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# UA66/8/2 The Climate of Bowling Green & Warren County

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**Authors**

WKU Center for Local Government, Glen Conner, Mike Nichols, John Ternent, Grant Whittle, and Amy Huot

L M T  
 SUMMER DEGREE COLD D  
 N V A R N D  
 LOW PRESSURE SNAP C R O  
 W R E L H O A D O U  
 SOLAR CLIMATE HAIL ZERO G H T  
 AIR ICE IN JET STREAM  
 FRIGID WEATHER A T O R M L A Y E R M E R C U R Y  
 L A R E U P  
 W E A T H E R I D F R O S T H U N D E  
 C H C I R C U L A T I O N N I M B U S  
 F L O O D M W A R M F R O N T

## CLIMATE ANALYSIS

WARREN COUNTY COMPREHENSIVE PLAN

## TECHNICAL REPORT



**WARREN COUNTY COMPREHENSIVE PLAN  
TECHNICAL REPORT**

**THE CLIMATE OF  
BOWLING GREEN AND  
WARREN COUNTY**

**GLEN CONNER  
CONSULTANT**

**PREPARED IN CONJUNCTION WITH  
THE CENTER FOR LOCAL GOVERNMENT  
WESTERN KENTUCKY UNIVERSITY**

# **THE CLIMATE OF BOWLING GREEN AND WARREN COUNTY**

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**1989**

This technical report was written under the auspices

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## EXECUTIVE SUMMARY

The Climate of Bowling Green and Warren County consists of four seasons which bring a refreshing variety of weather conditions and events. Its temperature regime is similar to that of Cheju, Korea; Osaka, Japan; or Shanghai, China. No month averages below freezing in winter nor above the upper seventies in summer. The annual range of temperature means is from 33°F in January to 78°F in July. Daily temperature ranges vary from about eighteen to twenty degrees in winter to a peak at twenty-four degrees in the fall. The mean growing season length of 196 days permits a wide variety of crops and gardens to flourish.

The area accumulates about 3400 heating degree days in an average year. That is a third less than that of Syracuse, New York or Omaha, Nebraska. For example, energy use for heating in the Bowling Green area in January is less than Grand Rapids, Michigan or Worcester, Massachusetts in March. The annual accumulation of cooling degrees days in the study area is about 1400. That is half of the total for Houston, Texas or a third less than that of Columbus, Georgia. This area's location is intermediate between the increasing winter heating costs to the north and summer cooling costs to the south.

Precipitation averages over forty-nine inches per year. The precipitation is well distributed from a high of over five inches in March to a low of about three inches in October. Virtually all this precipitation is in the form of rain with an average of only fourteen inches of snowfall. Persistent snow cover is uncommon with an average of only twelve days with an inch or more snowdepth.

The prevailing winds are from the south to the southwest. There is a secondary direction from the northeast in spring, summer and fall. In winter, the northwest is a secondary direction. The least likely directions for all seasons are in the east to southeast sector. Extremely stable atmospheric conditions are expected as much as thirty-seven percent of the time in summer and fall and calm conditions occur over twenty-three percent of these seasons. Unless mitigated by careful site location, air stagnation could become a matter for concern.

Severe storms, including the uncommon but potentially devastating tornadoes, are of intense interest to the public. The area is surveilled by the National Weather Service radars and severe weather watches and warnings are immediately broadcast throughout the area when severe storms are detected or reported. To use this life saving capability, all locations of public agencies and schools should be provided with inexpensive weather radios to alert them of severe conditions. Likewise, business and industry should be similarly equipped. Because forty percent of the nation's tornado deaths occur in just six percent of the housing (mobile homes), a permanent structure useful as a refuge should be available in mobile home developments.

The climate of Bowling Green and Warren County can be considered as a valuable natural resource. There is ample evidence of the unintended or inadvertent changes in climate which can occur as a result of indiscriminate or unplanned urbanization. This area should exercise care for the climate through the planning process as it would any other non-renewable resource.

## GENERAL

The four season climate of Bowling Green and Warren County, Kentucky is classified as Humid Subtropical. The typical temperature, precipitation, and humidity are well within comfort limits of plants, animals, and humans. Distinct seasons of winter, spring, summer, and fall bring a variety of weather conditions and events avoiding the monotony evidenced in some other parts of the country. The Subtropical part of the climate's name describes this area as a warm summer climate which has moderately cold winters. July has an average of less than 79°F and January's average temperature is above freezing. Humid in the climate name refers not to humidity but to the ample precipitation received throughout the year. Precipitation ranges from about three inches in October to about five inches in March. Figure 1 is a climograph illustrating the average temperature and precipitation for the period 1958 through 1987. This period, unless noted otherwise, is used throughout this study. The subsequent paragraphs will describe in detail several pertinent aspects of the climate of this area.

## TEMPERATURE

The temperature regime of the area has been shown to decrease slightly from south to north

but the total variance is only about one degree. Because Bowling Green is centrally located, its data will be used as representative of the entire area.

### Means and Extremes

The area is located in one of the warmest areas of Kentucky as indicated by the annual mean temperature of 56.6°F. This annual temperature and the monthly temperatures as well are closely comparable to those moderate ones of Albuquerque, New Mexico. The means and extremes of temperature are presented in Table 1.

The range of temperature between the daily mean maximum and minimum temperatures is about 18°F in December increasing to about 23°F in May. The refreshing variability in spring represents the alternating invasions of warm and cold fronts as the transition from winter to summer air mass regimes is accomplished. The mean extremes show that although zero temperatures occur in winter, they occur as an extreme rather than being common. In fact, zero or subzero readings occur only two days a year on the average. Likewise, the mid-nineties of summer are also extremes and hundred degree readings occur in only about one of nine years.

### Days Equal to or Greater than 90°F

One standard measure of summer temperature is the number of days when the maximum temperature is equal to or exceeds 90°F. Sometimes, these data are used in supporting the

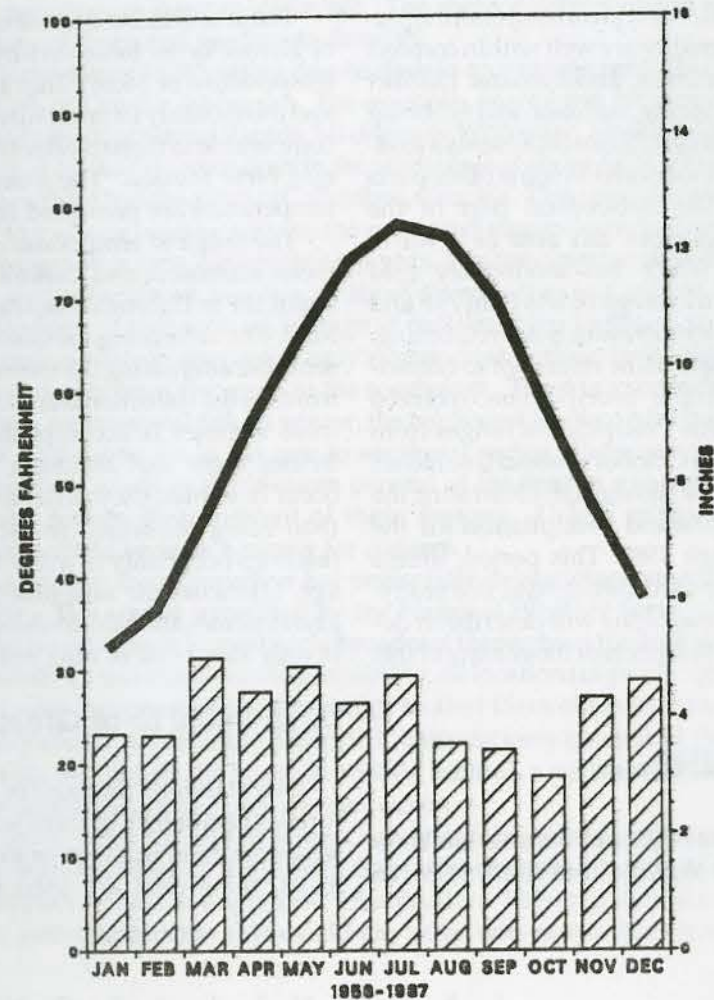
	J	F	M	A	M	J	J	A	S	O	N	D
Mean Extreme Maximum	64	68	77	84	88	94	96	96	92	85	76	66
Mean Daily Maximum	42	47	57	69	78	85	89	87	81	70	57	47
Mean Daily	33	37	47	57	66	74	78	76	70	58	47	38
Mean Daily Minimum	23	27	36	46	55	63	67	65	58	46	37	29
Mean Extreme Minimum	0	5	18	29	38	50	55	54	43	29	19	8

**TABLE 1**

*Mean and Extreme Temperatures, Bowling Green, 1958-1987.*



### CLIMAGRAPH, MEAN TEMPERATURE AND PRECIPITATION, BOWLING GREEN, KENTUCKY



severity of a summer or its impact on humans. In this area, such temperatures are generally restricted to the three summer months and then to mid-afternoon hours. The annual number of days which equal or exceed 90F varies greatly as indicated by a standard deviation of sixteen days. However, as shown in Figure 2, this annual number averages about thirty-nine but has been as few as ten in the past thirty years. Prolonged periods of ninety degree weather are not common.

#### Days Equal to or Less than 32F

A standard measure of winter temperature is the number of days when the minimum temperature equals or is less than freezing. Under some circumstances, these data are used as a measurement of winter severity. On the average, ninety-four days each winter record below freezing temperatures. These days are, for the most part, accrued from November through March. January averages seven days when temperatures remain above freezing for the entire day. This is evidence that extended cold spells are not the rule. October and April average just two days with temperatures which dip below freezing. Both are transition months which announce a new season. The annual variance in the number of days recording below freezing temperature is depicted in Figure 3.

#### FREEZE DATES AND GROWING SEASON

The occurrence of the last freezing temperature in spring and the first freezing temperature in the fall bound the period defined as the growing season.

#### Mean Freeze Dates

The timing of the occurrence of freezing temperatures is an important concern, particularly to agricultural and horticultural interests. Concerns involve both the planting and harvesting of crops because many are susceptible to freeze damage. Other activities dependent on temperature, such as construction, may also be

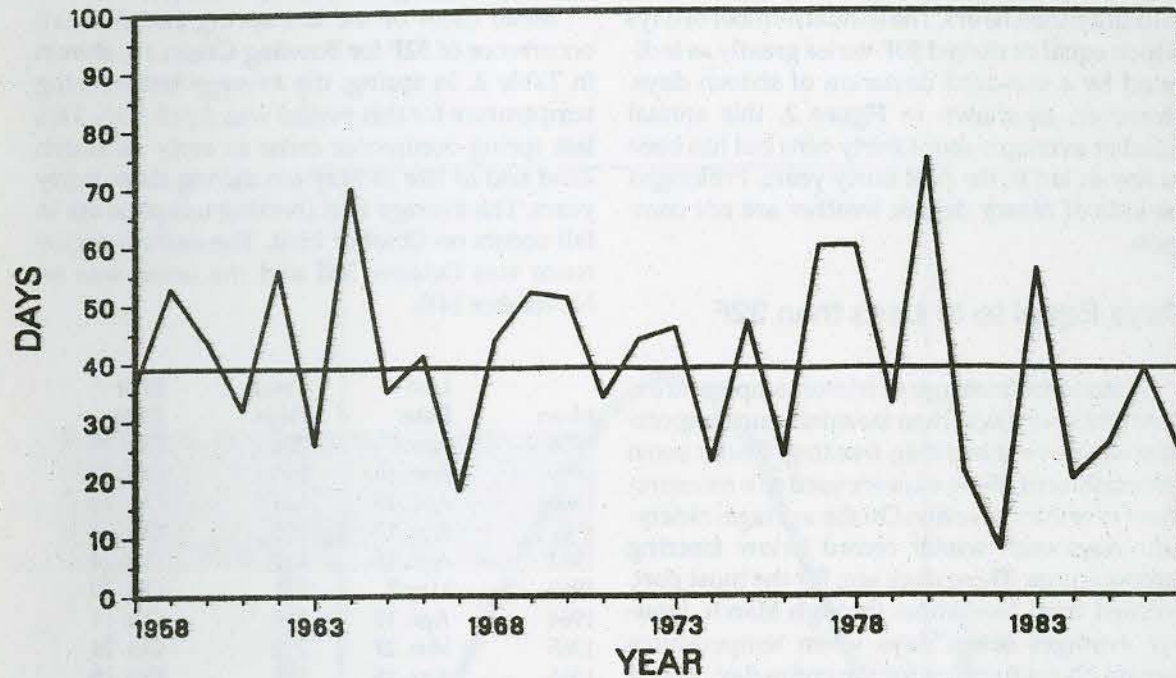
hindered by freezing temperatures. Some municipal planners use the mean freeze dates as an aid to scheduling leaf pickup during the fall.

Mean dates of the last spring and first fall occurrence of 32F for Bowling Green are shown in Table 2. In spring, the average last freezing temperature for this period was April 10th. This last spring occurrence came as early as March 22nd and as late as May 4th during these thirty years. The average first freezing temperature in fall occurs on October 23rd. The earliest occurrence was October 3rd and the latest was on November 14th.

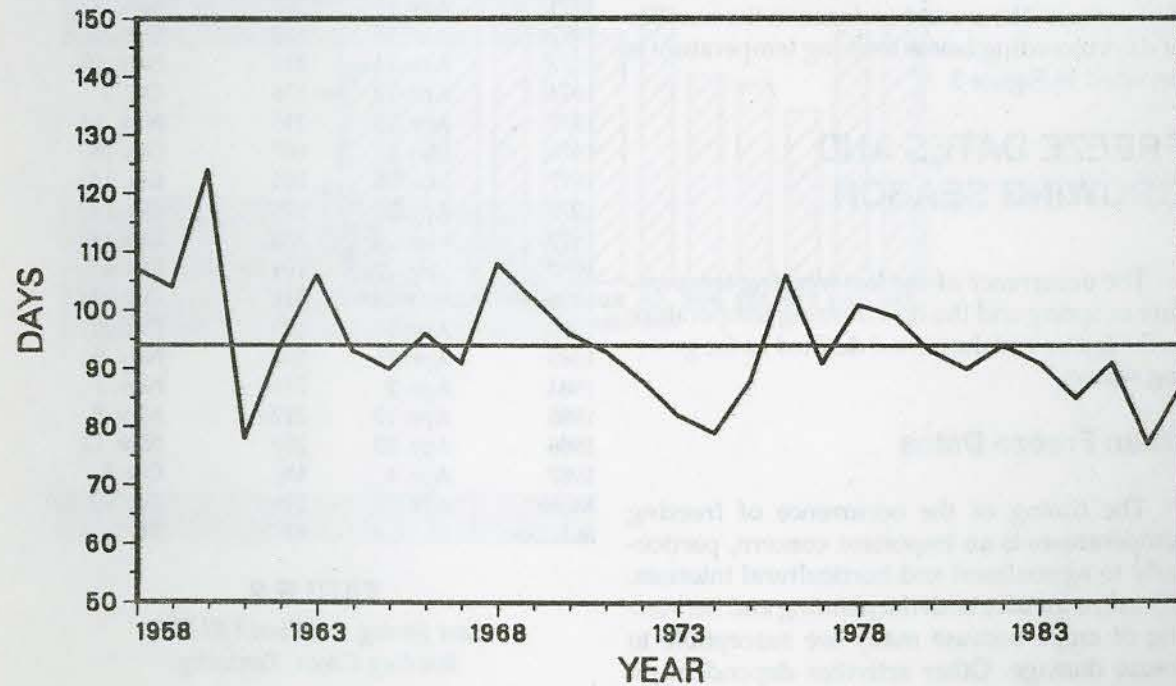
Mean	Last Date	Total Days	First Date
1958	Apr. 8	204	Oct. 29
1959	Apr. 15	195	Oct. 27
1960	Apr. 19	185	Oct. 21
1961	Apr. 11	198	Oct. 26
1962	Apr. 16	191	Oct. 24
1963	May 2	181	Oct. 30
1964	Apr. 10	184	Oct. 11
1965	Mar. 27	212	Oct. 24
1966	Apr. 15	196	Oct. 28
1967	Mar. 22	204	Oct. 11
1968	Mar. 26	194	Oct. 5
1969	Mar. 31	202	Oct. 18
1970	Apr. 15	185	Oct. 17
1971	Apr. 11	207	Nov. 4
1972	Apr. 26	177	Oct. 20
1973	Apr. 14	210	Nov. 10
1974	Apr. 10	176	Oct. 3
1975	Apr. 13	215	Nov. 14
1976	May 4	167	Oct. 18
1977	Mar. 25	204	Oct. 14
1978	Apr. 22	176	Oct. 15
1979	Mar. 26	203	Oct. 14
1980	Mar. 27	194	Oct. 6
1981	Mar. 24	214	Oct. 23
1982	Apr. 10	194	Oct. 21
1983	Apr. 21	198	Nov. 5
1984	Apr. 2	219	Nov. 7
1985	Apr. 10	212	Nov. 8
1986	Apr. 23	203	Nov. 12
1987	Apr. 4	187	Oct. 8
Mean	Apr. 10	196	Oct. 23
Std. Dev.	12	13	11

**TABLE 2**  
Last Spring and First Fall 32F,  
Bowling Green, Kentucky.

**DAYS WITH MAXIMUM TEMPERATURE 90F OR ABOVE,  
BOWLING GREEN, KENTUCKY, 1958-1987**



**DAYS WITH MINIMUM TEMPERATURE 32F OR ABOVE,  
BOWLING GREEN, KENTUCKY, 1958-1987**



**Growing Season**

The number of days between the last spring 32F and the first fall 32F is the growing season. It is considered to be the safe part of the year during which plants may be grown safe from the threat of freezing temperature. As shown in Table 2, the average length of the growing season for this area is 196 days which is about six and a half months. The standard deviation of the season length is about thirteen days with the absolute range of lengths being from 167 to 219 days.

**HEATING AND COOLING DEGREE DAYS**

The statistic called heating or cooling degree days was developed as a useful index of the weather induced consumption of energy for either heating or cooling. The statistic is calculated from daily temperature means by comparing it to a base temperature. For this study, the base temperature used is 65F, the standard used by industry.

**Heating Degree Days**

The heating degree day is a useful means of estimating the heating needs of a community. Developed by heating engineers, it has been proven to correspond very closely with heating energy use. The number of heating degree days is determined by subtracting the daily mean temperature from the base temperature of 65F.

The base temperature is considered to be the highest temperature at which heating might still be needed. If the mean temperature is 65F or greater, there are zero heating degree days. The daily calculated heating degree days are accumulated into monthly totals.

Degree day data are generally used in the form of normals. Normals are values calculated each decadal year for the prior thirty year period. They represent the arithmetic mean of the normal period. The current period uses the 1951-1980 data. These normals are given in Table 3.

The normal accumulated heating degree days are 4309 per year. Of this total, about sixty percent is accumulated from December through February and eighty-six percent is from November through March.

Figure 4 represents the apportionment of heating degree days accumulated throughout the year. The graph can be used by making the vertical axis represent the total cost apportioned for heating during the year. The actual cumulative cost can be plotted on the graph at the end of each month. If the plot is above the apportionment line, heating costs have been greater than normal and would require explanation by the monitor of that portion of the budget.

**Cooling Degree Days**

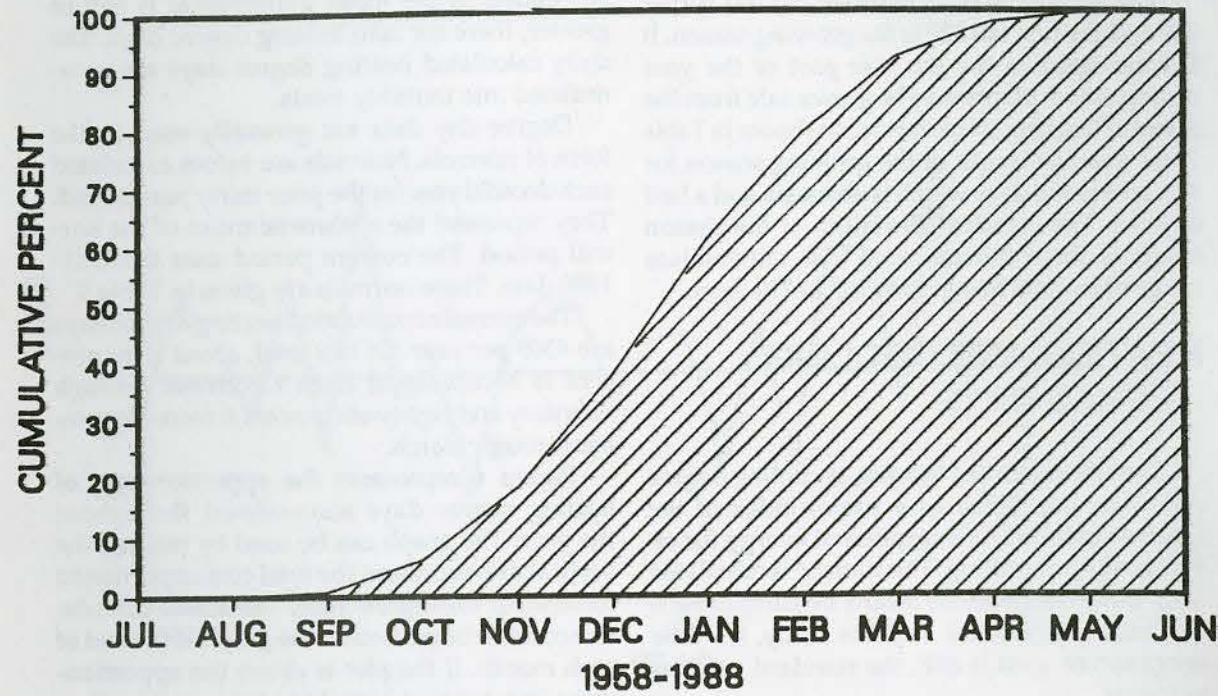
A similar measurement is the cooling degree day. This statistic is obtained by subtracting the base temperature of 65F from the daily mean temperature. The remainder is the total cooling degree days for that day. If the mean temperature

	J	F	M	A	M	J	J	A	S	O	N	D	Annual
Heating Degree Days	964	773	589	242	78	0	0	0	28	240	561	834	4309
Cooling Degree Days	0	0	10	14	121	290	409	372	190	23	0	0	1429

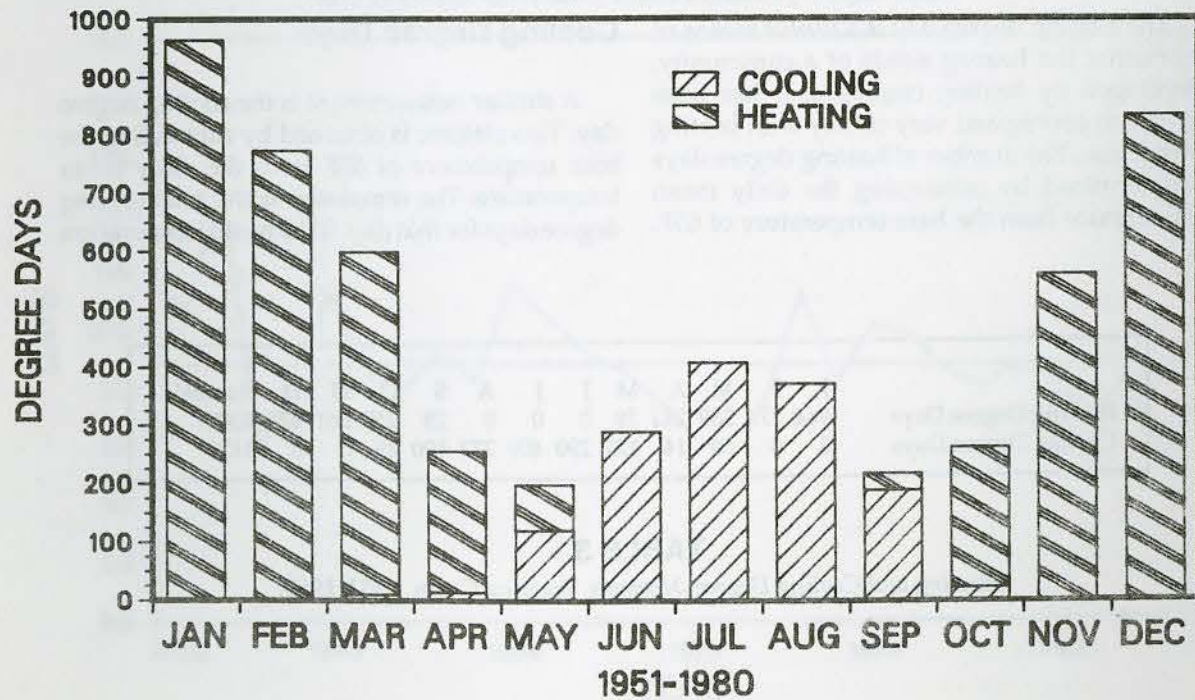
**TABLE 3**

Heating and Cooling Degree Normals, Bowling Green, 1951-1980.

HEATING DEGREE DAYS, APPORTIONMENT,  
BOWLING GREEN, KENTUCKY



NORMAL HEATING AND COOLING DEGREE DAYS,  
BOWLING GREEN, KENTUCKY



is 65F or less, there are zero cooling degree days. The cooling degree days are accumulated for each month.

Cooling degree day normals are shown in Table 3. Of the area's annual mean of 1429 cooling degree days, about seventy-five percent occur during June through August and 97% during May through September.

**Total Degree Days**

Figure 5 depicts the normal values for both heating and cooling degree days. From November through February, there are only heating degree days. Heating days outnumber cooling days during March, April, and October. The transition months are May, with nearly equal amounts of heating and cooling, and September, which is mostly cooling. June through August have only cooling degree days.

**PRECIPITATION**

Kentucky's precipitation pattern is generally latitudinal with the greatest amounts being found in the southern and southwestern parts of the state. The primary source of moisture is the Gulf of Mexico and the areas nearest to that source reflect that influence. There is evidence that the annual precipitation diminishes about 0.12 inch per mile from south to north over Western Kentucky (Conner, 1982). Nevertheless, Bowling Green's central location makes it representative of the entire Warren County area.

**Means and Extremes**

The mean annual precipitation of 49.52 inches at Bowling Green ranks it among the areas of Kentucky with the most ample moisture. This precipitation is produced by frontal activity during the winter and spring but convective showers become the primary producer during the summer. As a result, the summer rainfall is characterized by scattered isolated afternoon thundershowers. The wettest month is March with about five inches. In the following months through July, over four inches is recorded after which the amounts decrease to a low of about three inches in October. The amounts during the winter are about three and a half to four and a half inches. Table 4 presents the specific data.

The precipitation amounts vary considerably. The wettest single month during the thirty year period was 14.58 inches in March of 1975 but, of the 360 months studied, only nine recorded amounts greater than ten inches. The driest month was October of 1963 which measured only 0.07 inch but, of the 360 months, only twelve recorded less than one inch.

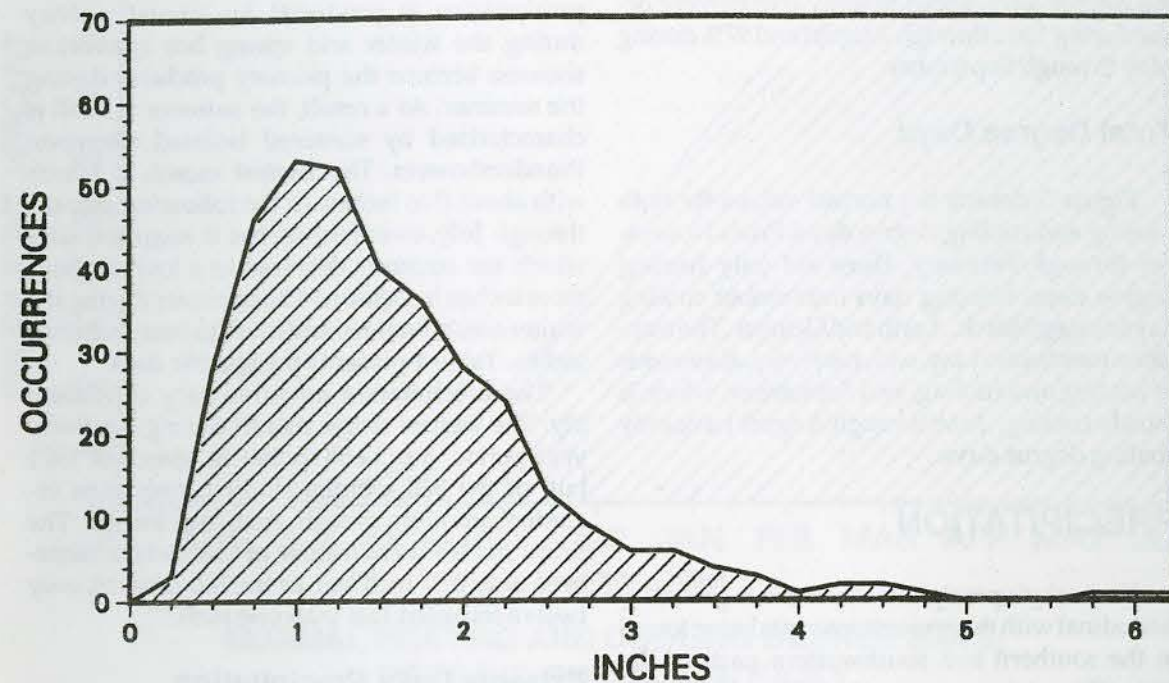
**Extreme Daily Precipitation**

One measure of extreme rainfall events is the maximum amount recorded in one day. The average greatest daily precipitation varies little among the months. The average is from 1.16 inches in October to 1.62 inches in March. The daily extreme for the thirty year study period

	J	F	M	A	M	J	J	A	S	O	N	D	Annual
Mean Amount	3.72	3.69	5.02	4.43	4.86	4.23	4.70	3.54	3.43	2.97	4.32	4.61	49.52
Standard Deviation	2.42	1.86	2.82	2.14	2.79	2.43	2.28	1.92	2.22	1.77	2.01	2.59	8.75

**TABLE 4**  
Mean Monthly Precipitation, Bowling Green, 1958-1987.

**MONTHLY EXTREME MAXIMUM DAILY PRECIPITATION,  
BOWLING GREEN, KENTUCKY, 1958-1987**



was 6.02 inches in September 1979. All years surpassed two inches in one day and seventeen of the thirty years surpassed three inches in a day. Only eight years surpassed four inches for a day. Typically, the daily extremes are in the one to two inch amounts. Beyond two inches, the events become less frequent. These occurrences of extreme daily precipitation are depicted in Figure 6.

### Days of Precipitation

The frequency of precipitation can be understood by the number of days which record precipitation. An amount of 0.10 inch or more is a disruptive shower for outdoor work such as site construction or concrete finishing. The area has 0.10 inch or more precipitation on an average of 81 days per year. March, April, and May lead with about eight days each and August, September, and October trail with about five days each. Heavier amounts are less frequent with only 32 days having a half inch or more and only twelve days measuring an inch or more.

### Snowfall

The term border state is clearly appropriate to describe snowfall in this area of Kentucky. Most of the time, winter precipitation falls as rain but, occasionally, it occurs as snow. Annual amounts fluctuate widely from a low of one inch in the winter of 1973-1974 to a high of 48.0 inches in 1959-60. The average annual snowfall is just over fourteen inches with January's average of about five inches being the greatest monthly mean. Snowfall does not extend to fall and spring. No snowfall was recorded in October and only one April recorded more than a trace. Average monthly snowfall is shown in Figure 7.

### Snowdepth

Snowfalls in this section of Kentucky are seldom intense and frequently occur over unfrozen surfaces. As a result, maximum snowdepth seldom equals snowfall. As an example, the average maximum snowdepth for January is about three inches, February about two inches, and March one inch. All other months have means less than an inch. Snow cover, when it occurs, is not persis-

tent. January averages six days and February four days which have an inch or more of snow on the ground. All other months average less than one day with that amount of snow cover. These data notwithstanding, a study of urban disruption by snow (Rooney, 1967) places Kentucky in the critical zone with southwestern areas described as an area of higher disruption. However, the data insists that these disruptions are short lived. The annual maximum snowdepth for the past thirty years is shown in Figure 8.

## HUMIDITY

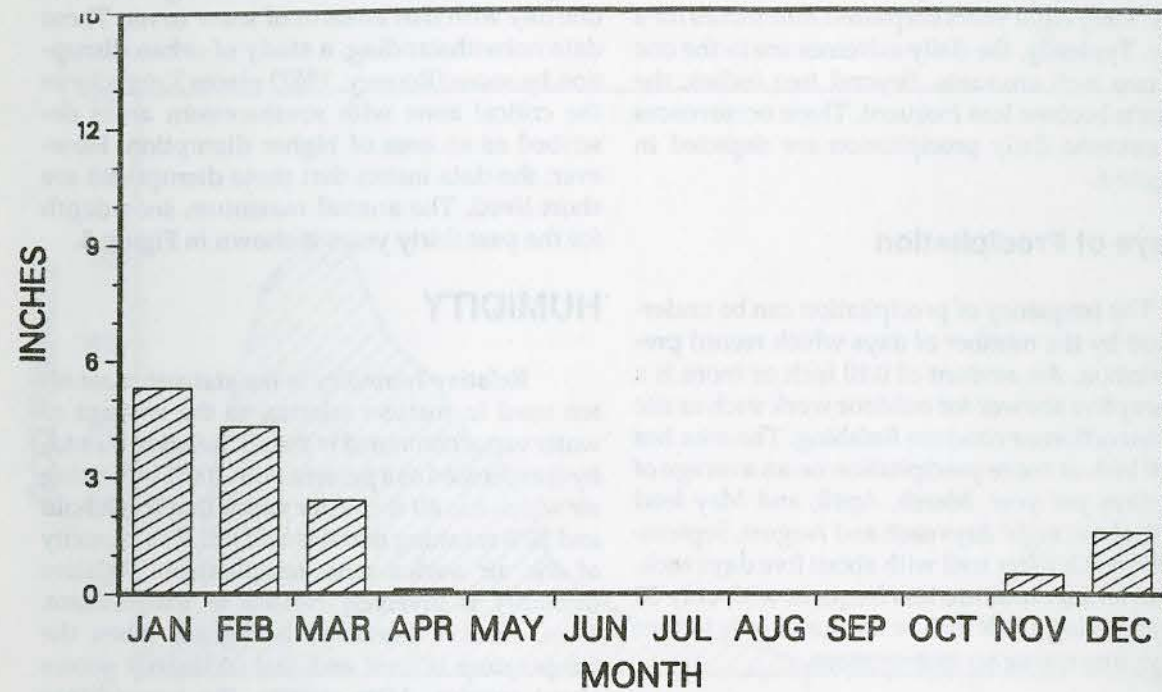
Relative humidity is the statistic most often used in matters relating to the amount of water vapor contained in the air. Relative humidity is expressed as a percent with 100% indicating air which has all the water vapor that it can hold and 50% meaning that it is half full. The capacity of the air varies with temperature. Relative humidity is inversely related to temperature. Thus, relative humidity is highest when the temperature is least and that ordinarily occurs about sunrise. After sunrise, the temperature usually increases until afternoon when relative humidity decreases to its minimum.

The Nashville, Tennessee observation station is the station nearest to Bowling Green which has long term and complete hourly observations. Because relative humidity does not vary substantively over short distances, the Nashville data are used in this study. Figure 9 displays the mean relative humidity at six in the morning (shown as the top of the shaded area) and at noon (shown as the bottom of the shaded area). The mean morning relative humidity varies between eighty and ninety percent with the highest percentage being observed in August and September. The mean noon relative humidity is consistently below sixty percent except during the middle of winter. It should be noted that midtown relative humidity is consistently less than that of suburban or rural areas because of the lack of evapotranspiration.

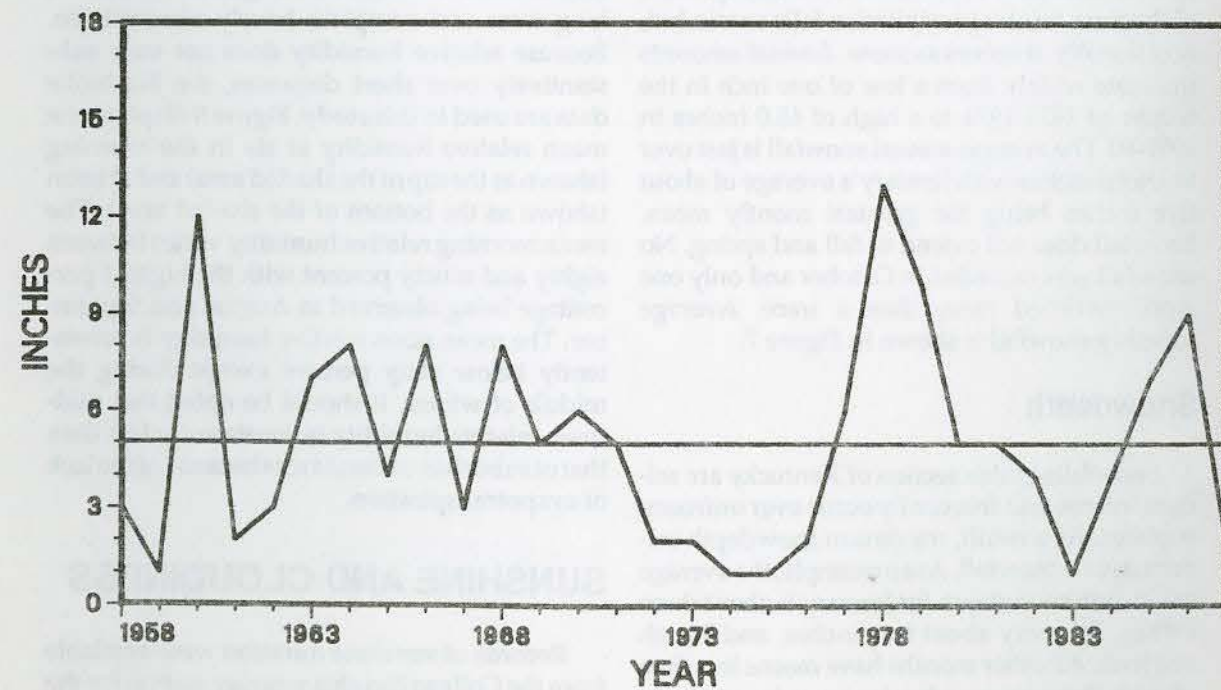
## SUNSHINE AND CLOUDINESS

Records of sunshine duration were available from the College Heights weather station for the

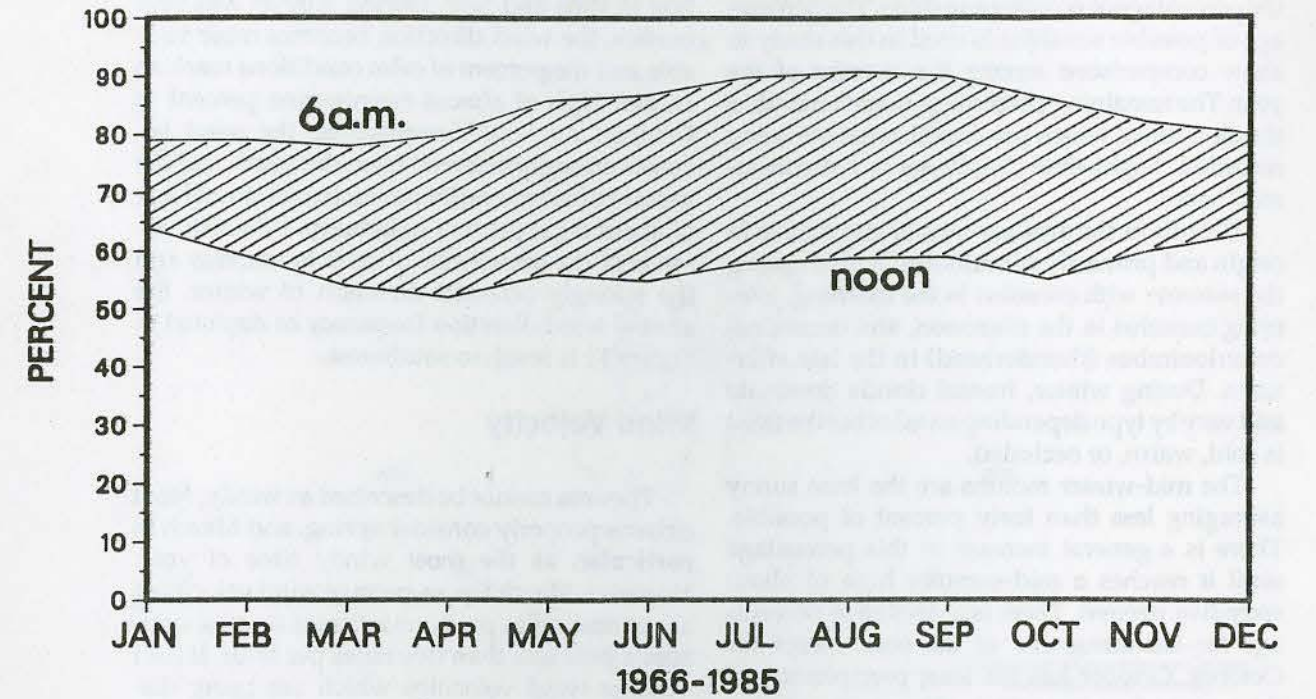
**TOTAL MONTHLY SNOWFALL,  
BOWLING GREEN, KENTUCKY, 1958-1987**



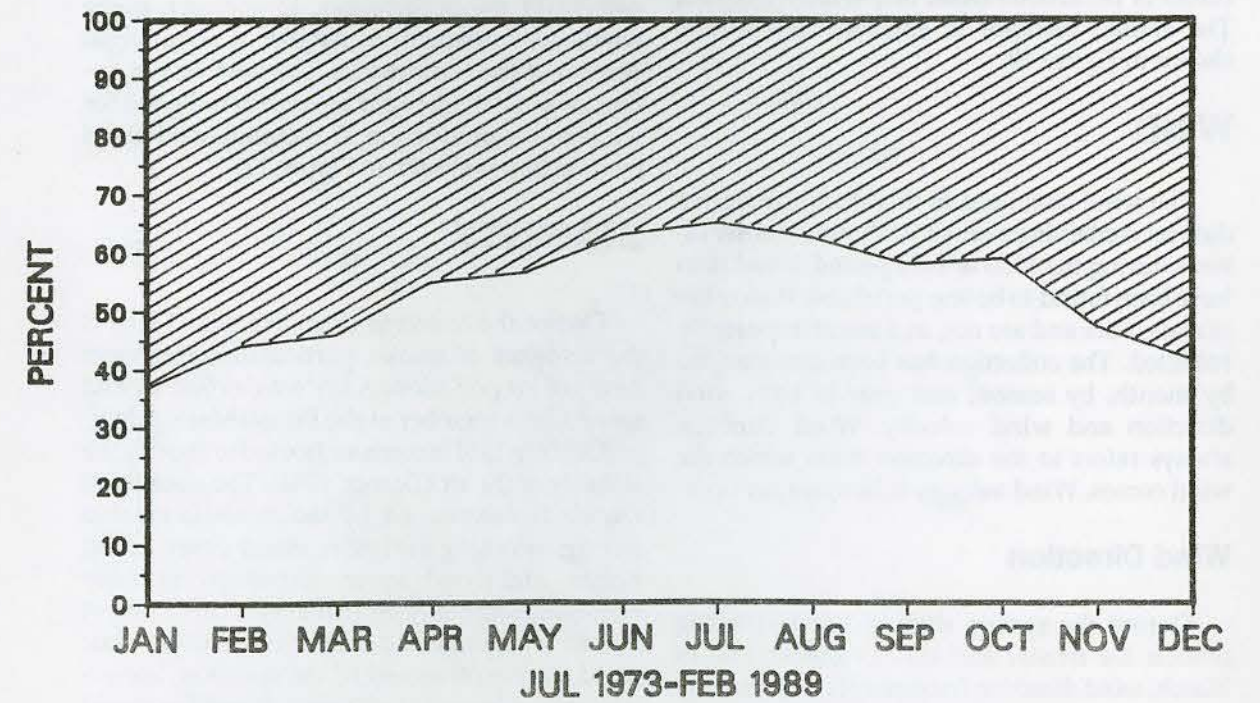
**MAXIMUM SNOW DEPTH,  
BOWLING GREEN, KENTUCKY, 1958-1987.**



**MEAN RELATIVE HUMIDITY, 6:00 A.M. AND 12:00 NOON,  
NASHVILLE, TENNESSEE**



**SUNSHINE, PERCENT OF POSSIBLE, COLLEGE HEIGHTS**



period July, 1973 through February, 1989. The statistic is recorded daily both in minutes and as the percentage of possible sunshine. The percentage of possible sunshine is used in this study to show comparisons among the months of the year. The remaining percentage in each month is the cloudiness which precluded sunshine being recorded. Night-time cloudiness is not considered here.

Clouds in the area are mostly convective in origin and primarily cumuliform in type during the summer with cumulus in the morning, towering cumulus in the afternoon, and occasional cumulonimbus (thunderhead) in the late afternoon. During winter, frontal clouds dominate and vary by type depending on whether the front is cold, warm, or occluded.

The mid-winter months are the least sunny averaging less than forty percent of possible. There is a general increase in this percentage until it reaches a mid-summer high of about sixty-five percent. There is a decline in percentage for the remainder of the year except for October. October has the least precipitation of the year and an increase in the amount of sunshine over the prior and subsequent months. It is the month with the bluest sky and, with the fall colors of deciduous trees, one widely enjoyed. The annual variance in sunshine amounts is shown in Figure 10.

**WIND**

The wind data used in this study are from a data set containing over 43,000 hours of observations during the 1950 to 1954 period. Wind data have been found to be less perishable than other climatic data and are not, as a result, repeatedly collected. The collection has been summarized by month, by season, and year in both wind direction and wind velocity. Wind direction always refers to the direction from which the wind comes. Wind velocity is in miles per hour.

**Wind Direction**

During the spring, shifting wind direction reflects the frontal activities of the season. In March, wind direction frequency is about evenly divided among the points between south clockwise to northwest. By May, the southwest direc-

tion has become dominant. The summer continues with southwest being the prevailing direction in June and July. During August and September, the wind direction becomes more variable and the percent of calm conditions reach an annual high of almost twenty-nine percent in October. As winter encroaches, the wind becomes strongly oriented from the south and the percent of calm conditions reaches an annual low of about eight percent in January. Primarily because of the prevalence of calm in summer and the strongly oriented direction of winter, the annual wind direction frequency as depicted in Figure 11 is south to southwest.

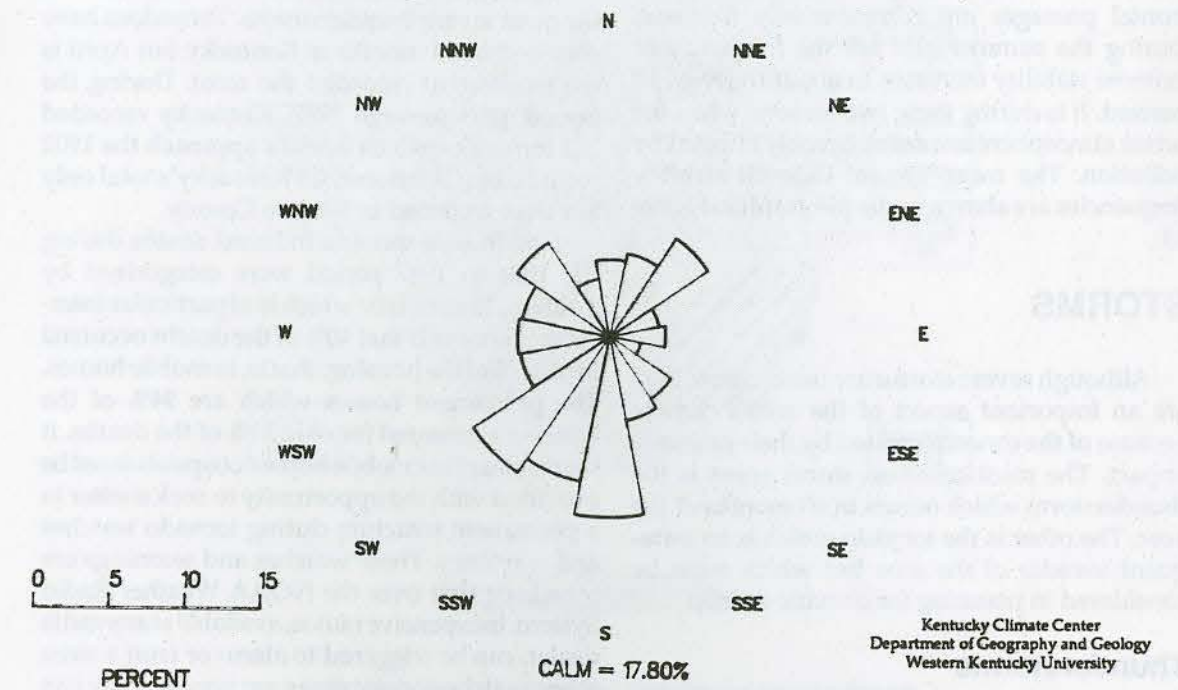
**Wind Velocity**

The area cannot be described as windy. Most citizens properly consider spring, and March in particular, as the most windy time of year. However, March has an average wind velocity of about nine miles per hour whereas August averages a little less than five miles per hour. It isn't average wind velocities which are being discerned by the citizen. Rather, it is the frequency of gusty winds. The frequency of velocities of above thirteen miles per hour peak in March at about 38 percent of the occurrences. In contrast, gusty winds are infrequent in August at about eight percent of the occurrences. The data do not define an area which could be considered good for wind power production. The annual wind speed by direction is shown in Figure 12.

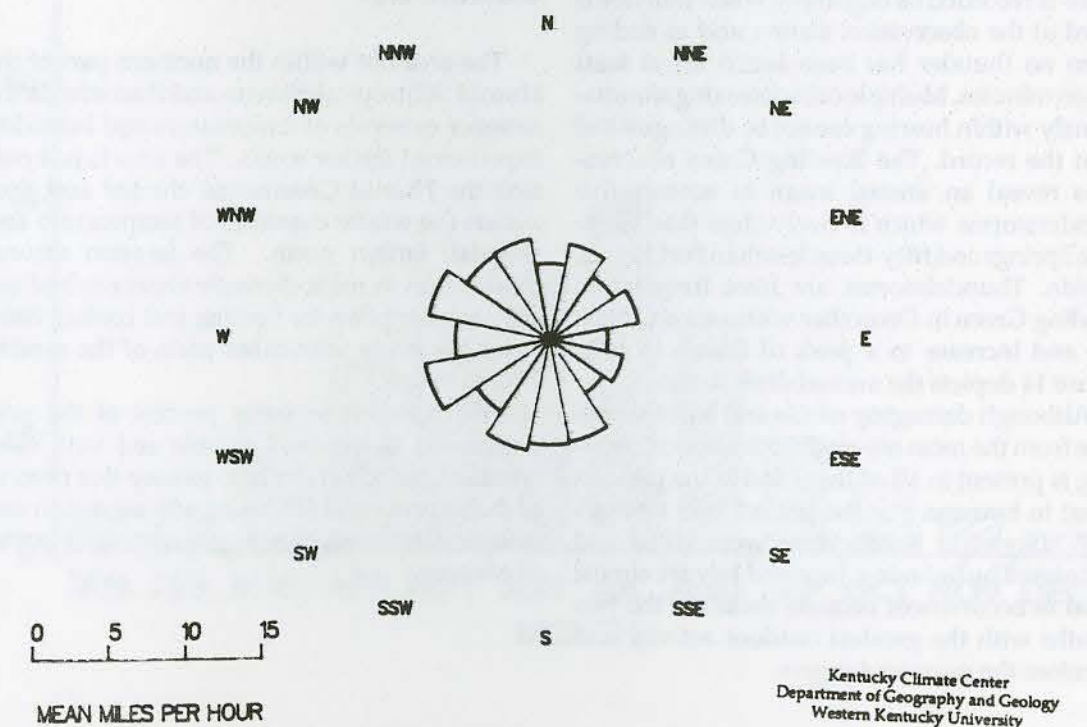
**STABILITY**

One of the concerns of an urbanized area is the dispersal of smoke, particulates, and other forms of air pollution. A system devised by and named for a member of the British Meteorological Office in 1961 is commonly used to classify the stability of the air (Turner, 1964). The stability of the air is determined by the interrelationship among incoming radiation, cloud cover, cloud height, and wind speed. Extremely unstable conditions generally mean that vertical mixing of the air will occur and dispersion will be most rapid. At the other end of the spectrum are extremely stable conditions where dispersion would be least rapid. Extreme stability is least during

**MEAN ANNUAL WIND DIRECTION FREQUENCY, BOWLING GREEN, KENTUCKY, 1950-1954**



**MEAN ANNUAL WIND SPEED BY DIRECTION, BOWLING GREEN, KENTUCKY, 1950-1954**



the winter with extreme conditions present about twenty-two percent of the time. The spring months show little change from winter because frontal passages are comparatively frequent. During the summer and fall the frequency of extreme stability increases to about thirty-eight percent. It is during these two seasons when the urban atmosphere is most noticeably affected by pollution. The mean annual Pasquill stability frequencies are shown in the pie graph in Figure 13.

**STORMS**

Although severe storms are uncommon, they are an important aspect of the area's climate because of the concern created by their potential impact. The most common storm event is the thunderstorm which occurs in all months of the year. The other is the tornado which is an infrequent invader of the area but which must be considered in planning for climatic events.

**Thunderstorms**

The data used here was extracted from a study by Changery (1981) which considered a data set from the 1948 to 1977 period. A thunderstorm is recorded as beginning when thunder is heard at the observation station and as ending when no thunder has been heard for at least fifteen minutes. Multiple cells occurring simultaneously within hearing cannot be distinguished from the record. The Bowling Green observations reveal an annual mean of seventy-five thunderstorms which is twelve less than Colorado Springs and fifty-three less than Fort Myers, Florida. Thunderstorms are least frequent in Bowling Green in December with a mean of just one and increase to a peak of fifteen in July. Figure 14 depicts the annual distribution.

Although damaging winds and hail are possible from the most severe thunderstorms, lightning is present in all of them and is the greatest threat to humans. For the period 1959 through 1987, sixty-eight Kentuckians were killed and 178 injured by lightning. June and July are almost equal in occurrences because these are the two months with the greatest outdoor activity and therefore the greatest dangers.

**Tornadoes**

Tornadoes are associated with only a few of the most severe thunderstorms. Tornadoes have occurred in all months in Kentucky but April is the month that recorded the most. During the period 1953 through 1987, Kentucky recorded 282 tornadoes which doesn't approach the 1902 recorded in Oklahoma. Of Kentucky's total only ten were recorded in Warren County.

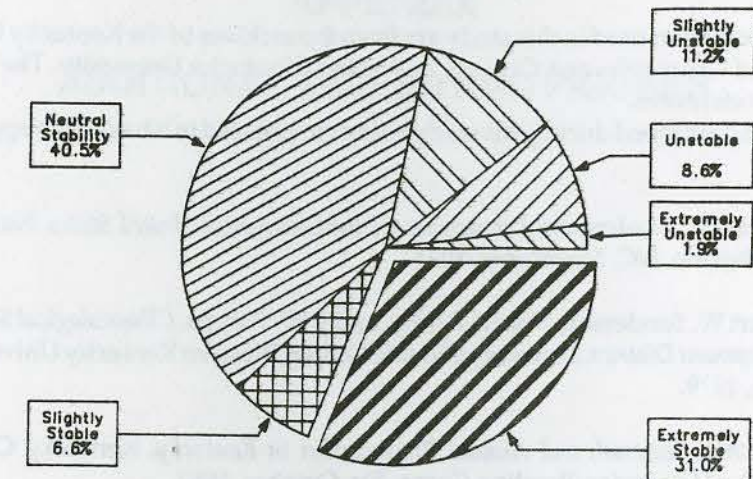
Nationwide tornado induced deaths during the 1984 to 1987 period were categorized by location. The statistic which is of particular interest to planners is that 40% of the deaths occurred in just 6% of the housing; that is, in mobile homes. The permanent homes which are 94% of the housing accounted for only 31% of the deaths. It seems clear that mobile home occupants must be provided with the opportunity to seek shelter in a permanent structure during tornado watches and warnings. These watches and warnings are broadcast first over the NOAA Weather Radio System. Inexpensive radios, available at any radio dealer, can be triggered to alarm or emit a siren when watches or warnings are issued. They can also be used to hear the broadcast weather message.

**SUMMARY**

The area lies within the northern part of the Humid Subtropical climate and thus avoids the summer extremes of temperature and humidity experienced farther south. The area is just outside the Humid Continental climate and thus avoids the winter extremes of temperature and snowfall farther north. The location assures moderation in most climatic elements and energy consumption for heating and cooling compares favorably with other parts of the eastern United States.

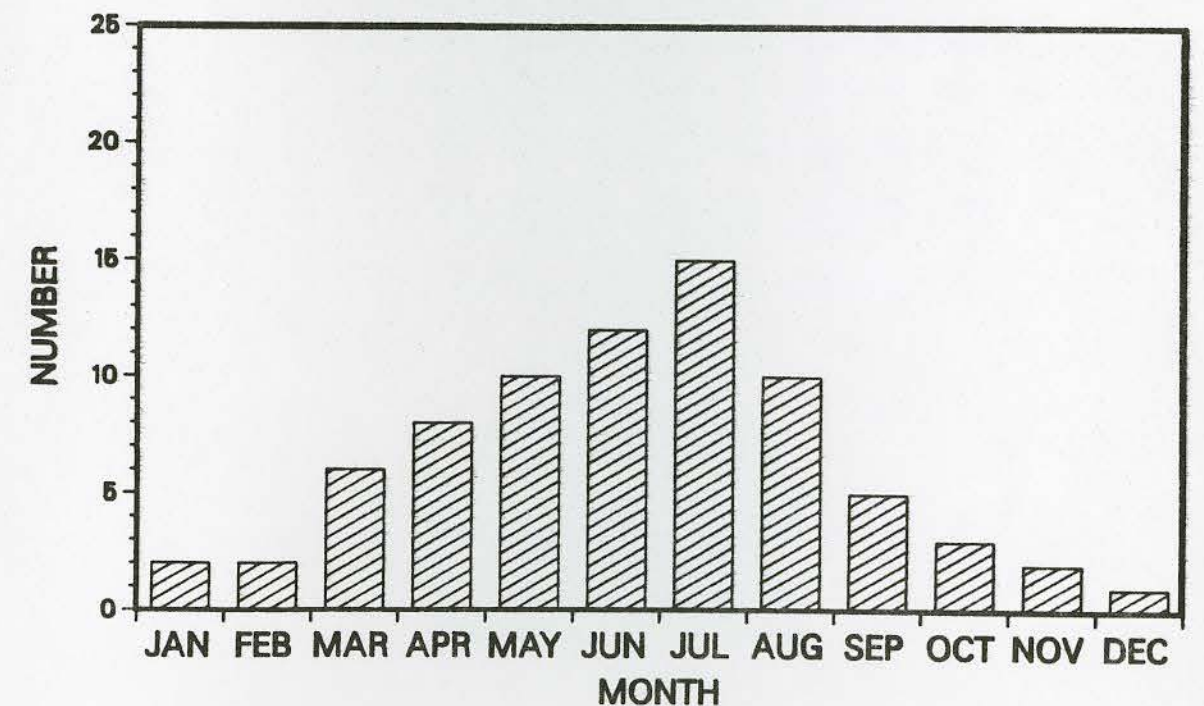
With more than thirty percent of the year designated as extremely stable and with calm winds recorded in twenty to twenty-five percent of the summer and fall hours, air stagnation and resulting accumulation of pollutants are a matter of concern.

**ANNUAL PASQUILL STABILITY FREQUENCY, BOWLING GREEN, KENTUCKY, 1950-1954**



Kentucky Climate Center  
Department of Geography and Geology  
Western Kentucky University

**MEAN NUMBER OF THUNDERSTORMS, BOWLING GREEN, KENTUCKY, 1948-1977**



REFERENCES

All data and information used in this study are from the archives of the Kentucky Climate Center in the Department of Geography and Geology at Western Kentucky University. The exceptions are listed below in the references.

Table and graphs developed during this study but not referenced in it have been appended hereto.

Changery, M. J. *National Thunderstorm Frequencies for the Contiguous United States*. National Climatic Data Center, Asheville, NC. November, 1981.

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Turner, D. Bruce. A Diffusion Model for an Urban Area. *Journal of Applied Meteorology*, Vol 3(1):pages 83-91. February, 1964.



APPENDIX  
ADDITIONAL TABLES AND FIGURES

Table with multiple columns and rows of data, likely representing precipitation or other meteorological measurements. The text is very faint and difficult to read, but the structure appears to be a standard data table.



BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	54*	67	60*	82	88*	92*	95	93	92*	85	80	63	95
1959	70	70*	78*	84*	93	98	97	97	91	92	78	64	98
1960	72	63*	78	87	90*	95	95	98	99	88	75	65	99
1961	61	73	74	80*	85	93	94	95*	95	87	81	69	95
1962	71	82	74	87	94	94	99	100	92*	87	68	69	100
1963	66	65	84	89	88*	95	92*	95	90*	90	71*	60	95
1964	68	59*	73	87	92*	100	97	102*	95	81*	80	73	102
1965	67*	73	70	90	90	93	99	98	92	84*	78	66	99
1966	63*	67	81	81	90	99	102	93	92	80	74	68	102
1967	71	70	84	86*	90*	95*	91	91	89*	85	70	71	95
1968	63*	63	81	82	87	95*	95	98*	90	86	80	60	98
1969	61	61	75	84	93	97	99	99	91	86	71	56	99
1970	68	66	72	86	92*	92	98	99	98	84	73	73	99
1971	63*	71	72	87	85*	98*	95	93	91	88*	83	74	98
1972	72	77	78	84	89*	92*	99	96	94	79	77	68	99
1973	66	64	78*	83	87	93*	95	95	95	88	75	68*	95
1974	71	72	82	85	91	94	96	93	89	82	82	69	96
1975	74	67	75*	83*	91	94	96	95	96	86*	81	69	96
1976	62	76	82	86*	86	92	98	92*	88	84	65	64	98
1977	42	74	83	87*	92	98*	100	96	98	83	77	61	100
1978	64	50	83	89	91*	99	99	98	96	84	77	66	99
1979	59	66	77	81	92	94*	96	98*	90	86*	77	67	98
1980	59	68	70	90	90*	97	107	99*	100	89	78	70	107
1981	63	74	82	81*	81	91*	95	94	86	80	76	65	95
1982	64	79	85*	81	89	91	91	91	88	86	82	78	91
1983	56*	68	78	78	79	93*	102	101	96	86	72	64	102
1984	60	70	79	83	86	94	94	90	91	81	73	73	94
1985	68	75	79	85	87	92	96	94	91	87	76	63	96
1986	68	70	82	85	88	92	102	96	93	87	74	61	102
1987	58	61	77	84	91	89	95	101	89	80	81	64	101
SUM	1924	2061	2326	2537	2667	2831	2907	2880	2777	2551	2285	2001	2943
MEAN	64	68	77	84	88	94	96	96	92	85	76	66	98
STD	6	6	5	3	3	2	3	3	3	3	4	4	3

TABLE 1  
Extreme Maximum Temperature.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	41.3	38.5	49.5	67.9	77.7	84.3	87.9	87.0	82.0	71.5	61.2	43.2	66.0
1959	44.4	51.1	57.2	68.8	81.3	85.3	89.2	90.0	83.7	70.8	53.8	49.3	68.7
1960	45.4	41.7	42.4	72.9	75.7	85.1	87.5	90.3	84.3	71.9	58.4	42.2	66.4
1961	41.5	53.3	59.6	61.8	73.8	82.7	87.3	86.0	85.3	72.3	56.6	47.0	67.2
1962	41.9	53.6	52.2	65.1	85.8	84.3	89.2	91.0	78.2	72.3	55.5	42.7	67.6
1963	39.4	44.2	63.5	70.9	77.5	85.7	86.3	86.8	81.4	81.6	59.1	37.2	67.8
1964	47.2	44.9	58.6	72.0	80.9	89.8	89.7	88.4	82.4	68.9	62.5	49.7	69.5
1965	47.5	49.5	49.5	71.8	82.7	84.9	87.5	89.1	82.0	70.3	61.1	52.2	69.0
1966	37.7	46.4	59.7	65.3	76.2	86.2	92.3	84.8	77.9	68.1	57.1	46.1	66.4
1967	48.8	44.5	65.7	74.1	74.5	84.8	84.1	81.4	77.7	70.1	52.4	50.6	67.3
1968	40.0	40.7	58.2	69.1	75.2	86.7	88.4	89.5	81.5	70.3	55.7	44.7	66.6
1969	42.6	45.3	50.7	70.1	79.9	86.6	92.0	88.2	80.6	70.0	53.4	41.5	66.7
1970	38.9	44.7	53.6	72.7	80.6	84.3	87.1	87.7	86.6	70.7	55.4	51.2	67.7
1971	42.4	47.4	53.8	70.6	74.5	88.6	85.5	85.3	83.0	76.2	58.4	55.4	68.4
1972	47.9	48.0	56.7	70.1	78.1	84.7	88.6	87.7	84.7	67.4	52.1	48.2	67.8
1973	43.6	46.2	65.4	64.2	73.2	87.3	88.5	87.4	85.4	75.0	61.4	47.3	68.7
1974	49.5	50.8	63.8	70.5	78.4	81.5	89.2	86.2	75.1	70.4	57.2	48.2	68.4
1975	49.5	50.6	53.6	66.1	79.5	86.2	88.7	89.1	75.6	70.5	60.8	48.0	68.1
1976	41.9	57.7	64.0	71.4	74.0	83.3	87.1	84.5	79.0	63.8	49.7	45.3	66.8
1977	29.7	48.7	64.5	74.0	83.4	87.4	92.4	89.0	83.5	66.1	58.2	45.4	68.5
1978	31.9	34.5	54.2	71.8	76.4	88.1	90.5	87.9	85.1	69.2	60.9	49.9	66.7
1979	33.9	40.6	59.9	67.5	76.8	85.9	86.1	87.9	78.4	70.1	56.9	49.1	66.0
1980	43.5	41.7	53.8	67.3	78.5	85.7	94.1	92.8	84.4	68.8	56.8	48.5	67.9
1981	38.8	50.3	55.6	71.5	70.6	84.8	87.1	84.0	77.4	66.6	59.3	44.1	65.8
1982	41.6	45.7	60.6	62.5	81.1	80.6	86.5	82.3	76.4	70.2	58.5	53.1	66.5
1983	41.8	48.6	55.7	60.0	70.4	82.6	91.0	93.0	82.7	71.4	57.3	37.3	65.9
1984	36.3	51.5	51.9	64.6	72.1	87.6	84.9	85.0	76.5	72.4	54.6	56.2	66.1
1985	33.6	42.4	60.8	70.6	77.0	82.7	87.6	83.0	79.6	70.7	61.7	40.5	65.8
1986	45.2	48.5	60.8	70.8	76.4	84.4	92.1	83.9	83.1	69.4	53.4	45.1	67.7
1987	41.1	48.1	60.3	66.9	82.0	85.1	87.4	89.2	81.8	65.6	60.4	49.9	68.1
SUM	1248.8	1399.7	1715.8	2062.9	2324.2	2557.2	2655.8	2618.4	2435.3	2112.6	1719.8	1409.1	2020.1
MEAN	41.6	46.7	57.2	68.8	77.5	85.2	88.5	87.3	81.2	70.4	57.3	47.0	67.3
STD	5.1	4.9	5.5	3.7	3.8	2.1	2.4	2.9	3.3	3.3	3.3	4.7	1.1

TABLE 2  
Monthly Mean Maximum Temperature.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	33.2	27.8	41.3	55.9	65.8	72.4	78.2	75.4	69.8	57.5	48.9	32.4	54.8
1959	33.7	39.2	44.6	56.8	69.9	73.5	77.3	78.9	72.1	59.2	42.8	40.4	57.3
1960	37.9	33.5	32.6	58.9	63.0	73.9	76.9	78.8	72.4	59.6	45.5	32.4	55.4
1961	31.0	43.2	50.1	51.6	62.2	71.6	76.9	75.3	72.6	58.6	47.5	38.5	56.5
1962	32.9	42.4	43.6	53.8	73.3	74.0	77.4	78.0	67.4	60.8	46.3	32.3	56.8
1963	27.8	32.5	51.5	58.9	65.4	74.5	75.9	74.9	68.4	64.2	47.9	28.0	55.8
1964	35.3	35.1	47.4	60.3	68.3	77.0	78.2	75.9	69.7	55.1	49.8	40.1	57.7
1965	36.5	37.4	40.4	60.2	70.5	73.9	77.1	77.1	71.5	56.6	49.4	42.4	57.7
1966	28.9	38.0	47.9	55.7	64.1	72.7	80.6	74.5	67.6	55.3	46.9	37.1	55.7
1967	39.4	34.0	53.0	61.8	64.0	73.9	73.9	71.4	65.8	57.1	42.4	40.1	56.4
1968	30.8	31.0	45.8	57.3	64.8	74.8	77.3	78.3	68.7	57.7	47.0	36.0	55.7
1969	34.5	37.9	39.6	58.2	67.1	74.9	80.8	75.9	68.7	58.2	43.5	33.7	56.0
1970	28.2	34.8	43.9	59.6	68.0	73.2	76.1	77.4	75.7	58.9	46.2	41.3	56.9
1971	33.6	36.2	42.3	56.1	62.5	77.2	75.8	74.9	72.9	64.7	47.5	46.0	57.4
1972	37.4	37.3	45.9	58.0	65.8	71.5	77.4	76.2	73.1	56.7	44.4	39.9	56.9
1973	34.6	36.5	54.8	55.1	62.1	76.2	78.2	76.2	74.1	62.0	50.6	38.0	58.2
1974	42.0	39.8	52.3	57.6	67.7	70.6	77.5	76.0	65.3	56.5	47.3	39.4	57.6
1975	39.3	40.5	43.1	55.0	68.7	75.4	77.3	79.4	65.7	59.5	49.7	39.2	57.7
1976	31.9	46.2	52.9	56.9	62.1	73.1	76.4	73.4	67.1	52.7	38.9	33.9	55.4
1977	20.0	37.4	52.3	61.3	71.1	75.7	81.1	78.3	73.2	54.9	49.7	35.8	57.5
1978	23.6	25.2	43.8	60.0	65.8	76.7	79.8	77.7	74.0	55.6	50.6	39.6	56.0
1979	26.2	29.9	49.3	57.0	65.5	74.5	77.5	77.3	68.6	58.6	46.2	39.5	55.8
1980	36.1	32.8	43.6	55.9	67.4	74.3	82.6	81.7	73.4	56.1	46.6	39.0	57.4
1981	29.6	39.2	45.0	60.8	60.6	74.7	77.5	74.1	65.7	55.6	49.0	35.7	55.6
1982	31.2	36.7	49.7	51.8	69.0	69.5	77.5	72.5	66.2	57.9	48.2	44.8	56.2
1983	34.7	39.3	46.6	50.7	60.7	72.3	79.6	80.6	70.0	59.6	47.4	29.8	55.9
1984	30.7	40.5	42.9	55.1	61.8	76.2	74.2	74.8	65.9	62.9	44.2	47.2	56.3
1985	25.6	33.8	50.8	59.6	66.7	72.4	77.1	74.2	67.6	61.2	54.1	31.1	56.1
1986	34.1	40.2	48.8	58.6	66.4	74.3	80.7	73.1	72.5	58.5	46.4	37.8	57.6
1987	34.0	39.8	48.5	55.3	70.7	75.2	77.1	77.5	69.0	51.5	49.1	40.4	57.3
SUM	974.7	1098.1	1094.3	1713.8	1981.0	2220.1	2334.0	2290.7	2094.7	1743.3	1414.0	1131.8	1697.6
MEAN	32.5	36.6	46.5	57.1	66.0	74.0	77.8	76.4	69.8	58.1	47.1	37.7	56.6
STD	4.9	4.6	4.9	2.9	3.3	1.9	2.0	2.4	3.1	3.0	3.0	4.6	0.9

**TABLE 3**  
Monthly Mean Temperature.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	-5.5	-12.7	-7.2	-2.4	-1.5	-4.0	-1.2	-2.6	-1.8	-2.7	1.6	-6.8	-46.8
1959	-5.0	-1.3	-3.9	-1.5	2.6	-2.9	-2.1	0.9	0.5	-1.0	-4.5	1.2	-17.0
1960	-0.8	-7.0	-15.9	0.6	-4.3	-2.5	-2.5	0.8	0.8	-0.6	-1.8	-6.8	-40.0
1961	-7.7	2.7	1.6	-6.7	-5.1	-4.8	-2.5	-2.7	1.0	-1.6	0.2	-0.7	-26.3
1962	-5.2	2.3	-3.8	-4.3	6.1	-2.0	-1.7	0.1	-4.0	0.8	-0.7	-6.8	-19.2
1963	-10.3	-7.6	4.1	0.8	-1.8	-1.5	-3.2	-3.0	-3.0	4.2	0.9	-11.1	-31.5
1964	-2.8	-5.0	0.0	2.2	1.1	1.0	-0.9	-1.0	-1.7	-4.9	2.8	1.0	-8.2
1965	-1.6	-2.7	-7.0	2.1	3.3	-2.1	-2.0	-0.8	0.1	-3.4	2.4	3.3	-8.4
1966	-9.2	-2.1	0.5	-2.4	-3.1	-3.3	1.5	-3.4	-3.8	-4.7	-0.1	-2.0	-32.1
1967	1.3	-6.1	5.6	3.7	-3.2	-2.1	-5.2	-5.5	-5.6	-2.9	-4.6	1.0	-24.6
1968	-7.3	-9.1	-1.6	-0.8	-2.4	-1.2	-1.8	0.4	-2.7	-2.3	0.0	-3.1	-31.9
1969	-3.6	-2.2	-7.8	0.1	-0.1	-1.1	1.7	-2.0	-2.7	-1.8	-3.5	-5.4	-28.4
1970	-9.9	-5.3	-3.5	1.5	0.8	-2.8	-3.0	-3.5	4.3	-1.1	-0.8	2.2	-18.1
1971	-4.5	-3.9	-5.1	-2.0	-4.7	1.2	-3.3	-3.0	1.5	4.7	0.5	6.9	-11.7
1972	-0.7	-2.8	-1.5	-0.1	-1.4	-4.5	-1.7	-1.7	1.7	-3.3	-2.6	0.8	-17.8
1973	-3.5	-3.6	7.4	-3.3	-5.1	0.2	-0.9	-1.7	2.7	2.0	3.6	-1.1	-3.0
1974	6.4	1.4	6.0	-0.2	1.0	-4.4	-0.6	-0.9	-5.0	-2.6	0.9	1.7	3.7
1975	3.7	2.1	-3.2	-2.8	2.0	0.4	-0.8	2.5	-4.6	0.4	3.3	1.5	4.5
1976	-3.7	7.8	6.6	-0.9	-4.6	-1.9	-1.7	-3.5	-3.2	-6.4	-7.5	-3.8	-22.8
1977	-15.6	-1.0	6.0	3.5	4.4	0.7	3.0	1.4	2.9	-4.2	3.3	-1.9	2.5
1978	-12.0	-13.2	-2.5	2.2	-3.9	1.7	1.7	0.8	3.7	-3.5	4.2	1.9	-15.9
1979	-9.4	-8.5	3.0	-0.8	-1.2	-0.5	-0.5	0.4	-1.7	-0.5	-0.2	1.8	-18.1
1980	0.5	-5.6	-2.7	-1.9	0.7	-0.7	4.5	4.8	3.1	-3.0	0.2	1.3	1.2
1981	-6.0	0.8	-1.3	3.0	-6.1	-0.3	-0.6	-2.8	-4.6	-3.5	2.6	-2.0	-20.8
1982	-4.4	-1.7	3.4	-6.0	2.3	-5.5	-0.6	-4.4	-4.1	-1.2	1.8	7.1	-13.3
1983	0.8	1.9	0.3	-6.7	-5.7	-2.2	1.4	3.6	-0.4	1.6	1.1	-8.3	-12.6
1984	-3.2	3.1	-3.4	-2.3	-4.6	1.7	-4.0	-2.2	-4.5	4.9	-2.1	9.1	-7.5
1985	-8.3	-3.6	4.5	2.2	0.3	-2.1	-1.1	-2.8	-2.8	3.2	7.8	-7.0	-9.7
1986	0.2	2.8	2.5	1.2	0.0	-0.2	2.5	-3.9	2.1	0.5	0.1	-0.3	7.5
1987	0.1	2.4	2.2	-2.1	4.3	0.7	-1.1	0.5	-1.4	-6.5	2.8	2.3	4.2
SUM	-127.2	-77.7	-16.7	-23.8	-26.9	-45.0	-26.7	-33.2	-33.2	-39.4	11.7	-24.0	-462.1
MEAN	-4.2	-2.5	-0.6	-0.8	-0.9	-1.5	-0.9	-1.1	-1.1	-1.3	0.4	-0.8	-15.4
STD	4.9	4.9	5.2	2.8	3.3	2.0	2.2	2.5	2.9	3.1	3.1	4.7	13.8

**TABLE 4**  
Departure from Normal Temperature.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	25.0	17.0	33.1	43.9	53.8	60.5	68.4	63.7	57.5	43.5	36.6	21.5	43.7
1959	23.0	27.3	31.9	44.7	58.4	61.6	65.4	67.8	60.4	47.6	31.8	31.5	45.9
1960	30.3	25.3	22.8	44.9	50.3	62.6	66.3	67.3	60.4	47.2	32.5	22.6	44.3
1961	20.5	33.1	40.6	41.4	50.5	60.4	66.4	64.6	59.8	44.9	38.4	30.0	45.8
1962	23.8	31.2	35.0	42.5	60.7	63.6	65.6	64.9	56.6	49.2	37.0	21.9	46.0
1963	16.2	20.7	39.5	46.8	53.3	63.2	65.4	62.9	55.3	46.8	36.6	18.8	43.7
1964	23.4	25.2	36.1	48.6	55.6	64.1	66.6	65.3	57.0	41.3	37.1	30.5	45.9
1965	25.4	25.3	31.2	48.6	58.3	62.9	66.7	65.1	61.0	42.9	37.6	32.5	46.4
1966	20.1	29.6	36.0	46.1	52.0	59.2	68.9	64.2	57.3	42.4	36.7	28.0	45.0
1967	29.9	23.4	40.2	49.4	53.5	63.0	63.6	61.4	53.8	44.1	32.3	29.6	45.3
1968	21.5	21.2	33.4	45.4	54.4	62.9	66.1	67.1	55.9	45.0	38.2	27.2	44.8
1969	26.4	30.5	28.4	46.3	54.2	63.1	69.5	63.6	56.7	46.4	33.5	25.9	45.3
1970	17.4	24.8	34.2	46.5	55.4	62.0	65.1	67.0	64.7	47.1	37.0	31.4	46.0
1971	24.7	25.0	30.8	41.5	50.4	65.7	66.0	64.4	62.7	53.1	36.5	26.6	46.4
1972	26.9	26.5	35.0	45.8	53.5	58.2	66.2	64.7	61.5	46.0	36.7	31.6	46.0
1973	25.6	26.7	44.1	46.0	50.9	65.0	67.9	65.0	62.7	49.0	39.8	28.6	47.6
1974	34.4	28.8	40.8	44.7	56.9	59.7	65.7	65.7	55.4	42.5	37.4	30.5	46.8
1975	29.0	30.3	32.5	43.9	57.9	64.5	65.9	69.6	55.7	48.5	38.5	30.4	47.2
1976	21.9	34.6	41.7	42.4	50.2	62.8	65.6	62.2	55.1	41.5	28.0	22.5	44.0
1977	10.2	26.1	40.1	48.6	58.7	64.0	69.8	67.5	62.8	43.6	41.2	26.2	46.5
1978	15.2	15.9	33.3	48.2	55.1	65.3	69.0	67.5	62.8	41.9	40.3	29.3	45.3
1979	18.5	19.2	38.6	46.5	54.1	63.1	69.1	66.6	58.7	47.0	35.4	29.8	45.5
1980	28.7	23.9	33.4	44.5	56.3	62.8	71.0	70.5	62.4	43.4	36.4	29.4	46.8
1981	20.3	28.1	34.3	50.1	50.6	64.6	67.8	64.2	54.0	44.6	38.7	27.3	45.3
1982	20.8	27.7	38.8	41.1	56.8	58.4	68.4	62.6	55.9	45.5	37.9	36.5	45.8
1983	27.6	29.9	37.5	41.4	50.9	62.0	68.1	68.1	57.2	47.7	37.5	22.2	45.8
1984	25.1	29.4	33.9	45.6	51.4	64.7	63.4	64.6	55.3	53.4	33.7	38.2	46.5
1985	17.5	25.1	40.7	48.5	56.3	62.0	66.5	65.4	55.6	51.6	46.4	21.6	46.4
1986	23.0	31.9	36.7	46.3	56.4	64.1	69.3	62.3	61.9	47.5	39.4	30.5	47.4
1987	26.8	31.4	36.7	43.7	59.4	65.3	66.8	65.8	56.2	37.3	37.7	30.9	46.5
SUM	699.1	795.1	1071.3	1363.9	1636.2	1881.3	2010.5	1961.6	1752.3	1372.5	1106.8	853.5	1373.9
MEAN	23.3	26.5	35.7	45.5	54.5	62.7	67.0	65.4	58.4	45.8	36.9	28.5	45.8
STD	5.1	4.5	4.5	2.5	3.1	2.0	1.8	2.2	3.2	3.6	3.3	4.8	1.0

TABLE 5  
Monthly Mean Minimum Temperature.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	12	-9	22	28	41*	51	59	50	44	31*	14	5	-9
1959	-2	10	20	31	39	50*	56	60*	48	28	12	15	-2
1960	15*	3	-6	27	33	53	59	60	48	30*	19	0	-6
1961	-11	12	27	28	35	51	54	57*	41	26	20	8*	-11
1962	-4	8	21	29*	47	54	51	54	41	27*	24*	-8	-8
1963	-21*	0	25	30	30	55	49	50	38	29	21	-2	-21
1964	-3	14	22	28	42	46	55	50	40	28	13*	6	-3
1965	-8	-6	18	34	48*	52	53*	50	36	26*	20	16	-8
1966	-11	6	19*	24	33	40	59	53	44	32	18*	2	-11
1967	11	2	18	37*	37	57	52	52	37	30*	21*	10	2
1968	1	6	14	33	38	50	52	50	45	28	22*	12	1
1969	3	19	15	33*	39	44	58	55	42	29	17*	11	3
1970	-9	-1	17	30	37	52	53	58	42	32	11	14	-9
1971	1	-6	21*	31*	33	57	56	56*	51	40	19	16	-6
1972	-5	10	19	26*	39	42	50	56*	42	30	19	8	-5
1973	5	10	28	24	37	53	56	54	42	34	21	10	5
1974	15	13	20	28	36	51*	57	55	39	27	21	17	13
1975	10	12	18	28	46	50	50	61*	41	33	22	12	10
1976	0	9	25	30	32	51	57	53	40	24	9	1	0
1977	-10	5	22	33	40	45	58	58	50	31	16	6	-10
1978	2	2	9	32	39	53	60	59	52*	32*	28	17	2
1979	3	-5	20	33	40	50	62	51	48*	31	25	15	-5
1980	12	6	1	34*	38	50*	62*	63	50*	27	24*	10	1
1981	0	1	24*	35	41*	54	57	55*	42*	24	20	7	0
1982	-15	6	19	23	44	49	61	52*	40	28	20	16	-15
1983	13	18	23	27	36	49	53	54	33	36*	27*	-7	-7
1984	8	-5	19	31	41	47	54	54	44	33	21	9	-5
1985	-14	-1	25	27	43	46	59	57	40	36	29	6	-14
1986	2	0	19	29	35	54	56	43	47	33	15	18	0
1987	7	19	24	28	45	53	57	54	45	23	21	17	7
SUM	7	158	568	891	1164	1509	1675	1634	1292	898	589	267	-111
MEAN	0	5	18	29	38	50	55	54	43	29	19	8	-3
STD	9	7	7	3	4	4	3	4	4	3	4	7	7

TABLE 6  
Extreme Minimum Temperature.

BOWLING GREEN FAA													
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	0	0	0	0	0	7	13	10	6	0	0	0	36
1959	0	0	0	0	3	7	19	19	4	1	0	0	53
1960	0	0	0	0	2	5	9	20	8	0	0	0	44
1961	0	0	0	0	0	3	8	7	14	0	0	0	32
1962	0	0	0	0	12	4	17	20	3	0	0	0	56
1963	0	0	0	0	0	7	5	11	2	1	0	0	26
1964	0	0	0	0	5	18	20	18	9	0	0	0	70
1965	0	0	0	1	1	3	8	15	7	0	0	0	35
1966	0	0	0	0	1	10	22	7	1	0	0	0	41
1967	0	0	0	0	2	11	3	2	0	0	0	0	18
1968	0	0	0	0	0	9	17	17	1	0	0	0	44
1969	0	0	0	0	3	14	23	11	1	0	0	0	52
1970	0	0	0	0	4	8	13	12	14	0	0	0	51
1971	0	0	0	0	0	16	9	6	3	0	0	0	34
1972	0	0	0	0	0	6	17	13	8	0	0	0	44
1973	0	0	0	0	0	11	13	12	10	0	0	0	46
1974	0	0	0	0	2	3	12	6	0	0	0	0	23
1975	0	0	0	0	2	10	15	16	4	0	0	0	47
1976	0	0	0	0	0	7	11	6	0	0	0	0	24
1977	0	0	0	0	4	10	19	21	6	0	0	0	60
1978	0	0	0	0	5	14	18	11	12	0	0	0	60
1979	0	0	0	0	1	9	9	13	1	0	0	0	33
1980	0	0	0	1	2	10	25	22	15	0	0	0	75
1981	0	0	0	0	0	6	12	3	0	0	0	0	21
1982	0	0	0	0	0	2	5	1	0	0	0	0	8
1983	0	0	0	0	0	3	21	26	6	0	0	0	56
1984	0	0	0	0	0	12	5	2	1	0	0	0	20
1985	0	0	0	0	0	3	13	6	4	0	0	0	26
1986	0	0	0	0	0	7	23	4	5	0	0	0	39
1987	0	0	0	0	2	0	10	12	0	0	0	0	24
SUM	0	0	0	2	51	235	414	349	145	2	0	0	1198
MEAN	0	0	0	0	1	7	13	11	4	0	0	0	39
STD	0	0	0	0	2	4	6	6	4	0	0	0	16

**TABLE 7**  
Days with Maximum Temperature 90F or Above.

BOWLING GREEN FAA													
YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	3	13	0	0	0	0	0	0	0	0	0	6	22
1959	6	3	0	0	0	0	0	0	0	0	1	0	10
1960	5	3	6	0	0	0	0	0	0	0	0	4	18
1961	6	2	0	0	0	0	0	0	0	0	0	4	12
1962	4	1	0	0	0	0	0	0	0	0	0	6	11
1963	9	6	0	0	0	0	0	0	0	0	0	12	27
1964	3	2	0	0	0	0	0	0	0	0	2	1	8
1965	5	4	0	0	0	0	0	0	0	0	0	0	9
1966	11	2	0	0	0	0	0	0	0	0	0	4	17
1967	2	3	0	0	0	0	0	0	0	0	0	4	9
1968	8	5	0	0	0	0	0	0	0	0	0	3	16
1969	5	1	1	0	0	0	0	0	0	0	0	2	9
1970	9	2	0	0	0	0	0	0	0	0	2	0	13
1971	7	7	0	0	0	0	0	0	0	0	0	0	14
1972	6	2	0	0	0	0	0	0	0	0	0	2	10
1973	8	3	0	0	0	0	0	0	0	0	0	2	13
1974	6	2	0	0	0	0	0	0	0	0	0	0	8
1975	2	1	1	0	0	0	0	0	0	0	0	1	5
1976	6	1	0	0	0	0	0	0	0	0	2	4	13
1977	19	4	0	0	0	0	0	0	0	0	1	5	29
1978	19	10	1	0	0	0	0	0	0	0	0	2	32
1979	15	7	0	0	0	0	0	0	0	0	1	1	24
1980	4	8	2	0	0	0	0	0	0	0	0	3	17
1981	10	5	0	0	0	0	0	0	0	0	0	3	18
1982	9	3	0	0	0	0	0	0	0	0	0	1	13
1983	5	1	1	0	0	0	0	0	0	0	0	10	17
1984	9	4	0	0	0	0	0	0	0	0	0	1	14
1985	9	9	0	0	0	0	0	0	0	0	0	7	25
1986	2	6	0	0	0	0	0	0	0	0	0	1	9
1987	5	0	0	0	0	0	0	0	0	0	0	0	5
SUM	217	120	12	0	0	0	0	0	0	0	9	89	447
MEAN	7	4	0	0	0	0	0	0	0	0	0	2	14
STD	4	3	1	0	0	0	0	0	0	0	0	2	7

Data Flag	Description
B	Amount is adjusted.
E	Amount is wholly or partly estimated.
I	Incomplete; 1 to 9 days of record are missing.
M	Data for entire month is missing.
T	Trace; an amount too small to measure.
*	Amount given occurred on more than one day.

**TABLE 8**  
Days with Maximum Temperature 32F or Below.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	27	23	17	3	0	0	0	0	0	2	10	25	107
1959	24	21	19	2	0	0	0	0	0	2	17	19	104
1960	20	23	26	6	0	0	0	0	0	3	18	28	124
1961	25	13	6	3	0	0	0	0	0	2	11	18	78
1962	25	13	10	6	0	0	0	0	0	5	9	25	94
1963	26	25	9	2	2	0	0	0	0	1	13	28	106
1964	23	26	14	3	0	0	0	0	0	3	7	17	93
1965	21	21	18	0	0	0	0	0	0	4	8	18	90
1966	27	17	13	4	0	0	0	0	0	1	12	22	96
1967	20	24	10	0	0	0	0	0	0	4	16	17	91
1968	26	27	17	0	0	0	0	0	0	5	11	22	108
1969	19	17	23	0	0	0	0	0	0	5	11	27	102
1970	29	24	13	3	0	0	0	0	0	1	8	18	96
1971	24	18	19	5	0	0	0	0	0	0	13	14	93
1972	22	23	14	6	0	0	0	0	0	2	9	12	88
1973	23	20	5	5	0	0	0	0	0	0	8	21	82
1974	13	20	7	3	0	0	0	0	0	3	13	20	79
1975	21	17	14	6	0	0	0	0	0	0	10	20	88
1976	26	13	7	4	1	0	0	0	0	4	23	28	106
1977	31	21	8	0	0	0	0	0	0	2	9	20	91
1978	28	28	12	1	0	0	0	0	0	3	7	22	101
1979	28	23	12	0	0	0	0	0	0	2	11	23	99
1980	24	22	12	0	0	0	0	0	0	5	10	20	93
1981	27	17	16	0	0	0	0	0	0	3	6	21	90
1982	24	19	10	5	0	0	0	0	0	5	13	18	94
1983	23	18	12	6	0	0	0	0	0	0	10	22	91
1984	25	17	12	2	0	0	0	0	0	0	15	14	85
1985	30	23	6	2	0	0	0	0	0	0	4	26	91
1986	26	13	10	1	0	0	0	0	0	0	6	21	77
1987	23	20	9	3	0	0	0	0	0	6	10	17	88
SUM	730	606	380	81	3	0	0	0	0	73	328	624	2825
MEAN	24	20	12	2	0	0	0	0	0	2	10	20	94
STD	3	4	5	2	0	0	0	0	0	1	3	4	

**TABLE 9**  
Days with Minimum Temperature 32F or Below.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	0	3	0	0	0	0	0	0	0	0	0	0	3
1959	1	0	0	0	0	0	0	0	0	0	0	0	1
1960	0	0	2	0	0	0	0	0	0	0	0	1	3
1961	3	0	0	0	0	0	0	0	0	0	0	0	3
1962	2	0	0	0	0	0	0	0	0	0	0	3	5
1963	5	1	0	0	0	0	0	0	0	0	0	1	7
1964	2	0	0	0	0	0	0	0	0	0	0	0	2
1965	3	2	0	0	0	0	0	0	0	0	0	0	5
1966	3	0	0	0	0	0	0	0	0	0	0	0	3
1967	0	0	0	0	0	0	0	0	0	0	0	0	0
1968	0	0	0	0	0	0	0	0	0	0	0	0	0
1969	0	0	0	0	0	0	0	0	0	0	0	0	0
1970	6	1	0	0	0	0	0	0	0	0	0	0	7
1971	0	4	0	0	0	0	0	0	0	0	0	0	4
1972	2	0	0	0	0	0	0	0	0	0	0	0	2
1973	0	0	0	0	0	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0	0	0	0	0	0
1976	1	0	0	0	0	0	0	0	0	0	0	0	1
1977	9	0	0	0	0	0	0	0	0	0	0	0	9
1978	0	0	0	0	0	0	0	0	0	0	0	0	0
1979	0	3	0	0	0	0	0	0	0	0	0	0	3
1980	0	0	0	0	0	0	0	0	0	0	0	0	0
1981	1	0	0	0	0	0	0	0	0	0	0	0	1
1982	4	0	0	0	0	0	0	0	0	0	0	0	4
1983	0	0	0	0	0	0	0	0	0	0	0	3	3
1984	0	2	0	0	0	0	0	0	0	0	0	0	2
1985	2	1	0	0	0	0	0	0	0	0	0	0	3
1986	0	1	0	0	0	0	0	0	0	0	0	0	1
1987	0	0	0	0	0	0	0	0	0	0	0	0	0
SUM	44	18	2	0	0	0	0	0	0	0	0	8	72
MEAN	1	0	0	0	0	0	0	0	0	0	0	0	2
STD	2	1	0	0	0	0	0	0	0	0	0	0	2

**TABLE 10**  
Days with Minimum Temperature 0F or Below.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	982	1039	725	270	72	1	0	0	25	242	492	1005	4853
1959	960	718	625	254	47	1	0	0	7	228	659	758	4257
1960	831	907	999	216	163	0	0	0	1	186	580	999	4882
1961	1047	604	454	409	122	6	0	0	32	207	527	816	4224
1962	989	627	656	359	5	0	0	0	60	198	556	1007	4457
1963	1147	905	417	231	82	1	0	0	41	72	505	1137	4538
1964	912	859	540	179	38	6	0	3	41	309	453	764	4104
1965	876	768	757	177	7	1	0	2	40	269	460	697	4054
1966	1114	748	570	307	101	12	0	0	33	309	534	859	4547
1967	789	862	392	150	104	8	1	2	69	270	672	763	4082
1968	1052	980	593	240	85	3	0	1	12	261	536	893	4656
1969	941	753	780	204	53	7	0	0	29	252	637	961	4617
1970	1133	839	645	195	58	2	1	0	21	206	555	727	4382
1971	964	799	696	279	116	0	0	0	3	65	530	581	4033
1972	848	798	584	238	55	16	0	0	14	255	616	771	4195
1973	936	793	322	313	118	0	0	0	15	151	432	833	3913
1974	705	699	400	246	61	2	0	0	82	276	544	787	3802
1975	792	681	673	315	23	1	0	0	98	201	460	794	4038
1976	1019	539	389	262	127	1	0	0	32	388	777	954	4488
1977	1390	769	399	160	34	7	0	0	4	316	464	898	4441
1978	1279	1107	652	171	111	0	0	0	2	295	426	780	4823
1979	1193	976	486	241	72	6	0	1	21	222	559	785	4562
1980	888	927	655	283	51	1	0	0	18	302	543	802	4470
1981	1092	715	615	154	166	0	0	0	69	286	472	899	4468
1982	1039	786	482	392	24	5	0	2	57	269	506	632	4194
1983	931	714	566	423	153	7	0	0	63	176	519	1083	4635
1984	1008	703	678	301	149	2	0	0	83	101	617	543	4185
1985	1217	871	446	188	43	16	0	0	67	155	333	1046	4382
1986	950	690	498	211	72	0	0	13	4	245	549	836	4068
1987	952	700	503	292	24	0	0	0	19	409	471	756	4126
SUM	29976	23876	17157	7660	2336	112	2	24	1062	7121	15984	25166	130476
MEAN	999	795	571	255	77	3	0	0	35	237	532	838	4349
STD	151	129	146	74	46	4	0	2	27	79	86	141	283

Data Flag	Description
B	Amount is adjusted.
E	Amount is wholly or partly estimated.
I	Incomplete; 1 to 9 days of record are missing.
M	Data for entire month is missing.
T	Trace; an amount too small to measure.
*	Amount given occurred on more than one day.

**TABLE 11**  
Heating Degree Days.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	2.94	1.09	3.55	5.28	3.60	3.91	7.56	2.05	2.88	1.52	3.34	1.52	39.24
1959	5.62	4.20	2.29	3.60	4.32	3.48	3.17	3.76	2.21	4.55	4.25	4.20	45.65
1960	2.26	4.04	5.05	1.36	1.73	6.94	2.75	3.64	3.01	1.25	4.20	3.60	39.83
1961	1.41	5.40	5.11	5.01	5.10	9.38	3.21	2.40	1.19	3.94	2.92	5.47	50.54
1962	5.85	9.06	4.92	2.92	3.08	3.38	1.88	2.23	4.69	5.30	2.45	2.61	48.37
1963	0.91	1.93	7.46	1.95	2.95	2.55	5.58	3.45	0.27	0.07	2.48	1.73	31.33
1964	3.92	2.09	10.52	3.59	1.39	1.06	2.78	5.55	3.77	0.71	5.26	6.99	47.63
1965	4.49	5.75	8.25	3.34	2.26	2.85	5.40	1.50	3.75	1.83	2.67	1.07	43.16
1966	6.84	4.40	1.74	7.30	2.91	1.84	3.67	4.08	4.05	2.58	4.16	4.76	48.33
1967	1.79	2.26	5.31	4.78	6.68	4.29	7.32	3.22	2.89	1.70	3.82	5.26	49.32
1968	1.91	0.69	6.81	6.89	10.36	2.33	3.85	2.81	1.78	2.20	4.99	3.26	47.88
1969	4.93	3.02	2.62	5.69	3.18	11.11	1.59	3.27	0.91	2.96	3.44	6.11	48.83
1970	1.70	4.05	4.15	7.01	2.45	5.15	2.31	2.65	2.58	3.75	2.34	4.86	43.00
1971	3.10	4.48	2.14	2.72	6.43	4.06	7.66	7.71	1.71	1.68	1.45	4.30	47.44
1972	8.79	5.00	5.48	4.16	3.04	1.45	6.49	0.72	2.00	4.20	6.81	9.46	57.60
1973	2.33	2.56	7.68	5.90	5.68	7.57	8.15	1.59	1.32	3.02	8.41	3.30	57.51
1974	10.38	2.86	3.67	4.16	4.85	4.13	1.82	6.08	5.46	1.52	3.30	3.38	51.61
1975	4.71	6.28	14.58	6.51	3.08	1.22	2.91	6.05	5.50	7.71	3.97	4.96	67.48
1976	5.46	3.44	7.07	0.94	6.05	5.22	5.84	1.34	3.18	5.31	0.69	1.47	46.01
1977	2.55	2.93	3.61	4.38	1.98	7.37	2.20	2.71	6.40	3.60	5.07	4.53	47.33
1978	6.38	1.56	3.34	1.70	5.27	4.37	5.46	4.94	2.54	2.79	5.45	13.17	56.97
1979	6.28	5.96	5.67	7.82	5.20	4.46	8.87	4.91	11.75	2.52	7.78	5.34	76.56
1980	2.09	1.56	7.33	2.38	4.74	4.48	6.34	5.41	2.06	2.83	3.65	1.52	44.39
1981	1.37	5.37	2.82	5.35	6.73	7.38	3.70	1.18	4.96	4.42	3.07	3.38	49.73
1982	4.90	3.10	2.97	5.52	4.69	1.70	5.33	7.13	5.17	0.85	3.19	5.93	50.48
1983	1.85	2.32	2.63	9.68	13.27	3.18	3.96	1.01	0.83	4.98	6.14	7.35	57.20
1984	1.39	4.73	5.22	5.62	11.66	1.97	5.36	2.84	2.88	5.68	8.34	5.12	60.81
1985	2.57	1.36	2.72	3.11	3.60	3.54	5.77	6.50	4.70	3.06	3.84	1.69	42.46
1986	1.00	3.93	3.66	1.65	4.64	3.50	1.18	3.54	4.57	2.23	8.32	4.76	42.98
1987	1.77	5.21	2.22	2.47	4.87	3.02	8.95	1.95	3.83	0.47	3.86	7.35	45.97
SUM	111.49	110.63	150.59	132.79	145.79	126.89	141.06	106.22	102.84	89.23	129.66	138.45	1485.64
MEAN	3.72	3.69	5.02	4.43	4.86	4.23	4.70	3.54	3.43	2.97	4.32	4.61	49.52
STD	2.42	1.86	2.82	2.14	2.79	2.43	2.28	1.92	2.22	1.77	2.01	2.59	8.75

**TABLE 12**  
Total Monthly Precipitation.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	-2.88	-2.94	-2.08	1.24	-0.21	-0.03	3.29	-1.66	-0.31	-0.82	-0.13	-2.90	-9.43
1959	-0.20	0.17	-3.34	-0.44	0.51	-0.46	-1.10	0.05	-0.98	2.21	0.78	-0.22	-3.02
1960	-3.56	0.01	-0.58	-2.68	-2.08	3.00	-1.52	-0.07	-0.18	-1.09	0.73	-0.82	-8.84
1961	-4.41	1.37	-0.52	0.97	1.29	5.44	-1.06	-1.31	-2.00	1.60	-0.55	1.05	1.87
1962	0.15	4.94	-0.34	-1.14	-0.69	-0.78	-2.31	-1.37	1.62	2.92	-1.16	-1.73	0.11
1963	-4.79	-2.19	2.20	-2.11	-0.82	-1.61	1.39	-0.15	-2.80	-2.31	-1.13	-2.61	-16.93
1964	-1.78	-2.03	5.26	-0.47	-2.38	-3.10	-1.41	1.95	0.70	-1.67	1.65	2.65	-0.63
1965	-1.21	1.63	2.99	-0.72	-1.51	-1.31	1.21	-2.10	0.68	-0.55	-0.94	-3.27	-5.10
1966	1.14	0.28	-3.52	3.24	-0.86	-2.32	-0.52	0.48	0.98	0.20	0.55	0.42	0.07
1967	-3.91	-1.86	0.05	0.72	2.91	0.13	3.13	-0.38	-0.18	-0.68	0.21	0.92	1.06
1968	-3.79	-3.43	1.55	2.83	6.59	-1.83	-0.34	-0.79	-1.29	-0.18	1.38	-1.08	-0.38
1969	-0.77	-1.10	-2.64	1.63	-0.59	6.95	-2.60	-0.33	-2.16	0.58	-0.17	1.77	0.57
1970	-4.00	-0.07	-1.11	2.95	-1.32	0.99	-1.88	-0.95	-0.49	1.37	-1.27	0.52	-5.26
1971	-2.60	0.36	-3.12	-1.34	2.66	-0.10	3.47	4.11	-1.36	-0.70	-2.16	-0.04	-0.82
1972	3.09	0.88	0.22	0.10	-0.73	-2.71	2.30	-2.88	-1.07	1.82	3.20	5.12	9.34
1973	-3.37	-1.56	2.42	1.84	1.91	3.41	3.96	-2.01	-1.75	0.64	4.80	-1.04	9.25
1974	5.86	-1.39	-1.56	0.01	0.85	-0.22	-2.04	2.81	2.63	-0.95	-0.38	-1.00	4.52
1975	0.19	2.03	9.35	2.36	-0.92	-3.13	-0.95	2.78	2.67	5.24	0.29	0.58	20.49
1976	0.94	-0.81	1.84	-3.21	2.05	0.87	1.98	-1.93	0.35	2.84	-2.99	-2.91	-0.98
1977	-1.97	-1.32	-1.52	0.23	-2.02	3.02	-1.66	-0.56	3.57	1.13	1.39	0.15	0.34
1978	1.86	-2.69	-1.89	-2.45	1.27	0.02	1.60	1.67	-0.29	0.32	1.77	8.79	9.98
1979	1.76	1.71	0.44	3.67	1.20	0.11	5.01	1.64	8.92	0.05	4.10	0.96	29.57
1980	-2.43	-2.69	2.10	-1.77	0.74	0.13	2.48	2.14	-0.77	0.36	-0.03	-2.86	-2.60
1981	-3.15	1.12	-2.41	1.20	2.73	3.03	-0.16	-2.09	2.13	1.95	-0.61	-1.00	2.74
1982	0.38	-1.15	-2.26	1.37	0.69	-2.65	1.47	3.86	2.34	-1.62	-0.49	1.55	3.49
1983	-2.74	-1.66	-2.89	5.50	9.11	-1.35	-0.37	-2.32	-2.35	2.16	2.27	2.82	8.18
1984	-3.20	0.75	-0.30	1.44	7.50	-2.56	1.03	-0.49	-0.30	2.86	4.47	0.59	11.79
1985	-2.02	-2.52	-2.80	-1.07	-0.56	-0.99	1.44	3.17	1.52	0.24	-0.03	-2.84	-6.56
1986	-3.59	-0.05	-1.86	-2.53	0.48	-1.03	-3.15	0.21	1.39	-0.59	4.45	0.23	-6.04
1987	-2.82	1.23	-3.30	-1.71	0.71	-1.51	4.62	-1.38	0.65	-2.35	-0.01	2.82	-3.05
SUM	-43.82	-13.08	-9.72	9.66	28.51	-0.59	17.31	2.10	11.87	14.98	19.99	6.62	43.83
MEAN	-1.46	-0.44	-0.32	0.32	0.95	-0.02	0.58	0.07	0.40	0.50	0.67	0.22	1.46
STD	2.52	1.86	2.87	2.15	2.73	2.48	2.29	1.97	2.30	1.75	1.97	2.58	9.04

TABLE 13

Departure from Normal Precipitation.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	0.87	0.48	0.89	0.83	0.93	2.10	1.34	0.66	2.04	0.81	1.15	0.66	2.10
1959	2.96	1.01	0.51	1.08	0.95	2.65	1.81	0.98	1.46	1.08	2.03	1.57	2.96
1960	0.70	1.52	2.13	0.49	0.69	3.47	0.91	1.33	1.37	0.72	2.00	1.37	3.47
1961	0.49	1.30	1.16	1.07	1.50	2.22	0.73	0.84	0.81	1.36	0.76	2.62	2.62
1962	1.51	2.19	1.42	0.81	0.63	1.07	0.65	0.76	1.73	2.61	1.43	0.75	2.61
1963	0.49	0.78	1.84	1.28	0.50	0.69	2.06	1.27	0.14	0.07	0.53	0.59	2.06
1964	0.77	0.57	4.48	1.02	0.40	0.47	1.22	2.16	1.77	0.35	2.00	2.48	4.48
1965	2.19	2.06	1.82	0.81	0.50	0.83	1.68	0.70	1.56	0.90	1.39	0.64	2.19
1966	2.45	1.43	0.95	2.24	0.56	0.65	1.01	1.28	1.17	1.37	0.99	1.74	2.45
1967	0.50	0.86	2.41	1.89	2.98	1.01	1.74	1.72	1.46	0.82	0.92	1.61	2.98
1968	0.35	0.35	1.27	4.61	2.51	0.88	0.77	1.15	0.49	1.20	2.30	0.74	4.61
1969	0.82	0.77	0.81	1.30	0.74	5.69	0.61	1.76	0.59	0.87	1.83	2.29	5.69
1970	0.71	1.55	0.94	3.22	1.01	1.71	0.76	1.34	0.67	0.67	0.71	1.82	3.22
1971	0.93	0.80	0.40	1.66	1.95	1.23	1.53	2.87	0.81	0.95	0.43	1.02	2.87
1972	2.68	2.10	0.88	0.92	1.59	0.57	3.76	0.25	1.07	1.26	2.45	3.31	3.76
1973	0.66	0.47	1.70	1.74	1.44	1.50	2.25	1.30	0.59	0.86	3.07	1.03	3.07
1974	4.38	1.06	1.27	1.00	1.78	1.43	0.47	1.28	1.64	1.15	1.10	0.82	4.38
1975	2.05	3.74	5.93	1.83	1.22	0.44	1.33	3.53	1.19	3.08	1.31	1.54	5.93
1976	1.62	1.45	4.03	0.38	1.62	1.47	2.02	0.63	1.55	1.34	0.49	0.35	4.03
1977	0.83	1.57	1.94	1.26	0.86	1.74	0.98	0.69	2.09	2.20	0.98	1.64	2.20
1978	1.58	0.48	0.72	0.51	1.29	1.13	1.78	1.19	1.08	1.41	1.95	4.15	4.15
1979	2.25	1.20	1.62	2.39	1.88	1.85	3.62	1.18	6.02	1.00	2.08	1.93	6.02
1980	0.50	0.65	1.80	0.53	2.48	2.03	2.77	1.73	0.56	1.13	2.09	0.48	2.77
1981	0.39	2.27	1.11	1.38	2.75	3.28	1.57	0.32	2.60	2.59	1.12	1.88	3.28
1982	1.23	1.24	0.49	1.20	1.23	0.95	1.61	3.48	2.56	0.26	0.68	2.21	3.48
1983	1.12	0.67	0.98	1.80	3.04	0.80	1.16	0.62	0.37	1.63	1.39	1.56	3.04
1984	0.59	1.57	1.44	0.85	3.22	1.12	1.47	1.75	1.24	1.28	2.71	1.16	3.22
1985	0.44	0.57	0.56	1.84	1.04	1.82	3.17	1.23	2.05	0.77	1.20	0.81	3.17
1986	0.86	1.16	1.80	0.95	1.51	1.38	0.40	1.91	2.26	1.03	1.98	2.09	2.26
1987	0.61	1.76	1.23	0.81	1.99	1.16	2.42	1.15	1.15	0.17	1.26	2.96	2.96
SUM	37.53	37.63	48.53	41.70	44.79	47.34	47.60	41.06	44.09	34.94	44.33	47.82	102.03
MEAN	1.25	1.25	1.62	1.39	1.49	1.58	1.59	1.37	1.47	1.16	1.48	1.59	3.40
STD	0.95	0.73	1.23	0.88	0.82	1.09	0.88	0.80	1.07	0.70	0.69	0.90	1.09

TABLE 14

Extreme Maximum Daily Precipitation.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	5	3	7	11	8	6	13	5	4	3	6	5	76
1959	8	9	7	6	9	4	8	7	3	6	8	5	80
1960	7	7	9	3	5	8	5	6	3	3	5	7	68
1961	4	10	10	9	6	8	9	5	2	5	7	7	82
1962	8	9	10	7	7	7	5	4	8	7	4	5	81
1963	3	4	8	4	9	8	6	7	1	0	9	4	63
1964	9	6	6	8	4	2	7	6	4	2	5	10	69
1965	10	7	11	8	8	5	8	4	7	4	5	2	79
1966	6	7	4	11	6	5	5	8	6	4	7	7	76
1967	6	3	4	7	9	6	9	6	4	2	8	10	74
1968	8	2	8	8	13	5	9	6	6	4	8	8	85
1969	15	8	5	8	9	9	4	3	3	7	4	9	84
1970	3	9	9	8	5	9	5	5	5	10	5	7	80
1971	6	8	9	4	7	7	9	7	4	5	6	9	81
1972	8	8	11	9	7	4	5	3	6	6	11	13	91
1973	6	7	16	13	9	13	9	3	4	5	9	8	102
1974	10	5	6	7	8	7	6	9	9	3	6	8	84
1975	9	6	15	8	5	3	5	4	10	8	6	5	84
1976	7	5	7	4	10	9	9	4	6	10	2	6	79
1977	9	3	6	10	5	9	3	9	9	4	11	7	85
1978	9	6	9	5	11	8	7	8	6	4	8	8	89
1979	10	11	10	9	8	7	10	10	7	5	8	7	102
1980	6	5	11	8	8	4	5	10	4	5	5	4	75
1981	4	6	5	8	9	8	6	4	5	4	7	6	72
1982	9	7	11	11	11	3	8	10	8	3	9	10	100
1983	5	6	6	15	14	7	4	3	3	9	9	11	92
1984	4	10	12	15	9	4	7	6	4	8	8	8	95
1985	8	3	9	6	5	6	4	8	5	7	10	4	75
1986	1	8	4	4	10	8	3	5	6	5	10	6	70
1987	4	8	5	7	6	7	9	4	7	2	7	9	75
SUN	207	196	250	241	240	196	202	179	159	150	213	215	2448
MEAN	6	6	8	8	8	6	6	5	5	5	7	7	81
STD	2	2	3	3	2	2	2	2	2	2	2	2	9

**TABLE 15**  
Days with 0.10 Inch or More Precipitation.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	3	0	4	4	2	2	7	1	1	1	3	1	29
1959	3	4	1	4	2	2	1	3	1	4	1	3	29
1960	1	3	3	0	1	4	2	2	2	1	4	2	25
1961	0	5	4	5	4	6	2	2	1	4	2	3	38
1962	5	5	3	3	4	3	1	3	3	2	1	3	36
1963	0	2	7	1	1	2	5	2	0	0	1	1	22
1964	3	1	4	3	0	0	2	4	3	0	4	3	27
1965	1	2	4	2	1	3	4	1	2	1	2	1	24
1966	4	3	1	5	4	1	4	3	3	1	4	3	36
1967	1	2	3	4	4	4	5	2	2	2	3	3	35
1968	0	0	7	2	9	1	5	2	0	1	2	2	31
1969	5	2	2	5	2	4	2	2	1	3	2	5	35
1970	1	2	2	4	2	4	1	2	3	4	2	4	31
1971	2	5	0	2	5	2	5	4	1	1	0	3	30
1972	4	3	6	3	2	1	4	0	1	4	3	7	38
1973	1	0	5	3	3	5	6	1	1	3	5	2	35
1974	5	2	3	4	3	4	0	5	3	1	3	2	35
1975	3	4	7	6	2	0	1	3	4	4	4	4	42
1976	4	2	3	0	4	4	3	1	2	4	0	0	27
1977	1	3	2	3	1	6	2	2	4	2	4	4	34
1978	4	0	3	1	5	4	5	5	2	2	4	5	40
1979	5	6	5	4	4	3	4	3	5	2	4	3	48
1980	1	1	4	2	2	3	4	4	2	2	3	0	28
1981	0	4	3	5	4	4	3	0	2	3	3	1	32
1982	5	1	0	5	2	1	5	3	3	0	2	2	29
1983	1	2	2	8	7	3	4	1	0	3	6	4	41
1984	1	3	3	5	6	2	4	1	2	5	5	4	41
1985	0	1	2	1	4	2	3	6	3	3	2	1	28
1986	1	3	2	1	4	2	0	2	2	1	5	3	26
1987	2	3	1	2	3	2	7	1	2	0	3	5	31
SUN	67	74	96	97	97	84	101	71	61	64	87	84	983
MEAN	2	2	3	3	3	2	3	2	2	2	2	2	32
STD	1	1	1	1	1	1	1	1	1	1	1	1	6

**TABLE 16**  
Days with 0.50 Inch or More Precipitation.



BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	0	0	0	0	0	1	2	0	1	0	2	0	6
1959	1	1	0	1	0	1	1	0	1	3	1	2	12
1960	0	1	1	0	0	1	0	2	2	0	1	1	9
1961	0	2	1	2	2	4	0	0	0	2	0	1	14
1962	2	4	1	0	0	1	0	0	1	2	1	0	12
1963	0	0	3	1	0	0	2	2	0	0	0	0	8
1964	0	0	3	1	0	0	1	2	1	0	2	3	13
1965	1	2	3	0	0	0	2	0	1	0	1	0	10
1966	3	2	0	1	0	0	1	1	1	1	0	2	12
1967	0	0	2	1	1	1	4	1	1	0	0	1	12
1968	0	0	4	1	3	0	0	1	0	1	1	0	11
1969	0	0	0	2	0	2	0	2	0	0	1	1	8
1970	0	1	0	2	1	2	0	1	0	0	0	2	9
1971	0	0	0	1	3	1	3	3	0	0	0	1	12
1972	4	1	0	0	1	0	1	0	1	2	2	3	15
1973	0	0	2	1	2	2	2	1	0	0	3	1	14
1974	3	1	1	1	1	1	0	1	2	1	1	0	13
1975	1	1	4	2	1	0	1	2	2	3	2	3	22
1976	2	1	2	0	2	1	2	0	1	2	0	0	13
1977	0	1	1	1	0	4	0	0	2	1	0	2	12
1978	2	0	0	0	1	1	2	1	1	1	1	5	15
1979	1	1	1	2	1	1	2	2	3	1	4	2	21
1980	0	0	3	0	1	2	3	2	0	1	1	0	13
1981	0	2	1	1	2	3	1	0	2	1	1	1	15
1982	1	1	0	1	2	0	1	2	1	0	0	2	11
1983	1	0	0	3	6	0	1	0	0	2	2	3	18
1984	0	1	1	0	5	1	2	1	1	1	3	1	17
1985	0	0	0	1	1	1	2	2	2	0	1	0	10
1986	0	1	2	0	1	1	0	1	2	1	4	2	15
1987	0	2	1	0	2	1	3	1	1	0	1	2	14
SUM	22	26	37	26	39	33	39	31	30	26	36	41	386
MEAN	0	0	1	0	1	1	1	1	1	0	1	1	12
STD	1	0	1	0	1	1	1	0	0	0	1	1	3

**TABLE 17**  
Days with 1.00 Inch or More Precipitation.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	T	4.0	1.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	5.1
1959	T	0.1	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	T	1.1
1960	4.0	11.0	32.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.8	49.8
1961	9.0	0.3	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T	2.5	11.8
1962	2.3	M	3.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T	5.1	10.4M
1963	7.0	3.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	8.9	18.9
1964	14.2	1.9	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	T	16.7
1965	4.4	8.0	2.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.2
1966	7.0	0.6	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8.0	6.1	21.7
1967	1.0	4.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.0	17.0
1968	8.4	1.3	11.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.1	21.0
1969	3.0	7.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	3.7	13.8
1970	7.1	4.4	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	2.0	14.5
1971	3.0	7.5	1.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T	T	11.5
1972	T	1.0	2.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.2	3.7
1973	2.0	T	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	2.0
1974	T	1.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	1.0
1975	2.0	1.0	2.1	T	0.0	0.0	0.0	0.0	0.0	0.0	T	T	5.1
1976	1.0	2.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.5	4.5
1977	18.0	T	0.0	T	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.2	21.2
1978	21.5	13.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	34.5
1979	7.3	20.0	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	27.3
1980	1.5	7.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	13.5
1981	9.0	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	9.0
1982	4.0	2.5	T	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.5
1983	1.5	1.1	T	2.1	0.0	0.0	0.0	0.0	0.0	0.0	T	3.7	8.4
1984	5.2	5.3	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	11.4
1985	12.4	4.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	17.8
1986	T	11.7	T	0.0	0.0	0.0	0.0	0.0	0.0	0.0	T	T	11.7
1987	2.2	2.1	8.0	T	0.0	0.0	0.0	0.0	0.0	0.0	T	0.1	12.4
SUM	158.0	125.1	71.1	2.1	0.0	0.0	0.0	0.0	0.0	0.0	14.3	47.9	408.1
MEAN	5.3	4.3	2.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.5	1.6	14.1
STD	5.5	4.8	6.2	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.5	2.7	10.5

Data Flag	Description
B	Amount is adjusted.
E	Amount is wholly or partly estimated.
I	Incomplete; 1 to 9 days of record are missing.
M	Data for entire month is missing.
T	Trace; an amount too small to measure.
*	Amount given occurred on more than one day.

**TABLE 18**  
Total Monthly Snowfall.

BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	0	3+	1	0	0	0	0	0	0	0	T	0	3
1959	T	0	0	0	0	0	0	0	0	0	1	T	1
1960	4	7	12	0	0	0	0	0	0	0	0	1+	12
1961	2+	1	0	0	0	0	0	0	0	0	0	3	3H
1962	2+	H	2	0	0	0	0	0	0	0	0	7+	7
1963	5+	2	0	0	0	0	0	0	0	0	0	0	8
1964	8	T	0	0	0	0	0	0	0	0	0	0	4
1965	4+	4+	2	0	0	0	0	0	0	0	0	0	8
1966	6	2	T	0	0	0	0	0	0	0	8	6+	8
1967	1	2	1	0	0	0	0	0	0	0	0	3+	3
1968	8	1	8	0	0	0	0	0	0	0	0	0	8
1969	1	5+	T	0	0	0	0	0	0	0	0	2+	5
1970	6	1+	1	0	0	0	0	0	0	0	T	1	6
1971	2	5	T	0	0	0	0	0	0	0	0	0	5
1972	T	T	2	0	0	0	0	0	0	0	0	T	2
1973	2+	T	0	0	0	0	0	0	0	0	0	T	1
1974	0	1	0	0	0	0	0	0	0	0	0	T	1
1975	1+	1	1	T	0	0	0	0	0	0	0	0	1
1976	1	2	0	0	0	0	0	0	0	0	1	T	2
1977	6	1+	0	0	0	0	0	0	0	0	2	T	6
1978	13+	8	0	0	0	0	0	0	0	0	0	0	13
1979	3	10	T	0	0	0	0	0	0	0	0	0	10
1980	2	4	5	0	0	0	0	0	0	0	0	0	5
1981	5+	2	0	0	0	0	0	0	0	0	0	T	5
1982	4+	2	T	T	0	0	0	0	0	0	0	1	4
1983	T	1	T	1	0	0	0	0	0	0	0	1	4
1984	4	4	T	0	0	0	0	0	0	0	0	1	7
1985	5	7	0	0	0	0	0	0	0	0	0	0	1
1986	T	9	T	0	0	0	0	0	0	0	T	T	9
1987	2	1	2	T	0	0	0	0	0	0	T	T	2
SUM	97	86	37	1	0	0	0	0	0	0	12	27	146
MEAN	3	2	1	0	0	0	0	0	0	0	0	0	5
STD	3	2	2	0	0	0	0	0	0	0	1	1	3

**TABLE 19**  
Maximum Snow Depth.

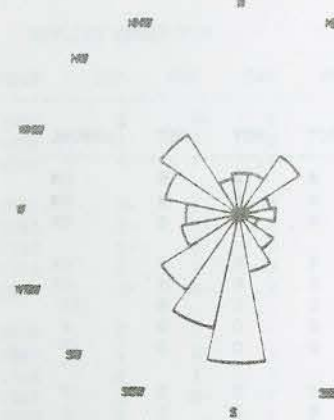
BOWLING GREEN FAA

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANNUAL
1958	M	M	M	M	M	M	M	M	M	M	M	M	OM
1959	M	M	M	M	M	M	M	M	M	M	M	M	OM
1960	M	M	M	M	M	M	M	M	M	M	M	M	OM
1961	M	M	M	M	M	M	M	M	M	M	M	M	OM
1962	M	M	M	M	M	M	M	M	M	M	M	M	OM
1963	9	3	0	0	0	0	0	0	0	0	0	6	18
1964	8	0	0	0	0	0	0	0	0	0	0	0	8
1965	9	6	2	0	0	0	0	0	0	0	0	0	17
1966	9	2	0	0	0	0	0	0	0	0	2	5	18
1967	1	1	1	0	0	0	0	0	0	0	0	3	6
1968	16	1	3	0	0	0	0	0	0	0	0	0	20
1969	1	4	0	0	0	0	2	0	0	0	0	3	8
1970	14	3	1	0	0	0	0	0	0	0	0	1	19
1971	1	10	0	0	0	0	0	0	0	0	0	0	11
1972	0	0	2	0	0	0	0	0	0	0	0	0	2
1973	4	0	0	0	0	0	0	0	0	0	0	0	4
1974	0	1	0	0	0	0	0	0	0	0	0	0	1
1975	3	1	1	0	0	0	0	0	0	0	0	0	5
1976	1	1	0	0	0	0	0	0	0	0	1	0	3
1977	26	2	0	0	0	0	0	0	0	0	1	0	29
1978	19	28	0	0	0	0	0	0	0	0	0	0	47
1979	6	15	0	0	0	0	0	0	0	0	0	0	21
1980	1	8	3	0	0	0	0	0	0	0	0	0	12
1981	9	1	0	0	0	0	0	0	0	0	0	0	10
1982	7	1	0	0	0	0	0	0	0	0	0	0	8
1983	0	1	0	1	0	0	0	0	0	0	0	1	3
1984	8	4	0	0	0	0	0	0	0	0	0	2	14
1985	9	11	0	0	0	0	0	0	0	0	0	1	21
1986	0	7	0	0	0	0	0	0	0	0	0	0	7
1987	5	1	1	0	0	0	0	0	0	0	0	0	7
SUM	166	112	14	1	0	0	0	0	0	0	4	22	319
MEAN	6	4	0	0	0	0	0	0	0	0	0	0	12
STD	6	6	0	0	0	0	0	0	0	0	0	1	10

**TABLE 20**  
Days with Snow Depth One Inch or More.

SEASONAL MEAN WIND DIRECTION FREQUENCY

WINTER MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954

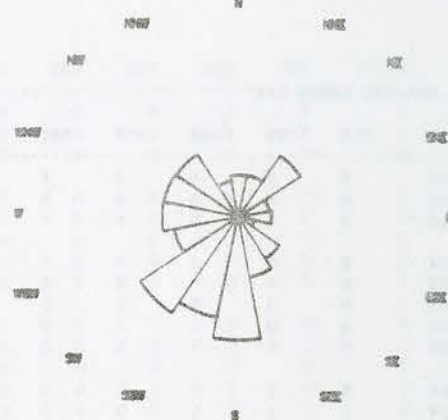


CALM = 10.58%



PERCENT

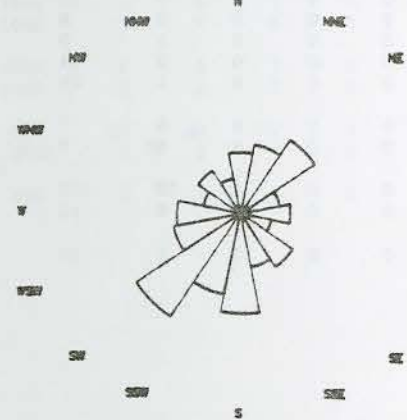
SPRING MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 13.07%

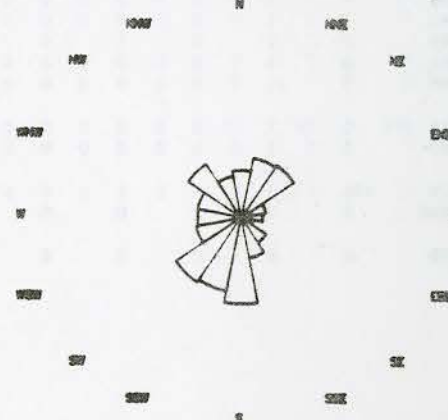
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WESTERN KENTUCKY UNIVERSITY

SUMMER MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 23.32%

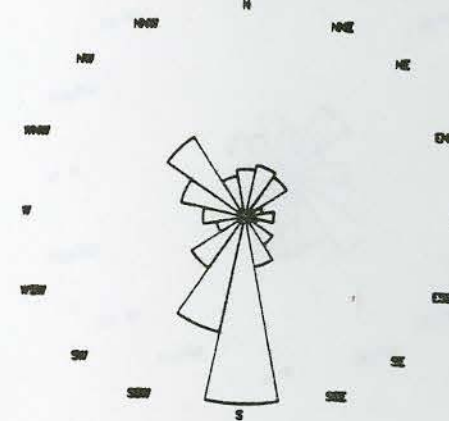
FALL MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 24.38%

JANUARY TO APRIL MEAN WIND DIRECTION FREQUENCY

JANUARY MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954

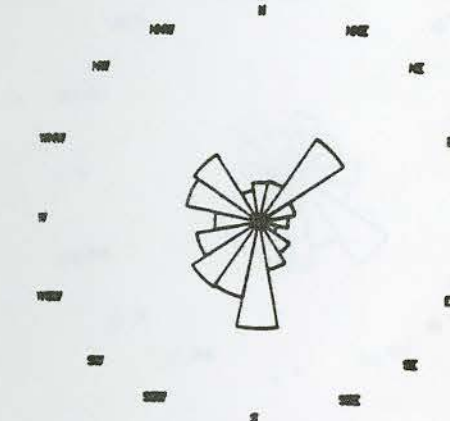


CALM = 8.30%



PERCENT

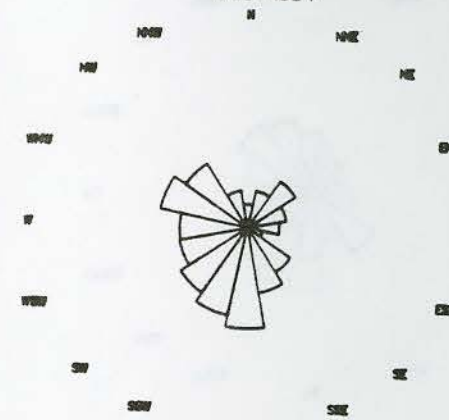
FEBRUARY MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 10.12%

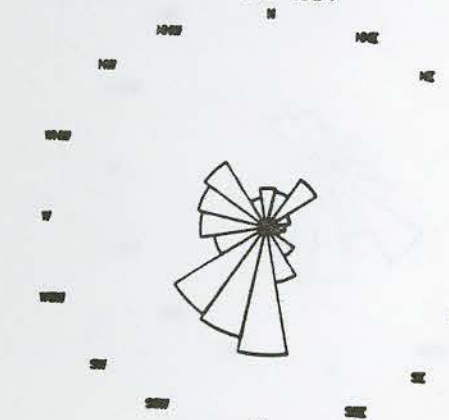
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WESTERN KENTUCKY UNIVERSITY

MARCH MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 9.40%

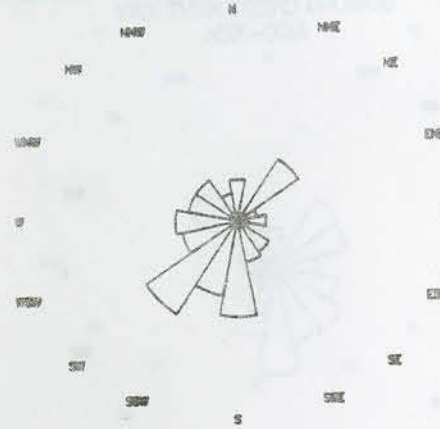
APRIL MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 10.10%

MAY TO AUGUST MEAN WIND DIRECTION FREQUENCY

MAY MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954

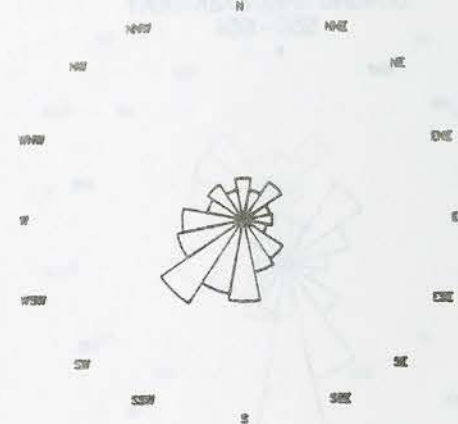


CALM = 19.50%



PERCENT

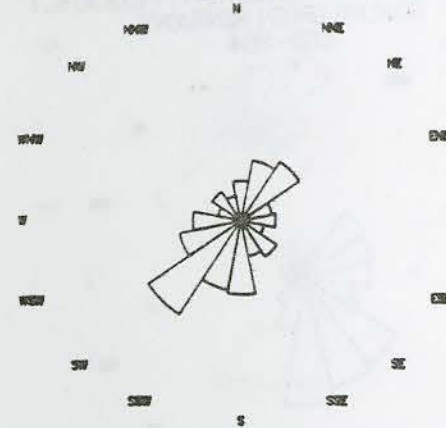
JUNE MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 22.30%

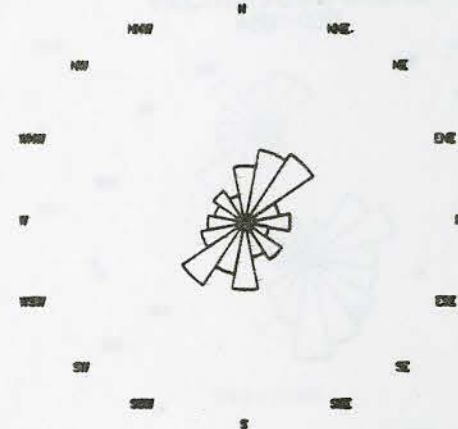
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WESTERN KENTUCKY UNIVERSITY

JULY MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 22.60%

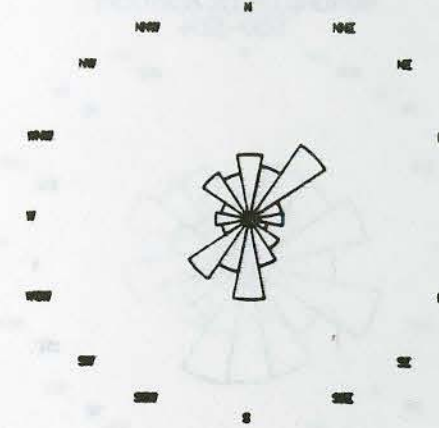
AUGUST MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 25.10%

SEPTEMBER TO DECEMBER MEAN WIND DIRECTION FREQUENCY

SEPTEMBER MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954

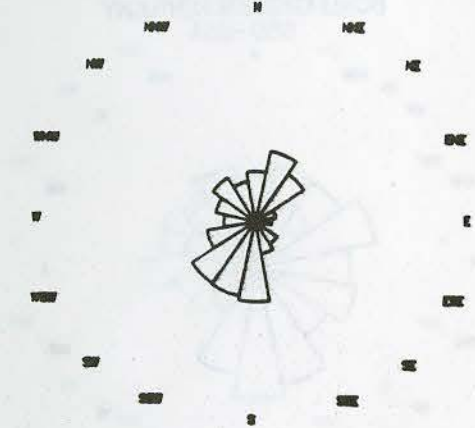


CALM = 23.80%



PERCENT

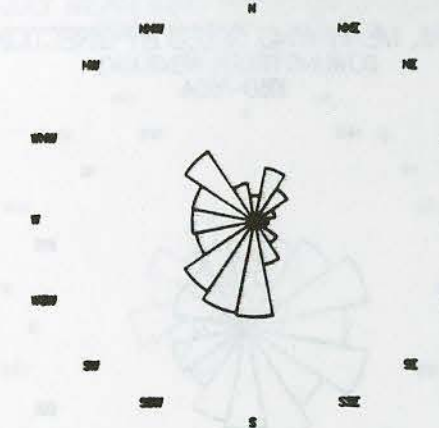
OCTOBER MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 28.70%

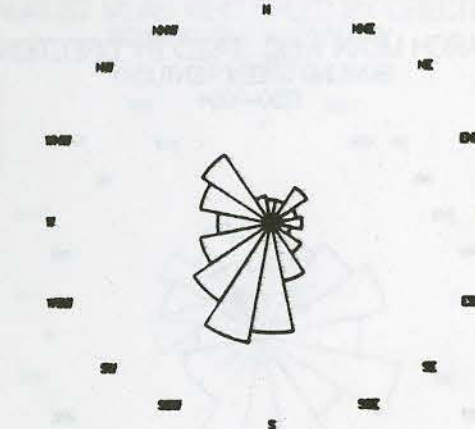
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WESTERN KENTUCKY UNIVERSITY

NOVEMBER MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



CALM = 20.80%

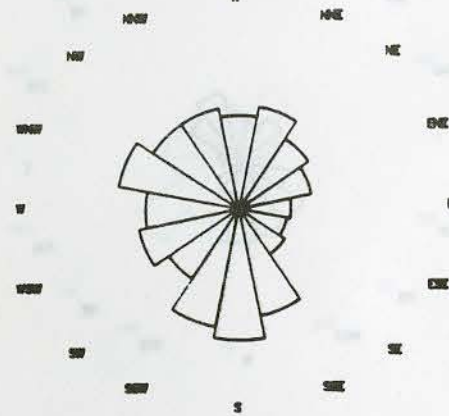
DECEMBER MEAN WIND DIRECTION FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



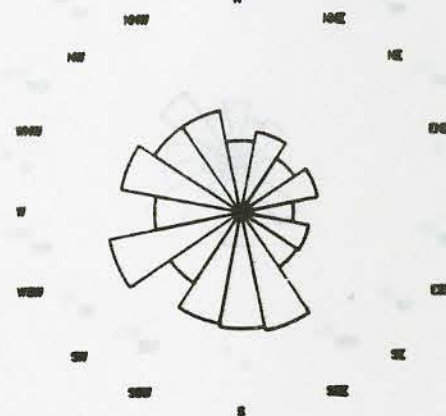
CALM = 13.10%

JANUARY TO APRIL MEAN WIND SPEED BY DIRECTION

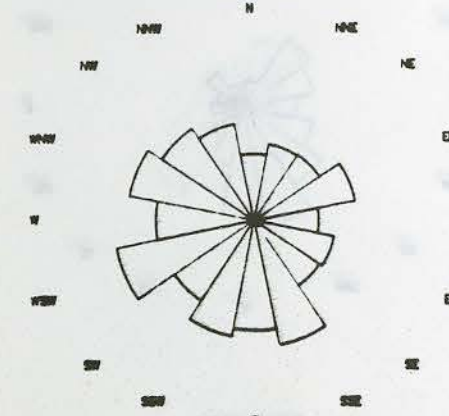
JANUARY MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954



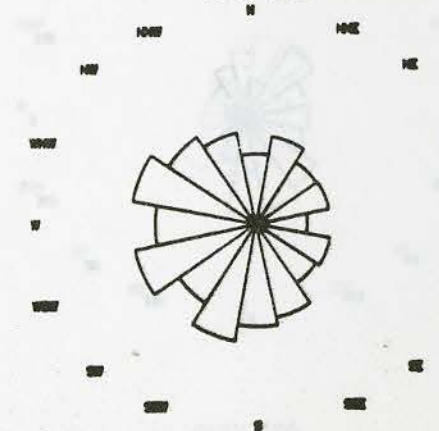
FEBRUARY MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954



MARCH MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954



APRIL MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954

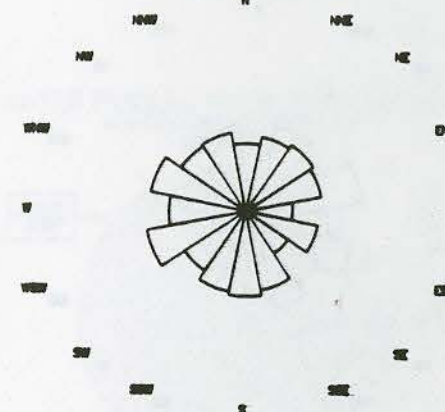


0 5 10 15  
MEAN MILES PER HOUR

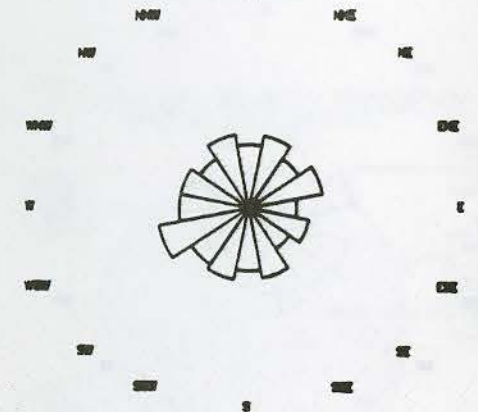
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WESTERN KENTUCKY UNIVERSITY

MAY TO AUGUST MEAN WIND SPEED BY DIRECTION

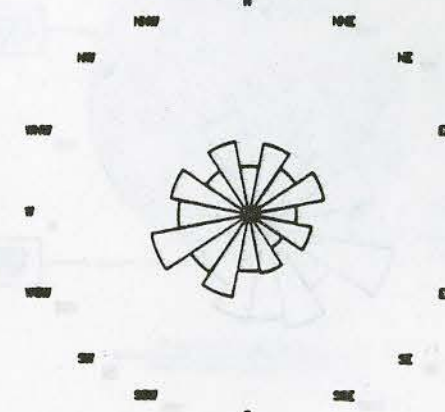
MAY MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954



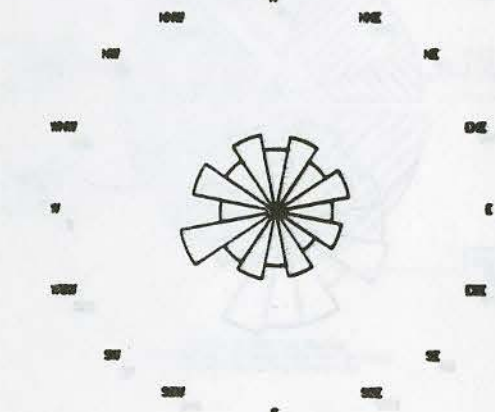
JUNE MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954



JULY MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954



AUGUST MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954

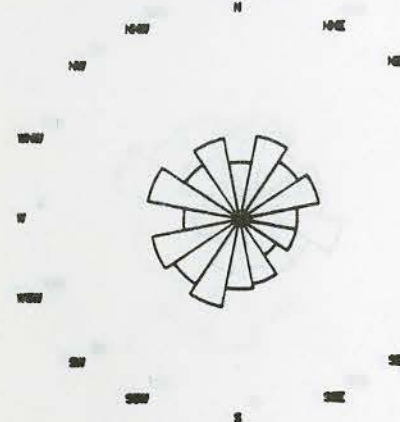


0 5 10 15  
MEAN MILES PER HOUR

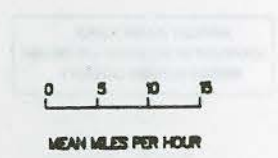
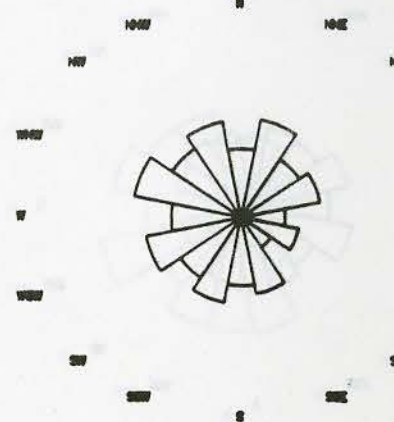
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SEPTEMBER TO DECEMBER MEAN WIND SPEED BY DIRECTION

SEPTEMBER MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954

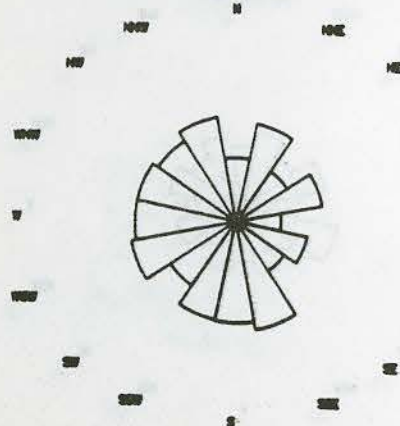


OCTOBER MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954

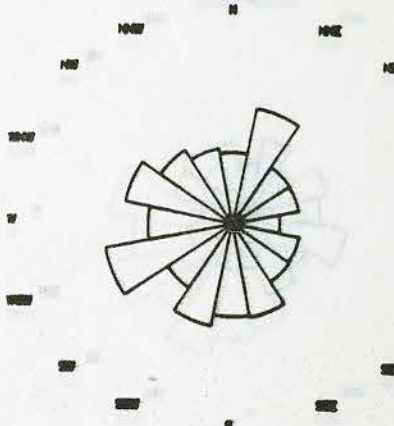


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NOVEMBER MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954

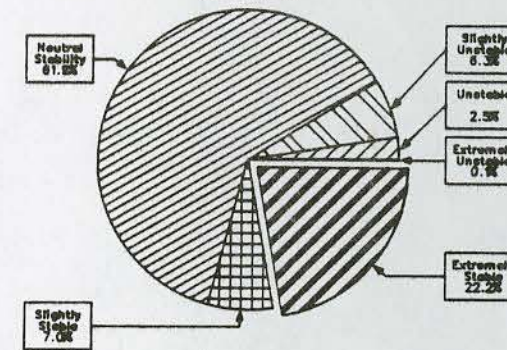


DECEMBER MEAN WIND SPEED BY DIRECTION  
BOWLING GREEN, KENTUCKY  
1950-1954



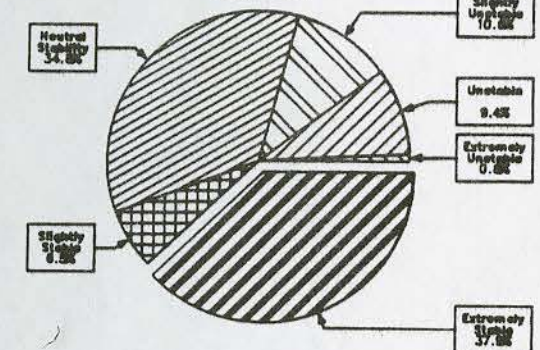
SEASONAL PASQUILL STABILITY INDEX

WINTER PASQUILL STABILITY FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



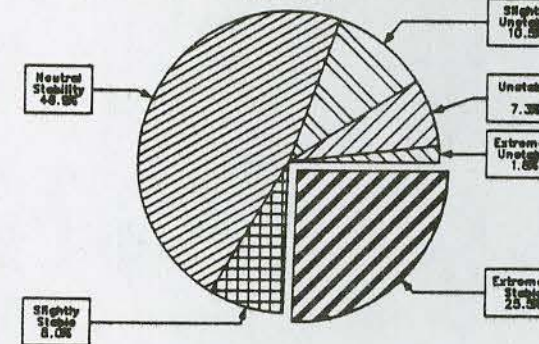
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Western Kentucky University

FALL PASQUILL STABILITY FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



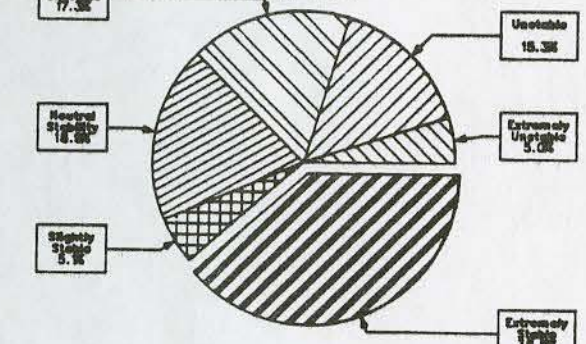
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Western Kentucky University

SPRING PASQUILL STABILITY FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



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SUMMER PASQUILL STABILITY FREQUENCY  
BOWLING GREEN, KENTUCKY  
1950-1954



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