	37	45	20	0
26	38	1971	68	1968	20	1962	49	1992	53	37	45	20	0
27	40	1971	67	1968	19	1960	54	1972	54	37	45	20	0
28	41	1962	71	1988	24	1960	46	1959	54	37	46	19	0
29	44	1964	68	1968	29	1960	46	1988	54	37	46	19	0
	FEBRUARY EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	15	1989	71	1988	-3	1950	54	1972	51.0	36.1	43.6	599	0

[1] HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2] HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

MARCH DAILY TEMPERATURE DATA
(1941-1999)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	36	1993	67	1981	22	1971	48	1968	54	37	46	19	0
2	35	1989	67	1986	25	1960	47	1994	54	38	46	19	0
3	29	1960	67	1994	19	1989	54	1950	54	38	46	19	0
4	34	1960	69	1987	26	1960	52	1987	54	38	46	19	0
5	36	1956	66	1984	19	1955	51	1972	54	38	46	19	0
6	41	1971	70	1965	28	1976	51	1979	55	38	46	19	0
7	41	1951	69	1945	25	1974	49	1986	55	38	46	19	0
8	38	1951	72	1953	26	1974	48	1983	55	38	46	19	0
9	37	1951	67	1995	26	1969	51	1983	55	38	47	18	0
10	39	1951	72	1965	22	1969	50	1972	55	38	47	18	0
11	42	1950	69	1965	24	1956	50	1972	55	38	47	18	0
12	45	1977	70	1994	24	1954	52	1972	55	38	47	18	0
13	39	1947	71	1979	24	1944	50	1972	56	38	47	18	0
14	43	1957	74	1947	28	1953	50	1961	56	38	47	18	0
15	45	1975	77	1947	26	1955	49	1992	56	39	47	18	0
16	46	1951	80	1947	27	1955	49	1983	56	39	47	18	0
17	46	1945	76	1947	24	1955	48	1990	56	39	47	18	0
18	46	1952	71	1988	29	1971	47	1997	56	39	47	18	0
19	47	1975	73	1960	25	1965	50	1997	56	39	48	17	0
20	44	1966	71	1960	28	1955	49	1988	57	39	48	17	0
21	47	1975	70	1978	28	1952	49	1972	57	39	48	17	0
22	46	1994	73	1979	29	1966	47	1956	57	39	48	17	0
23	46	1975	73	1982	31	1954	48	1978	57	39	48	17	0
24	47	1996	72	1960	29	1969	49	1952	57	39	48	17	0
25	39	1955	74	1966	30	1970	49	1952	57	39	48	17	0
26	42	1985	73	1994	31	1996	51	1943	57	39	48	17	0
27	48	1999	77	1994	27	1975	49	1978	58	39	48	17	0
28	44	1967	76	1994	28	1962	49	1978	58	39	49	16	0
29	47	1943	75	1994	23	1954	49	1992	58	40	49	16	0
30	47	1967	74	1942	24	1954	50	1994	58	40	49	16	0
31	48	1976	71	1987	31	1970	50	1994	58	40	49	16	0
	MARCH EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	29	1960	80	1947	19	1989	54	1950	56.0	38.6	47.3	549	0

[1]HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2]HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

APRIL DAILY TEMPERATURE DATA
(1941-1999)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	49	1968	79	1987	30	1971	53	1943	58	40	49	16	0
2	48	1982	79	1992	30	1972	52	1961	58	40	49	16	0
3	45	1975	75	1995	30	1964	48	1992	58	40	49	16	0
4	46	1999	75	1990	29	1955	51	1991	59	40	49	16	0
5	48	1964	77	1977	30	1975	50	1989	59	40	49	16	0
6	48	1980	77	1985	30	1975	54	1962	59	40	50	15	0
7	51	1988	79	1996	32	1970	52	1960	59	40	50	15	0
8	45	1950	74	1996	31	1975	53	1996	59	40	50	15	0
9	46	1983	79	1985	33	1982	50	1996	59	40	50	15	0
10	46	1979	76	1990	31	1954	50	1989	60	40	50	15	0
11	50	1986	77	1951	33	1991	50	1985	60	41	50	15	0
12	48	1955	82	1943	30	1970	48	1992	60	41	50	15	0
13	47	1967	82	1947	30	1968	50	1988	60	41	50	15	0
14	46	1982	84	1947	32	1977	53	1989	60	41	51	14	0
15	48	1963	82	1990	31	1967	52	1990	60	41	51	14	0
16	45	1967	81	1947	32	1964	54	1992	61	41	51	14	0
17	47	1963	78	1983	31	1977	52	1990	61	41	51	14	0
18	47	1961	80	1962	30	1964	51	1994	61	41	51	14	0
19	47	1961	80	1956	31	1982	56	1989	61	42	51	14	0
20	42	1963	84	1956	33	1975	52	1983	61	42	52	13	0
21	48	1960	77	1982	29	1951	54	1956	62	42	52	13	0
22	43	1961	79	1982	30	1972	52	1981	62	42	52	13	0
23	46	1960	79	1995	34	1954	51	1996	62	42	52	13	0
24	48	1963	79	1999	32	1950	54	1992	62	42	52	13	0
25	50	1970	80	1992	32	1955	54	1978	62	43	53	12	0
26	48	1950	86	1947	34	1970	52	1980	63	43	53	12	0
27	48	1955	86	1987	32	1948	56	1992	63	43	53	12	0
28	49	1972	82	1998	34	1973	56	1992	63	43	53	12	0
29	49	1954	87	1957	33	1952	55	1992	63	43	53	12	0
30	50	1964	90	1998	33	1986	57	1998	63	44	54	11	0
	APRIL EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	42	1963	90	1998	29	1955	57	1998	60.6	41.3	51.0	420	0

[1]HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2]HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

MAY DAILY TEMPERATURE DATA
(1941-1999)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	49	1964	85	1998	29	1954	53	1998	64	44	54	11	0
2	52	1955	89	1945	32	1964	56	1946	64	44	54	11	0
3	50	1961	89	1992	33	1964	55	1998	64	44	54	11	0
4	52	1950	89	1992	34	1962	58	1989	64	44	54	11	0
5	51	1965	87	1992	35	1978	56	1989	65	45	55	10	0
6	49	1962	91	1987	36	1965	56	1974	65	45	55	10	0
7	50	1999	93	1987	36	1965	57	1987	65	45	55	10	0
8	51	1999	92	1987	35	1965	58	1987	65	45	55	10	0
9	52	1998	86	1987	36	1955	56	1987	66	46	56	9	0
10	52	1986	85	1993	37	1999	54	1960	66	46	56	9	0
11	55	1986	91	1971	37	1985	54	1997	66	46	56	9	0
12	54	1999	87	1973	37	1985	55	1997	66	46	56	9	0
13	54	1999	92	1973	36	1963	56	1981	66	46	56	9	0
14	55	1978	86	1973	33	1964	60	1997	67	47	57	8	0
15	53	1966	86	1970	36	1964	58	1997	67	47	57	8	0
16	53	1977	88	1985	40	1950	54	1997	67	47	57	8	0
17	52	1991	89	1958	37	1966	55	1973	67	47	57	8	0
18	52	1974	86	1963	41	1976	58	1993	68	47	58	7	0
19	55	1976	91	1961	41	1982	58	1958	68	48	58	7	0
20	54	1960	91	1963	37	1975	56	1985	68	48	58	7	0
21	52	1960	87	1988	38	1955	56	1958	68	48	58	7	0
22	55	1980	88	1969	33	1960	57	1958	68	48	58	7	0
23	53	1953	90	1947	35	1964	59	1985	69	48	58	7	0
24	55	1962	93	1992	37	1955	58	1981	69	49	59	6	0
25	56	1960	90	1947	38	1975	61	1992	69	49	59	6	0
26	56	1980	92	1947	41	1973	60	1958	69	49	59	6	0
27	57	1989	90	1944	39	1966	58	1958	70	49	60	5	0
28	58	1996	100	1983	38	1954	62	1983	70	50	60	5	0
29	54	1954	90	1973	41	1978	61	1983	70	50	60	5	0
30	53	1976	91	1986	40	1955	61	1997	70	50	60	5	0
31	54	1971	92	1986	39	1966	62	1986	70	50	60	5	0
	MAY EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	49	1964	100	1983	29	1954	62	1986	67.1	47.0	57.1	249	0

[1]HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2]HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

JUNE DAILY TEMPERATURE DATA
(1941-1999)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	56	1985	94	1970	39	1966	58	1986	71	50	60	5	0
2	58	1980	98	1970	41	1977	59	1961	71	51	61	4	0
3	56	1962	91	1987	42	1976	58	1996	71	51	61	4	0
4	55	1963	90	1978	42	1966	61	1969	72	51	62	3	0
5	57	1956	92	1958	41	1966	60	1978	72	51	62	3	0
6	57	1999	90	1948	45	1962	59	1977	72	51	62	3	0
7	54	1950	93	1948	44	1999	67	1948	72	51	62	3	0
8	53	1964	94	1955	45	1985	68	1948	72	52	62	3	0
9	63	1954	95	1955	44	1962	64	1955	73	52	62	3	0
10	60	1964	90	1982	44	1973	58	1969	73	52	62	3	0
11	54	1952	95	1941	44	1952	60	1986	73	52	63	2	0
12	56	1943	89	1986	42	1965	61	1999	73	52	63	2	0
13	56	1980	96	1986	42	1976	62	1999	73	53	63	2	0
14	57	1952	89	1988	43	1945	62	1985	74	53	63	2	0
15	60	1954	95	1966	45	1959	60	1969	74	53	63	2	0
16	59	1944	95	1958	44	1955	60	1969	74	53	63	2	0
17	59	1996	97	1969	42	1991	63	1961	74	53	64	1	0
18	61	1998	100	1982	43	1954	62	1982	75	53	64	1	0
19	61	1964	95	1982	45	1955	64	1982	75	54	65	0	0
20	55	1991	95	1970	44	1964	62	1958	75	54	65	0	0
21	60	1991	96	1992	45	1942	63	1970	75	54	65	0	0
22	61	1997	100	1992	46	1945	63	1958	75	54	65	0	0
23	60	1950	97	1992	46	1985	64	1992	76	54	65	0	0
24	58	1975	96	1992	46	1971	62	1992	76	54	65	0	0
25	58	1942	95	1987	44	1976	64	1973	76	54	65	0	0
26	58	1975	94	1987	45	1976	66	1973	76	55	65	0	0
27	61	1975	90	1978	41	1965	62	1984	76	55	65	0	0
28	60	1971	95	1951	42	1964	64	1948	77	55	66	0	1
29	57	1963	97	1951	45	1971	68	1948	77	55	66	0	1
30	64	1989	100	1942	41	1949	61	1978	77	55	66	0	1
	JUNE EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	53	1964	100	1992	39	1966	68	1948	74.0	52.9	63.5	91	46

[1] HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2] HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

JULY DAILY TEMPERATURE DATA
(1941-1998)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	60	1966	105	1942	48	1963	64	1942	78	55	67	0	2
2	60	1966	102	1942	43	1955	62	1942	78	55	67	0	2
3	60	1980	99	1970	45	1954	65	1942	78	55	67	0	2
4	61	1964	97	1972	48	1977	63	1985	78	56	67	0	2
5	62	1988	94	1960	49	1988	61	1975	78	56	67	0	2
6	64	1981	97	1960	46	1977	63	1997	79	56	67	0	2
7	61	1963	93	1996	46	1971	63	1985	79	56	67	0	2
8	63	1955	98	1952	45	1981	62	1997	79	56	67	0	2
9	64	1974	96	1985	47	1964	65	1985	79	56	67	0	2
10	65	1971	91	1990	48	1960	64	1985	79	56	68	0	3
11	65	1956	104	1961	48	1960	66	1990	79	56	68	0	3
12	68	1993	102	1961	47	1943	65	1996	80	56	68	0	3
13	67	1962	101	1941	48	1968	66	1996	80	56	68	0	3
14	66	1964	103	1941	51	1969	66	1996	80	56	68	0	3
15	64	1986	103	1941	49	1982	65	1941	80	57	68	0	3
16	65	1989	104	1979	49	1968	70	1941	80	57	68	0	3
17	61	1996	102	1979	49	1955	74	1941	80	57	68	0	3
18	67	1996	104	1944	47	1986	66	1995	80	57	69	0	4
19	64	1968	102	1994	48	1964	66	1985	81	57	69	0	4
20	60	1954	103	1994	49	1950	66	1971	81	57	69	0	4
21	67	1952	101	1994	50	1984	65	1980	81	57	69	0	4
22	65	1992	98	1978	49	1954	65	1998	81	57	69	0	4
23	68	1949	100	1991	46	1963	65	1996	81	57	69	0	4
24	66	1993	100	1984	50	1973	68	1996	81	57	69	0	4
25	67	1949	100	1988	49	1963	67	1975	81	57	69	0	4
26	68	1989	99	1998	48	1953	67	1960	81	57	69	0	4
27	67	1986	102	1958	47	1959	72	1998	81	57	69	0	4
28	65	1975	101	1998	50	1963	70	1998	81	57	69	0	4
29	69	1993	99	1990	50	1956	65	1974	81	57	69	0	4
30	65	1982	107	1965	47	1945	63	1992	81	57	69	0	4
31	68	1989	102	1965	48	1956	66	1948	81	58	69	0	4
	JULY EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	60	1980	107	1965	43	1955	74	1941	79.9	56.5	68.2	28	127

[1] HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2] HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

AUGUST DAILY TEMPERATURE DATA
(1941-1998)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mea	HDD	CDD
1	61	1989	93	1986	47	1963	66	1949	81	57	69	0	4
2	58	1956	96	1986	50	1959	62	1993	81	58	69	0	4
3	65	1953	99	1952	47	1950	65	1945	81	58	69	0	4
4	64	1954	100	1990	51	1954	66	1993	81	58	69	0	4
5	69	1954	100	1945	48	1960	64	1990	81	58	69	0	4
6	65	1976	102	1972	49	1975	67	1997	81	58	69	0	4
7	63	1976	104	1972	49	1974	65	1991	81	58	69	0	4
8	68	1953	107	1981	49	1970	67	1991	81	58	69	0	4
9	65	1982	105	1981	48	1954	67	1981	81	58	69	0	4
10	68	1995	107	1981	50	1964	66	1996	81	57	69	0	4
11	65	1941	102	1977	50	1966	65	1990	81	57	69	0	4
12	68	1955	104	1977	49	1957	66	1992	81	57	69	0	4
13	61	1976	96	1992	45	1949	65	1998	81	57	69	0	4
14	69	1993	97	1967	47	1982	66	1998	81	57	69	0	4
15	63	1976	98	1967	51	1989	65	1950	81	57	69	0	4
16	66	1978	102	1977	47	1969	63	1979	81	57	69	0	4
17	68	1975	105	1977	45	1970	66	1977	80	57	69	0	4
18	65	1975	93	1946	45	1973	62	1997	80	57	69	0	4
19	64	1974	94	1967	46	1947	64	1993	80	57	69	0	4
20	65	1978	95	1986	46	1959	64	1982	80	57	69	0	4
21	66	1960	95	1945	45	1955	64	1967	80	57	69	0	4
22	66	1960	98	1942	47	1973	63	1965	80	57	69	0	4
23	63	1960	101	1988	48	1951	62	1965	80	57	69	0	4
24	60	1963	99	1982	47	1992	66	1985	80	56	68	0	3
25	62	1977	94	1967	47	1957	68	1996	80	56	68	0	3
26	64	1960	100	1986	46	1962	63	1996	79	56	68	0	3
27	60	1964	97	1972	47	1964	66	1986	79	56	68	0	3
28	60	1953	102	1967	45	1980	66	1972	79	56	67	0	2
29	67	1990	95	1944	44	1980	63	1979	79	56	67	0	2
30	62	1973	98	1987	46	1951	63	1996	79	55	67	0	2
31	66	1971	102	1987	44	1951	66	1987	78	55	67	0	2
	AUGUST EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mea	HDD	CDD
	58	1956	107	1981	44	1980	68	1996	80.3	56.9	68.7	35	147

[1]HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2]HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

SEPTEMBER DAILY TEMPERATURE DATA
(1941-1998)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	61	1960	98	1988	44	1973	63	1998	78	55	67	0	2
2	62	1964	105	1988	42	1960	63	1997	78	55	66	0	1
3	62	1969	93	1988	45	1980	63	1998	78	55	66	0	1
4	62	1978	98	1955	43	1956	62	1985	78	54	66	0	1
5	63	1970	101	1944	44	1956	62	1985	77	54	66	0	1
6	65	1995	97	1958	45	1960	60	1990	77	54	66	0	1
7	63	1955	99	1981	42	1992	61	1990	77	54	65	0	0
8	61	1978	93	1993	42	1961	64	1984	77	54	65	0	0
9	65	1982	94	1948	42	1962	59	1997	77	53	65	0	0
10	62	1962	98	1944	42	1964	63	1997	76	53	65	0	0
11	60	1982	90	1975	43	1964	61	1997	76	53	65	0	0
12	64	1960	92	1975	41	1955	60	1996	76	53	64	1	0
13	59	1980	93	1988	37	1970	60	1961	76	53	64	1	0
14	60	1992	92	1995	42	1992	62	1984	75	52	64	1	0
15	57	1955	96	1981	40	1970	59	1995	75	52	64	1	0
16	60	1985	92	1994	41	1965	59	1979	75	52	63	2	0
17	58	1944	93	1962	34	1965	59	1994	74	52	63	2	0
18	61	1972	93	1991	36	1965	61	1984	74	52	63	2	0
19	57	1968	93	1974	39	1957	61	1984	74	51	63	2	0
20	59	1982	96	1952	39	1957	60	1967	73	51	62	3	0
21	62	1959	94	1952	39	1964	62	1995	73	51	62	3	0
22	57	1948	93	1994	34	1961	59	1953	73	51	62	3	0
23	54	1948	94	1974	41	1961	59	1969	73	50	61	4	0
24	59	1949	96	1974	36	1970	61	1982	72	50	61	4	0
25	59	1986	94	1991	38	1955	59	1990	72	50	61	4	0
26	55	1948	92	1967	38	1961	58	1994	72	50	61	4	0
27	60	1955	94	1967	37	1961	60	1976	71	49	60	5	0
28	57	1971	89	1989	37	1983	60	1994	71	49	60	5	0
29	56	1971	89	1993	37	1954	60	1994	70	49	60	5	0
30	59	1986	88	1987	35	1954	61	1994	70	49	59	6	0
	SEPTEMBER EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	54	1948	105	1988	34	1965	64	1984	74.6	52.0	63.3	102	51

[1] HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2] HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

OCTOBER DAILY TEMPERATURE DATA
(1941-1998)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	60	1953	92	1987	33	1950	59	1951	70	48	59	6	0
2	54	1950	90	1970	37	1954	58	1951	70	48	59	6	0
3	56	1950	86	1979	38	1964	60	1947	69	48	58	7	0
4	54	1957	84	1952	37	1977	58	1996	69	48	58	7	0
5	55	1948	90	1980	37	1972	56	1965	68	47	58	7	0
6	55	1957	89	1952	37	1974	58	1984	68	47	57	8	0
7	54	1949	83	1943	33	1970	61	1979	68	47	57	8	0
8	54	1997	82	1971	32	1985	57	1984	67	47	57	8	0
9	55	1997	83	1996	30	1985	58	1953	67	46	57	8	0
10	53	1959	85	1991	35	1960	58	1996	66	46	56	9	0
11	55	1960	86	1991	37	1990	56	1988	66	46	56	9	0
12	51	1968	76	1982	39	1994	56	1988	66	46	56	9	0
13	56	1966	78	1991	35	1966	56	1988	65	45	55	10	0
14	52	1984	82	1991	31	1969	58	1988	65	45	55	10	0
15	50	1984	80	1991	33	1992	60	1988	64	45	55	10	0
16	51	1950	79	1958	30	1946	57	1988	64	45	54	11	0
17	51	1971	79	1952	33	1971	54	1997	64	45	54	11	0
18	51	1984	78	1978	31	1949	55	1992	63	44	54	11	0
19	50	1996	74	1944	27	1949	55	1992	63	44	54	11	0
20	50	1984	74	1987	28	1949	54	1989	62	44	53	12	0
21	47	1961	73	1965	30	1949	55	1963	62	44	53	12	0
22	50	1991	75	1965	33	1980	57	1944	62	44	53	12	0
23	48	1943	74	1965	32	1964	57	1959	61	43	52	13	0
24	50	1956	73	1974	30	1958	53	1985	61	43	52	13	0
25	46	1949	74	1965	34	1978	57	1986	61	43	52	13	0
26	48	1970	74	1987	30	1963	57	1986	60	43	52	13	0
27	45	1956	75	1944	31	1970	55	1981	60	43	51	14	0
28	43	1991	69	1987	26	1946	52	1969	59	42	51	14	0
29	47	1991	71	1993	26	1971	52	1997	59	42	51	14	0
30	46	1971	69	1988	27	1991	56	1987	58	42	50	15	0
31	44	1955	71	1954	28	1995	55	1987	58	42	50	15	0
	OCTOBER EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	43	1991	92	1987	26	1971	61	1979	64.0	44.9	54.5	326	0

[1]HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2]HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

NOVEMBER DAILY TEMPERATURE DATA
(1941-1998)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	42	1984	70	1969	31	1978	54	1983	58	42	50	15	0
2	50	1991	68	1976	29	1973	56	1985	57	42	50	15	0
3	46	1994	73	1975	29	1995	54	1980	57	42	49	16	0
4	45	1973	69	1980	27	1957	54	1997	56	41	49	16	0
5	40	1973	68	1987	28	1971	51	1944	56	41	49	16	0
6	44	1945	67	1980	27	1971	54	1979	56	41	48	17	0
7	43	1945	66	1941	29	1959	53	1995	55	41	48	17	0
8	44	1964	64	1976	27	1977	50	1970	55	41	48	17	0
9	45	1964	65	1989	28	1959	57	1990	55	41	48	17	0
10	42	1985	65	1989	25	1978	53	1989	54	40	47	18	0
11	41	1948	64	1989	26	1955	56	1989	54	40	47	18	0
12	28	1955	66	1974	19	1978	53	1987	54	40	47	18	0
13	30	1955	67	1995	18	1978	51	1953	53	40	47	18	0
14	27	1955	66	1995	15	1955	51	1995	53	40	46	19	0
15	26	1955	62	1949	13	1955	53	1995	53	40	46	19	0
16	25	1955	68	1976	20	1955	52	1983	52	39	46	19	0
17	28	1955	61	1995	23	1961	52	1995	52	39	46	19	0
18	37	1994	60	1995	25	1985	51	1954	52	39	45	20	0
19	38	1978	62	1965	25	1956	49	1965	51	39	45	20	0
20	35	1978	61	1986	25	1964	52	1998	51	39	45	20	0
21	35	1977	58	1958	23	1952	49	1965	51	39	45	20	0
22	31	1985	59	1968	20	1985	49	1990	50	38	44	21	0
23	27	1985	63	1959	17	1985	55	1959	50	38	44	21	0
24	25	1985	64	1949	13	1985	58	1949	50	38	44	21	0
25	29	1985	63	1977	20	1985	52	1950	50	38	44	21	0
26	38	1993	61	1949	18	1952	52	1949	49	38	44	21	0
27	38	1985	63	1947	20	1952	48	1983	49	38	43	22	0
28	27	1985	58	1995	20	1952	56	1995	49	37	43	22	0
29	26	1985	58	1995	21	1985	54	1995	48	37	43	22	0
30	26	1985	58	1941	22	1985	52	1995	48	37	43	22	0
	NOVEMBER EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	25	1985	73	1975	13	1985	58	1949	52.6	39.5	46.1	567	0

[1]HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2]HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

DECEMBER DAILY TEMPERATURE DATA
(1941-1998)

	RECORD MAXIMUM TEMPERATURES				RECORD MINIMUM TEMPERATURES				CLIMATIC NORMALS[1] (based on 1961-90 normals)				
Day	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
1	24	1985	62	1958	20	1985	54	1975	48	37	42	23	0
2	41	1983	62	1958	23	1985	55	1975	48	37	42	23	0
3	37	1969	62	1979	28	1988	53	1975	48	36	42	23	0
4	32	1972	64	1945	23	1972	46	1989	47	36	42	23	0
5	27	1972	59	1970	20	1972	49	1991	47	36	42	23	0
6	27	1972	60	1988	22	1972	47	1989	47	36	41	24	0
7	25	1972	58	1970	17	1972	44	1946	47	36	41	24	0
8	26	1972	59	1975	8	1972	46	1991	47	36	41	24	0
9	28	1972	60	1987	15	1972	46	1988	46	35	41	24	0
10	28	1972	65	1993	16	1972	50	1956	46	35	41	24	0
11	24	1972	61	1955	16	1972	48	1977	46	35	41	24	0
12	31	1972	63	1995	14	1972	49	1998	46	35	41	24	0
13	32	1972	61	1977	18	1972	50	1946	46	35	40	25	0
14	34	1961	58	1977	23	1972	50	1979	46	35	40	25	0
15	30	1972	59	1959	23	1972	45	1973	45	35	40	25	0
16	32	1964	60	1974	6	1964	48	1982	45	35	40	25	0
17	17	1964	56	1994	7	1964	47	1994	45	34	40	25	0
18	17	1964	58	1972	11	1964	46	1994	45	34	40	25	0
19	28	1964	59	1972	14	1964	48	1972	45	34	40	25	0
20	19	1990	59	1974	13	1967	51	1974	45	34	40	25	0
21	20	1990	61	1972	12	1990	50	1972	45	34	39	26	0
22	21	1990	59	1964	13	1990	50	1950	45	34	39	26	0
23	20	1983	64	1950	11	1998	47	1950	45	34	39	26	0
24	23	1983	60	1980	15	1990	47	1950	45	34	39	26	0
25	31	1983	64	1980	19	1990	60	1980	45	34	39	26	0
26	34	1983	63	1980	22	1983	55	1980	45	34	39	26	0
27	33	1948	61	1980	23	1971	47	1994	44	34	39	26	0
28	33	1983	58	1945	19	1990	50	1998	44	34	39	26	0
29	22	1990	58	1950	14	1990	52	1998	44	34	39	26	0
30	14	1968	60	1980	8	1968	49	1980	44	34	39	26	0
31	19	1978	58	1996	9	1968	45	1996	44	33	39	26	0
	DECEMBER EXTREMES (most recent occurrence)								Normal Monthly Average[2]				
	MIN	Year	MAX	Year	MIN	Year	MAX	Year	MAX	MIN	Mean	HDD	CDD
	14	1968	65	1993	6	1964	60	1980	45.6	34.8	40.2	769	0

[1]HDD are Heating Degree Days and CDD are Cooling Degree Days.

[2]HDD and CDD monthly average values are based on the actual occurrences rather than the total of daily normal values.

NUMBER OF DAYS PER MONTH WITH MAXIMUM TEMPERATURE...
(October 1940 - May 1999)

Maximum Temperature of 90+ Deg

Month	AVG[1]	Most/Year	Least/Year
January	0	0 in 1999	0 in 1999
February	0	0 in 1999	0 in 1999
March	0	0 in 1999	0 in 1999
April	0	1 in 1998	0 in 1999
May	0.3	3 in 1987	0 in 1999
June	1.2	6 in 1970	0 in 1998
July	3.6	12 in 1996	0 in 1993
August	3.8	13 in 1967	0 in 1989
September	1.8	8 in 1974	0 in 1996
October	0.1	1 in 1988	0 in 1998
November	0	0 in 1998	0 in 1998
December	0	0 in 1998	0 in 1998
Year	10.8	23 in 1987	0 in 1954

Maximum Temperature of 32 Deg or Less

Month	AVG[1]	Most/Year	Least/Year
January	2.2	9 in 1979	0 in 1999
February	0.3	4 in 1996	0 in 1999
March	0	3 in 1995	0 in 1999
April	0	0 in 1999	0 in 1999
May	0	0 in 1999	0 in 1999
June	0	0 in 1998	0 in 1998
July	0	0 in 1998	0 in 1998
August	0	0 in 1998	0 in 1998
September	0	0 in 1998	0 in 1998
October	0	0 in 1998	0 in 1998
November	0.2	7 in 1985	0 in 1998
December	0.9	11 in 1972	0 in 1997
Year	3.6	13 in 1972	0 in 1997

NUMBER OF DAYS PER MONTH WITH MINIMUM TEMPERATURE...
(October 1940 - May 1999)

Minimum Temperature of 32 Deg or Less

Month	AVG[1]	Most/Year	Least/Year
January	13.1	30 in 1949	1 in 1967
February	8.2	15 in 1993	0 in 1961
March	4.6	14 in 1955	0 in 1986
April	1.0	4 in 1972	0 in 1998
May	0.1	2 in 1964	0 in 1999
June	0	0 in 1998	0 in 1998
July	0	0 in 1998	0 in 1998
August	0	0 in 1998	0 in 1998
September	0	0 in 1998	0 in 1998
October	0.6	4 in 1987	0 in 1998
November	5.2	19 in 1978	0 in 1998
December	9.6	25 in 1985	0 in 1953
Year	42.4	84 in 1985	18 in 1953

Minimum Temperature of 15 Deg or Less

Month	AVG[2]	Most/Year	Least/Year
January	--	3 in 1974	0 in 1999
February	--	5 in 1989	0 in 1999
March	--	0 in 1999	0 in 1999
April	--	0 in 1999	0 in 1999
May	--	0 in 1999	0 in 1999
June	--	0 in 1998	0 in 1998
July	--	0 in 1998	0 in 1998
August	--	0 in 1998	0 in 1998
September	--	0 in 1998	0 in 1998
October	--	0 in 1998	0 in 1998
November	--	1 in 1985	0 in 1998
December	--	6 in 1990	0 in 1997
Year	--	6 in 1990	0 in 1997

[1] Averages are the 1961-1990 Climatic Normals.

[2] Averages have not been calculated at this time.

CUMULATIVE FREQUENCY OF MAXIMUM TEMPERATURES
(based on temperature data from 1928-1990)

Example of how to use table: The max temperature in July is 75 degrees or warmer 70.0% of the time.

TEMP (F)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
>=105	0	0	0	0	0	0	0.2	0.2	0.1	0	0	0	<0.1
>=100	0	0	0	0	0	0.1	0.1	1.5	0.1	0	0	0	0.3
>=95	0	0	0	0	0.2	1.1	4.5	4.4	0.9	0	0	0	0.9
>=90	0	0	0	0.2	1.1	4.4	11.6	12.3	4.5	0.2	0	0	2.9
>=85	0	0	0	0.6	5.0	12.1	26.9	25.9	12.8	1.0	0	0	7.1
>=80	0	0	0.1	2.2	11.4	23.4	47.4	44.5	25.4	2.7	0	0	13.2
>=75	0	0	0.5	7.6	21.9	39.3	70.0	70.2	43.6	9.1	0	0	22.0
>=70	0	0.1	4.0	17.9	36.9	61.9	89.5	90.4	66.1	20.7	0.2	0	32.5
>=65	0.1	1.1	11.0	31.1	55.7	85.0	98.4	98.5	87.6	42.4	2.4	0	43.0
>=60	1.3	7.2	25.7	52.1	81.0	97.4	100	99.9	98.2	71.3	12.7	1.7	54.2
>=55	8.5	23.3	51.6	80.5	96.6	99.8	100	100	99.8	91.3	39.9	9.9	67.0
>=50	26.9	54.7	82.5	96.3	99.9	100	100	100	100	98.7	70.4	32.2	80.2
>=45	54.7	82.3	96.5	99.7	100	100	100	100	100	99.7	89.8	61.3	90.3
>=40	76.6	93.0	99.4	99.9	100	100	100	100	100	99.9	97.5	86.6	96.1
>=35	88.2	97.0	99.9	100	100	100	100	100	100	100	99.1	95.4	98.3
>=30	95.5	99.0	99.9	100	100	100	100	100	100	100	99.4	98.0	99.3
>=25	98.4	99.6	100	100	100	100	100	100	100	100	100	99.0	99.8
>=20	99.8	99.8	100	100	100	100	100	100	100	100	100	99.6	99.9
>=15	100	100	100	100	100	100	100	100	100	100	100	99.9	100
CLIMATIC NORMAL MONTHLY MAXIMUM TEMPERATURES (based on 1961-1990 data)													
	45.4	51.0	56.0	60.6	67.1	74.0	79.9	80.3	74.6	64.0	52.6	45.6	62.6

CUMULATIVE FREQUENCY OF MINIMUM TEMPERATURES
(based on temperature data from1928-1990)

Example of how to use table: The min temperature in May is 45 degrees or warmer 74.1% of the time.

TEMP (F)	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
>=70	0	0	0	0	0	0	0.5	0	0	0	0	0	<0.1
>=65	0	0	0	0	0	0.4	2.5	1.7	0.1	0.1	0	0	0.4
>=60	0	0	0	0.1	0.6	6.1	19.4	24.3	5.6	0.4	0.1	0.1	4.8
>=55	0	0.1	0.2	0.9	7.8	38.2	72.5	73.9	36.2	5.9	0.5	0.2	19.9
>=50	0.9	1.2	2.0	9.5	33.2	79.4	96.1	95.3	71.6	29.1	5.6	1.4	35.7
>=45	6.5	8.3	15.8	33.1	74.1	98.2	99.9	99.8	91.8	60.7	25.7	8.3	52.1
>=40	23.8	33.6	48.7	69.2	95.1	99.9	100	100	98.6	85.0	54.5	31.2	70.1
>=35	50.3	63.3	79.3	92.8	99.5	100	100	100	99.9	96.8	78.9	61.3	85.3
>=30	74.9	85.8	95.0	99.9	99.9	100	100	100	100	99.6	92.1	83.4	94.2
>=25	87.4	95.1	99.4	100	100	100	100	100	100	100	98.1	94.2	97.8
>=20	93.8	97.9	99.9	100	100	100	100	100	100	100	99.5	97.6	99.1
>=15	97.8	99.4	100	100	100	100	100	100	100	100	99.9	99.0	99.7
>=10	99.5	99.7	100	100	100	100	100	100	100	100	100	99.7	99.9
>=5	99.9	99.8	100	100	100	100	100	100	100	100	100	100	~100
>=0	99.9	99.9	100	100	100	100	100	100	100	100	100	100	~100
>=-5	100	100	100	100	100	100	100	100	100	100	100	100	100
CLIMATIC NORMAL MONTHLY MINIMUM TEMPERATURES (based on 1961-1990 data)													
	33.7	36.1	38.6	41.3	47.0	52.9	56.5	56.9	52.0	44.9	33.9	34.8	44.5

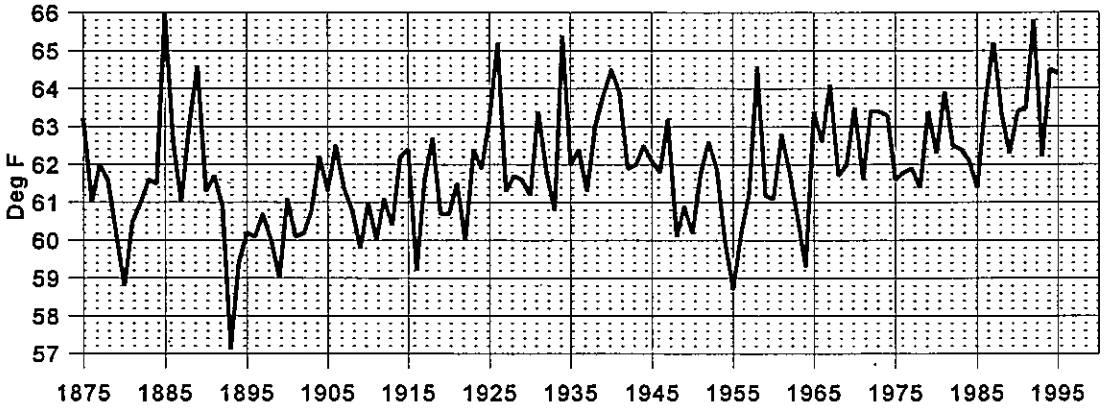
LONGEST HOT SPELLS AND COLD SNAPS
(1871-1998)

	Consecutive Days	Dates	Temperatures (degrees Farenheit)
Maximum Temperature of 100 Degrees or Greater	5	July 13-17, 1941	101/103/103/102/101
	4	Aug 7-10, 1981	103/107/105/107
	3	July 19-21, 1981	102/103/101
	3	Aug 10-12, 1977	101/102/104
	3	July 19-21, 1994	102/103/101
	3	Aug 9-11, 1971	100/101/100
	3	June 30-July 3, 1942	100/105/102
	2	strings of 2 days of 100 degrees or higher occur occasionally	
Maximum Temperature of 90 Degrees or Greater	8	Aug 12-19, 1967	92/95/97/98/97/92/91/94
	7	Aug 3-9, 1972	94/92/95/102/104/96/91
	7	Sept 4-10, 1944	93/101/90/93/92/92/98
	7	July 12-18, 1911	91/97/92/94/97/95/94
	7	July 17-23, 1988	97/95/93/93/94/93/90
	6	strings of 6 days of 90 degrees or higher occur occasionally	
Maximum Temperature of 32 Degrees or Lower	19	Jan 8-26, 1930	32/32/29/27/30/28/26/23/22/18/19/26/ 26/24/22/26/30/32/30
	12	Jan 18-29, 1957	30/26/29/32/31/30/30/26/28/22/26/25
	10	Dec 4-13, 1972	32/27/27/25/26/28/28/24/31/32
	9	Jan 27-Feb 4, 1950	22/25/20/25/16/25/18/20/30
	8	Jan 20-27, 1949	28/28/32/32/28/26/23/32
	7	Dec 29-Jan 4 1978-79	29/24/19/21/25/31/31
	6	strings of 6 days occur occasionally	
Minimum Temperature of 32 Degrees or Lower	38	Jan 1-Feb7, 1949	30/25/22/22/24/27/32/23/16/16/19/19/ 16/23/26/26/29/26/23/15/22/9/ 11/10/11/18/19/10/26/30//27/ 27/29/27/29/28/32/32
	25	Dec 9-Jan 2, 1985-86	30/26/22/23/25/25/29/27/26/25/21/26/ 22/22/23/25/23/23/24/24/25/21 29/28/29
Minimum Temperature of 20 Degrees or Lower	7	Dec 19-Dec 25, 1990	18/14/12/13/16/15/19
	7	Dec 7-13, 1972	17/8/15/16/16/14/18
	7	Jan 24-30, 1957	19/13/6/8/10/12/14
	7	Jan 22-28, 1949	9/11/10/11/18/19/10
	6	Dec 18-Jan 2, 1978-79	19/15/15/13/14/16
	5	strings of 6 days occur occasionally	
Minimum Temperature of 10 Degrees or Lower	7	Jan 28-Feb 3, 1950	10/8/10/-2/1/-3/4
	3	Jan 26-28, 1957	6/8/10
	2	strings of 2 days occur infrequently	
Minimum Temperature of 0 Degrees or Lower	1	Feb 1, 1950	-2
	1	Feb 3 , 1950	-3

AVG ANNUAL TEMP GRAPHS

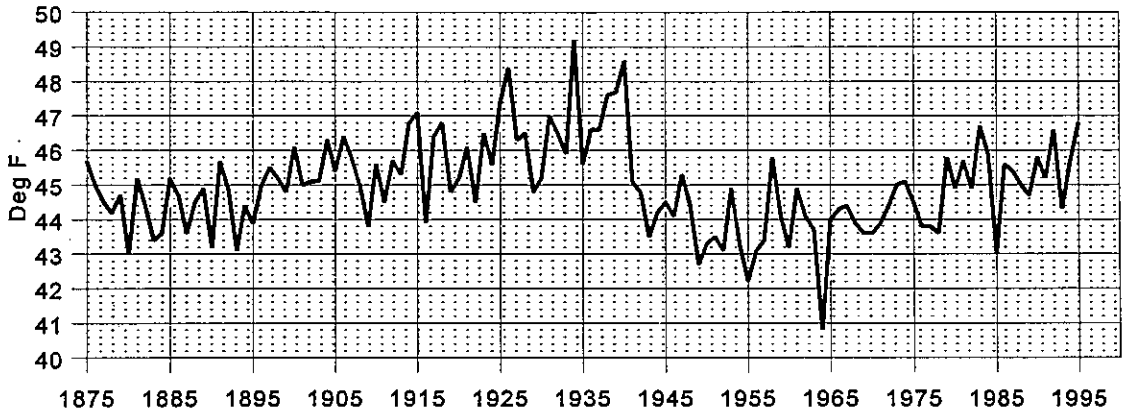
Average Annual MAXIMUM Temperature (1875-1997)

Climatic Annual Normal 62.6 degrees



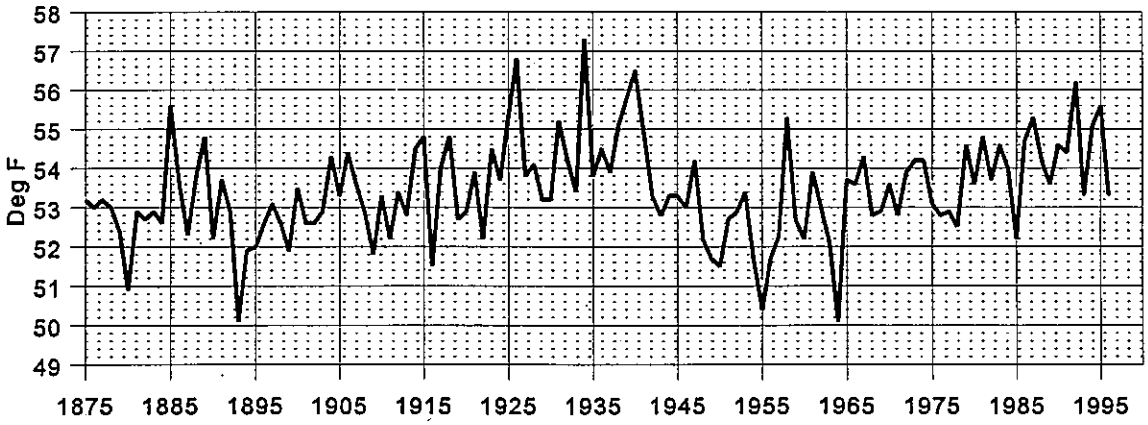
Average Annual MINIMUM Temperature (1875-1997)

Climatic Annual Normal 44.5 degrees



Average Annual MEAN Temperature (1875-1997)

Climatic Annual Normal 53.6 degrees



Monthly Average MAXIMUM Temperatures

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1871	Observations begin Nov. 1st, 1871, but data is too sparse to determine averages until 1874												
1874	NA	NA	NA	NA	NA	NA	77.8	73.5	71.8	66.1	51.3	48.3	NA
1875	35.9	47.9	50.6	66.6	64.1	70.2	82.9	77.0	74.2	66.0	50.9	52.7	63.2
1876	46.0	51.8	51.5	57.9	63.7	73.7	75.3	73.5	72.9	65.2	54.0	47.0	61.0
1877	48.1	54.0	57.0	62.3	64.8	70.7	76.5	76.6	68.8	61.4	54.5	48.3	62.0
1878	47.0	51.3	59.2	60.5	67.7	76.3	74.5	77.5	68.8	58.6	52.6	44.7	61.6
1879	43.5	50.2	55.5	60.8	62.7	68.9	75.2	78.3	73.5	59.0	50.2	43.5	60.2
1880	45.7	43.3	48.5	59.5	62.8	69.8	76.7	73.6	69.8	62.1	48.3	45.1	58.8
1881	44.3	50.6	57.3	63.2	67.2	69.9	75.2	73.3	69.5	55.8	50.1	49.5	60.5
1882	45.4	44.0	52.6	57.8	68.2	74.8	79.2	77.4	72.4	58.1	51.3	51.4	61.0
1883	44.3	42.0	61.8	59.0	69.8	75.7	80.0	73.8	72.3	58.4	52.8	49.0	61.6
1884	46.3	44.4	55.6	65.1	73.6	74.9	75.0	81.9	66.5	61.9	54.6	37.5	61.5
1885	41.6	53.2	63.5	68.3	74.5	73.7	83.1	82.5	73.8	69.1	57.6	50.0	66.0
1886	43.3	53.4	54.3	59.9	69.9	75.5	81.2	79.9	74.6	60.2	48.8	50.8	62.6
1887	47.7	38.4	58.8	59.5	69.3	71.4	78.5	75.8	71.9	63.4	50.6	47.0	61.0
1888	36.5	51.6	55.7	66.5	75.1	71.3	80.3	81.8	77.3	63.7	49.1	48.6	63.1
1889	44.7	53.4	63.9	65.2	70.9	79.4	84.4	77.1	73.4	65.6	54.1	43.0	64.6
1890	36.7	45.1	52.4	63.2	72.5	71.5	76.6	76.9	74.6	61.9	55.8	48.3	61.3
1891	48.8	42.3	51.8	60.5	70.4	68.7	80.5	82.1	70.1	65.0	53.6	46.1	61.7
1892	44.7	50.0	57.4	56.8	69.2	72.4	75.0	78.5	72.7	61.2	50.5	42.7	60.9
1893	39.5	42.9	49.9	51.1	62.5	65.3	75.1	77.3	65.2	56.3	51.4	48.5	57.1
1894	44.9	42.9	50.7	57.1	64.5	66.3	78.8	80.9	68.3	59.5	54.5	44.3	59.4
1895	42.1	48.6	54.1	61.2	64.0	72.7	75.8	76.9	65.7	65.9	50.3	45.1	60.2
1896	48.6	52.1	53.4	54.1	59.6	70.5	81.5	74.7	70.9	64.7	43.2	48.2	60.1
1897	43.4	47.4	45.7	65.6	71.9	69.1	74.1	82.3	68.7	62.4	49.9	47.8	60.7
1898	42.9	50.6	51.3	60.6	65.5	71.3	77.2	77.8	71.5	60.2	49.0	42.1	60.0
1899	45.0	45.0	50.9	56.7	57.5	67.4	77.6	69.1	74.6	58.8	57.1	47.7	59.0
1900	49.3	47.1	59.5	60.9	64.4	72.4	77.1	72.3	68.6	59.3	51.5	50.3	61.1
1901	44.7	48.8	53.7	57.3	65.0	65.4	72.8	80.2	67.0	67.1	53.8	45.3	60.1
1902	43.7	49.9	50.5	56.7	63.5	71.0	75.2	78.8	72.8	64.7	50.9	44.5	60.2
1903	47.1	48.4	53.9	57.6	66.3	73.3	74.0	75.6	71.9	64.0	51.1	45.8	60.8
1904	46.0	46.1	48.7	63.9	67.7	73.6	77.5	79.8	74.7	64.7	56.5	47.7	62.2
1905	45.0	48.9	58.0	65.6	64.4	70.1	80.2	76.8	71.0	58.6	51.8	45.0	61.3
1906	47.4	50.0	52.7	66.6	65.5	69.3	84.8	80.4	71.7	63.4	50.8	47.4	62.5
1907	38.8	51.2	51.3	61.4	69.3	71.7	78.5	73.9	71.9	64.2	55.5	48.8	61.4
1908	47.4	48.4	53.2	62.2	60.9	71.1	80.4	76.5	70.9	60.4	55.1	43.3	60.8
1909	38.0	48.2	55.2	60.0	64.3	73.1	73.2	76.7	73.8	62.4	52.3	40.4	59.8
1910	42.3	44.5	60.8	62.8	69.7	69.3	78.1	74.3	69.2	62.4	51.7	46.9	61.0
1911	42.6	46.0	58.8	58.4	62.2	68.6	81.1	77.0	66.0	62.5	51.6	45.5	60.0
1912	46.1	50.8	54.5	58.0	68.8	73.6	76.9	75.1	72.3	59.3	52.4	45.9	61.1
1913	42.8	46.1	50.9	59.4	66.4	72.1	78.2	78.8	72.7	60.4	52.1	44.3	60.4
1914	50.5	48.0	58.0	62.7	71.6	70.5	80.1	79.1	67.3	64.1	52.5	41.5	62.2
1915	43.6	51.2	60.6	65.7	66.5	72.0	76.1	82.7	71.7	63.3	49.9	46.1	62.4
1916	34.1	48.0	53.2	62.1	63.3	71.6	72.7	78.5	72.4	63.1	49.1	41.8	59.2
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
NORM	***45.4***	***51.0***	***56.0***	***60.6***	***67.1***	***74.0***	***79.9***	***80.3***	***74.6***	***64.0***	***52.6***	***45.6***	***62.6***

Monthly Average MAXIMUM Temperatures
(continued)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1917	44.3	46.4	48.6	55.9	61.6	72.0	80.6	82.1	71.5	66.9	57.4	52.5	61.6
1918	49.5	47.2	53.7	63.3	64.5	78.8	78.4	77.3	78.0	63.5	51.7	46.9	62.7
1919	47.6	47.1	55.5	61.9	66.8	70.8	79.8	80.1	71.4	58.3	50.3	38.5	60.7
1920	44.6	50.0	52.8	55.8	65.7	71.8	78.9	80.6	69.1	59.0	52.7	47.7	60.7
1921	46.4	50.6	54.7	58.9	66.5	72.9	76.6	77.5	69.7	65.5	54.5	44.0	61.5
1922	40.4	45.5	49.8	56.4	67.9	76.2	79.6	77.2	73.9	62.1	48.8	42.5	60.0
1923	46.9	43.2	55.5	63.5	66.1	71.7	77.5	81.5	74.7	64.8	57.3	46.3	62.4
1924	43.5	53.8	53.6	63.4	72.4	74.7	78.2	75.9	73.7	61.4	50.5	41.3	61.9
1925	49.4	51.6	55.4	62.5	71.0	73.5	81.3	76.1	73.1	64.4	51.2	50.9	63.2
1926	47.5	54.5	63.4	70.4	68.1	77.7	82.8	79.6	70.9	65.5	56.5	45.6	65.2
1927	43.2	51.8	54.3	61.3	62.9	73.7	78.9	79.9	69.5	62.5	54.8	42.4	61.3
1928	43.2	50.7	57.5	58.7	74.1	69.8	79.2	78.3	70.2	61.2	51.9	45.2	61.7
1929	39.3	41.9	54.6	57.4	68.3	71.3	80.0	80.9	75.6	67.6	51.8	49.9	61.6
1930	32.6	53.1	58.9	64.5	63.8	71.9	77.6	80.7	72.4	61.4	52.3	44.7	61.2
1931	49.8	51.2	55.9	65.2	73.5	72.6	82.1	81.1	71.5	64.0	49.6	44.4	63.4
1932	44.2	47.1	53.5	61.5	66.5	76.5	75.7	77.3	77.2	64.5	55.1	42.7	61.8
1933	43.6	43.8	54.0	61.5	61.0	71.4	79.1	80.4	67.4	65.3	51.6	50.5	60.8
1934	51.5	56.4	64.0	70.0	70.8	74.0	76.8	80.5	72.3	65.5	54.9	48.1	65.4
1935	46.0	52.5	50.3	60.5	68.9	74.4	78.7	79.7	78.1	60.5	48.2	46.6	62.0
1936	48.5	38.9	52.5	64.5	70.7	73.8	77.7	80.4	73.2	68.2	53.0	47.3	62.4
1937	34.4	47.0	56.1	57.1	68.4	74.8	78.5	76.6	72.5	67.5	54.1	49.0	61.3
1938	46.5	48.1	53.4	63.3	69.8	75.3	82.8	76.7	77.6	64.6	49.6	48.1	63.0
1939	47.9	46.0	57.5	66.1	70.9	69.7	80.5	81.5	75.1	63.6	56.4	51.0	63.8
1940	47.3	52.0	59.2	63.5	73.3	79.2	79.2	81.9	73.7	65.5	49.7	49.0	64.5
1941	47.4	55.1	63.5	65.8	67.1	71.6	84.5	77.6	68.8	62.5	54.8	47.7	63.9
1942	39.8	49.2	55.6	62.1	65.1	70.4	80.2	80.5	76.2	65.5	50.4	47.7	61.9
1943	40.0	52.6	53.4	64.1	65.2	69.6	78.9	78.0	79.5	62.5	53.5	46.3	62.0
1944	45.5	49.0	54.7	59.9	68.4	71.7	80.2	78.0	77.8	67.9	51.6	44.8	62.5
1945	48.5	50.8	52.0	58.7	68.4	73.0	82.0	80.4	72.1	64.1	50.3	44.9	62.1
1946	46.7	49.4	54.4	61.5	70.6	70.6	79.1	80.0	72.5	58.8	51.0	47.2	61.8
1947	43.6	53.8	59.8	64.6	73.3	71.1	77.2	76.9	75.6	61.8	52.6	48.3	63.2
1948	45.7	47.5	52.4	56.5	65.0	75.9	76.5	74.2	72.7	62.3	49.5	42.8	60.1
1949	34.5	45.2	53.0	63.0	69.8	72.9	77.1	77.4	75.0	57.6	58.4	46.3	60.9
1950	32.8	45.5	51.5	57.9	65.8	71.3	79.0	81.8	74.5	58.7	51.6	51.4	60.2
1951	44.5	49.7	49.4	66.0	67.0	77.1	78.4	77.9	76.0	61.6	51.2	42.6	61.8
1952	40.4	48.4	52.4	64.4	68.5	69.4	80.9	79.6	79.0	71.8	49.5	46.8	62.6
1953	52.0	51.3	53.5	58.8	63.3	66.4	78.0	76.1	74.6	64.4	55.0	49.1	61.9
1954	44.2	49.8	54.0	59.3	67.4	66.2	72.6	71.6	69.9	63.0	55.8	46.0	60.0
1955	44.8	47.3	49.2	55.0	63.0	70.7	72.2	77.2	71.9	61.0	46.9	44.7	58.7
1956	45.2	40.9	51.8	63.6	69.7	67.6	80.1	75.7	72.0	59.0	50.6	46.0	60.2
1957	36.5	50.1	52.9	61.4	67.5	71.5	76.6	75.2	79.1	61.3	53.0	49.3	61.2
1958	49.9	54.6	54.8	60.5	73.4	73.6	83.5	83.3	74.0	67.2	51.7	49.1	64.6
1959	45.5	48.6	54.9	62.0	65.2	71.5	80.7	77.1	69.3	63.0	50.5	46.0	61.2
Year	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	**Annual**
NORM	***45.4***	***51.0***	***56.0***	***60.6***	***67.1***	***74.0***	***79.9***	***80.3***	***74.6***	***64.0***	***52.6***	***45.6***	***62.6***

Monthly Average MAXIMUM Temperatures
(continued)

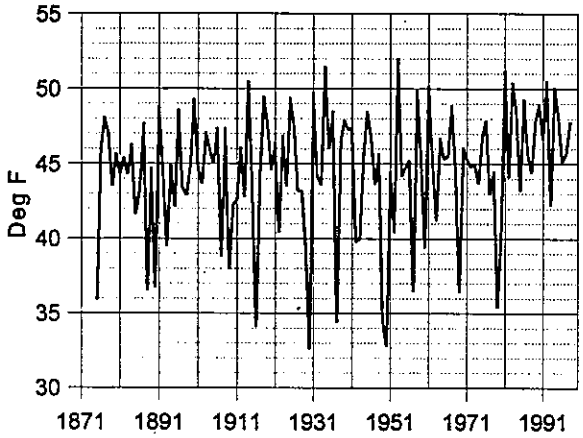
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1960	39.4	49.5	53.4	60.1	62.4	74.4	82.8	75.5	73.2	64.2	53.4	44.8	61.1
1961	50.2	52.7	54.7	58.6	65.7	77.3	81.2	82.9	71.1	62.6	50.9	46.1	62.8
1962	45.3	50.3	53.5	62.4	61.6	72.7	78.9	76.7	74.8	63.6	53.9	48.5	61.8
1963	41.2	55.3	53.7	55.9	67.4	68.4	72.0	76.5	76.5	63.1	52.7	43.9	60.6
1964	46.7	49.5	52.0	56.0	63.3	68.4	75.9	75.2	70.3	64.5	47.6	42.6	59.3
1965	45.3	50.6	59.6	61.9	64.5	73.9	83.3	80.1	72.9	67.4	55.8	45.4	63.4
1966	45.5	50.3	56.3	61.0	64.6	74.1	77.3	80.4	75.4	63.4	53.5	48.9	62.6
1967	48.9	52.6	51.9	56.2	68.1	77.5	82.6	88.1	80.0	63.9	53.9	45.6	64.1
1968	44.6	57.8	57.0	57.8	65.6	72.7	81.3	75.7	71.4	60.8	53.5	42.2	61.7
1969	36.4	46.9	58.9	59.9	71.5	76.1	78.0	78.4	74.0	62.1	54.2	47.8	62.0
1970	46.1	54.9	75.2	57.4	68.9	77.9	82.5	81.5	72.1	63.7	54.2	45.8	63.5
1971	45.3	50.4	52.0	60.1	67.6	69.8	81.4	83.6	71.7	61.0	51.4	45.3	61.6
1972	44.8	50.5	58.3	57.4	71.4	74.6	83.9	85.0	72.8	64.1	55.0	43.1	63.4
1973	45.0	53.2	55.7	63.4	71.2	74.3	83.5	77.5	75.9	62.7	49.2	49.6	63.4
1974	43.7	48.4	55.3	59.3	64.4	75.6	77.9	80.4	81.9	67.8	54.7	49.6	63.3
1975	46.8	47.7	52.3	56.6	68.4	72.0	80.1	75.3	79.7	60.0	52.0	48.1	61.6
1976	47.9	49.2	53.0	60.1	67.2	70.8	78.5	74.3	74.6	64.8	56.1	45.4	61.8
1977	43.0	52.4	52.9	65.3	62.3	75.4	77.8	84.1	69.7	63.5	49.5	46.9	61.9
1978	44.5	51.4	59.3	58.8	64.5	75.6	80.0	77.8	69.0	66.9	46.9	41.6	61.4
1979	35.4	48.7	60.5	61.8	70.5	76.6	83.4	78.7	77.4	66.7	51.5	49.9	63.4
1980	40.8	49.4	53.5	64.5	66.1	68.5	80.0	77.6	75.1	66.8	54.8	50.2	62.3
1981	51.2	51.8	58.4	61.4	66.2	70.5	78.2	85.5	76.5	62.4	56.4	47.9	63.9
1982	44.1	50.3	57.9	58.6	68.8	76.7	78.0	79.6	73.2	63.8	51.3	47.2	62.5
1983	50.4	53.3	57.7	63.0	70.4	70.9	75.2	78.8	71.9	63.6	53.9	40.2	62.4
1984	48.6	52.7	59.1	57.9	64.8	71.2	80.9	81.1	73.8	59.8	52.5	42.8	62.1
1985	43.2	48.6	54.8	63.3	68.2	75.4	87.5	81.0	70.6	61.6	42.9	39.2	61.4
1986	49.3	50.9	60.5	59.5	67.3	77.4	75.4	86.2	70.7	67.1	53.7	46.4	63.7
1987	45.7	52.7	56.7	64.7	71.1	79.3	77.4	84.1	78.5	71.9	55.6	44.2	65.2
1988	44.4	53.6	56.7	60.6	65.8	73.0	80.9	80.9	76.9	66.8	52.7	47.5	63.3
1989	47.8	43.5	52.6	66.8	67.6	74.9	75.0	75.5	79.7	63.6	55.0	45.9	62.3
1990	49.0	48.7	58.8	64.4	65.6	73.1	83.8	82.1	78.0	62.5	54.4	40.0	63.4
1991	46.6	57.7	54.6	59.5	62.3	68.3	82.4	81.6	81.4	66.8	53.2	47.8	63.5
1992	50.5	56.2	63.7	64.3	76.6	79.5	81.7	82.9	73.5	64.5	52.0	44.0	65.8
1993	42.2	47.3	56.7	59.9	71.3	71.6	72.8	79.6	80.1	67.7	49.2	48.0	62.2
1994	50.1	47.6	60.9	63.7	71.3	73.7	84.6	82.1	79.4	64.4	48.3	47.5	64.5
1995	48.2	54.9	57.5	60.6	71.6	74.1	81.6	78.9	77.6	63.3	57.1	47.4	64.4
1996	45.1	49.2	55.9	61.7	62.7	74.3	84.8	82.2	71.2	61.8	51.2	46.7	62.2
1997	45.7	50.9	54.4	59.4	72.6	71.6	79.3	82.7	75.7	60.7	55.9	46.1	62.9
1998	47.8	51.8	56.2	62.1	62.7	72.3	80.7	82.7	79.1	62.1	53.4	45.5	63.0
1999	47.9	49.2	52.7	60.3	63.9	69.3							
2000													
2001													
2002													
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
NORM	*45.4*	*51.0*	*56.0*	*60.6*	*67.1*	*74.0*	*79.9*	*80.3*	*74.6*	*64.0*	*52.6*	*45.6*	*62.6*

**NORM are the 30 year climatic Normals (1961-90)*

Monthly Average MAXIMUM Temperatures

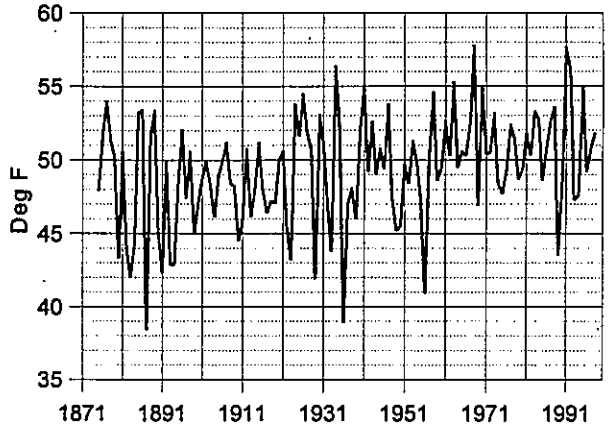
JANUARY

Climatic Normal 45.4 deg



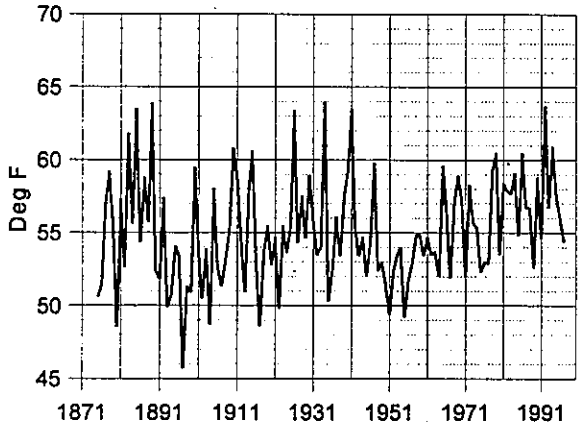
FEBRUARY

Climatic Normal 51.0 deg



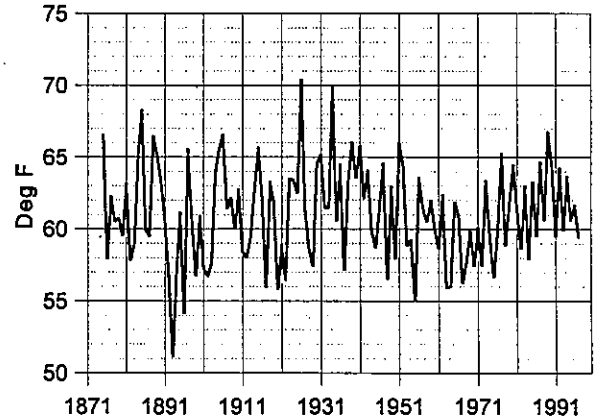
MARCH

Climatic Normal 56.0 deg



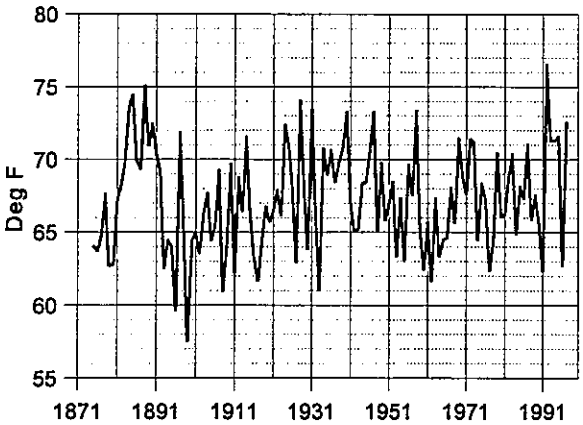
APRIL

Climatic Normal 60.6 deg



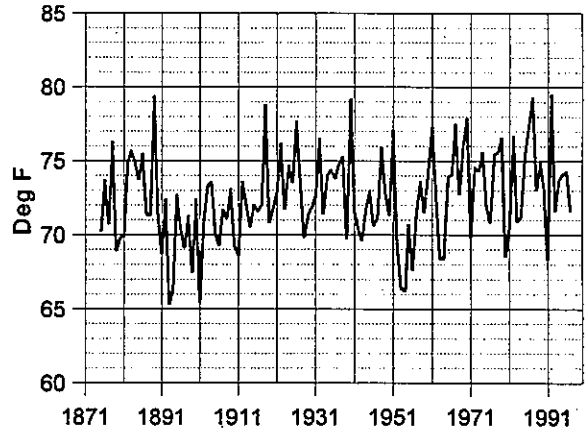
MAY

Climatic Normal 67.1 deg



JUNE

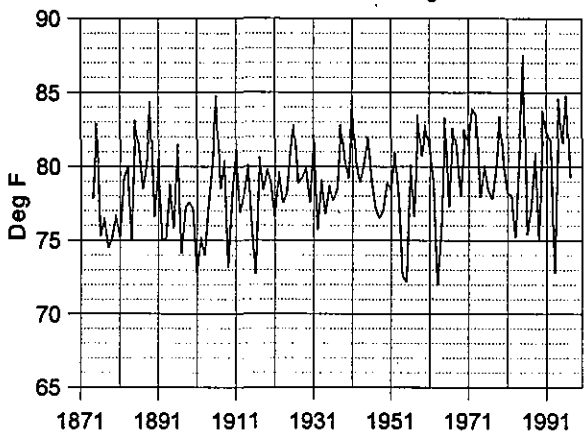
Climatic Normal 74.0 deg



Monthly Average MAXIMUM Temperatures

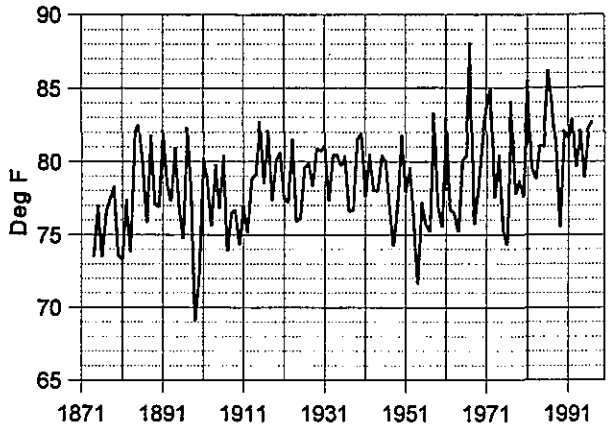
JULY

Climatic Normal 79.9 deg



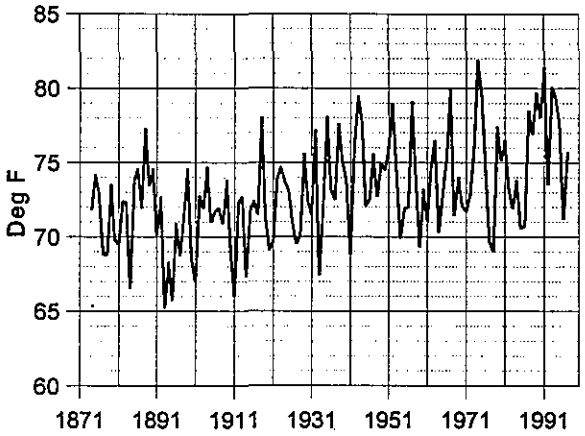
AUGUST

Climatic Normal 80.3 deg



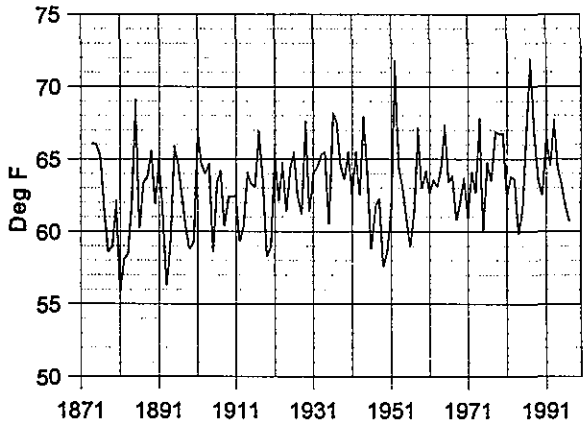
SEPTEMBER

Climatic Normal 74.6 deg



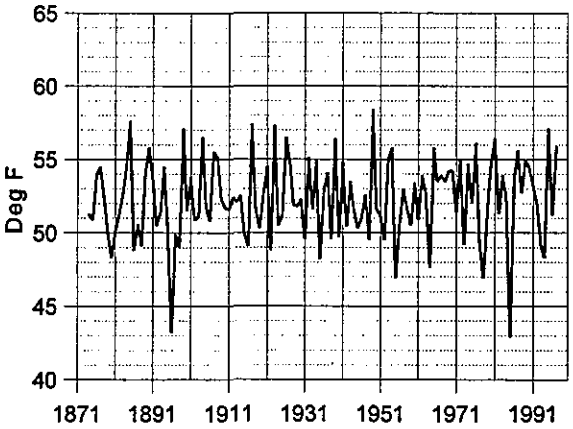
OCTOBER

Climatic Normal 64.0 deg



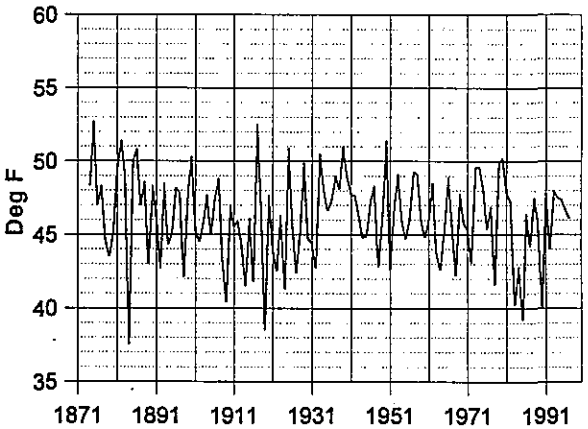
NOVEMBER

Climatic Normal 52.6 deg



DECEMBER

Climatic Normal 45.6 deg



Monthly Average MINIMUM Temperatures

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1871	Observations begin Nov. 1st, 1871, but data is too sparse to determine averages until 1874												
1874	NA	NA	NA	NA	NA	NA	NA	53.5	49.3	45.5	38.9	38.2	NA
1875	24.6	34.4	38.9	43.5	47.4	51.2	58.0	55.2	52.3	50.9	38.9	42.7	45.7
1876	33.2	38.8	38.6	42.3	45.9	54.3	56.2	52.1	53.2	50.5	40.9	33.9	45.0
1877	35.8	38.6	42.5	41.6	45.4	50.1	55.1	55.5	49.9	44.9	41.8	36.4	44.5
1878	35.5	39.0	42.7	41.4	45.4	51.0	53.4	54.3	49.5	43.8	40.7	34.3	44.2
1879	32.2	37.1	41.7	44.2	47.6	51.9	55.3	55.2	53.9	46.0	36.9	34.3	44.7
1880	37.6	33.6	35.0	40.7	44.5	51.2	54.4	54.1	50.2	44.6	36.3	34.4	43.0
1881	34.6	40.4	42.0	47.5	46.4	52.4	54.0	53.3	50.5	44.8	38.4	38.4	45.2
1882	35.2	33.2	36.9	40.8	47.0	54.3	55.2	54.8	50.6	45.7	37.7	41.6	44.4
1883	32.5	25.8	41.1	42.1	48.4	53.2	57.0	54.2	52.6	45.4	42.0	36.8	43.4
1884	33.3	29.4	37.8	45.3	48.7	53.7	55.9	57.7	49.4	45.0	42.0	25.5	43.6
1885	31.6	41.5	42.9	41.5	48.9	50.5	57.3	52.8	51.1	46.0	40.7	37.8	45.2
1886	31.7	39.1	37.5	42.6	48.5	53.5	56.4	55.3	52.2	44.5	34.6	40.2	44.7
1887	36.8	25.7	40.9	42.0	48.2	50.4	54.2	54.9	49.3	45.0	38.5	37.9	43.6
1888	22.0	36.0	36.4	44.1	49.6	54.5	54.8	56.3	54.7	48.9	38.7	38.8	44.5
1889	32.2	35.1	43.7	43.4	49.7	52.5	56.4	52.4	49.3	48.7	41.2	34.1	44.9
1890	26.8	31.9	37.9	41.7	48.8	52.2	54.4	54.9	50.2	43.3	38.6	37.6	43.2
1891	37.5	31.7	36.3	44.1	49.4	51.6	57.0	57.8	51.4	50.1	44.3	37.5	45.7
1892	35.1	36.9	42.4	41.3	48.9	51.9	54.4	55.2	53.1	45.1	40.9	33.9	44.9
1893	28.7	31.4	38.9	40.7	46.3	49.9	53.9	55.2	50.6	42.7	39.9	39.2	43.1
1894	35.8	32.2	37.4	42.0	46.5	51.4	55.7	57.5	51.6	45.5	42.6	34.7	44.4
1895	32.5	37.1	37.7	41.8	47.8	51.7	55.5	53.8	49.1	46.2	37.4	36.6	43.9
1896	37.0	40.3	37.6	39.9	44.9	51.8	58.7	57.9	51.1	47.1	34.0	39.6	45.0
1897	34.1	37.2	35.3	44.4	50.9	53.2	55.1	59.9	51.3	46.1	39.5	38.5	45.5
1898	35.1	40.8	36.3	42.7	47.7	53.7	55.6	58.5	54.1	45.7	38.8	32.9	45.2
1899	36.1	33.7	36.8	40.8	44.7	50.2	56.1	53.9	53.6	44.8	47.9	38.5	44.8
1900	38.8	36.6	44.2	43.6	49.2	54.5	56.1	53.9	51.4	45.1	40.2	39.4	46.1
1901	34.3	37.2	39.4	40.3	48.4	50.7	52.9	56.7	49.6	51.1	43.0	36.9	45.0
1902	33.2	39.4	39.5	41.4	49.0	51.7	55.1	54.8	51.2	48.4	41.3	36.2	45.1
1903	38.6	33.7	37.6	42.0	47.5	55.1	54.4	56.4	51.0	47.2	41.2	36.3	45.1
1904	38.2	36.4	38.2	45.7	47.5	52.2	56.6	55.1	52.5	48.3	46.2	38.9	46.3
1905	35.9	36.4	43.5	45.3	48.1	52.6	56.8	55.5	53.1	44.0	37.0	36.3	45.4
1906	38.5	39.9	38.2	44.7	48.3	50.8	59.8	56.0	51.8	47.9	41.6	38.8	46.4
1907	29.1	39.2	38.5	42.9	49.0	53.6	57.3	55.2	53.6	50.4	42.0	39.2	45.8
1908	37.1	37.1	39.4	43.3	44.8	51.3	59.0	55.5	49.2	45.4	42.5	34.8	45.0
1909	27.6	38.4	40.0	42.1	45.4	52.3	54.6	53.2	52.7	46.8	42.1	30.8	43.8
1910	32.8	34.1	43.6	44.7	50.4	51.3	56.1	53.5	50.9	49.6	47.8	38.9	45.6
1911	34.2	34.5	39.5	39.2	46.4	50.6	57.9	57.1	50.9	46.0	40.5	37.2	44.5
1912	36.6	39.8	38.2	41.8	49.5	53.6	57.8	56.4	52.2	44.0	41.8	37.0	45.7
1913	33.5	33.3	38.3	42.7	48.7	53.7	57.5	58.5	51.9	46.0	42.9	37.1	45.3
1914	41.2	38.8	44.2	44.8	50.6	52.4	57.1	57.0	51.4	50.6	41.6	32.1	46.8
1915	34.8	39.5	44.5	45.6	48.9	53.3	58.3	59.8	53.0	48.2	40.9	38.0	47.1
1916	25.2	36.5	40.7	44.0	46.2	52.3	55.6	57.5	52.6	43.4	38.3	34.4	43.9
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
NORM	***33.7***	***36.1***	***38.6***	***41.3***	***47.0***	***52.9***	***56.5***	***56.9***	***52.0***	***44.9***	***39.5***	***34.8***	***44.5***

Monthly Average MINIMUM Temperatures
(continued)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1917	35.0	36.6	36.5	42.8	47.5	51.6	57.4	58.5	54.7	47.7	43.9	44.3	46.4
1918	41.4	36.1	39.6	42.3	46.6	55.4	57.1	57.4	56.9	49.3	41.6	37.7	46.8
1919	36.9	38.0	40.8	44.8	47.7	50.4	56.1	57.0	53.6	43.5	39.7	28.6	44.8
1920	34.1	34.4	38.9	40.7	44.5	52.4	57.1	58.0	53.3	47.2	40.9	40.5	45.2
1921	36.8	39.9	41.2	42.6	47.7	56.0	54.8	56.6	51.3	48.6	43.0	34.2	46.1
1922	29.9	34.3	36.8	41.0	48.2	54.8	56.9	57.3	53.8	48.8	38.3	33.6	44.5
1923	38.8	31.6	38.9	45.0	49.1	53.3	58.1	59.6	54.3	49.4	43.5	36.7	46.5
1924	33.5	42.2	38.1	42.7	50.1	53.9	55.8	57.1	53.1	47.8	40.7	31.8	45.6
1925	40.3	41.1	39.5	45.8	51.4	53.3	58.4	55.8	54.5	47.1	40.9	40.6	47.4
1926	38.0	42.9	43.6	50.0	50.3	56.2	58.2	58.7	52.3	50.2	44.6	36.3	48.4
1927	34.9	39.4	39.5	42.6	47.8	55.0	58.2	58.4	54.3	47.4	44.8	33.2	46.3
1928	34.0	37.7	44.1	44.1	50.7	54.7	58.8	56.7	52.8	48.2	41.2	35.0	46.5
1929	29.0	29.4	40.8	40.9	48.8	53.6	56.6	57.3	54.0	49.4	37.7	40.7	44.8
1930	23.5	39.5	41.7	47.1	46.3	52.5	55.7	59.0	55.0	46.0	39.8	36.2	45.2
1931	39.6	38.8	41.8	45.9	51.9	54.6	58.1	57.3	54.0	47.6	38.3	35.9	47.0
1932	35.3	35.8	42.4	44.9	48.7	55.2	55.8	58.8	53.9	49.8	43.5	33.5	46.5
1933	36.0	32.6	40.1	41.8	46.8	53.2	56.9	58.8	51.8	49.0	41.4	42.8	45.9
1934	42.3	42.5	46.4	49.5	52.1	54.1	57.1	58.5	53.2	49.2	45.7	40.1	49.2
1935	34.9	40.0	37.8	42.9	46.8	54.4	56.9	57.1	56.3	46.1	36.5	37.7	45.6
1936	39.8	28.9	38.1	46.6	51.7	56.5	57.8	58.6	53.7	49.1	38.1	40.2	46.6
1937	25.4	36.5	43.3	43.0	48.5	56.1	58.4	57.0	55.2	51.0	45.2	39.0	46.6
1938	36.3	38.6	40.5	45.4	49.0	54.5	59.2	55.8	57.4	49.9	40.1	39.2	47.6
1939	39.6	35.6	41.3	45.8	50.4	52.9	58.3	58.4	55.7	49.5	43.5	41.7	47.7
1940	37.2	42.4	44.5	47.1	51.9	55.8	58.7	59.0	57.5	51.8	38.8	39.0	48.6
1941	35.2	37.1	40.6	43.1	48.1	54.8	58.3	58.0	52.0	46.8	41.3	38.1	45.1
1942	30.9	36.3	37.1	43.5	47.8	51.6	58.6	57.6	50.3	45.8	39.4	38.3	44.8
1943	26.5	34.3	37.4	44.5	46.0	51.0	55.5	55.7	52.0	47.2	38.7	33.6	43.5
1944	32.8	35.4	36.0	41.8	46.6	51.6	55.6	55.6	52.5	49.1	38.9	33.9	44.2
1945	36.3	38.0	38.4	42.1	49.2	50.6	56.0	55.4	49.5	44.2	39.9	34.7	44.5
1946	35.1	36.0	38.7	41.4	48.8	51.8	56.1	55.5	51.5	42.4	35.3	36.5	44.1
1947	30.9	36.6	39.7	43.2	48.3	52.8	56.4	54.8	51.7	48.9	41.4	37.5	45.3
1948	33.3	34.0	37.1	41.3	47.1	57.1	56.9	57.4	53.2	44.8	37.9	33.3	44.4
1949	21.0	33.0	38.3	41.8	48.5	50.5	54.6	55.5	51.3	39.5	41.3	36.5	42.7
1950	21.2	32.1	38.6	39.2	43.2	52.2	54.7	55.7	53.8	46.1	41.2	41.4	43.3
1951	35.0	36.0	34.5	40.9	46.5	51.9	55.7	53.4	50.2	45.7	40.2	32.4	43.5
1952	30.8	35.0	38.3	40.4	46.5	51.1	55.0	56.1	50.6	45.5	31.8	36.4	43.1
1953	42.6	36.3	38.2	40.9	45.5	50.8	54.4	55.0	50.3	44.2	42.2	38.3	44.9
1954	33.8	35.3	33.6	39.8	46.0	49.7	53.5	55.0	50.4	43.1	43.5	35.7	43.3
1955	34.6	33.5	33.8	37.9	42.8	50.7	54.7	53.7	48.9	46.2	35.9	33.7	42.2
1956	34.6	30.8	36.5	41.7	48.4	50.4	55.9	55.1	49.6	44.4	34.6	35.3	43.1
1957	25.9	33.2	39.4	42.2	50.2	52.6	54.5	53.8	51.4	44.3	34.9	38.5	43.4
1958	37.3	42.6	36.1	41.2	50.2	56.8	57.6	57.3	50.6	43.1	39.2	38.0	45.8
1959	35.3	36.8	38.6	42.5	46.2	54.0	56.6	53.8	51.3	45.4	35.0	33.2	44.1
Year	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	**Annual**
NORM	***33.7***	***36.1***	***38.6***	***41.3***	***47.0***	***52.9***	***56.5***	***56.9***	***52.0***	***44.9***	***39.5***	***34.8***	***44.5***

Monthly Average MINIMUM Temperatures
(continued)

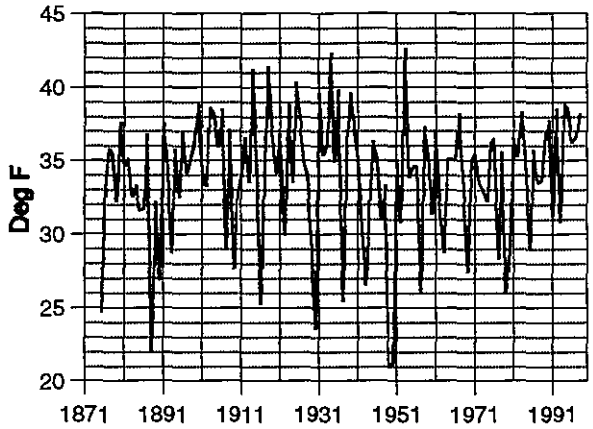
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1960	31.3	35.0	36.5	41.1	45.5	51.6	55.3	55.3	49.8	44.8	39.5	32.5	43.2
1961	37.0	41.6	40.6	41.5	47.4	53.3	57.5	57.7	47.9	44.0	34.9	35.7	44.9
1962	31.9	35.6	37.0	42.7	46.6	50.5	53.8	55.2	51.8	46.6	41.2	36.6	44.1
1963	28.7	40.2	36.7	41.2	45.7	51.5	54.1	55.7	53.7	45.3	39.3	32.0	43.7
1964	35.1	30.6	35.6	37.4	41.9	49.0	53.1	52.2	46.5	41.9	34.4	31.4	40.8
1965	35.1	36.2	35.5	41.6	44.0	49.7	56.0	57.0	47.9	47.5	43.5	33.5	44.0
1966	35.0	35.2	38.1	40.2	44.3	50.6	55.5	54.6	53.4	43.9	40.7	39.5	44.3
1967	38.2	34.7	36.0	37.6	46.0	54.3	55.9	57.7	52.8	45.7	38.4	35.1	44.4
1968	34.0	38.5	39.3	38.2	47.0	51.7	55.9	55.8	51.6	43.3	39.5	32.4	43.9
1969	27.4	32.4	34.1	40.2	47.4	56.9	55.2	53.7	52.8	44.4	40.2	37.9	43.6
1970	35.0	37.1	36.6	39.3	45.1	53.9	55.8	54.9	49.3	42.3	40.0	34.1	43.6
1971	35.5	35.1	35.4	39.1	45.9	50.6	56.9	59.6	49.9	43.7	39.5	35.4	43.9
1972	33.5	37.0	41.2	38.6	48.9	53.3	57.8	58.4	49.5	41.9	41.4	31.7	44.4
1973	32.9	36.6	40.0	41.1	47.6	53.5	57.0	54.3	52.9	45.8	39.1	39.7	45.0
1974	32.2	37.6	39.1	43.3	47.0	53.1	56.2	57.4	52.7	42.5	41.5	38.6	45.1
1975	36.1	34.7	37.6	38.0	46.5	51.7	57.9	55.3	51.6	47.0	39.9	37.2	44.5
1976	36.5	35.0	35.7	40.4	45.9	49.9	55.8	56.7	53.8	44.5	37.8	33.5	43.8
1977	28.3	36.8	38.1	40.4	45.3	52.4	54.8	59.3	51.8	44.0	37.0	37.1	43.8
1978	35.6	38.0	38.9	42.1	44.8	54.6	56.7	57.3	52.8	42.5	31.2	28.9	43.6
1979	26.0	37.0	41.0	44.3	49.6	53.5	57.6	58.5	55.2	49.5	38.5	38.9	45.8
1980	29.4	35.5	39.0	43.1	48.5	52.8	57.7	55.1	52.4	45.2	42.2	37.8	44.9
1981	36.5	36.1	39.2	43.5	48.8	53.0	56.7	58.8	53.2	44.2	41.2	37.4	45.7
1982	35.2	36.8	39.0	39.3	46.3	55.2	56.9	57.5	53.1	45.9	37.4	36.2	44.9
1983	38.3	41.2	43.7	42.4	50.4	54.6	57.8	59.4	51.1	44.8	44.7	32.5	46.7
1984	35.8	39.1	43.1	42.8	48.0	53.1	57.2	57.7	53.6	45.9	40.9	33.8	45.9
1985	28.9	33.5	36.7	44.4	48.3	53.3	60.7	57.5	51.0	43.8	31.6	26.8	43.0
1986	35.7	36.4	42.0	40.9	47.9	55.2	55.1	58.4	52.3	46.8	41.6	34.7	45.6
1987	33.5	37.7	40.7	43.6	49.6	53.6	56.9	56.9	52.4	44.5	41.9	33.9	45.4
1988	33.6	35.8	37.7	43.7	46.9	51.8	55.9	55.0	51.0	49.8	42.2	36.4	45.0
1989	36.6	28.5	38.5	45.2	48.3	53.6	55.9	56.6	50.8	46.1	42.1	34.6	44.7
1990	37.7	35.0	39.9	44.6	47.8	54.0	58.5	59.6	56.0	45.2	42.3	29.4	45.8
1991	31.2	39.9	37.8	42.0	47.1	51.4	57.3	58.5	53.3	43.9	41.8	37.6	45.2
1992	38.5	40.0	40.8	46.5	49.6	55.2	58.7	56.6	51.0	47.2	40.5	34.6	46.6
1993	30.8	32.8	39.1	45.2	50.9	53.4	55.8	57.3	51.2	47.0	33.8	34.7	44.3
1994	38.8	34.1	39.5	44.7	50.0	52.1	57.5	58.2	55.8	43.8	37.0	37.0	45.7
1995	38.5	38.0	39.0	41.9	49.8	53.4	59.5	55.6	56.6	45.7	46.2	37.5	46.8
1996	36.2	34.0	39.4	45.2	47.8	52.9	59.3	58.5	52.4	46.1	39.7	36.5	45.7
1997	36.3	34.9	38.9	42.6	51.7	53.7	58.4	60.4	56.0	46.6	43.7	36.1	46.6
1998	38.1	40.4	41.3	43.4	49.8	54.4	61.2	59.3	54.7	46.5	44.4	35.5	47.4
1999	37.8	38.1	38.9	41.0	45.9	53.0							
2000													
2001													
2002													
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
NORM	*33.7*	*36.1*	*38.6*	*41.3*	*47.0*	*52.9*	*56.5*	*56.9*	*52.0*	*44.9*	*39.5*	*34.8*	*44.5*

**NORM are the 30 year climatic Normals (1961-90)*

Monthly Average MINIMUM Temperatures

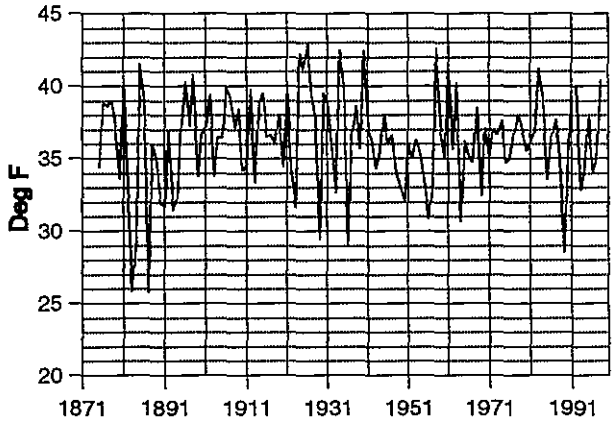
JANUARY

Climatic Normal 33.7 deg



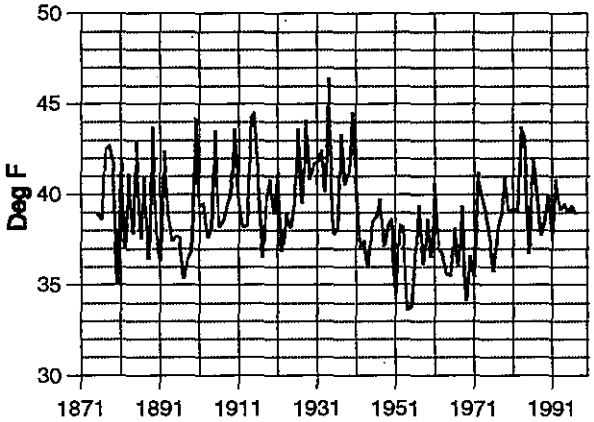
FEBRUARY

Climatic Normal 36.1 deg



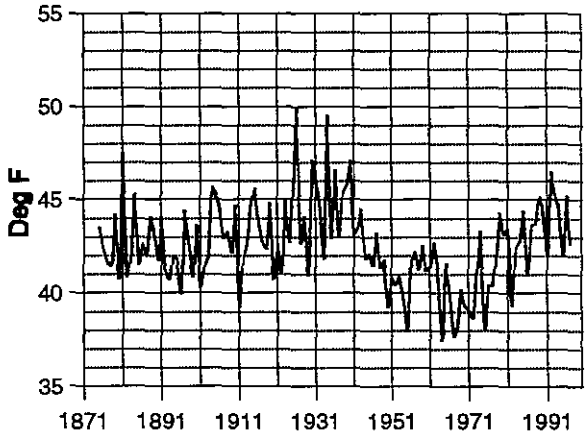
MARCH

Climatic Normal 38.6 deg



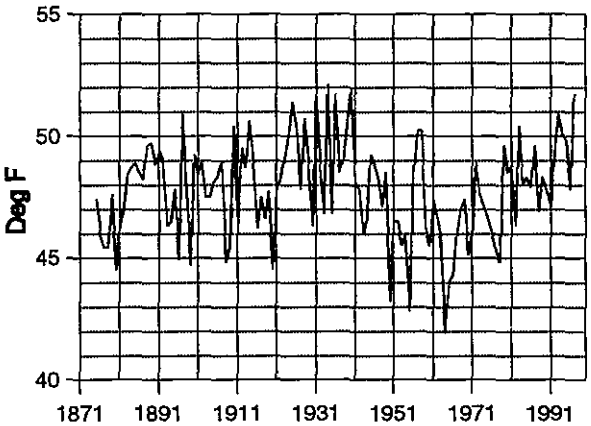
APRIL

Climatic Normal 41.3 deg



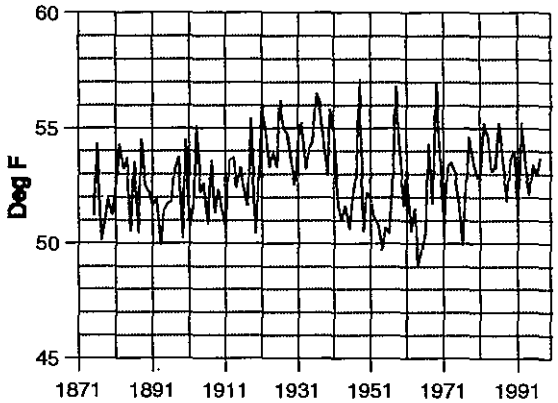
MAY

Climatic Normal 47.0 deg



JUNE

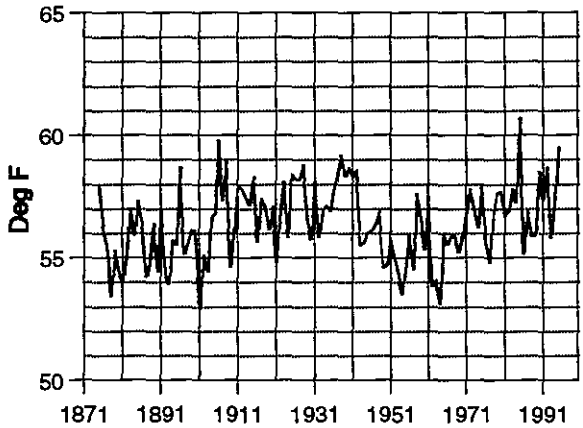
Climatic Normal 52.9 deg



Monthly Average MINIMUM Temperatures

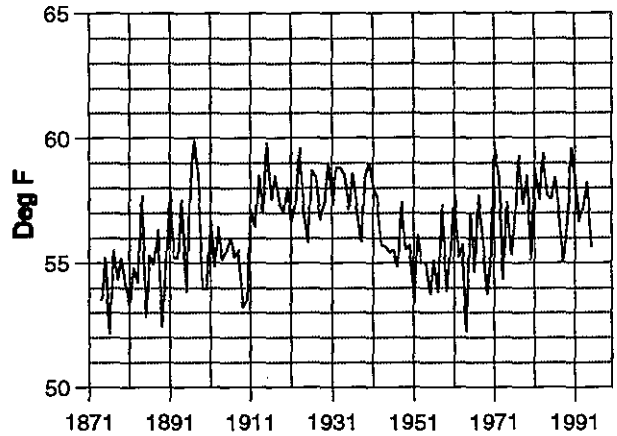
JULY

Climatic Normal 56.5 deg



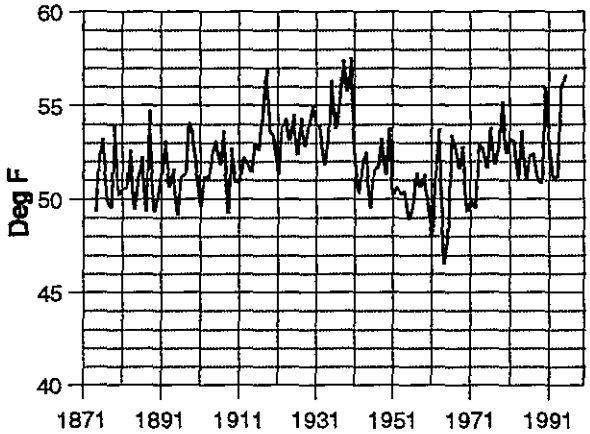
AUGUST

Climatic Normal 56.9 deg



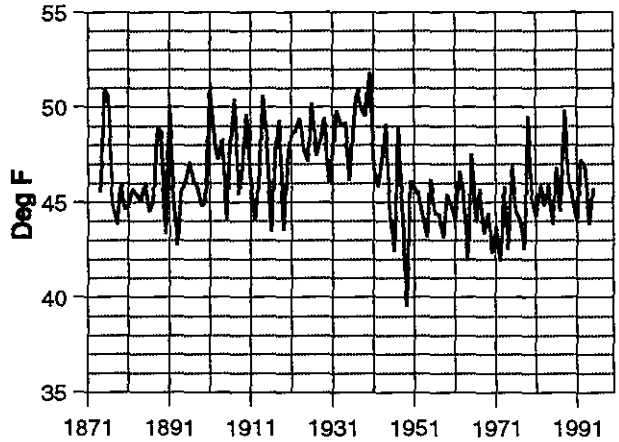
SEPTEMBER

Climatic Normal 52.0 deg



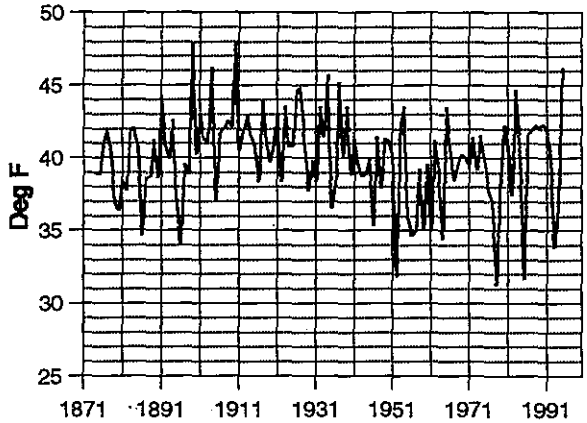
OCTOBER

Climatic Normal 44.9 deg



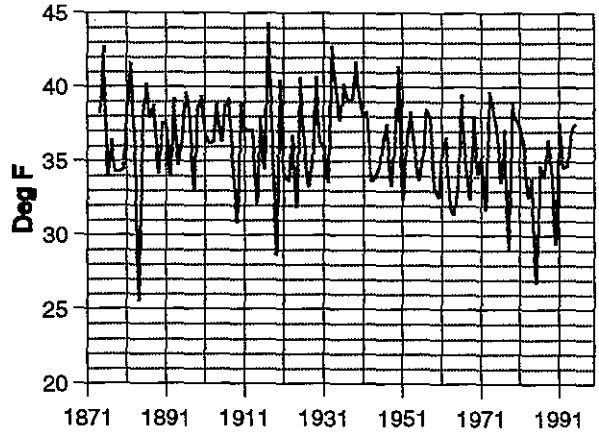
NOVEMBER

Climatic Normal 39.5 deg



DECEMBER

Climatic Normal 45.6 deg



Monthly Average MEAN Temperatures

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1871	Observations begin Nov. 1st, 1871, but data is too sparse to determine averages until 1874												
1874	42.9	42.7	45.1	53.9	59.7	60.2	68.3	63.5	60.6	55.8	45.1	43.2	53.4
1875	30.2	41.2	44.8	55.0	55.8	60.7	70.4	66.1	63.2	58.4	44.9	47.7	53.2
1876	39.6	45.3	45.0	50.1	54.8	64.0	65.8	62.8	63.0	57.8	47.4	40.4	53.0
1877	42.0	46.3	49.8	50.2	55.1	60.4	65.8	66.0	59.4	53.2	48.2	42.4	53.2
1878	41.2	45.2	51.0	51.0	56.6	63.6	64.0	65.9	59.2	51.2	46.6	39.5	53.0
1879	37.8	43.6	48.6	52.5	55.2	60.4	65.2	66.8	63.7	52.5	43.6	38.9	52.4
1880	41.6	38.4	41.8	50.1	53.6	60.5	65.6	63.8	60.0	53.4	42.3	39.8	50.9
1881	39.4	45.5	49.6	55.4	56.8	61.2	64.6	63.3	60.0	50.3	44.2	44.0	52.9
1882	40.3	38.6	44.8	49.3	57.6	64.6	67.2	66.1	61.5	51.9	44.5	46.5	52.7
1883	38.4	33.9	51.4	50.6	59.1	64.4	68.5	64.0	62.4	51.9	47.4	42.9	52.9
1884	39.8	36.9	46.7	55.2	61.2	64.3	65.4	69.8	58.0	53.4	48.3	31.5	52.6
1885	36.6	47.4	53.2	54.9	61.7	62.1	70.2	67.6	62.4	57.6	49.2	43.9	55.6
1886	37.5	43.8	45.9	51.2	59.2	64.5	68.8	67.6	63.4	52.4	41.7	45.5	53.6
1887	42.2	32.0	49.8	50.8	58.8	60.9	66.4	65.4	60.6	54.2	44.6	42.4	52.3
1888	29.2	43.8	46.0	55.3	62.4	62.9	67.6	69.0	66.0	56.3	43.9	43.7	53.8
1889	38.4	44.2	53.8	54.3	60.3	66.0	70.4	64.8	61.4	57.2	47.6	38.6	54.8
1890	31.8	38.5	45.2	52.4	60.6	61.8	65.5	65.9	62.4	52.6	47.2	43.0	52.2
1891	43.2	37.0	44.0	52.3	59.9	60.2	68.8	70.0	60.8	57.6	49.0	41.8	53.7
1892	39.9	43.4	49.9	49.0	59.0	62.2	64.7	66.8	62.9	53.2	45.7	38.3	52.9
1893	34.1	37.2	44.4	45.9	54.4	57.6	64.5	66.2	57.9	49.5	45.6	43.8	50.1
1894	40.4	37.6	44.0	49.6	55.5	58.8	67.2	69.2	60.0	52.5	48.6	39.5	51.9
1895	37.3	42.8	45.9	51.5	55.9	62.2	65.6	65.4	57.4	56.0	43.8	40.8	52.0
1896	42.8	46.2	45.5	47.0	52.0	61.2	70.1	66.3	61.0	55.9	38.6	43.9	52.6
1897	38.8	42.3	40.5	55.0	61.4	61.2	64.6	71.1	60.0	54.2	44.7	43.2	53.1
1898	39.0	45.7	43.8	51.6	56.6	62.5	66.4	68.2	62.8	53.0	43.9	37.5	52.6
1899	40.6	39.3	43.8	48.8	51.1	58.8	66.8	61.5	64.1	51.8	52.5	43.1	51.9
1900	44.0	41.8	51.8	52.2	56.8	63.5	66.6	63.1	60.0	52.2	45.8	44.8	53.5
1901	39.5	43.0	46.6	48.8	56.7	58.0	62.8	68.4	58.3	59.1	48.4	41.1	52.6
1902	38.4	44.6	45.0	49.0	56.2	61.4	65.2	66.8	62.0	56.6	46.1	40.4	52.6
1903	42.8	41.0	45.8	49.8	56.9	64.2	64.2	66.0	61.4	55.6	46.2	41.0	52.9
1904	42.1	41.2	43.4	54.8	57.6	62.9	67.0	67.4	63.6	56.5	51.4	43.3	54.3
1905	40.4	42.6	50.8	55.4	56.2	61.4	68.5	66.2	62.0	51.3	44.4	40.6	53.3
1906	43.0	45.0	45.4	55.6	56.9	60.0	72.3	68.2	61.8	55.6	46.2	43.1	54.4
1907	34.0	45.2	44.9	52.2	59.2	62.6	67.9	64.6	62.8	57.3	48.8	44.0	53.6
1908	42.2	42.8	46.3	52.8	52.8	61.2	69.7	66.0	60.0	52.9	48.8	39.0	52.9
1909	32.8	43.3	47.6	51.0	54.8	62.7	63.9	65.0	63.2	54.6	47.2	35.6	51.8
1910	37.6	39.3	52.2	53.8	60.0	60.3	67.1	63.9	60.0	56.0	46.8	42.9	53.3
1911	38.4	40.2	49.2	48.8	54.3	59.6	69.5	67.0	58.4	54.2	46.0	41.4	52.2
1912	41.1	45.3	46.4	49.9	59.2	63.6	67.4	65.8	62.2	51.6	47.1	41.4	53.4
1913	38.2	39.7	44.6	51.0	57.6	62.9	67.8	68.6	62.3	53.2	47.5	40.7	52.8
1914	45.8	43.4	51.2	53.7	61.1	61.4	68.6	68.0	59.4	57.4	47.0	36.8	54.5
1915	39.2	45.4	52.6	55.6	57.7	62.6	67.2	71.2	62.4	55.8	45.4	42.0	54.8
1916	29.6	42.2	47.0	53.0	54.8	62.0	64.2	68.0	62.5	53.2	43.7	38.1	51.5
Year	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	**Annual**
NORM	***39.6***	***43.6***	***47.3***	***51.0***	***57.1***	***63.5***	***68.2***	***68.6***	***63.3***	***54.5***	***46.1***	***40.2***	***53.6***

Monthly Average MEAN Temperatures
(continued)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1917	39.6	41.5	42.6	49.4	54.6	61.8	69.0	70.3	63.1	57.3	50.6	48.4	54.0
1918	45.4	41.6	46.7	52.8	55.6	67.1	67.8	67.4	67.4	56.4	46.6	42.3	54.8
1919	42.2	42.6	48.2	53.4	57.2	60.6	68.0	68.6	62.5	50.9	45.0	33.6	52.7
1920	39.4	42.2	45.8	48.2	55.1	62.1	68.0	69.3	61.2	53.1	46.8	44.1	52.9
1921	41.6	45.2	48.0	50.8	57.1	64.4	65.7	67.0	60.5	57.0	48.8	39.1	53.8
1922	35.2	39.9	43.3	48.7	58.0	65.5	68.2	67.2	63.8	55.4	43.6	38.0	52.2
1923	42.8	37.4	47.2	54.2	57.6	62.5	67.8	70.6	64.5	57.1	50.4	41.5	54.5
1924	38.5	48.0	45.8	53.0	61.2	64.3	67.0	66.5	63.4	54.6	45.6	36.6	53.7
1925	44.8	46.4	47.4	54.2	61.2	63.4	69.8	66.0	62.9	55.8	46.0	45.8	55.3
1926	42.8	48.7	53.5	60.2	59.2	67.0	70.5	69.2	61.6	57.8	50.6	41.0	56.8
1927	39.0	45.6	46.9	52.0	55.4	64.4	68.6	69.2	61.9	54.9	49.8	37.8	53.8
1928	38.6	44.2	50.8	51.4	62.4	62.2	69.0	67.5	61.5	54.7	46.6	40.1	54.1
1929	34.2	35.6	47.7	49.2	58.6	62.4	68.4	69.1	64.8	58.5	44.8	45.3	53.2
1930	28.0	46.3	50.3	55.8	55.0	62.2	66.6	69.8	63.7	53.7	46.0	40.4	53.2
1931	44.7	45.0	48.8	55.6	62.7	63.6	70.1	69.2	62.8	55.8	44.0	40.2	55.2
1932	39.8	41.4	48.0	53.2	57.6	65.8	65.8	68.0	65.6	57.2	49.3	38.1	54.2
1933	39.8	38.2	47.0	51.6	53.9	62.3	68.0	69.6	59.6	57.2	46.5	46.6	53.4
1934	46.9	49.4	55.2	59.8	61.4	64.0	67.0	69.5	62.8	57.4	50.3	44.1	57.3
1935	40.4	46.2	44.0	51.7	57.8	64.4	67.8	68.4	67.2	53.3	42.4	42.2	53.8
1936	44.2	33.9	45.3	55.6	61.2	65.2	67.8	69.5	63.4	58.6	45.6	43.8	54.5
1937	29.9	41.8	49.7	50.0	58.4	65.4	68.4	66.8	63.8	59.2	49.6	44.0	53.9
1938	41.4	43.4	47.0	54.4	59.4	64.9	71.0	66.2	67.5	57.2	44.8	43.6	55.1
1939	43.8	40.8	49.4	56.0	60.6	61.3	69.4	70.0	65.4	56.6	50.0	46.4	55.8
1940	42.2	47.2	51.8	55.3	62.6	67.5	69.0	70.4	65.6	58.6	44.2	44.0	56.5
1941	41.3	46.1	52.0	54.4	57.6	62.1	71.4	67.8	60.4	54.6	48.0	42.9	54.9
1942	35.4	42.8	46.4	52.8	56.4	61.0	69.4	69.0	63.2	55.6	44.9	43.0	53.3
1943	33.2	43.4	45.5	54.3	55.6	60.3	67.2	66.8	65.8	54.8	46.1	40.0	52.8
1944	39.2	42.2	45.4	50.8	57.5	61.6	67.9	66.8	65.2	58.5	45.2	39.4	53.3
1945	42.4	44.4	45.2	50.4	58.8	61.8	69.0	67.9	60.8	54.2	45.1	39.8	53.3
1946	40.9	42.7	46.6	51.4	59.7	61.2	67.6	67.8	62.0	50.6	43.2	41.8	53.0
1947	37.2	45.2	49.8	53.9	61.3	62.0	66.8	65.8	63.6	55.4	47.0	42.9	54.2
1948	39.5	40.8	44.8	48.9	56.0	66.5	66.8	65.8	61.8	53.5	43.7	38.1	52.2
1949	27.6	39.1	45.7	52.4	59.2	61.7	65.9	66.5	63.2	48.6	49.9	41.4	51.7
1950	27.0	38.8	45.1	48.6	54.5	61.8	66.9	68.8	61.8	52.4	46.4	46.4	51.5
1951	39.8	42.9	42.0	53.5	56.8	64.5	67.1	65.7	63.1	53.7	45.7	37.5	52.7
1952	35.6	41.7	45.4	52.4	57.5	60.3	68.0	67.9	64.8	58.7	40.7	41.6	52.9
1953	47.3	43.8	45.9	49.9	54.4	58.6	66.2	65.6	62.5	54.3	48.6	43.7	53.4
1954	39.9	42.6	43.8	49.6	56.7	58.0	63.1	63.3	60.2	53.1	49.7	40.9	51.7
1955	39.7	40.4	41.5	46.5	52.9	60.7	63.5	65.5	60.4	53.6	41.4	39.2	50.4
1956	39.9	35.9	44.2	52.7	59.1	59.0	68.0	65.4	60.8	51.7	42.6	40.7	51.7
1957	31.2	41.7	46.2	51.8	58.9	62.1	65.6	64.5	65.3	52.8	44.0	43.9	52.3
1958	43.6	48.6	45.5	50.9	61.8	65.2	70.6	70.3	62.3	55.2	45.5	43.6	55.3
1959	40.4	42.7	46.8	52.3	55.7	62.8	68.7	65.5	60.3	54.2	42.8	39.6	52.7
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
NORM	***39.6***	***43.6***	***47.3***	***51.0***	***57.1***	***63.5***	***68.2***	***68.6***	***63.3***	***54.5***	***46.1***	***40.2***	***53.6***

Monthly Average MEAN Temperatures
(continued)

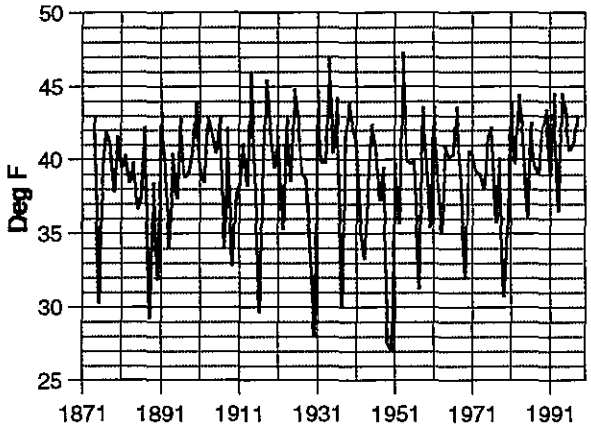
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1960	35.4	42.3	45.0	50.6	54.0	63.0	69.1	65.4	61.5	54.5	46.5	38.7	52.2
1961	43.6	47.2	47.7	50.1	56.6	65.3	69.4	70.3	59.5	53.3	42.9	40.9	53.9
1962	38.6	43.0	45.3	52.6	53.9	61.6	66.4	66.0	63.3	55.1	47.6	42.6	53.0
1963	35.0	47.8	45.2	48.6	56.6	60.0	63.1	66.1	65.1	54.2	46.0	38.0	52.1
1964	40.9	40.1	43.8	46.7	52.6	58.7	64.5	63.7	58.4	53.2	41.0	37.0	50.1
1965	40.2	43.4	47.6	51.8	54.3	61.8	69.7	68.6	60.4	57.5	49.7	39.5	53.7
1966	40.3	42.8	47.2	50.6	57.0	62.4	66.4	67.5	64.4	53.7	47.1	44.2	53.6
1967	43.6	43.7	44.0	46.9	57.1	65.9	69.3	72.9	66.4	54.8	46.2	40.4	54.3
1968	39.3	48.2	48.2	48.0	56.3	62.2	68.6	65.8	61.5	52.1	46.5	37.3	52.8
1969	31.9	39.7	46.5	50.1	59.5	66.5	66.6	66.1	63.4	53.3	47.2	42.9	52.9
1970	40.6	46.0	46.9	48.4	57.0	65.9	69.2	68.2	60.7	53.0	47.1	40.0	53.6
1971	40.4	42.8	43.7	49.6	56.8	60.2	69.2	71.6	60.8	52.4	45.5	40.4	52.8
1972	39.2	43.8	49.8	48.0	60.2	64.0	70.9	71.7	61.2	53.0	48.2	37.4	53.9
1973	39.0	44.9	47.9	52.3	59.4	63.9	70.3	65.9	64.4	54.3	44.2	44.7	54.2
1974	38.0	43.0	47.2	51.3	55.7	64.4	67.1	68.9	67.3	55.2	48.1	44.1	54.2
1975	41.5	41.2	45.0	47.3	57.5	61.9	69.0	65.3	65.7	53.5	46.0	42.7	53.1
1976	42.2	42.1	44.4	50.3	56.6	60.4	67.2	65.5	64.2	54.7	47.0	39.5	52.8
1977	35.7	44.6	45.5	52.9	53.8	63.9	66.3	71.7	60.8	53.8	43.3	42.0	52.9
1978	40.1	44.7	49.1	50.5	54.7	65.1	68.4	67.6	60.9	54.7	39.1	35.3	52.5
1979	30.7	42.9	50.8	53.1	60.1	65.1	70.5	68.6	66.3	58.1	45.0	44.4	54.6
1980	35.1	42.5	46.3	53.8	57.3	60.7	68.9	66.4	63.8	56.0	48.5	44.0	53.6
1981	43.9	44.0	48.8	52.5	57.5	61.8	67.5	72.2	64.9	53.3	48.8	42.7	54.8
1982	39.7	43.6	48.5	49.0	57.6	66.0	67.5	68.6	63.2	54.9	44.4	41.7	53.7
1983	44.4	47.3	50.7	52.7	60.4	62.8	66.5	69.1	61.5	54.2	49.3	36.4	54.6
1984	42.2	45.9	51.1	50.4	56.4	62.2	69.1	69.4	63.7	52.9	46.7	38.3	54.0
1985	36.1	41.1	45.8	53.9	58.3	64.4	74.1	69.3	60.8	52.7	37.3	33.0	52.2
1986	42.5	43.7	51.3	50.2	57.6	66.3	65.3	72.3	61.5	57.0	47.7	40.6	54.7
1987	39.6	45.2	48.7	54.2	60.4	66.5	67.2	70.5	65.5	58.2	48.8	39.1	55.3
1988	39.0	44.7	47.2	52.2	56.4	62.4	68.4	68.0	64.0	58.3	47.5	42.0	54.2
1989	42.2	36.0	45.6	56.0	58.0	64.3	65.5	66.1	65.3	54.9	48.6	40.3	53.6
1990	43.4	41.9	49.4	54.5	56.7	63.6	71.2	70.9	67.0	53.9	48.4	34.7	54.6
1991	38.9	48.8	46.2	50.8	54.7	59.9	69.9	70.1	67.4	55.4	47.5	42.7	54.4
1992	44.5	48.1	52.3	55.4	63.1	67.4	70.2	69.8	62.3	55.9	46.3	39.3	56.2
1993	36.5	40.1	47.9	52.6	61.1	62.5	64.3	68.5	65.7	57.4	41.5	41.4	53.3
1994	44.5	40.9	50.2	54.2	60.7	62.9	71.1	70.2	67.6	54.1	42.7	42.3	55.1
1995	43.4	46.5	48.3	51.3	60.7	63.8	70.6	67.3	67.1	54.5	51.7	42.4	55.6
1996	40.7	41.6	47.7	53.5	55.3	63.6	72.0	70.4	61.8	54.0	45.5	41.6	54.0
1997	41.0	42.9	46.7	51.0	62.2	62.7	68.9	71.6	65.9	53.7	49.8	41.1	54.8
1998	43.0	46.1	48.8	52.8	56.3	63.4	71.0	71.0	66.9	54.3	48.9	40.5	55.3
1999	42.9	43.6	45.8	50.6	54.9	61.2							
2000													
2001													
2002													
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
NORM	*39.6*	*43.6*	*47.3*	*51.0*	*57.1*	*63.5*	*68.2*	*68.6*	*63.3*	*54.5*	*46.1*	*40.2*	*53.6*

NORM are the 30 year climatic Normals (1961-90)

Monthly Average MEAN Temperatures

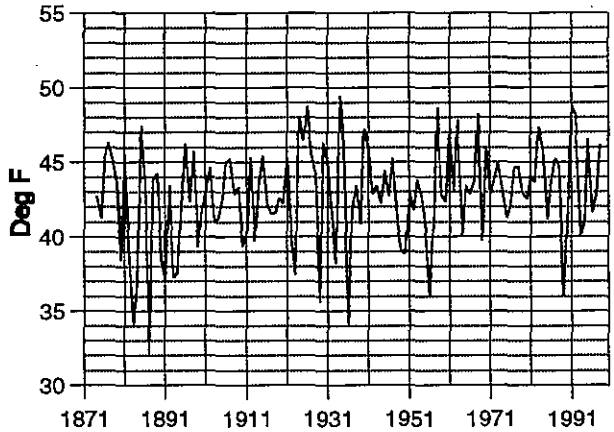
JANUARY

Climatic Normal 39.6 deg



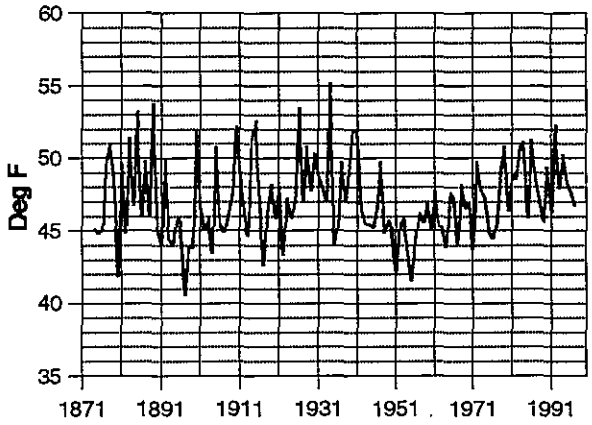
FEBRUARY

Climatic Normal 43.6 deg



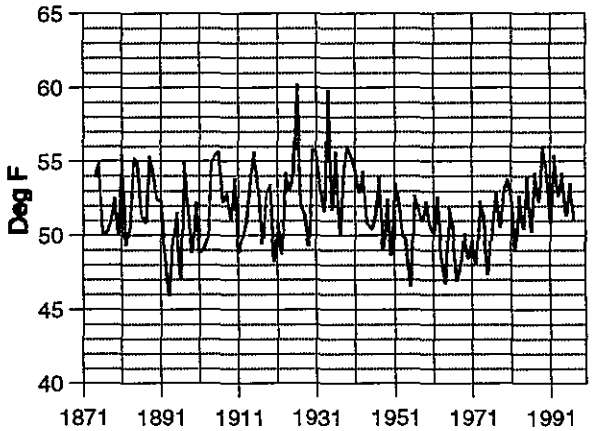
MARCH

Climatic Normal 47.3 deg



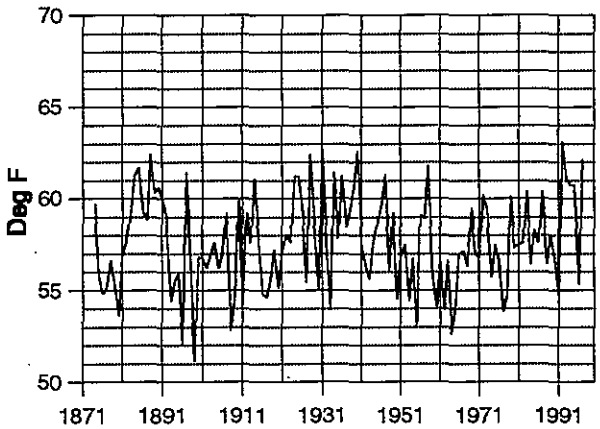
APRIL

Climatic Normal 51.0 deg



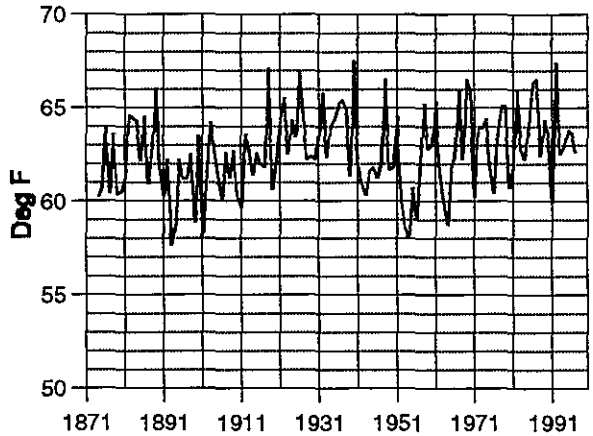
MAY

Climatic Normal 57.1 deg



JUNE

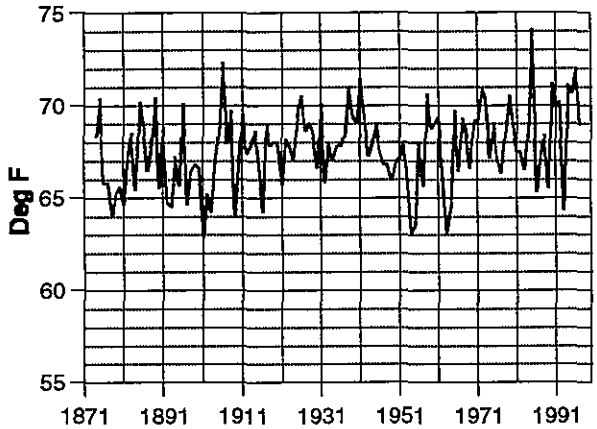
Climatic Normal 63.5 deg



Monthly Average MEAN Temperatures

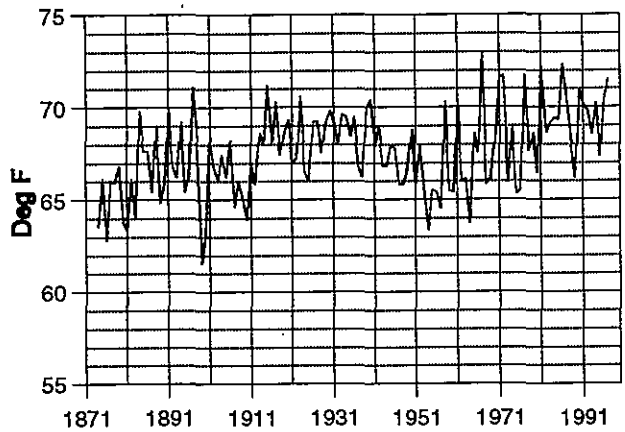
JULY

Climatic Normal 68.2 deg



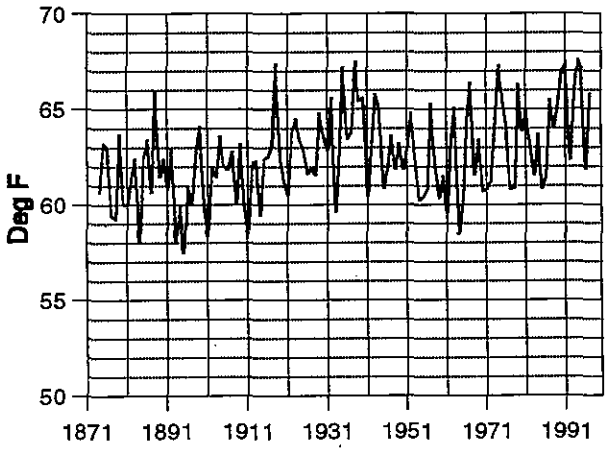
AUGUST

Climatic Normal 68.6 deg



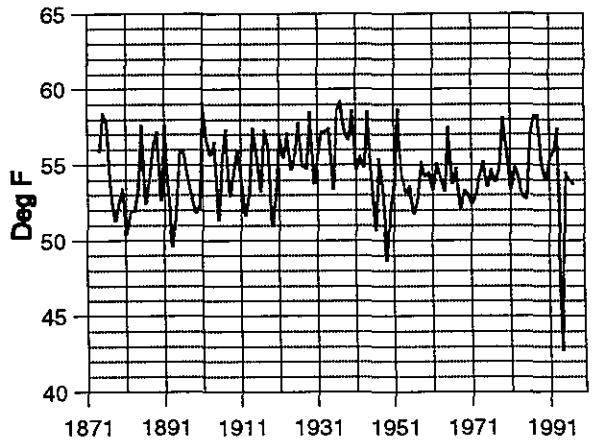
SEPTEMBER

Climatic Normal 63.3 deg



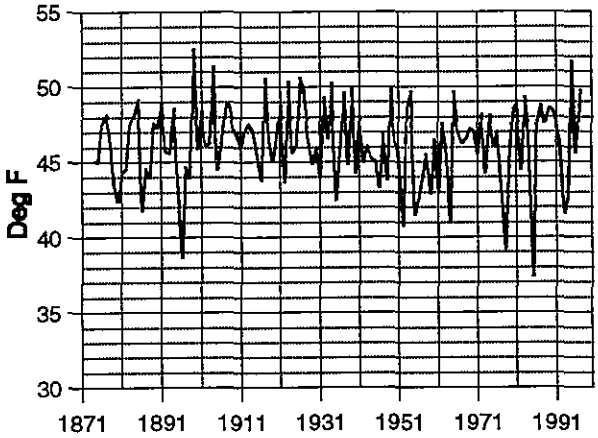
OCTOBER

Climatic Normal 54.5 deg



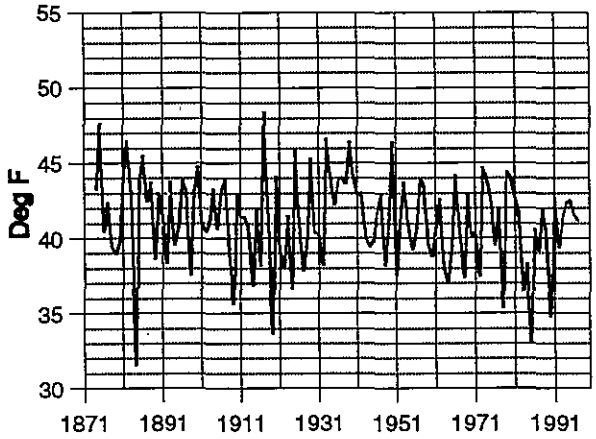
NOVEMBER

Climatic Normal 46.1 deg



DECEMBER

Climatic Normal 40.2 deg



MONTHLY AND ANNUAL TEMPERATURE DATA

WARMEST AND COLDEST FIVE[1]

MONTH	AVERAGE MAXIMUM Warmest 5		Coldest 5		AVERAGE MINIMUM Warmest 5		Coldest 5		AVERAGE MEAN Warmest 5		Coldest 5	
January	52.0	1953	32.8	1950	42.6	1953	21.0	1949	47.3	1953	27.0	1950
	51.2	1981	34.5	1949	38.8	1994	21.2	1950	44.5	1994	27.6	1949
	50.5	1992	35.4	1979	38.5	1995	25.9	1957	44.5	1992	30.7	1979
	50.4	1983	36.4	1969	38.5	1992	26.0	1979	44.4	1983	31.2	1957
	50.2	1961	36.5	1957	38.3	1983	26.5	1943	43.9	1981	31.9	1969
	Climatic Normal 45.4				***Climatic Normal 33.7***				***Climatic Normal 39.6***			
February	57.8	1968	40.9	1956	42.6	1958	28.5	1989	48.8	1991	35.9	1956
	57.7	1991	43.5	1989	41.6	1961	30.6	1964	48.6	1958	36.0	1989
	56.2	1992	45.2	1949	41.2	1983	30.8	1956	48.2	1968	38.8	1950
	55.3	1963	45.5	1950	40.4	1998	32.1	1950	48.1	1992	39.1	1949
	55.1	1941	46.9	1969	40.2	1963	32.4	1969	47.8	1963	39.7	1969
	Climatic Normal 51.0				***Climatic Normal 36.1***				***Climatic Normal 43.6***			
March	63.7	1992	49.2	1955	43.7	1983	33.6	1954	52.3	1992	41.5	1955
	63.5	1941	49.4	1951	43.1	1984	33.8	1955	52.0	1941	42.0	1951
	60.9	1994	51.5	1950	42.0	1986	34.1	1969	51.3	1986	43.7	1971
	60.5	1986	51.8	1956	41.3	1998	34.5	1951	51.1	1984	43.8	1964
	60.5	1979	51.9	1967	41.2	1972	35.4	1971	50.8	1979	43.8	1954
	Climatic Normal 56.0				***Climatic Normal 38.6***				***Climatic Normal 47.3***			
April	66.8	1989	53.2	1893	46.5	1992	37.4	1964	56.0	1989	46.5	1955
	66.0	1951	53.6	1955	45.2	1996	37.6	1967	55.4	1992	46.7	1964
	65.8	1941	54.5	1896	45.2	1993	37.9	1955	54.5	1990	46.9	1967
	65.3	1977	55.6	1963	45.2	1989	38.0	1975	54.4	1941	47.3	1975
	64.7	1987	55.7	1892	44.7	1994	38.2	1968	54.3	1943	48.0	1972[2]
	Climatic Normal 60.6				***Climatic Normal 41.3***				***Climatic Normal 51.0***			
May	76.6	1992	61.6	1962	51.7	1997	41.9	1964	63.1	1994	52.6	1964
	73.4	1958	62.3	1991	50.9	1993	42.8	1955	62.2	1997	52.9	1955
	73.3	1947	62.3	1977	50.4	1983	43.2	1950	61.8	1958	53.8	1977
	72.6	1997	62.4	1960	50.2	1958	44.0	1965	61.3	1947	53.9	1962
	71.6	1995	62.7	1998[2]	50.2	1957	44.3	1966	61.1	1993	54.0	1960
	Climatic Normal 67.1				***Climatic Normal 41.3***				***Climatic Normal 57.1***			
June	79.5	1992	66.2	1954	57.1	1948	49.0	1964	67.4	1992	58.0	1954
	79.3	1987	66.4	1955	56.9	1969	49.7	1965	66.5	1987	58.6	1953
	77.9	1970	67.6	1956	56.8	1958	49.7	1954	66.5	1969	58.7	1964
	77.5	1967	68.3	1991	55.2	1992	49.9	1976	66.5	1948	59.0	1956
	77.4	1986	68.4	1964[2]	55.2	1986	50.4	1956	66.3	1986	59.9	1991
	Climatic Normal 74.0				***Climatic Normal 52.9***				***Climatic Normal 63.5***			
July	87.5	1985	72.0	1963	61.2	1998	53.1	1964	74.1	1985	63.1	1963
	84.8	1996	72.2	1955	60.7	1985	53.5	1954	72.0	1996	63.1	1954
	84.6	1994	72.6	1954	59.5	1995	53.8	1962	71.4	1941	63.5	1955
	84.5	1941	72.8	1993	59.3	1996	54.1	1963	71.2	1990	64.5	1964
	83.9	1972	75.0	1989	58.7	1992	54.4	1953	71.1	1994	65.3	1986
	Climatic Normal 79.9				***Climatic Normal 56.5***				***Climatic Normal 68.2***			

MONTHLY AND ANNUAL TEMPERATURE DATA
WARMEST AND COLDEST FIVE[1] (continued)

MONTH	AVERAGE MAXIMUM Warmest 5		Coldest 5		AVERAGE MINIMUM Warmest 5		Coldest 5		AVERAGE MEAN Warmest 5		Coldest 5	
August	88.1	1967	71.6	1954	60.4	1997	52.2	1964	72.9	1967	63.3	1954
	86.2	1986	74.2	1948	59.6	1990	53.4	1951	71.7	1977	63.7	1964
	85.5	1981	74.3	1976	59.6	1971	53.7	1969	71.7	1972	64.5	1957
	85.0	1972	75.2	1964	59.4	1983	53.7	1955	71.6	1971	65.4	1956
	84.1	1987[2]	75.2	1957	59.3	1998[2]	53.8	1959	71.6	1996	65.4	1960
	Climatic Normal 80.3				***Climatic Normal 56.9***				***Climatic Normal 68.6***			
September	81.9	1974	68.8	1941	56.6	1995	46.5	1964	67.6	1994	58.4	1964
	81.4	1991	69.0	1979	56.0	1996	47.9	1965	67.4	1991	59.5	1961
	80.1	1993	69.3	1959	56.0	1990	47.9	1961	67.3	1974	60.2	1954
	80.0	1967	69.7	1977	55.8	1994	48.9	1955	67.1	1995	60.3	1959
	79.7	1989[2]	69.9	1954	55.2	1979	49.3	1970	67.0	1990	60.4	1965[2]
	Climatic Normal 74.6				***Climatic Normal 52.0***				***Climatic Normal 63.3***			
October	71.9	1987	57.6	1949	51.8	1940	39.5	1949	58.7	1952	48.6	1949
	71.8	1952	58.7	1950	49.8	1988	41.9	1964	58.6	1940	50.6	1946
	67.9	1944	58.8	1946	49.5	1979	41.9	1972	58.5	1944	51.7	1956
	67.8	1974	59.0	1956	49.1	1944	42.3	1970	58.3	1988	52.1	1968
	67.7	1993	59.8	1984	48.9	1947	42.4	1946	58.2	1987	52.4	1971[2]
	Climatic Normal 64.0				***Climatic Normal 44.9***				***Climatic Normal 54.5***			
November	58.4	1949	42.9	1985	46.2	1995	31.2	1978	51.7	1995	37.3	1985
	57.1	1995	46.9	1978	44.7	1983	31.6	1985	49.9	1949	39.1	1978
	56.4	1981	46.9	1955	43.7	1997	31.8	1952	49.8	1997	40.7	1952
	56.1	1976	47.6	1964	43.5	1965	33.8	1993	49.7	1965	41.0	1964
	55.9	1997	48.3	1994	43.5	1954	34.4	1964	49.7	1954	41.4	1955
	Climatic Normal 52.6				***Climatic Normal 39.5***				***Climatic Normal 46.1***			
December	51.4	1950	39.2	1985	41.4	1950	26.8	1985	46.4	1950	33.0	1985
	50.2	1980	40.0	1990	39.7	1966	28.9	1978	44.7	1973	34.7	1990
	49.9	1979	40.2	1983	39.5	1973	29.4	1990	44.4	1979	35.3	1978
	49.6	1974	41.6	1978	39.0	1940	31.4	1964	44.2	1966	36.4	1983
	49.6	1973	42.6	1964[2]	38.9	1979	31.7	1972	44.1	1974	37.0	1964
	Climatic Normal 45.6				***Climatic Normal 34.8***				***Climatic Normal 40.2***			
Annually	65.8	1992	58.7	1955	47.4	1998	40.8	1964	56.2	1992	50.1	1964
	65.2	1987	59.3	1964	46.8	1995	42.2	1955	55.6	1995	50.4	1955
	64.6	1958	60.0	1954	46.7	1983	42.7	1949	55.3	1998	51.5	1950
	64.5	1994	60.1	1948	46.6	1997	43.0	1985	55.3	1987	51.7	1956
	64.4	1995	60.2	1956[2]	46.6	1992	43.1	1956[2]	55.3	1958	51.7	1952[2]
	Climatic Normal 62.6				***Climatic Normal 44.5***				***Climatic Normal 53.6***			

[1]Period of record is from October 1940 through June 1999. Climatic normals are based on the 1961-90 temperature data set.
[2] In some instances, an identical temperature may have occurred on several years. As a result, the most recent year of occurrence is listed.

Monthly EXTREME MAXIMUM Temperatures (since 1874)

(NA indicates that the data is not available due to incomplete observations during the time period)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1874	*NA*	*NA*	*NA*	*NA*	*NA*	82	88	84	88	77	63	57	*NA*
1875	53	54	83	75	82	82	96	88	86	78	63	63	96
1876	58	59	59	67	82	99	90	84	90	79	63	56	99
1877	58	62	68	78	79	86	91	89	88	73	62	62	91
1878	55	58	69	74	86	97	85	87	86	70	62	59	97
1879	52	60	74	77	82	82	92	87	85	68	61	58	92
1880	57	52	58	85	76	90	92	88	80	74	64	63	92
1881	57	63	76	80	82	85	90	85	84	64	58	58	90
1882	55	52	70	78	85	94	95	91	85	67	60	60	95
1883	56	60	75	74	84	87	94	80	87	64	60	56	94
1884	59	65	67	80	90	89	84	94	72	72	63	55	94
1885	55	59	72	82	94	86	99	94	85	82	65	59	99
1886	60	65	79	74	89	95	94	90	93	76	58	65	95
1887	58	63	75	69	99	95	93	90	87	75	68	57	99
1888	62	61	68	84	91	87	97	92	90	82	58	59	97
1889	55	64	78	77	88	94	96	87	89	80	64	53	96
1890	55	60	66	85	87	82	95	96	84	72	73	57	96
1891	61	48	60	72	84	87	102	97	88	83	68	58	102
1892	58	60	76	76	93	94	88	90	90	82	62	55	94
1893	56	53	62	62	78	81	92	94	77	67	62	58	94
1894	61	54	67	76	89	90	94	94	89	73	67	56	94
1895	57	58	66	82	86	97	94	91	79	79	63	57	97
1896	61	62	68	67	81	90	93	91	89	78	60	62	93
1897	57	58	56	89	93	83	92	95	89	81	66	59	95
1898	50	61	63	81	85	90	95	97	88	70	57	55	97
1899	58	59	61	73	68	81	93	84	87	77	66	58	93
1900	61	57	76	84	78	90	90	81	87	74	63	60	90
1901	57	68	67	70	87	87	83	94	85	78	62	56	94
1902	61	66	62	72	90	86	95	97	87	82	62	58	97
1903	57	59	72	73	84	97	91	90	86	77	65	54	97
1904	58	58	61	87	81	99	100	95	87	80	67	55	100
1905	58	68	77	84	83	83	99	90	87	69	66	54	99
1906	56	59	70	90	89	92	101	89	84	83	65	60	101
1907	55	60	67	79	93	91	102	86	93	80	66	59	102
1908	54	60	66	82	77	92	92	94	86	79	70	54	94
1909	59	60	70	78	86	90	88	91	93	80	63	58	93
1910	53	56	74	89	86	94	97	91	82	75	65	56	97
1911	54	52	75	79	84	87	99	90	82	78	63	55	99
1912	58	60	71	72	89	93	96	93	84	72	61	54	96
1913	54	63	67	76	84	87	98	93	87	75	60	55	98
1914	62	57	71	76	87	94	94	93	84	72	64	51	94
1915	50	60	79	82	81	95	100	97	84	74	59	55	100
1916	54	58	68	73	81	92	86	96	85	73	58	51	96
1917	55	61	59	67	78	90	91	92	83	85	66	65	92
1918	59	59	76	82	79	91	91	94	90	78	60	61	94
Year	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	**Annual**

Monthly EXTREME MAXIMUM Temperatures (since 1874)
(continued)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1919	61	53	73	75	82	83	100	96	85	78	65	61	100
1920	57	60	62	78	87	87	97	98	89	73	61	58	98
1921	57	64	69	73	80	83	89	90	78	79	68	62	90
1922	52	56	63	72	94	89	95	92	93	78	56	61	95
1923	56	62	82	85	85	94	93	95	95	86	67	55	95
1924	60	64	60	80	88	98	99	88	92	71	59	60	99
1925	58	60	65	79	88	101	90	96	90	78	60	62	101
1926	60	65	76	93	87	99	104	91	90	77	69	63	104
1927	56	57	68	81	86	92	101	96	84	75	70	59	101
1928	59	60	76	74	93	86	99	88	90	74	61	59	99
1929	51	52	66	75	82	89	93	95	87	80	67	59	95
1930	54	63	83	77	78	94	92	96	97	69	69	55	97
1931	64	58	65	86	93	91	101	96	89	79	67	59	101
1932	54	68	67	75	81	91	86	95	91	86	67	57	95
1933	58	58	63	76	80	91	94	102	82	81	62	60	102
1934	59	62	76	90	90	88	88	95	95	85	68	57	95
1935	65	58	62	75	83	96	105	100	93	81	55	55	105
1936	55	56	67	85	89	85	88	97	88	88	64	58	97
1937	44	60	66	67	84	92	89	92	97	79	63	60	97
1938	56	57	69	75	89	92	101	86	95	78	57	61	101
1939	58	53	76	84	96	86	100	100	88	80	66	62	100
1940	60	58	72	82	91	98	92	99	88	78	59	62	99
1941	55	61	75	79	86	95	103	96	80	71	66	60	103
1942	54	55	74	77	80	100	105	96	91	81	59	57	105
1943	52	63	61	82	82	88	91	91	91	83	62	57	91
1944	55	57	68	79	90	90	104	95	101	78	60	58	104
1945	62	60	61	75	89	91	93	100	92	84	59	64	100
1946	55	58	69	79	85	86	102	93	86	71	58	57	102
1947	58	62	80	86	92	85	91	88	91	76	63	55	92
1948	52	65	72	70	85	93	92	85	94	73	55	52	93
1949	41	62	61	74	86	87	93	93	91	68	68	56	93
1950	48	61	62	77	85	88	90	93	91	72	60	64	93
1951	58	62	63	81	85	97	93	94	91	79	64	51	97
1952	57	59	65	76	85	83	98	99	96	89	62	56	99
1953	60	58	72	70	86	80	91	95	88	77	61	59	95
1954	58	60	63	73	86	84	82	82	83	72	69	54	86
1955	52	55	60	73	77	95	86	90	98	75	61	60	98
1956	57	50	70	84	89	81	102	89	85	81	58	58	102
1957	54	62	62	87	83	79	87	86	92	72	60	58	92
1958	62	66	67	77	89	95	102	95	97	84	61	62	102
1959	57	61	65	77	83	86	98	88	89	73	62	59	98
1960	58	57	73	77	79	86	97	100	89	78	61	54	100
1961	59	60	65	71	91	94	104	98	83	80	61	59	104
1962	59	59	69	80	70	85	92	87	93	75	67	58	93
1963	55	65	67	70	91	90	83	93	89	74	59	52	93
1964	53	60	74	67	84	83	89	94	81	80	56	59	94
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual

Monthly EXTREME MAXIMUM Temperatures (since 1874)
(continued)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1965	55	61	72	80	78	93	107	91	88	82	63	60	107
1966	55	60	74	75	87	95	89	93	91	81	66	58	95
1967	58	62	61	66	87	91	99	102	94	73	63	58	102
1968	56	70	67	81	79	93	99	92	92	72	62	52	99
1969	53	57	73	72	88	97	91	88	92	74	70	56	97
1970	61	64	65	66	86	98	102	97	88	90	69	59	102
1971	60	62	65	76	91	90	97	101	82	82	60	55	101
1972	58	62	72	78	92	88	97	104	97	78	63	61	104
1973	59	63	68	74	92	93	99	94	97	70	58	56	99
1974	62	56	70	75	78	90	94	95	96	81	66	60	96
1975	59	64	63	72	88	90	95	87	92	86	73	60	95
1976	58	60	66	82	84	89	92	86	87	82	68	54	92
1977	56	68	64	79	76	88	93	105	88	72	63	61	105
1978	55	64	71	74	84	91	98	101	80	78	61	54	101
1979	49	57	73	83	88	92	104	88	92	86	64	62	104
1980	55	59	64	81	79	80	101	95	93	90	69	64	101
1981	60	64	67	79	82	87	95	107	99	72	67	57	107
1982	55	65	73	79	85	100	91	99	91	76	62	60	100
1983	58	63	67	78	100	88	93	91	80	72	62	55	100
1984	62	58	68	79	80	87	100	95	85	82	61	51	100
1985	53	61	66	79	88	96	101	93	82	78	65	48	101
1986	63	68	70	78	92	96	88	100	91	77	64	53	100
1987	55	61	71	86	93	95	93	102	94	92	68	60	102
1988	58	71	71	80	88	89	100	101	105	91	63	60	105
1989	60	54	64	81	80	93	87	87	92	78	65	61	93
1990	61	64	71	82	86	93	99	101	93	72	63	55	101
1991	62	67	71	78	75	83	100	92	94	86	63	54	100
1992	60	64	71	80	93	100	101	101	86	75	59	52	101
1993	59	58	67	70	87	86	85	97	93	84	62	65	97
1994	57	55	77	76	85	84	103	93	93	78	56	59	103
1995	62	67	72	79	87	97	99	92	92	75	67	63	99
1996	58	63	69	79	79	87	100	98	85	83	63	58	100
1997	57	62	72	73	89	82	94	93	92	72	65	54	94
1998	56	59	70	90	85	87	101	98	93	77	62	57	101
1999	57	55	72	79	89	87							
2000													
2001													
2002													
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
	Extreme Maximum Temperatures 1941-1997 (Portland I'tnl Airport Site)												
	63	71	80	90	100	100	107	107	105	92	73	65	107
Year	1986	1988	1947	1998	1983	1992	1965	1981	1988	1987	1975	1993	1981[1]
	Extreme Maximum Temperature 1874-1997 (All Observation Sites)												
	64	71	83	93	100	101	107	107	105	92	73	65	107
Year	1931	1988	1930	1926	1983	1925	1965	1981	1988	1987	1975	1993	1981[1]

[1]Temperature has been reached in both 1981 and 1965.

Monthly EXTREME MINIMUM Temperatures (since 1874)

(NA indicates that the data is not available due to incomplete observations during the time period)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1874	NA	NA	NA	NA	NA	43	50	46	30	32	27	31	NA
1875	3	24	34	28	40	39	46	46	44	36	28	33	3
1876	20	32	33	33	36	45	49	43	44	42	34	24	20
1877	27	25	31	35	38	44	47	48	39	31	32	25	25
1878	18	33	31	32	33	44	49	47	43	33	32	23	18
1879	20	25	33	36	41	44	48	50	44	37	25	3	3
1880	26	26	26	33	35	42	46	46	42	34	22	19	19
1881	24	26	31	40	40	45	46	46	40	32	29	29	24
1882	26	18	29	31	36	48	47	44	39	37	28	31	18
1883	8	7	34	36	40	44	48	44	45	37	34	24	7
1884	25	7	28	40	40	47	48	51	43	36	34	12	7
1885	17	32	33	35	40	42	49	48	41	34	34	27	17
1886	15	31	30	36	36	46	50	48	44	34	26	30	15
1887	29	9	31	31	34	44	46	45	40	33	25	29	9
1888	- 2	30	24	32	38	48	46	52	44	37	31	31	- 2
1889	24	23	35	33	42	43	46	46	38	38	32	25	23
1890	12	10	24	32	40	45	48	48	40	35	30	28	10
1891	25	25	23	37	39	42	50	51	39	40	34	28	23
1892	26	27	36	33	39	42	47	47	42	38	33	20	20
1893	12	8	32	32	40	44	48	46	43	33	28	28	8
1894	27	18	30	34	32	43	49	48	44	39	32	27	18
1895	25	28	27	32	36	44	47	44	36	31	27	30	25
1896	23	29	20	34	37	43	53	55	42	40	11	27	11
1897	22	30	23	36	40	41	50	51	42	37	29	27	22
1898	25	32	27	32	39	43	48	52	44	41	29	21	21
1899	20	9	31	31	38	39	51	46	46	34	38	30	9
1900	28	19	35	34	43	49	48	45	41	37	19	25	19
1901	26	28	34	33	41	43	45	50	41	44	35	26	26
1902	13	25	30	34	41	43	46	44	39	42	31	30	13
1903	29	24	30	34	39	45	48	49	41	38	31	29	24
1904	30	29	30	32	38	45	43	48	42	40	37	28	28
1905	25	17	32	37	41	48	51	46	45	32	30	27	17
1906	31	31	22	34	40	43	54	48	41	35	30	29	22
1907	13	28	32	35	41	46	52	49	46	44	34	32	13
1908	27	25	30	34	38	42	51	46	35	35	32	23	23
1909	6	33	34	36	37	43	47	46	41	40	28	24	6
1910	21	23	33	34	44	44	51	48	45	40	34	31	21
1911	23	27	31	30	39	43	47	51	43	34	29	29	23
1912	20	32	30	34	43	45	53	50	42	38	31	30	20
1913	22	26	29	36	41	47	51	50	44	38	34	30	22
1914	33	28	38	37	40	42	50	49	45	43	33	22	22
1915	26	30	38	37	36	47	54	54	46	38	32	26	26
1916	13	22	32	36	36	41	50	46	45	34	29	24	13
1917	22	30	29	37	39	43	50	51	50	34	34	34	22
1918	24	22	31	32	40	44	48	48	45	38	34	25	22
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual

Monthly EXTREME MINIMUM Temperatures (since 1874)
(continued)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1919	23	33	33	34	39	44	49	50	44	30	26	3	3
1920	23	30	32	35	38	43	50	44	48	38	34	31	23
1921	27	31	34	32	40	50	46	50	44	42	29	21	21
1922	16	22	30	35	37	46	49	52	48	39	28	18	16
1923	26	14	27	39	40	48	52	53	45	39	32	17	14
1924	14	32	32	32	41	46	50	47	43	37	30	11	11
1925	29	34	32	38	45	47	52	47	48	38	29	32	29
1926	31	37	35	41	42	48	51	54	43	41	36	19	19
1927	12	31	34	34	43	46	53	49	47	34	34	14	12
1928	15	31	32	37	40	48	50	52	43	35	31	25	15
1929	15	16	33	33	43	47	53	50	45	38	30	34	15
1930	13	31	33	38	37	45	50	51	44	38	29	28	13
1931	30	32	33	37	40	47	53	52	45	39	25	25	25
1932	22	22	31	38	41	46	49	54	46	40	33	16	16
1933	23	12	33	34	43	45	52	52	40	38	35	34	12
1934	34	33	38	39	43	47	52	53	39	42	39	34	33
1935	12	29	32	36	41	42	49	49	50	29	23	28	12
1936	27	14	31	31	41	51	53	52	44	36	30	27	14
1937	14	19	36	38	39	47	50	48	44	44	38	32	14
1938	26	31	34	38	40	46	50	49	53	39	32	29	26
1939	33	24	32	38	40	47	52	49	47	38	35	28	24
1940	27	32	39	40	44	46	51	52	46	41	30	29	27
1941	28	28	30	37	38	46	49	51	43	39	28	24	27
1942	19	26	31	37	38	45	51	48	40	37	29	31	19
1943	3	29	31	36	37	45	48	48	42	39	32	27	3
1944	27	27	24	34	37	43	47	48	42	40	28	25	24
1945	24	28	29	31	43	43	47	48	37	35	29	22	22
1946	27	27	31	32	40	46	49	48	38	26	28	20	20
1947	18	25	30	34	41	45	50	46	40	42	29	31	18
1948	24	24	30	32	34	52	48	50	41	32	29	22	22
1949	9	23	31	32	36	41	48	45	40	27	29	28	9
1950	-2	-3	28	31	38	45	48	48	36	33	26	35	-3
1951	16	26	26	29	37	46	48	44	39	31	31	22	16
1952	20	28	28	32	33	42	47	49	42	37	18	25	18
1953	29	27	28	31	37	43	48	48	38	33	31	33	27
1954	19	25	23	31	29	42	45	48	35	32	27	30	26
1955	29	20	19	29	36	44	43	45	38	38	13	23	13
1956	13	16	24	30	36	46	48	48	42	35	22	23	13
1957	6	22	27	32	43	46	46	47	39	34	26	32	6
1958	26	27	27	34	36	50	51	50	42	30	23	27	23
1959	16	29	31	33	38	45	47	46	43	31	25	22	16
1960	22	19	22	33	33	47	47	47	41	33	30	23	19
1961	23	35	30	33	39	42	49	51	34	32	23	21	21
1962	9	20	28	35	34	44	44	46	42	38	31	22	9
1963	11	32	28	33	36	44	46	47	44	30	26	20	11
1964	28	23	29	30	32	42	47	46	39	32	25	6	6
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual

Monthly EXTREME MINIMUM Temperatures (since 1874)
(continued)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1965	29	29	25	32	35	41	50	46	34	36	32	19	19
1966	24	26	29	32	37	39	52	48	46	34	33	32	24
1967	31	27	25	31	39	46	52	51	43	36	25	13	13
1968	24	26	27	30	38	45	48	49	44	35	31	8	8
1969	16	23	22	33	36	50	49	46	42	31	28	24	16
1970	23	31	29	30	37	45	50	45	36	29	27	26	23
1971	20	23	22	30	40	45	46	52	40	26	27	23	20
1972	18	18	29	30	37	47	49	51	39	30	30	8	8
1973	22	26	33	33	40	44	50	45	44	37	29	30	22
1974	12	29	25	34	39	45	49	48	43	35	31	28	12
1975	26	27	27	30	37	45	51	48	42	36	29	26	26
1976	26	24	25	31	41	42	46	49	45	33	22	23	22
1977	17	28	29	31	40	41	46	51	42	37	27	26	17
1978	23	27	28	33	35	47	49	48	44	31	18	13	13
1979	14	16	33	38	42	44	47	52	45	38	30	28	14
1980	13	25	33	31	42	45	53	44	44	33	33	22	13
1981	28	25	28	31	40	48	45	50	43	34	26	29	25
1982	14	21	31	31	37	47	49	47	43	35	24	22	14
1983	25	28	34	33	43	49	50	51	37	36	29	12	12
1984	19	30	32	36	42	46	50	50	42	35	31	18	18
1985	21	15	27	36	37	45	53	50	39	30	13	20	13
1986	28	25	33	33	37	46	47	50	42	39	30	27	25
1987	23	25	32	34	43	45	51	50	45	37	28	23	23
1988	22	22	29	32	38	42	48	50	44	35	31	26	22
1989	28	9	19	33	42	47	51	51	44	32	32	25	9
1990	26	20	29	36	38	49	51	50	47	37	32	12	12
1991	20	30	32	33	40	42	52	49	47	27	30	26	20
1992	29	29	31	37	39	46	54	47	42	33	31	27	27
1993	20	24	31	38	42	47	50	48	42	39	18	25	18
1994	27	22	29	36	41	46	51	51	49	38	28	24	22
1995	29	16	28	35	43	47	52	48	48	28	29	28	16
1996	17	14	28	38	38	48	50	52	44	36	28	28	14
1997	26	27	31	31	40	49	51	56	48	38	35	29	26
1998	24	31	29	35	45	51	57	51	47	37	34	11	11
1999	27	31	31	32	37	44							
2000													
2001													
2002													
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
	Extreme Minimum Temperatures 1941-1997 (Portland I'ntl Airport Site)												
	- 2	- 3	19	29	29	39	43	44	34	26	13	6	- 3
Year	1950	1950	1989	1955	1954	1966	1955	1980	1965	1971	1985	1964	1950
	Extreme Minimum Temperature 1874-1997 (All Observation Sites)												
	- 2	- 3	19	28	29	39	43	44	30	26	11	3	- 3
Year	1950	1950	1989	1875	1954	1966	1955	1980	1874	1971	1896	1919	1950

FIRST and LAST Occurrence in Year of HIGH Temperature of at Least...

	70 Degrees				80 Degrees				90 Degrees				100 Degrees			
Year	First Date		Last Date		First Date		Last Date		First Date		Last Date		First Date		Last Date	
1875	73	4/10	75	10/14	80	4/12	80	9/25	90	7/4	90	7/26	--	--	--	--
1876	72	5/7	72	10/14	82	5/8	82	9/30	92	6/16	90	9/1	--	--	--	--
1877	74	4/25	73	10/17	80	6/8	83	9/2	90	7/15	91	7/16	--	--	--	--
1878	72	4/1	70	10/4	82	5/7	86	9/10	90	6/5	92	6/19	--	--	--	--
1879	74	3/31	71	9/26	82	5/31	80	9/20	91	7/25	92	7/26	--	--	--	--
1880	77	4/8	74	10/4	80	4/28	80	9/25	90	6/27	92	7/16	--	--	--	--
1881	76	3/29	72	9/22	80	4/2	81	9/14	90	7/23	90	7/23	--	--	--	--
1882	70	3/30	77	9/26	80	5/21	82	10/7	94	6/2	91	8/30	--	--	--	--
1883	71	3/14	74	9/23	84	5/10	87	9/21	90	7/5	94	7/7	--	--	--	--
1884	73	4/5	72	10/17	80	4/7	87	8/29	90	5/31	90	8/8	--	--	--	--
1885	70	3/14	70	10/21	80	4/10	80	9/30	94	5/5	90	8/28	--	--	--	--
1886	79	3/29	76	10/3	81	5/16	81	9/29	95	6/2	90	9/12	--	--	--	--
1887	75	3/22	71	10/30	80	5/15	84	9/28	90	5/17	90	8/10	--	--	--	--
1888	77	4/11	72	10/11	84	4/19	82	10/5	91	5/28	90	8/2	--	--	--	--
1889	70	3/4	70	10/21	82	5/10	80	10/4	94	6/2	91	7/26	--	--	--	--
1890	70	4/9	73	11/2	85	4/28	83	9/28	92	6/6	96	8/13	--	--	--	--
1891	70	4/15	72	10/18	80	5/2	82	10/8	92	6/26	90	8/28	102	7/23	102	7/23
1892	76	3/10	71	10/7	84	5/19	82	10/2	93	5/20	90	9/11	--	--	--	--
1893	74	5/6	72	9/25	81	6/4	80	8/31	90	7/30	94	8/31	--	--	--	--
1894	76	4/19	73	10/4	80	5/18	89	9/10	90	6/2	94	8/27	--	--	--	--
1895	78	4/21	73	10/20	82	4/22	83	8/29	91	6/26	91	8/5	--	--	--	--
1896	74	5/21	75	10/17	81	5/29	80	9/22	90	6/25	90	8/23	--	--	--	--
1897	77	4/9	71	10/17	83	4/15	81	10/6	92	5/12	91	8/21	--	--	--	--
1898	70	4/12	70	10/7	80	4/12	80	9/17	90	6/6	90	8/24	--	--	--	--
1899	73	4/7	73	10/5	81	6/16	80	9/28	93	7/26	91	7/27	--	--	--	--
1900	72	3/14	72	10/16	84	4/29	87	9/12	90	6/12	90	7/20	--	--	--	--
1901	70	4/10	75	10/25	87	5/25	81	9/19	92	8/4	91	8/22	--	--	--	--
1902	72	4/15	73	10/11	81	5/25	82	10/3	90	5/26	97	8/10	--	--	--	--
1903	70	3/22	72	10/23	84	5/5	83	9/27	97	6/7	90	8/11	--	--	--	--
1904	72	4/8	73	10/25	81	4/10	80	10/1	99	6/29	95	8/4	100	7/25	100	7/25
1905	72	3/7	70	9/23	84	4/23	81	9/23	99	7/8	90	8/8	--	--	--	--
1906	70	3/28	70	10/26	80	4/6	83	10/9	90	4/20	92	7/27	101	7/3	101	7/3
1907	71	4/12	76	10/11	85	5/15	80	10/10	95	5/30	93	9/9	102	7/30	102	7/30
1908	70	4/11	75	10/8	82	4/30	82	9/30	92	6/30	92	8/19	--	--	--	--
1909	78	4/8	70	10/15	86	5/2	80	10/11	90	6/10	93	9/5	--	--	--	--
1910	70	3/11	74	10/15	84	4/18	80	9/19	94	6/10	91	8/16	--	--	--	--
1911	70	3/19	70	10/15	82	5/29	82	9/1	91	7/12	90	8/23	--	--	--	--
1912	71	3/30	70	10/14	83	5/7	82	9/21	93	6/6	90	8/22	--	--	--	--
1913	70	4/9	75	10/1	84	5/6	85	9/20	92	7/18	91	8/21	--	--	--	--
1914	71	3/18	71	10/27	80	5/1	81	9/24	94	6/15	90	8/13	--	--	--	--
1915	72	3/20	70	10/28	82	4/16	84	9/20	95	6/30	94	8/29	100	7/20	100	7/20
1916	70	4/2	73	10/10	81	5/2	84	9/21	91	6/15	92	8/25	--	--	--	--
1917	78	5/8	70	10/14	80	6/13	84	10/8	90	6/13	90	8/24	--	--	--	--
1918	78	4/19	71	10/12	82	4/20	88	9/27	91	6/5	90	9/16	--	--	--	--
1919	71	3/22	77	10/7	82	5/21	83	9/25	90	7/14	82	8/24	100	7/14	100	7/14
1920	71	4/25	70	10/5	82	5/6	82	9/29	97	7/7	91	8/21	--	--	--	--

First and Last Occurrence in Year of HIGH Temperature of at Least...

	70 Degrees				80 Degrees				90 Degrees				100 Degrees			
Year	First Date		Last Date		First Date		Last Date		First Date		Last Date		First Date		Last Date	
1921	71	4/8	71	10/10	80	5/13	80	8/29	90	8/7	90	8/7	--	--	--	--
1922	71	5/12	78	10/8	84	5/15	81	9/25	90	5/30	93	9/11	--	--	--	--
1923	71	3/26	70	10/20	82	3/29	86	10/1	94	6/28	95	9/7	--	--	--	--
1924	73	4/6	70	10/22	80	4/26	82	10/28	90	6/1	92	9/12	--	--	--	--
1925	78	4/8	71	10/21	82	5/4	80	9/23	99	6/24	90	9/23	101	6/25	101	6/25
1926	70	3/2	70	10/24	82	4/13	80	9/11	93	4/27	90	9/4	104	7/10	1040	7/10
1927	70	4/12	70	11/3	81	4/24	81	9/11	92	6/20	94	8/17	101	7/23	101	7/23
1928	73	3/18	74	10/8	81	5/13	80	9/22	91	5/20	90	9/22	--	--	--	--
1929	72	4/24	73	10/24	81	5/18	80	10/15	90	7/1	95	8/10	--	--	--	--
1930	72	3/26	75	9/26	83	3/28	83	9/20	94	6/15	97	9/2	--	--	--	--
1931	70	4/9	79	10/15	81	4/26			91	5/29	96	8/28	101	7/19	101	7/19
1932	73	4/9	70	10/7	81	5/5	86	10/4	91	6/10	91	9/10	--	--	--	--
1933	70	4/5	72	10/23	80	5/28	80	10/6	91	6/12	91	8/26	102	8/13	102	8/13
1934	75	3/11	70	10/10	82	4/11	85	10/10	90	5/22	95	9/3	--	--	--	--
1935	70	4/10	71	10/17	83	5/20	81	10/1	90	6/5	93	9/8	105	7/13	100	8/12
1936	71	4/11	70	10/18	83	5/10	88	10/10	90	8/20	97	8/28	--	--	--	--
1937	76	5/1	70	10/27	84	5/2	80	9/14	90	6/1	97	9/14	--	--	--	--
1938	70	4/7	75	10/22	80	5/19	80	9/27	92	6/6	95	9/17	101	7/20	101	7/21
1939	70	3/18	70	10/20	81	5/11	80	10/13	96	5/13	94	8/19	100	8/2	100	8/2
1940	70	3/21	79	10/19	82	5/1	80	10/18	97	6/11	94	8/29	--	--	--	--
1941	70	3/25	71	10/22	84	5/10	80	9/24	95	6/11	93	8/19	101	7/13	100	7/17
1942	74	3/30	73	10/18	80	5/20	80	10/9	91	6/29	90	8/24	100	6/30	102	7/2
1943	77	4/11	71	10/14	82	4/12	83	10/7	91	7/20	90	9/24	--	--	--	--
1944	73	4/1	75	10/27	80	5/3	83	9/27	90	5/27	98	9/10	104	7/18	101	9/5
1945	70	4/19	76	10/14	83	5/1	80	10/8	91	6/17	92	9/12	100	8/5	100	8/5
1946	77	4/17	71	10/11	81	5/2	80	9/29	99	7/19	90	8/22	102	7/20	102	7/20
1947	74	3/14	71	10/12	80	3/16	87	9/24	90	5/23	91	9/23	--	--	--	--
1948	72	3/28	73	10/2	85	5/24	86	9/12	90	6/6	93		--	--	--	--
1949	74	4/4	70	9/29	81	5/6	80	9/27	93	7/14	91	9/27	--	--	--	--
1950	77	4/19	79	9/23	80	5/11	80	9/22	90	7/12	91	9/21	--	--	--	--
1951	70	4/2	75	10/9	81	4/12	84	9/21	95	6/28	91	9/14	--	--	--	--
1952	77	5/10	72	10/25	85	5/16	89	10/6	92	7/7	93	9/22	--	--	--	--
1953	70	4/19	70	10/8	80	5/4	82	9/20	91	7/6	95	8/14	--	--	--	--
1954	72	4/11	71	10/31	81	5/7	83	9/25	--	--	--	--	--	--	--	--
1955	73	4/6	73	10/17	85	6/7	86	9/6	94	6/8	93	9/5	--	--	--	--
1956	70	3/17	76	10/7	80	4/19	81	10/6	98	7/7	93	8/12	102	7/19	102	7/19
1957	72	4/27	70	10/11	81	4/28	80	9/30	90	9/13	90	9/22	--	--	--	--
1958	77	4/12	70	10/17	81	5/14	80	10/3	92	6/5	96	9/7	102	7/26	102	7/26
1959	73	4/9	71	10/23	82	5/12	82	9/10	90	7/17	95	7/31	--	--	--	--
1960	73	3/19	71	10/18	81	6/1	86	9/29	94	7/5	94	8/9	100	8/8	100	8/8
1961	71	4/28	73	10/18	80	5/17	80	10/14	91	5/19	92	8/21	104	7/11	102	7/12
1962	75	4/12	70	10/29	80	4/18	82	9/24	91	7/22	93	9/17	--	--	--	--
1963	70	4/28	70	10/16	84	5/17	85	9/27	91	5/20	93	8/8	--	--	--	--
1964	71	5/19	74	10/22	84	5/30	80	10/5	90	8/10	94	10/24	--	--	--	--
1965	70	3/6	73	10/26	80	4/26	82	10/2	93	6/30	90	8/31	107	7/30	102	7/31
1966	74	3/25	70	10/10	82	5/3	81	10/4	95	6/15	91	9/4	--	--	--	--

First and Last Occurrence in Year of HIGH Temperature of at Least...

	70 Degrees				80 Degrees				90 Degrees				100 Degrees			
Year	First Date		Last Date		First Date		Last Date		First Date		Last Date		First Date		Last Date	
1967	71	5/5	71	10/17	85	5/16	82	9/28	90	6/18	94	9/27	102	8/9	102	8/28
1968	70	2/28	72	10/3	81	4/28	81	9/8	93	6/25	92	9/5	--	--	--	--
1969	71	3/25	70	11/1	87	5/7	87	9/11	94	6/16	90	9/10	--	--	--	--
1970	70	5/1	71	10/16	82	5/3	85	9/28	94	6/1	90	10/2	102	7/15	102	7/15
1971	73	4/4	78	10/9	82	5/7	82	10/8	91	5/11	90	8/12	100	8/8	100	8/11
1972	72	3/16	71	10/17	83	5/12	83	9/15	92	5/28	93	9/3	102	8/6	104	8/7
1973	70	4/3	70	10/17	87	5/12	82	9/28	92	5/13	95	9/10	--	--	--	--
1974	70	3/26	73	10/24	83	6/1	81	10/1	90	6/29	96	9/24	--	--	--	--
1975	70	4/11	73	11/3	83	5/9	86	10/1	90	6/1	92	9/12	--	--	--	--
1976	71	4/4	70	10/19	82	4/30	82	10/7	92	7/15	92	7/15	--	--	--	--
1977	70	4/4	71	10/15	86	6/5	82	9/13	93	7/24	90	8/17	100	8/10	105	8/17
1978	71	3/17	71	10/19	81	5/19	80	9/1	90	6/4	94	8/9	101	8/7	101	8/8
1979	71	3/13	76	10/11	83	4/26	80	10/10	90	6/1	92	9/14	104	7/16	102	7/17
1980	70	4/11	74	10/10	81	4/27	81	10/6	90	7/21	90	10/5	101	7/21	101	7/21
1981	72	4/14	70	10/18	82	5/28	87	9/16	90	7/2	96	9/15	103	8/7	107	8/10
1982	73	3/23	74	10/14	85	5/24	84	9/23	90	6/10	91	9/2	100	6/18	100	6/18
1983	72	4/15	70	10/7	84	5/22	80	9/13	90	5/28	91	8/13	100	5/28	100	5/28
1984	79	4/14	72	10/9	86	5/28	82	10/7	91	7/15	91	8/26	100	7/24	100	7/24
1985	70	4/1	76	10/5	80	5/15	82	9/25	91	6/17	90	8/26	101	7/19	101	7/19
1986	70	3/20	72	10/24	80	5/24	86	9/6	91	5/30	91	9/5	100	8/26	100	8/26
1987	70	3/30	74	10/26	83	4/26	81	10/11	91	5/6	92	10/1	101	8/8	102	8/31
1988	71	2/28	70	10/16	80	4/12	80	10/1	91	7/18	91	10/1	100	7/25	105	9/2
1989	73	4/6	73	10/17	80	4/13	89	9/28	93	6/24	92	9/22	--	--	--	--
1990	71	3/27	72	10/4	82	4/15	83	9/28	93	6/21	93	9/22	100	8/5	101	8/11
1991	71	3/30	73	10/20	82	6/9	80	10/15	95	7/2	94	9/25	100	7/23	100	7/23
1992	70	3/29	73	10/23	80	4/25	82	9/30	93	5/24	91	8/26	100	6/22	101	8/11
1993	70	4/20	71	10/29	85	5/10	83	10/3	93	8/3	91	9/9	--	--	--	--
1994	70	3/12	70	10/24	80	5/5	87	9/27	90	7/7	93	9/22	102	7/19	101	7/21
1995	71	3/29	74	10/15	83	5/14	80	9/24	90	6/29	92	9/14	--	--	--	--
1996	70	4/4	71	10/10	87	6/2	83	10/9	93	7/7	92	8/29	100	7/13	100	7/13
1997	72	3/25	71	10/16	81	5/10	85	9/23	94	7/4	90	9/24	--	--	--	--
1998	70	3/20	70	10/22	82	4/28	82	9/30	90	4/30	90	9/3	101	7/28	101	7/28
1999	72	3/19			89	5/23										
2000																
2001																

FIRST High of at Least:	70 Deg	80 Deg	90 Deg	100 Deg
Earliest in Year	Feb 28th, 1988 *(high of 70)*	Mar 16th, 1947 *(high of 80)*	April 20th, 1906 *(high of 90)*	May 28th, 1983 *(high of 100)*
Latest in Year	May 21st, 1896 *(high of 74)*	June 16th, 1899 *(high of 80)*	Year of 1954 *(no high of 90+)*	Year of 1997[1] *(no high 100+)*

LAST High of at Least:	70 Deg	80 Deg	90 Deg	100 Deg
Earliest in Year	Sept 23rd, 1950 *(high of 79)*	Aug 31st, 1893 *(high of 80)*	July 7th, 1883 *(high of 94)*	May 28th, 1983 *(high of 100)*
Latest in Year	Nov 3rd, 1927 *(high of 70)*	Oct 28th, 1924 *(high of 80)*	Oct 5th, 1980 *(high of 90)*	Sept 5th, 1944 *(high of 101)*

[1]Several years have had no high of 100 degrees or greater. Thus, most recent year of occurrence is listed.

Monthly and Seasonal HEATING DEGREE DAYS (HDD)
(1941-1999)

Season	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1940-41	- -	- -	- -	- -	- -	- -	735	529	402	328	245	102	**2,341**
1941-42	5	28	144	319	502	689	921	627	569	370	282	154	4,610
1942-43	9	18	71	289	599	683	985	601	606	328	290	160	4,639
1943-44	26	34	156	321	568	776	800	659	608	424	208	125	4,705
1944-45	21	28	80	201	591	796	699	575	613	434	202	131	4,371
1945-46	21	15	138	332	554	780	749	628	570	404	167	124	4,482
1946-47	28	18	116	442	656	716	862	557	470	329	141	103	4,438
1947-48	15	35	83	299	541	684	787	701	630	484	283	49	4,591
1948-49	32	17	143	356	634	832	1,154	726	593	381	191	114	5,173
1949-50	48	30	99	511	452	731	1,172	727	611	487	319	115	5,180
1950-51	20	17	120	382	548	571	776	612	709	337	253	64	4,410
1951-52	18	43	90	343	570	845	901	667	600	371	230	114	4,822
1952-53	18	15	66	197	725	718	539	586	586	445	326	186	4,407
1953-54	32	41	91	323	485	653	797	624	649	456	254	205	4,610
1954-55	63	57	142	365	452	741	777	681	724	552	368	152	5,074
1955-56	80	33	173	346	701	793	770	838	639	364	201	174	5,112
1956-57	22	47	120	407	662	746	1,041	648	578	390	190	95	4,946
1957-58	25	35	45	370	624	644	656	451	599	420	128	62	4,059
1958-59	3	5	105	295	579	657	755	618	559	375	280	89	4,320
1959-60	26	32	142	326	659	781	910	653	612	424	337	78	4,980
1960-61	18	52	114	316	548	807	654	494	530	442	261	66	4,302
1961-62	11	4	169	359	656	740	811	613	605	364	339	118	4,789
1962-63	49	19	71	299	515	687	925	477	606	486	272	168	4,574
1963-64	72	24	41	329	561	830	739	718	650	539	380	182	5,065
1964-65	67	81	191	358	711	860	761	599	533	388	325	113	4,987
1965-66	22	16	139	227	451	786	759	620	545	425	249	99	4,338
1966-67	27	16	56	345	531	635	655	591	647	535	246	50	4,334
1967-68	3	0	29	306	558	758	789	482	515	500	261	110	4,311
1968-69	17	43	123	395	544	852	1,022	703	570	442	178	51	4,940
1969-70	17	22	85	357	526	678	751	526	553	493	246	71	4,325
1970-71	14	14	130	369	530	771	757	615	653	454	253	149	4,709
1971-72	33	5	123	388	578	756	793	607	466	501	174	61	4,485
1972-73	10	6	153	363	497	848	799	560	525	378	202	89	4,430
1973-74	6	47	59	326	618	624	832	610	545	403	282	72	4,424
1974-75	32	16	29	301	500	640	722	660	615	523	240	127	4,405
1975-76	24	41	48	354	565	686	698	658	632	437	258	155	4,556
1976-77	15	41	47	319	536	783	901	564	596	358	340	68	4,568
1977-78	40	19	131	339	644	707	764	561	485	430	317	58	4,495
1978-79	29	26	134	312	772	915	1,058	615	434	351	162	57	4,865
1979-80	8	2	19	214	592	631	920	647	575	329	232	125	4,294
1980-81	15	25	64	284	485	644	650	583	494	372	229	108	3,953
Season	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
Norm[2]	***28***	***35***	***102***	***326***	***567***	***769***	***787***	***599***	***549***	***420***	***249***	***91***	***4,522***

HDD Season extends from July 1st through June 30th.

Monthly and Seasonal HEATING DEGREE DAYS (HDD)
(1941-1999) continued

Season	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
1981-82	23	5	76	355	487	687	780	596	502	472	229	71	4,274
1982-83	22	10	99	307	614	715	635	492	435	363	184	81	3,957
1983-84	27	2	109	325	463	880	701	546	425	430	269	115	4,292
1984-85	9	2	80	377	539	820	893	664	588	327	213	62	4,574
1985-86	0	7	124	373	826	982	691	591	417	437	265	43	4,756
1986-87	37	0	148	242	510	750	780	550	495	321	173	51	4,057
1987-88	22	2	54	214	479	798	801	581	544	380	272	109	4,256
1988-89	33	15	91	208	518	705	699	805	594	263	219	77	4,227
1989-90	32	27	44	306	486	759	664	641	476	308	251	78	4,072
1990-91	10	5	14	336	492	933	802	446	575	420	310	156	4,499
1991-92	4	13	25	295	517	685	627	483	387	282	108	35	3,461
1992-93	5	9	107	274	556	789	877	692	522	366	135	94	4,426
1993-94	37	17	57	231	698	726	630	668	451	316	143	85	4,059
1994-95	16	0	23	330	662	696	666	514	510	405	149	95	4,066
1995-96	3	15	20	318	392	693	747	671	530	340	294	70	4,093
1996-97	16	8	113	340	581	717	733	612	563	413	116	79	4,291
1997-98	7	0	42	341	452	734	676	523	498	376	268	72	3,989
1998-99	12	4	32	323	475	753	677	592	586	424	312	151	4,341
99-00													
2000-01													
Season	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**TOTAL**
Norm[2]	***28***	***35***	***102***	***326***	***567***	***769***	***787***	***599***	***549***	***420***	***249***	***91***	***4,522***
Least Monthly and Seasonal HDD and Year of Occurrence													
Least	0[1]	0[1]	20	197	392	571	539	446	387	263	108	35	3,461
Year	1985	1997	1995	1952	1995	1950	1953	1991	1992	1989	1992	1992	1991-92
Most Monthly and Seasonal HDD and Year of Occurrence													
Most	80	81	191	511	826	982	1,172	838	724	552	380	205	5,180
Year	1955	1964	1964	1949	1985	1985	1950	1956	1955	1955	1964	1964	1949-50

[1] *Number of HDD have occurred more than once. As a result, the year of most recent occurrence is listed.*
[2] *Normals are from the 1961-90 Climatic Data Set.*

What are Heating Degree Days? Heating Degree Day Units (HDD) are used by utility companies and other institutions for determining energy consumption requirements. The season is from July 1st through June 30th.

How to Calculate Heating Degree Day Units:
Subtract the **mean** daily temperature (in degrees F) from 65. The difference is the number of HDD units. All negative values are recorded as zero. Monthly and seasonal values are sums of the daily values during the appropriate period.

Example: Assume that the Mean Temperature on October 4 was 45 deg F.
According to the HDD formula, 65 - 45 = 20, so there were 20 HDD on October 4.

Daily Cumulative Total of Average Seasonal Heating Degree Days

(Season is from July 1st through June 30th)

DAY	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN
1	1	29	65	171	506	1,081	1,853	2,638	3,232	3,778	4,193	4,436
2	2	30	67	177	521	1,104	1,879	2,661	3,251	3,794	4,204	4,441
3	3	31	69	184	537	1,127	1,905	2,684	3,270	3,810	4,215	4,446
4	4	32	71	191	553	1,150	1,931	2,707	3,289	3,826	4,226	4,450
5	5	33	73	198	569	1,173	1,957	2,730	3,308	3,842	4,236	4,454
6	6	34	75	206	586	1,197	1,983	2,753	3,327	3,857	4,246	4,458
7	7	35	77	214	603	1,221	2,009	2,775	3,346	3,872	4,256	4,462
8	8	36	79	222	620	1,245	2,035	2,797	3,365	3,887	4,266	4,466
9	9	37	81	230	637	1,269	2,061	2,819	3,383	3,902	4,275	4,470
10	10	38	83	239	655	1,293	2,087	2,841	3,401	3,917	4,284	4,474
11	11	39	85	248	673	1,317	2,113	2,863	3,419	3,932	4,293	4,477
12	12	40	88	257	691	1,341	2,139	2,885	3,437	3,947	4,302	4,480
13	13	41	91	267	709	1,366	2,165	2,907	3,455	3,962	4,311	4,483
14	14	42	94	277	728	1,391	2,191	2,928	3,473	3,976	4,319	4,486
15	15	43	97	287	747	1,416	2,217	2,949	3,491	3,990	4,327	4,489
16	16	44	100	298	766	1,441	2,243	2,970	3,509	4,004	4,335	4,492
17	17	45	103	309	785	1,466	2,269	2,991	3,527	4,018	4,343	4,495
18	17	46	106	320	805	1,491	2,294	3,012	3,545	4,032	4,350	4,498
19	17	47	109	331	825	1,516	2,319	3,033	3,562	4,046	4,357	4,500
20	17	48	113	343	845	1,541	2,344	3,054	3,579	4,059	4,364	4,502
21	18	49	117	355	865	1,567	2,369	3,074	3,596	4,072	4,371	4,504
22	19	50	121	367	886	1,593	2,394	3,094	3,613	4,085	4,378	4,506
23	20	51	126	380	907	1,619	2,419	3,114	3,630	4,098	4,385	4,508
24	21	52	131	393	928	1,645	2,444	3,134	3,647	4,111	4,391	4,510
25	22	53	136	406	949	1,671	2,469	3,154	3,664	4,123	4,397	4,512
26	23	54	141	419	970	1,697	2,494	3,174	3,681	4,135	4,403	4,514
27	24	55	147	433	992	1,723	2,518	3,194	3,698	4,147	4,409	4,516
28	25	57	153	447	1,014	1,749	2,542	3,213	3,714	4,159	4,415	4,518
29	26	59	159	461	1,036	1,775	2,566		3,730	4,171	4,421	4,520
30	27	61	165	476	1,058	1,801	2,590		3,746	4,182	4,426	4,522
31	28	63		491		1,827	2614		3,762		4,431	

(based on the 1961-90 Climatic Normals)

Monthly and Seasonal COOLING DEGREE DAY Units
(1969-1999)

Season	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1969	0	0	0	0	13	102	74	65	43	0	0	0	297
1970	0	0	0	0	8	106	150	120	8	2	0	0	394
1971	0	0	0	0	5	14	170	217	7	3	0	0	416
1972	0	0	0	0	27	39	200	221	44	0	0	0	531
1973	0	0	0	0	34	65	178	81	45	0	0	0	403
1974	0	0	0	0	1	60	102	144	102	0	0	0	409
1975	0	0	0	0	12	39	157	57	75	2	0	0	342
1976	0	0	0	0	4	23	89	66	30	4	0	0	216
1977	0	0	0	0	0	42	90	233	10	0	0	0	375
1978	0	0	0	0	3	69	141	112	18	0	0	0	343
1979	0	0	0	0	18	65	183	124	65	7	0	0	462
1980	0	0	0	1	0	2	141	75	35	12	0	0	266
1981	0	0	0	3	4	16	109	232	82	0	0	0	446
1982	0	0	0	0	4	107	103	127	50	0	0	0	391
1983	0	0	0	0	48	23	80	137	12	0	0	0	300
1984	0	0	0	0	10	34	140	144	47	6	0	0	381
1985	0	0	0	0	11	53	291	145	5	0	0	0	505
1986	0	0	0	0	40	87	52	235	50	0	0	0	464
1987	0	0	0	4	37	102	95	177	77	12	0	0	504
1988	0	0	0	0	10	39	147	115	67	8	0	0	386
1989	0	0	0	1	9	62	53	66	60	0	0	0	250
1990	0	0	0	2	3	45	206	193	83	0	0	0	532
1991	0	0	0	0	0	7	164	176	102	2	0	0	451
1992	0	0	0	1	57	114	174	164	31	0	0	0	541
1993	0	0	0	0	21	24	22	132	80	3	0	0	282
1994	0	0	0	0	15	31	210	168	109	0	0	0	533
1995	0	0	0	0	23	63	104	92	91	0	0	0	453
1996	0	0	0	0	1	25	240	181	25	7	0	0	479
1997	0	0	0	0	37	16	134	210	75	0	0	0	472
1998	0	0	0	14	4	30	206	197	96	0	0	0	547
1999	0	0	0	0	9	41							
2000													
Season	**JAN**	**FEB**	**MAR**	**APR**	**MAY**	**JUN**	**JUL**	**AUG**	**SEP**	**OCT**	**NOV**	**DEC**	**TOTAL**
Norm[1]	***0***	***0***	***0***	***0***	***0***	***46***	***127***	***147***	***51***	***0***	***0***	***0***	***371***
MOST Monthly and Seasonal CDD and Year of Occurrence (most recent year listed)													
Most	0	0	0	14	57	114	291	235	109	12	0	0	547
Year	1998	1998	1998	1998	1992	1992	1985	1986	1994	1987	1997	1997	1998

[1]Norm are the normals from the 1961-90 data set.

How to Calculate Cooling Degree Day Units:

Subtract the **65** from the daily mean temperature (in degrees F). The difference is the number of CDD units. All negative values are recorded as zero. Monthly and seasonal values are sums of the daily values during the appropriate period.

Example: Assume that the Mean Temperature on July 20 was 77 deg F.
According to the CDD formula, 77 - 65 = 12, so there were 12 CDD on July 20.

Daily Cumulative Total of Average Seasonal Cooling Degree Days

(Season is from January 1st through December 31st)

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0	0	0	0	0	0	49	178	324	371	371	371
2	0	0	0	0	0	1	52	183	327	371	371	371
3	0	0	0	0	0	2	55	188	330	371	371	371
4	0	0	0	0	0	3	58	193	333	371	371	371
5	0	0	0	0	0	4	61	198	336	371	371	371
6	0	0	0	0	0	5	64	203	339	371	371	371
7	0	0	0	0	0	6	67	208	341	371	371	371
8	0	0	0	0	0	7	70	213	343	371	371	371
9	0	0	0	0	0	8	74	218	345	371	371	371
10	0	0	0	0	0	9	78	223	347	371	371	371
11	0	0	0	0	0	10	82	228	349	371	371	371
12	0	0	0	0	0	11	86	233	351	371	371	371
13	0	0	0	0	0	12	90	238	353	371	371	371
14	0	0	0	0	0	13	94	243	355	371	371	371
15	0	0	0	0	0	14	98	248	357	371	371	371
16	0	0	0	0	0	15	102	253	358	371	371	371
17	0	0	0	0	0	17	106	258	359	371	371	371
18	0	0	0	0	0	19	110	263	360	371	371	371
19	0	0	0	0	0	21	114	268	361	371	371	371
20	0	0	0	0	0	23	118	273	362	371	371	371
21	0	0	0	0	0	25	123	278	363	371	371	371
22	0	0	0	0	0	27	128	283	364	371	371	371
23	0	0	0	0	0	29	133	288	365	371	371	371
24	0	0	0	0	0	31	138	292	366	371	371	371
25	0	0	0	0	0	33	143	296	367	371	371	371
26	0	0	0	0	0	35	148	300	368	371	371	371
27	0	0	0	0	0	37	153	304	369	371	371	371
28	0	0	0	0	0	40	158	308	370	371	371	371
29	0		0	0	0	43	163	312	371	371	371	371
30	0		0	0	0	46	168	316	371	371	371	371
31	0		0		0		173	320		371		371

(based on the 1961-90 Climatic Normals)

FREEZE DATA

Latest Freeze in Spring, Earliest Freeze in Autumn, and Length of Freeze-Free Period

	Latest Date in Spring		Earliest Date in Autumn		Freeze-Free Period
Year	Temp	Date	Temp	Date	(days)
1875	28	4/7	30	11/16	221
1876	32	2/27	32	12/5	282
1877	31	3/4	31	10/31	240
1878	32	4/14	32	11/11	211
1879	25	2/5	32	11/1	269
1880	32	3/18	26	11/18	242
1881	32	2/18	32	10/13	223
1882	32	4/27	29	11/10	197
1883	31	2/24	31	12/30	309
1884	28	3/8	32	12/6	235
1885	32	2/23	29	12/11	291
1886	32	3/18	30	11/2	229
1887	31	4/3	30	11/16	235
1888	32	4/9	31	11/24	227
1889	30	2/25	32	11/16	264
1890	32	4/14	32	11/6	208
1891	31	3/31	31	12/6	250
1892	30	2/16	32	12/7	295
1893	32	4/17	28	11/1	198
1894	30	3/20	32	12/1	256
1895	32	4/4	31	10/31	209
1896	29	3/31	32	11/6	220
1897	32	3/30	32	11/19	234
1898	32	4/3	32	11/7	218
1899	31	4/13	32	12/19	240
1900	31	2/18	27	11/19	274
1901	29	2/21	26	12/12	294
1902	30	3/28	31	11/23	240
1903	32	3/14	31	11/24	250
1904	32	4/23	29	12/5	226
1905	32	3/30	32	10/18	202
1906	32	3/18	31	11/22	249
1907	32	3/12	30	11/24	257
1908	30	3/9	32	11/27	263
1909	29	1/28	32	11/14	290
1910	29	2/23	31	12/20	300
1911	31	3/2	28	11/10	229
1912	32	3/9	31	11/28	264
1913	29	3/25	32	12/4	254
1914	32	2/9	31	12/11	304
1915	30	2/15	32	11/27	317
1916	32	3/4	32	11/11	253
1917	32	3/16	None	None	226

	Latest Date in Spring		Earliest Date in Autumn		Freeze-Free Period
Year	Temp	Date	Temp	Date	(days)
1918	32	4/3	30	12/17	264
1919	32	1/28	30	10/27	272
1920	32	3/17	None	None	229
1921	32	4/4	29	11/20	276
1922	32	3/27	28	11/27	245
1923	32	3/15	32	11/18	248
1924	32	4/15	30	11/12	211
1925	32	3/6	29	11/23	262
1926	31	1/25	29	12/12	321
1927	32	2/14	29	12/7	296
1928	32	3/14	31	11/18	249
1929	30	2/18	31	11/13	268
1930	31	2/28	30	11/24	269
1931	32	2/22	32	11/21	272
1932	31	3/3	32	12/6	278
1933	31	2/14	None	None	320
1934	None	None	None	None	365
1935	32	3/9	29	10/30	235
1936	32	4/4	30	11/2	212
1937	32	2/10	32	12/6	299
1938	31	2/1	32	11/12	284
1939	32	3/10	29	12/24	288
1940	32	2/12	32	11/19	281
1941	30	3/14	29	11/20	250
1942	32	3/24	29	11/12	233
1943	31	3/18	32	11/23	269
1944	32	3/29	31	11/14	229
1945	31	4/2	32	11/19	230
1946	32	4/7	30	10/15	191
1947	31	3/6	32	11/21	259
1948	32	4/27	32	10/27	182
1949	32	4/3	31	10/18	200
1950	32	4/24	32	11/10	199
1951	29	4/21	31	10/30	191
1952	32	4/8	32	11/8	213
1953	32	4/2	31	11/2	213
1954	29	5/1	32	10/27	179
1955	32	4/25	26	11/11	199
1956	30	4/6	25	11/19	226
1957	32	4/7	27	11/4	211
1958	28	3/16	30	10/24	221
1959	32	3/20	31	10/29	222
1960	30	3/19	32	11/7	232

FREEZE DATA (continued)

Latest Freeze in Spring, Earliest Freeze in Autumn, and Length of Freeze-Free Period

	Latest Date in Spring		Earliest Date in Autumn		Freeze-Free Period		Latest Date in Spring		Earliest Date in Autumn		Freeze-Free Period
Year	Temp	Date	Temp	Date	(days)	Year	Temp	Date	Temp	Date	(days)
1961	30	3/28	32	10/20	205	1981	31	4/13	30	11/27	227
1962	28	3/28	28	11/28	243	1982	31	4/19	32	11/2	196
1963	31	3/17	30	10/26	222	1983	30	2/5	29	11/29	296
1964	32	5/2	32	10/23	203	1984	32	3/4	31	11/21	261
1965	32	4/6	32	11/29	236	1985	29	3/15	32	10/8	206
1966	32	4/19	32	12/25	249	1986	29	2/19	32	11/10	263
1967	31	4/15	32	11/6	204	1987	32	3/28	29	11/28	241
1968	32	4/22	31	11/1	192	1988	32	4/8	31	11/30	235
1969	29	3/24	31	10/14	203	1989	31	3/20	32	10/29	222
1970	30	4/12	32	10/26	196	1990	29	3/13	32	11/18	250
1971	32	4/3	32	10/27	206	1991	32	3/20	27	10/30	224
1972	30	4/22	30	10/29	220	1992	31	3/28	31	11/28	245
1973	29	2/20	29	11/2	254	1993	31	3/11	32	10/5	208
1974	30	3/18	31	11/28	254	1994	31	3/7	32	11/3	231
1975	31	4/5	30	11/17	222	1995	31	3/26	32	10/30	216
1976	31	4/2	32	11/20	231	1996	31	3/26	32	11/18	237
1977	31	4/17	32	11/3	199	1997	32	4/5	32	12/6	244
1978	28	3/15	32	10/26	214	1998	32	3/29	32	12/9	255
1979	32	2/21	31	10/26	262	1999	32	4/1			
1980	31	4/2	30	12/6	247	2000					
1981	31	4/13	30	11/27	227	2001					

Historical Freeze Data for Portland

	1895-1940	*1941-1999*
Average Last Freeze Date in Spring		**March 30th**
Latest Last Freeze in Spring	April 27th, 1882	May 2nd, 1964
Earliest Last Freeze in Spring	No Freeze in 1934	February 5th, 1983
Average First Freeze Date in Autumn		**November 8th**
Earliest First Freeze in Autumn	October 13th, 1881	October 5th, 1993
Latest First Freeze in Autumn	No Freeze 1934[1]	December 25th, 1966
Average Length of Freeze Free Period		**223 Days**
Shortest Freeze-Free Period	197 days in 1882	179 days in 1954
Longest Freeze-Free Period	365 days in 1934	296 days in 1983

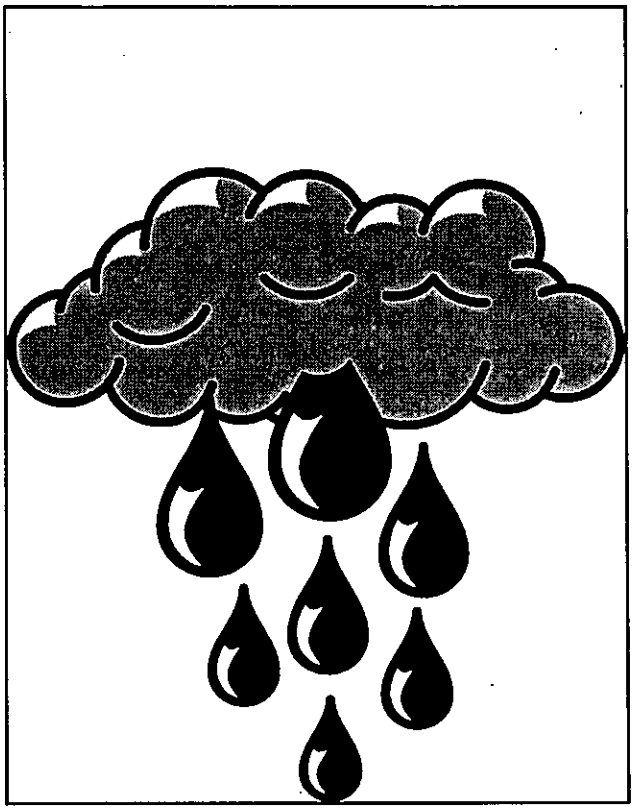
[1]*Occurred during several years, with the most recent year of occurrence listed.*

Selected Critical Temperatures[2] Data

Temperature	24 Deg	28 Deg	32 Deg	36 Deg
Average Last Occurrence in Spring	Jan 28th	Feb 25th	Mar 30th	Apr 26th
Average First Occurrence in Autumn	Dec 22nd	Dec 2nd	Nov 8th	Oct 21st
Days between Last Temperature in Spring and First Temperature in Autumn	329	281	223	179

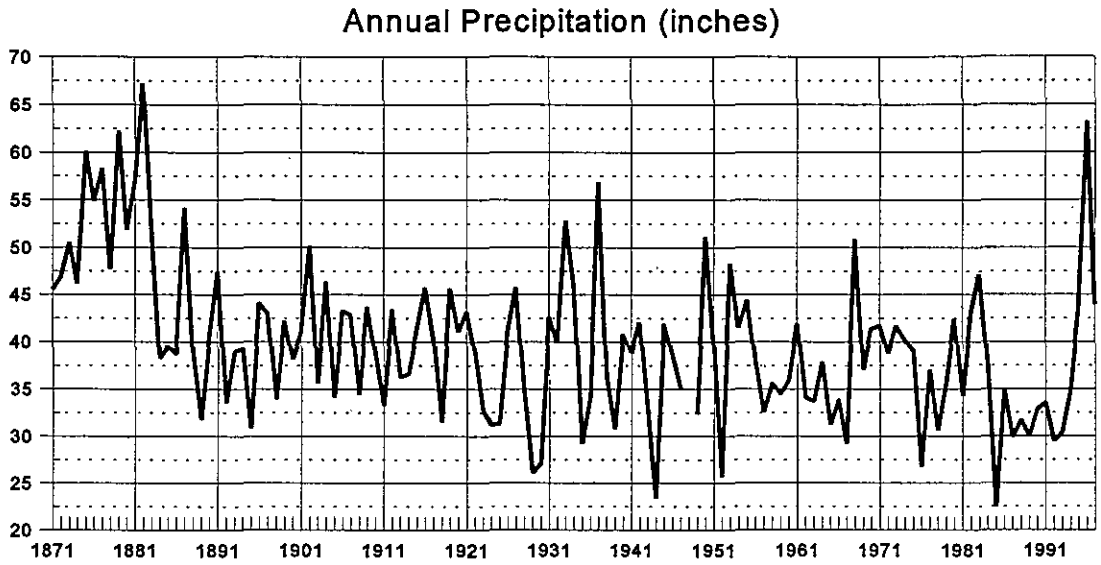
[2]*Values and dates are based on data from the Portland Int'l Airport Observation site.*

This page left intentionally blank.

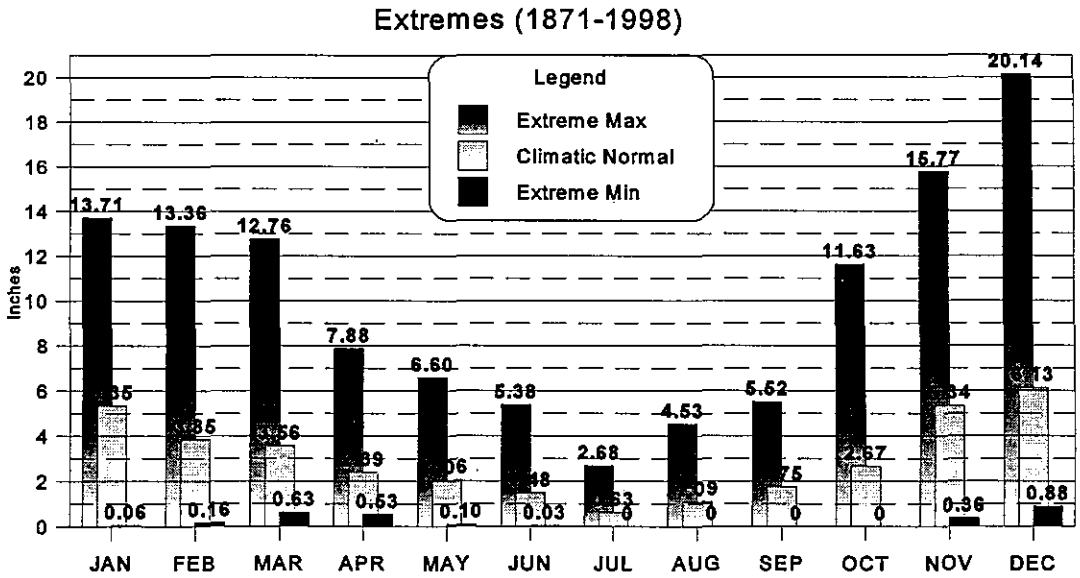


Precipitation Records and Data

ANNUAL AND MONTHLY PRECIPITATION GRAPHS



Monthly Precipitation Extremes and Climatic Normals



(for years of occurrence, see page 67)

JANUARY PRECIPITATION DATA
(1941-1999)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.22	.19	.19	14.33	1.03	1987
2	.22	.38	.38	14.52	1.19	1951
3	.22	.57	.57	14.71	1.32	1966
4	.22	.76	.76	14.90	1.93	1956
5	.18	.94	.94	15.08	0.95	1966
6	.26	1.12	1.12	15.26	2.48	1948
7	.16	1.30	1.30	15.44	1.47	1953
8	.17	1.48	1.48	15.62	1.46	1953
9	.15	1.66	1.66	15.80	1.14	1980
10	.18	1.84	1.84	15.98	1.35	1979
11	.17	2.02	2.02	16.16	1.01	1972
12	.21	2.20	2.20	16.34	1.38	1975
13	.18	2.38	2.38	16.52	1.28	1980
14	.23	2.56	2.56	16.70	1.50	1974
15	.18	2.73	2.73	16.87	1.98	1974
16	.20	2.90	2.90	17.04	1.13	1982
17	.18	3.07	3.07	17.21	1.76	1997
18	.23	3.24	3.24	17.38	1.06	1974
19	.18	3.41	3.41	17.55	1.27	1968
20	.16	3.58	3.58	17.72	1.73	1972
21	.18	3.75	3.75	17.89	1.10	1943
22	.18	3.92	3.92	18.06	2.03	1970
23	.22	4.08	4.08	18.22	1.48	1965
24	.19	4.24	4.24	18.38	1.20	1964
25	.19	4.40	4.40	18.54	1.54	1964
26	.15	4.56	4.56	18.70	1.05	1956
27	.16	4.72	4.72	18.86	1.56	1954
28	.20	4.88	4.88	19.02	1.20	1990
29	.18	5.04	5.04	19.18	0.67	1958
30	.12	5.20	5.20	19.34	1.14	1997
31	.21	5.35	5.35	19.49	2.33	1987
		Normal Monthly Accumulation Totals: JAN	YTD	WTD	January's Greatest: Amt	Year
		5.35	5.35	19.49	2.48	1948

[1] Water Year runs from October 1 through September 30

FEBRUARY PRECIPITATION DATA
(1941-1999)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.19	.15	5.50	19.64	1.15	1961
2	.18	.30	5.65	19.79	1.13	1968
3	.17	.45	5.80	19.94	0.68	1952
4	.15	.60	5.95	20.09	0.82	1942
5	.18	.75	6.10	20.24	1.54	1946
6	.19	.90	6.25	20.39	2.16	1996
7	.14	1.04	6.39	20.53	1.90	1996
8	.15	1.18	6.53	20.67	1.86	1996
9	.18	1.32	6.67	20.81	1.51	1949
10	.16	1.46	6.81	20.95	1.72	1961
11	.18	1.60	6.95	21.09	0.78	1954
12	.23	1.74	7.09	21.23	1.21	1954
13	.18	1.88	7.23	21.37	0.90	1959
14	.14	2.02	7.37	21.51	0.76	1947
15	.18	2.16	7.51	21.65	1.11	1970
16	.16	2.29	7.64	21.78	1.42	1970
17	.18	2.42	7.77	21.91	1.78	1949
18	.17	2.55	7.90	22.04	1.28	1968
19	.14	2.68	8.03	22.17	1.27	1968
20	.19	2.81	8.16	22.30	1.71	1982
21	.13	2.94	8.29	22.43	0.77	1949
22	.14	3.07	8.42	22.56	1.09	1957
23	.13	3.20	8.55	22.69	1.07	1950
24	.15	3.33	8.68	22.82	1.89	1994
25	.14	3.46	8.81	22.95	1.30	1957
26	.13	3.59	8.94	23.08	0.57	1946
27	.17	3.72	9.07	23.21	1.32	1976
28	.14	3.85	9.20	23.34	0.68	1955
29	.13	---	---	---	0.25	1952
		Normal Monthly Accumulation Totals: FEB	YTD	WTD	February's Greatest: Amt	Year
		3.85	9.20	23.34	2.16	1996

Other January Monthly Statistics

Greatest 24-hour Rainfall: 2.61" on 14th-15th, 1974
Greatest 24-hour Snowfall: 10.6" on 13th-14th, 1950
Wettest Month: 1953 with 12.83 inches
Driest Month: 1985 with 0.06 inch
Snowiest Month: 1950 with 41.4 inches

Other February Monthly Statistics:

Greatest 24-hour Rainfall: 2.46" 23-24, 1994
Greatest 24-hour Snowfall: 6.4" 18-19th, 1993
Wettest Month: 1996 with 10.03 inches
Driest Month: 1993 with 0.72 inch
Snowiest Month: 1949 with 13.2 inches

MARCH PRECIPITATION DATA
(1941-1999)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.13	.13	9.33	23.47	1.07	1997
2	.11	.26	9.46	23.60	.53	1991
3	.13	.39	9.59	23.73	1.26	1987
4	.12	.52	9.72	23.86	.76	1996
5	.15	.64	9.84	23.98	.92	1989
6	.12	.76	9.96	24.10	.89	1970
7	.14	.88	10.08	24.22	1.00	1957
8	.14	1.00	10.20	24.34	.97	1954
9	.14	1.12	10.32	24.46	1.27	1983
10	.12	1.24	10.44	24.58	.59	1997
11	.14	1.36	10.56	24.70	.82	1971
12	.15	1.48	10.68	24.82	.84	1989
13	.15	1.60	10.80	24.94	1.02	1961
14	.11	1.72	10.92	25.06	.83	1967
15	.15	1.84	11.04	25.18	.88	1946
16	.10	1.96	11.16	25.30	.97	1992
17	.13	2.08	11.28	25.42	.58	1949
18	.11	2.19	11.39	25.53	.69	1997
19	.07	2.30	11.50	25.64	.63	1997
20	.10	2.41	11.61	25.75	.53	1964
21	.12	2.52	11.72	25.86	1.36	1948
22	.12	2.63	11.83	25.97	.96	1993
23	.14	2.74	11.94	26.08	.62	1986
24	.14	2.85	12.05	26.19	.83	1948
25	.15	2.96	12.16	26.30	1.23	1962
26	.13	3.06	12.26	26.40	.57	1985
27	.16	3.16	12.36	26.50	.82	1974
28	.16	3.26	12.46	26.60	1.25	1943
29	.14	3.36	12.56	26.70	1.54	1983
30	.12	3.46	12.66	26.80	.78	1943
31	.10	3.56	12.76	26.90	1.47	1943
		Normal Monthly Accumulation Totals: MAR	YTD	WTD	March's Greatest: Amt	Year
		3.56	12.76	26.90	1.54	1983

[1]Water Year runs from October 1 through September 30.

APRIL PRECIPITATION DATA
(1941-1999)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.10	.10	12.86	27.00	.39	1996
2	.11	.19	12.95	27.09	.80	1988
3	.08	.28	13.04	27.18	.68	1993
4	.09	.37	13.13	27.27	.78	1991
5	.09	.46	13.22	27.36	.74	1991
6	.08	.55	13.31	27.45	.49	1980
7	.12	.64	13.40	27.54	1.20	1984
8	.10	.73	13.49	27.63	.69	1971
9	.10	.82	13.58	27.72	1.17	1971
10	.08	.90	13.66	27.80	.42	1999
11	.07	.98	13.74	27.88	.57	1982
12	.09	1.06	13.82	27.96	1.23	1955
13	.08	1.14	13.90	28.04	.75	1982
14	.10	1.22	13.98	28.12	.68	1960
15	.09	1.30	14.06	28.20	.45	1958
16	.09	1.38	14.14	28.28	.71	1992
17	.09	1.46	14.22	28.36	.55	1987
18	.10	1.54	14.30	28.44	.55	1970
19	.10	1.62	14.38	28.52	1.01	1965
20	.08	1.69	14.45	28.59	.59	1958
21	.07	1.76	14.52	28.66	1.25	1988
22	.09	1.83	14.59	28.73	1.20	1996
23	.08	1.90	14.66	28.80	.71	1996
24	.06	1.97	14.73	28.87	.54	1970
25	.07	2.04	14.80	28.94	1.00	1989
26	.08	2.11	14.87	29.01	.45	1978
27	.09	2.18	14.94	29.08	1.03	1962
28	.07	2.25	15.01	29.15	.60	1969
29	.06	2.32	15.08	29.22	.62	1992
30	.08	2.39	15.15	29.29	.58	1952
		Normal Monthly Accumulation Totals: APR	YTD	WTD	April's Greatest: Amt	Year
		2.39	15.15	29.29	1.25	1988

Other March Monthly Statistics
Greatest 24-hour Rainfall: 1.83" on 30-31st, 1943
Greatest 24-hour Snowfall: 7.7" on 7-8th, 1951
Wettest Month: 1957 with 7.52 inches
Driest Month: 1965 with 1.10 inches
Snowiest Month: 1951 with 7.7 inches

Other April Monthly Statistics:
Greatest 24-hour Rainfall: 1.47" on 26-27, 1962
Greatest 24-hour Snowfall: no snowfall in April
Wettest Month: 1993 with 5.26 inches
Driest Month: 1956 with 0.53 inch
Snowiest Month: No snowfall in April

MAY PRECIPITATION DATA
(1941-1999)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.08	.07	15.22	29.36	1.15	1949
2	.07	.14	15.29	29.43	.71	1975
3	.08	.21	15.36	29.50	.66	1948
4	.10	.28	15.43	29.57	.74	1979
5	.11	.35	15.50	29.64	1.07	1948
6	.08	.42	15.57	29.71	.80	1963
7	.08	.49	15.64	29.78	.81	1991
8	.07	.56	15.71	29.85	.51	1970
9	.06	.63	15.78	29.92	.45	1956
10	.05	.70	15.85	29.99	.40	1977
11	.05	.77	15.92	30.06	.29	1987
12	.04	.84	15.99	30.13	.49	1988
13	.07	.91	16.06	30.20	1.08	1978
14	.08	.98	16.13	30.27	.70	1959
15	.08	1.05	16.20	30.34	.59	1942
16	.08	1.12	16.27	30.41	1.34	1945
17	.08	1.19	16.34	30.48	1.20	1991
18	.05	1.26	16.41	30.55	.53	1981
19	.10	1.33	16.48	30.62	1.47	1968
20	.06	1.40	16.55	30.69	.55	1961
21	.05	1.46	16.61	30.75	.44	1996
22	.05	1.52	16.67	30.81	.78	1984
23	.04	1.58	16.73	30.87	.58	1945
24	.05	1.64	16.79	30.93	.64	1973
25	.08	1.70	16.85	30.99	.63	1989
26	.08	1.76	16.91	31.05	.93	1953
27	.06	1.82	16.97	31.11	.59	1990
28	.06	1.88	17.03	31.17	.80	1985
29	.04	1.94	17.09	31.23	.57	1996
30	.05	2.00	17.15	31.29	.58	1943
31	.05	2.06	17.21	31.35	1.08	1993
		Normal Monthly Accumulation Totals: MAY	YTD	WTD	May's Greatest: Amt	Year
		2.06	17.21	31.35	1.47	1968

[1]Water Year runs from October 1 through September 30.

JUNE PRECIPITATION DATA
(1941-1999)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.05	.06	17.27	31.41	.97	1968
2	.03	.12	17.33	31.47	.46	1962
3	.05	.18	17.39	31.53	.55	1977
4	.05	.24	17.45	31.59	.79	1984
5	.05	.30	17.51	31.65	.46	1942
6	.09	.36	17.57	31.71	1.70	1958
7	.07	.42	17.63	31.77	1.02	1981
8	.05	.48	17.69	31.83	.59	1981
9	.06	.54	17.75	31.89	.72	1950
10	.06	.60	17.81	31.95	.66	1948
11	.05	.65	17.86	32.00	.47	1952
12	.05	.70	17.91	32.05	.50	1982
13	.04	.75	17.96	32.10	.89	1980
14	.07	.80	18.01	32.15	.55	1978
15	.06	.85	18.06	32.20	.56	.1954
16	.06	.90	18.11	32.25	.49	1973
17	.04	.95	18.16	32.30	.58	1943
18	.04	1.00	18.21	32.35	.54	1995
19	.08	1.05	18.26	32.40	.43	1991
20	.06	1.10	18.31	32.45	1.46	1984
21	.05	1.14	18.35	32.49	.44	1967
22	.05	1.18	18.39	32.53	.47	1993
23	.04	1.22	18.43	32.57	.87	1969
24	.07	1.26	18.47	32.61	.82	1971
25	.03	1.30	18.51	32.65	.29	1973
26	.05	1.34	18.55	32.69	.58	1969
27	.04	1.38	18.59	32.73	.37	1955
28	.05	1.42	18.63	32.77	.63	1955
29	.03	1.45	18.66	32.80	.37	1984
30	.02	1.48	18.69	32.83	.81	1954
		Normal Monthly Accumulation Totals: JUN	YTD	WTD	June's Greatest: Amt	Year
		1.48	18.69	32.83	1.70	1927

Other May Monthly Statistics

Greatest 24-hour Rainfall: 1.47 inches on 19th, 1968
Wettest Month: 1998 with 5.22 inches
Driest Month: 1992 with 0.10 inch

Other June Monthly Statistics:

Greatest 24-hour Rainfall: 1.82 inches on 5th-6th, 1958
Wettest Month: 1984 with 4.06 inches
Driest Month: 1951 with 0.03 inch

JULY PRECIPITATION DATA
(1941-1998)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.02	.03	18.72	32.86	.28	1983
2	.04	.06	18.75	32.89	.81	1966
3	.03	.09	18.78	32.92	.25	1986
4	.02	.12	18.81	32.95	.21	1998
5	.04	.14	18.83	32.97	.48	1992
6	.03	.16	18.85	32.99	.20	1963
7	.02	.18	18.87	33.01	.45	1976
8	.03	.20	18.89	33.03	.89	1946
9	.01	.22	18.91	33.05	1.06	1995
10	.03	.24	18.93	33.07	.63	1986
11	.01	.26	18.95	33.09	.32	1988
12	.02	.28	18.97	33.11	.06	1988
13	.01	.30	18.99	33.13	.15	1957
14	.01	.32	19.01	33.15	.50	1942
15	.02	.34	19.03	33.17	.80	1978
16	.04	.36	19.05	33.19	.81	1989
17	.02	.38	19.07	33.21	.64	1993
18	.01	.40	19.09	33.23	.63	1987
19	.01	.41	19.10	33.24	.89	1983
20	.02	.42	19.11	33.25	.84	1954
21	.01	.43	19.12	33.26	.51	1945
22	.00	.45	19.14	33.28	.05	1963
23	.01	.47	19.16	33.30	.06	1959
24	.01	.49	19.18	33.32	.51	1949
25	.02	.51	19.20	33.34	.42	1983
26	.01	.53	19.22	33.36	.52	1947
27	.01	.55	19.24	33.38	.25	1947
28	.01	.57	19.26	33.40	.36	1993
29	.01	.59	19.28	33.42	.14	1993
30	.01	.61	19.30	33.44	.52	1982
31	.01	.63	19.32	33.46	.38	1985
		Normal Monthly Accumulation Totals: JUL	YTD	WTD	July's Greatest: Amt	Year
		0.63	19.3	33.46	1.06	1995

[1]Water Year runs from October 1 through September 30.

AUGUST PRECIPITATION DATA
(1941-1998)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.01	.02	19.34	33.48	.39	1989
2	.01	..04	19.36	33.50	.54	1956
3	.02	.06	19.38	33.52	.41	1962
4	.01	.08	19.40	33.54	.05	1943
5	.01	.11	19.43	33.57	.26	1943
6	.02	.14	19.46	33.60	.94	1976
7	.02	.17	19.49	33.63	.63	1976
8	.02	.20	19.52	33.66	.08	1985
9	.01	.23	19.55	33.69	.41	1982
10	.01	.26	19.58	33.72	.36	1957
11	.01	.29	19.61	33.75	.36	1982
12	.02	.32	19.64	33.78	.38	1978
13	.02	.35	19.67	33.81	.34	1987
14	.02	.38	19.70	33.84	.26	1948
15	.02	.41	19.73	33.87	.73	1976
16	.02	.45	19.77	33.91	.46	1972
17	.03	.49	19.81	33.95	.90	1948
18	.01	.53	19.85	33.99	.45	1968
19	.02	.57	19.89	34.03	1.20	1968
20	.01	.61	19.93	34.07	.30	1978
21	.02	.65	19.97	34.11	.27	1971
22	.04	.69	20.01	34.15	.69	1975
23	.04	.73	20.05	34.19	1.20	1977
24	.05	.77	20.09	34.23	.89	1973
25	.05	.81	20.13	34.27	1.47	1977
26	.03	.85	20.17	34.31	.44	1953
27	.02	.89	20.21	34.35	.42	1975
28	.03	.94	20.26	34.40	.61	1983
29	.04	.99	20.31	34.45	1.13	1983
30	.03	1.04	20.36	34.50	.64	1954
31	.04	1.09	20.41	34.55	.52	1961
		Normal Monthly Accumulation Totals: AUG	YTD	WTD	August's Greatest: Amt	Year
		1.09	20.41	34.55	1.47	1977

Other July Monthly Statistics

Greatest 24-hour Rainfall: 1.09"
on the 15th-16th, 1978
Wettest Month: 1983 with 2.68 inches
Driest Month: 1967 with No Rain

Other August Monthly Statistics:

Greatest 24-hour Rainfall: 1.54"
on the 25th-26th, 1977
Wettest Month: 1968 with 4.53 inches
Driest Month: 1970 with A Trace

SEPTEMBER PRECIPITATION DATA
(1941-1998)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.05	.05	20.46	34.60	1.48	1971
2	.04	.10	20.51	34.65	.86	1979
3	.05	.15	20.56	34.70	1.18	1945
4	.08	.20	20.61	34.75	1.00	1959
5	.06	.25	20.66	34.80	.65	1984
6	.05	.31	20.72	34.86	.60	1973
7	.03	.37	20.78	34.92	.26	1951
8	.04	.43	20.84	34.98	.27	1952
9	.06	.49	20.90	35.04	.84	1972
10	.07	.55	20.96	35.10	1.18	1985
11	.05	.61	21.02	35.16	.44	1966
12	.04	.67	21.08	35.22	.23	1985
13	.04	.73	21.14	35.28	.50	1955
14	.06	.79	21.20	35.34	2.03	1996
15	.05	.85	21.26	35.40	.57	1955
16	.03	.91	21.32	35.46	.28	1996
17	.06	.97	21.38	35.52	2.23	1969
18	.07	1.03	21.44	35.58	.82	1998
19	.08	1.09	21.50	35.64	.97	1988
20	.06	1.15	21.56	35.70	1.56	1982
21	.05	1.21	21.62	35.76	.76	1972
22	.07	1.27	21.68	35.82	.73	1948
23	.08	1.33	21.74	35.88	.86	1986
24	.06	1.39	21.80	35.94	.74	1950
25	.05	1.45	21.86	36.00	1.48	1986
26	.05	1.51	21.92	36.06	1.11	1948
27	.07	1.57	21.98	36.12	1.30	1955
28	.08	1.63	22.04	36.18	.78	1962
29	.06	1.69	22.10	36.24	.59	1951
30	.10	1.75	22.16	36.30	.77	1944
		Normal Monthly Accumulation Totals: SEP	YTD	WTD	September's Greatest: Amt	Year
		1.75	22.16	36.30	2.23	1969

[1]Water Year runs from October 1 through September 30.

OCTOBER PRECIPITATION DATA
(1941-1998)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.10	.06	22.22	.06	.98	1997
2	.07	.12	22.28	.12	.79	1957
3	.09	.18	22.34	.18	.69	1967
4	.09	.24	22.40	.24	1.00	1949
5	.06	.30	22.46	.30	.80	1950
6	.10	.37	22.53	.37	1.24	1981
7	.07	.44	22.60	.44	.79	1962
8	.07	.51	22.67	.51	.87	1955
9	.09	.58	22.74	.58	1.66	1955
10	.13	.65	22.81	.65	1.65	1959
11	.10	.72	22.88	.72	.82	1968
12	.10	.79	22.95	.79	.82	1968
13	.05	.86	23.02	.86	.34	1973
14	.09	.94	23.10	.94	.51	1951
15	.08	1.02	23.18	1.02	1.06	1947
16	.10	1.10	23.26	1.10	.79	1956
17	.09	1.18	23.34	1.18	.77	1947
18	.10	1.27	23.43	1.27	1.40	1979
19	.11	1.36	23.52	1.36	1.32	1947
20	.10	1.45	23.61	1.45	.99	1956
21	.13	1.54	23.70	1.54	1.10	1951
22	.12	1.64	23.80	1.64	1.31	1951
23	.10	1.74	23.90	1.74	.79	1951
24	.09	1.84	24.00	1.84	1.31	1943
25	.12	1.95	24.11	1.95	1.10	1955
26	.12	2.06	24.22	2.06	2.33	1994
27	.13	2.17	24.33	2.17	2.44	1994
28	.13	2.29	24.45	2.29	1.62	1982
29	.15	2.41	24.57	2.41	1.14	1997
30	.12	2.54	24.70	2.54	1.20	1997
31	.13	2.67	24.83	2.67	2.44	1994
		Normal Monthly Accumulation Totals: OCT	YTD	WTD	October's Greatest: Amt	Year
		2.67	24.83	2.67	2.44	1994

Other September Monthly Statistics

Greatest 24-hour Rainfall: 2.38 inches on the 19th-20th, 1982
Wettest Month: 1986 with 4.30 inches
Driest Month: 1993 with A Trace

Other October Monthly Statistics:

Greatest 24-hour Rainfall: 4.44 inches on the 26th-27th, 1994
Wettest Month: 1994 with 8.41 inches
Driest Month: 1988 with 0.19 inch
Snowiest Month: 1950 with 0.2 inch

NOVEMBER PRECIPITATION DATA[1]
(1940-1998)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.16	.13	24.96	2.80	1.31	1984
2	.19	.27	25.10	2.94	1.33	1984
3	.21	.14	25.24	3.08	1.88	1983
4	.15	.56	25.39	3.23	1.87	1969
5	.15	.71	25.54	3.38	.83	1988
6	.19	.87	25.70	3.54	1.31	1980
7	.22	1.03	25.86	3.70	.91	1980
8	.18	1.19	26.02	3.86	1.38	1968
9	.17	1.36	26.19	4.03	1.40	1973
10	.14	1.53	26.36	4.20	1.30	1962
11	.16	1.70	26.53	4.37	2.01	1995
12	.14	1.87	26.70	4.54	.93	1989
13	.18	2.05	26.88	4.72	1.37	1941
14	.22	2.23	27.06	4.90	1.28	1948
15	.26	2.41	27.24	5.08	2.43	1950
16	.19	2.59	27.42	5.26	1.13	1953
17	.22	2.78	27.61	5.45	1.46	1946
18	.23	2.97	27.80	5.64	1.99	1946
19	.25	3.16	27.99	5.83	.75	1960
20	.19	3.35	28.18	6.02	1.50	1962
21	.19	3.54	28.37	6.21	1.57	1992
22	.23	3.74	28.57	6.41	1.08	1979
23	.25	3.94	28.77	6.61	1.80	1942
24	.22	4.14	28.97	6.81	2.31	1960
25	.20	4.34	29.17	7.01	2.11	1998
26	.20	4.54	29.37	7.21	2.26	1945
27	.16	4.74	29.57	7.41	1.97	1984
28	.15	4.94	29.77	7.61	.89	1940
29	.22	5.14	29.97	7.81	.67	1942
30	.19	5.34	30.17	8.01	1.63	1994
		Normal Monthly Accumulation Totals: NOV	YTD	WTD	November's Greatest: Amt	Year
		5.34	30.17	8.01	2.43	1950

[1]Water Year runs from October 1 through September 30.

DECEMBER PRECIPITATION DATA[1]
(1940-1998)

Day	AVG Daily Precip	Climatic Normals: Month to Date	Climatic Normals: Year to Date	Climatic Normals: Water Year[1] to Date	Greatest Daily Precipitation: Amt	Greatest Daily Precipitation: Year
1	.23	.20	30.37	8.21	1.69	1987
2	.21	.40	30.57	8.41	2.08	1980
3	.20	.60	30.77	8.61	1.69	1980
4	.20	.80	30.97	8.81	1.56	1966
5	.22	1.00	31.17	9.01	1.80	1981
6	.25	1.20	31.37	9.21	1.11	1952
7	.17	1.40	31.57	9.41	.86	1985
8	.18	1.60	31.77	9.61	.89	1971
9	.23	1.80	31.97	9.81	1.30	1987
10	.23	2.00	32.17	10.01	1.43	1992
11	.22	2.20	32.37	10.21	1.30	1969
12	.21	2.40	32.57	10.41	.93	1973
13	.21	2.60	32.77	10.61	1.84	1977
14	.14	2.80	32.97	10.81	1.35	1946
15	.18	3.00	33.17	11.01	1.84	1982
16	.15	3.20	33.37	11.21	1.19	1994
17	.16	3.40	33.57	11.41	1.02	1972
18	.19	3.60	33.77	11.61	1.01	1941
19	.27	3.80	33.97	11.81	1.72	1953
20	.24	4.00	34.17	12.01	1.28	1961
21	.26	4.20	34.37	12.21	1.99	1955
22	.22	4.40	34.57	12.41	1.50	1964
23	.18	4.60	34.77	12.61	1.19	1971
24	.21	4.80	34.97	12.81	1.72	1980
25	.20	4.99	35.16	13.00	1.73	1980
26	.27	5.18	35.35	13.19	1.05	1974
27	.24	5.37	35.54	13.38	2.17	1942
28	.20	5.56	35.73	13.57	.88	1965
29	.23	5.75	35.92	13.76	1.66	1983
30	.18	5.94	36.11	13.95	1.37	1970
31	.20	6.13	36.30	14.14	1.30	1979
		Normal Monthly Accumulation Totals: DEC	YTD	WTD	December's Greatest: Amt	Year
		6.13	36.30	14.14	2.17	1942

Other November Monthly Statistics
Greatest 24-hour Rainfall: 2.82" on 10-11th, 1995
Greatest 24-hour Snowfall: 7.4" on 21-22nd, 1977
Wettest Month: 1942 with 11.57 inches
Driest Month: 1976 with 0.77 inch
Snowiest Month: 1955 with 8.2 inches

Other December Monthly Statistics:
Greatest 24-hour Rainfall: 2.59" on 12-13, 1977
Greatest 24-hour Snowfall: 8.0" on 19th, 1964
Wettest Month: 1996 with 13.35 inches
Driest Month: 1976 with 1.38 inches
Snowiest Month: 1968 with 15.7 inches

MONTHLY AND ANNUAL PRECIPITATION (since 1871)
(measurement in inches)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1871	7.60	5.06	9.84	3.64	5.18	0.50	0.55	0.45	1.15	1.19	2.77	7.62	45.55
1872	6.56	12.13	5.28	2.96	0.92	1.52	0.20	0.13	1.26	1.80	4.67	9.47	46.90
1873	8.49	6.58	12.76	2.35	2.18	2.96	1.02	0.84	0	3.86	4.33	5.15	50.52
1874	9.46	4.28	5.15	3.68	2.38	2.68	0.19	0.83	1.70	0.36	10.22	5.24	46.17
1875	4.49	1.99	9.41	2.10	2.87	2.07	0.02	0.53	0.71	6.73	15.77	13.41	60.10
1876	4.80	7.50	9.12	5.34	1.88	2.35	0.96	0.56	1.09	10.53	9.93	0.88	54.94
1877	2.75	7.56	11.31	2.44	2.24	2.05	0.54	1.70	3.36	5.03	12.45	6.87	58.30
1878	6.67	12.16	6.23	1.85	2.17	0.13	1.10	0.50	3.54	3.22	5.61	4.52	47.70
1879	5.28	13.22	11.70	2.19	6.60	2.18	1.75	0.97	2.18	4.23	4.56	7.36	62.22
1880	12.27	5.67	4.48	2.92	3.13	1.59	0.59	1.31	1.34	1.47	3.17	13.93	51.87
1881	8.57	13.36	2.83	3.51	1.38	2.34	1.16	2.11	2.64	6.60	5.91	6.64	57.05
1882	5.06	10.49	2.53	4.60	1.84	1.91	0.95	0.07	0.91	11.63	7.11	20.14	67.24
1883	13.71	2.34	6.40	7.88	1.67	0.08	0	0.19	0.67	3.91	8.26	6.34	51.45
1884	3.70	4.88	2.25	3.57	1.34	1.42	1.80	0.33	4.25	4.01	3.24	7.52	38.31
1885	4.57	6.72	0.63	1.12	4.69	1.77	0.24	0	2.48	1.68	8.52	7.17	39.59
1886	9.37	1.96	5.39	3.16	1.32	0.67	0.32	0.03	1.19	2.87	1.00	11.52	38.76
1887	12.31	2.81	8.00	5.06	4.77	1.44	0.03	0.58	3.06	1.34	3.43	11.34	54.17
1888	8.50	2.42	2.87	2.06	0.68	5.38	1.04	0.05	1.13	4.97	4.47	5.19	38.76
1889	4.78	1.07	1.80	2.72	4.02	0.51	trace	0.90	1.61	4.59	3.97	5.79	31.76
1890	11.13	9.85	6.23	1.41	1.08	2.23	0.59	0.13	0.10	2.79	0.50	4.34	40.38
1891	3.62	6.26	2.06	4.00	1.83	4.07	0.24	0.93	2.17	5.04	5.74	11.45	47.41
1892	4.79	2.48	2.82	4.82	1.57	1.41	0.70	0.17	1.63	2.16	4.34	6.69	33.58
1893	2.12	5.19	3.48	4.89	2.30	0.99	0.14	trace	2.56	5.01	7.74	4.61	39.03
1894	9.65	5.16	7.48	2.57	1.09	2.16	0.10	trace	1.32	3.56	2.76	3.47	39.32
1895	8.53	1.01	2.84	1.91	3.42	0.57	0.23	0.37	1.16	trace	2.93	7.79	30.76
1896	6.52	3.44	2.19	4.09	3.55	1.41	trace	1.32	0.47	1.76	13.12	6.26	44.13
1897	3.25	5.57	4.00	1.76	0.90	1.35	0.65	0.26	2.79	1.99	11.65	8.84	43.01
1898	3.91	6.51	2.17	2.12	1.78	1.88	0.79	0.15	2.69	1.58	6.03	4.29	33.90
1899	6.42	4.20	2.30	3.73	3.16	0.62	0.47	2.50	1.37	3.97	7.56	5.91	42.21
1900	4.58	3.36	4.63	1.30	3.90	1.76	0.34	2.04	1.93	3.87	4.50	6.01	38.22
1901	7.80	6.52	4.12	4.05	2.41	1.39	0.12	0.17	3.57	0.75	6.14	4.01	41.05
1902	3.11	8.66	5.79	3.71	2.19	0.80	1.76	0.44	1.75	1.72	9.94	10.28	50.15
1903	5.43	1.44	4.29	2.25	1.71	2.00	0.51	0.81	1.13	2.20	10.71	3.14	35.62
1904	5.22	11.08	8.73	2.26	0.59	0.45	0.73	0.20	0.28	2.29	7.40	7.14	46.37
1905	3.66	1.77	5.03	1.71	2.56	2.12	0.12	0.19	2.79	4.73	3.01	6.41	34.10
1906	5.72	6.76	2.23	2.02	2.00	3.03	trace	0.05	2.20	3.43	8.30	7.55	43.29
1907	8.23	3.54	3.86	3.57	1.37	1.84	1.19	1.02	1.73	0.93	6.51	9.10	42.89
1908	4.73	2.85	4.39	3.38	4.66	0.67	0.05	1.34	0.23	5.17	3.10	3.80	34.37
1909	9.29	7.03	2.35	0.89	1.79	0.17	2.26	0.05	0.95	2.01	12.49	4.47	43.75
1910	6.29	6.45	2.25	3.78	1.82	1.61	trace	0.13	1.15	3.43	8.24	3.53	38.65
1911	8.53	3.34	0.63	2.11	3.95	0.87	0.01	0.28	5.19	0.99	2.64	4.74	33.28
1912	8.01	4.85	1.41	2.04	1.89	3.03	0.48	3.39	1.18	3.36	5.80	8.03	43.47
1913	6.25	1.13	4.04	2.94	1.63	4.42	0.24	0.76	2.58	3.62	5.39	3.48	36.30
1914	11.53	4.19	2.28	3.08	1.22	1.52	0.01	0.01	3.10	3.47	3.70	2.56	36.67
1915	5.90	3.07	2.15	2.03	2.59	1.47	1.52	0.01	0.53	1.98	11.32	8.73	41.30
1916	5.69	7.87	10.57	2.85	2.05	1.83	2.55	0.27	0.71	1.26	6.31	3.81	45.77
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual

MONTHLY AND ANNUAL PRECIPITATION (cont.)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1917	2.54	3.32	5.33	5.36	2.31	1.17	0.01	trace	1.96	0.03	4.24	14.23	40.50
1918	4.68	6.77	3.47	1.13	1.38	0.12	1.08	0.31	0.66	4.47	4.30	3.13	31.50
1919	9.08	8.36	4.64	3.60	1.95	0.91	0.23	0.10	3.18	1.43	7.44	4.78	45.70
1920	4.84	0.16	3.94	4.75	0.91	2.11	1.18	1.25	4.16	3.71	5.84	8.32	41.17
1921	7.82	7.21	4.28	2.26	0.99	1.36	trace	0.30	3.08	2.78	10.04	3.09	43.21
1922	3.08	3.29	6.57	3.05	1.60	0.14	trace	2.06	1.90	4.70	2.94	9.43	38.76
1923	9.57	1.81	1.83	1.90	1.48	1.19	2.17	0.26	0.59	1.61	4.15	6.25	32.81
1924	3.94	5.21	1.40	0.91	0.45	0.68	0.03	0.62	1.93	5.50	6.11	4.44	31.22
1925	6.94	6.46	1.76	1.92	0.74	0.73	trace	0.71	1.50	0.02	5.44	5.14	31.36
1926	3.64	7.71	0.80	0.80	2.83	0.35	0	1.95	2.14	5.26	9.78	5.91	41.17
1927	9.18	6.95	2.11	1.69	2.24	2.68	0.95	0.35	5.52	2.65	7.99	3.47	45.78
1928	5.11	1.19	7.21	4.47	0.74	0.44	0.42	trace	0.65	1.65	5.30	7.51	34.69
1929	3.50	0.97	2.90	4.06	1.14	2.19	0.02	0.23	0.31	1.33	0.67	8.79	26.11
1930	3.43	5.03	2.21	2.72	3.08	0.69	trace	0.06	1.79	2.15	2.84	3.16	27.16
1931	4.30	2.40	8.12	2.40	1.09	3.13	trace	0.04	2.10	4.32	6.38	8.40	42.68
1932	5.63	2.58	6.08	3.57	1.50	0.07	0.48	0.45	0.11	3.76	7.88	7.87	39.98
1933	7.94	4.26	5.10	0.95	3.59	2.60	trace	0.86	2.97	4.59	2.54	17.45	52.85
1934	6.02	1.40	5.18	2.46	1.60	0.96	0.11	0.33	1.32	5.30	10.47	10.83	45.98
1935	3.45	3.17	5.28	2.48	0.61	0.50	0.28	0.20	0.86	3.20	3.27	5.89	29.19
1936	8.55	4.73	3.10	0.80	3.72	2.43	0.40	0.07	1.41	0.44	0.36	8.28	34.29
1937	6.02	6.34	2.81	6.22	1.06	3.88	0.20	1.41	2.06	2.91	10.08	13.86	56.85
1938	5.06	7.83	6.42	2.02	0.65	0.45	0.25	0.35	1.38	2.87	4.83	4.16	36.27
1939	4.69	5.26	2.29	0.55	1.08	1.73	0.79	1.52	0.60	2.14	1.73	8.37	30.75
1940	2.36	10.82	5.12	2.76	1.57	0.06	0.39	0.07	3.56	4.26	4.82	5.03	40.82
1941	5.27	1.59	1.75	1.66	4.27	0.81	0.03	1.45	3.58	2.18	5.04	9.11	36.73
1942	3.63	3.64	1.63	2.38	2.84	1.94	1.40	0.17	0.06	3.49	11.57	9.37	42.12
1943	5.50	3.27	5.54	2.21	1.42	2.80	0.32	1.39	0.06	5.59	2.20	2.70	33.00
1944	2.81	3.11	1.93	2.28	1.07	0.81	0.06	0.03	2.73	1.64	5.00	1.90	23.37
1945	4.10	4.36	5.30	2.42	4.57	0.07	0.51	0.37	3.96	2.11	8.58	5.61	41.96
1946	5.12	4.99	4.23	0.78	1.24	1.91	1.08	0.18	1.15	4.81	7.57	5.47	38.53
1947	3.72	2.77	4.11	1.81	0.66	2.93	0.94	0.29	1.06	8.04	4.08	4.64	35.05
1948	5.87	5.02	4.24	3.41	3.76	1.42	0.32	1.55	3.28	2.39	6.89	8.06	46.21
1949	1.02	9.46	2.78	0.72	2.12	0.68	0.91	0.24	1.66	2.35	5.56	4.86	32.36
1950	10.10	5.77	4.76	2.74	0.57	2.50	0.50	0.72	1.45	7.00	8.67	6.31	51.09
1951	7.71	5.02	3.86	1.14	1.75	0.03	0.28	0.02	2.55	6.81	5.31	5.06	39.54
1952	4.40	3.59	3.82	1.45	0.78	2.23	trace	0.18	0.33	0.72	1.44	6.76	25.70
1953	12.83	3.71	3.82	1.89	3.45	2.04	0.03	1.79	1.16	3.56	6.46	7.85	48.59
1954	8.95	4.57	2.55	2.54	1.83	3.58	1.24	1.92	0.85	3.40	5.09	5.01	41.53
1955	2.30	3.37	3.06	4.72	1.24	1.83	0.89	trace	2.86	6.69	7.34	10.14	44.44
1956	11.66	3.03	4.30	0.53	2.50	2.03	0.01	2.56	1.12	5.10	1.47	3.64	37.95
1957	2.23	4.14	7.52	1.84	1.97	0.73	0.19	0.69	0.49	3.53	3.07	6.15	32.55
1958	6.56	5.13	2.20	3.33	1.35	3.04	trace	0.02	1.05	1.49	6.39	5.06	35.62
1959	7.57	4.18	3.22	0.92	2.89	2.38	0.56	0.09	2.81	3.51	3.30	3.08	34.51
1960	3.93	4.00	4.77	3.33	3.37	0.52	trace	1.00	1.37	2.39	8.63	2.61	35.92
1961	4.50	8.92	6.04	3.59	2.80	0.47	0.42	1.07	0.64	2.89	4.67	5.94	41.95
1962	1.58	3.43	4.25	3.15	2.56	0.78	0.06	1.49	1.66	3.31	9.32	2.59	34.18
1963	2.27	3.48	4.69	3.78	2.74	1.71	1.17	0.87	0.75	3.04	5.64	3.60	33.74
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual

MONTHLY AND ANNUAL PRECIPITATION (cont.)

Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
1964	9.51	0.78	2.30	1.56	1.04	1.96	0.68	0.90	1.61	0.84	6.78	9.92	37.88
1965	7.44	2.22	1.10	2.20	1.31	0.83	0.44	0.73	0.01	2.03	5.64	7.34	31.29
1966	5.74	1.70	4.71	0.85	0.91	1.02	1.19	0.59	1.70	3.06	5.50	6.89	33.86
1967	6.21	2.02	4.31	2.17	1.02	1.01	0	trace	0.76	4.72	2.27	4.75	29.24
1968	4.58	6.64	2.68	1.91	3.63	2.20	0.14	4.53	2.20	5.03	6.23	11.12	50.89
1969	7.60	3.14	1.13	2.28	1.61	2.99	0.14	0.04	3.86	3.02	3.18	8.12	37.11
1970	11.81	4.77	2.58	2.94	1.55	0.49	0.05	trace	1.10	2.85	5.72	7.49	41.35
1971	7.09	3.36	4.87	2.72	1.00	1.76	0.26	0.95	3.53	2.37	5.76	8.05	41.72
1972	5.71	4.08	5.41	2.98	2.23	0.68	0.56	0.67	3.06	0.87	3.78	8.79	38.82
1973	3.69	1.94	2.45	1.33	1.43	1.45	0.06	1.41	3.29	3.14	11.55	9.93	41.67
1974	8.51	4.61	5.65	1.76	1.74	0.80	2.01	0.07	0.21	2.14	6.73	6.05	40.28
1975	8.43	4.75	3.45	1.88	1.35	1.13	0.43	2.10	trace	4.76	4.10	6.68	39.06
1976	5.14	4.92	2.93	2.34	2.29	0.78	0.66	3.29	0.73	1.48	0.77	1.38	26.71
1977	1.07	2.49	3.50	1.04	4.30	0.83	0.39	3.26	3.33	2.28	5.56	8.98	37.03
1978	4.85	3.28	1.49	3.96	3.17	1.69	1.36	2.05	2.07	0.36	3.83	2.51	30.62
1979	2.55	6.53	2.51	2.47	2.41	0.64	0.25	1.18	1.75	4.85	3.38	7.23	35.75
1980	8.51	4.01	3.11	2.58	2.19	2.50	0.19	0.39	1.56	1.18	6.47	9.72	42.41
1981	1.47	3.86	2.33	1.79	2.25	3.23	0.24	0.15	1.86	4.12	4.62	8.37	34.29
1982	6.31	5.98	2.38	3.56	0.46	1.66	0.94	1.66	3.98	4.44	3.51	8.16	43.04
1983	6.23	7.78	6.80	1.87	1.30	1.95	2.68	2.29	0.39	1.95	8.65	5.30	47.19
1984	2.01	3.93	3.19	3.20	3.41	4.06	trace	0.09	1.46	3.85	9.74	2.56	37.50
1985	0.06	1.79	3.08	1.07	1.52	2.34	0.55	0.48	2.76	2.75	3.89	2.19	22.48
1986	4.65	5.31	2.60	1.91	2.19	0.23	1.20	0.10	4.30	1.99	6.26	4.30	35.04
1987	6.93	2.45	4.91	1.94	1.63	0.14	1.03	0.35	0.30	0.27	1.96	8.00	29.91
1988	4.95	1.17	3.13	4.57	2.53	2.34	0.69	0.10	1.76	0.19	7.92	2.37	31.72
1989	3.30	2.84	6.73	2.08	2.87	0.78	0.91	1.07	1.48	1.73	3.18	3.08	30.05
1990	7.95	3.43	2.52	2.31	2.37	1.94	0.32	0.95	0.34	4.65	3.68	2.40	32.86
1991	2.56	3.65	4.64	4.05	3.34	2.31	0.07	0.70	0.02	1.51	6.36	4.34	33.55
1992	4.31	4.12	1.87	3.82	0.10	0.60	0.67	0.49	1.12	2.87	4.55	4.98	29.50
1993	3.06	0.72	4.39	5.26	4.36	1.69	2.41	0.37	trace	1.59	1.50	5.01	30.36
1994	3.56	4.92	1.84	1.91	0.56	1.67	0.07	0.13	1.13	8.41	5.91	4.85	34.96
1995	5.56	3.19	3.82	3.49	1.65	2.62	1.23	0.81	1.31	3.15	11.15	5.35	43.33
1996	7.15	10.03	3.24	5.12	4.88	0.44	0.73	0.25	3.05	5.39	9.58	13.35	63.21
1997	7.32	1.63	7.14	3.73	3.63	2.83	0.52	1.58	1.98	6.40	4.02	3.03	43.81
1998	6.77	5.27	4.06	1.04	5.55	1.73	0.59	trace	1.09	2.16	11.02	6.74	46.02
1999	6.62	8.73	4.03	1.55	1.97	1.73							
2000													
2001													
2002													
2003													
Year	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual

Average Monthly Precipitation (inches) (1961-90 Climatic Normals)												
JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual
5.35	3.85	3.56	2.39	2.06	1.48	0.63	1.09	1.75	2.67	5.34	6.13	36.30

MONTHLY and ANNUAL PRECIPITATION[1]: WETTEST AND DRIEST 5

(with 1961-90 Climatic Normal and 1941-1997 Average)

		Portland Itn'l Airport (1941-4/1999)				All Portland Locations (1871-4/1999)			
		Wettest 5		Driest 5		Wettest 5		Driest 5	
JANUARY		12.83	1953	0.06	1985	13.71	1883	0.06	1985
		11.81	1970	1.02	1949	12.83	1953	1.02	1949
AVG	5.24	11.66	1956	1.07	1977	12.31	1887	1.07	1977
NORM	5.35	10.10	1950	1.47	1981	12.27	1880	1.47	1981
		9.51	1964	1.58	1962	11.81	1970	1.58	1962
FEBRUARY		10.03	1996	0.72	1993	13.36	1881	0.16	1920
		9.46	1949	0.78	1964	13.32	1879	0.72	1993
AVG	3.88	8.92	1961	1.17	1988	12.16	1878	0.78	1964
NORM	3.85	8.73	1999	1.59	1941	12.13	1872	0.97	1929
		7.78	1983	1.63	1997	11.08	1904	1.01	1889
MARCH		7.52	1957	1.10	1965	12.76	1873	0.63	1911
		7.14	1997	1.13	1969	11.70	1879	0.80	1926
AVG	3.58	6.80	1983	1.49	1979	11.31	1877	1.10	1965
NORM	3.56	6.73	1989	1.63	1942	10.57	1916	1.13	1969
		6.04	1961	1.74	1941	9.84	1871	1.40	1924
APRIL		5.26	1993	0.53	1956	7.88	1883	0.53	1956
		5.12	1996	0.72	1949	6.22	1937	0.55	1939
AVG	2.33	4.72	1955	0.78	1946	5.36	1917	0.72	1949
NORM	2.39	4.57	1988	0.85	1966	5.34	1876	0.78	1946
		4.05	1991	0.92	1959	5.26	1993	0.80	1926
MAY		5.55	1998	0.10	1992	6.60	1879	0.10	1992
		4.88	1996	0.46	1982	5.18	1871	0.45	1924
AVG	1.97	4.57	1945	0.56	1994	4.97	1941	0.46	1982
NORM	2.06	4.36	1993	0.57	1950	4.88	1996	0.56	1994
		4.30	1977	0.66	1947	4.77	1887	0.57	1950
JUNE		4.06	1984	0.03	1951	5.38	1888	0.03	1951
		3.58	1954	0.07	1945	4.24	1913	0.06	1918
AVG	1.54	3.23	1981	0.14	1987	4.07	1891	0.07	1945
NORM	1.48	3.04	1958	0.23	1986	4.06	1984	0.07	1932
		2.99	1969	0.44	1996	3.88	1937	0.08	1883
JULY		2.68	1983	0.00	1967	2.68	1983	0.00	1967
		2.41	1993	Trace	1984	2.55	1916	0.00	1926
AVG	0.63	2.01	1974	Trace	1960	2.41	1993	0.00	1883
NORM	0.51	1.40	1942	Trace	1958	2.26	1909	Trace	1984
		1.36	1978	Trace	1952	2.17	1923	Trace also prior years	

MONTHLY and ANNUAL PRECIPITATION[1]: WETTEST AND DRIEST 5 (cont.)

		Portland Itn'l Airport (1941-4/1999)				All Portland Locations (1871-4/1999)			
		Wettest 5		Driest 5		Wettest 5		Driest 5	
AUGUST		4.53	1968	Trace	1998	4.53	1968	0.00	1885
		3.29	1976	Trace	1970	3.39	1912	Trace	1998
AVG	0.80	3.26	1977	Trace	1967	3.29	1976	Trace	1970
NORM	1.09	2.56	1956	Trace	1955	3.26	1977	Trace	1967
		2.29	1983	0.02	1958	2.56	1956	Trace also prior years	
SEPTEMBER		4.30	1986	Trace	1993	5.52	1927	0.00	1873
		3.98	1982	0.01	1965	5.19	1911	Trace	1993
AVG	1.41	3.96	1945	0.02	1991	4.30	1986	0.01	1965
NORM	1.75	3.86	1969	0.06	1943	4.25	1884	0.02	1991
		3.58	1941	0.06	1942	4.16	1920	0.06	1943
OCTOBER		8.41	1994	0.19	1988	11.63	1882	Trace	1895
		8.04	1947	0.27	1987	10.53	1876	0.02	1925
AVG	2.71	7.00	1950	0.36	1978	8.41	1994	0.03	1917
NORM	2.67	6.81	1951	0.72	1952	8.04	1947	0.19	1988
		6.69	1955	0.84	1964	7.00	1950	0.27	1987
NOVEMBER		11.57	1942	0.77	1976	15.77	1875	0.36	1936
		11.55	1973	1.44	1952	13.12	1896	0.50	1890
AVG	5.44	11.15	1995	1.47	1956	12.49	1909	0.67	1929
NORM	5.34	9.74	1984	1.50	1993	12.45	1877	0.77	1976
		9.58	1996	1.96	1987	11.65	1897	1.00	1886
DECEMBER		13.35	1996	1.38	1976	20.14	1882	0.88	1876
		11.12	1968	1.90	1944	17.45	1933	1.38	1976
AVG	5.84	10.14	1955	2.19	1985	14.23	1917	1.90	1944
NORM	6.13	9.93	1973	2.37	1988	13.93	1880	2.19	1985
		9.92	1964	2.40	1990	13.86	1937	2.37	1988
ANNUAL		63.21	1996	22.48	1985	67.24	1882	22.48	1985
		51.09	1950	23.37	1944	63.21	1996	23.37	1944
AVG	35.24	50.89	1968	25.70	1952	62.22	1879	25.70	1952
NORM	36.30	48.59	1953	26.71	1976	60.10	1875	26.11	1929
		47.19	1983	29.24	1967	58.30	1881	26.71	1976
WATER[2]		58.68	1996-97	23.84	1976-77	69.51	1875-76	23.84	1976-77
YEAR		54.54	1995-96	23.89	1993-94	59.42	1878-79	23.89	1993-94
AVG	37.29	51.91	1955-56	25.32	1943-44	58.70	1877-78	25.32	1943-44
NORM	36.30	49.98	1973-74	26.99	1977-78	58.58	1996-97	26.99	1977-78
		47.40	1982-83	29.31	1991-92	56.47	1880-81	27.18	1923-24

[1]Precipitation totals are in units of inches. [2]Water year runs from October 1 through September 30.

WATER YEAR PRECIPITATION TOTALS[1]
(1870-1998)

The water year starts on October 1st and ends September 30th.

Water Year	Total	Water Year	Total	Water Year	Total	Water Year	Total	Water Year	Total
1870-71	---	1896-97	41.67	1922-23	37.87	1948-49	36.93	1974-75	38.44
1871-72	42.54	1897-98	44.48	1923-24	27.18	1949-50	41.88	1975-76	38.62
1872-73	53.12	1898-99	36.67	1924-25	36.81	1950-51	44.34	1976-77	23.84
1873-74	43.69	1899-00	41.28	1925-26	30.82	1951-52	33.96	1977-78	40.74
1874-75	40.01	1900-01	44.53	1926-27	52.62	1952-53	39.64	1978-79	26.99
1875-76	69.51	1901-02	39.11	1927-28	34.34	1953-54	45.90	1979-80	40.50
1876-77	55.29	1902-03	41.51	1928-29	29.78	1954-55	33.77	1980-81	34.55
1877-78	58.70	1903-04	45.59	1929-30	29.80	1955-56	51.91	1981-82	44.04
1878-79	59.42	1904-05	36.78	1930-31	31.73	1956-57	30.01	1982-83	47.40
1879-80	49.45	1905-06	38.16	1931-32	39.57	1957-58	35.43	1983-84	37.25
1880-81	56.47	1906-07	45.63	1932-33	47.78	1958-59	37.56	1984-85	29.80
1881-82	47.51	1907-08	38.84	1933-34	43.96	1959-60	32.18	1985-86	31.32
1882-83	71.82	1908-09	36.85	1934-35	43.43	1960-61	42.08	1986-87	32.23
1883-84	42.05	1909-10	42.42	1935-36	37.57	1961-62	32.46	1987-88	31.47
1884-85	36.99	1910-11	40.11	1936-37	39.08	1962-63	36.68	1988-89	32.54
1885-86	40.78	1911-12	34.65	1937-38	51.26	1963-64	32.62	1989-90	30.12
1886-87	53.45	1912-13	41.00	1938-39	30.37	1964-65	33.82	1990-91	32.07
1887-88	40.24	1913-14	39.43	1939-40	38.95	1965-66	33.42	1991-92	29.31
1888-89	32.04	1914-15	29.00	1940-41	34.51	1966-67	32.95	1992-93	34.66
1889-90	47.10	1915-16	56.42	1941-42	34.02	1967-68	40.25	1993-94	23.89
1890-91	32.81	1916-17	33.38	1942-43	46.94	1968-69	45.17	1994-95	42.85
1891-92	42.62	1917-18	38.10	1943-44	25.32	1969-70	39.61	1995-96	54.54
1892-93	34.86	1918-19	43.95	1944-45	34.20	1970-71	41.60	1996-97	58.68
1893-94	46.89	1919-20	36.95	1945-46	36.98	1971-72	41.56	1997-98	39.55
1894-95	29.83	1920-21	45.17	1946-47	36.14	1972-73	30.49	1998-99	
1895-96	33.71	1921-22	37.60	1947-48	45.63	1973-74	49.98	1999-00	

[1]Precipitation totals are in units of inches.

AVERAGE (1940-1998) **37.29 inches** **1961-90 NORMAL:** **36.30 inches**

Portland I'ntl Airport (1940-1998)				All Portland Locations (1870-1998)			
Wettest 5		**Driest 5**		**Wettest 5**		**Driest 5**	
58.68	1996-97	23.84	1976-77	69.51	1875-76	23.84	1976-77
54.54	1995-96	23.89	1993-94	59.42	1878-79	23.89	1993-94
51.91	1955-56	25.32	1943-44	58.70	1877-78	25.32	1943-44
49.98	1973-74	26.99	1977-78	58.58	1996-97	26.99	1977-78
47.40	1982-83	29.31	1991-92	56.47	1880-81	27.18	1923-24

GREATEST RAINFALL[1] DURING A TIME DURATION OF...

(Period of Record is January 1953 to December 1995)

MONTH	5 minutes	Date	10 minutes	Date	15 minutes	Date
January	0.18	22nd of 1970	0.27	22nd of 1970	0.31	22nd of 1970
February	0.12	7th of 1978	0.15	7th of 1978	0.25	7th of 1978
March	0.12	12th of 1972	0.19	12th of 1972	0.29	12th of 1972
April	0.15	29th of 1992	0.17	29th of 1992	0.18	29th of 1992
May	0.30	19th of 1968	0.42	19th of 1968	0.52	19th of 1968
June	0.40	14th of 1978	0.43	14th of 1978	0.44	14th of 1978
July	0.28	30th of 1982	0.34	30th of 1982	0.37	30th of 1982
August	0.35	30th of 1954	0.52	19th of 1968	0.61	19th of 1968
September	0.28	11th of 1966	0.41	9th of 1972	0.46	19th of 1988
October	0.22	6th of 1982	0.25	6th of 1982	0.26	25th of 1984
November	0.15	3rd of 1983	0.21	13th of 1966	0.24	13th of 1966
December	0.16	9th of 1953	0.23	6th of 1981	0.24	6th of 1981
GREATEST	0.40	June 14, 1978	0.52	Aug 19, 1968	0.61	Aug 19, 1968

[1]Precipitation totals are in units of inches.

MONTH	30 minutes	Date	1 Hour	Date	2 Hours	Date	3 Hours	Date
January	0.48	22nd /1970	0.92	22nd /1970	1.16	22nd /1970	1.28	22nd /1970
February	0.36	7th /1978	0.36	20th /1991	0.56	1st /1961	0.71	25th /1957
March	0.34	29th /1983	0.43	9th /1983	0.69	9th /1983	0.79	21st /1953
April	0.24	7th /1991	0.35	7th /1984	0.52	25th /1989	0.75	25th /1989
May	0.55	19th /1968	0.67	19th /1968	0.82	19th /1968	0.94	19th /1968
June	0.44	14th /1978	0.44	14th /1978	0.47	6th /1990	0.50	6th /1950
July	0.48	8th /1983	0.50	9th /1995	0.65	9th /1995	0.94	9th /1995
August	0.82	19th /1968	0.89	19th /1968	0.89	19th /1968	0.89	19th /1968
September	0.51	19th /1988	0.59	17th /1970	0.99	17th /1970	1.36	17th /1970
October	0.30	25th /1984	0.42	25th /1984	0.69	26th /1994	0.94	26th /1994
November	0.28	8th /1980	0.43	12th /1989	0.65	12th /1989	0.73	15th /1973
December	0.28	2nd/1980	0.40	10th /1992	0.68	10th /1992	1.05	4th /1968
GREATEST	0.82	8-19-68	0.92	1-22-70	1.16	1-22-70	1.36	9-17-90

[1]Precipitation totals are in units of inches.

GREATEST 24-HOUR RAINFALL[1] RECORDS

	Portland Airport (1940-1999)			All Portland Locations (1871-1999)		
Month	**Rainfall**	**Date**	**Year**	**Rainfall**	**Date**	**Year**
January	2.61	14th -15th	1974	6.86	5th -6th	1883
February	2.46	23rd -24th	1994	3.81	1st -2nd	1890
March	1.83	30th -31st	1943	2.50	30th -31st	1931
April	1.47	26th -27th	1962	1.96	12th -13th	1937
May	1.47	19th	1968	1.83	14th -15th	1908
June	1.82	5th -6th	1958	2.16	8th -9th	1933
July	1.09	15th -16th	1978	1.35	1st -2nd	1902
August	1.54	25th -26th	1977	1.75	8th -9th	1900
September	2.38	19th -20th	1982	2.88	4th -5th	1911
October	4.44	26th -27th	1994	4.44	26th -27th	1994
November	2.82	10th -11th	1995	4.43	19th -20th	1921
December	2.59	12th -13th	1977	7.66	12th -13th	1882
Greatest	4.44	Oct 26-27th	1994	7.66	Dec 12-13th	1882

[1]Precipitation totals are in units of inches.

NOTES:

DAYS IN A MONTH WITH MEASURABLE RAINFALL

(October 1940-June 1999)

	Rainfall of 0.01 inch or more					Rainfall of 0.10 inch or more				
Month	Avg.	Most	Year	Least	Year	Avg.	Most	Year	Least	Year
January	*17.5*	30	1950	2	1985	*10.8*	21	1953	0	1985
February	*15.5*	26	1961	8	1995	*11.1*	22	1961	1	1993
March	*17.1*	25	1961	5	1965	*9.8*	18	1945	0	1982
April	*14.3*	23	1955	4	1951	*7.4*	17	1955	2	1956[1]
May	*11.8*	21	1977	4	1947	*6.5*	15	1977	0	1992
June	*8.5*	18	1983	2	1987[1]	*4.4*	12	1947	0	1987
July	*4.2*	12	1983	0	1984[1]	*2.0*	7	1983	0	1994[1]
August	*5.3*	14	1968	0	1998[1]	*2.8*	9	1968	0	1998[1]
September	*8.0*	17	1941	0	1993	*4.6*	11	1977	0	1993[1]
October	*12.0*	23	1950[1]	1	1987	*6.9*	17	1947	0	1988
November	*18.5*	27	1998	8	1976[1]	*12.5*	22	1973	3	1976
December	*18.7*	27	1981[1]	7	1985	*12.1*	19	1981[1]	5	1985[1]
ANNUAL	*151.4*	186	1950	112	1985	*90.6*	117	1948,'96	65	1985

[1]Has occurred more than once therefore the most recent year of occurrence is listed.

	Rainfall of 0.50 inch or more					Rainfall of 1.00 inch or more				
Month	Avg.	Most	Year	Least	Year	Avg.	Most	Year	Least	Year
January	*3.7*	11	1953	0	1985[1]	*1.1*	5	1956	0	1998[1]
February	*2.2*	8	1983	0	1997[1]	*0.4*	4	1949	0	1998[1]
March	*1.5*	6	1997	0	1994[1]	*0.2*	2	1983[1]	0	1999[1]
April	*0.7*	3	1993[1]	0	1999[1]	*0.2*	1	1996[1]	0	1999[1]
May	*0.8*	5	1998	0	1995[1]	*0.1*	1	1997[1]	0	1999[1]
June	*0.7*	3	1954	0	1998[1]	*0.1*	1	1991[1]	0	1999[1]
July	*0.3*	2	1993[1]	0	1998[1]	*~0.0*	1	1995	0	1998[1]
August	*0.5*	3	1976	0	1998[1]	*~0.0*	2	1977	0	1998[1]
September	*0.9*	4	1945	0	1997	*0.1*	1	1996[1]	0	1998[1]
October	*1.7*	7	1947	0	1998	*0.2*	3	1994	0	1998[1]
November	*3.1*	10	1942	0	1993	*0.8*	3	1984[1]	0	1993[1]
December	*4.0*	11	1996	0	1984[1]	*1.1*	5	1980	0	1997[1]
ANNUAL	*20.0*	43	1996	6	1944	*4.5*	12	1996	1	1952[1]

[1]Has occurred more than once therefore the most recent year of occurrence is listed.

CONSECUTIVE DAYS OF RAINFALL
(October 1940 - May 1999)

Rainfall of 0.01 inch or more		
Month	**days**	**year**
January	**29**	1950
February	**22**	1949
March	**16**	1957
April	**13**	1958
May	**9**	1996[1]
June	**10**	1947
July	**5**	1963
August	**9**	1941
September	**8**	1973[1]
October	**10**	1962[1]
November	**19**	1948
December	**16**	1957
ANNUAL	**29**	January

[1]Has occurred more than once therefore the most recent year of occurrence is listed.

CONSECUTIVE DAYS WITH RAINFALL OF 0.01 INCH OR MORE
(October 1940-May 31st, 1999)

rank	streak	date/year	total rainfall
1.	29 days	Jan 1st - 31st, 1950	10.01 inches
2.	26 days	Nov 13th-Dec 8th, 1998	10.48 inches
3.	25 days	Oct 27th - Nov 17th, 1947	5.48 inches
4.	24 days	Dec 18th - Jan 10th, 1964-65	10.78 inches
5.	23 days	Dec 23rd - Jan 14th, 1965-66	10.62 inches
6.	22 days	Feb 1st - 22nd, 1949	9.46 inches
7.	21 days	Nov 5th - 25th, 1983	6.20 inches
7.	21 days	Feb 8th - 28th, 1983	7.08 inches
7.	21 days	Nov 12th - Dec 2nd, 1948	6.39 inches
10.	20 days	Feb 15th - Mar 5th, 1956	4.14 inches
10.	20 days	Feb 3rd - 22nd, 1961	6.49 inches
10.	20 days	Jan 8th - 27th, 1951	6.36 inches
Back at the Downtown years (1871-1939)...			
	40 days	Feb 6th - Mar 16th, 1872	15.50 inches
	37 days	Jan 15th - Feb 20th, 1878	17.02 inches

Rainfall of 0.10 inch or more		
Month	**days**	**year**
January	**16**	1970
February	**13**	1961
March	**9**	1957[1]
April	**9**	1963
May	**8**	1968
June	**7**	1969
July	**5**	1963
August	**5**	1953
September	**7**	1972
October	**9**	1970
November	**10**	1995
December	**13**	1996
ANNUAL	**16**	January

[1]Has occurred more than once therefore the most recent year of occurrence is listed.

CONSECUTIVE DAYS WITH RAINFALL OF A TRACE OR MORE
(October 1940 - May 31st, 1999)

rank	streak	date/year	total rainfall
1.	34 days	Dec 11th - Jan 31st, 1949-50	10.96 inches
1.	34 days	Nov 10th - Dec 13th, 1953	10.04 inches
1.	34 days	Nov 12th - Dec 19th, 1948	10.51 inches
4.	33 days	Nov 11th - Dec 13th, 1996	14.78 inches
4.	33 days	Jan 6th - Feb 7th, 1953	13.61 inches
6.	32 days	Dec 5th - Jan 5th, 1992-93	4.74 inches
7.	31 days	Oct 29th - Nov 28th, 1983	9.06 inches
8.	30 days	Feb 10th - Mar 10th, 1956	4.74 inches
8.	30 days	Dec 21st - Jan 19th, 1968-69	9.96 inches
9.	29 days	Nov 10th - Dec 8th, 1998	10.56 inches
10.	26 days	Jan 29th - Feb 23rd, 1945	4.51 inches
11.	25 days	Nov 1st - 25th, 1988	7.56 inches
11.	25 days	Nov 8th - Dec 2nd, 1955	6.85 inches
11.	25 days	Oct 9th - Nov 2nd, 1956	5.31 inches
11.	25 days	Feb 24th - Mar 17th, 1961	5.94 inches
11.	25 days	Dec 31st - Jan 24th, 1955-56	10.62 inches
11.	25 days	Oct 27th - Nov 20th, 1947	5.55 inches
11.	25 days	Feb 3rd - 27th, 1950	5.77 inches
11.	25 days	Jan 29th - Feb 22nd, 1949	9.55 inches

DAYS PER MONTH OF MEASURABLE RAIN, TRACE OF RAIN, AND NO RAIN

(Format of Table Columns: N is No Rain, T is for Days with Trace, R is Rainy Days)

Year	JAN			FEB			MARCH			APRIL			MAY			JUNE			JULY			AUG			SEP			OCT			NOV			DEC			ANNUAL			Year
	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	
1940	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	7	9	16	4	10	15	4	12	--	--	--	1940
1941	17	3	11	11	2	15	9	4	18	11	4	15	18	2	11	10	8	12	1	0	30	11	2	18	17	2	11	15	2	14	15	5	11	19	7	5	153	41	171	1941
1942	14	5	12	18	4	6	15	4	12	14	3	13	19	2	10	12	5	13	5	5	21	2	9	20	1	9	20	10	4	17	24	0	6	22	6	3	156	56	153	1942
1943	14	4	13	10	1	17	12	8	11	15	2	13	8	8	15	13	1	16	3	3	25	6	6	19	1	3	26	13	8	10	13	3	14	9	3	19	117	50	198	1943
1944	14	4	13	20	2	7	12	7	12	16	5	9	11	5	15	7	8	15	2	4	25	2	7	22	9	1	20	7	2	22	16	2	12	13	2	16	129	49	188	1944
1945	16	5	10	20	5	3	19	9	3	12	10	8	13	5	13	2	7	21	1	0	30	2	7	22	8	5	17	12	2	17	23	3	4	24	1	6	152	59	154	1945
1946	20	6	5	20	3	5	19	5	7	11	6	13	7	8	16	16	5	9	3	3	25	2	5	24	6	4	20	15	7	9	20	2	8	16	3	12	155	57	153	1946
1947	19	1	11	12	3	16	15	2	14	15	3	12	4	5	22	16	4	10	7	7	17	6	2	23	7	3	20	23	2	6	20	4	6	23	2	6	164	38	163	1947
1948	12	3	16	20	3	6	21	4	6	18	7	5	13	4	14	6	8	16	6	1	24	9	4	18	10	4	16	11	4	16	25	1	4	22	3	6	173	46	147	1948
1949	11	4	16	22	0	6	18	4	9	9	7	14	9	6	16	8	3	19	5	4	22	4	5	22	8	6	16	11	4	16	16	1	13	20	5	6	140	50	175	1949
1950	30	1	0	21	4	3	24	2	5	15	3	12	7	5	19	10	6	14	6	1	24	4	2	25	3	3	24	23	2	6	20	2	8	23	7	1	186	38	141	1950
1951	24	2	5	18	1	9	20	3	8	4	1	25	12	6	13	3	2	25	4	2	25	1	2	28	7	1	22	17	3	11	18	3	9	18	4	9	146	30	189	1951
1952	21	5	5	15	7	7	21	2	8	8	5	17	8	9	14	11	5	14	0	2	29	1	5	25	5	3	22	5	2	24	8	0	22	23	2	6	126	47	193	1952
1953	28	1	2	15	4	9	18	4	9	16	5	9	18	8	5	15	5	10	1	3	27	8	5	18	5	4	21	9	5	17	25	0	5	22	4	5	180	48	137	1953
1954	21	5	5	14	2	12	8	4	19	11	5	14	11	3	17	17	3	10	5	4	22	10	5	16	11	2	17	11	3	17	18	1	11	19	4	8	156	41	168	1954
1955	18	6	7	15	4	9	18	3	10	23	1	6	15	1	15	13	3	14	8	2	21	0	1	30	8	1	21	17	3	11	25	3	2	21	0	10	181	28	156	1955
1956	25	3	3	21	4	4	19	5	7	7	6	17	12	4	15	11	5	14	1	5	25	6	3	22	5	9	16	17	7	7	10	2	18	18	4	9	152	57	157	1956
1957	16	4	11	14	5	9	24	1	6	16	6	8	12	4	15	7	3	20	3	5	23	6	0	25	3	4	24	14	6	11	12	3	15	20	6	5	146	47	172	1957
1958	20	3	8	19	6	3	14	9	8	19	4	7	7	7	17	9	8	13	0	4	27	1	5	25	14	2	14	7	3	21	21	2	7	23	3	5	154	52	155	1958
1959	27	2	2	16	7	5	18	6	7	11	5	14	17	2	12	12	8	10	5	1	25	1	5	25	14	6	10	14	4	13	11	4	15	16	6	9	162	56	147	1959
1960	22	4	5	17	3	9	18	5	8	19	2	9	20	3	8	4	2	24	0	3	28	9	4	18	7	5	18	14	4	13	18	1	11	15	4	12	163	40	163	1960
1961	17	2	12	26	1	1	25	2	4	18	3	9	17	5	9	4	4	22	2	4	25	4	7	20	7	3	20	15	3	13	18	2	10	20	6	5	173	42	150	1961
1962	13	4	14	15	3	10	20	1	10	11	8	11	10	6	15	4	5	21	1	5	25	8	4	19	6	4	20	12	4	15	23	2	5	13	8	10	135	55	175	1962
	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	
AVG	18	4	9	16	3	9	17	4	10	14	5	11	12	4	15	9	4	17	4	3	24	5	3	23	8	3	19	12	4	15	19	2	9	19	4	8	168	44	153	AVG

DAYS PER MONTH OF MEASURABLE RAIN, TRACE OF RAIN, AND NO RAIN

(Format of Table Columns: N is No Rain, T is for Days with Trace, R is Rainy Days)

Year	JAN			FEB			MARCH			APRIL			MAY			JUNE			JULY			AUG			SEP			OCT			NOV			DEC			ANNUAL			Year
	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	
1963	13	2	16	13	4	11	19	2	10	20	4	6	8	3	20	13	4	13	10	3	18	7	7	17	5	5	20	14	6	11	25	1	4	16	2	13	163	43	159	1963
1964	27	2	2	13	3	13	18	5	8	12	7	11	11	6	14	14	2	14	10	2	19	11	6	14	9	2	19	9	4	18	19	2	9	25	4	2	178	45	143	1964
1965	21	2	8	13	7	8	5	5	21	12	4	14	9	3	19	3	3	24	2	4	25	7	3	21	1	4	25	11	7	13	18	7	5	18	2	11	147	24	194	1965
1966	20	4	7	14	6	8	18	5	8	10	2	18	8	5	18	8	5	17	6	1	24	3	3	25	9	4	17	12	4	15	16	7	7	23	4	4	147	50	168	1966
1967	22	1	4	12	5	11	22	3	6	13	5	12	8	1	22	4	3	23	0	0	31	0	4	27	6	1	23	18	4	9	13	3	14	18	7	6	130	47	188	1967
1968	21	7	3	11	1	17	18	2	11	15	4	11	15	4	12	11	3	16	2	5	24	14	1	16	10	0	20	19	2	10	22	1	7	26	3	2	184	33	149	1968
1969	22	5	4	14	4	10	9	4	18	15	8	7	10	5	16	10	4	16	4	1	26	1	3	27	15	3	12	15	0	16	8	4	18	21	4	6	144	45	176	1969
1970	20	3	8	11	2	15	13	9	9	15	6	9	9	2	20	7	6	17	2	4	25	0	4	27	7	7	16	13	0	18	21	3	6	23	2	6	141	48	176	1970
1971	20	5	6	17	7	8	20	2	9	13	5	12	11	6	14	13	5	12	5	5	21	4	4	23	12	1	17	13	3	15	20	3	7	21	6	4	169	48	148	1971
1972	19	5	7	18	5	6	20	4	7	20	3	7	9	2	20	5	7	18	2	5	24	4	2	25	10	4	16	7	3	21	17	6	7	19	6	6	150	52	164	1972
1973	16	4	11	10	3	15	19	5	7	7	6	17	11	1	19	9	7	14	1	1	29	4	3	24	10	0	20	14	3	14	26	2	2	24	2	5	151	37	177	1973
1974	17	5	9	20	0	8	21	2	8	16	6	8	12	9	10	5	4	21	9	4	18	2	2	27	2	2	26	9	1	21	14	3	13	24	3	4	151	41	173	1974
1975	20	6	5	23	0	5	15	5	11	14	3	13	9	6	16	10	5	15	2	4	25	9	4	18	0	1	29	21	6	4	20	4	6	21	3	7	164	47	154	1975
1976	14	8	9	16	4	9	16	4	11	17	3	10	12	4	15	7	4	19	6	3	22	10	2	19	5	7	18	6	6	19	8	4	18	10	8	13	127	57	182	1976
1977	12	3	16	12	4	12	19	4	8	8	4	18	21	4	6	3	1	26	4	4	23	9	1	21	16	3	11	10	4	17	24	1	5	22	4	5	160	37	168	1977
1978	22	5	4	18	2	8	12	2	17	20	2	8	13	7	11	7	6	17	5	4	22	11	4	16	14	5	11	4	3	24	15	0	15	15	5	11	156	45	164	1978
1979	12	2	17	23	1	4	13	5	13	18	4	8	8	3	20	6	3	21	4	2	25	11	3	17	6	3	21	14	2	15	14	2	14	18	9	4	147	39	179	1979
1980	18	1	12	18	2	9	18	7	6	13	5	12	11	6	14	16	3	11	2	3	26	3	4	24	11	3	16	7	2	22	22	2	6	18	3	10	157	41	168	1980
1981	12	3	16	15	1	12	13	4	14	16	3	11	16	3	12	15	4	11	4	2	25	3	3	25	10	2	18	13	1	17	18	1	11	27	2	2	162	29	174	1981
1982	21	7	3	17	1	10	15	3	13	15	0	15	5	6	20	9	6	15	7	2	22	7	3	21	13	2	15	14	7	10	15	2	13	19	0	12	157	39	169	1982
1983	19	4	8	22	1	5	22	2	7	11	4	15	10	2	19	18	2	10	12	3	16	7	1	23	6	3	21	12	2	17	26	2	2	20	5	6	185	31	149	1983
1984	8	7	16	19	4	6	20	4	7	20	6	4	17	7	7	14	0	16	0	1	30	1	1	29	9	6	15	18	2	11	24	1	5	18	2	11	168	41	157	1984
1985	2	5	24	13	5	10	14	5	12	10	6	14	8	8	15	6	3	21	2	1	28	3	1	27	11	4	15	16	2	13	20	3	7	7	4	20	112	47	206	1985
	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	
AVG	18	4	9	16	3	9	17	4	10	14	5	11	12	4	15	9	4	17	4	3	24	5	3	23	8	3	19	12	4	15	19	2	9	19	4	8	168	44	153	AVG

DAYS PER MONTH OF MEASURABLE RAIN, TRACE OF RAIN, AND NO RAIN

(Format of Table Columns: N is No Rain, T is for Days with Trace, R is Rainy Days)

Year	JAN			FEB			MARCH			APRIL			MAY			JUNE			JULY			AUG			SEP			OCT			NOV			DEC			ANNUAL			Year
	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	
1986	20	6	5	17	2	9	15	4	12	15	4	11	12	4	15	4	4	22	7	3	21	2	3	26	15	3	12	7	1	23	18	5	7	16	4	11	148	43	174	1986
1987	16	2	13	12	7	9	20	2	9	13	0	17	11	3	17	2	2	26	6	1	24	2	0	29	3	3	24	1	3	27	13	6	11	22	3	6	121	32	212	1987
1988	17	6	8	12	1	16	17	1	13	18	3	9	16	7	8	10	4	16	4	2	25	1	2	28	6	4	20	7	4	20	25	2	3	13	6	12	146	42	178	1988
1989	18	9	4	11	5	12	22	7	2	12	2	16	13	3	15	5	6	19	3	8	20	4	8	19	6	2	22	10	8	13	15	6	9	10	5	16	129	69	167	1989
1990	22	3	6	15	4	9	14	3	14	12	2	16	20	2	9	13	7	10	4	4	23	7	6	18	2	4	24	20	3	8	19	3	8	17	7	7	165	48	152	1990
1991	11	6	14	11	2	15	17	4	10	17	2	11	14	6	11	7	8	15	3	3	25	5	4	22	1	2	27	7	5	19	21	4	5	19	5	7	133	51	181	1991
1992	19	4	8	15	7	7	8	4	19	17	7	6	5	4	24	3	4	23	3	3	25	2	2	27	8	5	17	11	5	15	17	5	8	22	7	2	130	55	181	1992
1993	14	7	10	5	6	17	16	6	9	22	6	2	18	5	8	12	7	11	10	5	16	5	5	21	0	2	28	7	5	19	9	6	15	16	2	13	134	62	169	1993
1994	16	7	8	16	7	5	13	4	14	17	1	12	8	5	18	11	2	17	2	2	27	3	5	23	5	2	23	10	3	18	23	2	5	19	4	8	143	44	178	1994
1995	17	3	11	8	4	16	19	1	11	19	1	10	8	1	22	10	3	17	3	4	24	8	2	21	10	4	16	13	4	14	23	0	7	20	3	8	158	30	177	1995
1996	25	2	4	16	2	11	18	3	10	19	3	8	17	4	10	6	1	23	5	2	24	3	3	25	11	1	18	15	2	14	23	1	6	26	2	3	184	26	156	1996
1997	20	3	8	13	2	13	23	2	6	18	3	9	13	1	17	11	3	16	4	3	24	4	2	25	11	3	16	19	2	10	17	1	12	14	3	14	167	28	170	1997
1998	26	2	3	25	2	1	22	2	7	12	4	14	18	3	10	9	1	20	6	0	25	0	1	30	5	0	25	14	4	13	27	2	1	21	2	8	185	23	157	1998
1999	22	1	8	23	2	3	21	3	7	16	1	13	16	2	13	13	5	12																						1999
2000																																								2000
2001																																								2001
2002																																								2002
2003																																								2003
2004																																								2004
2005																																								2005
2006																																								2006
	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	R	T	N	
AVG	18	4	9	16	3	9	17	4	10	14	5	11	12	4	15	9	4	17	4	3	24	5	3	23	8	3	19	12	4	15	19	2	9	19	4	8	168	44	153	AVG

TOP 10 WETTEST DAYS OF EACH MONTH[1]
(October 1940 - June 1999)

	January				February				March				April		
1.	2.48	6th	1948	*1.*	2.16	6th	1996	*1.*	1.54	29th	1983	*1.*	1.25	21st	1988
2.	2.33	31st	1987	*2.*	1.90	7th	1996	*2.*	1.47	31st	1943	*2.*	1.23	12th	1955
3.	2.03	22nd	1970	*3.*	1.89	24th	1994	*3.*	1.36	21st	1948	*3.*	1.20	22nd	1996
4.	1.98	15th	1974	*4.*	1.86	8th	1996	*4.*	1.27	9th	1983	*3.*	1.20	7th	1984
4.	1.98	19th	1950	*5.*	1.78	17th	1949	*5.*	1.26	3rd	1987	*5.*	1.17	9th	1971
6.	1.93	4th	1956	*6.*	1.72	10th	1961	*6.*	1.25	28th	1943	*6.*	1.03	27th	1962
7.	1.76	17th	1997	*7.*	1.71	20th	1982	*7.*	1.23	25th	1962	*7.*	1.02	7th	1945
8.	1.75	4th	1954	*8.*	1.54	5th	1946	*8.*	1.07	29th	1963	*8.*	1.01	19th	1965
9.	1.73	20th	1972	*9.*	1.51	9th	1949	*9.*	1.06	29th	1960	*9.*	1.00	25th	1989
10.	1.56	27th	1954	*10.*	1.42	16th	1970	*10.*	1.02	13th	1961	*10.*	0.95	22nd	1961

	May				June				July				August		
1.	1.47	19th	1968	*1.*	1.70	6th	1958	*1.*	1.06	9th	1995	*1.*	1.47	25th	1977
2.	1.45	31st	1997	*2.*	1.46	20th	1984	*2.*	0.89	19th	1983	*2.*	1.29	25th	1956
3.	1.34	16th	1945	*3.*	1.39	20th	1991	*2.*	0.89	8th	1946	*3.*	1.20	23rd	1977
4.	1.20	17th	1991	*4.*	1.36	6th	1985	*4.*	0.84	20th	1954	*3.*	1.20	19th	1968
5.	1.08	31st	1993	*5.*	1.02	7th	1981	*5.*	0.81	16th	1989	*5.*	1.13	29th	1983
5.	1.08	13th	1978	*6.*	0.97	1st	1968	*5.*	0.81	8th	1974	*6.*	0.94	6th	1976
7.	1.07	5th	1948	*7.*	0.92	6th	1994	*5.*	0.81	2nd	1966	*7.*	0.90	17th	1948
8.	1.04	5th	1963	*8.*	0.89	13th	1980	*8.*	0.80	15th	1978	*8.*	0.89	24th	1973
9.	0.96	23rd	1997	*9.*	0.87	23rd	1969	*9.*	0.64	17th	1993	*8.*	0.89	29th	1943
10.	0.93	26th	1953	*10.*	0.82	24th	1971	*10.*	0.63	18th	1987	*10.*	0.73	15th	1976

	September				October				November				December		
1.	2.23	17th	1969	*1.*	2.44	31st	1994	*1.*	2.69	19th	1996	*1.*	2.17	27th	1942
2.	2.03	14th	1996	*1.*	2.44	27th	1994	*2.*	2.43	15th	1950	*2.*	2.08	2nd	1980
3.	1.56	20th	1982	*3.*	2.33	26th	1994	*3.*	2.42	15th	1973	*3.*	2.02	27th	1998
4.	1.48	25th	1986	*4.*	1.66	9th	1955	*4.*	2.31	24th	1960	*4.*	1.99	21st	1955
4.	1.48	1st	1971	*5.*	1.65	10th	1959	*5.*	2.26	26th	1945	*5.*	1.84	15th	1982
6.	1.30	27th	1955	*6.*	1.63	31st	1942	*6.*	2.11	25th	1998	*5.*	1.84	13th	1977
7.	1.18	10th	1985	*7.*	1.62	28th	1982	*7.*	2.01	11th	1995	*7.*	1.80	5th	1981
7.	1.18	3rd	1945	*8.*	1.40	18th	1979	*8.*	1.99	26th	1945	*7.*	1.80	21st	1964
9.	1.11	26th	1948	*9.*	1.32	19th	1947	*9.*	1.97	27th	1984	*9.*	1.79	27th	1965
10.	1.00	4th	1959	*10.*	1.31	22nd	1951	*10.*	1.88	3rd	1983	*10.*	1.74	2nd	1977

TOP 20 WETTEST DAYS SINCE 1940

1.	2.69"	November 19th, 1996	*11.*	2.16"	February 6th, 1996
2.	2.48"	January 6th, 1948	*12.*	2.11"	November 25th, 1998
3.	2.44"	October 31st, 1994	*13.*	2.03"	September 14th, 1996
3.	2.44"	October 27th, 1994	*13.*	2.03"	January 22nd, 1970
5.	2.43"	November 15th, 1950	*15.*	2.01"	November 11th, 1995
6.	2.42"	November 15th, 1973	*16.*	1.99"	November 18th, 1946
7.	2.33"	October 26th, 1994	*17.*	1.98"	January 15th, 1974
7.	2.33"	January 31st, 1987	*17.*	1.98"	January 19th, 1950
9.	2.31"	November 24th, 1960	*19.*	1.97"	November 27th, 1984
10.	2.26"	November 26th, 1945	*20.*	1.93"	January 4th, 1956

**** Including Downtown Portland records, the wettest day was December 13th, 1882 with 6.68 inches.*

[1]Day is defined as midnight to midnight.

DAYS IN A MONTH WITH NO MEASURABLE RAINFALL
(October 1940 - June 1999)

	Days with NO Rainfall				
Month	Average	Most	Year	Least	Year
January	*9*	24	1985	0	1950
February	*9*	17	1993, 1968, 1943	1	1998, 1961
March	*10*	21	1965	2	1989
April	*11*	25	1951	2	1993
May	*15*	24	1992	5	1993
June	*17*	26	1977, 1987	9	1946
July	*24*	31	1967	16	1993, 1983
August	*23*	30	1955, 1998	14	1964
September	*19*	29	1975	10	1959
October	*15*	27	1987	4	1975
November	*9*	22	1952	1	1998
December	*8*	20	1985	1	1950
ANNUAL	*168*	212	1987	137	1953

	Days with a TRACE OR LESS Rainfall				
Month	Average	Most	Year	Least	Year
January	*13*	29	1985	1	1950
February	*12*	23	1993	2	1961
March	*14*	26	1965	6	1961
April	*16*	26	1951	7	1955
May	*19*	27	1947	10	1997
June	*21*	28	1987, 1945	12	1983
July	*27*	31	1984,'67,'60, '58,'52	19	1983
August	*26*	31	1998, '70, '67, '55	17	1968
September	*22*	30	1975, 1993	13	1941
October	*19*	30	1987	8	1950, 1947
November	*11*	22	1976, 1969, 1952	3	1998
December	*12*	24	1985	4	1981
ANNUAL	*212*	253	1985	179	1950

CONSECUTIVE DRY DAYS and DRY SPELLS

Consecutive days per month with NO RAINFALL		
month	days	year
January	13	1985
February	17	1943
March	11	1941
April	21	1951
May	15	1995
June	18	1951
July	31	1967
August	29	1955
September	27	1975
October	16	1987
November	12	1956
December	13	1985
ANNUAL	41	1967

CONSECUTIVE DAYS WITH NO RAINFALL
(October 1940 - June 1999)

Rank	No. of Days	Dates of Occurrence	
1.	41 days	1967	June 27th - August 6th
2.	36	1981	July 14th - August 18th
3.	32	1991	September 14th - October 15th
3.	32	1979	July 12th - August 12th
5.	31	1988	July 15th - August 14th
5.	31	1955	July 30th - August 29th
7.	29	1997	July 22nd - August 19th
8.	28	1951	July 15th - August 11th
9.	27	1987	August 15th - September 10th
9.	27	1975	September 1st - 27th
11.	26	1957	August 11th - September 5th
12.	25	1984	August 6th - 30th
13	25	1974	July 19th - August 12th
13.	25	1952	September 13th - October 7th
15.	23	1984	June 30th - July 22nd
15.	23	1973	June 27th - July 19th
15.	23	1969	July 12th - August 3rd
18.	22	1998	August 1st - 22nd
18.	*22*	*5 more streaks are tied with 22 days*	

Consecutive days per month with a TRACE OR LESS		
month	days	year
January	17	1948
February	17	1943
March	21	1965
April	26	1951
May	22	1963
June	23	1985
July	31	1984[1]
August	31	1998[1]
September	30	1993,1975
October	30	1987
November	12	1956
December	23	1985
ANNUAL	71	1967

[1]Has occurred more than once therefore the most recent year of occurrence is listed.

CONSECUTIVE DAYS WITH RAINFALL OF A TRACE OR LESS
(October 1940 - June 1999)

Rank	No. of Days	Dates of Occurrence	
1.	71 days	1967	June 23rd - September 1st
2.	62	1984	June 30th - August 30th
3.	55	1960	June 20th - August 13th
3.	55	1952	June 30th - August 23rd
5.	53	1980	July 5th - August 26th
6.	52	1985	June 8th - July 29th
6.	52	1951	July 7th - August 27th
8.	47	1998	August 1st - September 16th
8.	47	1981	July 13th - August 28th
10.	46	1957	August 11th - September 25th
11.	44	1946	July 16th - August 28th
12.	43	1944	July 13th - August 24th
13.	42	1993	August 25th - October 5th
14.	41	1990	July 7th - August 16th
15.	40	1961	July 6th - August 14th
16.	39	1997	June 11th - July 19th
16.	39	1955	July 30th - September 6th
18.	38	1959	July 24th - August 30th
19.	37	1970	July 28th - September 2nd
19.	37	1945	June 14th - July 20th

DAYS WITH MEASURABLE PRECIPITATION[1] OF AT LEAST 0.01 INCH

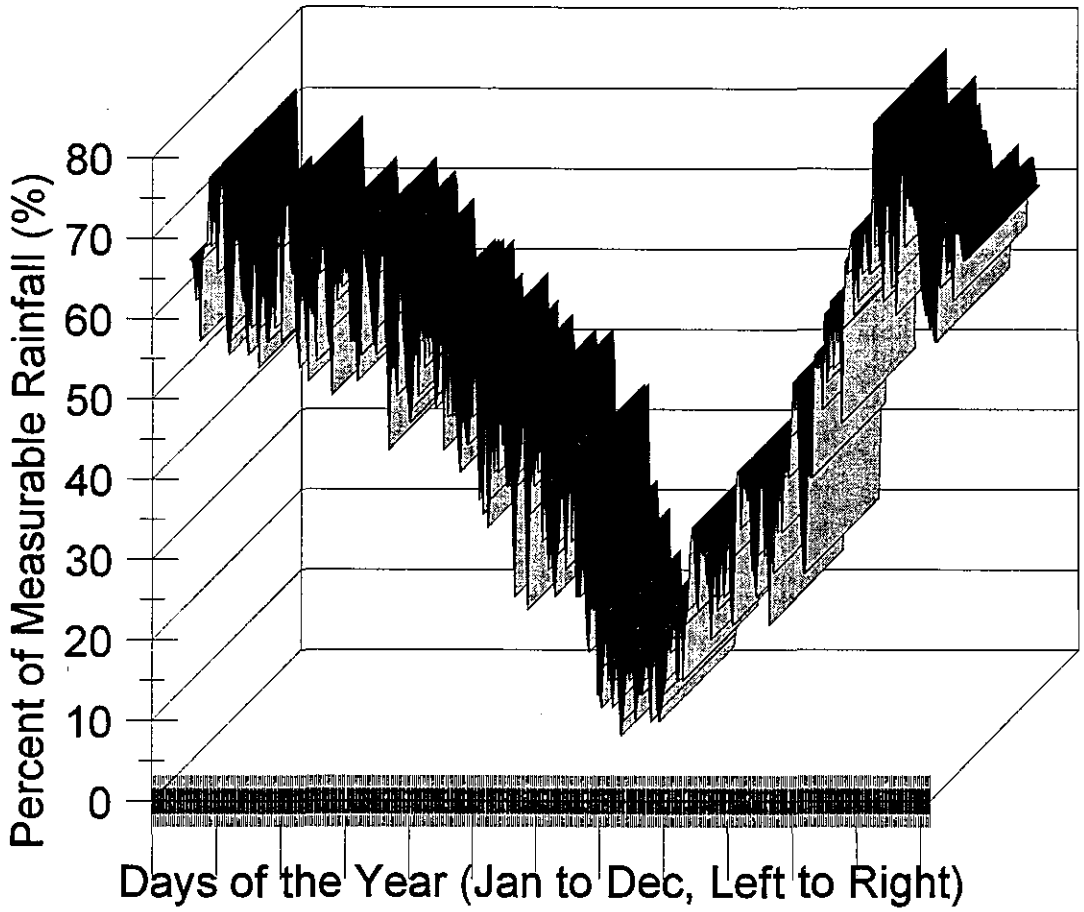
October 1940 - April 1999

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	37	36	36	37	25	16	12	5	13	14	33	45
2	37	29	36	29	30	12	12	6	9	19	25	38
3	36	32	39	23	25	20	12	8	12	17	32	43
4	34	35	37	29	26	21	15	6	15	22	37	41
5	37	34	32	29	25	23	13	3	11	17	36	41
6	31	31	31	29	22	26	9	7	12	21	38	41
7	37	31	27	27	21	17	8	8	16	22	39	40
8	38	33	32	33	26	11	12	4	12	21	33	40
9	38	35	37	36	24	18	11	3	14	24	38	38
10	43	32	34	32	23	22	13	4	18	28	34	35
11	38	38	36	28	23	20	5	5	12	26	38	34
12	40	41	35	27	26	23	5	6	10	28	36	33
13	40	31	37	25	25	21	4	9	15	21	40	33
14	36	38	36	26	30	26	7	8	21	17	38	32
15	41	41	37	30	25	16	10	9	21	14	36	33
16	44	42	31	31	19	20	6	11	17	14	36	31
17	39	37	31	27	21	17	7	6	20	22	47	31
18	33	36	32	31	18	14	4	6	20	21	38	36
19	30	36	28	33	28	16	6	12	19	21	42	35
20	31	31	30	29	17	14	8	6	19	30	37	38
21	32	29	30	33	19	12	5	10	14	29	38	40
22	38	34	39	30	25	15	2	11	14	29	34	36
23	39	35	37	33	21	16	3	15	12	30	39	37
24	38	33	36	30	24	20	5	17	15	26	43	37
25	35	28	35	26	21	19	7	16	20	33	38	34
26	34	35	33	27	27	14	6	12	20	28	35	39
27	34	33	31	30	23	17	7	11	15	29	42	39
28	30	34	30	33	23	22	6	16	17	34	33	39
29	34	7	32	24	20	16	3	15	10	29	36	38
30	32	---	36	30	20	22	5	16	17	33	42	37
31	38	---	38	---	21	---	5	13	---	31	---	37

[1]Based on observations taken at the National Weather Service office at the Portland International Airport.
[2]February 29 has occurred 14 times between 1940 and 1999.

Percentage of Measurable Rainfall from January to December

(Visual Interpretation of the Data on Page 83)



Data based on rainfall observations at the National Weather Service observation site at the Portland International Airport on Marine Drive between October 1940 and April 1999.

DAILY PROBABILITY OF MEASURABLE PRECIPITATION[1] OF AT LEAST 0.01 INCH

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	62.7	61.0	61.0	62.7	43.1	27.6	20.7	8.6	22.4	23.7	55.9	76.3
2	62.7	49.2	61.0	49.2	51.7	20.7	20.7	10.3	15.5	32.8	42.4	64.4
3	61.0	54.2	66.1	39.0	43.1	34.5	20.7	13.8	20.7	28.8	54.2	72.9
4	57.6	59.3	62.7	49.2	44.8	36.2	25.9	10.3	25.9	37.3	62.7	69.5
5	62.7	57.6	54.2	49.2	43.1	39.7	22.4	5.2	19.0	28.8	61.0	69.5
6	52.5	52.5	52.5	49.2	37.9	44.8	15.5	12.1	20.7	35.6	64.4	69.5
7	62.7	52.5	45.8	45.8	36.2	29.3	13.8	13.8	27.6	37.3	66.1	67.8
8	64.4	55.9	54.2	55.9	44.8	19.0	20.7	6.9	20.7	35.6	55.9	67.8
9	64.4	59.3	62.7	61.0	42.2	31.0	19.0	5.2	24.1	40.7	64.4	64.4
10	72.9	54.2	57.6	54.2	39.7	37.9	22.4	6.9	31.0	47.5	57.6	59.3
11	64.4	64.4	61.0	47.5	39.7	34.5	8.6	8.6	20.7	44.1	64.4	57.6
12	67.8	69.5	59.3	45.8	44.8	39.7	8.6	10.3	17.2	47.5	61.0	55.9
13	67.8	52.5	62.7	42.4	43.1	36.2	6.9	15.5	25.9	35.6	67.8	55.9
14	61.0	64.4	61.0	44.1	51.7	44.8	12.1	13.8	36.2	28.8	64.4	54.2
15	69.5	69.5	62.7	50.8	43.1	27.6	17.2	15.5	36.2	23.7	61.0	55.9
16	74.6	71.2	52.5	52.5	32.8	34.5	10.3	19.0	29.3	23.7	61.0	52.5
17	66.1	62.7	52.5	45.8	36.2	29.3	12.1	10.3	34.5	37.3	79.7	52.5
18	55.9	61.0	54.2	52.5	31.0	24.1	6.9	10.3	34.5	35.6	64.4	61.0
19	50.8	61.0	47.5	55.9	48.3	27.6	10.3	20.7	32.8	35.6	71.2	59.3
20	52.5	52.5	50.8	49.2	29.3	24.1	13.8	10.3	32.8	50.8	62.7	64.4
21	54.2	49.2	50.8	55.9	32.8	20.7	8.6	17.2	24.1	49.2	64.4	67.8
22	64.4	57.6	66.1	50.8	43.1	25.9	3.4	19.0	24.1	49.2	57.6	61.0
23	66.1	59.3	62.7	55.9	36.2	27.6	5.2	25.9	20.7	50.8	66.1	62.7
24	64.4	55.9	61.0	50.8	41.4	34.5	8.6	29.3	25.9	44.1	72.9	62.7
25	59.3	47.5	59.3	44.1	36.2	32.8	12.1	27.6	34.5	55.9	64.4	57.6
26	57.6	59.3	55.9	45.8	46.6	24.1	10.3	20.7	34.5	47.5	59.3	66.1
27	57.6	55.9	52.5	50.8	39.7	29.3	12.1	19.0	25.9	49.2	71.2	66.1
28	50.8	57.6	50.8	55.9	39.7	37.9	10.3	27.6	29.3	57.6	55.9	66.1
29	57.6	50.0	54.2	39.0	34.5	27.6	5.2	25.9	17.2	49.2	61.0	64.4
30	54.2	---	61.0	50.8	34.5	37.9	8.6	27.6	29.3	55.9	71.2	62.7
31	64.4	---	64.4	---	36.2	---	8.6	22.4	---	52.5	---	62.7

[1]Based on observations taken at the National Weather Service office at Portland International Airport observation site between October 1940 and April 1999.

[2]February 29 probability has been calculated using 14 years due to occurrence of 14 Leap Years between 1941 and 1999.

SNOWFALL RECORDS AND EXTREMES[1]
(1949 - 1995)

	Days with Measurable[2] Snow				Greatest 24-hour			Greatest Snow Depth		
Month	Most	Year	Least	Year	Total	Day(s)	Year	Total	Day(s)	Year
January	21	1950	0	1990	10.6	13th -14th	1950	15.0	31st	1950
February	6	1990	0	1988	6.4	18th -19th	1993	14.0	1st	1950
March	8	1951	0	1990	7.7	7th - 8th	1951	5.0	8th	1951
April	—	—	—	—	Trace	multiple	—	Trace	9th	1980
May-Sept.	—	—	—	—	—	—	—	—	—	—
October	—	—	—	—	Trace	multiple	—	Trace	13th	1984
November	5	1985	0	1990	7.4	21st - 22nd	1977	5.0	23rd	1977
December	7	1968	0	1990	8.0	19th	1964	11.0	20th	1964
Season (Jul-Jun)	24	1949 - 1950	0	1982 - 1983	10.6	January 13th - 14th, 1950		15	January 31st, 1950	

[1]All precipitation measurements are in units of inches.
[2]Measurable snowfall is defined as snowfall of 0.01 inch or more.

EARLIEST AND LATEST SNOWFALL[1] OF THE WINTER SEASON
(October 1940 - May 1999)

Latest Snowfall in Winter Season of...			Earliest Snowfall in Winter Season of...		
	Snowfall	Date		Snowfall	Date
Trace or more	0.7	Mar. 10, 1951	*Trace or more*	Trace	Oct. 31st, 1955
0.1 inch or more	0.7	Mar. 10, 1951	*0.1 inch or more*	1.1	Nov. 11th, 1955
1.0 inch or more	7.6	Mar. 8, 1951	*1.0 inch or more*	1.1	Nov. 11th, 1955
2.0 inches or	7.6	Mar. 8, 1951	*2.0 inches or*	8.0	Dec. 19th, 1964

[1]All precipitation measurements are in units of inches.

HISTORY OF A WHITE CHRISTMAS

A white Christmas in the Portland area is rare. In fact, between the years of 1940 and 1999, snowflakes have fallen only five times on Christmas day, and only five times on Christmas Eve. Here is a list of the dates on which snow has fallen at the National Weather Service office at the Portland Int'l airport and snowfall totals.

December 24th:
1998 2.0 inches snowfall
1990 0.3 inch snowfall
1983 0.3 inch snowfall
1974, 1988 Trace of snow

December 25th: Trace of snowfall on these years:
1990, 1983, 1965, 1954 and 1952
Most snowfall on these dates fell and melted almost immediately.

Records from the old National Weather Service office in downtown Portland show that there has been more snow on past Christmases. Here are the top two snowiest Christmas days in since 1870:

1937 1.3 inches snowfall ***1884 0.9 inch snowfall***

PROBABILITY OF...
receiving a Trace or more on Christmas Day 8.4%
receiving 0.1 inch or more on Christmas Day less than 1%

MOST CONSECUTIVE DAYS WITH MEASURABLE SNOWFALL...
(1949 - 1995)

Rank	Days	Year	Month/Day	Daily Snowfall (inches)
1.	9	1950	Jan. 11th - 19th	0.2/0.7/7.5/3.3/2.8/1.6/0.3/1.8/4.1
1.	9	1950	Jan. 23rd - 31st	0.2/0.7/0.7/2.8/5.4/1.2/1.6/2.6/0.2
3.	8	1951	March 3rd - 10th	0.6/0.4/1.8/0.5/0.5/7.6/0.8/0.7
4.	5	1968-69	Dec. 27th - Jan. 1st	0.7/0.4/3.2/6.0/3.4/1.1
5.	4	1993	Feb. 18th - 21st	0.3/6.1/0.1/0.1
5.	4	1980	Jan. 7th - 10th	2.2/3.3/5.5/0.6
5.	4	1954	Jan. 23rd - 26th	0.3/0.4/2.5/1.0
5.	4	1952	Jan. 3rd - 6th	4.1/0.5/2.7/0.3
9.	3	1992-93	Dec. 31st - Jan. 2nd	2.5/0.1/0.3
9	3	1990	Feb. 14th - 16th	0.2/2.3/0.1
9.	3	1986	Feb. 11th - 13th	1.1/0.5/1.4
9.	3	1982	Jan. 3rd - 5th	1.0/0.1/1.0
9.	3	1971	Feb. 25th - 27th	0.3/0.6/0.8
9.	3	1971	Jan. 12th - 14th	3.5/3.3/0.1

6 additional strings of 3 days have occurred between 1950 and 1969.
Strings of 1 to 2 days have occurred often.

MOST CONSECUTIVE DAYS WITH A SNOW DEPTH OF...
(1949 - 1995)

	Number	Dates		Daily Snow Depth (inches)
1.0 Inch or More	29 days	1950	Jan. 13th - Feb. 10th	7/8/7/8/8/8/13/12/8/6/4/5/4/6/11/12/12/15/15/14/13/13/14/13/9/6/3/2/1
	12 days	1956	Jan. 27th - Feb. 8th	9/6/3/2/2/1/1/1/1/1/1/1
	10 days	1968-69	Dec. 29th - Jan. 7th	1/5/9/9/7/7/7/5/4/1
	8 days	1969	Jan. 26th - Feb. 3rd	4/8/6/6/10/8/5/3
	6 days	1952	Jan. 3rd - 7th	1/5/4/5/4/1
	5 days	1980	Jan. 8th -14th	2/5/10/7/2
	5 days	1960	Jan. 19th - 26th	4/5/5/2/1

3-4 days occurred often, especially during the 1960s.

	Number	Dates		Daily Snow Depth (inches)
6.0 Inches or More	13 days	1950	Jan. 26th - Feb 7th	6/11/12/12/15/15/14/13/13/14/13/9/6
	10 days	1950	Jan. 13th - 22nd	7/8/7/8/8/8/13/12/8/6
	5 days	1968-69	Dec. 31st - Jan. 4th	9/9/7/7/7
	2 days	1980	Jan. 10th - 11th	10/7
	2 days	1964	Dec. 19th -20th	11/7
	2 days	1956	Jan. 27th - 28th	11/7

	Number	Dates		Daily Snow Depth (inches)
12.0 Inches or More	9 days	1950	Jan. 28th - Feb. 5th	12/12/15/15/14/13/13/14/13
	2 days	1950	Jan. 19th -20th	13/12

Significant snowfall in the Portland metropolitan area usually occurs over Clark county, located just north of the Portland International airport, and to the east of the airport across the eastern Portland area such as Troutdale, Vancouver and Fairview.

MONTHLY AND SEASONAL SNOWFALL

(Totals are in inches, and includes accumulations of snow, sleet, ice pellets, and hail)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
1871-72	Records begin Oct			0	5.0	25.0	4.6	15.4	0	0	0	0	50.0
1872-73	0	0	0	0	8.6	20.0	0	1.7	0	0	0	0	30.3
1873-74	0	0	0	0	trace	4.9	12.9	3.1	15.2	0	0	0	36.1
1874-75	0	0	0	0	0	0	3.2	0	0	0	0	0	3.2
1875-76	0	0	0	0	7.8	13.6	5.5	2.0	0	0	0	0	28.6
1876-77	0	0	0	0	0	0	trace	3.4	0	0	0	0	3.4
1877-78	0	0	0	0	0	0	1.0	0	0	0	0	0	1.0
1878-79	0	0	0	0	0	0.5	2.0	9.0	0	0	0	0	11.5
1879-80	0	0	0	0	0	9.1	9.5	0.1	0.1	0	0	0	18.8
1880-81	0	0	0	0	0.4	6.1	4.7	10.6	trace	0	0	0	21.8
1881-82	0	0	0	0	0	0.4	4.7	7.2	0	0	0	0	12.3
1882-83	0	0	0	0	0	0	2.0	1.0	0	0	0	0	3.0
1883-84	0	0	0	0	0	0	7.0	18.5	0	0	0	0	25.5
1884-85	0	0	0	0	0	34.1	1.0	0	0	0	0	0	35.1
1885-86	0	0	0	0	0	0	9.3	0	0	0	0	0	9.3
1886-87	0	0	0	0	0	0	12.3	18.9	trace	0	0	0	31.2
1887-88	0	0	0	0	2.0	trace	12.0	0	0	0	0	0	14.0
1888-89	0	0	0	0	0	0	0.3	1.0	0	0	0	0	1.3
1889-90	0	0	0	0	0	5.9	35.3	0.4	trace	trace	0	0	41.6
1890-91	0	0	0	0	0	0	0	11.4	1.6	0	0	0	13.0
1891-92	0	0	0	0	0	0.7	0	0	0	0	0	0	0.7
1892-93	0	0	0	0	0	29.0	11.8	20.0	0.1	0	0	0	60.9
1893-94	0	0	0	0	trace	0	4.1	10.0	2.4	0	0	0	16.5
1894-95	0	0	0	0	0	1.0	20.4	1.5	trace	0.1	0	0	23.0
1895-96	0	0	0	0	0	1.1	6.0	0.8	1.2	0	0	0	9.1
1896-97	0	0	0	0	2.0	0	1.8	trace	5.0	0	0	0	8.8
1897-98	0	0	0	0	3.0	0.2	1.8	trace	1.5	0	0	0	6.5
1898-99	0	0	0	0	0.3	5.7	11.6	5.8	0.4	0	0	0	23.8
1899-00	0	0	0	0	0	0	0	1.4	0	0	0	0	1.4
1900-01	0	0	0	0	0	0	15.7	trace	0	0.2	0	0	15.9
1901-02	0	0	0	0	0	trace	6.8	0.4	trace	trace	0	0	7.2
1902-03	0	0	0	0	0	0.7	0.8	0.6	2.6	0.2	0	0	4.9
1903-04	0	0	0	0	0	0	0.9	1.5	trace	trace	0	0	2.4
1904-05	0	0	0	0	0	trace	2.5	0.1	trace	0	0	0	2.6
1905-06	0	0	0	0	trace	trace	trace	0	4.0	0	0	0	4.0
1906-07	0	0	0	0	0	0	3.0	3.5	trace	0	0	0	6.5
1907-08	0	0	0	0	0	0.1	trace	1.8	0	0	0	0	1.9
1908-09	0	0	0	0	0	0.7	15.1	0	0	trace	0	0	15.8
1909-10	0	0	0	0	0	10.3	2.1	2.1	0	0	0	0	14.5
1910-11	0	0	0	0	0	0	5.1	0.2	0	trace	0	0	5.3
1911-12	0	0	0	0	2.2	trace	7.9	0	trace	trace	0	0	10.1
1912-13	0	0	0	0	0	trace	11.3	trace	1.2	0	0	0	12.5
1913-14	0	0	0	0	0	trace	1.5	trace	0	0	0	0	1.5
1914-15	0	0	0	0	0	trace	trace	0	0	0	0	0	Trace
1915-16	0	0	0	0	0	trace	32.9	8.2	1.9	0	0	0	43.0
Season	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Total**
Normal	0	0	0	Trace	0.4	1.4	3.3	1.0	0.4	0	0	0	6.6

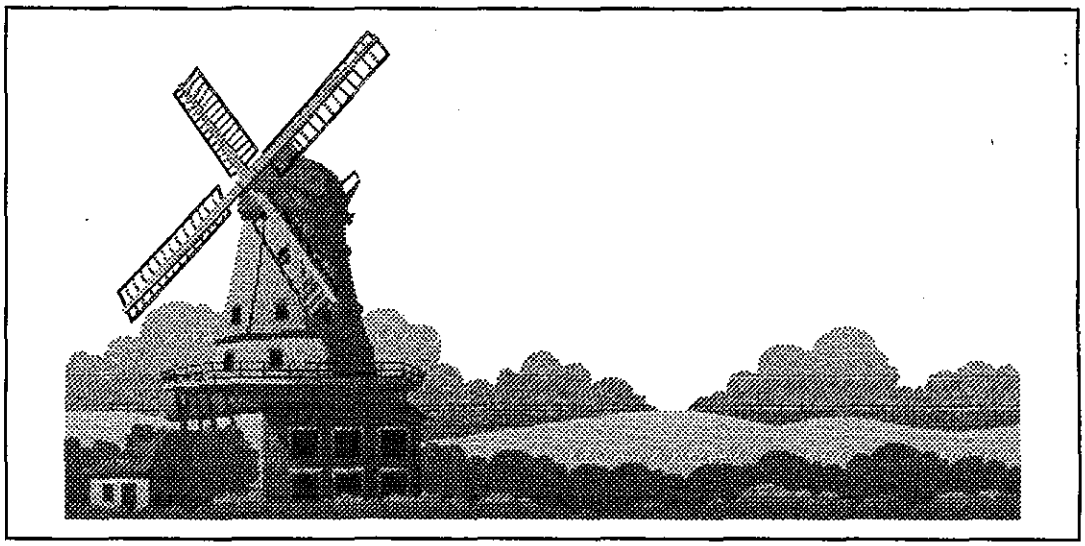
MONTHLY AND SEASONAL SNOWFALL

(continued)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
1916-17	0	0	0	0	0	1.6	4.5	13.3	0.2	0	0	0	19.6
1917-18	0	0	0	0	0	0	0	6.6	trace	0	0	0	6.6
1918-19	0	0	0	0	0	0	0	trace	0	0	0	0	trace
1919-20	0	0	0	0	0	17.5	trace	trace	1.5	trace	0	0	19.0
1920-21	0	0	0	0	trace	0.1	0.7	2.4	trace	trace	0	0	3.2
1921-22	0	0	0	0	0	4.3	1.7	trace	trace	trace	trace	0	6.0
1922-23	0	0	0	0	trace	7.9	1.0	13.3	trace	0	0	0	22.2
1923-24	0	0	0	0	0	0.1	4.8	0	trace	0.1	0	0	5.0
1924-25	0	0	0	0	0	3.7	trace	0	0	0	0	0	3.7
1925-26	0	0	0	0	0	0	0	0	0	0	0	0	0
1926-27	0	0	0	0	0	4.2	16.2	0	0	trace	0	0	20.4
1927-28	0	0	0	0	0	2.3	2.0	trace	0	trace	0	0	4.3
1928-29	0	0	0	0	0	0.2	13.2	trace	0.2	trace	trace	0	13.6
1929-30	0	0	0	0	0	trace	16.4	trace	0	0	0	0	16.4
1930-31	0	0	0	0	0	trace	0.	0	trace	0	0	0	trace
1931-32	0	0	0	0	0	1.0	9.8	4.3	trace	0	0	0	15.1
1932-33	0	0	0	0	0	1.2	8.7	2.4	trace	1.7	0	0	14.0
1933-34	0	0	0	0	0	0.1	0	0	0	0	0	0	0.1
1934-35	0	0	0	0	0	trace	6.7	0	trace	0	0	0	6.7
1935-36	0	0	0	0.6	0	0	0	3.3	1.6	5.2	0	0	10.7
1936-37	0	0	0	0	0	0.5	18.0	15.9	0	0	0	0	34.3
1937-38	0	0	0	0	0	2.4	0.9	1.4	0.7	0	0	0	5.4
1938-39	0	0	0	0	trace	0.6	trace	5.4	trace	0	0	0	6.0
1939-40	0	0	0	0	0	0	trace	0	0	0	0	0	trace
1940-41	0	0	0	0	0	0	trace	0	0	0	0	0	trace
1941-42	0	0	0	0	0	trace	0.5	trace	0	0	0	0	0.5
1942-43	0	0	0	0	0	2.0	17.3	trace	trace	0	0	0	19.3
1943-44	0	0	0	0	0	0	0.2	0	0	0	0	0	0.2
1944-45	0	0	0	0	0	0	0	0	trace	0	0	0	trace
1945-46	0	0	0	0	0	0	trace	trace	0.6	0	0	0	0.6
1946-47	0	0	0	0	0.5	0	2.0	0	0	0	0	0	2.5
1947-48	0	0	0	0	0	0	0.9	0.3	trace	trace	0	0	1.2
1948-49	0	0	0	0	0	trace	9.8	13.2	0	0	0	0	23.0
1949-50	0	0	0	0	0	0.2	41.4	2.1	0.8	0	0	0	44.5
1950-51	0	0	0	0.2	0	0	0.2	trace	12.9	0	0	0	13.3
1951-52	0	0	0	0	0	0.7	8.9	trace	trace	trace	0	0	9.6
1952-53	0	0	0	0	trace	trace	trace	trace	trace	0	0.6	0	0.6
1953-54	0	0	0	0	trace	trace	10.6	0	trace	trace	0	0	10.6
1954-55	0	0	0	0	0	1.2	1.1	1.3	0.8	trace	trace	0	4.4
1955-56	0	0	0	trace	8.2	2.0	9.3	1.1	1.8	0	0	0	22.4
1956-57	0	0	0	0	0	2.6	4.2	1.4	trace	0	0	0	8.2
1957-58	0	0	0	0	0	trace	0	0	0	0	0	0	trace
1958-59	0	0	0	0	trace	0	0.9	2.0	trace	0	0	0	2.9
1959-60	0	0	0	0	0	trace	10.3	trace	2.6	0	trace	0	12.9
1960-61	0	0	0	0	0	0	0	trace	trace	trace	0	0	trace
Season	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
Normal	0	0	0	trace	0.4	1.4	3.3	1.0	0.4	0	0	0	6.6

MONTHLY AND SEASONAL SNOWFALL
(continued)

Season	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total
1961-62	0	0	0	0	0	1.0	0.7	3.8	0.1	0	0	0	5.6
1962-63	0	0	0	0	0	0	5.0	0	0	trace	0	0	5.0
1963-64	0	0	0	0	trace	0	trace	0	trace	0	0	0	trace
1964-65	0	0	0	0	trace	11.0	trace	0	0.3	0	trace	0	11.3
1965-66	0	0	0	0	0	trace	trace	trace	0.6	0	0	0	0.6
1966-67	0	0	0	0	0	0	trace	trace	trace	trace	0	0	trace
1967-68	0	0	0	0	0	5.7	5.2	0	0	trace	0	0	10.9
1968-69	0	0	0	0	0	15.7	18.3	trace	0	0	0	0	34.0
1969-70	0	0	0	0	0	0	trace	trace	trace	trace	0	0	trace
1970-71	0	0	0	0	trace	1.4	6.9	1.7	trace	trace	0	0	10.0
1971-72	0	0	0	trace	0	4.6	0.4	trace	trace	trace	0	0	5.0
1972-73	0	0	0	0	0	6.1	0.4	trace	trace	trace	0	0	6.5
1973-74	0	0	0	0	trace	0	trace	trace	trace	0	trace	0	trace
1974-75	0	0	0	0	0	trace	trace	0.1	trace	trace	trace	0	0.1
1975-76	0	0	0	0	trace	trace	trace	trace	trace	trace	trace	0	trace
1976-77	0	0	0	0	0	0	trace	0	trace	0	trace	0	trace
1977-78	0	0	0	0	7.6	trace	0	0	0.1	trace	trace	0	7.7
1978-79	0	0	0	0	3.0	2.4	1.9	1.1	trace	trace	0	0	8.4
1979-80	0	0	0	0	0	trace	12.4	trace	trace	trace	0	0	12.4
1980-81	0	0	0	0	trace	trace	0	trace	trace	trace	trace	0	trace
1981-82	0	0	0	0	0	2.0	2.1	trace	trace	trace	0	0	4.1
1982-83	0	0	0	trace	trace	0	0	0	trace	trace	trace	0	trace
1983-84	0	0	0	0	0	2.3	0.1	trace	trace	0	trace	0	2.4
1984-85	0	0	0	trace	0	2.8	trace	4.8	trace	trace	0	0	7.6
1985-86	0	0	0	0	3.4	1.6	trace	5.8	trace	trace	trace	0	10.8
1986-87	0	0	0	0	trace	0.1	0	trace	trace	trace	trace	0	0.1
1987-88	0	0	0	0	0	2.9	0.6	0	0	trace	trace	0	3.5
1988-89	0	0	0	0	trace	trace	0.9	0.3	2.0	trace	0	0	3.2
1989-90	0	trace	0	trace	0	0	trace	8.3	trace	0	0	0	8.3
1990-91	0	0	0	0	0	1.3	0.6	0	trace	trace	0	0	1.9
1991-92	0	0	0	0	trace	0	0	0	0	trace	0	0	trace
1992-93	0	0	0	0	trace	4.6	2.9	6.6	0	trace	trace	0	14.1
1993-94	0	0	0	0	trace	trace	0	2.6	trace	trace	0	0	2.6
1994-95	0	0	0	0	0.3	1.1	trace	3.6	0.4	trace	0	0	5.4
1995-96	0	0	0	0	0	trace	---	---	---	---	---	---	---
	In December 1995, ASOS, the Automatic Surface Observation System became operational. Unfortunately, it was not equipped to measure snowfall amounts.												
Season	**Jul**	**Aug**	**Sep**	**Oct**	**Nov**	**Dec**	**Jan**	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Total**
Normal	***0***	***0***	***0***	***trace***	***0.4***	***1.4***	***3.3***	***1.0***	***0.4***	***0***	***0***	***0***	***6.6***



OTHER CLIMATIC DATA AND RECORDS

DAYS WITH DENSE FOG[1]

(1949-May 1999)

(dense fog is that which reduces horizontal visibility to 1/4 mile or less)

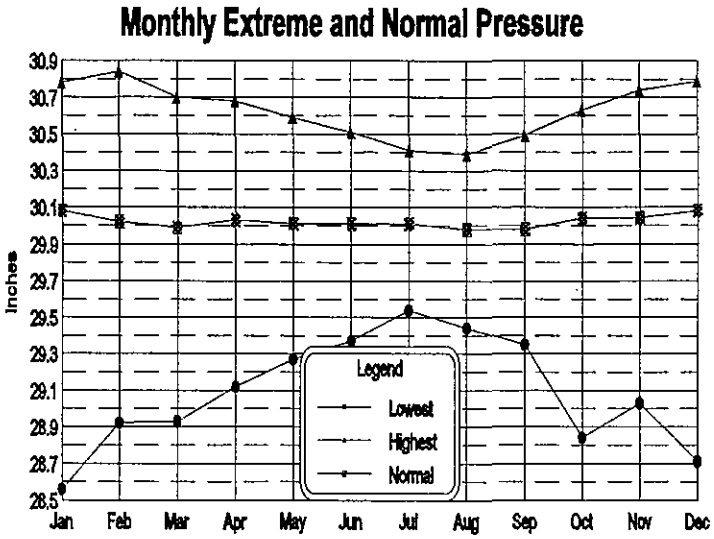
Month	*Normal*	Greatest	Year	Least	Year
January	***4.3***	11	1963, 1999	0	1957[2]
February	***3.7***	9	1988	0	1983[2]
March	***2.4***	6	1981	0	1999[2]
April	***1.1***	4	1977	0	1999[2]
May	***0.2***	2	1965	0	1999[2]
June	***0.1***	1	1985[2]	0	1998[2]
July	***0.1***	1	1983	0	1998[2]
August	***0.2***	4	1984	0	1998[2]
September	***2.7***	10	1950	0	1998[2]
October	***7.2***	16	1949	1	1975
November	***6.1***	18	1976	0	1973
December	***4.9***	16	1976	0	1971[2]
Annual	***32.9***	66	1981	14	1995

[1]Normal values are the 1961-90 climatic normals. Greatest and least values are for the period of record 1949-May1999.
[2]Occurrence has repeated, with the most recent year of occurrence listed.

MOST CONSECUTIVE DAYS WITH...

DENSE FOG (1949-May 1999)	10 days	1986	October 14th -23rd
	8 days	1949	October 18th - 25th
	7 days	1985	February 12th -18th
	6 days	1999	January 8th - 13th
	5 days	1993	November 7th -11th
	5 days	1993	December 16th - 20th
	4 days	1991	January 16th - 19th
	4 days	1984	December 5th - 8th
	3 days	*common occurrence during autumn and early winter*	
LIGHT and DENSE FOG (1949-May 1999)	35 days	1998-1999	December 23rd - January 26th
	32 days	1997-1998	December 14th - January 14th
	23 days	1996	November 6th - 28th
	21 days	1997	October 19th - November 11th
	20 days	1983	October 13th - November 1st
	17 days	1996-1997	December 19th - January 4th
	17 days	1993	November 5th -21st
	16 days	1998	October 26th - November 10th
	15 days	1998	November 19th - December 3rd
	15 days	1983-1984	December 29th - January 13th
	14 days	1997	February 18th - March 3rd
	14 days	1995	November 21st - December 4th
	13 days	1989	December 19th -31st
	12 days	1997	September 29th - October 10th
	12 days	1997	March 5th - 16th
	11 days	1959	November 28th - December 8th
	10 days	1995	November 10th - 19th
	strings of 8 to 10 days are common, especially during autumn to early winter.		

MONTHLY NORMAL AND EXTREME PRESSURE VALUES[1]

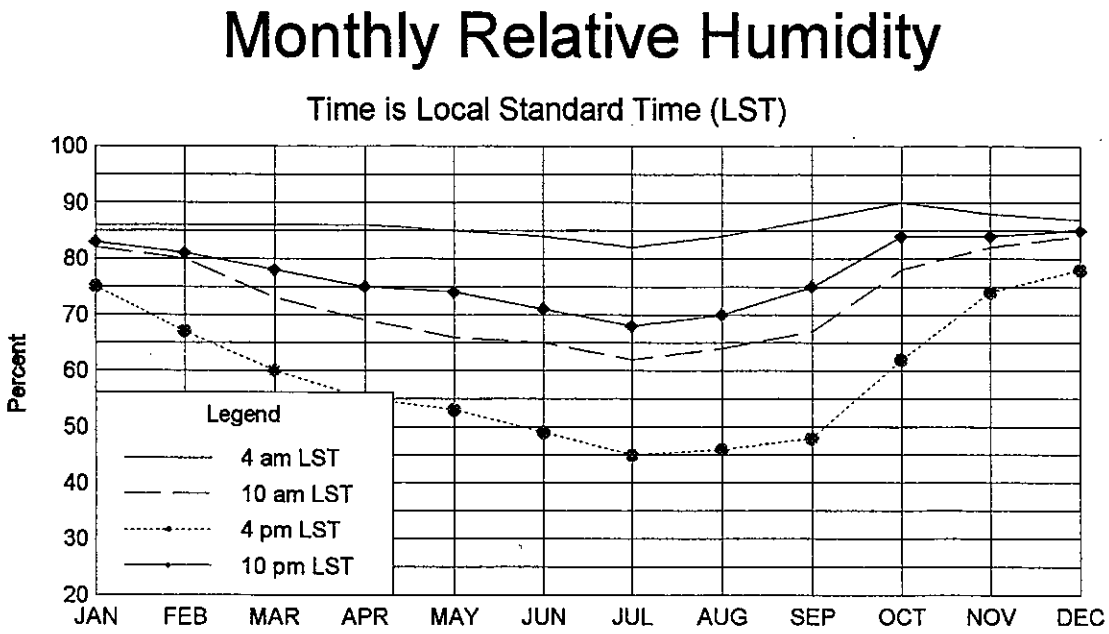


Monthly Average and Extremes of Pressure
(1871 to May 1999)

Month	*Avg (in.)*	*Avg (mb)*	Highest	Year	Lowest	Year
January	*30.08*	*1018.1*	30.78	1888 & 1963	28.56	1880
February	*30.02*	*1016.6*	30.84	1880	28.92	1958
March	*29.99*	*1015.2*	30.70	1955	28.93	1904
April	*30.03*	*1016.7*	30.68	1936	29.12	1958
May	*30.01*	*1016.2*	30.59	1931	29.27	1906
June	*30.01*	*1016.1*	30.51	1895	29.37	1907
July	*30.01*	*1016.2*	30.41	1875 & 1944	29.54	1879
August	*29.98*	*1015.2*	30.39	1876	29.44	1951
September	*29.98*	*1015.5*	30.49	1937	29.35	1920
October	*30.04*	*1017.2*	30.63	1932 & 1935	28.84	1962
November	*30.04*	*1017.2*	30.74	1928	29.03	1871
December	*30.08*	*1018.4*	30.79	1879	28.71	1995
Annual	*30.02*	*1016.5*	30.84	February 2nd, 1880	28.71	December 12th, 1995

[1]Normal values are the 1961-90 climatic normals. Extreme values are for the period of record 1870 to May 1999. All measurements of pressure are represented in units of inches.

MONTHLY RELATIVE HUMIDITY DEPENDING ON TIME OF DAY[1]



Monthly Normal Relative Humidity (%) Based on Time of Day[1]

Time is Local Standard Time (LST)

TIME	JAN	FEB	MAR	APR	MAY	JUN
4 AM	86	86	86	86	85	84
10 AM	82	80	73	69	66	65
4 PM	75	67	60	55	53	49
10 PM	83	81	78	75	74	71

TIME	JUL	AUG	SEP	OCT	NOV	DEC	Annual
4 AM	82	84	87	90	88	87	86
10 AM	62	64	67	78	82	84	73
4 PM	45	46	48	62	74	78	59
10 PM	68	70	75	84	84	85	77

[1] Normals are the 30 year climatic normals, based on 1961-90 data.

WIND RECORDS AND DATA[1]

	Climatic Averages		Extremes of Wind (1951-June 1999)							
			Highest Avg.		Fastest Mile[2]			Peak Wind Gust		
Month	*Dir.*	*Speed*	Speed	Year	Dir.	Speed	Year	Dir.	Speed	Year
Jan.	*ESE*	*9.9*	15.1	1995	S	54	1951	SW	63	1990
Feb.	*ESE*	*9.2*	12.2	1993	SW	61	1958	S	68	1965
March	*ESE*	*8.3*	10.9	1956	S	57	1963	S	71	1971
April	*NW*	*7.4*	9.3	1981	S	60	1957	S	63	1972
May	*NW*	*7.1*	8.6	1963	SW	42	1960	SW	48	1971
June	*NW*	*7.2*	9.1	1974	SW	40	1958	SW	40	1994, '97
July	*NW*	*7.6*	8.9	1962	SW	33	1983	SW	35	1983
Aug.	*NW*	*7.1*	8.7	1966	SW	29	1961	E	38	1966
Sept.	*NW*	*6.5*	8.0	1961	S	61	1963	SW	61	1963
Oct.	*ESE*	*6.5*	8.4	1975	S	88	1962	S	104[3]	1962
Nov.	*ESE*	*8.6*	11.2	1979	SW	56	1961	S	71	1981
Dec.	*ESE*	*9.5*	12.9	1977	S	57	1951	S	74	1995[4]
Annual	*ESE*	*7.9*	8.8	1995	S	88	Oct 1962	S	104[3]	Oct 1962

[1]Wind Speeds are in units of miles per hour (mph). Dir is an abbreviation for direction. Climatic Records are 1961-90.
[2]Fastest Mile is the speed it takes for one mile of wind to pass a given point in one minute.
[3]Wind equipment recorded 104 mph before being damaged during the infamous Columbus Day storm.
[4]Peak wind gust recorders recorded 74 mph, while the ASOS (Automatic Surface Observation System) recorded 62 mph.

FIVE WINDIEST MONTHS AND YEARS[5]

(1951-June 1999)

January		*February*		*March*		*April*		*May*		*June*	
15.1	1995	12.2	1993	10.9	1956	9.3	1981	8.6	1963	9.1	1974
13.5	1993	12.1	1999	10.2	1989	9.2	1958	8.5	1974	8.8	1979
12.7	1961	12.1	1989	10.1	1995	8.9	1993	8.4	1975	8.6	1962
12.2	1973	11.4	1982	9.8	1975	8.5	1955	8.2	1978	8.5	1977
12.0	1974	11.0	1980	9.7	1957	8.4	1980	8.1	1979	8.3	1981

July		*August*		*September*		*October*		*November*		*December*	
8.9	1962	8.7	1966	8.0	1961	8.4	1975	11.2	1979	12.9	1977
8.8	1981	8.3	1975	7.9	1971	8.3	1957	11.0	1963	12.0	1955
8.7	1967	8.2	1994	7.8	1981	8.2	1982	10.7	1977	11.9	1972
8.6	1961	8.1	1963	7.7	1979	8.0	1963	10.4	1983	11.8	1968
8.5	1994	8.0	1981	7.4	1977	7.8	1979	10.1	1970	11.7	1964

Top Five Most Windy Years

Avg. Annual speed 7.9 mph

11.2	1982
8.9	1981
8.9	1979
8.8	1975
8.7	1977

Top Five Least Windy Years

Avg. Annual speed 7.9 mph

6.3	1952
6.5	1951
6.8	1969
7.0	1953
7.4	1970

[5]All wind speeds are in units of miles per hour (mph).

FREQUENCY of WIND DIRECTION based on TIME OF DAY

How to use this and the following tables: For July, the wind at 1300 LST (1 pm) is from the NW about 22.5% of the time. Using the table on the next page, we can see the average wind from the NW is 7.7 knots or 8.9 mph.

LST		Calm	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
Jan	07	12.4	1.3	0.6	1.4	2.5	7.8	23.4	12.6	4.3	8.0	8.2	3.8	2.1	2.7	3.4	2.9	2.2
	13	4.8	1.9	0.8	1.4	1.9	9.3	22.9	12.2	3.5	7.1	10.7	5.4	3.3	3.8	5.4	3.8	2.1
	19	9.1	0.8	0.4	0.8	2.0	8.3	31.4	14.5	3.4	7.5	7.9	4.3	1.9	2.3	2.3	1.9	1.2
Feb	07	16.4	1.1	1.1	1.0	1.9	5.7	22.0	11.6	4.6	8.6	9.2	4.1	2.0	3.2	3.7	3.1	1.3
	13	4.1	2.3	1.0	1.7	2.9	7.8	18.1	11.1	2.8	7.2	11.4	5.6	3.4	5.3	6.5	5.6	3.1
	19	10.2	1.8	0.6	0.8	1.6	7.1	25.6	14.2	3.9	7.8	7.7	3.3	2.8	3.2	4.6	3.0	2.0
Mar	07	19.4	1.3	0.3	0.7	1.3	4.7	17.8	8.5	3.9	10.2	11.1	4.1	3.2	4.3	4.3	3.4	2.2
	13	2.9	4.3	2.3	1.6	4.5	6.7	9.1	4.7	1.7	9.0	11.3	7.3	5.6	5.8	10.6	6.8	5.2
	19	8.5	3.2	1.2	1.0	2.8	6.5	15.0	7.1	4.2	7.4	7.5	3.8	4.7	5.3	7.5	8.1	5.8
Apr	07	18.9	2.0	0.6	1.0	1.3	3.1	13.0	6.8	4.8	10.1	10.1	3.3	2.8	4.9	7.4	7.0	3.0
	13	3.3	5.8	2.9	3.6	2.8	5.2	5.0	2.4	1.8	7.7	10.0	7.4	7.3	6.3	12.5	8.8	7.0
	19	6.0	5.1	1.0	1.4	3.2	5.7	6.7	3.5	2.1	5.9	5.1	4.5	4.9	5.8	10.4	16.2	12.1
May	07	16.5	4.2	1.5	1.0	1.6	4.1	5.7	4.5	4.3	8.9	8.5	4.5	2.8	3.8	8.8	11.9	7.8
	13	2.0	6.5	3.3	3.4	3.2	4.5	2.5	2.1	1.9	5.3	6.6	5.8	5.8	6.8	16.1	15.6	9.1
	19	3.7	8.0	1.9	1.4	2.1	3.5	4.7	1.5	1.5	3.4	2.5	3.2	3.7	5.5	10.6	21.7	21.3
Jun	07	16.4	9.2	2.1	2.3	2.1	2.7	4.5	3.0	3.6	7.8	7.3	3.8	1.8	2.7	5.2	12.2	12.6
	13	1.8	7.3	3.9	3.1	3.0	2.3	1.7	1.0	1.4	4.6	6.0	3.8	5.1	7.7	17.2	18.8	11.8
	19	3.2	9.9	1.3	0.6	1.0	2.4	2.3	0.8	1.1	2.8	2.8	2.1	2.7	4.9	10.8	25.5	25.5
Jul	07	10.6	12.9	4.2	2.5	2.1	2.0	3.2	2.1	3.0	4.5	3.2	1.6	2.1	3.1	8.0	16.1	18.7
	13	1.7	7.9	3.6	2.5	2.5	1.8	0.9	0.5	0.8	2.5	2.3	2.3	3.4	7.6	22.5	22.5	15.5
	19	1.2	9.9	1.3	0.5	0.8	1.4	1.0	0.8	0.4	1.4	0.9	1.0	1.9	2.9	7.5	31.3	36.6
Aug	07	15.0	9.6	3.8	2.4	1.2	2.6	4.4	5.4	4.4	5.9	3.8	2.5	1.9	3.2	6.3	13.9	13.9
	13	1.5	7.5	2.9	2.7	2.3	2.2	1.0	0.8	1.2	3.2	3.1	2.3	2.9	7.7	23.4	23.4	12.0
	19	1.6	8.5	1.1	0.9	1.4	1.4	1.8	1.2	0.6	1.5	1.4	1.4	1.2	3.6	8.2	29.6	34.5
Sep	07	18.8	4.4	2.4	1.1	0.9	2.1	8.2	8.0	5.7	7.0	5.2	4.5	3.1	6.5	8.4	8.0	5.8
	13	2.6	7.1	3.4	2.6	3.0	6.7	3.7	1.9	1.9	4.0	5.3	4.0	4.5	7.2	16.6	15.7	9.7
	19	6.5	5.2	1.6	1.3	2.0	5.5	6.8	2.7	1.6	3.1	2.3	2.1	3.1	5.7	11.6	21.1	18.0
Oct	07	19.8	2.7	1.9	1.2	1.2	2.5	12.5	10.5	5.4	8.7	6.1	4.0	4.2	4.9	6.5	5.4	2.6
	13	5.6	4.3	2.3	2.2	2.2	6.2	9.3	4.7	2.1	8.6	7.8	4.7	4.1	6.7	11.0	11.2	6.7
	19	14.8	2.0	0.3	1.0	2.1	5.8	13.9	9.0	3.8	4.7	4.8	3.2	3.9	6.0	9.8	9.4	5.3
Nov	07	13.2	1.5	0.9	1.3	1.4	3.8	18.2	13.3	6.0	9.6	8.4	4.2	3.5	4.8	4.9	3.8	1.3
	13	5.7	1.9	1.2	1.0	2.1	6.0	17.7	10.4	2.9	10.8	9.9	5.5	3.0	5.1	7.7	5.6	3.6
	19	12.2	1.0	0.6	0.6	0.9	5.7	24.8	14.0	4.9	8.0	8.3	4.0	2.7	3.7	3.1	4.0	1.7
Dec	06	12.7	1.6	1.0	0.9	1.5	6.0	23.6	13.9	4.8	8.9	7.8	4.7	2.7	3.6	3.3	1.8	1.6
	13	5.1	2.1	1.1	1.2	2.2	6.7	22.2	12.6	2.9	7.4	11.2	5.1	3.6	3.2	5.6	5.0	2.9
	19	9.5	0.8	0.9	0.8	1.2	7.0	28.5	16.3	3.6	6.9	8.8	3.6	2.5	2.8	2.7	2.8	1.8

[1]Data based on hourly observations between 1948 and 1995 are used for this table. Total values may not equal 100% due to rounding errors.

AVERAGE WIND SPEED based on DIRECTION and TIME OF DAY[1]

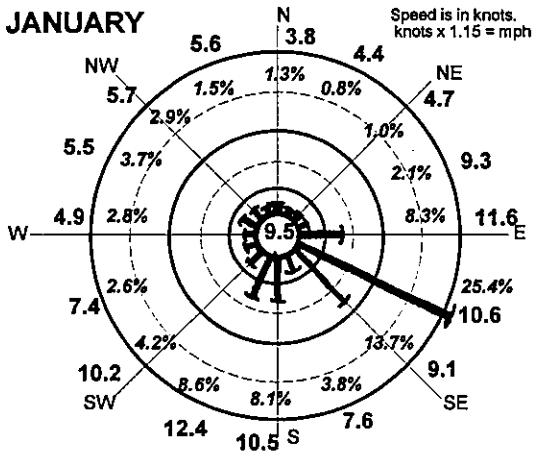
How to use: At 1300 LST (1 pm), in January, the average wind from the East is 12.1 knots (13.9 mph).
wind speed are given in knots (conversion to mph = 1.15 x knots)

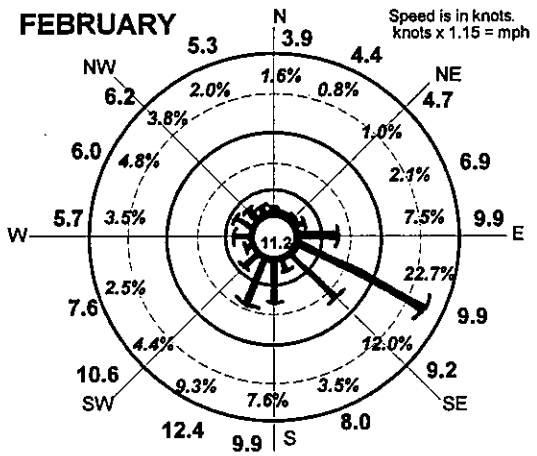
LST hour		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
Jan	07	4.2	5.0	4.9	7.8	11.4	10.2	9.0	7.7	9.4	12.4	9.3	5.2	3.7	5.6	5.3	5.3
	13	3.6	5.1	4.6	12.3	12.1	11.6	10.2	7.8	11.7	13.2	11.4	9.7	6.1	6.0	5.7	5.5
	19	3.9	4.3	4.5	9.6	11.0	10.1	9.1	8.8	10.0	12.5	10.1	7.3	4.6	5.2	5.6	5.8
Feb	07	3.9	3.6	3.8	6.1	9.5	9.5	8.4	7.4	8.8	12.5	9.9	6.3	4.6	5.2	4.9	3.9
	13	4.4	5.0	6.0	7.4	11.4	11.9	10.4	9.4	10.8	13.5	12.0	9.0	6.5	6.3	6.7	4.8
	19	3.8	5.0	4.9	8.5	10.5	10.3	9.0	7.1	9.5	11.8	10.3	8.3	5.6	6.2	7.3	6.6
Mar	07	3.6	4.2	3.8	5.1	6.9	8.3	7.2	6.4	8.7	10.5	8.2	5.3	4.5	4.9	5.9	5.3
	13	4.8	4.6	5.4	7.0	10.4	10.5	11.1	10.8	10.9	13.1	11.2	9.9	7.7	7.7	7.3	6.1
	19	6.3	4.5	5.9	5.8	8.1	8.7	8.3	7.7	9.1	10.7	10.6	7.7	6.5	7.0	7.6	6.7
Apr	07	4.0	4.4	3.5	4.4	5.7	6.9	6.0	5.8	8.0	9.1	8.2	5.8	4.7	5.2	5.5	5.4
	13	4.8	5.1	5.0	7.0	9.6	9.5	8.0	8.5	10.7	11.5	10.3	8.3	7.9	7.9	7.3	7.0
	19	6.6	5.1	4.5	5.6	7.0	7.6	7.3	7.4	8.7	9.7	8.7	8.5	6.6	7.0	8.7	8.7
May	07	3.9	4.1	3.8	4.1	4.6	6.6	5.8	6.3	6.8	8.0	7.4	5.6	4.4	5.1	5.6	5.5
	13	5.3	5.0	4.9	6.7	7.7	8.2	6.5	7.7	9.2	9.6	9.1	7.7	7.2	7.7	7.2	6.8
	19	7.9	5.6	5.9	6.8	5.9	6.8	7.1	7.3	7.5	9.5	7.8	7.7	7.5	8.0	9.3	9.2
Jun	07	4.8	4.6	4.2	4.2	3.8	5.3	5.9	5.6	6.5	8.1	7.6	5.0	4.0	4.9	6.0	6.0
	13	6.0	5.1	5.2	6.4	6.3	6.6	6.7	6.1	8.2	9.5	9.2	7.7	7.3	7.6	7.4	7.1
	19	9.0	6.5	5.0	5.8	4.9	6.5	7.3	7.8	7.4	8.4	7.8	9.0	7.1	7.9	9.5	9.8
Jul	07	5.3	4.4	4.3	4.0	4.1	5.8	6.3	6.3	5.9	6.8	6.5	4.3	4.2	5.0	5.5	5.8
	13	5.9	5.3	5.3	6.8	7.5	7.5	5.4	7.1	8.6	9.3	8.3	7.3	7.1	8.1	7.7	7.4
	19	8.9	5.9	5.7	6.7	5.6	6.3	6.9	6.2	7.3	10.9	9.0	7.3	6.5	8.7	10.2	10.3
Aug	07	4.6	4.4	4.3	3.9	3.6	5.5	5.4	5.4	5.8	6.8	5.6	4.2	4.1	4.8	5.5	5.6
	13	5.8	5.2	5.4	6.9	8.0	7.4	5.5	7.5	8.0	9.3	8.9	7.7	6.8	7.7	7.5	6.5
	19	8.0	7.3	5.0	5.9	4.9	7.7	6.4	8.2	6.0	8.1	8.3	8.0	6.2	7.8	9.5	9.6
Sep	07	4.5	4.2	4.8	5.2	5.1	5.6	5.0	5.3	5.5	7.0	5.0	4.1	4.2	5.2	5.7	5.2
	13	5.5	5.3	6.5	10.4	11.6	8.8	6.6	6.6	9.7	9.6	9.2	6.8	6.8	7.6	6.8	6.5
	19	7.7	6.7	6.2	6.7	6.8	6.6	6.8	5.1	7.0	9.9	8.4	6.7	5.1	6.7	7.7	8.6
Oct	07	4.3	4.5	4.2	4.4	6.2	7.4	6.3	5.2	7.0	8.4	6.2	4.0	4.0	4.7	5.1	6.0
	13	4.6	4.9	5.2	8.2	10.8	10.5	9.0	7.9	9.6	10.6	8.8	7.1	5.6	6.6	6.1	5.9
	19	5.1	4.8	4.4	5.7	6.9	7.4	6.5	7.1	7.5	9.4	7.8	4.8	4.7	5.9	6.6	7.5
Nov	07	4.0	4.7	4.3	6.0	10.5	9.7	7.9	6.1	8.9	10.7	7.1	5.4	4.9	5.3	5.9	6.4
	13	4.7	4.6	5.5	6.8	12.0	11.3	9.9	8.4	10.4	12.0	11.5	9.2	6.6	6.7	6.5	4.7
	19	4.5	4.3	4.9	8.6	10.3	9.9	8.1	7.8	9.5	11.1	8.2	6.6	4.8	5.8	5.2	6.1
Dec	07	3.6	4.8	5.5	6.1	10.9	10.8	9.0	6.0	8.9	12.2	9.6	6.4	4.5	5.2	6.1	5.5
	13	4.5	3.8	5.2	8.0	12.7	11.6	10.0	8.0	10.8	12.7	11.1	7.8	6.5	5.8	6.1	5.8
	19	4.5	4.2	6.2	8.9	11.2	10.6	9.2	6.9	10.3	12.2	9.0	6.2	4.9	5.6	5.6	4.7

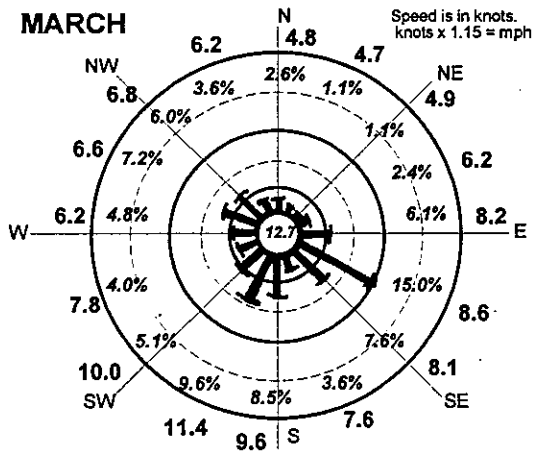
[1]Data based on hourly observations taken at the National Weather Service office at the Portland International airport between 1948 and 1995.

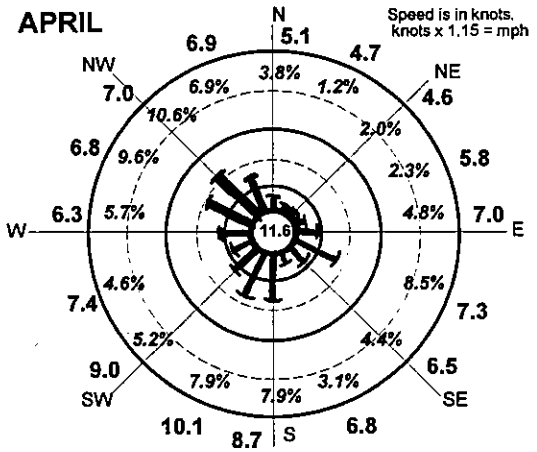
PORTLAND MONTHLY WIND ROSES

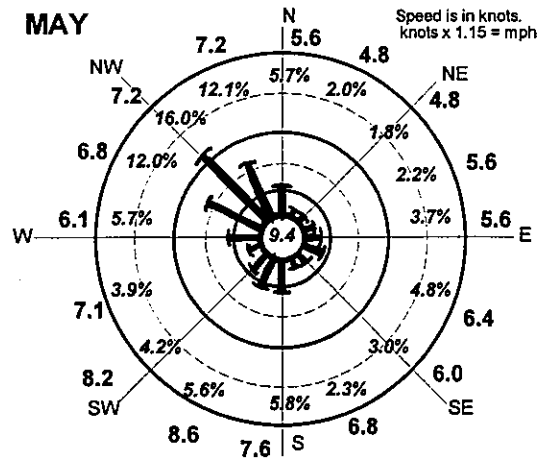
A wind rose indicates the percentage of time that the wind was from a particular direction and the average speed from that direction. Each concentric circle represents a five percent interval starting with zero at the inner circle and ending with 25 percent at the outer circle. The value in the center circle is the percent of time with calm winds. The bold lines represent the percentages of wind from various directions while the bold values along the outer circle are the average wind speeds (knots) from a particular direction. For example, in January, the wind is from the south 8.1% of the time, with an average speed of 10.5 knots (12 mph).

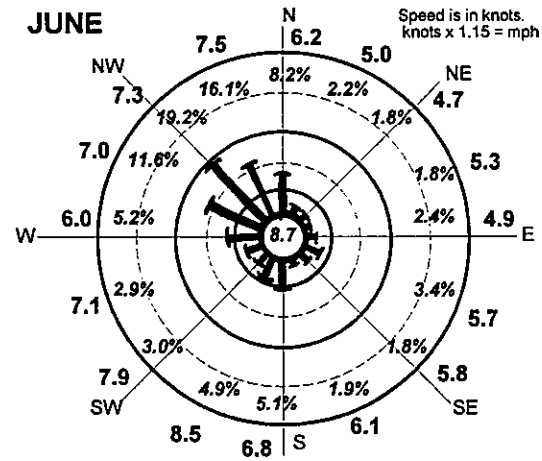




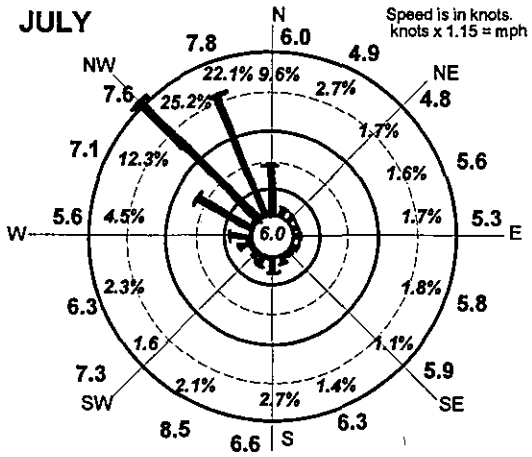


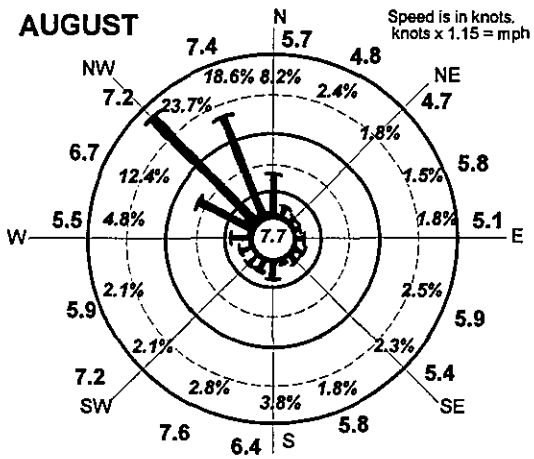


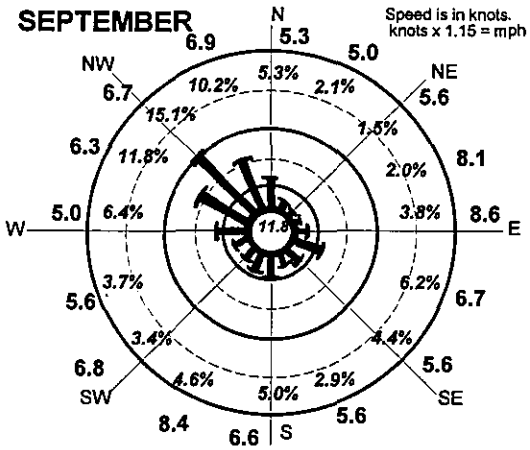


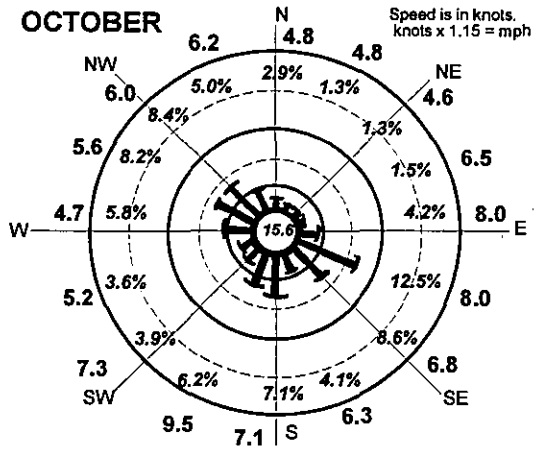


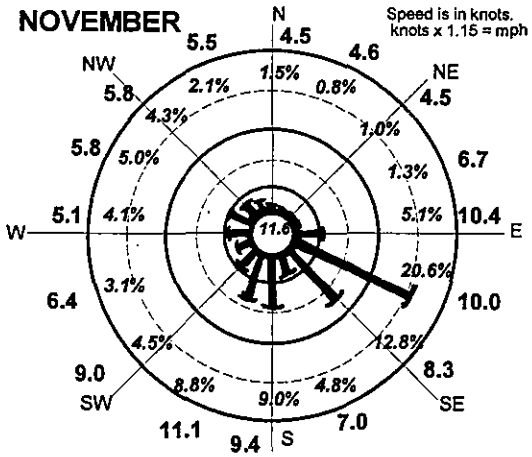
PORTLAND WIND ROSES
(continued)

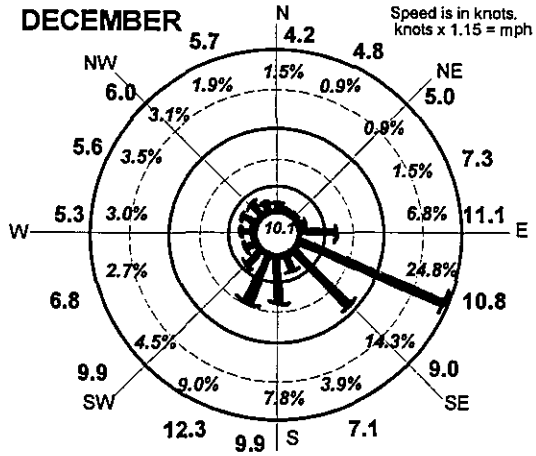












#Note: Wind roses were created using observations taken at the National Weather Service office at the Portland International Airport between 1948 and 1995.

Monthly Average, Most and Least Number Days Per Month of Clear, Partly Cloudy, and Clear

(1951 through 1995[1])

	Clear Skies (Clouds cover 0 to 0.3 of sky)					Partly Cloudy Skies (Clouds cover 0.4 to 0.7 of sky)					Cloudy Skies (Clouds cover 0.8 to 1.0 of sky)				
Month	AVG	Most	Year	Least	Year	AVG	Most	Year	Least	Year	AVG	Most	Year	Least	Year
JAN	3	10	1977	0	1990[2]	4	12	1985	0	1952	24	30	1967[2]	13	1985
FEB	2	11	1968	0	1979[2]	4	10	1981	0	1961	22	28	1961	13	1993[2]
MAR	3	12	1969	0	1989[2]	5	16	1992	1	1963[2]	23	28	1961[2]	8	1992
APR	3	12	1951	0	1994[2]	6	12	1983[2]	2	1970[2]	21	28	1953	8	1951
MAY	5	14	1992	0	1977[2]	7	13	1967	1	1960	19	30	1960	10	1963
JUN	6	15	1961[2]	1	1959[2]	8	15	1977	3	1954	16	24	1954[2]	8	1987[2]
JUL	12	23	1960	1	1963	8	15	1981	3	1973	11	22	1993	2	1958
AUG	12	19	1958	2	1954	9	15	1970	4	1992	10	23	1954	2	1970
SEP	11	19	1989[2]	0	1978	8	14	1983	3	1977	11	24	1978	4	1974
OCT	6	16	1991	0	1984	8	14	1995[2]	1	1975	17	28	1975	8	1987
NOV	2	10	1956	0	1988[2]	4	9	1976[2]	0	1965	24	28	1989[2]	12	1991
DEC	3	9	1985	0	1991[2]	5	13	1975	0	1966[2]	23	31	1966	11	1975
Annual	67	92	1970	47	1983[2]	71	98	1985	47	1953	227	263	1953	181	1985

[1]Due to ASOS technical difficulty, complete sky observations are not available after September 1995.
[2]Number of days occurred on more than one occasion. As a result the most recent occurrence is listed.

Monthly and Annual Sunshine Received

(1951-1995)

	% of Possible Sunshine					Total Minutes of Sunshine					
Month	Avg.	Most	Year	Least	Year	Possible	Average	Most	Year	Least	Year
Jan	28 %	56 %	1980	7	1982	17,060	4,800	9,498	1980	1,225	1982
Feb	38 %	63	1987	7	1961	17,600	6,688	11,069	1980[1]	1,260	1961
Mar	48 %	79	1978	20	1957	22,000	10,560	17,455	1978	4,500	1957
April	52 %	76	1977	22	1963	24,430	12,704	18,517	1977	5,460	1963
May	57 %	82	1979	27	1962	27,750	15,818	22,762	1979	7,440	1962
June	56 %	88	1987	27	1953	28,115	15,744	24,680	1987	7,860	1953
July	69 %	88	1984	34	1993	28,400	19,596	25,095	1984	9,632	1993
Aug	66 %	89	1984	40	1954	26,300	17,358	23,327	1984	10,440	1954
Sept	62 %	81	1975	36	1959	22,500	13,950	18,180	1975	8,100	1959
Oct	44 %	69	1978	14	1956	20,300	8,932	14,083	1978	2,820	1956
Nov	28 %	54	1961	11	1971	17,100	4,788	9,240	1961	1,860	1971
Dec	23 %	60	1985	8	1981	16,400	3,772	9,826	1985	1,292	1981
Annual	48 %	64 %	1987	36	1955	267,955	128,618	172,351	1987	95,760	1955

[1]February % and minutes total different due to 1980 being a leap year, thus more minutes, but not more %.

FREQUENCY OF HOURLY TOTAL SKY COVER AMOUNTS

(based on hourly observations from 1948-1995)

How to use these tables: Each table represents a month of hourly observations, categorized into groups of sky coverage. For a specified hour of the day, sky coverage is classified as clear, scattered, broken and overcast along with their respective percentages. For example, at 7 am local time in March, clear skies occurred 6.3 percent of the time while 65.9 percent of the time, skies were overcast.

CLR = Clear skies, where less than 0.1 of sky is covered clouds.
SCT = Scattered clouds, where 0.1 to less than 0.6 of the sky is covered clouds.
BKN = Broken clouds, where 0.6 to less than 0.9 of the sky is covered clouds.
OVC = Overcast skies, where greater than 0.9 of the sky is covered clouds.

JANUARY

Hour (LST)	CLR	SCT	BKN	OVC
0100	13.3	8.0	12.1	66.6
0400	11.4	8.2	10.8	69.6
0700	9.1	7.9	12.6	70.4
1000	7.1	8.2	14.3	70.4
1300	7.3	9.0	16.7	67.1
1600	7.5	9.7	14.2	68.6
1900	12.4	9.5	11.8	66.3
2200	15.7	8.5	11.3	64.5
All Day	10.5	8.6	13.0	67.9

FEBRUARY

Hour (LST)	CLR	SCT	BKN	OVC
0100	16.6	10.9	13.9	58.7
0400	13.0	7.8	12.4	66.7
0700	7.7	9.4	18.2	64.7
1000	7.3	8.0	16.7	68.0
1300	7.8	10.5	18.6	63.0
1600	8.0	11.7	18.7	61.7
1900	11.5	14.5	16.0	58.1
2200	16.1	12.3	14.2	57.3
All Day	11.0	10.6	16.1	62.3

MARCH

Hour (LST)	CLR	SCT	BKN	OVC
0100	19.8	9.7	15.9	54.5
0400	15.2	9.5	14.0	61.3
0700	6.3	10.0	17.8	65.9
1000	6.7	10.8	18.5	63.9
1300	8.4	11.9	23.2	56.6
1600	6.8	13.8	25.1	54.3
1900	9.4	15.0	20.9	54.7
2200	16.4	15.9	17.4	50.2
All Day	11.1	12.1	19.1	57.7

APRIL

Hour (LST)	CLR	SCT	BKN	OVC
0100	19.6	13.2	18.6	48.7
0400	16.7	13.0	15.5	54.9
0700	8.2	9.9	19.3	62.6
1000	8.0	10.7	23.5	57.8
1300	8.6	14.2	25.2	52.1
1600	8.7	14.0	25.7	51.6
1900	8.9	16.7	25.4	49.0
2200	18.9	17.3	18.9	45.0
All Day	12.2	13.6	21.5	52.7

MAY

Hour (LST)	CLR	SCT	BKN	OVC
0100	22.9	16.3	17.0	43.8
0400	15.8	14.6	18.4	51.2
0700	9.3	13.0	19.1	58.5
1000	10.4	13.9	22.0	53.7
1300	11.9	17.5	26.0	44.6
1600	11.7	18.6	27.6	42.1
1900	11.9	20.9	27.1	40.0
2200	21.8	18.9	20.2	39.1
All Day	14.5	16.7	22.2	46.6

JUNE

Hour (LST)	CLR	SCT	BKN	OVC
0100	28.8	14.8	16.3	40.1
0400	18.2	15.5	16.7	49.7
0700	11.6	14.9	17.2	56.4
1000	13.9	14.4	22.2	49.5
1300	16.7	17.4	25.7	40.1
1600	17.6	19.2	26.4	36.8
1900	19.7	20.8	25.6	33.9
2200	28.9	18.5	18.2	34.5
All Day	19.4	16.9	21.0	42.6

PERCENT FREQUENCY OF HOURLY TOTAL SKY COVER AMOUNTS
(continued)

JULY

Hour (LST)	CLR	SCT	BKN	OVC
0100	49.9	12.8	13.3	24.0
0400	34.8	15.6	14.4	35.2
0700	23.9	15.0	14.4	46.6
1000	30.6	16.4	16.6	36.5
1300	37.4	19.6	18.4	24.6
1600	40.2	20.6	19.1	20.1
1900	43.5	22.0	17.9	16.6
2200	51.8	17.3	13.3	17.7
All Day	39.0	17.4	15.9	27.7

AUGUST

Hour (LST)	CLR	SCT	BKN	OVC
0100	46.9	15.1	12.8	25.3
0400	36.2	13.7	13.5	36.6
0700	17.8	16.7	16.1	46.3
1000	25.2	17.6	18.7	38.5
1300	32.8	20.9	19.8	26.6
1600	34.5	24.7	18.8	22.0
1900	37.5	23.9	18.9	19.8
2200	49.2	16.6	13.7	20.5
All Day	35.0	18.7	16.5	29.8

SEPTEMBER

Hour (LST)	CLR	SCT	BKN	OVC
0100	44.8	14.0	12.4	28.7
0400	34.8	14.3	13.1	37.8
0700	19.2	15.2	17.4	48.2
1000	26.0	17.7	18.9	37.4
1300	31.0	21.1	19.8	28.0
1600	32.6	19.2	20.9	27.3
1900	35.9	21.7	16.5	25.9
2200	46.6	15.1	13.4	24.9
All Day	33.9	17.3	16.6	32.3

OCTOBER

Hour (LST)	CLR	SCT	BKN	OVC
0100	26.5	15.9	13.6	44.0
0400	17.8	12.7	15.8	53.7
0700	8.0	11.0	18.2	62.8
1000	12.4	13.3	17.2	57.0
1300	18.4	16.9	21.6	43.1
1600	17.7	16.8	23.1	42.4
1900	24.8	17.7	16.1	41.4
2200	28.4	17.4	15.6	38.6
All Day	19.3	15.2	17.6	47.9

NOVEMBER

Hour (LST)	CLR	SCT	BKN	OVC
0100	12.4	10.1	13.8	63.7
0400	9.2	8.9	14.5	67.4
0700	5.0	8.9	16.0	70.0
1000	6.2	8.7	17.2	67.9
1300	7.2	11.4	19.4	61.9
1600	8.2	12.2	20.1	59.4
1900	12.6	11.6	16.9	58.9
2200	14.6	10.2	14.7	60.5
All Day	9.4	10.3	16.6	63.7

DECEMBER

Hour (LST)	CLR	SCT	BKN	OVC
0100	9.7	8.6	12.3	69.5
0400	9.1	7.5	11.9	71.5
0700	6.2	7.6	12.2	74.0
1000	4.7	6.7	15.1	73.6
1300	5.3	9.3	15.8	69.6
1600	5.5	9.8	17.0	67.7
1900	9.3	9.8	14.0	66.9
2200	10.4	10.2	13.0	66.4
All Day	7.5	8.7	13.9	69.9

ENTIRE YEAR

Hour (LST)	CLR	SCT	BKN	OVC
0100	26.0	12.5	14.3	47.2
0400	19.4	11.8	14.2	54.6
0700	11.1	11.6	16.5	60.8
1000	13.2	12.2	18.4	56.1
1300	16.1	15.0	20.9	48.0
1600	16.6	15.9	21.4	46.1
1900	19.9	17.0	18.9	44.2
2200	26.6	14.9	15.3	43.2
All Day	18.6	13.9	17.5	50.0

MAJOR HOLIDAY WEATHER

	New Years Day (1/1)	Valentines Day (2/14)	St Patrick's Day (3/17)	Easter Sunday	Mother's Day
Avg. High Temperature:	**44**	**51**	**56**	**59**	**66**
warmest high:	60 in 1981	63 in 1977	76 in 1947	75 to 79	91 in 1971
coldest high:	21 in 1979	34 in 1990	46 in 1945	48 to 51	51 in 1999
Avg. Low Temperature:	**34**	**36**	**39**	**40**	**46**
warmest low:	50 in 1997	52 in 1982	48 in 1990	50 to 55	58 in 1987
coldest low:	14 in 1979	16 in 1995	24 in 1955	29 to 32	35 in 1965
Average Precipitation:	**0.22"**	**0.14"**	**0.15"**	**0.10"**	**0.06"**
most precipitation:	1.03" in 1987	0.76" in 1946	0.58" in 1949	~0.90"	~ 0.50"
chance of 0.01+ inch:	**62.7%**	**64.4%**	**52.5%**	**49%**	**40%**

	Memorial Day (~5/30)	Father's Day (~6/19)	July 4th (7/4)	Labor Day (~9/4)	Halloween (10/31)
Avg. High Temperature:	**70**	**75**	**78**	**77**	**58**
warmest high:	100 in 1983	100 in 1992	97 in 1972	101 in 1944	71 in 1954
coldest high:	53 in 1976	55 in 1991	61 in 1964	62 in 1978	44 in 1955
Avg. Low Temperature:	**50**	**54**	**56**	**54**	**42**
warmest low:	62 in 1983	64 in 1982	63 in 1985	63 in 1998	55 in 1987
coldest low:	38 in 1954	43 in 1954	48 in 1977	43 in 1956	28 in 1995
Average Precipitation:	**0.06"**	**0.05"**	**0.02"**	**0.06"**	**0.13"**
most precipitation:	1.03 in 1993	1.46" in 1984	0.21" in 1998	1.18" in 1945	2.44" in 1994
chance of 0.01+ inch:	**~35%**	**~25%**	**25.9%**	**~20%**	**52.5%**

	Veteran's Day (11/11)	Thanksgiving Day (11/25)	Hannukah 1st Day (12/4)	Christmas Day (12/25) *(see also pg. 84)*
Avg. High Temperature:	**54**	**50**	**47**	**45**
warmest high:	64 in 1989	63 in 1977	64 in 1945	64 in 1980
coldest high:	41 in 1948	26 in 1985	27 in 1972	31 in 1983
Avg. Low Temperature:	**40**	**38**	**36**	**34**
warmest low:	56 in 1989	56 in 1995	55 in 1975	60 in 1980
coldest low:	26 in 1955	48 in 1983	20 in 1972	19 in 1990
Average Precipitation:	**0.16"**	**0.18"**	**0.21"**	**0.20"**
most precipitation:	2.01" in 1995	2.26" in 1945	2.08" in 1980	1.73' in 1980
chance of 0.01+ inch:	**64.4%**	**~65%**	**~70%**	**57.6%**

OTHER DAYS	Rose Parade *(also see pg 102)* (~ 6/11)
Avg. High Temperature:	**73**
warmest high:	93 in 1963
coldest high:	57 in 1933
Avg. Low Temperature:	**52**
warmest low:	66 in 1963
coldest low:	42 in 1967
Average Precipitation:	**0.07"**
most precipitation:	0.57" in 1957
chance of 0.01+ inch:	**~32%**

Portland Rose Festival Parade Weather

The annual Rose Festival Parade is held in downtown Portland during early June, a time of transition from spring into summer. The weather can be cool and rainy, or hot and dry.

27 of the past parades have had measurable rain. The wettest parade day was June 9th, 1950 when 0.57 inch of rainfall fell. The next wettest was June 12th, 1982 with 0.50 inch of rain.

The warmest parade day was June 15th, 1963 when the temperature rose to 93 degrees while the coldest day was June 9th, 1933 with a cool 57 degree high temperature. On average, parade day temperatures top in the lower 70s (70.9 degrees).

Here are some statistics: (1955-1998)				
	Cloudy Parades days...	26	Average Relative Humidity...	64%
	Partly cloudy days...	9	Chance of Rain (0.01+)...	33%
	Sunny parade days...	9	Average Wind...	NW at 7 mph
	Rainy days...	11	Average Parade Temperature...	63

Here is the early history of weather on Parade Day[1]:

Date/Year	High Temp.	Low Temp	Rainfall	Date/Year	High Temp.	Low Temp	Rainfall
June 4 1908	64	49	0	June 9 1933	57	46	0.31"
8 1909	82	51	0	14 1934	75	53	0
9 1910	74	48	0	7 1935	72	58	0
8 1911	63	47	0	12 1936	78	58	0
13 1912	66	51	0.12"	11 1937	70	55	0.40"
12 1913	73	56	0.09"	10 1938	82	48	0
11 1914	77	55	0	9 1939	71	55	Trace
10 1915	62	48	0.25"	7 1940	68	54	0.03"
8 1916	66	50	0	13 1941	69	55	0
12 1919	72	49	0.13"	7 1946	70	51	0.17"
24 1920	59	45	0.11"	13 1947	69	54	Trace
13 1923	58	49	0.03"	12 1948	66	56	0.19"
12 1924	72	56	0	10 1949	71	58	0
18 1925	74	53	0	9 1950	77	53	0.57"
16 1927	70	54	0.08"	8 1951	72	49	0
13 1930	66	50	0	13 1952	69	46	0.04"
12 1931	80	53	Trace	12 1953	61	52	0.38"
17 1932	75	46	0	12 1954	65	54	0.11

[1]Some years are not listed. This is due to no parade that year, such as during World War II, or incomplete weather data.

Here is more detailed weather history of the Rose Festival Parade Day:

Date/Year	Sky Condition	Parade Time	Temperatures Afternoon High	Temperatures Morning Low	Average Relative Humidity	Avg Wind 10 - Noon (dir/speed)		Rainfall (inches)
June 11 1955	Mostly Cloudy	58	76	66	66%	NW	8 mph	0
9 1956	Cloudy	66	77	56	66	E	6 mph	0.12
15 1957	Cloudy	58	67	50	75	NW	3 mph	Trace
14 1958	Cloudy	63	75	58	70	NW	10 mph	0
13 1959	Partly Cloudy	61	64	53	67	W	6 mph	0
June 11 1960	Cloudy	61	75	52	63	NW	9 mph	0
10 1961	Sunny	58	71	47	60	W	6 mph	0.06
16 1962	Mostly Cloudy	60	74	53	56	NW	7 mph	0
15 1963	Mostly Sunny	75	93	66	48	NW	4 mph	0

Portland Rose Festival Parade Weather

Continued the detailed weather history of the Rose Festival Parade Day:

Date/Year			Sky Condition	Temperatures Parade Time	Afternoon High	Morning Low	Average Relative Humidity	Avg Wind 10 - Noon (dir/speed)		Rainfall (inches)
June	13	1964	Cloudy/Light Rain	62	72	55	65%	NW	6 mph	0.02
	12	1965	Partly Cloudy	57	68	45	55	W	6 mph	0
	11	1966	Cloudy/Light Rain	59	66	51	77	S	8 mph	0.04
	10	1967	Cloudy/Light Rain	56	66	42	80	SE	13 mph	Trace
	8	1968	Cloudy	57	61	54	74	NW	9 mph	0
	14	1969	Sunny	65	82	61	63	W	10 mph	Trace
	13	1970	Cloudy/Sprinkles	64	70	58	58	Calm winds		Trace
June	12	1971	Cloudy	60	64	49	61%	NW	3 mph	0
	10	1972	Sunny	60	70	47	58	N	3 mph	0
	9	1973	Mostly Cloudy	61	69	50	45	N	5 mph	0
	15	1974	Cloudy	66	71	59	56	NW	6 mph	0
	14	1975	Partly Cloudy	70	84	58	55	N	5 mph	0
	12	1976	Cloudy	59	63	43	57	NW	8 mph	0
	11	1977	Cloudy	58	65	52	70	NE	5 mph	0
	10	1978	Cloudy/Rain	58	63	53	82	SW	12 mph	0.24
	9	1979	Sunny	74	85	53	50	NW	8 mph	0
	12	1980	Cloudy/Light Rain	60	62	56	75	SW	5 mph	0.06
June	13	1981	Mostly Cloudy	55	66	48	72%	NW	10 mph	0
	12	1982	Cloudy/Rain	55	60	55	90	S	4 mph	0.50
	11	1983	Cloudy/evening rain	60	66	53	65	S	6 mph	0.19
	9	1984	Cloudy/Light Rain	56	66	52	71	NW	5 mph	0.09
	8	1985	Partly Cloudy	62	71	45	64	NW	8 mph	0
	7	1986	Cloudy	59	69	53	75	NW	6 mph	Trace
	6	1987	Sunny	61	75	51	64	NW	7 mph	0
	11	1988	Sunny	59	73	46	55	W	7 mph	0
	10	1989	Sunny	61	78	50	65	NW	4 mph	0
	9	1990	Cloudy/Rain	59	65	58	80	NW	8 mph	0.43
June	8	1991	Partly Cloudy	65	73	54	65%	NW	6 mph	0
	6	1992	Partly Cloudy	69	82	52	55	NW	7 mph	0
	12	1993	Partly Cloudy	59	71	51	65	NW	4 mph	Trace
	11	1994	Partly Cloudy	63	81	58	61	W	7 mph	0
	10	1995	Cloudy/Light Rain	61	64	50	72	S	8 mph	0.10
	8	1996	Partly Cloudy	61	74	57	55	W	7 mph	Trace
	7	1997	Mostly Cloudy	62	67	54	52	NW	10 mph	0
	6	1998	Mostly Sunny	64	81	53	55%	NW	4 mph	0
	12	1999	Mostly Sunny	69	87	61	- - -	W	11 mph	Trace
June		2000								
		2001								
		2002								

SUNRISE AND SUNSET AT PORTLAND, OREGON

PACIFIC STANDARD TIME

NO. 1239

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 51	4 38	7 32	5 17	6 50	5 57	5 51	6 39	4 59	7 17	4 25	7 52	4 25	8 03	4 54	7 39	5 32	6 49	6 09	5 51	6 50	4 58	7 30	4 29
2	7 51	4 39	7 31	5 19	6 48	5 59	5 50	6 40	4 58	7 18	4 25	7 53	4 26	8 03	4 55	7 38	5 33	6 47	6 10	5 49	6 51	4 57	7 31	4 29
3	7 51	4 40	7 30	5 20	6 46	6 00	5 48	6 41	4 56	7 20	4 24	7 54	4 27	8 03	4 56	7 36	5 34	6 45	6 11	5 48	6 53	4 55	7 33	4 28
4	7 51	4 41	7 28	5 21	6 44	6 01	5 46	6 42	4 55	7 21	4 24	7 54	4 27	8 02	4 58	7 35	5 35	6 43	6 12	5 46	6 54	4 54	7 34	4 28
5	7 51	4 42	7 27	5 23	6 42	6 03	5 44	6 44	4 53	7 22	4 23	7 55	4 28	8 02	4 59	7 34	5 36	6 41	6 14	5 44	6 56	4 52	7 35	4 28
6	7 51	4 43	7 26	5 24	6 41	6 04	5 42	6 45	4 52	7 23	4 23	7 56	4 29	8 02	5 00	7 32	5 38	6 39	6 15	5 42	6 57	4 51	7 36	4 27
7	7 50	4 44	7 25	5 26	6 39	6 06	5 40	6 46	4 50	7 25	4 23	7 57	4 29	8 01	5 01	7 31	5 39	6 38	6 16	5 40	6 58	4 50	7 37	4 27
8	7 50	4 45	7 23	5 27	6 37	6 07	5 38	6 48	4 49	7 26	4 22	7 57	4 30	8 01	5 02	7 29	5 40	6 36	6 17	5 38	7 00	4 49	7 38	4 27
9	7 50	4 46	7 22	5 29	6 35	6 08	5 36	6 49	4 48	7 27	4 22	7 58	4 31	8 00	5 03	7 28	5 41	6 34	6 19	5 36	7 01	4 47	7 39	4 27
10	7 50	4 47	7 20	5 30	6 33	6 10	5 35	6 50	4 46	7 28	4 22	7 59	4 32	8 00	5 05	7 26	5 43	6 32	6 20	5 35	7 03	4 46	7 40	4 27
11	7 49	4 48	7 19	5 32	6 31	6 11	5 33	6 51	4 45	7 30	4 21	7 59	4 32	7 59	5 06	7 25	5 44	6 30	6 21	5 33	7 04	4 45	7 41	4 27
12	7 49	4 50	7 17	5 33	6 29	6 12	5 31	6 53	4 44	7 31	4 21	8 00	4 33	7 59	5 07	7 23	5 45	6 28	6 23	5 31	7 05	4 44	7 42	4 27
13	7 48	4 51	7 16	5 35	6 28	6 14	5 29	6 54	4 43	7 32	4 21	8 00	4 34	7 58	5 08	7 22	5 46	6 26	6 24	5 29	7 07	4 43	7 42	4 27
14	7 48	4 52	7 14	5 36	6 26	6 15	5 27	6 55	4 41	7 33	4 21	8 01	4 35	7 57	5 10	7 20	5 47	6 24	6 25	5 27	7 08	4 42	7 43	4 27
15	7 47	4 53	7 13	5 37	6 24	6 16	5 26	6 57	4 40	7 34	4 21	8 01	4 36	7 57	5 11	7 19	5 49	6 22	6 27	5 26	7 10	4 41	7 44	4 28
16	7 47	4 55	7 11	5 39	6 22	6 18	5 24	6 58	4 39	7 36	4 21	8 02	4 37	7 56	5 12	7 17	5 50	6 20	6 28	5 24	7 11	4 40	7 45	4 28
17	7 46	4 56	7 10	5 40	6 20	6 19	5 22	6 59	4 38	7 37	4 21	8 02	4 38	7 55	5 13	7 15	5 51	6 18	6 29	5 22	7 12	4 39	7 45	4 28
18	7 45	4 57	7 08	5 42	6 18	6 20	5 20	7 01	4 37	7 38	4 21	8 02	4 39	7 54	5 14	7 14	5 52	6 16	6 31	5 20	7 14	4 38	7 46	4 29
19	7 45	4 59	7 07	5 43	6 16	6 22	5 19	7 02	4 36	7 39	4 21	8 03	4 40	7 53	5 16	7 12	5 54	6 14	6 32	5 19	7 15	4 37	7 47	4 29
20	7 44	5 00	7 05	5 45	6 14	6 23	5 17	7 03	4 35	7 40	4 21	8 03	4 41	7 52	5 17	7 10	5 55	6 13	6 33	5 17	7 16	4 36	7 47	4 29
21	7 43	5 01	7 03	5 46	6 12	6 24	5 15	7 04	4 34	7 41	4 22	8 03	4 42	7 51	5 18	7 09	5 56	6 11	6 35	5 15	7 18	4 35	7 48	4 30
22	7 42	5 03	7 02	5 48	6 10	6 26	5 14	7 06	4 33	7 42	4 22	8 03	4 43	7 51	5 19	7 07	5 57	6 09	6 36	5 14	7 19	4 34	7 48	4 30
23	7 41	5 04	7 00	5 49	6 09	6 27	5 12	7 07	4 32	7 43	4 22	8 03	4 44	7 50	5 21	7 05	5 59	6 07	6 37	5 12	7 20	4 33	7 49	4 31
24	7 41	5 06	6 58	5 50	6 07	6 28	5 10	7 08	4 31	7 44	4 22	8 04	4 45	7 48	5 22	7 03	6 00	6 05	6 39	5 10	7 22	4 33	7 49	4 31
25	7 40	5 07	6 57	5 52	6 05	6 29	5 09	7 10	4 30	7 45	4 23	8 04	4 46	7 47	5 23	7 02	6 01	6 03	6 40	5 09	7 23	4 32	7 50	4 32
26	7 39	5 08	6 55	5 53	6 03	6 31	5 07	7 11	4 29	7 46	4 23	8 04	4 47	7 46	5 24	7 00	6 02	6 01	6 42	5 07	7 24	4 31	7 50	4 33
27	7 38	5 10	6 53	5 55	6 01	6 32	5 05	7 12	4 29	7 47	4 23	8 04	4 48	7 45	5 25	6 58	6 03	5 59	6 43	5 06	7 25	4 31	7 50	4 33
28	7 37	5 11	6 51	5 56	5 59	6 33	5 04	7 13	4 28	7 48	4 24	8 04	4 49	7 44	5 27	6 56	6 05	5 57	6 44	5 04	7 27	4 30	7 50	4 34
29	7 36	5 13	6 51	5 57	5 57	6 35	5 02	7 15	4 27	7 49	4 24	8 03	4 51	7 43	5 28	6 54	6 06	5 55	6 46	5 02	7 28	4 30	7 51	4 35
30	7 34	5 14			5 55	6 36	5 01	7 16	4 26	7 50	4 25	8 03	4 52	7 42	5 29	6 53	6 07	5 53	6 47	5 01	7 29	4 29	7 51	4 36
31	7 33	5 16			5 53	6 37			4 26	7 51			4 53	7 40	5 30	6 51			6 49	4 59			7 51	4 37

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

I certify that the above data are the result of an accurate and true computation by the Nautical Almanac Office, United States Naval Observatory, an agency charged by Federal Statute (9 Stat. L 374, 375) with the duty of making such computations and publishing the results.

E. W. WOOLARD
Director Nautical Almanac
U. S. Naval Observatory

C. G. CHRISTIE
Captain, USN

NORMALS, MEANS, AND EXTREMES

PORTLAND, OR (PDX)

LATITUDE: 45° 35′ 27″ N LONGITUDE: 122° 36′ 01″ W ELEVATION (FT): GRND: 21 BARO: 27 TIME ZONE: PACIFIC (UTC+ 8) WBAN: 24229

	ELEMENT	POR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR
TEMPERATURE °F	NORMAL DAILY MAXIMUM	30	45.4	51.0	56.0	60.6	67.1	74.0	79.9	80.3	74.6	64.0	52.6	45.6	62.6
	MEAN DAILY MAXIMUM	68	44.7	50.1	55.7	61.3	67.6	73.2	79.6	79.5	74.4	64.0	52.6	46.3	62.4
	HIGHEST DAILY MAXIMUM	58	63	71	80	90	100	100	107	107	105	92	73	65	107
	YEAR OF OCCURRENCE		1986	1988	1947	1998	1983	1992	1965	1981	1988	1987	1975	1993	AUG 1981
	MEAN OF EXTREME MAXS.	68	56.9	60.8	68.7	77.6	85.7	90.4	95.8	94.8	90.3	78.6	63.5	57.7	76.7
	NORMAL DAILY MINIMUM	30	33.7	36.1	38.6	41.3	47.0	52.9	56.5	56.9	52.0	44.9	39.5	34.8	44.5
	MEAN DAILY MINIMUM	68	34.0	36.4	39.0	42.4	47.8	53.1	56.7	56.9	52.4	45.9	39.9	35.9	45.0
	LOWEST DAILY MINIMUM	58	-2	-3	19	29	29	39	43	44	34	26	13	6	-3
	YEAR OF OCCURRENCE		1950	1950	1989	1955	1954	1966	1955	1980	1965	1971	1985	1964	FEB 1950
	MEAN OF EXTREME MINS.	68	21.1	24.4	29.4	33.8	38.4	45.7	49.5	49.1	42.8	34.7	28.5	23.9	35.1
	NORMAL DRY BULB	30	39.6	43.6	47.3	51.0	57.1	63.5	68.2	68.6	63.3	54.5	46.1	40.2	53.6
	MEAN DRY BULB	68	39.4	43.2	47.4	51.9	57.8	63.2	68.2	68.2	63.4	54.9	46.2	41.1	53.7
	MEAN WET BULB	14	38.6	40.0	44.2	47.9	52.4	56.3	55.7	56.5	53.5	50.8	44.1	35.1	47.9
	MEAN DEW POINT	14	35.0	35.6	39.5	43.3	47.5	50.9	50.2	51.1	48.6	46.9	41.2	31.8	43.5
	NORMAL NO. DAYS WITH:														
	MAXIMUM ≥ 90°	30	0.0	0.0	0.0	0.0	0.4	1.4	4.0	4.5	1.6	0.1	0.0	0.0	12.0
	MAXIMUM ≤ 32°	30	1.7	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	1.4	3.4
	MINIMUM ≤ 32°	30	12.4	7.7	4.2	1.1	0.1	0.0	0.0	0.0	0.0	0.6	4.6	10.4	41.1
	MINIMUM ≤ 0°	30	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
H/C	NORMAL HEATING DEG. DAYS	30	787	599	549	420	249	91	28	35	102	326	567	769	4522
	NORMAL COOLING DEG. DAYS	30	0	0	0	0	0	46	127	147	51	0	0	0	371
RH	NORMAL (PERCENT)	30	81	78	75	72	69	66	63	65	69	78	82	83	73
	HOUR 04 LST	30	85	85	85	85	84	82	80	82	86	90	87	86	85
	HOUR 10 LST	30	82	80	75	70	66	64	61	64	67	78	82	83	73
	HOUR 16 LST	30	74	66	59	55	52	49	44	44	48	60	73	78	58
	HOUR 22 LST	30	82	80	77	74	72	69	66	68	74	82	83	84	76
S	PERCENT POSSIBLE SUNSHINE	46	28	38	48	52	57	56	69	66	62	44	28	23	48
W/O	MEAN NO. DAYS WITH:														
	HEAVY FOG(VISBY≤1/4 MI)	56	4.2	3.7	2.3	1.1	0.1	0.1	0.1	0.2	2.6	7.0	5.8	4.7	31.9
	THUNDERSTORMS	58	0.1	0.1	0.5	0.9	1.4	0.9	0.8	1.0	0.7	0.4	0.3	0.1	7.2
CLOUDINESS	MEAN:														
	SUNRISE-SUNSET (OKTAS)	47	6.7	6.6	6.4	6.2	5.8	5.4	3.8	4.0	4.3	5.6	6.4	6.8	5.7
	MIDNIGHT-MIDNIGHT (OKTAS)	31	6.3	6.0	5.7	5.7	5.3	4.9	3.6	3.6	3.9	5.0	6.3	6.4	5.2
	MEAN NO. DAYS WITH:														
	CLEAR	47	2.9	2.9	3.3	3.5	5.0	6.2	12.6	11.4	10.3	5.4	2.8	2.1	68.4
	PARTLY CLOUDY	47	3.6	3.8	4.9	5.8	7.2	7.7	8.5	9.6	8.1	7.6	4.3	3.3	74.4
	CLOUDY	47	24.4	21.5	22.8	20.7	18.9	16.1	9.9	10.1	11.6	18.0	22.9	25.5	222.4
PR	MEAN STATION PRESSURE(IN)	26	30.09	29.99	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.00	30.10	30.02
	MEAN SEA-LEVEL PRES. (IN)	14	30.09	30.06	30.05	30.06	30.03	30.04	30.05	30.02	30.02	30.08	30.08	30.14	30.06
WINDS	MEAN SPEED (MPH)	44	10.0	9.3	8.4	7.5	7.2	7.3	7.6	7.1	6.5	6.6	8.6	9.6	8.0
	PREVAIL.DIR(TENS OF DEGS)	28	12	12	12	30	32	32	33	33	32	12	12	12	12
	MAXIMUM 2-MINUTE:														
	SPEED (MPH)	3	38	37	39	37	30	34	24	26	31	33	43	37	43
	DIR. (TENS OF DEGS)		07	18	23	18	19	20	18	18	21	19	20	22	20
	YEAR OF OCCURRENCE		1996	1996	1997	1996	1998	1997	1996	1997	1998	1997	1998	1996	NOV 1998
	MAXIMUM 5-SECOND:														
	SPEED (MPH)	3	53	51	48	44	38	40	29	33	37	43	51	51	53
	DIR. (TENS OF DEGS)		20	17	23	16	19	20	18	17	22	19	21	22	20
	YEAR OF OCCURRENCE		1996	1996	1997	1996	1998	1997	1996	1997	1997	1997	1998	1996	JAN 1996
PRECIPITATION	NORMAL (IN)	30	5.35	3.85	3.56	2.39	2.06	1.48	0.63	1.09	1.75	2.67	5.34	6.13	36.30
	MAXIMUM MONTHLY (IN)	58	12.83	10.03	7.52	5.26	5.55	4.06	2.68	4.53	4.30	8.41	11.57	13.35	13.35
	YEAR OF OCCURRENCE		1953	1996	1957	1993	1998	1984	1983	1968	1986	1994	1942	1996	DEC 1996
	MINIMUM MONTHLY (IN)	58	0.06	0.72	1.10	0.53	0.10	0.03	0.00	T	T	0.19	0.77	1.38	0.00
	YEAR OF OCCURRENCE		1985	1993	1965	1956	1992	1951	1967	1970	1993	1988	1976	1976	JUL 1967
	MAXIMUM IN 24 HOURS (IN)	58	2.61	2.46	1.83	1.47	1.47	1.82	1.09	1.54	2.38	4.44	4.10	2.59	4.44
	YEAR OF OCCURRENCE		1974	1994	1943	1962	1968	1958	1978	1977	1982	1994	1996	1977	OCT 1994
	NORMAL NO. DAYS WITH:														
	PRECIPITATION ≥ 0.01	30	17.5	15.5	17.1	14.3	11.8	8.5	4.2	5.3	8.0	12.0	18.5	18.7	151.4
	PRECIPITATION ≥ 1.00	30	1.1	0.4	0.2	0.2	0.1	0.1	0.0	0.1	0.2	0.2	0.8	1.1	4.5
SNOWFALL	NORMAL (IN)	30	1.8	0.9	0.1	T	T	0.0	0.0	0.0	0.0	0.0	0.5	2.0	5.3
	MAXIMUM MONTHLY (IN)	55	41.4	13.2	12.9	T	0.6	T	0.0	T	T	0.2	8.2	15.7	41.4
	YEAR OF OCCURRENCE		1950	1949	1951	1995	1953	1995		1989	1949	1950	1955	1968	JAN 1950
	MAXIMUM IN 24 HOURS (IN)	55	10.6	6.4	7.7	T	0.5	T	0.0	T	T	0.2	7.4	8.0	10.6
	YEAR OF OCCURRENCE		1950	1993	1951	1995	1953	1995		1989	1949	1950	1977	1964	JAN 1950
	MAXIMUM SNOW DEPTH (IN)	48	15	14	5	0	0	0	0	0	0	0	5	11	15
	YEAR OF OCCURRENCE		1950	1950	1951								1977	1964	JAN 1950
	NORMAL NO. DAYS WITH:														
	SNOWFALL ≥ 1.0	30	0.6	0.3	0.*	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.7	1.7

published by: NCDC Asheville, NC

151. NMC Model Performance in the Northeast Pacific. James E. Overland, PMEL-ERL, April 1980. (PB80 196033)
152. Climate of Salt Lake City, Utah. William J. Alder, Sean T. Buchanan, William Cope (Retired), James A. Cisco, Craig C. Schmidt, Alexander R. Smith (Retired), Wilbur E. Figgins (Retired), February 1998 - Seventh Revision (PB98-130727)
153. An Automatic Lightning Detection System in Northern California. James E. Rea and Chris E. Fontana, June 1980. (PB80 225592)
154. Regression Equation for the Peak Wind Gust 6 to 12 Hours in Advance at Great Falls During Strong Downslope Wind Storms. Michael J. Oard, July 1980. (PB81 108367)
155. A Raininess Index for the Arizona Monsoon. John H. Ten Harkel, July 1980. (PB81 106494)
156. The Effects of Terrain Distribution on Summer Thunderstorm Activity at Reno, Nevada. Christopher Dean Hill, July 1980. (PB81 102501)
157. An Operational Evaluation of the Scofield/Oliver Technique for Estimating Precipitation Rates from Satellite Imagery. Richard Ochoa, August 1980. (PB81 108227)
158. Hydrology Practicum. Thomas Dietrich, September 1980. (PB81 134033)
159. Tropical Cyclone Effects on California. Arnold Court, October 1980. (PB81 133779)
160. Eastern North Pacific Tropical Cyclone Occurrences During Intraseasonal Periods. Preston W. Leftwich and Gail M. Brown, February 1981. (PB81 205494)
161. Solar Radiation as a Sole Source of Energy for Photovoltaics in Las Vegas, Nevada, for July and December. Darryl Randerson, April 1981. (PB81 224503)
162. A Systems Approach to Real-Time Runoff Analysis with a Deterministic Rainfall-Runoff Model. Robert J.C. Burnash and R. Larry Ferral, April 1981. (PB81 224495)
163. A Comparison of Two Methods for Forecasting Thunderstorms at Luke Air Force Base, Arizona. LTC Keith R. Cooley, April 1981. (PB81 225393)
164. An Objective Aid for Forecasting Afternoon Relative Humidity Along the Washington Cascade East Slopes. Robert S. Robinson, April 1981. (PB81 23078)
165. Annual Data and Verification Tabulation, Eastern North Pacific Tropical Storms and Hurricanes 1980. Emil B. Gunther and Staff, May 1981. (PB82 230336)
166. Preliminary Estimates of Wind Power Potential at the Nevada Test Site. Howard G. Booth, June 1981. (PB82 127036)
167. ARAP User's Guide. Mark Mathewson, July 1981, Revised September 1981. (PB82 196783)
168. Forecasting the Onset of Coastal Gales Off Washington-Oregon. John R. Zimmerman and William D. Burton, August 1981. (PB82 127051)
169. A Statistical Dynamical Model for Prediction of Tropical Cyclone Motion in the Eastern North Pacific Ocean. Preston W. Leftwich, Jr., October 1981. (PB82195298)
170. An Enhanced Plotter for Surface Airways Observations. Andrew J. Spry and Jeffrey L. Anderson, October 1981. (PB82 153883)
171. Verification of 72-Hour 500-MB Map-Type Predictions. R.F. Quiring, November 1981. (PB82-158098)
172. Forecasting Heavy Snow at Wenatchee, Washington. James W. Holcomb, December 1981. (PB82-177783)
173. Central San Joaquin Valley Type Maps. Thomas R. Crossan, December 1981. (PB82 196064)
174. ARAP Test Results. Mark A. Mathewson, December 1981. (PB82 198103)
175. Approximations to the Peak Surface Wind Gusts from Desert Thunderstorms. Darryl Randerson, June 1982. (PB82 253089)
177. Climate of Phoenix, Arizona. Robert J. Schmidli and Austin Jamison, April 1969 (Revised July 1996). (PB96-191614)
178. Annual Data and Verification Tabulation, Eastern North Pacific Tropical Storms and Hurricanes 1982. E.B. Gunther, June 1983. (PB85 106078)
179. Stratified Maximum Temperature Relationships Between Sixteen Zone Stations in Arizona and Respective Key Stations. Ira S. Brenner, June 1983. (PB83 249904)
180. Standard Hydrologic Exchange Format (SHEF) Version I. Phillip A. Pasteris, Vernon C. Bissel, David G. Bennett, August 1983. (PB85 106052)
181. Quantitative and Spacial Distribution of Winter Precipitation along Utah's Wasatch Front. Lawrence B. Dunn, August 1983. (PB85 106912)
182. 500 Millibar Sign Frequency Teleconnection Charts - Winter. Lawrence B. Dunn, December 1983. (PB85 108278)
183. 500 Millibar Sign Frequency Teleconnection Charts - Spring. Lawrence B. Dunn, January 1984. (PB85 111367)
184. Collection and Use of Lightning Strike Data in the Western U.S. During Summer 1983. Glenn Rasch and Mark Mathewson, February 1984. (PB85 110534)
185. 500 Millibar Sign Frequency Teleconnection Charts - Summer. Lawrence B. Dunn, March 1984. (PB85 111359)
186. Annual Data and Verification Tabulation eastern North Pacific Tropical Storms and Hurricanes 1983. E.B. Gunther, March 1984. (PB85 109635)
187. 500 Millibar Sign Frequency Teleconnection Charts - Fall. Lawrence B. Dunn, May 1984. (PB85-110930)
188. The Use and Interpretation of Isentropic Analyses. Jeffrey L. Anderson, October 1984. (PB85-132894)
189. Annual Data & Verification Tabulation Eastern North Pacific Tropical Storms and Hurricanes 1984. E.B. Gunther and R.L. Cross, April 1985. (PB85 1878887AS)
190. Great Salt Lake Effect Snowfall: Some Notes and An Example. David M. Carpenter, October 1985. (PB86 119153/AS)
191. Large Scale Patterns Associated with Major Freeze Episodes in the Agricultural Southwest. Ronald S. Hamilton and Glenn R. Lussky, December 1985. (PB86 144474AS)
192. NWR Voice Synthesis Project: Phase I. Glen W. Sampson, January 1986. (PB86 145604/AS)
193. The MCC - An Overview and Case Study on Its Impact in the Western United States. Glenn R. Lussky, March 1986. (PB86 170651/AS)
194. Annual Data and Verification Tabulation Eastern North Pacific Tropical Storms and Hurricanes 1985. E.B. Gunther and R.L. Cross, March 1986. (PB86 170941/AS)
195. Radid Interpretation Guidelines. Roger G. Pappas, March 1986. (PB86 177680/AS)
196. A Mesoscale Convective Complex Type Storm over the Desert Southwest. Darryl Randerson, April 1986. (PB86 190998/AS)
197. The Effects of Eastern North Pacific Tropical Cyclones on the Southwestern United States. Walter Smith, August 1986. (PB87 106258AS)
198. Preliminary Lightning Climatology Studies for Idaho. Christopher D. Hill, Carl J. Gorski, and Michael C. Conger, April 1987. (PB87 180196/AS)
199. Heavy Rains and Flooding in Montana: A Case for Slantwise Convection. Glenn R. Lussky, April 1987. (PB87 185229/AS)
200. Annual Data and Verification Tabulation Eastern North Pacific Tropical Storms and Hurricanes 1986. Roger L. Cross and Kenneth B. Mielke, September 1987. (PB88 110895/AS)
201. An Inexpensive Solution for the Mass Distribution of Satellite Images. Glen W. Sampson and George Clark, September 1987. (PB88 114038/AS)
202. Annual Data and Verification Tabulation Eastern North Pacific Tropical Storms and Hurricanes 1987. Roger L. Cross and Kenneth B. Mielke, September 1988. (PB88-101935/AS)
203. An Investigation of the 24 September 1986 "Cold Sector" Tornado Outbreak in Northern California. John P. Monteverdi and Scott A. Braun, October 1988. (PB89 121297/AS)
204. Preliminary Analysis of Cloud-To-Ground Lightning in the Vicinity of the Nevada Test Site. Carven Scott, November 1988. (PB89 128649/AS)
205. Forecast Guidelines For Fire Weather and Forecasters -- How Nighttime Humidity Affects Wildland Fuels. David W. Goens, February 1989. (PB89 162549/AS)
206. A Collection of Papers Related to Heavy Precipitation Forecasting. Western Region Headquarters, Scientific Services Division, August 1989. (PB89 230833/AS)
207. The Las Vegas McCarran International Airport Microburst of August 8, 1989. Carven A. Scott, June 1990. (PB90-240268)
208. Meteorological Factors Contributing to the Canyon Creek Fire Blowup, September 6 and 7, 1988. David W. Goens, June 1990. (PB90-245085)
209. Status Surge Prediction Along the Central California Coast. Peter Felsch and Woodrow Whitlatch, December 1990. (PB91-129239)
210. Hydrotools. Tom Egger, January 1991. (PB91-151787/AS)
211. A Northern Utah Soaker. Mark E. Struthwolf, February 1991. (PB91-168716)
212. Preliminary Analysis of the San Francisco Rainfall Record: 1849-1990. Jan Null, May 1991 (PB91-208439)
213. Idaho Zone Preformat, Temperature Guidance, and Verification. Mark A. Mollner, July 1991 (PB91-227405/AS)
214. Emergency Operational Meteorological Considerations During an Accidental Release of Hazardous Chemicals. Peter Mueller and Jerry Galt, August 1991. (PB91-235424)
215. WeatherTools. Tom Egger, October 1991. (PB93-184950)
216. Creating MOS Equations for RAWS Stations Using Digital Model Data. Dennis D. Gettman December 1991. (PB92-131473/AS)
217. Forecasting Heavy Snow Events in Missoula, Montana. Mike Richmond, May 1992 (PB92-196104)
218. NWS Winter Weather Workshop in Portland, Oregon. Various Authors, December 1992 (PB93-146785)
219. A Case Study of the Operational Usefulness of the Sharp Workstation in Forecasting a Mesocyclone-Induced Cold Sector Tornado Event in California. John P. Monteverdi, March 1993. (PB93-178697)
220. Climate of Pendleton, Oregon. Claudia Bell, August 1993. (PB93-227536)
221. Utilization of the Bulk Richardson Number, Helicity and Sounding Modification in the Assessment of the Severe Convective Storms of 3 August 1992. Eric C. Evenson, September 1993. (PB94-131943)
222. Convective and Rotational Parameters Associated with Three Tornado Episodes in Northern and Central California. John P. Monteverdi and John Quadros, September 1993. (PB94-131943)
223. Climate of San Luis Obispo, California. Gary Ryan, February 1994. (PB94-162062)
224. Climate of Wenatchee, Washington. Michael W. McFarland, Roger G. Buckman, and Gregory E. Matzen, March 1994. (PB94-164308)
225. Climate of Santa Barbara, California. Gary Ryan, December 1994. (PB95-173720)
226. Climate of Yakima, Washington. Greg DeVoir, David Hogan, and Jay Neher, December 1994. (PB95-173688)
227. Climate of Kalispell, Montana. Chris Maier, December 1994. (PB95-169488)
228. Forecasting Minimum Temperatures in the Santa Maria Agricultural District. Wilfred Pi and Peter Felsch, December 1994. (PB95-171088)
229. The 10 February 1994 Oroville Tornado--A Case Study. Mike Staudenmaier, Jr., April 1995. (PB95-241873)
230. Santa Ana Winds and the Fire Outbreak of Fall 1993. Ivory Small, June 1995. (PB95-241865)
231. Washington State Tornadoes. Treste Huse, July 1995. (PB96-107024)
232. Fog Climatology at Spokane, Washington. Paul Frisbie, July 1995. (PB96-106604)
233. Storm Relative Isentropic Motion Associated with Cold Fronts in Northern Utah. Kevin B. Baker, Kathleen A. Hadley, and Lawrence B. Dunn, July 1995. (PB96-106596)
234. Some Climatological and Synoptic Aspects of Severe Weather Development in the Northwestern United States. Eric C. Evenson and Robert H. Johns, October 1995. (PB96-112958)
235. Climate of Las Vegas, Nevada. Paul H. Skrbac and Scott Cordero, December 1995. (PB96-135553)
236. Climate of Astoria, Oregon. Mark A. McInerney, January 1996.
237. The 6 July 1995 Severe Weather Events in the Northwestern United States: Recent Examples of SSWEs. Eric C. Evenson, April 1996.
238. Significant Weather Patterns Affecting West Central Montana. Joe Lester, May 1996. (PB96-178751)
239. Climate of Portland, Oregon. Clinton C. D. Rockey, May 1996. (PB96-17603) - First Revision, October 1999.
240. Downslop Winds of Santa Barbara, CA. Gary Ryan, July 1996. (PB96-191697)
241. Operational Applications of the Real-time National Lightning Detection Network Data at the NWSO Tucson, AZ. Darren McCollum, David Bright, Jim Meyer, and John Glueck, September 1996. (PB97-108450)
242. Climate of Pocatello, Idaho. Joe Heim, October 1996. (PB97-114540)
243. Climate of Great Falls, Montana. Matt Jackson and D. C. Williamson, December 1996. (PB97-126684)
244. WSR-88D VAD Wind Profile Data Influenced by Bird Migration over the Southwest United States. Jesus A. Haro, January 1997. (PB97-135263)
245. Climatology of Cape for Eastern Montana and Northern Wyoming. Heath Hockenberry and Keith Meier, January 1997. (PB97-133425)
246. A Western Region Guide to the Eta-29 Model. Mike Staudenmaier, Jr., March 1997. (PB97-144075)
247. The Northeast Nevada Climate Book. Edwin C. Clark, March 1997. (First Revision - January 1998 - Andrew S. Gorelow and Edwin C. Clark - PB98-123250)
248. Climate of Eugene, Oregon. Clinton C. D. Rockey, April 1997. (PB97-155303)
249. Climate of Tucson, Arizona. John R. Glueck, October 1997.
250. Northwest Oregon Daily Extremes and Normans. Clinton C. D. Rockey, October 1997.
251. A Composite Study Examining Five Heavy Snowfall Patterns for South-Central Montana. Jonathan D. Van Ausdall and Thomas W. Humphrey, February 1998. (PB98-125255)
252. Climate of Eureka, California. Alan H. Putter. February 1998. (PB98-130735)
253. Inferenced Oceanic Kelvin/Rossby Wave Influence on North American West Coast Precipitation. Martin E. Lee and Dudley Chelton. April 1998. (PB98-139744)
254. Conditional Symmetric Instability—Methods of Operational Diagnosis and Case Study of 23-24 February 1994 Eastern Washington/Oregon Snowstorm. Gregory A. DeVoir. May 1998. (PB98-144660).
255. Creation and Maintenance of a Comprehensive Climate Data Base. Eugene Petrescu. August 1998. (PB98-173529)
256. Climate of San Diego, California. Thomas E. Evans, III and Donald A. Halvorson. October 1998. (PB99-109381)
257. Climate of Seattle, Washington. Dana Felton. November 1998. (PB99-113482)
258. 1985-1998 North Pacific Tropical Cyclones Impacting the Southwestern United States and Northern Mexico: An Updated Climatology. Armando L. Garza. January 1999. (PB99-130502)
259. Climate of San Jose, California. Miguel Miller. April 1999. (PB99-145633)

NOAA-Seattle Regional Library
3 9292 01003287 6

NOAA SCIENTIFIC AND TECHNICAL PUBLIC

The National Oceanic and Atmospheric Administration was established as part of the Department of Commerce on October 3, 1970. The mission responsibilities of NOAA are to assess the socioeconomic impact of natural and technological changes in the environment and to monitor and predict the state of the solid Earth, the oceans and their living resources, the atmosphere, and the space environment of the Earth.

The major components of NOAA regularly produce various types of scientific and technical information in the following kinds of publications.

PROFESSIONAL PAPERS--Important definitive research results, major techniques, and special investigations.

CONTRACT AND GRANT REPORTS---Reports prepared by contractors or grantees under NOAA sponsorship.

ATLAS--Presentation of analyzed data generally in the form of maps showing distribution of rainfall, chemical and physical conditions of oceans and atmosphere, distribution of fishes and marine mammals, ionospheric conditions, etc.

TECHNICAL SERVICE PUBLICATIONS --Reports containing data, observations, instructions, etc. A partial listing includes data serials; prediction and outlook periodicals; technical manuals, training papers, planning reports, and information serials; and miscellaneous technical publications.

TECHNICAL REPORTS--Journal quality with extensive details, mathematical developments, or data listings.

TECHNICAL MEMORANDUMS--Reports of preliminary, partial, or negative research or technology results, interim instructions, and the like.

Information on availability of NOAA publications can be obtained from:

NATIONAL TECHNICAL INFORMATION SERVICE

U. S. DEPARTMENT OF COMMERCE

5285 PORT ROYAL ROAD

SPRINGFIELD, VA 22161