

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK (HCN) SERIAL TEMPERATURE AND PRECIPITATION DATA

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A model to estimate the time of observation bias associated with monthly mean maximum, minimum and mean temperatures for the United States by T. R. Karl, C. N. Williams, Jr., P. J. Young, and W. M. Wendland. 1986.

An approach to adjusting climatological time series for discontinuous inhomogeneities, by T. R. Karl and C.N. Williams, Jr. 1987.

Urbanization: Its detection and effect in the United States climate record, by T. R. Karl, H. F. Diaz, and G. Kukla. 1988.

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ABSTRACT

KARL, T. R., C. N. WILLIAMS, Jr., and F. T. QUINLAN. 1990. United States Historical Climatology Network (HCN) serial temperature and precipitation data. ORNL/CDIAC-30, NDP-019/R1. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, Oak Ridge, Tennessee. 374 pp.

This document describes a data base containing monthly temperature and precipitation data for 1219 U.S. stations. This network of stations, known as the Historical Climatology Network (HCN), and the resulting data base were compiled by the National Climatic Data Center (Asheville, North Carolina). These data represent the best available data from the United States for analyzing long-term climate trends on a regional scale and may be used for studies attempting to determine the climatic impacts of increased concentrations of greenhouse gases. The data for each station extend through 1987, and most station records are complete for at least 80 years. Unlike most data sets that have been used in past climate studies, these station data have been adjusted to remove biases introduced by station moves, instrument changes, time-of-observation differences, and urbanization effects (Karl et al. 1986; Karl and Williams 1987; and Karl et al. 1988).

These monthly data, along with supporting data, including station inventories, station histories, temperature corrections for time-of-observation bias, and data quality assessments, are available free of charge as a numeric data package (NDP) from the Carbon Dioxide Information Analysis Center. The NDP consists of this document and magnetic tapes containing machine-readable data files, supporting data files, a descriptive file, and computer access codes. This document describes how the stations in the HCN were selected and how the data were processed, defines limitations and restrictions of the data, describes the format and contents of the magnetic tape, and provides reprints of literature that discuss the editing and adjusting techniques used for the HCN.

PART 1
INFORMATION ABOUT THE DATA PACKAGE

1. NAME OF THE NUMERIC DATA PACKAGE

United States Historical Climatology Network (HCN) Serial Temperature and Precipitation Data

2. CONTRIBUTORS

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National Climatic Data Center
Asheville, North Carolina 28801

3. KEYWORDS

Historical data; precipitation; temperature monitoring; climatic changes.

4. BACKGROUND INFORMATION

In recent years, numerous studies have been conducted focusing on the problems of climate change and potential climatic impacts of increased concentrations of greenhouse gases. Many of these studies have examined long-term changes in temperature and precipitation (Jones et al. 1986; Vinnikov et al. 1980; Diaz and Quayle 1980; Wigley et al. 1985; Barnett 1985) whereas others have addressed the specific question of climate variability (Karl et al. 1984; Karl 1985; Agee 1982; Thompson 1975; Vinning and Griffiths 1985; Brinkman 1983). The quality of these and future studies is dependent on the reliability and accuracy of the modern historical climate records used in the studies. Even studies evaluating the climatic effects of periodic events such as volcanic eruptions or El Niño are dependent on long-term climatic records to illustrate the changes caused by the events. Unfortunately, many of the data bases used in past studies are not believed to be either free of bias and error or suitable for long-term climatic studies.

In response to the need for an accurate, unbiased, modern historical climate record the Carbon Dioxide Research Program of the U. S. Department of Energy and the National Climatic Data Center (NCDC) of the National Oceanic and Atmospheric Administration (NOAA) established a network of approximately 1219 stations in the contiguous United States for the specific purpose of compiling a data set suitable for detecting and monitoring climate change over the past two centuries. This network, known as the Historical Climatology Network (HCN), and the resulting data set were documented by Quinlan et al. (1987) and made available free of charge through the Carbon Dioxide Information Analysis Center (CDIAC). The data presented in Quinlan et al. (1987) extended only through 1984. Now, however, NCDC has updated the HCN data records through 1987. In addition, using the techniques of Karl et al. (1988), NCDC has generated temperature files in which the biases introduced by urbanization effects have been removed. These additional data files and updated data are discussed and documented in this package.

5. SOURCE AND SCOPE OF THE DATA

One of the objectives in establishing the HCN was to detect secular changes of regional rather than local climate. Therefore, only those stations that were not believed to be influenced to any substantial degree by artificial changes of local environments were included in the network. Some of the stations in the HCN are first-order weather stations, but the majority were selected from U.S. cooperative weather stations (approximately 5000 in the United States). To be included in the HCN, a station had to be currently active (in 1987), have at least 80 years of mean monthly temperature and total monthly precipitation data, and have experienced few station changes (see Appendix A for a complete listing of the stations in the HCN). An additional criterion that was used in selecting the 1219 HCN stations, which sometimes compromised the preceding criteria, was the desire to have a uniform distribution of stations across the United States (Fig. 1).

The 1219 station HCN data base contains station histories, monthly temperature (maximum, minimum, and mean) data, and total monthly precipitation data that were compiled by NCDC after being extracted from digital and non-digital data sets archived at NCDC. These data sets originated from a variety of sources, including climatological publications, universities, federal agencies, individuals, and data archives. All stations were quality controlled by NCDC with the use of outlier and areal edits, and each station in the network was corrected for time-of-observation differences, instrument changes, instrument moves, station relocations, and urbanization effects (Karl et al. 1986; Karl and Williams 1987; and Karl et al. 1988). A unique feature of the data set is that, within most temperature and precipitation data files, both original and adjusted estimates are given, along with confidence factors for each adjusted estimate. Another unique feature of the data base is that in relation to the long periods of record, a small portion of the data are represented as missing. In order to make the HCN record as serially complete as possible, missing data have been estimated by using data from neighboring stations. Since 1920, the majority of the 1219 stations have data records that are serially complete (Table 1).

Within this document the reader will find a complete description of the data base, a listing of the stations in the HCN along with the data available for each station (Appendix A), listings that provide quality assessments of the original temperature and precipitation data files documented in Quinlan et al. (1987) (Appendix B), time series plots (through 1984) of monthly precipitation and temperature data for each station (microfiche provided on the inside back cover of this document), and reprints of journal articles that provide greater details about the data adjustments and correction techniques used in compiling the data base (Appendix C).

6. APPLICATIONS OF THE DATA

The HCN data base probably represents the best monthly temperature and precipitation data set available for the contiguous United States. It provides an accurate, serially complete, modern historical climate record that is suitable for detecting and monitoring long-term climatic changes on a regional scale and may be used for studies attempting to determine the climatic impacts of increased concentrations of greenhouse gases. The HCN climate record may also be used by dendrochronologists and paleoclimatologists for calibrating tree ring growth, pollen, and marine plankton data or by those studying the climatic impacts of periodic events such as El Niño/Southern Oscillation or volcanic eruptions. Those studying long-term climatic changes on smaller scales, may want to review the information given in the appendices and on the microfiche in order to identify the stations most suitable for their research needs.

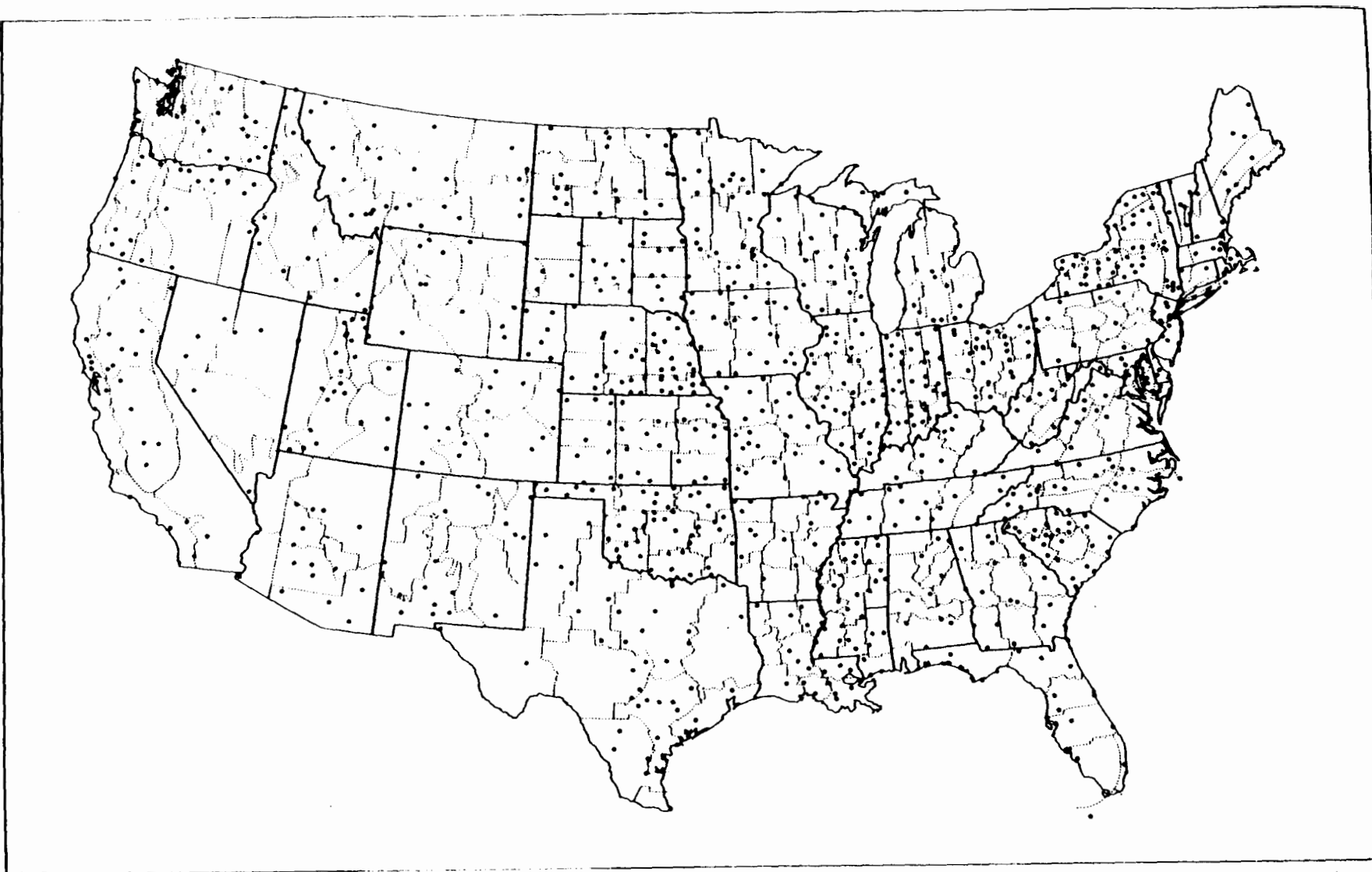


Figure 1. Spatial distribution of the stations in the Historical Climatology Network (HCN)

Table 1. Number of stations with serially complete data starting on, or before, the beginning of the decade^a

Decade	Mean temperature	Maximum/minimum temperature	Precipitation
1880	27	0	92
1890	231	36	359
1900	671	607	707
1910	951	912	929
1920	1097	1079	1036
1930	1144	1134	1071
1940	1163	1157	1086
1950	1172	1166	1092
1960	1188	1182	1116
1970	1203	1202	1147
1980	1218	1217	1158
1980+	1219	1219	1165
Unadjustable	0	0	826

^a In 1984, the U. S. National Weather Service introduced a new Maximum/Minimum Temperature System (MMTS) at cooperative observing stations. From 1983 to 1987, the percentage of HCN stations having an MMTS rose from 2% to 11%, 24%, 41%, and 45%, respectively. Obviously, the number of stations having MMTSs are now a substantial fraction of the network. Concerns have arisen about the homogeneity of this temperature system in contrast with that of the earlier thermometric system. The new system is thermistor based with a "beehive like" instrument shelter, in contrast with the older systems with liquid-in-glass thermometers, which were mounted inside a Cotton Region Shelter (Stevenson Screen). At present there is a dearth of comprehensive studies outlining the potential bias in this new system. This is unfortunate because the change to this new system was rapid and extensive. At this time we have not attempted to adjust the data for this potential bias. With a few more years of data, we will either use our adjustment scheme to determine the magnitude of any bias or we will use the results from the side-by-side measurement program now being implemented by the U. S. National Weather Service for the purpose of establishing differences in the measurement systems (Blackburn, National Weather Service Cooperative Program, personal communication). It is worth noting that in the study by Baker and Ruschy (1989) the daily maximum and minimum temperatures from the older Cotton Region Shelters were 0.07°C colder than in the newer MMTS measurements for two side-by-side systems at the University of Minnesota in St. Paul.

7. LIMITATIONS AND RESTRICTIONS

Great care has been taken in selecting stations for the HCN, correcting station inhomogeneities, and estimating missing values by using neighboring stations. Because some stations offer more reliable estimates than others, the reader should check the HCN station inventory (Appendix A), data quality assessments for each station (Appendix B), and time series plots (microfiche) **before** using the data from any particular station. As a result of the selection criteria, many of the 1219 stations are from areas with low population densities. There are many stations with long records which were not used in the network because the stations were found in or adjacent to large urban areas believed to be influenced by artificial environments. Nonetheless, a few of these historic stations, such as Central Park, New York and Charleston, South Carolina, were used in the HCN. For some years, original data were not available, so only adjusted data and confidence factors are included. In some instances, where original data were available but the adjustment algorithm was unable to derive the adjusted data, the original data will appear in the adjusted data field. Therefore, the user should carefully check the flag codes for confidence factors **before** using the adjusted data. Failure to do so may lead to spurious results because there are often substantial differences between adjusted and original data.

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9. QUALITY ASSURANCE OF THE HCN DATA BASE

An important part of the numeric data package process at CDIAC is the quality assurance (QA) of data before distribution. Data received at CDIAC are rarely in perfect condition for immediate distribution, regardless of source. To guarantee data of the highest possible quality, CDIAC conducts extensive QA reviews. Reviews involve examining the data for completeness, reasonableness, and accuracy. Although they have common objectives, these reviews are tailored to each data set, often requiring extensive programming efforts. Although time-consuming, the QA process is an important component in the value-added concept of assuring accurate, usable CO₂ data for researchers.

NCDC quality controlled all stations, using outlier and areal edits, and also performed internal quality control checks. Although the data sent by NCDC was in excellent condition, CDIAC still conducted QA checks on the HCN data and found some minor discrepancies. The following summarizes the QA checks that CDIAC performed on the HCN data files and the conversions and minor corrections made by CDIAC:

QA Checks

1. We checked each of the files for erroneous state codes (other than 1-48), station numbers (other than 0001-9998), missing value codes (other than -9999 or -99.99), data element codes (other than 1-4), data type codes (other than blank, "A" for adjusted, or "C" for confidence estimate), and units (other than degrees Fahrenheit or inches).
2. We determined the number of observations, missing values, and stations in each file. Stations having seemingly high numbers of missing values were printed and checked for reasonableness.
3. We compared the station numbers in the updated files with those in the files previously sent to CDIAC. We found that three files were incomplete (i.e., had fewer than 1219 stations) and thus needed to be regenerated by NCDC.
4. We calculated means for all numeric variables in each file to identify erroneous values, suspect values, and outliers.
 - A. All maximum monthly temperature values exceeding 100°F were printed and checked for reasonableness (i.e., checked to ensure that these data were during summer months and from western states and that neighboring stations contained similar warm data).
 - B. All minimum monthly temperature values below 0°F were printed and checked for reasonableness (i.e., checked to ensure that these data were during winter months and from northern states and that neighboring stations contained similar warm data).
5. We calculated seasonal values for the temperature files containing heat island adjustments and compared them with the seasonal values provided.

Conversions

1. We converted the three temperature files containing heat island adjustments from degrees Celsius so that all temperature files are expressed in degrees Fahrenheit.

Corrections

1. We identified erroneous values (i.e., no monthly maximum temperatures for 1950-51 greater than 0.2°F) for Brockport, New York; after consultation with NCDC, we corrected the files, using data provided by NCDC.
2. We modified the header record for Coldwater, Kansas, in the station history file so that it would conform with the rest of the header records in the file.

10. HOW TO OBTAIN THE PACKAGE

This document contains a complete listing of the stations in the HCN (Appendix A), complete listings of the data quality assessment files (Appendix B), and a set of microfiche

(inside back cover of this document) containing temperature and precipitation time series plots for each station for the use of requesters who may not need the automated data or may not know whether they need the data from all 1219 stations. By reviewing these materials, a requester can determine what stations are suitable for long-term climate studies or for their particular needs.

The HCN data files are available in machine-readable form, upon request on 9-track, magnetic tapes from CDIAC. This document and the magnetic tapes are available **free of charge**. Requests for magnetic tapes should include any specific instructions for transmitting the data required by the user to access the data (i.e., blocksize or record length constraints, labeled or non-labeled tapes, and preference for ASCII or EBCDIC characters). Requests not accompanied by specific instructions will be filled on 9-track, 6250 BPI, standard-labeled tapes with characters written in EBCDIC and files formatted as noted in Section 11. Because of the size and number of files, it is not possible to fill data requests for NDP19/R1 on floppy diskettes. Requests should be addressed to the following:

Carbon Dioxide Information Analysis Center
Oak Ridge National Laboratory
Post Office Box 2008
Oak Ridge, Tennessee 37831-6335, U.S.A.
Telephone: (615) 574-0390
 FTS 624-0390
FAX (615) 574-2232
 FTS 624-2232
TELEX 854478
BITNET eMail: CDP@ORNLSTC
INTERNET eMail: CDP@STC.CTD.ORNL.GOV
OMNET: CDIAC

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PART 2
INFORMATION ABOUT THE MAGNETIC TAPES

11. CONTENTS OF THE MAGNETIC TAPES

The following table lists the files distributed on magnetic tapes by CDIAC along with this documentation.

File number ^a and description	Logical records	Record format	Block size	Record length
<i>First Tape</i>				
1. General descriptive information file	1224	FB ^b	8000	80
2. FORTRAN retrieval code to read and print the HCN station inventory file (File 14)	25	FB	8000	80
3. SAS ^c input/output routine to read and print File 14	17	FB	8000	80
4. FORTRAN retrieval code to read and print the HCN station histories (File 15)	20	FB	8000	80
5. SAS input/output routine to read and print File 15	32	FB	8000	80
6. FORTRAN data retrieval code to read and print any of the precipitation and temperature data files (File 16 and Files 1-3 on the 2nd magnetic tape)	25	FB	8000	80
7. SAS input/output routine to read and print File 16 and Files 1-3 on the 2nd magnetic tape	23	FB	8000	80
8. FORTRAN retrieval code to read and print the file containing the temperature time-of-observation bias corrections (File 1 on the 3rd magnetic tape)	21	FB	8000	80
9. SAS input/output routine to read and print File 1 on the 3rd magnetic tape	11	FB	8000	80
10. FORTRAN retrieval code to read and print any of the data quality assessment files (Files 2-4 on the 3rd magnetic tape)	29	FB	8000	80

File number ^a and description	Logical records	Record format	Block size	Record length
11. SAS input/output routine to read and print files 2-4 on the 3rd magnetic tape	14	FB	8000	80
12. FORTRAN retrieval code to read and print the temperature files that have been adjusted for urbanization effects (Files 5-7 on the 3rd magnetic tape)	23	FB	8000	80
13. SAS input/output routine to read and print files 5-7 on the 3rd magnetic tape	14	FB	8000	80
14. HCN station inventory	1219	FB	8000	160
15. HCN station histories	19321	FB	5400	216
16. HCN total monthly precipitation	356996	FB	6600	132

Second Tape

1. HCN monthly maximum temperatures	328269	FB	6600	132
2. HCN monthly minimum temperatures	328270	FB	6600	132
3. HCN monthly mean temperatures	355348	FB	6600	132

Third Tape

1. Time-of-observation bias corrections for all temperature files	87768	FB	6600	132
2. Data quality assessments for each station in the total monthly precipitation data file (File 16 on the 1st magnetic tape)	1219	FB	6600	132

File number ^a and description	Logical records	Record format	Block size	Record length
3. Data quality assessments for each station in the monthly maximum and minimum temperature data files (Files 1-2 on the 2nd magnetic tape)	1219	FB	6600	132
4. Data quality assessments for each station in the monthly mean temperature data file (File 3 on the 2nd magnetic tape)	1219	FB	6600	132
5. HCN monthly maximum temperatures that have been adjusted for urbanization effects	108736	FB	6200	124
6. HCN monthly minimum temperatures that have been adjusted for urbanization effects	108722	FB	6200	124
7. HCN monthly mean temperatures that have been adjusted for urbanization effects	108736	FB	6200	124
Total records	1,808,522			

^a File numbers are for 6250 BPI density tapes. File numbers would differ for 1600 BPI density tapes.

^b FB denotes fixed block record formats.

^{*} SAS is the registered trademark of SAS Institute, Inc., Cary, North Carolina 27511-8000

12. DESCRIPTIVE FILE ON THE MAGNETIC TAPE

The following is a listing of the first file on the magnetic tapes distributed by CDIAC. This file is intended to provide the details (i.e., variable descriptions, formats, and units) about each file associated with this numeric data package.

TITLE OF THE DATA SET

United States Historical Climatology Network (HCN) Serial Temperature and Precipitation Data.

DATA CONTRIBUTORS

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SOURCE AND SCOPE OF THE DATA

One of the objectives in establishing the HCN was to detect secular changes of regional rather than local climate. Therefore, only stations not believed to be influenced to any substantial degree by artificial changes of local environments were included in the network. Some of the stations in the HCN are first-order weather stations, but the majority were selected from U.S. cooperative weather stations (approximately 5000 in the United States). To be included in the HCN, a station had to be currently active (in 1987), have at least 80 years of mean monthly temperature and total monthly precipitation data, and have experienced few station changes (see Appendix A for a complete listing of the stations in the HCN). An additional criterion that was used in selecting the 1219 HCN stations, a criterion which sometimes compromised the preceding criteria, was the desire to have a uniform distribution of stations in the United States.

The HCN data base contains station histories, monthly temperature data (maximum, minimum, and mean), and total monthly precipitation data that were compiled by NCDC after being extracted from digital and non-digital data sets archived at NCDC. These data sets originated from a variety of sources, including climatological publications, universities, federal agencies, individuals, and data archives. All stations were quality controlled by NCDC through the use of outlier and areal edits, and each station in the network was corrected for time-of-observation differences, instrument changes, instrument moves, station relocations, and urbanization effects (Karl et al. 1987, 1988). A unique feature of the data set is that within most temperature and precipitation data files, both original and adjusted estimates are given along with confidence factors for each adjusted estimate. Another unique feature of the data base is that in comparison with the long periods of record, only a small portion of the data are represented as missing. In order to make the HCN record as serially complete as possible, missing data have been estimated using data from neighboring stations. Since 1920, the majority of the 1219 stations have data records that are serially complete.

DATA FORMAT

Twenty-six files are provided on these tapes including this descriptive file; six FORTRAN IV input/output routines; six SAS input/output routines; one station inventory file; one station history file; three files containing monthly maximum, minimum, and mean temperatures; one file containing total monthly precipitation data; one file containing temperature time-of-observation bias corrections; three files containing data quality assessments for temperature and precipitation data files; and three temperature files (maximum, minimum, and mean monthly temperatures) that have been adjusted for heat island effects. The format and contents of each data file are described below.

STATION INVENTORY FILE

The station inventory file (File 14 on the first magnetic tape) provides a list of the stations in the HCN at the time the data set was compiled in 1984. Some station changes have occurred since 1984. Appendix A of the documentation provides a current list of the stations in the HCN. The file contains 1219 lines of data and provides essential information about each station, including the two-letter state abbreviation, full station name, state number, station number, division number, latitude and longitude coordinates, and the station elevation. This file also provides for each station the date that the data record starts, the percentage of the data record that constitutes original data, the date at which the data record becomes serially complete, the percentage of the data that have been estimated by using neighboring stations, the number of station moves, and the average confidence factor over the period of adjusted data for the temperature and precipitation data files. There are no missing values in this file.

The file may be read by the FORTRAN format:

```

      DIMENSION DATA(40)
1      CONTINUE
          READ(5,100,END=99) (DATA(I),I=1,40)
100     FORMAT(40A4)

```

or by the SAS format:

```

INPUT STATE $ 1-2 STATION $ 4-32 STACOD 33-34 STANUM 36-39 DIVCOD 41-42
      LATDEG 44-45 LATMIN 47-48 LONDEG 50-52 LONMIN 54-55 ELEV 59-62
      BGNPOR1 $ 66-72 ADJ1 74-75 SCDATE1 $ 77-83 EST1 85-86
      MOVE1 88-89 CONF1 $ 91-94 BGNPOR2 $ 97-104 ADJ2 106-107
      SCDATE2 $ 109-115 EST2 117-118 MOVE2 120-121 CONF2 $ 123-126
      BGNPOR3 $ 128-135 ADJ3 137-138 SCDATE3 $ 140-146 EST3 148-149
      MOVE3 151-152 CONF3 $ 154-160;

```


Stated in tabular form, the contents of the station inventory file include the following.

Variable	Variable type	Column width	Column start	Column end
STATE	Character	2	1	2
STATION	Alphanumeric	29	4	32
STACOD	Numeric	2	33	34
STANUM	Numeric	4	36	39
DIVCOD	Numeric	2	41	42
LATDEG	Numeric	2	44	45
LATMIN	Numeric	2	47	48
LONDEG	Numeric	2	50	52
LONMIN	Numeric	2	54	55
ELEV	Numeric	4	59	62
BGNPOR1	Alphanumeric	7	66	72
ADJ1	Numeric	2	74	75
SCDATE1	Alphanumeric	7	77	83
EST1	Numeric	2	85	86
MOVE1	Numeric	1	88	89
CONF1	Alphanumeric	4	91	94
BGNPOR2	Alphanumeric	8	97	104
ADJ2	Numeric	2	106	107
SCDATE2	Alphanumeric	7	109	115
EST2	Numeric	2	117	118
MOVE2	Numeric	2	120	121
CONF2	Alphanumeric	4	123	126
BGNPOR3	Alphanumeric	8	128	135
ADJ3	Numeric	2	137	138
SCDATE3	Alphanumeric	7	140	146
EST3	Numeric	2	148	149
MOVE3	Numeric	2	151	152
CONF3	Alphanumeric	7	154	160

where

STATE is a two-letter state abbreviation (e.g., AL=Alabama, AZ=Arizona, etc.);

STATION is the full name of the cooperative station as of 1984;

STACOD is the state code (e.g., 01 = Alabama, 02 = Arizona, etc.);

STANUM is the cooperative station number (values range from 0008 to 9933);

DIVCOD	is a two-digit integer division code;
LATDEG	is the station latitude coordinate, in degrees;
LATMIN	is the station latitude coordinate, in minutes;
LONDEG	is the station longitude coordinate, in degrees;
LONMIN	is the station longitude coordinate, in minutes;
ELEV	is the ground elevation at the station, expressed in whole feet above or below mean sea level (values range from -194 to 9065);
BGNPOR1	is the beginning period of record for a station in the mean temperature data file;
ADJ1	is the percentage of a station's mean temperature data that are original data (i.e., not estimated by using neighboring stations);
SCDATE1	is the date when the mean temperature data record for a station becomes serially complete;
EST1	is the percentage of a station's mean temperature data that have been estimated by using neighboring stations;
MOVE1	is the number of times a station has moved since the date when the mean temperature data file became serially complete (SCDATE1);
CONF1	is the average confidence factor over the period for which the mean temperature data have been adjusted;
BGNPOR2	is the beginning period of record for a station's minimum and maximum temperature data files;
ADJ2	is the percentage of a station's minimum and maximum temperature data that are original (i.e., not estimated by using neighboring stations);
SCDATE2	is the date when the minimum and maximum temperature data records for a station become serially complete;
EST2	is the percentage of a station's minimum and maximum temperature data that are estimated by using data from neighboring stations;
MOVE2	is the number of times a station has moved since the date when the minimum and maximum temperature data files became serially complete (SCDATE2);
CONF2	is the average confidence factor over the period for which the minimum and maximum temperature data files have been adjusted;

BGNPOR3	is the beginning period of record for a station's total monthly precipitation data file;
ADJ3	is the percentage of a station's the total monthly precipitation data that are original (i.e., not estimated by using data from neighboring stations);
SCDATE3	is the date when the total monthly precipitation data record for a station becomes serially complete;
EST3	is the percentage of a station's total monthly precipitation data that are estimated by using data from neighboring stations;
MOVE3	is the number of times a station has moved since the date when the total monthly precipitation data file became serially complete (SCDATE3);
CONF3	is the average confidence factor over the period for which the total monthly precipitation data have been adjusted;

STATION HISTORY FILE

The station history file (File 15 on the first tape) provides valuable information concerning each station in the HCN. This file documents station moves and instrument changes, lists station observers and observation times, and identifies suspect fields. When used in conjunction with the station inventory files (File 14 on the first tape), data quality assessment files (Files 2-4 on the third magnetic tape), and the microfiche (located on the inside back cover of the documentation) containing times series plots for each station, the user may accurately assess the quality and suitability of each station's data for long-term climate analyses.

This file contains 19,321 lines of data and may be read by the FORTRAN format:

```

      DIMENSION DATA(54)
1      CONTINUE
      READ(5,100,END=99) (DATA(I),I=1,54)
100    FORMAT(54A4)
```

or by the SAS format:

```

DATA HISTORY (DROP=X);
  RETAIN STANUM STATE DIVISION CURRNAME COUNTY XREF;
INFILE IN MISSEVER ls=230;
INPUT @45 x $1. @;
IF x ne ' ' then do;
  INPUT STANUM 1-6 STATE $ 8-9 DIVISION 11-12 CURRNAME $ 14-43
    COUNTY $ 45-60 XREF $ 62-86 ;
END;
ELSE
  INPUT STANUM2 1-6 MOBEG 8-9 DAYBEG 11-12 YRBEG 14-17 MOEND 19-20
```

DAYEND 22-23 YREND 25-28 SUSPLAT 30 SUSPLONG 31 SUSPLOC 32
 SUSPELEV 33 SUSPPO 34 SUSPNAME 35 SUSPQUAL 36 SUSPINST 37
 SUSPTIME 38 SUSPHTS 39 SUSPPUBS 40 SUSPBEG 41 SUSPEND 42 SUSPOBS 43
 SUSPOTHR 44 LATNORTH \$ 46-51 LONGWEST \$ 53-59 DISTANCE 61-63
 DIRECT \$ 65-67 ELEV 69-73 DISTPO 75-77 DIRECTPO \$ 79-81 NAME \$ 83-110
 QUALIF \$ 112-121 ADDINST 123 COTTON 124 DBULB 125 EVAPSTA 126
 FISHPORT 127 HYGRO 128 MINTHERM 129 MAXTHERM 130 NORIVGAG 131
 RAINGAGE 132 SHELTER 133 RECRIVER 134 RECRRAIN 135 SNOW 136
 STORAGE 137 STDRAIN 138 STDSHELT 139 THERMOGR 140 DIGTHERM 141
 TIPBUCK 142 OTHEVAP 143 MAXMIN 144 TIMEOBS \$ 146-149 PCTHTFT \$
 151-152 PCPHT \$ 154-155 BULLETW 157 COMBBUL 158 CLIMDATA 159
 RIVSTAGE 160 HYDROBUL 161 PRECDATA 162 SNOWBULL 163 NOTPUB 164
 CWB 165 MONTHREV 166 STATEPUB 167 LCD 168 BQ 169 SGPD 170 WWR 171
 MYB 172 OBSNAME \$ 174-213 NUMOBS 215-216;

Stated in tabular form, the contents of the station history file include the following.

Variable	Variable type	Variable width	Column start	Column end
X	Alphanumeric	1	45	45
STANUM	Numeric	6	1	6
STATE	Character	2	8	9
DIVISION	Numeric	2	11	12
CURRNAME	Alphanumeric	30	14	43
COUNTY	Alphanumeric	16	45	60
XREF	Alphanumeric	25	62	86
STANUM2	Numeric	6	1	6
MOBEG	Numeric	2	8	9
DAYBEG	Numeric	2	11	12
YRBEG	Numeric	4	14	17
MOEND	Numeric	2	19	20
DAYEND	Numeric	2	22	23
YREND	Numeric	4	25	28
SUSPLAT	Numeric	1	30	30
SUSPLONG	Numeric	1	31	31
SUSPLOC	Numeric	1	32	32
SUSPELEV	Numeric	1	33	33
SUSPPO	Numeric	1	34	34
SUSPNAME	Numeric	1	35	35
SUSPQUAL	Numeric	1	36	36
SUSPINST	Numeric	1	37	37
SUSPTIME	Numeric	1	38	38
SUSPHTS	Numeric	1	39	39
SUSPPUBS	Numeric	1	40	40
SUSPBEG	Numeric	1	41	41

Variable	Variable type	Variable width	Column start	Column end
SUSPEND	Numeric	1	42	42
SUSPOBS	Numeric	1	43	43
SUSPOTHR	Numeric	1	44	44
LATNORTH	Alphanumeric	6	46	51
LONGWEST	Alphanumeric	7	53	59
DISTANCE	Numeric	3	61	63
DIRECT	Alphanumeric	3	65	67
ELEV	Numeric	5	69	73
DISTPO	Numeric	3	75	77
DIRECTPO	Alphanumeric	3	79	81
NAME	Character	28	83	110
QUALIF	Alphanumeric	10	112	121
ADDINST	Numeric	1	123	123
COTTON	Numeric	1	124	124
DBULB	Numeric	1	125	125
EVAPSTA	Numeric	1	126	126
FISHPORT	Numeric	1	127	127
HYGRO	Numeric	1	128	128
MINTHERM	Numeric	1	129	129
MAXTHERM	Numeric	1	130	130
NORIVGAG	Numeric	1	131	131
RAINGAGE	Numeric	1	132	132
SHELTER	Numeric	1	133	133
RECRIVER	Numeric	1	134	134
RECRAIN	Numeric	1	135	135
SNOW	Numeric	1	136	136
STORAGE	Numeric	1	137	137
STDRAIN	Numeric	1	138	138
STDSHELT	Numeric	1	139	139
THERMOGR	Numeric	1	140	140
DIGTHERM	Numeric	1	141	141
TIPBUCK	Numeric	1	142	142
OTHEVAP	Numeric	1	143	143
MAXMIN	Numeric	1	144	144
TIMEOBS	Alphanumeric	4	146	149
PCTHTFT	Character	2	151	152
PCPHT	Alphanumeric	2	154	155
BULLETW	Numeric	1	157	157
COMBBUL	Numeric	1	158	158
CLIMDATA	Numeric	1	159	159
RIVSTAGE	Numeric	1	160	160
HYDROBUL	Numeric	1	161	161
PRECDATA	Numeric	1	162	162

Variable	Variable type	Variable width	Column start	Column end
SNOWBULL	Numeric	1	163	163
NOTPUB	Numeric	1	164	164
CWB	Numeric	1	165	165
MONTHREV	Numeric	1	166	166
STATEPUB	Numeric	1	167	167
LCD	Numeric	1	168	168
BQ	Numeric	1	169	169
SGPD	Numeric	1	170	170
WWR	Numeric	1	171	171
MYB	Numeric	1	172	172
OBSNAME	Alphanumeric	40	174	213
NUMOBS	Numeric	2	215	216

where

X is a dummy variable used in the above SAS program to differentiate header records from data records;

STANUM is the state and station number [state numbers range from 1 to 48 (e.g., 1 = Alabama, 2=Arizona, ... 48=Wyoming) and station numbers range from 2084 to 9905];

STATE is the two-letter state abbreviation (e.g., AL = Alabama);

DIVISION is the station division number;

CURRNAME is the most current station name;

COUNTY is the county in which the station is presently located;

XREF is a station cross-reference, representing the COOP number of the station or the county name that the current station moved to or from;

STANUM2 is the state and station number (state numbers range from 1 to 48, and station numbers range from 1084 to 9905);

MOBEG is the month the data record started (values range from 01 to 12, and missing values are represented by 99);

DAYBEG is the day the data record started (values range from 01 to 31, and missing values are represented by 99);

YRBEG is the year the data record started (values range from 1738 to 1988);

MOEND is the month the data record ended (values range from 01 to 99);

DAYEND is the day the data record ended (values range from 01 to 99);

YREND is the year the data record ended (values range from 1700 to 1988);

The next 15 variables represent suspect fields in the station history file only. The values for these variables will be either 0 or 1. Values of 1 represent field(s) flagged as suspect by the pre-key editor.

1. SUSPLAT	Latitude
2. SUSPLONG	Longitude
3. SUSPLOC	Previous location
4. SUSPELEV	Elevation
5. SUSPPO	Post office location
6. SUSPNAME	Station name
7. SUSQUAL	Qualifier
8. SUSINST	Instruments
9. SUSPTIME	Observation time
10. SUSPHTS	Instrument heights
11. SUSPPUBS	Publications
12. SUSPBEG	Beginning date
13. SUSPEND	Ending date
14. SUSPOBS	Observer
15. SUSPOTHR	Other observers

LATNORTH is the station latitude (North) expressed in degrees and minutes. Values range from S00 00 to S72 00 where S = sign; 0 = positive; and - = negative;

LONGWEST is the current station longitude (West) expressed in degrees and minutes. Values range from S060 00 to S180 00 where S = sign; 0 = positive; and - = negative;

DISTANCE is the distance, in tenths of miles, from the previous station location (e.g., 015 = 1.5 miles);

DIRECT is the direction (16 point) of a station move from the previous location. Remember that the location of the temperature instrument defines the official station location. Values may be blank, character, or numeric. Unknown direction is represented by 999. For example,

blank = first record of new station or distance and direction unknown;
 015 NW = station moved 1.5 miles NW from previous location;
 000 000 = no change in station (or instrument) location;
 000 ESE = move <0.1 mile east-southeast (ESE) from previous location;
 000 999 = move <0.1 mile, direction unknown;
 900 ESE = temperature instrument moved, precipitation instrument did not move, or both instruments were moved to the same location;

800 000 = precipitation instrument moved but the temperature instrument did not; and

999 NW = distance unknown, direction NW.

ELEV	is the ground elevation at the station, expressed in whole feet above or below mean sea level. Values range from -194 to 9843.
DISTPO	is the distance, in tenths of miles, from the nearest post office (e.g. 015 = 1.5 miles). Values range from 000 to 604. Unknown distances are represented by 999;
DIRECTPO	is the direction on a 16-point compass from the nearest post office. Values may be either blank, character, or numeric. Unknown directions are represented by 999. For example, blank = distance and direction unknown; 015NW = 1.5 miles NW of post office; 000NW = <0.1 mile NW from post office; 000999 = <0.1 mile from post office, direction unknown; and 000 000 = at the post office.
NAME	is the full station name;
QUALIF	is a qualifier or description that is added to the proper name of the station (e.g., Asheville 2N);

The next 22 variables represent the following instruments and classifications. If an instrument was used at a particular station or if a particular classification is appropriate for that station, the variable will have a value of 1; if it was not used, the variable will have a value of 0.

1. ADDINST	Additional instrument (wind, pressure, etc.)
2. COTTON	Cotton region shelter (official, CRS)
3. DBULB	Dry bulb thermometer
4. EVAPSTA	Class "A" evaporation station
5. FISHPORT	Fisher-Porter gage
6. HYGRO	Hygrothermograph
7. MINTHERM	Minimum thermometer
8. MAXTHERM	Maximum thermometer
9. NORIVGAG	Non-recording river gage
10. RAINGAGE	Non-standard rain gage
11. SHELTER	Non-standard shelter
12. RECRIVER	Recording river gage
13. RECRAIN	Recording rain gage
14. SNOW	Snow density gage
15. STORAGE	Storage gage
16. STDRAIN	Standard rain gage (SRG)
17. STDSHELT	Standard shelter (official)
18. THERMOGR	Thermograph
19. DIGTHERM	Digital thermometer
20. TIPBUCK	Tipping bucket gage

21. OTHEVAP Other than class" A" evaporation station
 22. MAXMIN Max/min temperature system

TIMEOBS is the observation time (rounded to the whole hour) for precipitation and temperature. Values may be either numeric, character, or alphanumeric. Possible values and their meaning include the following:

01-24 nearest whole hour;
 99 missing;
 SR sunrise;
 SS sunset;
 XXHR XX = number of hours observed per day;
 9XX9 XX = hours observed, unknown if for both temperature and precipitation;
 TRID = Tri-daily observations; TAVG = [7AM + 2PM + (2 x 9PM)]/4; and
 RS Crop season=sunrise (SR) and other month = sunset (SS).

PCTHTFT is the height of the precipitation instrument above ground and is rounded to the whole foot. Values range from 01 to 99;

PCPHT is the height of the temperature instrument above ground. Values may be given in either numerals or characters. Numerical values range from 01 to 99. Potential values include the following:

01-97 = actual height;
 98 = ≥ 98 feet;
 99 = missing; and
 RF = roof, height unknown.

The next 16 variables represent the following forms of publications. If the data from a particular station appeared in a publication, the variable will have a value of 1; if not, the variable will have a value of 0. The variables and their corresponding forms of publications are as follows:

1. BULLETW	Bulletin W
2. COMBBUL	<i>Combined Bulletin</i>
3. CLIMDATA	<i>Climatological Data</i>
4. RIVSTAGE	<i>Daily River Stages</i>
5. HYDROBUL	<i>Hydrologic Bulletin</i>
6. PRECDATA	published as hourly precipitation data
7. SNOWBULL	<i>Snow Bulletin</i>
8. NOTPUB	not published
9. CWB	Report to the chief of the U.S. Weather Bureau
10. MONTHREV	<i>Monthly Weather Review</i>
11. STATEPUB	published in state publications
12. LCD	<i>Local Climatological Data</i>
13. BQ	<i>Bulletin Q</i> , 1870-1903.
14. SGPD	<i>Storage Gage Precipitation Data, Western United States</i>
15. WWR	<i>Weekly Weather Review</i>
16. MYB	<i>U.S. Meteorological Yearbook</i>

OBSNAME is the observer's name (may include more than one name per record);

NUMOBS is the number of observers participating during the time of record for an agency (e.g., University of North Carolina -- 9, values range from 1 to 28).

TEMPERATURE AND PRECIPITATION DATA FILES -- ORIGINAL DATA, ADJUSTED DATA (EXCLUDING ADJUSTMENTS FOR URBANIZATION EFFECTS), AND CONFIDENCE ESTIMATES

Monthly data have been extracted from digital and non-digital data sets archived at the National Climatic Data Center (NCDC). The data are sorted by element: one file each for maximum temperature, minimum temperature, mean temperature, and total precipitation. The total monthly precipitation and temperature and data files (File 16 on the first magnetic tape and Files 1-3 on the second magnetic tape) are updates of the files distributed with the first edition of this NDP (Quinlan et al. 1987). These updates extend the period of record from 1984 through 1987. Each record of these four files contains 1 year of monthly data for a given station. These monthly data sets come from various sources as defined by the source field. There are, **at most**, three lines of data per year for each station. These lines include (1) original measured data; (2) data adjusted for time-of-observation differences (temperature files only), station moves, instrument changes, and other factors influencing the homogeneity of the station record; and (3) confidence estimates for these adjusted values. These files have **not** been adjusted for urbanization effects.

The files may be read by the FORTRAN format:

```

      DIMENSION IDATA(12),IFLAG(12),IFLAG2(12),IFLAG3(12),IFLAG4(12)
1     CONTINUE
      READ(5,100,END=99) ISTATE,ISTN,IYEAR,IELEM,CTYPE,
1     (IDATA(I),IFLAG(I),IFLAG2(I),IFLAG3(I),IFLAG4(I),I=1,12)
100   FORMAT(1X,I2,I4,1X,I4,1X,I1,A1,12(I5,4A1))

```

A schematic of the record layout for each file is:

ISTATE ISTN IYEAR	ORIGINAL DATA PLUS FLAGS
ISTATE ISTN IYEAR	ADJUSTED DATA PLUS FLAGS
ISTATE ISTN IYEAR	CONFIDENCE FACTORS PLUS FLAGS
ISTATE ISTN IYEAR+1	ORIGINAL DATA PLUS FLAGS
ISTATE ISTN IYEAR+1	ADJUSTED DATA PLUS FLAGS
ISTATE ISTN IYEAR+1	CONFIDENCE FACTORS PLUS FLAGS

Note: During some years, original data are not available, and only adjusted data and confidence factors are included, or vice-versa.

The files may also be read by the SAS format:

```

INPUT STATE 2-3 STANUM 4-7 YEAR 9-12 ELEM 14 TYPE $ 15
JAN 16-20 JANFLAG1 $ 21 JANFLAG2 $ 22 JANFLAG3 $ 23 JANFLAG4 $ 24
FEB 25-29 FEBFLAG1 $ 30 FEBFLAG2 $ 31 FEBFLAG3 $ 32 FEBFLAG4 $ 33
MAR 34-38 MARFLAG1 $ 39 MARFLAG2 $ 40 MARFLAG3 $ 41 MARFLAG4 $ 42

```

APR 43-47 APRFLAG1 \$ 48 APRFLAG2 \$ 49 APRFLAG3 \$ 50 APRFLAG4 \$ 51
MAY 52-56 MAYFLAG1 \$ 57 MAYFLAG2 \$ 58 MAYFLAG3 \$ 59 MAYFLAG4 \$ 60
JUN 61-65 JUNFLAG1 \$ 66 JUNFLAG2 \$ 67 JUNFLAG3 \$ 68 JUNFLAG4 \$ 69
JUL 70-74 JULFLAG1 \$ 75 JULFLAG2 \$ 76 JULFLAG3 \$ 77 JULFLAG4 \$ 78
AUG 79-83 AUGFLAG1 \$ 84 AUGFLAG2 \$ 85 AUGFLAG3 \$ 86 AUGFLAG4 \$ 87
SEP 88-92 SEPFLAG1 \$ 93 SEPFLAG2 \$ 94 SEPFLAG3 \$ 95 SEPFLAG4 \$ 96
OCT 97-101 OCTFLAG1 \$ 102 OCTFLAG2 \$ 103 OCTFLAG3 \$ 104 OCTFLAG4 \$ 105
NOV 106-110 NOVFLAG1 \$ 111 NOVFLAG2 \$ 112 NOVFLAG3 \$ 113 NOVFLAG4 \$ 114
DEC 115-119 DECFLAG1 \$ 120 DECFLAG2 \$ 121 DECFLAG3 \$ 122 DECFLAG4 \$ 123;

Stated in tabular form, the contents of the data files include the following.

Variable	Variable type	Variable width	Column start	Column end
STATE	Numeric	2	2	3
STANUM	Numeric	4	4	7
YEAR	Numeric	4	9	12
ELEM	Numeric	1	14	14
TYPE	Character	1	15	15
JAN	Numeric	5	16	20
JANFLAG1	Alphanumeric	1	21	21
JANFLAG2	Alphanumeric	1	22	22
JANFLAG3	Alphanumeric	1	23	23
JANFLAG4	Alphanumeric	1	24	24
FEB	Numeric	5	25	29
FEBFLAG1	Alphanumeric	1	30	30
FEBFLAG2	Alphanumeric	1	31	31
FEBFLAG3	Alphanumeric	1	32	32
FEBFLAG4	Alphanumeric	1	33	33
MAR	Numeric	5	34	38
MARFLAG1	Alphanumeric	1	39	39
MARFLAG2	Alphanumeric	1	40	40
MARFLAG3	Alphanumeric	1	41	41
MARFLAG4	Alphanumeric	1	42	42
APR	Numeric	5	43	47
APRFLAG1	Alphanumeric	1	48	48
APRFLAG2	Alphanumeric	1	49	49
APRFLAG3	Alphanumeric	1	50	50
APRFLAG4	Alphanumeric	1	51	51
MAY	Numeric	5	52	56
MAYFLAG1	Alphanumeric	1	57	57
MAYFLAG2	Alphanumeric	1	58	58
MAYFLAG3	Alphanumeric	1	59	59
MAYFLAG4	Alphanumeric	1	60	60
JUN	Numeric	5	61	65

Variable	Variable type	Variable width	Column start	Column end
JUNFLAG1	Alphanumeric	1	66	66
JUNFLAG2	Alphanumeric	1	67	67
JUNFLAG3	Alphanumeric	1	68	68
JUNFLAG4	Alphanumeric	1	69	69
JUL	Numeric	5	70	74
JULFLAG1	Alphanumeric	1	75	75
JULFLAG2	Alphanumeric	1	76	76
JULFLAG3	Alphanumeric	1	77	77
JULFLAG4	Alphanumeric	1	78	78
AUG	Numeric	5	79	83
AUGFLAG1	Alphanumeric	1	84	84
AUGFLAG2	Alphanumeric	1	85	85
AUGFLAG3	Alphanumeric	1	86	86
AUGFLAG4	Alphanumeric	1	87	87
SEP	Numeric	5	88	92
SEPFLAG1	Alphanumeric	1	93	93
SEPFLAG2	Alphanumeric	1	94	94
SEPFLAG3	Alphanumeric	1	95	95
SEPFLAG4	Alphanumeric	1	96	96
OCT	Numeric	5	97	101
OCTFLAG1	Alphanumeric	1	102	102
OCTFLAG2	Alphanumeric	1	103	103
OCTFLAG3	Alphanumeric	1	104	104
OCTFLAG4	Alphanumeric	1	105	105
NOV	Numeric	5	106	110
NOVFLAG1	Alphanumeric	1	111	111
NOVFLAG2	Alphanumeric	1	112	112
NOVFLAG3	Alphanumeric	1	113	113
NOVFLAG4	Alphanumeric	1	114	114
DEC	Numeric	5	115	119
DECFLAG1	Alphanumeric	1	120	120
DECFLAG2	Alphanumeric	1	121	121
DECFLAG3	Alphanumeric	1	122	122
DECFLAG4	Alphanumeric	1	123	123

where

STATE is the two digit state number [values range from 1 to 48 (1 = Alabama, 2 = Arizona, ... 48 = Wyoming)];

STANUM is the cooperative station network number (values range from 0008 to 9933);

YEAR is the year of record;

ELEM is the data element to identify the data file (1 = monthly maximum temperatures, 2 = monthly minimum temperatures, 3 = monthly mean temperatures, and 4 = total monthly precipitation);

TYPE is the data type code (blank = original data, A = adjusted data, and C = confidence factor);

Original data are the manuscript or "other sources" data that have been archived at NCDC. These data have been manually corrected as needed when checks, such as annual total versus monthly sum and $(MAX+MIN)/2$ versus AVG temperature, have indicated suspect data. These data are as "clean" as possible with respect to the source identified below (see FLAG2). Adjusted data, along with the confidence factors, are the product of three major computer programs. The station history data and a "network" of the best correlated nearby stations are used in all these routines. The original data are used as input for a time-of-observation (TOB) debiasing routine so that the data will be consistent with a midnight-to-midnight observation schedule. The TOB data are the input for the station history adjustment program (SHAP) which debiases the data with respect to position, instrument, and other station changes that may affect the temperature and precipitation data. The third and final routine, FILNET, uses the SHAP data and fills in missing original data and periods where the station changed too often for the SHAP routine to make an estimate of the adjustment needed to debias the data.

JAN - DEC are the monthly temperature or precipitation estimates. Original and adjusted temperature data are expressed in units of hundredths of degrees Fahrenheit. Precipitation is in hundredths of inches for both adjusted and unadjusted data. For adjusted data, one-half the maximum plus one-half the minimum do not necessarily exactly equal the mean. The mean temperature is adjusted independently of the adjustments of the maximum and minimum (Karl et al. 1986). For original and adjusted data, a -9999 indicates no data or no adjustments are provided.

Confidence factors for temperature are in units of hundredths of degrees Fahrenheit. For precipitation, a dimensionless multiplication factor in hundredths is provided for calculation of confidence intervals. A -9999 indicates that no confidence factors were calculated.

Temperature confidence intervals can be calculated by subtracting the temperature confidence factor from the adjusted value to obtain the lower end of the confidence interval (16%, -1 standard deviation). The upper end of the confidence interval (84%, +1 standard deviation) is obtained by adding the confidence factor to the adjusted data. For the precipitation confidence intervals, the lower end of the confidence interval (16%) is obtained by dividing the adjusted value by its confidence factor, and the upper end of the confidence interval (84%) is obtained by multiplying the adjusted value by its confidence factor.

Flag codes for original data

(JAN-DEC)FLAG1 is the code for the number of daily values not available in computing the monthly value. A = 1, B = 2, C = 3, ... J = 10. If the source code (FLAG2 - see below) equals 1, then FLAG1 = J indicates between 1 and 10 days missing.

(JAN-DEC)FLAG2 is the data source code. The codes and their meaning are as follows:

- 0 = NCDC Tape Deck 3200, Summary of the Day Element Digital File;
- 1 = NCDC Tape Deck 3200, Summary of the Month Element Digital File;
- 2 = Means Book--Smithsonian Institute, C. A. Schott (1876, 1881, up to 1931);
- 3 = Manuscript--Original National Climatic Data Records;
- 4 = CD--*Climatological Data*, published monthly by NCDC;
- 5 = Climate Record Book--for a description, see *History of Climatological Record Books*, U.S. Department of Commerce, Weather Bureau, U.S.G.P.O., 1960;
- 6 = Bulletin W--*Summary of the Climatological Data for the United States by Section* by F. H. Bigelow, U.S. Weather Bureau, 1912; and *Summary of the Climatological Data for the United States*, (Bulletin W - 2nd ed.);
- 7 = LCD--*Local Climatological Data*, published monthly by NCDC;
- 8 = State climatologists - various sources;
- B = Professor Raymond Bradley--see *Climatic Fluctuations of the Western United States During the Period of Instrumental Records*, by Bradley, Barry, and Kiladis, Contribution No. 42, Department of Geography and Geology, University of Massachusetts, 1982;
- D = Dr. Henry Diaz--A compilation of data from Bulletin W, LCD and NCDC Tape Deck 3220 (1983);
- G = Professor John Griffith--primarily from *Climatological Data*; and
- Blank = computed value from two of three temperature elements.

(JAN-DEC)FLAG3 is a precipitation indicator for trace precipitation (T = Trace). In the temperature files, this flag is an indicator of the quality of the available observation times for a given station. The codes and their meaning are as follows:

- Blank = information concerning the observation times was not available for the station during that year and the data are represented as missing;
- F = information concerning the observation times for the station during that year was suspect or "flaky" (the temperature data provided when this flag code appears should be used with caution); and
- G = information concerning the observation times for the station during that year was "good" and the information was judged to be accurate.

(JAN-DEC)FLAG4 is a code for outliers. The codes and their meaning are as follows:

S = data are outliers, but NCDC did not have enough confidence to invalidate the observation [the data in question are between 3.5 and 5.0 standard deviations from their mean offset with respect to its nearest neighbors (Karl et al. 1986)];

X = data are outliers and were removed (>5.0 standard deviations from their mean offset with respect to the station's nearest neighbors); and

A = annual value is an outlier, and all individual months have been estimated by using nearby stations [Value is consistent with station's 1987 position. Over half of the nearby stations were greater than 1.96 standard deviations from the mean offset (difference or log ratio) with respect to its neighbors].

Flag codes for adjusted data

(JAN-DEC)FLAG1 is the same flag code for the number of daily values used for the original data.

(JAN-DEC)FLAG2 is the same source code used for the original data.

(JAN-DEC)FLAG3 is a temperature indicator for the time-of-observation bias correction (added by the TOB program). The indicators and their meaning are:

0 = corrected;

T = trace precipitation field = zero;

Blank = no observation time correction--treated as a station move.

(JAN-DEC)FLAG4 indicates outliers and missing data estimates. The codes and their meaning are as follows:

S = same as in original data

M = no original data are available, but an estimate is provided that is consistent with the data adjusted by using nearest neighboring stations; or, the data were in excess of 5.0 standard deviations from their mean offset with respect to the station's nearest neighbors; and

E = original data available are available, but data were estimated using nearest neighbors because: (1) the data were between 3.5 and 5.0 standard deviations from their mean offset and 1 or more days in the month were missing, or (2) adjustments of original data were inappropriate (<5 years between potential inhomogeneities) so nearest neighbors were used to estimate the data consistent with its 1987 location or most recent location with at least 5 years without potential station discontinuities.

Flag codes for confidence factors

(JAN-DEC)FLAG1 not used.

(JAN-DEC)FLAG2 is a code representing the number of the move, counting back from 1987;

(JAN-DEC)FLAG3 represents the significance level at which the initial adjustment was made. Possible flag codes and their meanings are as follows:

<u>Value</u>	<u>Sigma</u>	<u>Confidence interval %</u>
1	1.0	16 to 84
2	2.0	5 to 95
3	2.57	1 to 99
4	3.3	0.1 to 99.9
5	3.75	0.01 to 99.99

If FLAG3 = X, the algorithm was unable to adjust the data.

If FLAG3 = U, the algorithm was unable to adjust the entire series due to the station density of the network, but an estimate for the missing data is given by using neighboring stations.

(JAN-DEC)FLAG4 not used.

The preceding information is all that is needed to use the data on a first-look basis. The flags and the data may be interpreted as follows: (1) if the data and confidence factor are present (not equal to -9999), then the data have successfully passed through all the adjustments and fill-ins and may be considered NCDC's "best" estimate, or (2) if the data are present but the confidence factor is missing, the temperature data have passed through only the TOB program (i.e., station history adjustment and the fill-in procedures could not determine an estimate for the adjusted data). A special case for precipitation should be noted. For FLAG3 in the confidence factor flag, the data are unadjustable (see above for details).

TEMPERATURE TIME-OF-OBSERVATION BIAS CORRECTIONS FILE

The temperature time-of-observation bias corrections file (File 1 on the third tape) was used by NCDC to remove the time-of-observation differences in all the temperature files provided. The model used for removing time-of-observation differences is detailed in Karl et al. (1986). For example, if the temperature observations at station 011084 (Brewton, Alabama) were recorded at 0100 hours in January, the values to be subtracted from the monthly maximum, minimum, and average temperatures are -.0688, -.2193, and -.1438, respectively. The file contains 87,768 records (1,219 stations x 3 temperature elements x 24 hours) and may be read by the FORTRAN format:

```

      DIMENSION BIAS(12)
1    CONTINUE
      READ(5,100,END=99) ISTATE,ISTANM,IHOUR,DTYPE,(BIAS(I),I=1,12)
100   FORMAT(I2,I4,2X,I2,1X,A4,2X,12(F7.4,2X))

```


or by the SAS format:

```
INPUT STATE 1-2 STANUM 3-6 HOUR TYPE $ JAN FEB MAR APR MAY JUN JUL
      AUG SEP OCT NOV DEC;
```

Stated in tabular form, the contents include the following.

Variable	Variable type	Variable width	Column start	Column end
STATE	Numeric	2	1	2
STANUM	Numeric	4	3	6
HOUR	Numeric	2	8	9
TYPE	Character	4	11	14
JAN	Numeric	7	17	23
FEB	Numeric	7	26	32
MAR	Numeric	7	35	41
APR	Numeric	7	44	50
MAY	Numeric	7	52	58
JUN	Numeric	7	61	67
JUL	Numeric	7	70	76
AUG	Numeric	7	79	85
SEP	Numeric	7	88	94
OCT	Numeric	7	97	103
NOV	Numeric	7	106	112
DEC	Numeric	7	115	121

where:

STATE is the two-letter state abbreviation (e.g. AL = Alabama, AZ = Arizona, etc.);

STANUM is the cooperative station number (values range from 0000 to 9998);

HOUR is the hour of the day for the correction (values range from 1 to 24);

TYPE is the type of temperature data that the correction may be used for (TMAX - maximum temperatures, TMIN - minimum temperatures, and TAVG - mean temperatures); and

JAN - DEC are the monthly time-of-observation corrections for a given station at a given HOUR and for a particular TYPE of temperature data expressed in degrees Fahrenheit.

DATA QUALITY ASSESSMENT FILES

Three data quality assessment files (Files 2-4 on the third magnetic tape) were generated by NCDC to allow the user to identify the stations of the highest quality. The information in these files, along with the information in the station history and data inventory files, enable the user to identify the stations with the longest, most complete records. Complete listings of the quality assessment files, separated by state, are provided in Appendix B of the documentation. On the second page (p. B-2) of the appendix an example is given to demonstrate how to interpret and use these files to select stations suitable for climatological analyses. These files provide information for the original temperature and precipitation data files only, not the temperature files that have been adjusted for heat island effects (Files 5-7 on the third magnetic tape). The statistics in these files were generated for the data through 1984. Quality assessments of the minimum and maximum temperature data have been combined into one file.

Each file contains 1219 records and may be read by the FORTRAN format:

```

      DIMENSION STANAM(7),STADIV(7),LAT(5),LONG(2),BPOR(7),SCDATE(7)
1    CONTINUE
      READ(5,100,END=99) STATE,STANAM,ISTATE,STADIV,LAT,LONG,IELEV,
1    BPOR,IRANK1,IPCTAJ,IRANK2,SCDATE,IRANK3,IPCTES,IRANK4,IMOVE,
2    IRANK5,CONF,IRANK6,CONF40,IRANK7,CFULL,IRANK8
100  FORMAT(4X,A2,1X,7A4,1X,I2,1X,7A1,1X,5A1,1X,2A3,1X,I6,1X,7A1,1X,
1    I1,1X,I3,1X,I1,1X,7A1,1X,I1,1X,I3,1X,I1,1X,I2,1X,I1,1X,A4,
2    1X,I1,4X,I2,3X,I1,4X,I2,4X,I1)

```

or by the SAS format:

```

INPUT STACOD $ STANAME $ 8-35 STANUM @40 STADIV $CHAR7. @48 LAT
$CHAR5. @54 LONG $CHAR6. ELEV @68 BPOR $CHAR7. RANK1 PERADJ
RANK2 @84 SCDATE $CHAR7. RANK3 PEREST RANK4 STAMOVE RANK5
CONF $CHAR4. RANK6 CONS40 RANK7 CONSFULL RANK8;

```

Stated in tabular form, the contents include the following.

Variable	Variable type	Variable width	Column start	Column end
STACOD	Character	2	5	6
STANAME	Alphanumeric	28	8	35
STANUM	Numeric	2	37	38
STADIV	Alphanumeric	7	40	46
LAT	Alphanumeric	5	48	52
LONG	Alphanumeric	6	54	59
ELEV	Numeric	6	61	66
BPOR	Alphanumeric	7	68	74
RANK1	Numeric	1	76	76
PERADJ	Numeric	3	78	80

Variable	Variable type	Variable width	Column start	Column end
RANK2	Numeric	1	82	82
SCDATE	Alphanumeric	7	84	90
RANK3	Numeric	1	92	92
PEREST	Numeric	3	94	96
RANK4	Numeric	1	98	98
STAMOVE	Numeric	2	100	101
RANK5	Numeric	1	103	103
CONF	Alphanumeric	4	105	108
RANK6	Numeric	1	110	110
CONS40	Numeric	2	115	116
RANK7	Numeric	1	119	119
CONSFULL	Numeric	2	123	124
RANK8	Numeric	1	128	128

where

- STACOD is the two-letter state abbreviation (e.g., AL = Alabama);
- STANAME is the full name of the cooperative station;
- STANUM is the state code (e.g., 01 = Alabama, 02 = Arizona, ... 48 = Wyoming);
- STADIV is the cooperative station number and the division number [the state number and division number are separated by a hyphen (e.g., 1084-07)];
- LAT is the latitude, expressed in degrees and minutes (e.g., 31-04);
- LONG is the longitude, expressed in degrees and minutes (e.g., 91-17);
- ELEV is the station elevation, expressed in feet above or below mean sea level;
- BPOR is the first month and year that data became available for a station (e.g., 12/1891);
- RANK1 is a decile ranking to judge the quality of the serial completion date (SCDATE) for a particular station in relation to the rest of the network [values range from 0 to 9, with the lowest deciles given to the longest records (i.e., 0 implies the lower 10 percentile, 1 implies 10-20 percentile, and 9 implies 90-100 percentile)];
- PERADJ is the percentage of original data available from the beginning period of record (BPOR) through 1984 for a given station (it serves as a useful indicator of the amount of missing and estimated data for a given station);

RANK2	is a decile ranking to compare the percentage of original data available for one station with the percentage of original data available for the other stations in the network [values range from 0 to 9, with the lowest deciles assigned to stations having the greatest percentage of original data available (i.e., 0 implies the lower 10 percentile, 1 implies 10-20 percentile, and 9 implies 90-100 percentile)];
SCDATE	is the date at which the data become serially complete, or the date from which there is no missing data in the data record for a particular station;
RANK3	is a decile ranking to compare the percentage of adjusted data for one station with the percentage of adjusted data for other stations in the network [values range from 0 to 9 with the lowest deciles assigned to the stations with the fewest estimated adjusted data (i.e., 0 implies the lower 10 percentile, 1 implies 10-20 percentile, and 9 implies 90-100 percentile)];
PEREST	is the percentage of data that were estimated back to the serially complete date (SCDATE);
RANK4	is a decile ranking to judge the quality of the beginning period of record for original data with the beginning period of record for other stations in the network [values range from 0 to 9, with the lowest deciles assigned to the stations with the longest records (i.e., 0 implies the lower 10 percentile, 1 implies 10-20 percentile, and 9 implies 90-100 percentile)];
STAMOVE	is the number of potential discontinuities for a given station, including station moves, instrument changes, and changes in averaging methods;
RANK5	is a decile ranking to judge the quality of the average confidence factor over the period of adjusted data (CONF) for a particular station in relation to the entire network (values range from 0 to 9, with the lowest deciles assigned to the stations with the lowest confidence factors or narrowest intervals);
CONF	is a confidence value which may be used to calculate the 16-84% mean confidence interval over the period of adjusted serially complete data [Confidence factors for temperature are in units of hundredths of degrees Fahrenheit. For precipitation, a dimensionless multiplication factor in hundredths is provided for calculation of confidence intervals. When adjustments were not possible, the record was not serially completed and confidence factors were not calculated. In these cases, the word UNADJUSTABLE will appear in the inventory. (NOTE: A .99 confidence factor for precipitation should be interpreted as 1.00. This occurs when no adjustments were necessary)];
RANK6	is a decile ranking to assess the number of potential discontinuities during the period of adjusted data (STAMOV) for a given station in relation to all the stations in the HCN [values range from 0 to 9, with the lowest deciles assigned to stations with the fewest potential discontinuities (i.e., 0 implies the lower 10 percentile, 1 implies 10-20 percentile, and 9 implies 90-100 percentile)];

- CONS40** is a value which represents the consistency of the adjusted data for a particular station with respect to its nearest 20 neighboring stations for the last 40 years of record. Values range from 0 to 20. The lower the value the better the station. Stations with high values have adjusted data that are not consistent with nearby stations and should be used with caution);
- RANK7** is a decile ranking to judge the consistency of the adjusted data for a given station on an annual basis in relation to its nearest 20 neighboring stations over the past 40 years (CONS40). Values range from 0 to 9, with the lowest deciles assigned to the stations with the most consistent or lowest differences;
- CONSFULL** is a value which represents the consistency of the adjusted data for a particular station with respect to its nearest 20 neighboring stations for the full period of record. Values range from 0 to 20. The lower the value, the better the station. Stations with high values have adjusted data that are not consistent with those of nearby stations and should be used with caution.
- RANK8** is a decile ranking to judge the consistency of the adjusted data for a given station on an annual basis in relation to its nearest 20 neighboring stations over the full period of record (CONSFULL). Values range from 0 to 9, with the lowest deciles assigned to the stations with the most consistent or lowest differences.

TEMPERATURE FILES ADJUSTED FOR URBANIZATION EFFECTS

This document provides three additional three temperature files (maximum, minimum, and mean) adjusted for the same biases mentioned in the previous temperature files (i.e., station moves, instrument changes, time-of-observation biases, etc.) and **also** for urbanization effects. The urbanization biases have been removed by using the techniques of Karl et al. (1988). Each station has the same period of record as their corresponding temperature files that contain original, adjusted, and confidence estimates. In these files, however, only adjusted data are given. No original data or confidence factors are provided. The maximum, minimum, and mean temperature files have 108,736, 108,722, and 108,736 lines of data, respectively. All data are expressed in degrees Fahrenheit, and missing values are represented by -99.99. The maximum, minimum, and mean temperatures contain 53,884, 52,319, and 76,088 missing values, respectively.

All three files are formatted in the same manner and may be read by the FORTRAN format:

```

      DIMENSION DATA(12),SEASON(4)
1      CONTINUE
      READ(5,100,END=99) ISTATE,ISTANM,IYEAR,(DATA(I),I=1,12),
1      (SEASON(I),I=1,4)
100     FORMAT(I2,I4,1X,I4,1X,12(F6.2,1X),4(F6.2,1X))

```

or by the SAS format:

INPUT STATE 1-2 STANUM 3-6 YEAR 8-11 JAN 13-18 FEB 20-25 MAR 27-32
 APR 34-39 MAY 41-46 JUN 48-53 JUL 55-60 AUG 62-67 SEP 69-74
 OCT 76-81 NOV 83-88 DEC 90-95 SPR 97-102 SUM 104-109 FALL 111-116
 WIN 118-123;

Stated in tabular form, the contents include the following.

Variable	Variable type	Variable width	Column start	Column end
STATE	Numeric	2	1	2
STANUM	Numeric	4	3	6
YEAR	Numeric	4	8	11
JAN	Numeric	6	13	18
FEB	Numeric	6	20	25
MAR	Numeric	6	27	32
APR	Numeric	6	34	39
MAY	Numeric	6	41	46
JUN	Numeric	6	48	53
JUL	Numeric	6	55	60
AUG	Numeric	6	62	67
SEP	Numeric	6	69	74
OCT	Numeric	6	76	81
NOV	Numeric	6	83	88
DEC	Numeric	6	90	95
SPR	Numeric	6	97	102
SUM	Numeric	6	104	109
FALL	Numeric	6	111	116
WIN	Numeric	6	118	123

where

STATE is the state code (e.g., 01 = Alabama, 02 = Arizona, ... 48 = Wyoming);

STANUM is the cooperative station number;

YEAR is the year of record;

JAN - DEC are the monthly adjusted temperature estimates expressed in degrees Fahrenheit. Missing values are represented by -99.99. These estimates have been adjusted for station moves, instrument changes, time-of-observation differences, and urbanization effects; and

SPR, SUM, FALL, WIN are the seasonal adjusted temperature estimates expressed in degrees Fahrenheit. Missing values are represented by -99.99. These estimates have been adjusted for station moves, instrument changes, time-of-observation differences, and urbanization effects. The seasons are defined as follows:

Winter (WIN) = January, February, and December of the next or upcoming year
 Spring (SPR) = March, April, and May
 Summer (SUM) = June, July, and August
 Fall (FALL) = September, October, and November

Greater details about the contents and format of all data files are given in the accompanying documentation.

REFERENCES

- Karl, T. R., and C. N. Williams, Jr. 1987. An approach to adjusting climatological time series for discontinuous inhomogeneities. *Journal of Climate and Applied Meteorology* 26:1744-1763.
- Karl, T. R., C. N. Williams, Jr., P. J. Young, and W. M. Wendland. 1986. A model to estimate the time of observation bias associated with monthly mean maximum, minimum and mean temperatures for the United States. *Journal of Climate and Applied Meteorology* 25:145-160.
- Karl, T. R., H. F. Diaz, and G. Kukla. 1988. Urbanization: Its detection and effect in the United States climate record. *Journal of Climate* 1:1099-1123.
- Quinlan, F. T., T. R. Karl, and C. N. Williams, Jr. 1987. United States Historical Climatology Network (HCN) serial temperature and precipitation data. NDP-019. Carbon Dioxide Information Analysis Center, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

13. LISTINGS OF THE FORTRAN IV DATA RETRIEVAL PROGRAMS

The following is a listing of the FORTRAN IV data retrieval program provided on magnetic tape (File 2 on the first magnetic tape) by CDIAC for reading and printing the HCN station inventory file (File 14 on the first magnetic tape).

```
//UIDINV JOB (12345,TAPE,IO10),'USER ADDRESS',TIME=(1,30),
// EXEC FORTQCLG
//FORT.SYSIN DD *
C
C  FORTRAN RETRIEVAL CODE TO READ AND PRINT THE HCN STATION
C  INVENTORY FILE (FILE 14 ON THE FIRST MAGNETIC TAPE)
C
      DIMENSION DATA(40)
1      CONTINUE
          READ(5,100,END=99) (DATA(I),I=1,40)
100     FORMAT(40A4)
          WRITE(6,200,END=99) (DATA(I),I=1,40)
C
C  IF YOU HAVE ACCESS TO A LINE PRINTER WITH THE CAPACITY
C  TO PRINT 160 CHARACTERS PER LINE YOU MAY WISH TO CHANGE
C  THE FOLLOWING FORMAT TO 40A4
C
200     FORMAT(1X,32A4,/,1X,8A4)
          GO TO 1
99      CONTINUE
          STOP
          END
//GO.FT05F001 DD UNIT=TAPE62,VOL=SER=TAPENUM1,DISP=(,PASS),
// DSN=TAB.NDP019.STATIONS.INVT,LABEL=(14,SL)
//GO.FT06F001 DD *
```


The following is a listing of the FORTRAN IV data retrieval program provided on magnetic tape (File 4 on the first magnetic tape) by CDIAC for reading and printing the HCN station history file (File 15 on the first magnetic tape).

```
//UIDHIS JOB (12345,TAPE,IO10),'USER ADDRESS',TIME=(1,30),
// EXEC FORTQCLG
//FORT.SYSIN DD *
C
C FORTRAN RETRIEVAL CODE TO READ AND PRINT THE HCN STATION
C HISTORY FILE (FILE 15 ON THE FIRST MAGNETIC TAPE)
C
  DIMENSION DATA(54)
1  CONTINUE
    READ(5,100,END=99) (DATA(I),I=1,54)
100  FORMAT(54A4)
    WRITE(6,101) (DATA(I),I=1,54)
101  FORMAT(1X,32A4,/,1X,22A4)
    GO TO 1
99  CONTINUE
    STOP
    END
//GO.FT05F001 DD UNIT=TAPE62,VOL=SER=TAPEVOL1,DISP=(,PASS),
// DSN=TAB.NDP019.STAHIS87.REVN,LABEL=(15,SL)
//GO.FT06F001 DD *
```

The following is a listing of the FORTRAN IV data retrieval program provided on magnetic tape (File 6 on the first magnetic tape) by CDIAC for reading and printing the temperature and precipitation data files that contain original data, adjusted data (for station moves, time-of-observation differences, instrument changes, etc. but not for urbanization effects), and confidence estimates for the adjusted values (File 16 on the first magnetic tape and Files 1-3 on the second magnetic tape).

```
//UIDDAT JOB (12345,TAPE,IO10),'USER ADDRESS',TIME=(1,30),
// EXEC FORTQCLG
//FORT.SYSIN DD *
C
C FORTRAN RETRIEVAL CODE TO READ AND PRINT THE HCN TEMPERATURE
C AND PRECIPITATION DATA FILES THAT HAVE BEEN ADJUSTED FOR
C STATION MOVES, INSTRUMENT CHANGES, AND OBSERVATION DIFFERENCES
C (FILE 16 ON THE FIRST MAGNETIC TAPE AND FILES 1-3 ON THE SECOND
C MAGNETIC TAPE)
C
      DIMENSION IDATA(12),IFLAG(12),IFLAG2(12),IFLAG3(12),IFLAG4(12)
1    CONTINUE
      READ(5,100,END=99) ISTATE,ISTN,IYEAR,IELEM,CTYPE,
1    (IDATA(I),IFLAG(I),IFLAG2(I),IFLAG3(I),IFLAG4(I),I=1,12)
100  FORMAT(1X,I2,I4,1X,I4,1X,I1,A1,12(I5,4A1))
      WRITE(6,101) ISTATE,ISTN,IYEAR,IELEM,CTYPE,
1    (IDATA(I),IFLAG(I),IFLAG2(I),IFLAG3(I),IFLAG4(I),I=1,12)
101  FORMAT(1X,I2,I4,1X,I4,1X,I1,A1,12(I5,4A1))
      GO TO 1
99   CONTINUE
      STOP
      END
//GO.FT05F001 DD UNIT=TAPE62,VOL=SER=TAPEVOL1,DISP=(,PASS),
// DSN=TAB.NDP019.PRECIP87.UPDT,LABEL=(16,SL)
//GO.FT06F001 DD *
```

The following is a listing of the FORTRAN IV data retrieval program provided on magnetic tape (File 8 on the first magnetic tape) by CDIAC for reading and printing the time-of-observation bias corrections file (File 1 on the third magnetic tape).

```
//UIDTOB JOB (12345,TAPE,IO10),'USER ADDRESS',TIME=(1,30),
// EXEC FORTQCLG
//FORT.SYSIN DD *
C
C  FORTRAN RETRIEVAL CODE TO READ AND PRINT THE HCN
C  TIME-OF-OBSERVATION BIAS CORRECTION FILE
C  (FILE 1 ON THE THIRD MAGNETIC TAPE)
C
    DIMENSION BIAS(12)
1  CONTINUE
    READ(5,100,END=99) ISTATE,ISTANM,IHOUR,DTYPE,(BIAS(I),I=1,12)
100  FORMAT(I2,I4,2X,I2,1X,A4,2X,12(F7.4,2X))
    WRITE(6,101) ISTATE,ISTANM,IHOUR,DTYPE,(BIAS(I),I=1,12)
101  FORMAT(I2,I4,2X,I2,1X,A4,2X,12(F7.4,2X))
    GO TO 1
99  CONTINUE
    STOP
    END
//GO.FT05F001 DD UNIT=TAPE62,VOL=SER=TAPEVOL3,DISP=(,PASS),
// DSN=TAB.NDP019.TIMEBIAS.CORR,LABEL=(1,SL)
//GO.FT06F001 DD *
```

The following is a listing of the FORTRAN IV data retrieval program provided on magnetic tape (File 10 on the first magnetic tape) by CDIAC for reading and printing the temperature and precipitation data quality assessment files (Files 2-4 on the third magnetic tape).

```
//UIDQAS JOB (12345,TAPE,IO10),'USER ADDRESS',TIME=(1,30)
// EXEC FORTQCLG
//FORT.SYSIN DD *
C
C  FORTRAN RETRIEVAL CODE TO READ AND PRINT THE HCN DATA
C  QUALITY ASSESSMENT FILES (FILES 2-4 ON THE THIRD MAGNETIC TAPE)
C
      DIMENSION STANAM(7),STADIV(7),LAT(5),LONG(2),BPOR(7),SCDATE(7)
1    CONTINUE
      READ(5,100,END=99) STATE,STANAM,ISTATE,STADIV,LAT,LONG,IELEV,
1    BPOR,IRANK1,IPCTAJ,IRANK2,SCDATE,IRANK3,IPCTES,IRANK4,IMOVE,
2    IRANK5,CONF,IRANK6,CONF40,IRANK7,CFULL,IRANK8
100  FORMAT(4X,A2,1X,7A4,1X,I2,1X,7A1,1X,5A1,1X,2A3,1X,I6,1X,7A1,1X,
1    I1,1X,I3,1X,I1,1X,7A1,1X,I1,1X,I3,1X,I1,1X,I2,1X,I1,1X,A4,
2    1X,I1,4X,I2,3X,I1,4X,I2,4X,I1)
C
      WRITE(6,101) STATE,STANAM,ISTATE,STADIV,LAT,LONG,IELEV,
1    BPOR,IRANK1,IPCTAJ,IRANK2,SCDATE,IRANK3,IPCTES,IRANK4,IMOVE,
2    IRANK5,CONF,IRANK6,CONF40,IRANK7,CFULL,IRANK8
101  FORMAT(1X,A2,4X,7A4,1X,I2,1X,7A1,1X,5A1,1X,2A3,1X,I6,1X,7A1,1X,
1    I1,1X,I3,1X,I1,1X,7A1,1X,I1,1X,I3,1X,I1,1X,I2,1X,I1,1X,A4,
2    1X,I1,4X,I2,3X,I1,4X,I2,4X,I1)
      GO TO 1
99   CONTINUE
      STOP
      END
//GO.FT05F001 DD UNIT=TAPE62,VOL=SER=TAPEVOL3,DISP=(,PASS),
// DSN=TAB.NDP019.QUALNMNMX.ASSM,LABEL=(3,SL)
//GO.FT06F001 DD *
```

The following is a listing of the FORTRAN IV data retrieval program provided on magnetic tape (File 12 on the first magnetic tape) by CDIAC for reading and printing the temperature files that have been adjusted for urbanization effects (Files 5-7 on the third magnetic tape).

```
//UIDHEA JOB (12345,TAPE,IO10),'USER ADDRESS',TIME=(1,30)
// EXEC FORTQCLG
//FORT.SYSIN DD *
C
C  FORTRAN RETRIEVAL CODE TO READ AND PRINT THE HCN TEMPERATURE
C  FILES THAT HAVE BEEN CORRECTED FOR URBANIZATION EFFECTS
C  (FILES 5-7 ON THE THIRD MAGNETIC TAPE)
C
      DIMENSION DATA(12),SEASON(4)
1      CONTINUE
      READ(5,100,END=99) ISTATE,ISTANM,IYEAR,(DATA(I),I=1,12),
1      (SEASON(I),I=1,4)
100     FORMAT(I2,I4,1X,I4,1X,12(F6.2,1X),4(F6.2,1X))
      WRITE(6,101) ISTATE,ISTANM,IYEAR,(DATA(I),I=1,12),
1      (SEASON(I),I=1,4)
101     FORMAT(1X,I2,I4,1X,I4,1X,12(F6.2,1X),4(F6.2,1X))
      GO TO 1
99     CONTINUE
      STOP
      END
//GO.FT05F001 DD UNIT=TAPE62,VOL=SER=TAPEVOL3,DISP=(,PASS),
// DSN=TAB.NDP019.MEAN1987.HEAT,LABEL=(7,SL)
//GO.FT06F001 DD *
```

14. LISTINGS OF THE SAS INPUT/OUTPUT RETRIEVAL PROGRAMS

The following is a listing of the SAS data retrieval program provided on magnetic tape (File 3 on the first magnetic tape) by CDIAC for reading and printing the HCN station inventory file (File 14 on the first magnetic tape).

```
//UIDINV JOB (12345,TAPE,IO10),'USER ADDRESS',TIME=(1,30),
//STEP1 EXEC SAS,SASRGN=4096K,WORK=1600
//IN DD UNIT=TAPE62,VOL=SER=TAPEVOL1,DISP=(,PASS),
// DSN=TAB.NDP019.STATIONS.INVT,LABEL=(14,SL)
//FT06F001 DD SYSOUT=A
//SYSIN DD *
DATA INVENT;
INFILE IN;
INPUT STATE $ 1-2 STATION $ 4-32 STACOD 33-34 STANUM 36-39 DIVCOD 41-42
      LATDEG 44-45 LATMIN 47-48 LONDEG 50-52 LONMIN 54-55 ELEV 59-62
      BGNPOR1 $ 66-72 ADJ1 74-75 SCDATE1 $ 77-83 EST1 85-86
      MOVE1 88-89 CONF1 $ 91-94 BGNPOR2 $ 97-104 ADJ2 106-107
      SCDATE2 $ 109-115 EST2 117-118 MOVE2 120-121 CONF2 $ 123-126
      BGNPOR3 $ 128-135 ADJ3 137-138 SCDATE3 $ 140-146 EST3 148-149
      MOVE3 151-152 CONF3 $ 154-160;
PROC PRINT;
RUN;
```

The following is a listing of the SAS data retrieval program provided on magnetic tape (File 5 on the first magnetic tape) by CDIAC for reading and printing the HCN station history file (File 15 on the first magnetic tape).

```
//UIDHIS JOB (12345,TAPE,IO25),'USER ADDRESS',TIME=(5,00),
//STEP1 EXEC SAS,SASRGN=3500K,WORK=500
//IN DD UNIT=TAPE62,VOL=SER=TAPEVOL1,DISP=(,PASS),
// DSN=TAB.NDP019.STAHIS87.REVN,LABEL=(15,SL)
//FT06F001 DD SYSOUT=A
//SYSIN DD *
DATA HISTORY (DROP=X);
  RETAIN STANUM STATE DIVISION CURRNAME COUNTY XREF;
  INFILE IN MISSEVER ls=230;
  INPUT @45 x $1. @;
  IF x ne ' ' then do;
    INPUT STANUM 1-6 STATE $ 8-9 DIVISION 11-12 CURRNAME $ 14-43 COUNTY $
    45-60 XREF $ 62-86 ;
  END;
ELSE
  INPUT STANUM2 1-6 MOBEG 8-9 DAYBEG 11-12 YRBEG 14-17 MOEND 19-20
    DAYEND 22-23 YREND 25-28 SUSPLAT 30 SUSPLONG 31 SUSPLOC 32
    SUSPELEV 33 SUSPPO 34 SUSPNAME 35 SUSPQUAL 36 SUSPINST 37
    SUSPTIME 38 SUSPHTS 39 SUSPPUBS 40 SUSPBEG 41 SUSPEND 42 SUSPOBS 43
    SUSPOTHR 44 LATNORTH $ 46-51 LONGWEST $ 53-59 DISTANCE 61-63
    DIRECT $ 65-67 ELEV 69-73 DISTPO 75-77 DIRECTPO $ 79-81 NAME $ 83-110
    QUALIF $ 112-121 ADDINST 123 COTTON 124 DBULB 125 EVAPSTA 126
    FISHPORT 127 HYGRO 128 MINTHERM 129 MAXTHERM 130 NORIVGAG 131
    RAINGAGE 132 SHELTER 133 RECRIVER 134 RECRRAIN 135 SNOW 136
    STORAGE 137 STDRAIN 138 STDSHELT 139 THERMOGR 140 DIGTHERM 141
    TIPBUCK 142 OTHEVAP 143 MAXMIN 144 TIMEOBS $ 146-149 PCTHTFT $
    151-152 PCPHT $ 154-155 BULLETW 157 COMBBUL 158 CLIMDATA 159
    RIVSTAGE 160 HYDROBUL 161 PRECDATA 162 SNOWBULL 163 NOTPUB 164
    CWB 165 MONTHREV 166 STATEPUB 167 LCD 168 BQ 169 SGPD 170 WWR 171
    MYB 172 OBSNAME $ 174-213 NUMOBS 215-216;
PROC PRINT;
RUN;
```

The following is a listing of the SAS data retrieval program provided on magnetic tape (File 7 on the first magnetic tape) by CDIAC for reading and printing the temperature and precipitation data files that contain original data, adjusted data (for station moves, time-of-observation differences, instrument changes, etc. but not for urbanization effects), and confidence estimates for adjusted values (File 16 on the first magnetic tape and Files 1-3 on the second magnetic tape).

```
//UIDDAT JOB (12345,TAPE,IO25),'USER ADDRESS',TIME=(5,00),
//STEP1 EXEC SAS,SASRGN=4096K,WORK=16000,SORT=50
//IN DD UNIT=TAPE62,VOL=SER=TAPEVOL2,DISP=(,PASS),
// DSN=TAB.NDP019.PRECIP87.UPDT,LABEL=(16,SL)
//FT06F001 DD SYSOUT=A
//SYSIN DD *
DATA PRECIP;
INFILE IN ;
INPUT STATE 2-3 STANUM 4-7 YEAR 9-12 ELEM 14 TYPE $ 15
JAN 16-20 JANFLAG1 $ 21 JANFLAG2 $ 22 JANFLAG3 $ 23 JANFLAG4 $ 24
FEB 25-29 FEBFLAG1 $ 30 FEBFLAG2 $ 31 FEBFLAG3 $ 32 FEBFLAG4 $ 33
MAR 34-38 MARFLAG1 $ 39 MARFLAG2 $ 40 MARFLAG3 $ 41 MARFLAG4 $ 42
APR 43-47 APRFLAG1 $ 48 APRFLAG2 $ 49 APRFLAG3 $ 50 APRFLAG4 $ 51
MAY 52-56 MAYFLAG1 $ 57 MAYFLAG2 $ 58 MAYFLAG3 $ 59 MAYFLAG4 $ 60
JUN 61-65 JUNFLAG1 $ 66 JUNFLAG2 $ 67 JUNFLAG3 $ 68 JUNFLAG4 $ 69
JUL 70-74 JULFLAG1 $ 75 JULFLAG2 $ 76 JULFLAG3 $ 77 JULFLAG4 $ 78
AUG 79-83 AUGFLAG1 $ 84 AUGFLAG2 $ 85 AUGFLAG3 $ 86 AUGFLAG4 $ 87
SEP 88-92 SEPFLAG1 $ 93 SEPFLAG2 $ 94 SEPFLAG3 $ 95 SEPFLAG4 $ 96
OCT 97-101 OCTFLAG1 $ 102 OCTFLAG2 $ 103 OCTFLAG3 $ 104 OCTFLAG4 $ 105
NOV 106-110 NOVFLAG1 $ 111 NOVFLAG2 $ 112 NOVFLAG3 $ 113 NOVFLAG4 $ 114
DEC 115-119 DECFLAG1 $ 120 DECFLAG2 $ 121 DECFLAG3 $ 122 DECFLAG4 $ 123;
PROC PRINT;
RUN;
```


The following is a listing of the SAS data retrieval program provided on magnetic tape (File 9 on the first magnetic tape) by CDIAC for reading and printing the time-of-observation bias corrections file (File 1 on the third magnetic tape).

```
//UIDTOB JOB (12345,TAPE,IO25),'USER ADDRESS',TIME=(3,00),
//STEP1 EXEC SAS,SASRGN=4096K,WORK=16000,SORT=50
//IN DD UNIT=TAPE62,VOL=SER=TAPEVOL3,DISP=(,PASS),
// DSN=TAB.NDP019.TIMEBIAS.CORR,LABEL=(1,SL)
//FT06F001 DD SYSOUT=A
//SYSIN DD *
DATA TOB; INFILE IN;
INPUT STATE 1-2 STANUM 3-6 HOUR TYPE $ JAN FEB MAR APR MAY JUN JUL
      AUG SEP OCT NOV DEC;
PROC PRINT;
RUN;
```

The following is a listing of the SAS data retrieval program provided on magnetic tape (File 11 on the first magnetic tape) by CDIAC for reading and printing the data quality assessment files (File 2-4 on the third magnetic tape).

```
//UIDQAS JOB (12345,TAPE,IO10),'USER ADDRESS',TIME=(2,00),
//STEP1 EXEC SAS,SASRGN=4096K,WORK=1600
//IN DD UNIT=TAPE62,VOL=SER=TAPEVOL3,DISP=(,PASS),
// DSN=TAB.NDP019.QUALMEAN.ASSM,LABEL=(4,SL)
//FT06F001 DD SYSOUT=A
//SYSIN DD *
DATA QUALITY;
INFILE IN;
INPUT STACOD $ STANAME $ 8-35 STANUM @40 STADIV $CHAR7. @48 LAT
$CHAR5. @54 LONG $CHAR6. ELEV @68 BPOR $CHAR7. RANK1 PERADJ
RANK2 @84 SCDATE $CHAR7. RANK3 PEREST RANK4 STAMOVE RANK5 CONF
$CHAR4. RANK6 CONS40 RANK7 CONSFULL RANK8;
PROC PRINT;
RUN;
```

The following is a listing of the SAS data retrieval program provided on magnetic tape (File 13 on the first magnetic tape) by CDIAC for reading and printing the temperature files that have been adjusted for urbanization effects (Files 5-7 on the third magnetic tape).

```
//UIDHET JOB (24339,TAPE,IO40),'USER ADDRESS',TIME=(2,00)
//STEP1 EXEC SAS,SASRGN=4096K,WORK=1600
//IN DD UNIT=TAPE62,VOL=SER=TAPEVOL3,DISP=(,PASS),
// DSN=TAB.NDP019.MAXM1987.HEAT,LABEL=(5,SL)
//FT06F001 DD SYSOUT=A
//SYSIN DD *
DATA HEAT;
INFILE IN ;
INPUT STATE 1-2 STANUM 3-6 YEAR 8-11 JAN 13-18 FEB 20-25 MAR 27-32
      APR 34-39 MAY 41-46 JUN 48-53 JUL 55-60 AUG 62-67 SEP 69-74
      OCT 76-81 NOV 83-88 DEC 90-95 SPR 97-102 SUM 104-109 FALL 111-116
      WIN 118-123;
PROC PRINT;
RUN;
```

TABLE 2. Sample listing of the HCN station inventory file

AL BREWTON 3SSE	01 1084-07 31-04 87-03	85	12/1890 68	6/1934 7 2	.12	12/1891 68	1/1919 29 5	.19	12/1890 69	5/1909 39 5	1.13
AL CLANTON	01 1694-03 32-51 86-38	580	2/1893 98	2/1893 4 4	.18	2/1893 98	2/1893 4 4	.19	1/1893 99	1/1893 1 5	1.03
AL FAIRHOPE 2NE	01 2813-08 30-33 87-53	23	3/1918 98	3/1918 2 1	.07	3/1918 98	3/1918 2 1	.09	3/1918 99	3/1918 0 1	1.01
AL GREENSBORO	01 3511-06 32-42 87-35	220	6/1856 82	1/1888 16 7	.37	3/1892 99	3/1892 17 7	.50	1/1855 87	12/1887 9 7	1.11
AL HIGHLAND HOME	01 3816-07 31-57 86-19	594	5/1892 97	5/1892 6 6	.38	5/1892 98	5/1892 4 6	.50	1/1892100	1/1892 9 7	1.08
AL MUSCLE SHOALS FAA AP	01 5749-01 34-45 85-37	536	12/1940 98	12/1940 2 1	.10	12/1940 98	12/1940 2 1	.09	12/1940 98	12/1940 10 2	1.02
AL ST BERNARD	01 7157-02 34-10 86-49	800	9/1907 97	9/1907 2 3	.40	9/1907 97	9/1907 2 3	.59	8/1907 98	8/1907 1 3	1.03
AL SCOTTSBORO	01 7304-02 34-41 86-03	615	4/1882 88	9/1896 26 15	.29	10/1891 92	1/1893 29 14	.39	1/1882 96	12/1893 22 10	1.08
AL SELMA	01 7366-06 32-25 87-00	147	1/1858 75	12/1888 15 5	.29	10/1889 92	2/1891 14 5	.39	1/1858 80	12/1888 7 4	1.05
AL TALLADEGA	01 8024-04 33-26 86-05	555	1/1888 91	1/1888 24 10	.43	10/1893 93	10/1893 18 10	.50	1/1888 96	1/1888 16 8	1.09
AL THOMASVILLE	01 8178-07 31-55 87-44	405	9/1891 93	9/1891 9 4	.28	9/1891 94	9/1891 8 4	.29	1/1891100	1/1891 3 4	1.03
AL TROY	01 8323-07 31-47 85-57	498	2/1872 72	4/1891 32 18	.30	6/1908 97	6/1908 17 9	.29	1/1872 73	4/1891 36 10	1.09
AL TUSCALOOSA OLIVER DAM	01 8385-03 33-13 87-35	152	1/1854 74	1/1889 9 7	.32	3/1884 92	9/1891 7 6	.39	1/1854 81	1/1890 3 5	1.04
AL UNION SPRINGS 4S	01 8438-06 32-06 85-43	460	9/1887 95	9/1887 19 14	.39	11/1887 94	5/1891 19 14	.50	1/1868 99	1/1892 15 12	1.10
AL VALLEY HEAD	01 8469-02 34-34 85-37	1042	6/1885 96	6/1885 14 12	.53	1/1893 97	1/1893 15 12	.69	12/1885 98	12/1885 9 11	1.07
AZ AJO	02 0080-07 32-22 112-52	1800	1/1915100	1/1915 6 3	.28	1/1915100	1/1915 6 3	.39	1/1913100	1/1913 0 6	UNADJ
AZ BUCKEYE	02 1026-06 33-22 112-35	870	1/1893 99	1/1893 12 11	.40	3/1893 96	3/1893 14 8	.50	1/1889 99	1/1889 1 8	UNADJ
AZ CANYON-DE-CHELLY	02 1248-02 36-09 109-32	5540	12/1908 85	12/1908 16 5	.37	12/1908 86	1/1938 1 1	.19	12/1908 87	12/1908 12 3	UNADJ
AZ CHILDS	02 1614-03 34-21 111-42	2650	9/1915 94	9/1915 6 0	.02	9/1915 96	9/1915 3 0	.00	9/1915 97	9/1915 2 0	.99
AZ DOUGLAS	02 2659-07 31-21 109-32	4040	12/1903 99	12/1903 4 6	.40	12/1903 99	12/1903 4 6	.59	12/1903 99	12/1903 0 6	UNADJ
AZ FORT VALLEY	02 3160-02 35-16 111-44	7347	1/1909100	1/1909 0 2	.24	1/1909 99	1/1909 1 2	.39	1/1909 99	1/1909 1 2	1.03
AZ GRAND CANYON NATL PARK 2	02 3596-02 36-03 112-09	6785	1/1903 99	7/1903 5 6	.42	10/1903 97	10/1903 5 5	.59	1/1903 99	1/1921 0 3	1.07
AZ HOLBROOK	02 4089-02 34-54 110-10	5080	1/1887 96	1/1904 12 6	.65	10/1891 93	12/1913 21 5	.69	1/1887 99	1/1887 1 8	UNADJ
AZ KINGMAN 2	02 4645-01 35-12 114-01	3539	6/1901 94	6/1901 25 11	.57	6/1901 94	6/1901 23 11	.79	6/1901 97	6/1901 3 11	UNADJ
AZ LEES FERRY	02 4849-02 36-52 111-36	3210	10/1921 88	10/1921 21 3	.25	10/1921 88	10/1921 20 3	.29	1/1916 88	11/1942 2 2	UNADJ
AZ MESA EXPERIMENT FARM	02 5467-06 33-25 111-52	1230	3/1896100	1/1917 0 1	.17	3/1896 97	1/1917 0 1	.19	3/1896100	3/1896 0 3	UNADJ
AZ MIAMI	02 5512-04 33-24 110-53	3560	12/1913 98	12/1913 1 3	.20	12/1913 98	12/1913 1 3	.19	12/1913 99	12/1913 1 2	1.04
AZ PARKER	02 6250-05 34-10 114-17	425	10/1893 96	1/1916 2 3	.28	10/1893 96	1/1916 2 3	.39	1/1893100	1/1893 0 7	UNADJ
AZ PRESCOTT	02 6796-03 34-34 112-28	5205	1/1865 98	6/1908 13 11	.31	6/1898 99	1/1909 13 11	.29	3/1865 99	1/1909 19 11	1.16
AZ ROOSEVELT 1WNW	02 7281-04 33-40 111-09	2205	1/1905 98	1/1905 6 4	.33	8/1905 98	8/1905 6 4	.59	1/1905100	1/1905 4 4	1.07
AZ SACATON	02 7370-06 33-04 111-45	1285	4/1908 97	4/1908 2 2	.20	4/1908 97	4/1908 3 2	.19	1/1908 99	1/1908 1 3	UNADJ

011084	AL	07	BREWTON	3SSE					ESCAMBIA								
011084	12	01	1890	06	30	1894	1101000000000000	31	04	087	03		85		BREWTON		010000
011084	10	01	1894	10	31	1897	1101000000000000	31	04	087	03		85		BREWTON		010000
011084	03	01	1900	12	31	1900	1101000000000000	31	04	087	03		85		BREWTON		000000
011084	01	21	1926	08	31	1928	0000000000000000	31	04	087	03		85	001 N	BREWTON		010000
011084	02	15	1929	03	31	1929	0000000000000000	31	04	087	03		85		BREWTON		010000
011084	04	01	1929	10	31	1933	0000000000000000	31	04	087	03		85	030 S	BREWTON	(NEAR)	010000
011084	11	01	1933	05	28	1934	0000000000000000	31	04	087	03	000 000	85	030 S	BREWTON	(NEAR)	010000
011084	05	29	1934	04	30	1941	0000000000000000	31	04	087	03		85	030 S	BREWTON	(NEAR)	010000
011084	05	01	1941	10	18	1944	0000000000000000	31	04	087	03	003 E	85	030 SSE	BREWTON	(NEAR)	010000
011084	10	19	1944	08	31	1948	0000000000000000	31	04	087	03	000 000	85	030 SSE	BREWTON	3SSE	010000
011084	09	01	1948	05	31	1949	0000000000000000	31	04	087	03	000 000	85	030 SSE	BREWTON	3SSE	010000
011084	06	01	1949	03	03	1977	0000000000000000	31	04	087	03	000 000	85	030 SSE	BREWTON	3SSE	010000
011084	03	04	1977	03	31	1978	0000000000000000	31	04	087	03	000 000	85	030 SSE	BREWTON	3SSE	010000
011084	04	01	1978	05	29	1980	0000000000000000	31	04	087	03	000 000	85	030 SSE	BREWTON	3SSE	010000
011084	05	30	1980	04	30	1983	0000000000000000	31	04	087	03	000 S	85	033 SSE	BREWTON	3SSE	010000
011084	05	01	1983	12	31	1985	0000000000000000	31	04	087	03	000 000	85	033 SSE	BREWTON	3SSE	010000
011084	01	01	1986				0000000000000000	31	04	087	03		85	033 SSE	BREWTON	3SSE	100000
011694	AL	03	CLANTON												CHILTON		
011694	02	01	1893	08	31	1894	0000000000000000	32	51	086	38		590		CLANTON		000000
011694	09	01	1894	08	31	1903	0000000000000000	32	51	086	38		590		CLANTON		000000
011694	09	01	1903	09	23	1903	0000000000000000	32	51	086	38	000 000	590		CLANTON		000000
011694	09	24	1903	08	31	1904	0000000000000000	32	51	086	38	000 000	590		CLANTON		000000
011694	09	01	1904	02	28	1905	0000000000000000	32	51	086	38	000 000	590		CLANTON		000000
011694	03	01	1905	03	31	1912	0000000000000000	32	51	086	38		590		CLANTON		010000
011694	04	01	1912	11	14	1918	0000000000000000	32	51	086	38		590	002 SE	CLANTON		010000

TABLE 4. Sample listing of the HCN monthly maximum temperature data file

11084	1891	1	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	6132	3F												
11084	1891	1A	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	6132	3												
11084	1891	1C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X											
11084	1892	1	5319	3F	6847	3F	7010	3F	8105	3F	8300	3F	9046	3F	8750	3F	8591	3F	7079	3F	-9999	F					
11084	1892	1A	5319	3	6847	3	7010	3	8105	3	8300	3	9046	3	8728	3	9250	3	8750	3	8591	3	7079	3	-9999		
11084	1892	1C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	
11084	1893	1	5519	3F	6777	3F	6730	3F	7895	3F	8400	3F	9166	3F	9408	3F	9250	3F	9090	3F	8001	3F	6949	3F	6842	3F	
11084	1893	1A	5519	3	6777	3	6730	3	7895	3	8400	3	9166	3	9408	3	9250	3	9090	3	8001	3	6949	3	6842	3	
11084	1893	1C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	
11084	1894	1	6559	3F	6297	3F	7100	3F	8145	3F	8750	3F	9346	3F	-9999	F	-9999	F	-9999	F	8241	3F	-9999	3FX	6762	3FS	
11084	1894	1A	-9999J3	-9999	3	-9999	3	-9999	3	-9999	3	-9999	3	-9999		-9999	-9999	-9999		-9999	3	-9999J		-9999J3			
11084	1894	1C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	
11084	1895	1	5839	3F	5507	3F	7170	3F	7755	3F	8300	3F	9016	3F	9258	3F	9230	3F	9180	3F	7741	3F	-9999	F	-9999	F	
11084	1895	1A	5465J3	-9999	3	-9999	3	-9999	3	-9999	3	-9999	3	-9999	3	-9999	3	-9999	3	-9999	3	-9999	3	-9999		-9999	
11084	1895	1C	64	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	
11084	1896	1	5769	3F	6477	3F	6700	3F	-9999	F	8850	3F	8926	3F	9088	3F	9340	3F	8840	3F	7871	3F	6899	3F	5712	3F	
11084	1896	1A	5345J3	-9999	3	-9999	3	-9999		-9999J3	-9999	3	-9999J3	-9999J3	-9999J3	-9999J3	-9999J3	-9999J3	-9999J3	-9999J3	-9999J3	-9999J3	-9999J3	-9999	3		
11084	1896	1C	64	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	
11084	1897	1	5659	3F	6607	3F	7750	3F	7735	3F	8200	3F	9616	3F	9348	3F	8870	3F	8980	3F	8101	3F	-9999	F	-9999	F	
11084	1897	1A	5815J3	-9999	3	-9999	3	-9999	3	8312J3	-9999	3	9064J3	8864J3	8723J3	7856J3	6834J		-9999								
11084	1897	1C	64	7X	-9999	7X	-9999	7X	-9999	7X	150	7X	-9999	7X	90	7X	76	7X	61	7X	104	7X	57	7X	-9999	7X	
11084	1898	1A	5945J	-9999J	-9999J	-9999J	8562J	-9999J	8932J	8750J	8756J	7436J	6235J	-9999J													
11084	1898	1C	64	7X	-9999	7X	-9999	7X	-9999	7X	150	7X	-9999	7X	90	7X	76	7X	61	7X	104	7X	57	7X	-9999	7X	
11084	1899	1A	5595J	-9999J	-9999J	-9999J	8923J	-9999J	9136J	9246J	8785J	7706J	6903J	-9999J													
11084	1899	1C	64	7X	-9999	7X	-9999	7X	-9999	7X	150	7X	-9999	7X	90	7X	76	7X	61	7X	104	7X	57	7X	-9999	6X	
11084	1900	1	-9999	F	-9999	F	6820A3F	8005	3F	8880	3F	8926	3F	9338	3F	9700	3F	9430	3FS	8281	3F	7079	3F	6402	3FS		
11084	1900	1A	5545J	-9999J	-9999J3	-9999J3	8486J3	-9999J3	9014J3	9295J3	9111J3	7936J3	6858J3	-9999J3													
11084	1900	1C	64	6X	-9999	6X	-9999	5X	-9999	5X	150	5X	-9999	5X	90	5X	76	5X	61	5X	104	5X	57	5X	-9999	5X	
11084	1901	1A	5875J	-9999J	-9999J	-9999J	8669J	-9999J	9194J	9008J	8602J	7546J	6304J	-9999J													
11084	1901	1C	64	5X	-9999	5X	-9999	5X	-9999	5X	150	5X	-9999	5X	90	5X	76	5X	61	5X	104	5X	57	5X	-9999	5X	
11084	1902	1A	5725J	-9999J	-9999J	-9999J	8959J	-9999J	9531J	9434J	8821J	7886J	7290J	-9999J													

TABLE 5. Sample listing of the HCN monthly minimum temperature data file

11084	1891	2	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	3943	3FS
11084	1891	2A	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	3943	J3
11084	1891	2C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X
11084	1892	2	3173	3F	4483	3F	4180	3F	5482	3F	5459	3F	6578	3F
11084	1892	2A	3173	3	4483	3	4180	3	5482	3	5459	3	6578	3
11084	1892	2C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X
11084	1893	2	3013	3F	4383	3F	4250	3F	5402	3F	5849	3F	6768	3F
11084	1893	2A	3013	3	4383	3	4250	3	5402	3	5849	3	6768	3
11084	1893	2C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X
11084	1894	2	4193	3F	3873	3F	4950	3F	5072	3F	5519	3F	5788	3F
11084	1894	2A	-9999J3	-9999	3	-9999	3	-9999	3	-9999	3	-9999	3	-9999
11084	1894	2C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X
11084	1895	2	3293	3F	2883	3F	4060	3F	4932	3F	5839	3F	6728	3F
11084	1895	2A	3416J3	-9999	3	-9999	3	-9999	3	-9999	3	-9999	3	-9999
11084	1895	2C	102	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X
11084	1896	2	3513	3F	3653	3F	4070	3F	-9999	F	6419	3F	6778	3F
11084	1896	2A	3716J3	-9999	3	-9999	3	-9999	-9999J3	-9999J3	-9999J3	-9999J3	-9999J3	-9999
11084	1896	2C	102	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X
11084	1897	2	3143	3F	4313	3F	5570	3F	5022	3F	5649	3F	6688	3F
11084	1897	2A	3356J3	-9999	3	-9999	3	-9999	3	5727J3	6892J3	7086J3	6993J3	6531J3
11084	1897	2C	102	7X	-9999	7X	-9999	7X	-9999	7X	70	7X	64	7X
11084	1898	2A	4066J	-9999J	-9999J	-9999J	6158J	6930J	7099J	6970J	6562J	5294J	4305J	-9999J
11084	1898	2C	102	7X	-9999	7X	-9999	7X	-9999	7X	70	7X	64	7X
11084	1899	2A	3686J	-9999J	-9999J	-9999J	6494J	6801J	6977J	6992J	6246J	5704J	4514J	-9999J
11084	1899	2C	102	7X	-9999	7X	-9999	7X	-9999	7X	70	7X	64	7X
11084	1900	2	-9999	F	-9999	F	4210A3F	5292	3F	6029	3F	6758	3F	7002
11084	1900	2A	3416J	-9999J	-9999J3	-9999J3	6061J3	6777J3	7038J3	6987J3	6854J3	6153J3	4562J3	-9999J3
11084	1900	2C	102	6X	-9999	6X	-9999	5X	-9999	5X	70	5X	64	5X
11084	1901	2A	3856J	-9999J	-9999J	-9999J	5871J	6822J	7163J	6970J	6522J	5144J	3835J	-9999J
11084	1901	2C	102	5X	-9999	5X	-9999	5X	-9999	5X	70	5X	64	5X
11084	1902	2A	3606J	-9999J	-9999J	-9999J	6488J	6890J	7223J	7126J	6682J	5124J	4882J	-9999J

TABLE 6. Sample listing of the HCN monthly mean temperature data file

11084	1890	3	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	5820	2	S													
11084	1890	3A	-9999	-9999	5697J	6488J	7090J	8075J	8027J	7923J	-9999	-9999	-9999	-9999J2														
11084	1890	3C	-9999	7X	-9999	7X	61	7X	69	7X	38	7X	31	7X	40	7X	42	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X
11084	1891	3	4910	2	5650	2	5770	2	6380	2	7040	2	8160	2	8100	2	S	8140	2	7600	2	6230	2	-9999	2	X	5039	2F
11084	1891	3A	4910	2	5650	2	5770	2	6380	2	7040	2	8160	2	8100J2			8140	2	7600	2	6230	2	-9999J			5039	2
11084	1891	3C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X
11084	1892	3	4251	2F	5664	2F	5599	2F	6792	2F	6883	2F	7811	2F	7855	2F		8120	2F	7565	3F	7159	2FS	5520	2F	-9999		F
11084	1892	3A	4251	2	5664	2	5599	2	6792	2	6883	2	7811	2	7855	2		8120	2	7565	3	7159J2		5520	2	-9999		
11084	1892	3C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X
11084	1893	3	4271	2F	5584	2F	5489	2F	6652	2F	7123	2F	7971	2F	8135	2F		7960	2F	7645	2F	6379	2F	5460	2F	5399	2F	
11084	1893	3A	-9999	2	-9999	2	5489	2	6652	2	7123	2	7971	2	8135	2		7960	2	-9999	2	-9999	2	-9999J2		-9999	2	
11084	1893	3C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X
11084	1894	3	5381	2F	5084	2F	6029	2F	6612	2F	7133	2F	7571	2F	-9999	F	-9999	F	-9999	F	6509	2F	5410	2F	5209	2F		
11084	1894	3A	-9999J2		-9999	2	6029	2	6612	2	7133	2	7571	2	7890J		7783J		-9999		-9999	2	5369J2		-9999	2		
11084	1894	3C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	41	7X	40	7X	-9999	7X	-9999	7X	61	7X	-9999	7X		
11084	1895	3	4571	2F	4194	2F	5619	2F	6342	2F	7073	2F	7871	2F	8115	2F		8080	2F	7825	2F	6069	2F	-9999	F	-9999	F	
11084	1895	3A	4443J2		-9999	2	5619	2	6342	2	7073	2	7871	2	8115	2		8080	2	-9999	2	-9999	2	5400J		-9999		
11084	1895	3C	48	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	61	7X	-9999	7X		
11084	1896	3	4641	2F	5064	2F	5389	2F	-9999	F	7633	2F	7851	2F	8005	2F		8130	2F	7405	2F	6389	2F	5690	2F	4439	2F	
11084	1896	3A	4532J2		-9999	2	5389	2	6994J		7633	2	7851	2	8005	2		8130	2	-9999J2		-9999J2		6031J2		-9999	2	
11084	1896	3C	48	7X	-9999	7X	-9999	7X	34	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	61	7X	-9999	7X		
11084	1897	3	4401	2F	5464	2F	6659	2FS	6382	2F	6923	2F	8151	2F	8145	2F		7770	2F	7495	2F	6519	2F	-9999	F	-9999	F	
11084	1897	3A	4592J2		-9999	2	6659J2		6382	2	6923	2	8151	2	8145	2		7770	2	7598J2		6696J2		5690J		-9999		
11084	1897	3C	48	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	60	7X	82	7X	61	7X	-9999	7X		
11084	1898	3A	5012J		-9999J		6154J		6121J		7469J		8049J		8120J		7884J		7630J		6326J		5269J		-9999J			
11084	1898	3C	48	7X	-9999	7X	45	7X	53	7X	48	7X	34	7X	42	7X	46	7X	60	7X	82	7X	61	7X	-9999	7X		
11084	1899	3A	4643J		-9999J		5851J		6595J		7752J		8004J		8182J		8153J		7512J		6667J		5669J		-9999J			
11084	1899	3C	48	7X	-9999	7X	45	7X	53	7X	48	7X	34	7X	42	7X	46	7X	60	7X	82	7X	61	7X	-9999	6X		
11084	1900	3	-9999	F	-9999	F	5519A4F		6652	4F	7453	4F	7841	4F	8175	4F		8350	4F	8025	4F	7319	4F	5790	4FS	5059	4F	
11084	1900	3A	4483J		-9999J		5519A4		6652	4	7453	4	7841	4	8175	4		8350	4	7965J4		7006J4		5709J4		-9999J4		
11084	1900	3C	48	6X	-9999	6X	-9999	5X	-9999	5X	-9999	5X	-9999	5X	-9999	5X	-9999	5X	60	5X	82	5X	61	5X	-9999	5X		

TABLE 7. Sample listing of the HCN total monthly precipitation data file

11084	1890	4	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	-9999	170	2											
11084	1890	4A	-9999	-9999	-9999	-9999	-9999	197J	899J	394J	298J	-9999	-9999	-9999	2											
11084	1890	4C	-9999	8X	-9999	8X	-9999	8X	-9999	8X	125	8X	126	8X	151	8X	122	8X	-9999	8X	-9999	7X	-9999	7X		
11084	1891	4	550	2	561	2	575	2	165	2	275	2	670	2	425	2	172	2	200	2	0	2	930	2	525	2
11084	1891	4A	-9999	2	-9999	2	-9999	2	-9999	2	-9999	2	497J2	1158J2	1024J2	37J2	-9999	2	-9999	2	-9999	2	-9999	2		
11084	1891	4C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	125	7X	126	7X	151	7X	122	7X	-9999	7X	-9999	7X	-9999	7X
11084	1892	4	1245	2	440	2	256	2	160	2	380	2	780	2	1226	2	1355	2	300	2	100	2	165	2	-9999	
11084	1892	4A	-9999	2	-9999	2	-9999	2	-9999	2	-9999	2	696J2	1279J2	832J2	101J2	-9999	2	-9999	2	-9999	2	-9999			
11084	1892	4C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	125	7X	126	7X	151	7X	122	7X	-9999	7X	-9999	7X	-9999	7X
11084	1893	4	535	2	608	2	465	2	380	2	730	2	345	2	425	2	645	2	345	2	635	2	487	2	487	2
11084	1893	4A	-9999J2	-9999	2	-9999	2	-9999	2	-9999	2	-9999	2	345J2	611J2	753J2	372J2	-9999	2	-9999J2	-9999J2	-9999J2				
11084	1893	4C	-9999	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	125	7X	126	7X	151	7X	122	7X	-9999	7X	-9999	7X	-9999	7X
11084	1894	4	240	2	1649	2	788	2	225	2	465	2	265	2	-9999	-9999	-9999	-9999	30J2	-9999	-9999	-9999J2				
11084	1894	4A	228J2	-9999	2	-9999	2	-9999	2	-9999	2	-9999	2	197J2	590J	754J	176J	-9999J2	83J	181J						
11084	1894	4C	130	7X	-9999	7X	-9999	7X	-9999	7X	-9999	7X	125	7X	126	7X	151	7X	122	6X	-9999	6X	166	6X	129	6X
11084	1895	4	-9999	150	2	400	2	400	2	400	2	400	2	300	2	-9999	-9999	200	2	-9999	300	2				
11084	1895	4A	650J	-9999	2	-9999	2	-9999	2	-9999	2	-9999	2	549J2	385J2	681J	29J	-9999	2	67J	276J2					
11084	1895	4C	130	6X	-9999	6X	-9999	6X	-9999	6X	-9999	6X	125	6X	126	6X	151	6X	122	6X	-9999	6X	166	6X	129	6X
11084	1896	4	440	2	1340	2	590	2	-9999	320	2	1100	2	935	2	185	2	140	2	500	2	340	2	225	2	
11084	1896	4A	424J2	-9999	2	-9999	2	-9999	-9999J2	344J2	1109J2	460J2	70J2	-9999J2	153J2	149J2										
11084	1896	4C	130	6X	-9999	6X	-9999	6X	-9999	6X	-9999	6X	125	6X	126	6X	151	6X	122	6X	-9999	6X	166	6X	129	6X
11084	1897	4	245	2	1230	2	475	2	435	2	50	2	-9999J2	735	2	980	2	0	2T	0	2	-9999	-9999			
11084	1897	4A	347J2	-9999	2	-9999	2	-9999	2	153J2	250J	1125J2	1150J2	213J2	172J2	171J	459J									
11084	1897	4C	130	6X	-9999	6X	-9999	6X	-9999	6X	143	6X	125	6X	126	6X	151	6X	122	6X	207	6X	166	6X	129	6X
11084	1898	4A	535J	-9999J	-9999J	-9999J	-9999J	123J	357J	923J	1481J	97J	565J	382J	379J											
11084	1898	4C	130	6X	-9999	6X	-9999	6X	-9999	6X	143	6X	125	6X	126	6X	151	6X	122	6X	207	6X	166	6X	129	6X
11084	1899	4A	697J	-9999J	-9999J	-9999J	-9999J	124J	252J	773J	897J	35J	722J	84J	334J											
11084	1899	4C	130	6X	-9999	6X	-9999	6X	-9999	6X	143	6X	125	6X	126	6X	151	6X	122	6X	207	6X	166	6X	129	6X
11084	1900	4	-9999	-9999	731	2	704	2	225	2	1296	2	783	2	391	2	611	2	648	2	192	2	607	2		
11084	1900	4A	1175J	-9999J	-9999J2	-9999J2	-9999J2	445J2	767J2	405J2	587J2	59J2	439J2	70J2	590J2											
11084	1900	4C	130	6X	-9999	5X	-9999	5X	-9999	5X	143	5X	125	5X	126	5X	151	5X	122	5X	207	5X	166	5X	129	5X

TABLE 8. Sample listing of the temperature time-of-observation bias corrections file

11084	1	TMAX	-0.0688	-0.2492	-0.2605	-0.2538	-0.1951	-0.1349	-0.0330	0.0689	0.2232	0.2594	0.1255	0.0651
11084	1	TMIN	-0.2193	-0.5573	-0.4705	-0.4211	-0.3014	-0.2107	-0.0882	-0.0005	0.1879	0.1083	-0.1433	-0.0750
11084	1	TAVG	-0.1438	-0.4014	-0.3649	-0.3351	-0.2499	-0.1731	-0.0603	0.0351	0.2084	0.1753	-0.0098	-0.0060
11084	2	TMAX	-0.1222	-0.2776	-0.2906	-0.2442	-0.2007	-0.1390	-0.0390	0.0586	0.2050	0.2332	0.0819	0.0048
11084	2	TMIN	-0.4232	-0.7778	-0.7521	-0.5963	-0.4665	-0.3285	-0.1771	-0.0871	0.0837	-0.0597	-0.3549	-0.2755
11084	2	TAVG	-0.2722	-0.5247	-0.5200	-0.4234	-0.3376	-0.2345	-0.1073	-0.0157	0.1370	0.0757	-0.1378	-0.1375
11084	3	TMAX	-0.1575	-0.3061	-0.3009	-0.2511	-0.2062	-0.1430	-0.0449	0.0484	0.1787	0.1938	0.0552	-0.0372
11084	3	TMIN	-0.6457	-1.0173	-1.0130	-0.7869	-0.6449	-0.4557	-0.2728	-0.1806	-0.0206	-0.2277	-0.5666	-0.4936
11084	3	TAVG	-0.4006	-0.6480	-0.6545	-0.5444	-0.4388	-0.3053	-0.1612	-0.0665	0.0732	-0.0238	-0.2658	-0.2689
11084	4	TMAX	-0.1749	-0.3164	-0.3111	-0.2580	-0.2117	-0.1471	-0.0509	0.0382	0.1605	0.1676	0.0117	-0.0607
11084	4	TMIN	-0.8682	-1.2379	-1.2739	-0.9929	-0.8499	-0.6019	-0.3824	-0.2879	-0.1321	-0.3956	-0.7446	-0.7118
11084	4	TAVG	-0.5290	-0.7713	-0.7890	-0.6490	-0.5401	-0.3762	-0.2151	-0.1173	0.0019	-0.1234	-0.3770	-0.4003
11084	5	TMAX	-0.2103	-0.3268	-0.3214	-0.2648	-0.2173	-0.1511	-0.0568	0.0349	0.1504	0.1546	-0.0150	-0.1027
11084	5	TMIN	-1.0535	-1.4394	-1.5348	-1.1681	-1.0283	-0.7291	-0.4782	-0.3745	-0.2509	-0.5517	-0.9225	-0.8945
11084	5	TAVG	-0.6389	-0.8759	-0.9235	-0.7373	-0.6278	-0.4375	-0.2621	-0.1613	-0.0619	-0.2106	-0.4712	-0.5137
11084	6	TMAX	-0.2276	-0.3372	-0.3317	-0.2552	-0.2094	-0.1456	-0.0557	0.0246	0.1322	0.1284	-0.0418	-0.1263
11084	6	TMIN	-1.2388	-1.5458	-1.7125	-0.7581	-0.7277	-0.5151	-0.3248	-0.2182	-0.3406	-0.6600	-0.9997	-1.0771
11084	6	TAVG	-0.7304	-0.9430	-1.0169	-0.5319	-0.4834	-0.3366	-0.1922	-0.0900	-0.1179	-0.2855	-0.5148	-0.6091
11084	7	TMAX	-0.2450	-0.3295	-0.3221	-0.2456	-0.2149	-0.1497	-0.0616	0.0213	0.1140	0.1154	-0.0348	-0.1498
11084	7	TMIN	-1.3125	-0.8915	-1.0162	-0.0247	-0.0677	-0.0453	0.0154	0.1115	-0.1478	-0.2916	-0.4210	-1.1533
11084	7	TAVG	-0.7667	-0.6172	-0.6779	-0.1306	-0.1479	-0.1023	-0.0261	0.0696	-0.0283	-0.1006	-0.2377	-0.6503
11084	8	TMAX	-0.2263	-0.2857	-0.3125	-0.2360	-0.2070	-0.1442	-0.0605	0.0180	0.1039	0.1156	0.0060	-0.1367
11084	8	TMIN	-0.6611	0.1052	0.0753	0.2930	0.2462	0.1781	0.1757	0.2539	0.2262	0.3510	0.4603	-0.5375
11084	8	TAVG	-0.4527	-0.0856	-0.1330	0.0422	0.0238	0.0177	0.0576	0.1342	0.1686	0.2327	0.2252	-0.3491
11084	9	TMAX	-0.1717	-0.1696	-0.2433	-0.1770	-0.1588	-0.1103	-0.0381	0.0356	0.1102	0.1554	0.1478	-0.0869
11084	9	TMIN	0.3251	0.5883	0.5842	0.3796	0.3340	0.2404	0.2183	0.2853	0.3828	0.6241	0.9212	0.3978
11084	9	TAVG	0.0641	0.2027	0.1648	0.1170	0.0862	0.0613	0.0862	0.1580	0.2506	0.4052	0.5361	0.1505
11084	10	TMAX	-0.0090	0.1092	-0.0549	-0.0192	-0.0568	-0.0384	0.0125	0.0878	0.1490	0.3008	0.4750	0.0731
11084	10	TMIN	0.8463	0.7862	0.7603	0.4046	0.3552	0.2553	0.2264	0.2890	0.4234	0.7184	1.0963	0.8894
11084	10	TAVG	0.4150	0.4537	0.3597	0.2082	0.1624	0.1144	0.1217	0.1886	0.2942	0.5159	0.7963	0.4878
11084	11	TMAX	0.3517	0.5866	0.2923	0.2210	0.1124	0.0810	0.0985	0.1885	0.2530	0.5649	0.9539	0.4351

TABLE 9. Sample listing of the data quality assessment file for the monthly maximum and minimum temperature files

AL	BREWTON 3SSE	1	1084-07	31-04	87-03	85	12/1891	2	68	9	01/1919	8	29	9	5	5	0.19	3	0	1	0	8
AL	CLANTON	1	1694-03	32-51	86-38	580	02/1893	3	98	4	02/1893	1	4	2	4	4	0.19	3	0	1	0	8
AL	FAIRHOPE 2NE	1	2813-08	30-33	87-53	23	03/1918	9	98	4	03/1918	8	2	1	1	1	0.09	1	0	1	0	9
AL	GREENSBORO	1	3511-06	32-42	87-35	220	03/1892	2	99	2	03/1892	0	17	8	7	7	0.50	8	0	0	0	3
AL	HIGHLAND HOME	1	3816-07	31-57	86-19	594	05/1892	2	98	4	05/1892	0	4	2	6	6	0.50	8	0	0	0	4
AL	MUSCLE SHOALS FAA AP	1	5749-01	34-45	85-37	536	12/1940	9	98	4	12/1940	9	2	1	1	1	0.09	1	0	0	0	2
AL	ST BERNARD	1	7157-02	34-10	86-49	800	09/1907	8	97	5	09/1907	6	2	1	3	2	0.59	9	0	1	0	6
AL	SCOTTSBORO	1	7304-02	34-41	86-03	615	10/1891	1	92	8	01/1893	1	29	9	14	9	0.39	7	0	0	0	0
AL	SELMA	1	7366-06	32-25	87-00	147	10/1889	1	92	8	02/1891	0	14	7	5	5	0.39	7	0	0	0	0
AL	TALLADEGA	1	8024-04	33-26	86-05	555	10/1893	4	93	7	10/1893	2	18	8	10	8	0.50	8	0	1	0	7
AL	THOMASVILLE	1	8178-07	31-55	87-44	405	09/1891	1	94	7	09/1891	0	8	4	4	4	0.29	5	0	1	0	5
AL	TROY	1	8323-07	31-47	85-57	498	06/1908	8	97	5	06/1908	7	17	8	9	8	0.29	5	0	1	0	8
AL	TUSCALOOSA OLIVER DAM	1	8385-03	33-13	87-35	152	03/1884	0	92	8	09/1891	0	7	4	6	6	0.39	7	0	0	0	4
AL	UNION SPRINGS 4S	1	8438-06	32-06	85-43	460	11/1887	0	94	7	05/1891	0	19	8	14	9	0.50	8	0	0	0	0
AL	VALLEY HEAD	1	8469-02	34-34	85-37	1042	01/1893	3	97	5	01/1893	1	15	7	12	9	0.69	9	0	0	0	4
AZ	AJO	2	0080-07	32-22	112-52	1800	01/1915	9	100	0	01/1915	8	6	3	3	2	0.39	7	0	1	0	7
AZ	BUCKEYE	2	1026-06	33-22	112-35	870	03/1893	3	96	6	03/1893	2	14	7	8	7	0.50	8	0	1	0	7
AZ	CANYON-DE-CHELLY	2	1248-02	36-09	109-32	5540	12/1908	8	86	9	01/1938	9	1	0	1	1	0.19	3	0	0	0	4
AZ	CHILDS	2	1614-03	34-21	111-42	2650	09/1915	9	96	6	09/1915	8	3	2	0	0	0.0	0	0	1	0	7
AZ	DOUGLAS	2	2659-07	31-21	109-32	4040	12/1903	7	99	2	12/1903	6	4	2	6	6	0.59	9	0	0	0	4
AZ	FORT VALLEY	2	3160-02	35-16	111-44	7347	01/1909	8	99	2	01/1909	7	1	0	2	1	0.39	7	0	0	0	3
AZ	GRAND CANYON NATL PARK 2	2	3596-02	36-03	112-09	6785	10/1903	7	97	5	10/1903	5	5	3	5	5	0.59	9	0	0	0	4
AZ	HOLBROOK	2	4089-02	34-54	110-10	5080	10/1891	1	93	7	12/1913	8	21	8	5	5	0.69	9	0	1	0	9
AZ	KINGMAN 2	2	4645-01	35-12	114-01	3539	06/1901	7	94	7	06/1901	5	23	9	11	9	0.79	9	0	0	0	0
AZ	LEES FERRY	2	4849-02	36-52	111-36	3210	10/1921	9	88	9	10/1921	8	20	8	3	2	0.29	5	0	1	0	7
AZ	MESA EXPERIMENT FARM	2	5467-06	33-25	111-52	1230	03/1896	5	97	5	01/1917	8	0	0	1	1	0.19	3	0	1	0	8
AZ	MIAMI	2	5512-04	33-24	110-53	3560	12/1913	9	98	4	12/1913	8	1	0	3	2	0.19	3	0	1	0	5
AZ	PARKER	2	6250-05	34-10	114-17	425	10/1893	4	96	6	01/1916	8	2	1	3	2	0.39	7	0	1	0	7
AZ	PRESCOTT	2	6796-03	34-34	112-28	5205	06/1898	6	99	2	01/1909	7	13	6	11	9	0.29	5	0	0	0	0
AZ	ROOSEVELT 1WNW	2	7281-04	33-40	111-09	2205	08/1905	7	98	4	08/1905	6	6	3	4	4	0.59	9	0	1	0	7

TABLE 10. Sample listing of the data quality assessment file for the monthly mean temperature data file

AL	BREWTON 3SSE	1	1084-07	31-04	87-03	85	12/1890	4	68	9	06/1934	9	7	3	2	1	0.12	1	0	0	0	3
AL	CLANTON	1	1694-03	32-51	86-38	580	02/1893	5	98	3	02/1893	3	4	2	4	3	0.18	2	0	2	0	9
AL	FAIRHOPE 2NE	1	2813-08	30-33	87-53	23	03/1918	9	98	3	03/1918	8	2	1	1	0	0.07	0	0	1	0	6
AL	GREENSBORO	1	3511-06	32-42	87-35	220	06/1856	0	82	8	01/1888	1	16	7	7	6	0.37	7	0	0	0	2
AL	HIGHLAND HOME	1	3816-07	31-57	86-19	594	05/1892	5	97	4	05/1892	2	6	3	6	5	0.38	7	0	0	0	4
AL	MUSCLE SHOALS FAA AP	1	5749-01	34-45	85-37	536	12/1940	9	98	3	12/1940	9	2	1	1	0	0.10	0	0	0	0	1
AL	ST BERNARD	1	7157-02	34-10	86-49	800	09/1907	8	97	4	09/1907	7	2	1	3	2	0.40	8	0	1	0	9
AL	SCOTTSBORO	1	7304-02	34-41	86-03	615	04/1882	2	88	7	09/1896	4	26	9	15	9	0.29	5	0	0	0	0
AL	SELMA	1	7366-06	32-25	87-00	147	01/1858	0	75	9	12/1888	1	15	7	5	4	0.29	5	0	0	0	4
AL	TALLADEGA	1	8024-04	33-26	86-05	555	01/1888	3	91	7	01/1888	1	24	9	10	8	0.43	8	0	1	0	8
AL	THOMASVILLE	1	8178-07	31-55	87-44	405	09/1891	4	93	6	09/1891	2	9	5	4	3	0.28	5	0	0	0	1
AL	TROY	1	8323-07	31-47	85-57	498	02/1872	1	72	9	04/1891	2	32	9	18	9	0.30	5	0	2	0	9
AL	TUSCALOOSA OLIVER DAM	1	8385-03	33-13	87-35	152	01/1854	0	74	9	01/1889	1	9	5	7	6	0.32	6	0	0	0	3
AL	UNION SPRINGS 4S	1	8438-06	32-06	85-43	460	09/1887	3	95	5	09/1887	0	19	8	14	9	0.39	8	0	0	0	0
AL	VALLEY HEAD	1	8469-02	34-34	85-37	1042	06/1885	2	96	5	06/1885	0	14	7	12	9	0.53	9	0	0	0	4
AZ	AJO	2	0080-07	32-22	112-52	1800	01/1915	9	100	0	01/1915	8	6	3	3	2	0.28	5	0	0	0	0
AZ	BUCKEYE	2	1026-06	33-22	112-35	870	01/1893	5	99	2	01/1893	3	12	6	11	8	0.40	8	0	1	0	5
AZ	CANYON-DE-CHELLY	2	1248-02	36-09	109-32	5540	12/1908	8	85	8	12/1908	7	16	7	5	4	0.37	7	0	0	0	1
AZ	CHILDS	2	1614-03	34-21	111-42	2650	09/1915	9	94	6	09/1915	8	6	3	0	0	0.02	0	0	1	0	8
AZ	DOUGLAS	2	2659-07	31-21	109-32	4040	12/1903	7	99	2	12/1903	6	4	2	6	5	0.40	8	0	0	0	1
AZ	FORT VALLEY	2	3160-02	35-16	111-44	7347	01/1909	8	100	0	01/1909	7	0	0	2	1	0.24	4	0	0	0	4
AZ	GRAND CANYON NATL PARK 2	2	3596-02	36-03	112-09	6785	01/1903	7	99	2	07/1903	6	5	2	6	5	0.42	8	0	1	0	9
AZ	HOLBROOK	2	4089-02	34-54	110-10	5080	01/1887	3	96	5	01/1904	6	12	6	6	5	0.65	9	0	2	0	9
AZ	KINGMAN 2	2	4645-01	35-12	114-01	3539	06/1901	7	94	6	06/1901	5	25	9	11	8	0.57	9	0	0	0	1
AZ	LEES FERRY	2	4849-02	36-52	111-36	3210	10/1921	9	88	7	10/1921	9	21	8	3	2	0.25	4	0	1	0	9
AZ	MESA EXPERIMENT FARM	2	5467-06	33-25	111-52	1230	03/1896	6	100	0	01/1917	8	0	0	1	0	0.17	2	0	1	0	7
AZ	MIAMI	2	5512-04	33-24	110-53	3560	12/1913	9	98	3	12/1913	8	1	0	3	2	0.20	3	0	1	0	6
AZ	PARKER	2	6250-05	34-10	114-17	425	10/1893	5	96	5	01/1916	8	2	1	3	2	0.28	5	0	0	0	3
AZ	PRESCOTT	2	6796-03	34-34	112-28	5205	01/1865	1	98	3	06/1908	7	13	6	11	8	0.31	6	0	0	0	4
AZ	ROOSEVELT 1WNW	2	7281-04	33-40	111-09	2205	01/1905	8	98	3	01/1905	6	6	3	4	3	0.33	6	0	1	0	9

TABLE 11. Sample listing of the data quality assessment file for the total monthly precipitation data file

AL	BREWTON 3SSE	1	1084-07	31-04	87-03	85	12/1890	4	69	9	05/1909	7	39	9	5	4	1.13	7	0	0	0	2
AL	CLANTON	1	1694-03	32-51	86-38	580	01/1893	5	99	3	01/1893	4	1	2	5	4	1.03	1	0	1	0	8
AL	FAIRHOPE 2NE	1	2813-08	30-33	87-53	23	03/1918	9	99	3	03/1918	8	0	1	1	0	1.01	0	0	0	0	0
AL	GREENSBORO	1	3511-06	32-42	87-35	220	01/1855	0	87	8	12/1887	2	9	6	7	6	1.11	7	0	0	0	4
AL	HIGHLAND HOME	1	3816-07	31-57	86-19	594	01/1892	5	100	1	01/1892	4	9	6	7	6	1.08	5	0	1	0	6
AL	MUSCLE SHOALS FAA AP	1	5749-01	34-45	85-37	536	12/1940	9	98	4	12/1940	9	10	6	2	1	1.02	1	0	0	0	4
AL	ST BERNARD	1	7157-02	34-10	86-49	800	08/1907	8	98	4	08/1907	7	1	2	3	2	1.03	1	0	0	0	2
AL	SCOTTSBORO	1	7304-02	34-41	86-03	615	01/1882	2	96	6	12/1893	4	22	9	10	8	1.08	5	0	1	0	8
AL	SELMA	1	7366-06	32-25	87-00	147	01/1858	0	80	9	12/1888	2	7	5	4	3	1.05	3	0	0	0	0
AL	TALLADEGA	1	8024-04	33-26	86-05	555	01/1888	3	96	6	01/1888	2	16	7	8	7	1.09	6	0	1	0	6
AL	THOMASVILLE	1	8178-07	31-55	87-44	405	01/1891	5	100	1	01/1891	3	3	3	4	3	1.03	1	0	1	0	6
AL	TROY	1	8323-07	31-47	85-57	498	01/1872	1	73	9	04/1891	3	36	9	10	8	1.09	6	0	0	0	0
AL	TUSCALOOSA OLIVER DAM	1	8385-03	33-13	87-35	152	01/1854	0	81	9	01/1890	3	3	3	5	4	1.04	2	0	1	0	7
AL	UNION SPRINGS 4S	1	8438-06	32-06	85-43	460	01/1868	1	99	3	01/1892	4	15	7	12	9	1.10	6	0	0	0	2
AL	VALLEY HEAD	1	8469-02	34-34	85-37	1042	12/1885	3	98	4	12/1885	1	9	6	11	9	1.07	5	0	1	0	6
AZ	AJO	2	0080-07	32-22	112-52	1800	01/1913	9	100	1	01/1913	8	0	1	6	5	0.0	9	0	1	0	9
AZ	BUCKEYE	2	1026-06	33-22	112-35	870	01/1889	4	99	3	01/1889	2	1	2	8	7	0.0	9	0	0	0	0
AZ	CANYON-DE-CHELLY	2	1248-02	36-09	109-32	5540	12/1908	8	87	8	12/1908	7	12	6	3	2	0.0	9	0	1	0	5
AZ	CHILDS	2	1614-03	34-21	111-42	2650	09/1915	9	97	5	09/1915	8	2	3	0	0	0.99	0	0	1	0	8
AZ	DOUGLAS	2	2659-07	31-21	109-32	4040	12/1903	8	99	3	12/1903	6	0	1	6	5	0.0	9	0	0	0	1
AZ	FORT VALLEY	2	3160-02	35-16	111-44	7347	01/1909	8	99	3	01/1909	7	1	2	2	1	1.03	1	0	1	0	6
AZ	GRAND CANYON NATL PARK 2	2	3596-02	36-03	112-09	6785	01/1903	7	99	3	01/1921	8	0	1	3	2	1.07	5	0	1	0	8
AZ	HOLBROOK	2	4089-02	34-54	110-10	5080	01/1887	3	99	3	01/1887	1	1	2	8	7	0.0	9	0	0	0	2
AZ	KINGMAN 2	2	4645-01	35-12	114-01	3539	06/1901	7	97	5	06/1901	6	3	3	11	9	0.0	9	0	0	0	4
AZ	LEES FERRY	2	4849-02	36-52	111-36	3210	01/1916	9	88	8	11/1942	9	2	3	2	1	0.0	9	0	0	0	1
AZ	MESA EXPERIMENT FARM	2	5467-06	33-25	111-52	1230	03/1896	6	100	1	03/1896	5	0	1	3	2	0.0	9	0	1	0	5
AZ	MIAMI	2	5512-04	33-24	110-53	3560	12/1913	9	99	3	12/1913	8	1	2	2	1	1.04	2	0	2	0	9
AZ	PARKER	2	6250-05	34-10	114-17	425	01/1893	5	100	1	01/1893	4	0	1	7	6	0.0	9	0	1	0	7
AZ	PRESCOTT	2	6796-03	34-34	112-28	5205	03/1865	1	99	3	01/1909	7	19	8	11	9	1.16	7	0	1	0	7
AZ	ROOSEVELT 1WNW	2	7281-04	33-40	111-09	2205	01/1905	8	100	1	01/1905	7	4	3	4	3	1.07	5	0	0	0	1

TABLE 12. Sample listing of the HCN monthly maximum temperature data file that has been adjusted for urbanization effects

11084	1895	54.64	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1896	53.44	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1897	58.14	-99.99	-99.99	-99.99	83.16	-99.99	90.66	88.66	87.24	78.57	68.34	-99.99	-99.99	-99.99	78.04	-99.99
11084	1898	59.43	-99.99	-99.99	-99.99	85.66	-99.99	89.35	87.53	87.57	74.37	62.37	-99.99	-99.99	-99.99	74.77	-99.99
11084	1899	55.94	-99.99	-99.99	-99.99	89.26	-99.99	91.38	92.48	87.85	77.07	69.04	-99.99	-99.99	-99.99	77.99	-99.99
11084	1900	55.44	-99.99	-99.99	-99.99	84.90	-99.99	90.16	92.98	91.11	79.38	68.59	-99.99	-99.99	-99.99	79.68	-99.99
11084	1901	58.73	-99.99	-99.99	-99.99	86.72	-99.99	91.96	90.10	86.04	75.47	63.05	-99.99	-99.99	-99.99	74.86	-99.99
11084	1902	57.24	-99.99	-99.99	-99.99	89.62	-99.99	95.34	94.37	88.21	78.87	72.91	-99.99	-99.99	-99.99	80.01	-99.99
11084	1903	55.74	-99.99	-99.99	-99.99	81.86	-99.99	-99.99	-99.99	-99.99	78.26	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1904	58.44	-99.99	-99.99	-99.99	84.69	-99.99	88.77	88.54	89.38	77.16	65.26	-99.99	-99.99	-99.99	77.27	-99.99
11084	1905	55.13	-99.99	-99.99	-99.99	86.52	-99.99	89.64	90.34	90.73	73.98	68.61	-99.99	-99.99	-99.99	77.77	-99.99
11084	1906	59.04	-99.99	-99.99	-99.99	83.84	-99.99	88.14	91.11	88.02	70.88	69.53	-99.99	-99.99	-99.99	76.14	-99.99
11084	1907	66.94	-99.99	-99.99	-99.99	82.26	-99.99	89.33	90.00	86.27	73.27	63.23	-99.99	-99.99	-99.99	74.25	-99.99
11084	1908	60.44	-99.99	-99.99	-99.99	83.28	-99.99	88.23	89.80	84.42	72.39	69.21	-99.99	-99.99	-99.99	75.33	-99.99
11084	1909	64.33	-99.99	-99.99	-99.99	81.34	-99.99	89.58	89.71	88.20	81.46	74.39	-99.99	-99.99	-99.99	81.36	-99.99
11084	1910	61.36	62.19	76.71	78.40	84.99	89.38	89.47	91.90	91.99	83.46	67.46	-99.99	80.04	90.27	80.98	-99.99
11084	1911	65.17	69.28	75.61	79.41	87.42	92.70	89.46	91.87	93.02	83.84	66.06	-99.99	80.82	91.35	80.98	-99.99
11084	1912	58.03	60.19	71.51	78.62	87.75	88.20	90.88	90.95	88.77	81.81	68.45	-99.99	79.29	90.01	79.68	-99.99
11084	1913	64.47	64.20	72.41	78.62	86.25	90.00	92.28	92.41	87.19	78.87	71.46	-99.99	79.09	91.56	79.18	-99.99
11084	1914	62.19	62.78	67.51	79.41	87.84	94.39	92.08	91.06	88.14	79.02	67.15	-99.99	78.26	92.52	78.10	-99.99
11084	1915	58.39	62.58	65.23	78.62	88.02	94.60	93.25	92.32	91.69	80.65	71.83	-99.99	77.29	93.40	81.39	-99.99
11084	1916	64.71	65.19	72.32	78.21	88.07	91.29	88.50	92.84	89.74	81.27	70.38	-99.99	79.54	90.88	80.46	-99.99
11084	1917	66.11	63.68	73.53	78.40	81.90	88.90	90.46	90.32	87.42	76.51	67.73	-99.99	77.94	89.89	77.22	-99.99
11084	1918	56.52	68.29	75.94	75.13	85.03	92.50	90.12	90.55	86.18	82.15	67.53	-99.99	78.69	91.06	78.62	-99.99
11084	1919	58.73	62.80	73.72	77.59	83.10	89.91	89.44	91.13	89.69	87.62	72.79	63.82	78.13	90.16	83.35	61.68
11084	1920	60.60	60.64	67.53	76.71	87.22	90.19	90.48	89.33	90.54	81.75	66.16	60.22	77.16	90.00	79.48	64.35
11084	1921	67.03	65.80	77.49	77.58	86.41	92.39	92.23	92.57	96.75	80.71	75.31	64.58	80.49	92.39	84.25	64.02
11084	1922	59.72	67.75	71.64	81.09	86.45	92.39	90.52	91.45	94.10	82.20	73.67	69.60	79.72	91.45	83.32	66.56
11084	1923	66.54	63.54	69.08	79.14	83.70	89.38	88.97	90.18	92.50	82.40	65.66	65.77	77.31	89.51	80.19	60.37
11084	1924	55.62	59.72	65.57	79.05	82.81	93.11	92.26	94.44	88.32	82.62	75.33	62.35	75.81	93.27	82.09	63.90

TABLE 13. Sample listing of the HCN monthly minimum temperature data file that has been adjusted for urbanization effects

11084	1895	34.02	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1896	37.00	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1897	33.42	-99.99	-99.99	-99.99	57.13	68.74	70.66	69.75	65.12	55.94	44.85	-99.99	-99.99	69.71	55.31	-99.99
11084	1898	40.51	-99.99	-99.99	-99.99	61.43	69.12	70.81	69.51	65.43	52.75	42.85	-99.99	-99.99	69.82	53.67	-99.99
11084	1899	36.72	-99.99	-99.99	-99.99	64.80	67.82	69.58	69.73	62.28	56.84	44.94	-99.99	-99.99	69.04	54.68	-99.99
11084	1900	34.02	-99.99	-99.99	-99.99	60.46	67.59	70.20	69.67	68.34	61.34	45.43	-99.99	-99.99	69.15	58.37	-99.99
11084	1901	38.41	-99.99	-99.99	-99.99	58.57	68.04	71.44	69.51	65.03	51.24	38.16	-99.99	-99.99	69.66	51.48	-99.99
11084	1902	35.91	-99.99	-99.99	-99.99	64.72	68.70	72.03	71.08	66.63	51.04	48.63	-99.99	-99.99	70.61	55.44	-99.99
11084	1903	36.01	-99.99	-99.99	-99.99	60.75	-99.99	-99.99	-99.99	-99.99	51.44	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1904	32.61	-99.99	-99.99	-99.99	56.52	66.43	67.91	67.66	66.38	54.14	41.41	-99.99	-99.99	67.33	53.98	-99.99
11084	1905	31.78	-99.99	-99.99	-99.99	64.35	67.55	69.12	69.73	67.55	55.00	46.11	-99.99	-99.99	68.79	56.23	-99.99
11084	1906	35.19	-99.99	-99.99	-99.99	58.87	68.50	69.62	70.16	69.64	51.51	45.86	-99.99	-99.99	69.42	55.67	-99.99
11084	1907	47.17	-99.99	-99.99	-99.99	59.74	64.80	70.11	69.57	67.23	52.30	41.34	-99.99	-99.99	68.14	53.62	-99.99
11084	1908	36.18	-99.99	-99.99	-99.99	59.99	66.65	69.24	70.74	65.46	48.81	45.14	-99.99	-99.99	68.88	53.13	-99.99
11084	1909	41.29	-99.99	-99.99	-99.99	58.82	67.80	70.92	70.12	66.47	50.07	46.27	32.04	-99.99	69.60	54.27	35.17
11084	1910	36.05	37.40	48.02	49.89	57.34	64.38	68.79	68.99	66.24	55.31	41.61	33.44	51.75	67.39	54.39	40.84
11084	1911	42.57	46.49	47.73	53.58	58.35	68.20	67.95	68.49	70.20	58.87	41.38	41.23	53.22	68.22	56.82	35.33
11084	1912	31.55	33.21	42.73	53.19	58.87	65.01	69.62	68.76	68.83	56.80	39.52	38.75	51.58	67.80	55.06	40.35
11084	1913	43.92	38.39	44.02	49.30	57.04	63.82	69.62	69.21	64.29	49.15	44.60	38.14	50.11	67.55	52.68	37.62
11084	1914	37.40	37.29	38.84	52.29	59.02	69.66	70.88	69.33	64.08	54.10	42.46	33.64	50.04	69.96	53.55	35.58
11084	1915	34.36	38.79	36.81	50.16	60.22	66.70	69.55	69.46	67.26	57.09	45.45	37.33	49.06	68.58	56.61	39.70
11084	1916	44.49	37.27	42.60	49.48	59.79	65.66	69.01	68.90	63.27	53.98	42.75	38.01	50.63	67.86	53.33	39.90
11084	1917	42.84	38.88	46.60	50.58	53.83	64.54	68.95	67.46	63.84	46.72	39.11	30.22	50.34	66.99	49.89	34.72
11084	1918	27.86	46.09	50.02	48.97	59.25	66.45	67.08	67.77	61.12	61.81	43.83	40.03	52.74	67.10	55.60	37.71
11084	1919	34.07	38.98	44.69	48.49	56.70	66.25	69.21	68.52	63.16	64.47	49.19	35.47	49.96	68.00	58.93	37.65
11084	1920	40.30	37.20	40.93	50.81	60.64	62.56	67.80	67.24	66.87	51.13	37.76	32.18	50.79	65.86	51.91	37.26
11084	1921	39.47	40.10	51.91	50.02	55.63	64.90	68.47	69.24	68.70	50.45	47.43	39.49	52.52	67.55	55.53	41.88
11084	1922	40.78	45.36	44.46	56.03	60.26	66.07	68.27	65.43	64.87	55.08	49.60	43.63	53.58	66.58	56.52	41.90
11084	1923	42.76	39.31	43.50	51.96	58.82	66.61	67.37	69.53	65.44	52.48	41.04	45.36	51.42	67.84	52.99	38.17
11084	1924	31.08	38.08	40.26	51.64	56.53	68.45	67.44	66.58	63.64	48.83	43.99	36.66	49.48	67.50	52.16	39.76

TABLE 14. Sample listing of the HCN monthly mean temperature data file that has been adjusted for urbanization effects

11084	1890	-99.99	-99.99	56.91	64.81	70.83	80.65	80.19	79.14	-99.99	-99.99	-99.99	-99.99	64.18	79.99	-99.99	-99.99
11084	1891	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1892	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1893	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1894	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	78.82	77.74	-99.99	-99.99	53.60	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1895	44.35	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	53.91	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1896	45.23	-99.99	-99.99	69.87	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	60.21	-99.99	-99.99	-99.99	-99.99	-99.99
11084	1897	45.84	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	75.88	66.87	56.80	-99.99	-99.99	-99.99	66.51	-99.99
11084	1898	50.04	-99.99	61.47	61.14	74.62	80.38	81.10	78.75	76.21	63.16	52.59	-99.99	65.73	80.08	63.99	-99.99
11084	1899	46.35	-99.99	58.44	65.88	77.45	79.93	81.72	81.43	75.02	66.58	56.59	-99.99	67.26	81.03	66.06	-99.99
11084	1900	44.74	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	-99.99	79.56	69.96	57.00	-99.99	-99.99	-99.99	68.83	-99.99
11084	1901	48.63	-99.99	55.99	60.33	73.09	79.57	82.56	80.13	75.51	62.96	50.81	-99.99	63.14	80.76	63.09	-99.99
11084	1902	46.63	-99.99	58.44	63.43	75.87	82.98	85.23	83.84	77.29	64.58	60.10	-99.99	65.91	84.02	67.32	-99.99
11084	1903	45.93	-99.99	60.82	62.64	70.75	76.75	81.72	82.09	-99.99	64.47	-99.99	-99.99	64.72	80.19	-99.99	-99.99
11084	1904	45.54	-99.99	61.52	62.96	70.38	78.03	79.12	78.06	77.95	65.26	53.91	-99.99	64.96	78.40	65.71	-99.99
11084	1905	43.52	-99.99	59.74	66.16	75.92	79.20	80.94	79.32	79.21	64.15	57.74	-99.99	67.28	79.83	67.03	-99.99
11084	1906	47.12	-99.99	54.16	65.14	71.76	79.61	80.46	80.44	78.82	60.84	58.39	-99.99	63.68	80.17	66.02	-99.99
11084	1907	57.11	-99.99	66.47	62.19	71.15	77.02	81.10	80.37	76.84	62.44	52.88	-99.99	66.60	79.50	64.06	-99.99
11084	1908	48.31	-99.99	64.98	69.66	72.82	78.06	80.35	79.86	75.15	60.26	57.43	-99.99	69.15	79.43	64.27	-99.99
11084	1909	52.83	-99.99	58.69	64.47	70.47	78.15	81.30	80.98	76.82	65.59	59.23	45.37	64.54	80.13	67.21	47.98
11084	1910	48.74	49.86	62.20	63.90	71.35	76.46	80.15	80.38	78.82	68.99	53.92	45.75	65.80	79.00	67.24	52.54
11084	1911	53.91	57.96	61.92	66.43	74.08	80.42	79.74	79.02	81.12	70.84	53.83	52.56	67.48	79.72	68.59	48.04
11084	1912	44.82	46.74	57.07	66.56	74.14	76.01	81.21	79.50	78.10	68.81	53.37	50.36	65.93	78.91	66.76	51.98
11084	1913	54.25	51.35	58.05	64.38	72.81	76.86	81.81	80.40	75.33	63.63	57.02	49.96	65.07	79.68	65.32	49.95
11084	1914	49.82	50.04	52.88	66.65	73.99	81.12	82.33	79.09	75.60	66.07	54.36	45.97	64.51	80.85	65.34	47.71
11084	1915	46.42	50.74	50.76	65.44	75.00	80.46	82.18	79.47	79.14	68.38	58.03	50.05	63.73	80.69	68.52	51.98
11084	1916	54.66	51.24	57.70	63.93	74.25	78.35	79.29	79.43	76.03	67.10	55.81	50.34	65.30	79.03	66.31	52.07
11084	1917	54.52	51.35	60.58	65.64	68.97	76.86	80.60	78.03	74.95	61.25	52.57	43.66	65.07	78.49	62.92	47.71
11084	1918	42.22	57.24	63.86	62.17	73.31	80.15	79.54	78.98	73.20	71.44	55.35	50.56	66.45	79.56	66.67	49.28
11084	1919	46.35	50.95	59.56	63.41	70.48	78.40	80.13	78.87	77.04	75.58	61.25	48.67	64.49	79.14	71.28	49.78

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15. VERIFICATION OF DATA TRANSPORT

The station inventory, station history, time-of-observation corrections, data quality assessment, and data files may be read by using the FORTRAN or SAS input/output routines provided. Users should verify that the files have been correctly transported to their systems; to do so, they should generate some or all of the statistics presented in Tables 15-27. These statistics were generated in SAS (PROC MEANS) but can be duplicated in other statistical packages or languages. If the statistics generated by the user differ from those presented here, the files may have been corrupted in transport.

These statistics are presented only as a tool to ensure proper reading of the data sets. They are not to be construed as either a summary of the climatic data or an indicator of trends in the climatic data.

Table 15. Characteristics of numeric variables for the HCN station inventory file

Variable	Number of observations	Mean	Minimum value	Maximum value
STACOD	1219	25.49876948	1.00000000	48.00000000
STANUM	1219	4749.53814602	8.00000000	9933.00000000
DIVCOD	1219	4.52584085	0.00000000	10.00000000
LATDEG	1219	39.06398687	24.00000000	49.00000000
LATMIN	1219	29.75471698	0.00000000	59.00000000
LONDEG	1219	95.16817063	67.00000000	124.00000000
LONMIN	1219	30.47087777	0.00000000	59.00000000
ELEV	1219	1675.77358491	-194.00000000	9065.00000000
ADJ1	1219	85.44544709	0.00000000	99.00000000
EST1	1219	11.29204266	0.00000000	73.00000000
MOVE1	1219	6.23954061	0.00000000	24.00000000
ADJ2	1219	86.64807219	0.00000000	99.00000000
EST2	1219	10.91058244	0.00000000	73.00000000
MOVE2	1219	5.84577523	0.00000000	24.00000000
ADJ3	1219	8.87284660	3.00000000	10.00000000
EST3	484	1.51859504	1.00000000	10.00000000
MOVE3	206	1.02427184	1.00000000	2.00000000

Table 16. Characteristics of numeric variables for the HCN station history file

Variable	Number of observations	Mean	Minimum value	Maximum value
STANUM	19321	258522.089850	11084.000000	489905.00000
DIVISION	19321	4.567155	0.000000	10.00000
STANUM2	18102	258449.665617	11084.000000	489905.00000
MOBEG	18102	6.557286	1.000000	99.00000
DAYBEG	18102	11.807148	0.000000	99.00000
YRBEG	18102	1937.565904	1738.000000	1988.00000
MOEND	16895	7.246523	1.000000	99.00000
DAYEND	16895	26.531045	1.000000	99.00000
YREND	16895	1940.747558	1759.000000	1988.00000
SUSPLAT	18102	0.030162	0.000000	1.00000
SUSPLONG	18102	0.030107	0.000000	1.00000
SUSPLOC	18102	0.001989	0.000000	1.00000
SUSPELEV	18102	0.047122	0.000000	1.00000
SUSPPO	18102	0.020108	0.000000	1.00000
SUSPNAME	18102	0.000110	0.000000	1.00000
SUSPQUAL	18102	0.000000	0.000000	0.00000
SUSPINST	18102	0.004696	0.000000	1.00000
SUSPTIME	18102	0.027842	0.000000	1.00000
SUSPHTS	18102	0.001326	0.000000	1.00000
SUSP	18102	12.566567	0.000000	10000.00000
PUBS	18102	0.000552	0.000000	1.00000
SUSPBEG	18102	0.006629	0.000000	1.00000
SUSPEND	18102	0.004088	0.000000	1.00000
SUSPOBS	18102	0.000442	0.000000	1.00000
SUSPOTHR	18102	0.000000	0.000000	0.00000
DISTANCE	12404	46.135601	0.000000	916.00000
ELEV	18084	1712.139073	-194.000000	9843.00000
DISTPO	13894	13.506406	0.000000	604.00000
ADDINST	18102	0.148713	0.000000	1.00000
COTTON	18102	0.882057	0.000000	1.00000
DBULB	18102	0.035300	0.000000	1.00000
EVAPSTA	18102	0.034029	0.000000	1.00000
FISHPORT	18102	0.048613	0.000000	1.00000
HYGRO	18102	0.032041	0.000000	1.00000
MINTHERM	18102	0.921500	0.000000	1.00000
MAXTHERM	18102	0.921500	0.000000	1.00000
NORIVGAG	18102	0.062535	0.000000	1.00000
RAINGAGE	18102	0.007955	0.000000	1.00000
SHELTER	18102	0.011104	0.000000	1.00000
RECRIVER	18102	0.021158	0.000000	1.00000
RECRAIN	18102	0.113302	0.000000	1.00000

Variable	Number of observations	Mean	Minimum value	Maximum value
SNOW	18102	0.008507	0.000000	1.00000
STORAGE	18102	0.002099	0.000000	1.00000
STDRAIN	18102	0.984643	0.000000	1.00000
STDSHELT	18102	0.000829	0.000000	1.00000
THERMOGR	18102	0.023920	0.000000	1.00000
DIGTHERM	18102	0.000000	0.000000	0.00000
TIPBUCK	18102	0.017567	0.000000	1.00000
OTHEVAP	18102	0.002928	0.000000	1.00000
MAXMIN	18102	0.038559	0.000000	1.00000
BULLETW	18102	0.279803	0.000000	1.00000
COMBBUL	18102	0.001326	0.000000	1.00000
CLIMDATA	18102	0.941885	0.000000	1.00000
RIVSTAGE	18102	0.030107	0.000000	1.00000
HYDROBUL	18102	0.027621	0.000000	1.00000
PRECDATA	18102	0.112916	0.000000	1.00000
SNOWBULL	18102	0.000276	0.000000	1.00000
NOTPUB	18102	0.001381	0.000000	1.00000
CWB	18102	0.005856	0.000000	1.00000
MONTHREV	18102	0.035631	0.000000	1.00000
STATEPUB	18102	0.011325	0.000000	1.00000
LCD	18102	0.001989	0.000000	1.00000
BQ	18102	0.001989	0.000000	1.00000
SGPD	18102	0.000055	0.000000	1.00000
WWR	18102	0.000110	0.000000	1.00000
MYB	18102	0.008728	0.000000	1.00000
NUMOBS	766	2.843342	1.000000	28.00000

Table 17. Characteristics of numeric variables for the HCN monthly maximum temperature data file

Variable	Number of observations	Mean	Minimum value	Maximum value
STATE	328269	25.34328249	1.000000	48.000000
STANUM	328269	4755.36901139	8.000000	9933.000000
YEAR	328269	1942.23821317	1871.000000	1987.000000
ELEM	328269	1.00000000	1.000000	1.000000
JAN	328269	2339.61619586	-9999.000000	8418.000000
FEB	328269	2605.19404208	-9999.000000	8742.000000
MAR	328269	3201.90682946	-9999.000000	9408.000000
APR	328269	3925.58021013	-9999.000000	9773.000000
MAY	328269	4563.49632771	-9999.000000	10470.000000
JUN	328269	5071.09334113	-9999.000000	11324.000000
JUL	328269	5352.79719072	-9999.000000	11891.000000
AUG	328269	5268.31154328	-9999.000000	11620.000000
SEP	328269	4847.25625630	-9999.000000	10958.000000
OCT	328269	4147.98795195	-9999.000000	10213.000000
NOV	328269	3232.17841161	-9999.000000	8886.000000
DEC	328269	2547.53385181	-9999.000000	8511.000000

Table 18. Characteristics of numeric variables for the HCN monthly minimum temperature data file

Variable	Number of observations	Mean	Minimum value	Maximum value
STATE	328270	25.34317787	1.000000	48.0000000
STANUM	328270	4755.33845006	8.000000	9933.0000000
YEAR	328270	1942.23823377	1871.000000	1987.0000000
ELEM	328270	2.000000000	2.000000	2.0000000
JAN	328270	1023.92704481	-9999.000000	7290.0000000
FEB	328270	1214.74680903	-9999.000000	7280.0000000
MAR	328270	1727.32778505	-9999.000000	7330.0000000
APR	328270	2321.40804825	-9999.000000	7650.0000000
MAY	328270	2907.22103451	-9999.000000	7840.0000000
JUN	328270	3428.93223566	-9999.000000	8845.0000000
JUL	328270	3716.71193530	-9999.000000	9616.0000000
AUG	328270	3611.89034636	-9999.000000	9411.0000000
SEP	328270	3167.56161087	-9999.000000	8031.0000000
OCT	328270	2485.97394523	-9999.000000	7810.0000000
NOV	328270	1806.36965608	-9999.000000	7656.0000000
DEC	328270	1280.07378378	-9999.000000	7260.0000000

Table 19. Characteristics of numeric variables for the HCN monthly mean temperature data file

Variable	Number of observations	Mean	Minimum value	Maximum value
STATE	355348	25.26856209	1.000000	48.000000
STANUM	355348	4762.22797370	8.000000	9933.000000
YEAR	355348	1937.26726758	1795.000000	1987.000000
ELEM	355348	3.00000000	3.000000	3.000000
JAN	355348	1377.82304952	-9999.000000	7780.000000
FEB	355348	1609.77259475	-9999.000000	7800.000000
MAR	355348	2149.60725542	-9999.000000	7954.000000
APR	355348	2807.48245945	-9999.000000	8288.000000
MAY	355348	3430.24953285	-9999.000000	9071.000000
JUN	355348	3960.41873881	-9999.000000	10025.000000
JUL	355348	4257.84590599	-9999.000000	10673.000000
AUG	355348	4156.87201560	-9999.000000	10602.000000
SEP	355348	3698.90874861	-9999.000000	9448.000000
OCT	355348	3003.46720398	-9999.000000	8343.000000
NOV	355348	2205.03528372	-9999.000000	8060.000000
DEC	355348	1610.65980110	-9999.000000	7880.000000

Table 20. Characteristics of numeric variables for the HCN total monthly precipitation file

Variable	Number of observations	Mean	Minimum value	Maximum value
STATE	356996	25.20728243	1.000000	48.0000000
STANUM	356996	4755.88382783	8.000000	9933.0000000
YEAR	356996	1936.92410839	1785.000000	1987.0000000
ELEM	356996	4.00000000	4.000000	4.0000000
JAN	356996	-897.56486347	-9999.000000	5103.0000000
FEB	356996	-903.12907988	-9999.000000	4288.0000000
MAR	356996	-881.99386268	-9999.000000	4635.0000000
APR	356996	-868.17771067	-9999.000000	2632.0000000
MAY	356996	-817.27877623	-9999.000000	3281.0000000
JUN	356996	-814.79240384	-9999.000000	3747.0000000
JUL	356996	-824.34111307	-9999.000000	3978.0000000
AUG	356996	-833.69339152	-9999.000000	3799.0000000
SEP	356996	-839.16708030	-9999.000000	3278.0000000
OCT	356996	-861.97309494	-9999.000000	3210.0000000
NOV	356996	-879.89820334	-9999.000000	3964.0000000
DEC	356996	-867.35884156	-9999.000000	5014.0000000

Table 21. Characteristics of numeric variables for the HCN maximum/minimum temperature data quality assessment file

Variable	Number of observations	Mean	Minimum value	Maximum value
STANUM	1219	25.49876948	1.00000000	48.0000000
ELEV	1219	1675.77358491	-194.00000000	9065.0000000
RANK1	1219	4.56439705	0.00000000	9.0000000
PERADJ	1219	94.85151764	47.00000000	100.0000000
RANK2	1219	4.94093519	0.00000000	9.0000000
RANK3	1219	4.50451189	0.00000000	9.0000000
PEREST	1219	10.99261690	0.00000000	100.0000000
RANK4	1219	4.73748975	0.00000000	9.0000000
STAMOVE	1219	5.84577523	0.00000000	24.0000000
RANK5	1219	4.92288761	0.00000000	9.0000000
RANK6	1219	5.13781788	0.00000000	9.0000000
CONS40	1219	10.15832650	0.00000000	20.0000000
RANK7	1219	4.84003281	0.00000000	9.0000000
CONSFULL	1219	9.97374897	0.00000000	20.0000000
RANK8	1219	4.80885972	0.00000000	9.0000000

Table 22. Characteristics of numeric variables for the mean temperature data quality assessment file

Variable	Number of observations	Mean	Minimum value	Maximum value
STANUM	1219	25.49876948	1.00000000	48.0000000
ELEV	1219	1675.77358491	-194.00000000	9065.0000000
RANK1	1219	4.51025431	0.00000000	9.0000000
PERADJ	1219	92.41837572	37.00000000	100.0000000
RANK2	1219	4.89581624	0.00000000	9.0000000
RANK3	1219	4.51517637	0.00000000	9.0000000
PEREST	1219	11.37407711	0.00000000	100.0000000
RANK4	1219	4.65135357	0.00000000	9.0000000
STAMOVE	1219	6.23954061	0.00000000	24.0000000
RANK5	1219	4.66447908	0.00000000	9.0000000
RANK6	1219	4.59885152	0.00000000	9.0000000
CONS40	1219	9.93109106	0.00000000	20.0000000
RANK7	1219	4.88105004	0.00000000	9.0000000
CONSFULL	1219	9.95242002	0.00000000	20.0000000
RANK8	1219	4.90237900	0.00000000	9.0000000

Table 23. Characteristics of numeric variables for the total monthly precipitation data quality assessment file

Variable	Number of observations	Mean	Minimum value	Maximum value
STANUM	1219	25.49876948	1.00000000	48.00000000
ELEV	1219	1675.77358491	-194.00000000	9065.00000000
RANK1	1219	4.50943396	0.00000000	9.00000000
PERADJ	1219	93.97621001	37.00000000	100.00000000
RANK2	1219	4.83264971	1.00000000	9.00000000
RANK3	1219	4.51845775	0.00000000	9.00000000
PEREST	1219	9.48400328	0.00000000	100.00000000
RANK4	1219	4.72764561	1.00000000	9.00000000
STAMOVE	1219	6.06070550	0.00000000	24.00000000
RANK5	1219	4.68416735	0.00000000	9.00000000
RANK6	1219	4.89417555	0.00000000	9.00000000
CONS40	1219	10.03445447	0.00000000	20.00000000
RANK7	1219	4.93437244	0.00000000	9.00000000
CONSFULL	1219	9.77358491	0.00000000	20.00000000
RANK8	1219	4.80885972	0.00000000	9.00000000

Table 24. Characteristics of numeric variables for the temperature time-of-observation bias corrections file

Variable	Number of observations	Mean	Minimum value	Maximum value
STATE	87768	25.49876948	1.00000000	48.0000000
STANUM	87768	4749.53814602	8.00000000	9933.0000000
HOURL	87768	12.50000000	1.00000000	24.0000000
JAN	87768	0.36040563	-1.82020000	3.1967000
FEB	87768	0.28105519	-2.23720000	3.2817000
MAR	87768	0.23814489	-2.43870000	3.1294000
APR	87768	0.27094398	-2.57110000	3.4835000
MAY	87768	0.24728827	-2.69100000	3.3725000
JUN	87768	0.20281018	-2.03210000	2.5792000
JUL	87768	0.21030275	-1.73390000	2.4305000
AUG	87768	0.32967191	-1.70420000	2.8349000
SEP	87768	0.46183277	-1.77290000	3.7714000
OCT	87768	0.51457419	-1.50280000	3.5012000
NOV	87768	0.52941793	-1.54660000	3.3587000
DEC	87768	0.42807887	-1.62470000	3.1386000

Table 25. Characteristics of numeric variables for the monthly maximum temperature data file that has been adjusted for urbanization effects

Variable	Number of observations	Mean	Minimum value	Maximum value
STATE	108736	25.32542120	1.0000000	48.0000000
STANUM	108736	4758.09560771	8.0000000	9933.0000000
YEAR	108736	1942.44233740	1873.0000000	1987.0000000
JAN	108736	35.42596224	-99.9900000	84.1500000
FEB	108736	39.20190176	-99.9900000	85.6600000
MAR	108736	48.75467619	-99.9900000	94.0800000
APR	108736	59.41672464	-99.9900000	96.8000000
MAY	108736	68.87547519	-99.9900000	104.7000000
JUN	108736	76.82304067	-99.9900000	113.2300000
JUL	108736	81.74838306	-99.9900000	118.9000000
AUG	108736	80.25664637	-99.9900000	116.2000000
SEP	108736	72.92680180	-99.9900000	109.5800000
OCT	108736	62.52476687	-99.9900000	102.1500000
NOV	108736	48.97778951	-99.9900000	88.8800000
DEC	108736	38.24892207	-99.9900000	85.1000000
SPR	108736	58.52842527	-99.9900000	97.2900000
SUM	108736	79.10675949	-99.9900000	114.6200000
FALL	108736	60.89980080	-99.9900000	95.2300000
WIN	108736	35.56738513	-99.9900000	83.2600000

Table 26. Characteristics of numeric variables for the monthly minimum temperature data file that has been adjusted for urbanization effects

Variable	Number of observations	Mean	Minimum value	Maximum value
STATE	108722	25.32530675	1.0000000	48.0000000
STANUM	108722	4758.24139549	8.0000000	9933.0000000
YEAR	108722	1942.44887879	1873.0000000	1987.0000000
JAN	108722	15.59780072	-99.9900000	72.3900000
FEB	108722	18.30871489	-99.9900000	72.1800000
MAR	108722	26.28197964	-99.9900000	72.4600000
APR	108722	35.05115404	-99.9900000	75.9700000
MAY	108722	43.73981080	-99.9900000	78.3500000
JUN	108722	51.26182971	-99.9900000	88.3900000
JUL	108722	55.65039330	-99.9900000	96.1000000
AUG	108722	54.11335599	-99.9900000	94.0500000
SEP	108722	47.22004130	-99.9900000	79.9300000
OCT	108722	37.12324488	-99.9900000	77.0400000
NOV	108722	27.01859182	-99.9900000	75.8300000
DEC	108722	19.13206803	-99.9900000	72.1900000
SPR	108722	34.63863551	-99.9900000	74.7000000
SUM	108722	53.23101516	-99.9900000	88.2700000
FALL	108722	36.68560650	-99.9900000	76.6800000
WIN	108722	16.00367525	-99.9900000	70.5900000

Table 27. Characteristics of numeric variables for the monthly mean temperature data file that has been adjusted for urbanization effects

Variable	Number of observations	Mean	Minimum value	Maximum value
STATE	114474	25.19860405	1.0000000	48.0000000
STANUM	114474	4762.20616035	8.0000000	9933.0000000
YEAR	114474	1939.56867062	1835.0000000	1987.0000000
JAN	114474	23.88670353	-99.9900000	77.5600000
FEB	114474	27.22779330	-99.9900000	76.7500000
MAR	114474	35.78843737	-99.9900000	79.5200000
APR	114474	45.43302121	-99.9900000	82.7400000
MAY	114474	54.57325602	-99.9900000	90.6800000
JUN	114474	62.73913133	-99.9900000	100.2200000
JUL	114474	67.34405254	-99.9900000	106.7000000
AUG	114474	65.81586142	-99.9900000	105.9800000
SEP	114474	58.37824353	-99.9900000	94.4400000
OCT	114474	48.09939628	-99.9900000	83.3000000
NOV	114474	36.35303361	-99.9900000	80.2600000
DEC	114474	27.20654157	-99.9900000	77.2700000
SPR	114474	44.44394037	-99.9900000	81.3200000
SUM	114474	64.53198595	-99.9900000	103.6200000
FALL	114474	46.77081049	-99.9900000	81.5200000
WIN	114474	24.11049793	-99.9900000	76.0600000

APPENDICES

APPENDIX A

United States Historical Climatology Network (HCN) Inventory of Original, Adjusted, and Serially Complete Data

Several statistics have been compiled regarding data availability, station changes, and confidence intervals for the HCN. This information is provided in hard copy and as a data file for each station sorted by state and station number (Coop numbers). The most recent latitude (LAT-N) and longitude (LONG-W) in degrees and minutes as well as the elevation (ELV) in feet, and the climate division number (DIV) is provided for each of the HCN stations. The beginning period of record, month and year (BGN-POR), for the data is given for the mean monthly temperature, the mean monthly maximum and minimum temperature, and the total monthly precipitation. In addition, the percent of data available (%A) from this beginning period of record through 1984 is also listed for each of the three separate data items (mean monthly maximum and minimum are treated together, and the information reported pertains to the element with the least data or poorest record).

The statistics in the listings also provide information on the adjusted and serially complete climate data through 1984. The date of the beginning period of record for the serially complete data is given (SC-DATE) for each station. Additionally, the percent of data that were estimated back to this date (%E) is also provided in the output. The number of potential station discontinuities (#M) (moves, instrument changes, changes in averaging methods, not including changes in observation times after the introduction of maximum-minimum thermometers, etc.) is also given during the period of serially complete data. Finally, a value is provided (CONF) which can be used to calculate the 16 to 84% mean confidence interval over the period of adjusted serially complete data.

Confidence factors (CONF) for temperature are in units of hundredths of degrees Fahrenheit. For precipitation, a dimensionless multiplication factor in hundredths (CONF) is provided for calculation of confidence intervals. When adjustments were not possible, the record was not serially completed and confidence factors were not calculated. In these cases, the word UNADJUSTABLE will appear in the inventory. (NOTE: A .99 confidence factor for precipitation should be interpreted as 1.00. This occurs when no adjustments were necessary.)

Temperature confidence intervals can be calculated by subtracting the temperature confidence factor from the adjusted value to obtain the lower end of the confidence interval (16%, -1 standard deviation). The upper end of the confidence interval (84%, +1 standard deviation) is obtained by adding the confidence factor to the adjusted data. For the precipitation confidence intervals, the lower end of the confidence interval (16%) is obtained by dividing the adjusted value by its confidence factor, and the upper end of the confidence interval (84%) is obtained by multiplying the adjusted value by its confidence factor.

The following is the inventory:

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
AL BREWTON 3SSE	01	1084-07	31-04	87-03	85	12/1890	68	6/1934	7	2	.12	12/1891	68	1/1919	29	5	.19	12/1890	69	5/1909	39	5	1.13
AL CLANTON	01	1694-03	32-51	86-38	580	2/1893	98	2/1893	4	4	.18	2/1893	98	2/1893	4	4	.19	1/1893	99	1/1893	1	5	1.03
AL FAIRHOPE 2NE	01	2813-08	30-33	87-53	23	3/1918	98	3/1918	2	1	.07	3/1918	98	3/1918	2	1	.09	3/1918	99	3/1918	0	1	1.01
AL GREENSBORO	01	3511-06	32-42	87-35	220	6/1856	82	1/1888	16	7	.37	3/1892	99	3/1892	17	7	.50	1/1855	87	12/1887	9	7	1.11
AL HIGHLAND HOME	01	3816-07	31-57	86-19	594	5/1892	97	5/1892	6	6	.38	5/1892	98	5/1892	4	6	.50	1/1892100	1/1892	9	7	1.08	
AL MUSCLE SHOALS FAA AP	01	5749-01	34-45	85-37	536	12/1940	98	12/1940	2	1	.10	12/1940	98	12/1940	2	1	.09	12/1940	98	12/1940	10	2	1.02
AL ST BERNARD	01	7157-02	34-10	86-49	800	9/1907	97	9/1907	2	3	.40	9/1907	97	9/1907	2	3	.59	8/1907	98	8/1907	1	3	1.03
AL SCOTTSBORO	01	7304-02	34-41	86-03	615	4/1882	88	9/1896	26	15	.29	10/1891	92	1/1893	29	14	.39	1/1882	96	12/1893	22	10	1.08
AL SELMA	01	7366-06	32-25	87-00	147	1/1858	75	12/1888	15	5	.29	10/1889	92	2/1891	14	5	.39	1/1858	80	12/1888	7	4	1.05
AL TALLADEGA	01	8024-04	33-26	86-05	555	1/1888	91	1/1888	24	10	.43	10/1893	93	10/1893	18	10	.50	1/1888	96	1/1888	16	8	1.09
AL THOMASVILLE	01	8178-07	31-55	87-44	405	9/1891	93	9/1891	9	4	.28	9/1891	94	9/1891	8	4	.29	1/1891100	1/1891	3	4	1.03	
AL TROY	01	8323-07	31-47	85-57	498	2/1872	72	4/1891	32	18	.30	6/1908	97	6/1908	17	9	.29	1/1872	73	4/1891	36	10	1.09
AL TUSCALOOSA OLIVER DAM	01	8385-03	33-13	87-35	152	1/1854	74	1/1889	9	7	.32	3/1884	92	9/1891	7	6	.39	1/1854	81	1/1890	3	5	1.04
AL UNION SPRINGS 4S	01	8438-06	32-06	85-43	460	9/1887	95	9/1887	19	14	.39	11/1887	94	5/1891	19	14	.50	1/1868	99	1/1892	15	12	1.10
AL VALLEY HEAD	01	8469-02	34-34	85-37	1042	6/1885	96	6/1885	14	12	.53	1/1893	97	1/1893	15	12	.69	12/1885	98	12/1885	9	11	1.07
AZ AJO	02	0080-07	32-22	112-52	1800	1/1915100	1/1915	6	3	.28	1/1915100	1/1915	6	3	.39	1/1913100	1/1913	0	6	UNADJ			
AZ BUCKEYE	02	1026-06	33-22	112-35	870	1/1893	99	1/1893	12	11	.40	3/1893	96	3/1893	14	8	.50	1/1889	99	1/1889	1	8	UNADJ
AZ CANYON-DE-CHELLY	02	1248-02	36-09	109-32	5540	12/1908	85	12/1908	16	5	.37	12/1908	86	1/1938	1	1	.19	12/1908	87	12/1908	12	3	UNADJ
AZ CHILDS	02	1614-03	34-21	111-42	2650	9/1915	94	9/1915	6	0	.02	9/1915	96	9/1915	3	0	.00	9/1915	97	9/1915	2	0	.99
AZ DOUGLAS	02	2659-07	31-21	109-32	4040	12/1903	99	12/1903	4	6	.40	12/1903	99	12/1903	4	6	.59	12/1903	99	12/1903	0	6	UNADJ
AZ FORT VALLEY	02	3160-02	35-16	111-44	7347	1/1909100	1/1909	0	2	.24	1/1909	99	1/1909	1	2	.39	1/1909	99	1/1909	1	2	1.03	
AZ GRAND CANYON NATL PARK 2	02	3596-02	36-03	112-09	6785	1/1903	99	7/1903	5	6	.42	10/1903	97	10/1903	5	5	.59	1/1903	99	1/1921	0	3	1.07
AZ HOLBROOK	02	4089-02	34-54	110-10	5080	1/1887	96	1/1904	12	6	.65	10/1891	93	12/1913	21	5	.69	1/1887	99	1/1887	1	8	UNADJ
AZ KINGMAN 2	02	4645-01	35-12	114-01	3539	6/1901	94	6/1901	25	11	.57	6/1901	94	6/1901	23	11	.79	6/1901	97	6/1901	3	11	UNADJ
AZ LEES FERRY	02	4849-02	36-52	111-36	3210	10/1921	88	10/1921	21	3	.25	10/1921	88	10/1921	20	3	.29	1/1916	88	11/1942	2	2	UNADJ
AZ MESA EXPERIMENT FARM	02	5467-06	33-25	111-52	1230	3/1896100	1/1917	0	1	.17	3/1896	97	1/1917	0	1	.19	3/1896100	3/1896	0	3	UNADJ		
AZ MIAMI	02	5512-04	33-24	110-53	3560	12/1913	98	12/1913	1	3	.20	12/1913	98	12/1913	1	3	.19	12/1913	99	12/1913	1	2	1.04
AZ PARKER	02	6250-05	34-10	114-17	425	10/1893	96	1/1916	2	3	.28	10/1893	96	1/1916	2	3	.39	1/1893100	1/1893	0	7	UNADJ	
AZ PRESCOTT	02	6796-03	34-34	112-28	5205	1/1865	98	6/1908	13	11	.31	6/1898	99	1/1909	13	11	.29	3/1865	99	1/1909	19	11	1.16
AZ ROOSEVELT 1WNW	02	7281-04	33-40	111-09	2205	1/1905	98	1/1905	6	4	.33	8/1905	98	8/1905	6	4	.59	1/1905100	1/1905	4	4	1.07	
AZ SACATON	02	7370-06	33-04	111-45	1285	4/1908	97	4/1908	2	2	.20	4/1908	97	4/1908	3	2	.19	1/1908	99	1/1908	1	3	UNADJ

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF
AZ SAFFORD AGRICULTURAL CENTER	AZ	7390-07	32-49	109-41	2954	8/1898	98	8/1898	17	9	.40	8/1898	98	8/1898	17	9	.50	8/1898	98	8/1898	1	6	UNADJ
AZ SAINT JOHNS	AZ	7435-02	34-31	109-23	5790	9/1901	93	9/1901	24	13	.52	9/1901	91	9/1901	26	12	.59	7/1889	84	7/1889	15	9	UNADJ
AZ SELIGMAN	AZ	7716-03	35-19	112-53	5250	8/1888	75	8/1917	9	3	.36	12/1904	90	12/1904	10	3	.59	8/1889	78	12/1902	9	4	UNADJ
AZ TOMBSTONE	AZ	8619-07	31-42	110-03	4610	5/1889	92	9/1892	27	9	.46	7/1893	91	6/1903	22	8	.50	4/1889	93	4/1889	7	10	UNADJ
AZ TUCSON U OF AZ	AZ	8815-07	32-15	110-57	2444	11/1875	99	1/1899	2	5	.51	10/1891	99	1/1899	2	5	.79	5/1867	100	5/1867	0	10	UNADJ
AZ WHITERIVER	AZ	9271-02	33-50	109-58	5280	11/1871	90	6/1878	11	5	.34	6/1897	88	6/1897	13	4	.39	1/1872	97	1/1872	16	7	1.14
AZ WICKENBURG	AZ	9287-06	33-59	112-44	2050	11/1875	77	1/1909	28	14	.36	3/1908	96	3/1908	30	12	.50	11/1875	77	11/1875	22	10	UNADJ
AZ WILLIAMS	AZ	9359-02	35-15	112-11	6750	8/1888	86	3/1903	9	6	.32	4/1897	93	3/1903	9	6	.39	5/1888	86	3/1903	14	8	1.10
AZ YUMA CITRUS	AZ	9652-05	32-37	114-39	191	9/1920	98	9/1920	1	1	.10	9/1920	98	9/1920	1	1	.09	9/1920	99	9/1920	0	1	UNADJ
AR BRINKLEY	AR	0936-06	34-53	91-11	200	4/1882	92	1/1889	17	11	.42	8/1888	95	4/1890	16	11	.59	4/1882	94	3/1884	22	10	1.08
AR CONWAY	AR	1596-05	35-06	92-27	332	1/1885	99	1/1889	11	9	.34	1/1897	99	1/1897	12	9	.39	1/1884	99	5/1887	14	9	1.09
AR CORNING	AR	1632-03	36-24	90-35	293	11/1892	91	11/1892	9	6	.20	11/1892	90	1/1893	10	6	.29	11/1892	97	11/1892	12	5	1.05
AR EUREKA SPRINGS 3WNW	AR	2356-01	36-25	93-47	1420	1/1888	86	1/1889	22	10	.44	5/1902	99	5/1902	10	6	.59	1/1888	86	11/1888	17	7	1.11
AR FAYETTEVILLE EXP STN	AR	2444-01	36-06	94-10	1270	2/1881	92	1/1889	2	2	.08	1/1893	99	1/1893	1	1	.00	10/1870	84	6/1887	4	2	1.02
AR GRAVETTE	AR	2930-01	36-26	94-27	1260	5/1898	98	5/1898	6	4	.24	4/1898	99	4/1898	5	4	.29	4/1898	100	4/1898	7	6	1.07
AR MAMMOTH SPRING	AR	4572-02	36-29	91-32	650	5/1904	94	5/1904	12	10	.47	5/1904	95	5/1904	12	10	.59	5/1904	96	5/1904	15	10	1.08
AR MENA	AR	4756-04	34-34	94-16	1130	1/1888	97	3/1890	6	6	.38	1/1891	98	1/1891	6	6	.39	1/1887	99	1/1890	7	6	1.10
AR NEWPORT	AR	5186-03	35-36	91-17	220	6/1887	96	4/1888	26	16	.56	7/1888	95	2/1892	29	16	.79	4/1884	97	4/1884	32	18	1.13
AR OZARK	AR	5508-04	35-29	93-51	490	10/1891	92	10/1891	16	9	.27	1/1892	92	1/1892	16	8	.29	10/1891	93	10/1891	9	5	1.07
AR PINE BLUFF	AR	5754-09	34-13	92-01	215	4/1888	98	1/1889	8	5	.25	7/1888	97	1/1891	8	5	.29	5/1884	96	1/1886	14	6	1.08
AR POCAHONTAS 1	AR	5820-03	36-16	90-58	315	4/1894	97	4/1894	6	3	.13	4/1894	98	4/1894	6	3	.09	4/1894	100	4/1894	4	3	1.04
AR PRESCOTT	AR	5908-08	33-48	93-23	308	4/1882	91	3/1890	8	4	.37	7/1888	96	1/1891	8	4	.50	4/1882	93	5/1887	7	5	1.09
AR SUBIACO	AR	6928-04	35-18	93-39	500	9/1897	97	9/1897	9	5	.28	9/1897	97	9/1897	10	5	.29	9/1897	98	9/1897	8	6	1.06
CA AVALON PLEASURE PIER	CA	0395-06	33-21	118-19	25	12/1909	97	12/1909	21	8	.65	12/1909	97	12/1909	21	8	.79	12/1909	99	12/1909	0	5	UNADJ
CA BERKELEY	CA	0693-04	37-52	122-15	345	11/1886	99	11/1886	1	5	.42	1/1893	99	1/1893	1	5	.50	12/1886	99	12/1886	0	9	UNADJ
CA BLYTHE	CA	0924-07	33-37	114-36	268	1/1909	99	1/1909	11	9	.35	1/1913	98	1/1913	17	8	.50	1/1909	100	1/1909	0	9	UNADJ
CA BRAWLEY 2SW	CA	1048-07	32-57	115-33	-100	1/1909	95	1/1909	8	4	.33	7/1909	94	7/1909	8	4	.39	1/1909	100	1/1909	0	4	UNADJ
CA CEDARVILLE	CA	1614-03	41-32	120-10	4670	5/1894	98	5/1894	11	8	.76	5/1894	98	1/1961	14	3	.29	5/1894	99	5/1894	0	8	UNADJ
CA CHICO UNIV FARM	CA	1715-02	39-42	121-49	185	1/1870	98	1/1870	5	6	.44	7/1902	95	7/1902	6	5	.39	11/1870	99	11/1870	0	6	UNADJ
CA CHULA VISTA	CA	1758-06	32-37	117-05	56	9/1918	99	9/1918	5	1	.01	9/1918	99	9/1918	5	1	.00	9/1918	99	9/1918	0	1	UNADJ
CA COLFAX	CA	1912-02	39-06	120-57	2410	8/1870	99	8/1870	1	3	.61	1/1905	98	1/1905	3	2	.59	1/1870	100	1/1870	0	3	1.07

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	MEAN TEMPERATURE											MAX/MIN TEMPERATURE											PRECIPITATION										
	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF										
CA CUYAMACA	04	2239-06	32-59	116-35	4640	1/1899	100	1/1899	3	3	.48	1/1910	98	1/1910	4	3	.59	7/1887	99	7/1887	0	5	1.17										
CA DAVIS	04	2294-02	38-32	121-46	60	11/1871	96	11/1871	14	7	.66	6/1908	99	6/1908	14	4	.19	11/1871	99	11/1871	0	6	UNADJ										
CA DEATH VALLEY	04	2319-07	36-28	116-52	-194	7/1911	96	7/1911	10	4	.45	7/1911	95	7/1911	11	4	.69	7/1911	99	7/1911	1	3	UNADJ										
CA ELECTRA PH	04	2728-05	38-20	120-40	715	1/1905	100	1/1905	8	4	.21	1/1905	98	1/1905	9	4	.29	12/1903	99	12/1903	3	3	1.02										
CA EUREKA	04	2910-01	40-48	124-10	43	12/1886	99	12/1886	3	1	.13	12/1886	99	7/1893	3	1	.00	1/1878	100	1/1878	8	2	1.03										
CA FAIRMONT	04	2941-07	34-42	118-26	3060	2/1912	84	2/1912	17	4	.35	2/1912	84	2/1912	17	4	.29	1/1909	100	1/1909	0	3	UNADJ										
CA FORT BRAGG 1E	04	3161-01	39-27	123-48	165	6/1895	56	1/1909	43	6	.25	6/1895	57	11/1909	42	6	.39	12/1860	74	8/1894	7	6	1.06										
CA FRESNO WSO AP	04	3257-05	36-46	119-43	326	1/1887	100	1/1887	8	11	.38	9/1887	100	1/1914	0	4	.29	7/1877	99	7/1877	0	11	UNADJ										
CA HANFORD 1S	04	3747-05	36-18	119-39	245	6/1899	98	6/1899	10	8	.51	6/1899	97	1/1917	12	7	.39	12/1880	91	10/1898	1	9	UNADJ										
CA HAPPY CAMP RS	04	3761-01	41-48	123-22	1120	1/1914	98	1/1914	19	7	.45	3/1914	92	3/1914	28	6	.69	1/1914	100	1/1914	10	7	1.08										
CA HEALDSBURG	04	3875-01	38-37	122-52	102	4/1893	99	1/1899	3	6	.26	3/1899	99	3/1899	4	6	.39	9/1876	99	9/1876	12	8	1.07										
CA INDEPENDENCE	04	4232-07	36-48	118-12	3950	11/1862	80	1/1899	10	6	.36	1/1893	92	2/1898	12	6	.39	12/1862	85	7/1887	5	7	UNADJ										
CA INDIO U S DATE GARDEN	04	4259-07	33-44	116-15	11	10/1877	98	1/1907	4	4	.32	5/1904	98	5/1904	6	5	.29	1/1877	99	1/1877	2	5	UNADJ										
CA LAKE SPAULDING	04	4713-02	39-19	120-38	5156	1/1914	100	1/1914	16	5	.61	1/1914	99	1/1914	17	5	.69	1/1895	100	1/1895	0	6	1.08										
CA LEMON COVE	04	4890-05	36-23	119-02	513	1/1895	100	2/1895	11	6	.52	1/1895	98	1/1923	3	1	.29	1/1899	100	1/1899	0	3	UNADJ										
CA LIVERMORE	04	4997-04	37-40	121-46	480	8/1870	99	8/1870	10	9	.55	1/1903	100	1/1903	13	8	.59	4/1870	100	4/1870	0	9	UNADJ										
CA LODI	04	5032-05	38-07	121-17	40	1/1882	81	12/1912	30	7	.40	1/1893	80	12/1912	30	7	.50	10/1882	83	7/1920	9	7	UNADJ										
CA MARYSVILLE	04	5385-02	39-09	121-36	57	5/1857	82	6/1897	30	10	.37	2/1897	90	2/1897	30	10	.39	1/1862	92	10/1870	1	13	UNADJ										
CA MERCED MUNICIPAL AP	04	5532-05	37-17	120-31	153	3/1872	99	1/1891	14	9	.46	6/1899	99	6/1899	16	8	.59	1/1872	99	1/1872	1	9	UNADJ										
CA MOUNT SHASTA WSO CITY	04	5983-02	41-19	122-19	3539	10/1891	98	10/1891	12	7	.73	1/1904	99	1/1904	9	6	.79	1/1888	100	1/1888	5	6	1.10										
CA NAPA STATE HOSPITAL	04	6074-01	38-17	122-16	35	1/1876	99	1/1921	4	1	.12	1/1893	96	1/1921	4	1	.09	1/1877	100	1/1877	0	4	UNADJ										
CA NEEDLES FAA AP	04	6118-07	34-46	114-37	914	8/1883	90	2/1907	9	5	.40	1/1893	92	1/1918	5	4	.39	9/1883	93	7/1891	0	7	UNADJ										
CA OJAI	04	6399-06	34-27	119-14	750	1/1906	100	1/1906	13	6	.43	1/1910	100	1/1910	13	6	.59	5/1905	100	5/1905	14	7	1.14										
CA ORLAND	04	6506-02	39-45	122-12	254	1/1883	99	1/1883	3	4	.34	3/1903	98	3/1903	7	4	.19	1/1883	100	1/1883	0	2	UNADJ										
CA ORLEANS	04	6508-01	41-18	123-32	410	4/1903	99	11/1905	16	4	.36	4/1903	100	11/1905	14	4	.50	10/1885	83	12/1916	0	2	1.03										
CA PASADENA	04	6719-06	34-09	118-09	864	1/1893	85	8/1898	20	12	.34	1/1893	85	9/1920	3	4	.19	11/1889	90	4/1896	21	9	1.16										
CA PASO ROBLES	04	6730-04	35-38	120-41	700	1/1894	96	1/1910	3	6	.28	1/1894	93	6/1903	10	7	.39	11/1886	99	9/1894	0	8	UNADJ										
CA PETALUMA FIRE STN #3	04	6826-01	38-14	122-38	27	2/1893	80	2/1897	25	12	.39	2/1913	98	2/1913	9	6	.39	11/1871	83	9/1910	3	8	UNADJ										
CA QUINCY	04	7195-02	39-55	120-57	3408	4/1895	97	4/1895	27	13	.81	4/1895	96	12/1909	30	12	1.09	1/1895	99	12/1971	42	2	1.22										
CA REDDING FIRE STN #4	04	7300-02	40-33	122-23	470	1/1875	99	1/1875	18	15	.86	1/1893	99	1/1893	21	15	.89	1/1875	100	1/1875	16	13	1.18										
CA REDLANDS	04	7306-06	34-03	117-11	1318	5/1892	99	1/1899	0	5	.41	4/1898	99	8/1898	1	5	.50	1/1889	100	1/1889	0	6	UNADJ										

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
CA SAN LUIS OBISPO POLY	04	7851-04	35-18	120-40	315	9/1887	94	9/1887	10	7	.45	8/1894	99	9/1914	3	4	.29	7/1869	99	7/1869	4	7	1.10
CA SANTA BARBARA	04	7902-06	34-25	119-41	5	3/1893	98	2/1895	17	11	.54	3/1893	98	2/1895	17	11	.69	7/1867	98	7/1867	1	10	UNADJ
CA SANTA CRUZ	04	7916-04	36-59	122-01	130	1/1873	100	1/1873	8	7	.58	9/1893	100	9/1893	5	5	.69	11/1873	98	9/1877	3	6	1.07
CA SANTA ROSA	04	7965-01	38-27	122-42	167	9/1891	98	9/1891	10	8	.50	6/1902	99	6/1902	11	7	.59	8/1888	99	8/1888	6	5	1.05
CA SUSANVILLE AP	04	8702-03	40-22	120-34	4146	1/1893	88	2/1894	29	14	.74	4/1895	87	4/1895	29	14	.89	10/1885	87	3/1920	12	8	UNADJ
CA TAHOE CITY	04	8758-03	39-10	120-08	6230	4/1909	99	4/1909	7	6	.46	4/1909	99	4/1909	7	6	.50	9/1903	93	9/1903	7	5	1.08
CA TEJON RANCHO	04	8839-05	35-02	118-45	1425	11/1898	91	5/1912	5	5	.51	11/1898	91	11/1898	10	5	.79	1/1895	100	1/1895	0	7	UNADJ
CA TUSTIN IRVINE RANCH	04	9087-06	33-44	117-47	118	1/1899	87	1/1899	18	4	.50	1/1899	87	1/1905	12	4	.59	1/1877	100	1/1877	0	3	UNADJ
CA UKIAH	04	9122-01	39-09	123-12	623	1/1892	100	1/1892	5	11	.59	1/1893	100	1/1893	5	10	.89	1/1877	100	1/1877	13	12	1.12
CA VACAVILLE	04	9200-02	38-22	121-57	105	9/1887	98	9/1887	7	6	.35	1/1905	95	1/1905	5	4	.29	1/1880	100	1/1880	0	6	UNADJ
CA WASCO	04	9452-05	35-36	119-20	345	7/1899	95	7/1899	15	5	.40	7/1899	97	7/1899	13	5	.69	7/1899	99	7/1899	0	6	UNADJ
CA WEAVERVILLE RS	04	9490-01	40-44	122-56	2050	1/1894	76	12/1953	8	1	.02	1/1894	77	12/1953	8	1	.00	7/1871	83	1/1913	12	6	1.07
CA WILLOWS 6W	04	9699-02	39-31	122-18	233	1/1878	98	12/1910	0	4	.31	9/1893	89	6/1911	1	3	.50	12/1878	99	12/1878	0	8	UNADJ
CA YOSEMITE PARK HEADQUARTERS	04	9855-05	37-45	119-35	3966	8/1906	98	8/1906	19	6	.65	8/1906	99	8/1906	19	6	.79	1/1904	99	1/1904	5	5	1.10
CA YREKA	04	9866-01	41-43	122-38	2625	2/1893	87	1/1915	10	4	.26	2/1893	87	1/1915	10	4	.29	9/1871	98	6/1885	2	8	UNADJ
CO BOULDER	05	0848-04	40-02	105-16	5375	10/1893	96	10/1893	19	13	.47	10/1893	96	10/1893	19	14	.59	1/1893	97	1/1893	19	16	1.15
CO CANON CITY	05	1294-01	38-26	105-15	5335	7/1886	96	12/1913	8	3	.07	3/1888	94	12/1913	9	3	.09	1/1888	97	1/1888	3	8	UNADJ
CO CHEESMAN	05	1528-04	39-13	105-17	6875	12/1902	98	12/1902	0	0	.00	12/1902	98	12/1902	0	0	.00	9/1902	99	9/1902	0	0	UNADJ
CO CHEYENNE WELLS	05	1564-03	38-49	102-21	4250	3/1889	95	9/1895	12	5	.47	4/1897	99	4/1897	11	5	.50	3/1889	95	3/1889	5	6	UNADJ
CO COLLEBRAN	05	1741-02	39-15	107-58	5980	1/1900	99	1/1900	26	14	.45	11/1900	92	11/1900	26	12	.69	1/1892	95	1/1892	30	14	1.18
CO DEL NORTE	05	2184-05	37-40	106-21	7884	5/1891	69	5/1904	29	19	.46	1/1893	69	5/1904	29	21	.59	4/1891	69	1/1901	25	7	UNADJ
CO DILLON 1E	05	2281-02	39-38	106-02	9065	5/1910	98	5/1910	12	6	.34	9/1910	98	9/1910	12	6	.50	6/1888	81	12/1899	11	8	UNADJ
CO DURANGO	05	2432-02	37-17	107-53	6600	8/1886	91	4/1894	4	6	.63	10/1894	99	10/1894	3	6	.89	1/1886	96	4/1894	0	6	1.12
CO EADS	05	2446-01	38-29	102-47	4215	4/1907	88	4/1907	29	8	.47	4/1907	89	4/1907	29	7	.50	4/1907	92	4/1907	8	11	UNADJ
CO FORT COLLINS	05	3005-04	40-35	105-05	5004	1/1873	91	1/1887	0	3	.32	2/1888	96	11/1892	0	3	.29	11/1872	93	10/1886	0	3	UNADJ
CO FORT MORGAN	05	3038-04	40-15	103-48	4321	2/1897	97	2/1897	7	3	.35	2/1897	98	2/1897	6	3	.39	1/1895	100	1/1895	0	5	UNADJ
CO FRUITA 1W	05	3146-02	39-10	108-45	4480	10/1889	90	6/1893	24	19	.68	4/1891	89	8/1897	22	17	.89	12/1889	89	12/1889	10	12	UNADJ
CO GUNNISON	05	3662-02	38-32	106-56	7664	1/1884	90	4/1894	13	9	.85	7/1893	97	4/1894	13	9	1.09	3/1884	94	12/1892	1	10	UNADJ
CO HERMIT 7ESE	05	3951-05	37-46	107-08	9000	8/1894	89	8/1896	21	14	.41	8/1894	91	8/1897	19	13	.39	6/1894	93	6/1894	21	12	1.11
CO HOLLY	05	4076-01	38-03	102-07	3390	9/1899	92	9/1899	14	5	.42	9/1899	93	12/1920	14	6	.29	1/1894	95	1/1894	5	6	UNADJ
CO LAS ANIMAS	05	4834-01	38-04	103-13	3891	1/1867	96	1/1890	9	4	.42	5/1891	96	10/1892	9	4	.50	1/1867	99	1/1867	1	6	UNADJ

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
CO MANASSA	05	5322-05	37-10	105-56	7687	5/1892	85	1/1901	30	15	.74	1/1893	85	1/1901	30	15	.89	5/1892	86	7/1897	14	15	UNADJ
CO MONTROSE #2	05	5722-02	38-29	107-53	5785	3/1885	91	1/1912	1	2	.36	1/1893	90	5/1899	11	6	.50	1/1885	100	1/1885	0	7	UNADJ
CO SAGUACHE	05	7337-05	38-05	106-08	7692	9/1886	88	4/1894	20	5	.32	4/1894	92	8/1897	20	5	.39	9/1886	88	4/1894	7	7	UNADJ
CO STEAMBOAT SPRINGS	05	7936-02	40-30	106-50	6770	9/1891	86	9/1891	19	10	.50	9/1891	86	12/1899	11	11	.50	9/1891	87	9/1891	12	4	UNADJ
CO TELLURIDE	05	8204-02	37-56	107-49	8800	12/1900	89	12/1900	23	9	.55	12/1900	89	12/1900	22	9	.69	12/1900	89	1/1957	0	1	1.03
CO TRINIDAD	05	8429-01	37-10	104-29	6030	5/1886	78	2/1899	23	16	.31	11/1899	89	12/1911	21	14	.29	8/1877	78	8/1896	9	8	UNADJ
CO WRAY 1E	05	9243-03	40-05	102-11	3520	1/1893	92	9/1895	18	13	.54	4/1893	93	4/1893	20	15	.69	1/1890	92	1/1890	23	16	1.15
CT FALLS VILLAGE	06	2658-01	41-57	73-22	550	2/1916	98	2/1916	4	0	.01	2/1916	98	2/1916	3	0	.00	5/1889	99	5/1889	1	1	1.01
CT GROTON	06	3207-03	41-21	72-03	40	2/1871	96	1/1885	13	6	.20	6/1885	96	6/1885	13	6	.19	1/1856	89	1/1856	16	7	1.08
CT NORWALK GAS PLANT	06	5893-03	41-07	73-25	37	1/1892	99	1/1892	3	5	.37	1/1892	99	1/1892	3	5	.50	2/1892	100	2/1892	2	5	1.08
CT STORRS	06	8138-02	41-48	72-15	650	7/1892	96	7/1892	7	5	.30	2/1893	87	2/1893	16	5	.29	1/1889	98	1/1889	2	4	1.06
DE BRIDGEVILLE 1NW	07	1330-02	38-45	75-37	50	1/1892	99	1/1892	4	2	.14	1/1892	100	1/1892	4	2	.19	1/1892	100	1/1892	0	2	1.04
DE DOVER	07	2730-02	39-09	75-31	30	8/1870	81	1/1907	10	7	.20	10/1891	87	12/1898	17	10	.29	7/1870	81	1/1907	5	5	1.07
DE MILFORD 4SE	07	5915-02	38-54	75-28	30	12/1857	74	1/1894	11	8	.30	5/1893	92	5/1893	13	8	.39	1/1858	75	1/1894	10	7	1.08
DE NEWARK UNIV FARM	07	6410-01	39-40	75-44	90	10/1888	65	1/1941	0	2	.10	4/1894	68	1/1941	0	2	.09	10/1888	66	10/1888	43	6	1.12
DE WILMINGTON PORTER RESERVOIR	07	9605-01	39-46	75-32	274	4/1894	83	4/1894	25	4	.15	4/1894	81	8/1897	22	5	.19	4/1894	99	4/1894	0	3	1.04
FL APALACHICOLA WSO AP	08	0211-01	29-44	85-02	20	11/1903	98	11/1903	1	5	.24	11/1903	100	11/1903	0	5	.29	11/1903	99	11/1903	0	5	1.11
FL ARCADIA	08	0228-04	27-14	81-51	63	11/1899	91	11/1899	14	7	.38	11/1899	92	11/1899	13	7	.59	11/1899	94	1/1966	10	3	1.06
FL BARTOW	08	0478-04	27-54	81-51	125	1/1887	99	1/1887	7	8	.51	1/1893	99	1/1893	8	8	.69	1/1887	99	1/1887	13	9	1.13
FL BELLE GLADE EXP STN	08	0611-05	26-39	80-38	15	6/1924	99	6/1924	6	2	.08	6/1924	99	6/1924	6	2	.09	5/1924	99	5/1924	5	2	1.02
FL DE FUNIAK SPRINGS	08	2220-01	30-44	86-07	230	10/1896	94	10/1896	12	4	.16	10/1896	94	10/1896	16	5	.19	10/1896	95	10/1896	20	8	1.10
FL EVERGLADES	08	2850-05	25-51	81-23	5	12/1926	94	12/1926	6	2	.16	12/1926	95	12/1926	5	2	.19	11/1926	98	11/1926	0	2	1.02
FL FEDERAL POINT	08	2915-02	29-45	81-32	5	1/1892	99	1/1892	6	3	.11	2/1892	98	2/1892	6	3	.09	2/1892	99	2/1892	5	4	1.04
FL FERNANDINA BEACH	08	2944-02	30-39	81-28	13	11/1891	92	11/1891	23	11	.37	1/1892	93	1/1898	24	11	.39	8/1891	93	5/1897	30	10	1.14
FL FORT LAUDERDALE	08	3163-06	26-06	80-12	16	11/1912	96	11/1912	28	11	.23	11/1912	96	11/1912	28	11	.29	11/1912	96	1/1954	17	3	1.06
FL FORT MYERS WSO AP	08	3186-05	26-35	81-52	15	10/1891	99	10/1891	14	13	.31	10/1891	99	10/1891	14	13	.39	1/1891	100	1/1891	0	13	UNADJ
FL FORT PIERCE	08	3207-04	27-28	80-21	25	1/1840	63	1/1902	4	5	.26	1/1901	99	1/1901	7	5	.39	3/1852	67	1/1892	10	7	UNADJ
FL HOMESTEAD EXP STN	08	4091-06	25-30	80-30	11	8/1910	92	8/1910	17	11	.18	8/1910	93	8/1910	17	9	.19	7/1910	94	7/1910	16	7	1.06
FL INVERNESS 3SE	08	4289-03	28-44	82-19	40	2/1899	93	2/1899	15	8	.22	2/1899	94	2/1899	14	8	.29	2/1899	95	2/1899	14	9	1.07
FL KEY WEST WBO AP	08	4570-07	24-33	81-45	4	1/1830	91	1/1888	2	6	.41	7/1872	100	1/1888	2	6	.50	10/1832	91	1/1870	0	13	UNADJ
FL LAKE CITY 2E	08	4731-02	30-11	82-36	195	1/1857	75	10/1891	14	8	.33	12/1892	98	11/1896	7	7	.39	12/1857	78	5/1891	21	9	1.08

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STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
FL MADISON 4N	08	5275-02	30-32	83-26	180	10/1889	86	5/1896	12	6	.23	1/1892	85	12/1899	8	5	.29	10/1889	88	4/1893	12	4	1.08
FL OCALA	08	6414-03	29-12	82-05	75	10/1832	65	10/1889	21	13	.35	1/1898	96	9/1960	2	1	.09	11/1889	96	3/1891	12	9	1.09
FL PENSACOLA FAA AP	08	6997-01	30-28	87-12	112	11/1879	99	1/1889	0	4	.25	11/1879	100	1/1889	0	4	.29	11/1879	99	1/1889	0	5	1.06
FL SAINT LEO	08	7851-03	28-20	82-16	190	1/1890	97	10/1891	14	7	.22	10/1891	96	1/1903	12	5	.29	1/1890	97	3/1891	16	8	1.11
FL TALLAHASSEE WSO AP	08	8758-01	30-23	84-22	55	3/1883	98	1/1888	3	5	.29	1/1893	100	1/1893	3	5	.39	4/1885	100	1/1888	4	6	1.07
FL TARPON SPRINGS	08	8824-04	28-09	82-45	8	8/1884	98	1/1954	0	0	.00	10/1891	97	1/1954	0	0	.00	8/1884	98	1/1954	1	1	1.03
FL TITUSVILLE	08	8942-03	28-37	80-49	5	2/1901	93	2/1901	22	11	.28	2/1901	93	2/1901	22	11	.39	2/1901	94	2/1901	20	10	1.11
GA ALBANY 3SE	09	0140-07	31-32	84-08	180	4/1878	92	4/1891	1	5	.26	11/1891	96	3/1892	3	5	.29	4/1878	93	4/1891	0	7	1.07
GA BAINBRIDGE INT PAPER CO	09	0586-07	30-48	84-39	190	4/1882	89	12/1891	21	14	.41	6/1892	92	6/1892	22	14	.50	4/1884	92	5/1891	20	13	1.11
GA BRUNSWICK	09	1340-09	31-10	81-30	13	4/1878	75	1/1921	4	4	.18	1/1895	80	2/1897	29	12	.29	4/1878	77	1/1921	3	4	1.04
GA COVINGTON	09	2318-05	33-36	83-52	770	4/1878	71	1/1929	5	2	.12	7/1893	76	1/1929	5	2	.09	6/1875	90	4/1884	13	8	1.06
GA DAHLONEGA	09	2475-02	34-32	83-59	1430	4/1874	85	4/1893	11	6	.22	2/1892	99	11/1896	7	6	.29	5/1874	85	4/1884	8	5	1.05
GA EASTMAN 1W	09	2966-05	32-12	83-12	400	4/1882	88	3/1899	7	2	.15	11/1891	92	11/1896	8	2	.19	4/1882	90	5/1891	17	4	1.05
GA FORT GAINES	09	3516-07	31-36	85-03	340	4/1882	91	4/1891	9	5	.27	11/1891	94	3/1892	10	5	.29	4/1882	94	1/1905	12	4	1.04
GA GAINESVILLE	09	3621-02	34-18	83-51	1170	2/1872	95	1/1907	9	8	.26	10/1891	95	1/1907	9	8	.39	1/1872	95	12/1906	7	7	1.04
GA GLENNVILLE	09	3754-09	31-56	81-55	170	1/1905	100	1/1905	3	3	.19	1/1905	100	1/1905	3	3	.19	11/1904	99	11/1904	0	2	1.06
GA HAWKINSVILLE	09	4170-05	32-17	83-28	265	3/1892	94	11/1898	15	10	.17	3/1892	95	10/1896	14	10	.19	3/1892	96	3/1892	26	10	1.06
GA MILLEDGEVILLE	09	5874-05	33-05	83-15	400	4/1878	88	1/1902	15	11	.35	10/1891	93	6/1895	20	16	.50	4/1878	90	1/1902	25	11	1.08
GA MILLEN 4N	09	5882-06	32-52	81-58	195	4/1882	93	1/1900	5	5	.40	11/1891	95	12/1899	5	5	.39	4/1882	94	1/1895	9	6	1.06
GA NEWNAN 4NE	09	6335-04	33-26	84-47	920	4/1882	93	4/1891	11	7	.32	10/1891	95	3/1892	13	7	.39	4/1882	94	4/1887	16	7	1.06
GA QUITMAN 2NW	09	7276-08	30-48	83-35	185	4/1882	93	12/1893	18	12	.40	11/1891	95	11/1891	21	12	.59	4/1882	96	4/1891	23	12	1.10
GA ROME	09	7600-01	34-15	85-09	620	4/1878	96	1/1905	0	3	.28	3/1892	100	12/1892	0	4	.39	6/1855	99	11/1869	1	4	1.05
GA SAVANNAH WSO AP	09	7847-09	32-08	81-12	46	6/1832	87	1/1900	5	7	.28	1/1874	100	1/1900	5	7	.29	8/1836	92	1/1900	12	7	1.09
GA TALBOTTON 1NE	09	8535-04	32-42	84-32	710	4/1878	85	5/1891	5	8	.45	3/1892	97	3/1892	4	8	.59	4/1878	85	4/1891	9	9	1.09
GA TIFTON EXP STN	09	8703-08	31-29	83-32	371	2/1911	87	2/1911	18	17	.21	2/1911	87	2/1911	18	16	.19	2/1911	87	2/1911	18	5	1.08
GA TOCCOA	09	8740-03	34-35	83-19	1019	1/1879	93	1/1914	2	2	.12	10/1891	97	1/1901	15	6	.19	1/1879	94	1/1905	5	5	1.03
GA WARRENTON	09	9141-06	33-25	82-40	510	6/1884	91	4/1906	8	5	.29	11/1891	94	1/1917	4	3	.29	6/1884	92	4/1891	9	5	1.05
GA WASHINGTON 2ESE	09	9157-03	33-43	82-43	620	5/1884	90	1/1959	19	1	.13	11/1891	92	1/1959	19	1	.09	5/1884	96	5/1887	26	11	1.07
GA WAYCROSS 4NE	09	9186-09	31-15	82-19	145	4/1882	91	12/1899	3	7	.32	6/1892	95	12/1899	3	7	.39	4/1882	93	1/1892	14	8	1.08
GA WEST POINT	09	9291-04	32-52	85-11	575	4/1882	92	4/1891	10	3	.16	10/1891	94	3/1892	10	2	.19	4/1882	93	4/1887	16	3	1.04
ID ABERDEEN EXPERIMENT STATION	10	0010-09	42-57	112-50	4405	4/1914	100	4/1914	3	2	.17	4/1914	100	4/1914	3	2	.19	4/1914	100	4/1914	0	1	UNADJ

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STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION												
						BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF							
ID ARROWROCK DAM	10	0448-04	43-36	115-55	3275	12/1911	98	12/1911	7	3	.22	12/1911	98	12/1911	7	3	.29	12/1911	98	12/1911	5	2	1.04							
ID ASHTON	10	0470-09	44-04	111-27	5260	2/1897	98	1/1900	12	7	.48	2/1897	97	1/1900	12	7	.59	2/1897	100	2/1897	0	8	UNADJ							
ID CALDWELL	10	1380-05	43-40	116-41	2370	10/1904	99	10/1904	3	5	.31	11/1904	100	11/1904	3	5	.29	11/1904	99	1/1961	0	0	.99							
ID CAMBRIDGE	10	1408-05	44-34	116-41	2650	1/1894	93	9/1903	12	6	.74	10/1894	92	9/1903	12	6	1.00	1/1894	100	3/1902	7	5	1.09							
ID CHALLIS	10	1663-08	44-30	114-14	5175	1/1895	82	2/1904	20	24	.36	1/1895	82	2/1904	22	24	.39	1/1896	83	11/1904	12	6	UNADJ							
ID COEUR D'ALENE RS	10	1956-01	47-41	116-45	2158	1/1884	86	6/1913	3	4	.18	7/1893	85	1/1900	18	19	.29	1/1884	88	1/1914	3	4	1.03							
ID GLENN'S FERRY	10	3631-05	42-56	115-19	2510	4/1905	91	4/1905	16	9	.49	4/1905	90	4/1905	18	9	.50	1/1905	95	1/1905	5	12	UNADJ							
ID GRACE	10	3732-10	42-35	111-44	5550	2/1907	99	2/1907	6	2	.20	2/1907	98	2/1907	7	2	.19	1/1907	100	1/1907	0	2	1.02							
ID HAILEY AP	10	3942-04	43-31	114-18	5306	4/1894	86	1/1900	18	6	.45	4/1894	85	1/1900	19	5	.59	11/1892	85	7/1899	19	7	1.15							
ID HAZELTON	10	4140-07	42-36	114-08	4060	5/1917	96	5/1917	3	0	.01	5/1917	97	5/1917	2	0	.00	5/1917	99	5/1917	0	0	.99							
ID HOLLISTER	10	4295-06	42-21	114-35	4550	3/1908	97	3/1908	10	3	.18	5/1908	92	5/1908	12	3	.19	5/1908	99	5/1908	6	3	1.03							
ID JEROME	10	4670-07	42-44	114-31	3785	10/1915	96	10/1915	10	2	.03	6/1916	96	6/1916	11	2	.00	10/1915	99	10/1915	11	3	1.06							
ID KELLOGG	10	4831-04	47-32	116-08	2320	2/1905	100	2/1905	11	5	.23	2/1905	98	2/1905	11	5	.29	2/1905	98	2/1905	11	5	1.05							
ID KOOSKIA	10	5011-03	46-09	115-59	1280	12/1908	97	12/1908	19	6	.30	12/1908	96	12/1908	20	6	.39	11/1908	98	11/1908	19	6	1.06							
ID LEWISTON WSO AP	10	5241-03	46-23	117-01	1413	1/1889	96	9/1904	8	9	.30	11/1894	97	6/1904	9	10	.29	1/1878	100	1/1913	17	9	1.09							
ID LIFTON PUMPING STATION	10	5275-10	42-07	111-18	5926	11/1919	99	11/1919	0	1	.07	11/1919	99	11/1919	0	1	.09	10/1919	99	10/1919	0	0	UNADJ							
ID MACKAY RS	10	5462-08	43-55	113-37	5897	1/1908	98	1/1908	3	4	.36	1/1908	96	1/1908	4	4	.39	1/1908	99	1/1908	1	4	UNADJ							
ID MALAD CITY	10	5559-10	42-10	112-17	4470	2/1904	86	2/1904	20	14	.30	2/1904	87	2/1904	19	11	.39	2/1904	87	2/1904	19	6	1.10							
ID MOSCOW U OF ID	10	6152-02	46-44	116-58	2660	2/1892	99	11/1897	4	4	.29	11/1893	99	11/1897	3	4	.29	1/1892	100	1/1892	4	4	1.05							
ID NEW MEADOWS RS	10	6388-04	44-58	116-17	3870	6/1903	98	6/1912	5	4	.30	6/1903	95	9/1909	9	5	.39	6/1903	99	6/1903	3	5	1.06							
ID OAKLEY	10	6542-10	42-14	113-53	4600	7/1893	99	7/1893	0	4	.41	7/1893	98	11/1896	1	5	.39	7/1893	99	7/1893	0	4	UNADJ							
ID OROFINO	10	6681-03	46-29	116-16	1320	9/1903	97	9/1903	9	7	.28	9/1903	97	9/1903	10	7	.39	9/1903	99	9/1903	9	7	1.02							
ID PAYETTE	10	6891-05	44-05	116-56	2150	4/1890	94	1/1907	11	7	.41	8/1892	94	1/1907	11	7	.50	4/1890	100	4/1890	0	8	UNADJ							
ID PORTHILL	10	7264-01	49-00	116-30	1775	8/1889	99	1/1902	6	4	.24	10/1894	99	1/1902	6	4	.29	8/1889	99	1/1902	5	5	1.04							
ID PRIEST RIVER EXPERIMENT STN	10	7386-01	48-21	116-50	2380	2/1898	92	1/1900	12	1	.07	2/1898	92	1/1900	12	2	.00	2/1898	93	9/1899	9	1	1.02							
ID SALMON 1N	10	8080-08	45-11	113-54	3931	11/1905	98	11/1905	20	9	.57	11/1905	96	11/1905	22	8	.59	1/1906	96	1/1906	4	9	UNADJ							
ID SANDPOINT EXP STN	10	8137-01	48-18	116-34	2100	10/1910	99	10/1910	12	4	.18	10/1910	99	10/1910	10	4	.19	10/1910	99	10/1910	10	6	1.07							
IL ALEDO	11	0072-01	41-13	90-45	720	8/1879	80	1/1898	25	11	.25	1/1901	99	1/1901	22	10	.29	6/1874	85	1/1964	0	1	1.01							
IL ANNA 1E	11	0187-08	37-28	89-14	645	5/1875	91	1/1897	8	9	.29	2/1896	100	2/1896	7	9	.29	1/1875	91	1/1897	10	8	1.06							
IL AURORA	11	0338-02	41-45	88-21	644	10/1857	86	9/1889	7	6	.36	9/1887	92	1/1893	8	6	.50	10/1857	90	1/1880	2	7	1.06							
IL CARLINVILLE	11	1280-06	39-17	89-52	625	1/1891	99	1/1891	2	7	.21	1/1893	99	1/1893	2	7	.29	1/1891	100	1/1891	6	7	1.06							

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
IL CHARLESTON	11	1436-07	39-29	88-10	680	1/1896	97	1/1961	15	2	.11	2/1896	97	1/1961	15	2	.09	1/1896	99	1/1961	15	2	1.05
IL DANVILLE	11	2140-05	40-08	87-39	558	5/1895	91	5/1895	23	10	.23	3/1897	91	3/1897	21	10	.29	5/1895	91	5/1895	36	12	1.10
IL DECATUR	11	2193-04	39-50	89-01	620	4/1875	86	1/1889	5	3	.19	12/1893	99	12/1893	0	3	.19	8/1868	85	6/1882	11	3	1.08
IL DIXON 1NW	11	2348-01	41-50	89-31	700	2/1881	95	1/1893	13	11	.26	10/1887	94	1/1893	13	11	.29	1/1881	96	1/1881	26	14	1.10
IL DUQUOIN 4SE	11	2483-08	37-59	89-12	420	12/1886	95	1/1892	14	8	.38	10/1888	89	1/1895	15	8	.50	3/1887	97	3/1887	21	9	1.10
IL GALVA	11	3335-01	41-10	90-03	855	5/1862	89	1/1894	12	5	.19	1/1893	100	1/1893	12	5	.19	5/1862	88	1/1894	10	5	1.04
IL GRIGGSVILLE	11	3717-06	39-43	90-44	700	4/1882	98	7/1887	10	11	.44	5/1887	93	1/1893	9	11	.59	1/1882	99	1/1890	6	10	1.08
IL HARRISBURG	11	3879-09	37-45	88-33	380	2/1898	99	2/1898	9	8	.17	3/1898	99	3/1898	10	8	.19	1/1898	100	1/1898	12	11	1.06
IL HILLSBORO	11	4108-06	39-09	89-29	630	5/1895	99	5/1895	8	9	.44	5/1895	98	5/1895	9	9	.69	5/1895	99	5/1895	19	9	1.09
IL HOOPESTON 1NE	11	4198-05	40-28	87-40	710	2/1887	84	6/1891	13	7	.12	9/1887	83	1/1893	12	5	.09	1/1887	85	1/1887	16	3	1.05
IL JACKSONVILLE 2E	11	4442-06	39-44	90-12	610	1/1858	72	1/1892	6	4	.20	5/1895	100	5/1895	2	3	.29	3/1861	75	1/1890	6	4	1.07
IL LA HARPE	11	4823-03	40-35	90-58	700	5/1895	99	5/1895	6	7	.36	5/1895	99	5/1895	6	7	.39	4/1895	100	4/1895	10	7	1.09
IL LINCOLN	11	5079-04	40-10	89-22	580	2/1906	99	2/1906	9	8	.20	2/1906	99	2/1906	9	7	.19	2/1906	99	2/1906	14	8	1.06
IL MARENGO	11	5326-02	42-15	88-36	820	1/1856	98	9/1892	8	9	.27	1/1893	98	6/1893	7	8	.29	1/1856	99	1/1856	6	7	1.07
IL MCLEANSBORO	11	5515-09	38-06	88-30	480	4/1882	98	12/1884	17	16	.38	6/1888	92	1/1895	19	15	.39	1/1882	99	3/1882	17	13	1.09
IL MINONK	11	5712-04	40-54	89-03	750	1/1886	89	8/1890	24	13	.23	10/1896	96	10/1896	20	11	.29	1/1886	89	1/1886	34	11	1.11
IL MONMOUTH	11	5768-03	40-55	90-38	770	2/1881	91	8/1890	11	5	.12	2/1893	99	2/1893	9	5	.09	1/1881	92	2/1891	9	5	1.03
IL MORRISON	11	5833-01	41-49	89-58	603	6/1880	87	1/1891	20	11	.25	5/1895	98	5/1895	14	10	.29	6/1880	88	1/1942	9	2	1.01
IL MOUNT CARROLL	11	5901-01	42-05	89-59	700	5/1887	95	1/1889	9	8	.49	12/1897	98	12/1897	7	8	.59	5/1887	97	5/1887	13	7	1.07
IL MT VERNON 3NE	11	5943-09	38-21	88-52	490	1/1879	84	5/1891	19	15	.51	5/1895	99	12/1895	15	13	.50	5/1878	85	4/1882	21	11	1.10
IL OLNEY 2S	11	6446-07	38-42	88-04	480	7/1887	97	6/1964	0	0	.00	11/1896	97	6/1964	0	0	.00	1/1887	98	1/1965	0	0	.99
IL OTTAWA 4SW	11	6526-02	41-20	88-55	525	1/1854	86	8/1890	12	12	.25	9/1887	92	1/1893	13	12	.29	1/1856	85	1/1887	7	9	1.08
IL PALESTINE	11	6558-07	39-00	87-37	515	7/1882	98	7/1882	20	12	.22	1/1893	99	1/1900	23	12	.19	6/1882	99	6/1882	15	11	1.07
IL PANA	11	6579-06	39-23	89-05	696	6/1869	84	1/1899	12	7	.12	1/1893	95	1/1893	17	9	.19	6/1869	86	4/1882	12	9	1.08
IL PARIS WATERWORKS	11	6610-07	39-38	87-42	680	12/1886	94	12/1886	12	12	.17	4/1893	98	4/1893	6	7	.09	12/1886	94	12/1886	10	7	1.06
IL PONTIAC	11	6910-05	40-53	88-38	650	3/1886	88	9/1889	18	24	.18	1/1903	100	1/1903	5	4	.19	10/1885	88	10/1885	29	6	1.09
IL RUSHVILLE	11	7551-03	40-07	90-35	675	1/1889	94	1/1902	7	9	.34	1/1893	95	1/1893	18	10	.39	1/1889	95	1/1889	10	10	1.09
IL SPARTA	11	8147-08	38-08	89-43	520	2/1887	99	2/1887	9	9	.32	1/1893	100	1/1895	13	9	.29	1/1887	99	1/1887	11	11	1.09
IL URBANA	11	8740-05	40-06	88-14	743	8/1888	98	1/1890	9	4	.12	10/1888	99	6/1897	1	3	.09	8/1888	99	8/1888	0	3	1.02
IL WALNUT	11	8916-01	41-33	89-36	690	1/1892	99	1/1892	7	9	.20	1/1893	99	1/1893	7	9	.19	1/1892	99	11/1893	5	7	1.05
IL WHITE HALL 1E	11	9241-06	39-26	90-23	578	7/1854	86	1/1913	7	4	.05	3/1894	95	3/1894	25	12	.09	7/1854	86	1/1909	7	6	1.02

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
IL WINDSOR	11	9354-07	39-26	88-36	685	8/1885	85	6/1890	15	24	.23	9/1887	84	1/1893	12	24	.29	8/1885	85	1/1887	23	6	1.10
IN ANDERSON SEWAGE PLANT	12	0177-05	40-06	85-43	845	6/1895	99	6/1895	7	7	.36	6/1895	99	6/1895	7	7	.39	6/1895	99	6/1895	11	6	1.06
IN ANGOLA	12	0200-03	41-38	84-59	1010	1/1885	83	12/1886	28	6	.26	2/1887	83	1/1894	26	6	.29	12/1884	83	12/1884	19	5	1.06
IN BERNE	12	0676-03	40-40	84-57	858	1/1910	100	1/1910	6	3	.12	1/1910	100	1/1910	6	3	.09	1/1910	100	1/1910	8	3	1.03
IN BLOOMINGTON IN UNIV	12	0784-08	39-10	86-31	825	1/1868	80	9/1898	9	10	.34	2/1896	96	2/1896	11	10	.59	3/1868	82	6/1882	21	13	1.08
IN BROOKVILLE	12	1030-09	39-25	85-00	670	12/1884	61	6/1902	35	7	.19	5/1925	98	5/1925	9	5	.09	7/1882	62	6/1902	33	7	1.10
IN CAMBRIDGE CITY	12	1229-06	39-49	85-10	950	4/1892	99	4/1892	5	5	.25	4/1892	99	6/1892	5	5	.29	4/1892	100	4/1892	5	5	1.04
IN COLUMBUS	12	1747-05	39-12	85-55	621	9/1884	99	11/1884	6	8	.35	10/1893	98	10/1893	6	8	.39	1/1884	100	1/1884	0	4	1.04
IN CRAWFORDSVILLE 2NW	12	1873-04	40-04	86-56	745	1/1885	84	4/1887	30	10	.31	12/1892	88	1/1917	16	6	.19	4/1885	83	4/1916	29	8	1.08
IN DELPHI 3NNE	12	2149-02	40-37	86-40	560	7/1885	98	4/1887	5	5	.22	12/1887	93	1/1893	5	5	.19	7/1885	99	7/1885	3	4	1.04
IN GOSHEN COLLEGE	12	3418-02	41-34	85-50	805	6/1914	98	6/1914	7	6	.17	6/1914	99	6/1914	7	6	.19	6/1914	98	6/1914	9	6	1.04
IN GREENCASTLE 1E	12	3513-04	39-39	86-51	835	10/1884	79	1/1917	10	6	.17	10/1895	87	1/1917	11	6	.19	8/1882	80	1/1917	6	7	1.04
IN GREENFIELD	12	3527-05	39-47	85-45	865	7/1883	81	11/1884	21	10	.27	11/1903	98	11/1903	2	6	.29	4/1883	81	4/1883	21	8	1.12
IN HOBART	12	4008-01	41-32	87-15	600	7/1919	98	7/1919	22	7	.20	7/1919	98	7/1919	21	7	.19	7/1919	98	7/1919	21	7	1.07
IN HUNTINGTON WATERWORKS	12	4181-03	40-51	85-30	725	11/1893	97	11/1893	8	6	.15	11/1893	97	11/1893	8	6	.19	10/1882	93	10/1882	15	8	1.04
IN LAPORTE	12	4837-01	41-36	86-43	810	1/1851	66	1/1928	14	5	.20	5/1897	98	1/1928	14	5	.29	3/1849	68	9/1984	100	0	1.20
IN MADISON SEWAGE PLANT	12	5237-09	38-44	85-24	455	11/1854	70	11/1884	15	9	.38	4/1893	96	4/1893	7	7	.50	1/1858	73	1/1881	14	7	1.07
IN MARION 2N	12	5337-05	40-34	85-40	790	11/1885	98	11/1885	15	8	.20	3/1891	99	1/1893	9	6	.19	11/1885	98	11/1885	5	4	1.04
IN MT VERNON	12	6001-07	37-57	87-53	415	2/1887	97	2/1887	12	4	.22	1/1893	98	10/1893	11	4	.19	2/1887	99	2/1887	7	5	1.04
IN OOLITIC PURDUE EXP FM	12	6580-08	38-53	86-33	650	2/1893	82	12/1900	18	4	.22	2/1893	82	1/1919	0	2	.09	2/1893	81	10/1905	16	2	1.04
IN PAOLI	12	6705-08	38-32	86-29	640	3/1898	98	3/1898	3	7	.37	3/1898	99	3/1898	3	7	.50	3/1898	99	3/1898	6	7	1.05
IN PRINCETON 1W	12	7125-07	38-21	87-35	482	8/1884	97	5/1886	6	10	.28	1/1899	98	1/1899	6	9	.29	8/1882	98	8/1882	7	10	1.05
IN RENSSELAER	12	7298-01	40-56	87-09	650	7/1864	71	9/1889	15	5	.22	5/1900	96	5/1900	4	2	.19	7/1864	73	10/1886	18	6	1.12
IN ROCHESTER	12	7482-02	41-04	86-13	770	4/1904	86	4/1904	22	9	.18	4/1904	87	4/1904	21	8	.19	4/1904	90	4/1904	22	9	1.06
IN ROCKVILLE	12	7522-04	39-46	87-14	690	1/1862	81	11/1884	6	4	.11	7/1887	96	1/1893	3	2	.09	1/1860	78	9/1884	7	6	1.05
IN RUSHVILLE	12	7646-05	39-36	85-27	955	2/1883	98	11/1884	7	4	.22	2/1887	96	6/1892	8	4	.29	1/1881	99	1/1881	9	4	1.05
IN SALEM	12	7755-08	38-37	86-05	800	8/1884	87	2/1887	21	9	.37	1/1897	95	1/1897	12	7	.39	7/1882	87	2/1887	19	8	1.06
IN SCOTTSBURG	12	7875-09	38-42	85-46	550	5/1894	99	5/1894	14	8	.19	3/1896	99	3/1896	14	8	.19	5/1894	99	5/1894	24	10	1.08
IN SEYMOUR 2N	12	7935-08	38-59	85-54	573	12/1887	97	12/1887	15	10	.31	9/1892	98	9/1892	16	10	.39	12/1887	97	12/1887	21	10	1.07
IN SHOALS HIGHWAY 50 BRIDGE	12	8036-07	38-40	86-48	550	12/1912	98	12/1912	8	5	.25	12/1912	100	12/1912	8	5	.29	1/1911	100	1/1911	2	5	1.02
IN VEVAY	12	9080-09	38-45	85-04	470	8/1864	96	1/1872	6	4	.32	12/1887	96	2/1891	7	4	.29	2/1865	98	2/1865	3	4	1.06

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	MEAN TEMPERATURE											MAX/MIN TEMPERATURE											PRECIPITATION										
	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF				
IN VINCENNES 5NE	12	9113-07	38-44	87-30	450	4/1894	99	4/1894	10	9	.28	4/1894	99	4/1894	10	9	.39	10/1882	94	10/1882	19	11	1.09										
IN WASHINGTON	12	9253-07	38-40	87-11	485	6/1896	98	6/1896	23	17	.21	6/1896	99	6/1896	23	17	.29	6/1896	98	6/1896	27	16	1.07										
IN WHEATFIELD 2NNW	12	9511-01	41-14	87-04	650	9/1916	97	9/1916	7	5	.17	9/1916	97	9/1916	7	5	.19	9/1916	98	9/1916	9	4	1.02										
IN WHITESTOWN	12	9557-05	40-00	86-21	935	3/1896	100	3/1896	10	7	.24	3/1896	100	3/1896	10	7	.29	3/1896	100	3/1896	9	7	1.06										
IN WINAMAC 2SSE	12	9670-01	41-02	86-35	690	8/1897	84	6/1918	8	4	.19	8/1897	84	6/1918	8	4	.19	5/1897	85	1/1908	15	4	1.04										
IA ALBIA	13	0112-08	41-02	92-48	940	1/1891	97	5/1898	19	13	.30	11/1897	98	11/1897	22	13	.39	1/1891	98	1/1891	36	15	1.11										
IA ALGONA 3W	13	0133-02	43-04	94-18	1230	6/1861	85	1/1894	10	6	.24	1/1893	99	1/1893	11	6	.29	6/1861	94	7/1876	5	6	1.07										
IA BELLE PLAINE	13	0600-06	41-53	92-16	810	8/1889	98	1/1891	16	7	.20	9/1890	98	1/1892	15	7	.19	8/1889	99	8/1889	16	7	1.07										
IA CHARLES CITY	13	1402-02	43-03	92-40	1013	1/1891	100	1/1891	3	4	.18	6/1891	98	12/1891	5	4	.19	1/1875	100	1/1892	3	4	1.03										
IA CLARINDA	13	1533-07	40-44	95-02	1030	1/1872	87	12/1887	7	6	.29	5/1890	98	7/1891	7	6	.39	1/1872	90	7/1875	15	8	1.08										
IA CLINTON #1	13	1635-06	41-48	90-16	585	11/1857	91	1/1892	9	10	.37	1/1893	99	1/1893	9	10	.39	8/1859	94	1/1879	14	11	1.13										
IA ESTERVILLE 2N	13	2724-01	43-25	94-50	1302	4/1895	97	4/1895	13	6	.23	4/1895	98	4/1895	13	6	.29	4/1895	97	4/1895	15	7	1.07										
IA FAIRFIELD	13	2789-09	41-02	91-57	740	1/1855	73	1/1891	12	16	.34	4/1891	90	1/1893	11	10	.39	5/1857	78	1/1909	2	5	1.07										
IA FAYETTE	13	2864-03	42-50	91-48	1010	6/1888	98	1/1891	16	10	.32	1/1893	98	1/1893	15	10	.39	6/1888	99	6/1888	25	10	1.10										
IA FOREST CITY 2NNE	13	2977-02	43-17	93-38	1300	4/1894	97	4/1894	20	14	.33	4/1894	97	4/1894	19	14	.39	1/1894	98	1/1894	19	15	1.11										
IA FORT DODGE	13	2999-05	42-30	94-12	1115	8/1851	65	7/1887	19	8	.26	2/1900	98	2/1900	7	6	.19	8/1851	70	1/1901	4	5	1.05										
IA INDIANOLA	13	4063-08	41-22	93-33	940	6/1882	93	1/1888	13	7	.25	5/1890	97	7/1891	10	6	.29	10/1875	90	8/1879	19	8	1.11										
IA IOWA FALLS	13	4142-05	42-32	93-16	1170	11/1863	82	1/1893	11	8	.32	1/1893	99	1/1893	11	8	.39	11/1863	82	2/1887	15	9	1.09										
IA LE MARS	13	4735-01	42-48	96-10	1195	3/1896	99	3/1896	14	11	.31	4/1896	100	4/1896	14	11	.39	6/1876	87	5/1895	15	12	1.08										
IA LOGAN	13	4894-04	41-38	95-48	1052	5/1866	99	1/1889	2	6	.33	4/1890	99	7/1891	2	6	.39	5/1866	99	1/1874	7	6	1.09										
IA MOUNT AYR 5SW	13	5769-08	40-39	94-18	1270	6/1892	96	6/1892	21	14	.42	6/1892	96	6/1892	21	14	.59	6/1892	96	1/1935	20	6	1.09										
IA MOUNT PLEASANT	13	5796-09	40-57	91-33	736	12/1863	86	8/1885	10	8	.36	10/1898	98	10/1898	13	7	.39	12/1863	89	6/1875	6	10	1.08										
IA NEW HAMPTON	13	5952-03	43-03	92-19	1160	3/1897	97	3/1897	8	8	.31	3/1897	98	3/1897	9	9	.39	4/1897	97	4/1897	9	9	1.07										
IA ROCK RAPIDS	13	7147-01	43-26	96-10	1350	4/1893	92	1/1901	9	4	.22	4/1893	93	4/1893	12	4	.29	5/1893	92	5/1893	7	4	1.08										
IA ROCKWELL CITY	13	7161-04	42-24	94-37	1210	9/1894	94	9/1894	6	4	.27	9/1894	94	9/1894	6	4	.29	11/1893	95	11/1893	26	6	1.10										
IA STORM LAKE 2E	13	7979-01	42-38	95-11	1425	8/1889	94	8/1889	20	15	.33	2/1891	94	1/1892	17	15	.39	10/1876	85	5/1886	15	8	1.08										
IA TOLEDO	13	8296-05	41-59	92-35	890	1/1894	99	1/1894	11	7	.23	9/1895	99	9/1895	13	7	.29	1/1894	99	1/1894	7	6	1.05										
IA WASHINGTON	13	8688-09	41-17	91-41	756	10/1875	94	1/1893	6	6	.24	4/1890	99	1/1893	6	6	.29	10/1875	97	1/1894	6	6	1.06										
KS ANTHONY	14	0264-08	37-09	98-05	1340	9/1906	95	9/1906	25	11	.33	9/1906	95	9/1906	25	11	.39	10/1896	98	1/1961	50	5	1.26										
KS ASHLAND	14	0365-07	37-12	99-46	1970	6/1888	98	10/1948	2	3	.16	2/1889	97	1/1950	0	2	.09	6/1888	99	1/1908	3	6	1.10										
KS ATCHISON	14	0405-03	39-34	95-07	945	5/1865	88	3/1879	19	8	.16	10/1891	98	12/1892	11	6	.09	2/1866	88	2/1866	12	3	1.05										

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
KS COLDWATER	14	1704-08	37-16	99-20	2083	7/1888	84	1/1907	10	3	.14	7/1888	84	3/1904	12	5	.19	7/1888	88	2/1896	13	3	1.09
KS COLUMBUS 1SW	14	1740-09	37-10	94-51	900	8/1891	98	8/1891	9	3	.09	8/1891	98	12/1892	9	3	.09	8/1890	98	8/1890	8	3	1.02
KS EL DORADO	14	2401-09	37-49	96-50	1340	2/1886	86	1/1890	16	6	.23	1/1893	90	1/1893	13	4	.29	1/1886	87	1/1886	18	5	1.09
KS ELLSWORTH	14	2459-05	38-44	98-14	1530	9/1866	73	11/1891	24	16	.35	1/1888	83	1/1894	23	13	.39	9/1866	75	1/1889	25	9	1.14
KS ESKRIDGE 1SE	14	2602-06	38-51	96-06	1420	8/1897	89	8/1897	17	7	.24	8/1897	90	8/1897	17	7	.29	7/1897	91	7/1897	16	7	1.07
KS FORT SCOTT	14	2835-09	37-51	94-42	845	1/1843	72	7/1886	12	8	.35	6/1896	97	6/1896	3	5	.29	1/1843	76	1/1892	2	4	1.05
KS HAYS 1S	14	3527-05	38-52	99-20	2010	1/1885	92	11/1889	8	3	.24	5/1893	96	5/1893	6	2	.19	9/1867	99	1/1891	0	1	1.03
KS HORTON	14	3810-03	39-40	95-31	1029	6/1888	98	6/1888	8	4	.14	1/1890	99	1/1891	7	4	.19	6/1888	99	6/1888	6	3	1.03
KS INDEPENDENCE	14	3954-09	37-15	95-42	780	1/1872	100	1/1872	8	6	.28	1/1888	99	12/1892	10	6	.29	1/1872	100	1/1872	11	6	1.07
KS JETMORE	14	4081-07	38-05	99-54	2302	2/1901	92	2/1901	13	5	.24	2/1901	93	2/1901	12	5	.29	1/1901	95	1/1901	10	6	1.09
KS LAKIN	14	4464-07	37-56	101-15	2998	9/1889	93	5/1896	9	7	.54	9/1889	93	5/1896	8	7	.69	8/1889	97	3/1896	2	7	UNADJ
KS LARNED	14	4530-08	38-10	99-05	1994	9/1860	77	1/1905	12	8	.21	7/1891	86	1/1894	22	14	.19	6/1860	78	1/1905	17	9	1.10
KS LAWRENCE	14	4559-06	38-58	95-16	1000	7/1857	95	9/1866	3	4	.14	9/1894	93	9/1894	7	3	.09	1/1861	96	4/1866	3	4	1.03
KS LEAVENWORTH 4SSE	14	4588-03	39-16	94-53	860	1/1830	87	1/1919	9	4	.23	1/1901	91	1/1901	23	14	.39	1/1836	89	4/1862	25	8	1.14
KS LIBERAL	14	4695-07	37-03	100-55	2834	2/1892	85	4/1903	16	7	.43	12/1892	84	4/1903	15	9	.59	2/1892	86	5/1899	9	7	UNADJ
KS MANHATTAN	14	4972-03	39-12	96-35	1065	1/1858	98	11/1878	13	8	.29	6/1893	99	6/1893	15	8	.29	1/1858	100	5/1863	6	7	1.08
KS MCPHERSON	14	5152-05	38-23	97-40	1495	11/1891	99	11/1891	1	2	.14	11/1891	100	12/1892	1	2	.19	12/1876	90	12/1882	6	3	1.06
KS MEDICINE LODGE 2N	14	5173-08	37-18	98-35	1540	6/1895	98	12/1950	7	4	.16	6/1895	98	12/1950	6	4	.19	6/1891	98	1/1951	6	4	1.05
KS MINNEAPOLIS	14	5363-02	39-08	97-43	1310	8/1889	98	12/1949	12	3	.14	8/1889	97	12/1949	16	3	.09	6/1889	99	1/1956	14	3	1.05
KS NORTON 9SSE	14	5856-01	39-42	99-50	2360	6/1890	90	7/1897	11	5	.21	6/1890	90	1/1911	4	3	.09	6/1890	92	6/1890	19	5	1.11
KS OBERLIN	14	5906-01	39-50	100-32	2610	5/1913	99	5/1913	23	8	.30	5/1913	99	5/1913	20	8	.39	1/1887	100	1/1887	11	7	1.07
KS OLATHE 3E	14	5972-06	38-53	94-46	1055	1/1864	78	1/1894	10	6	.18	5/1893	94	9/1915	5	5	.19	1/1864	79	8/1874	24	7	1.10
KS OTTAWA	14	6128-06	38-37	95-17	900	6/1895	99	6/1895	4	3	.20	6/1895	99	6/1895	4	3	.19	6/1895	100	6/1895	2	4	1.04
KS PHILLIPSBURG	14	6374-02	39-44	99-19	1907	9/1891	94	1/1907	4	6	.31	9/1891	94	1/1893	8	7	.39	9/1891	97	9/1891	9	7	1.09
KS SAINT FRANCIS	14	7093-01	39-46	101-48	3300	5/1908	99	5/1908	4	6	.39	5/1908	100	5/1908	4	6	.50	5/1908	99	5/1908	4	6	1.10
KS SCOTT CITY	14	7271-04	38-29	100-54	2970	12/1889	86	1/1896	13	4	.30	7/1895	92	9/1900	9	4	.39	7/1889	87	7/1889	13	5	1.12
KS SEDAN	14	7305-09	37-07	96-10	820	3/1885	98	11/1887	5	7	.37	12/1887	97	12/1892	3	7	.59	4/1885	100	2/1886	7	6	1.07
KS WAKEENEY	14	8495-04	39-01	99-53	2450	1/1883	99	1/1883	1	2	.18	1/1893	98	1/1893	2	2	.19	1/1883	100	1/1883	2	3	1.05
KY ANCHORAGE	15	0155-02	38-16	85-32	730	4/1895	92	4/1895	19	8	.25	4/1895	92	4/1895	19	8	.29	4/1895	91	4/1895	29	9	1.09
KY ASHLAND	15	0254-04	38-27	82-37	555	11/1882	98	11/1882	10	6	.25	6/1893	98	6/1893	9	5	.29	11/1882	98	11/1882	8	6	1.05
KY BERE A COLLEGE	15	0619-03	37-34	84-18	1070	2/1901	97	2/1901	8	5	.27	2/1901	98	2/1901	8	5	.39	2/1901	98	2/1901	10	7	1.06

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
KY BOWLING GREEN FAA AP	15	0909-02	36-58	86-26	534	5/1878	95	7/1886	3	3	.19	4/1890	98	2/1895	2	3	.19	1/1878	97	2/1887	5	3	1.06
KY FARMERS 2S	15	2791-03	38-07	83-33	680	12/1904	95	12/1904	15	8	.31	12/1904	96	1/1917	16	8	.29	12/1904	97	12/1904	18	9	1.07
KY FRANKFORT LOCK 4	15	3028-03	38-14	84-52	504	6/1881	94	8/1882	13	7	.38	4/1895	98	4/1895	11	6	.29	8/1882	96	8/1882	3	5	1.03
KY GREENSBURG	15	3430-02	37-15	85-30	590	4/1892	99	4/1892	6	5	.29	7/1896	99	7/1896	6	5	.29	8/1887	99	1/1954	0	1	1.01
KY HOPKINSVILLE	15	3994-01	36-50	87-30	590	5/1896	99	5/1896	2	3	.20	5/1896	99	5/1896	2	3	.19	5/1896	99	5/1896	2	5	1.02
KY LEITCHFIELD 2N	15	4703-02	37-31	86-18	620	11/1895	99	11/1895	4	5	.28	11/1895	99	11/1895	4	5	.39	10/1895	99	10/1895	8	6	1.06
KY MIDDLESBORO	15	5389-04	36-36	83-44	1175	1/1891	90	1/1908	9	8	.28	12/1892	90	12/1906	9	9	.50	1/1891	91	1/1891	27	11	1.08
KY OWENSBORO	15	6091-01	37-46	87-09	405	7/1896	98	7/1896	2	2	.24	9/1896	98	9/1896	2	2	.29	7/1896	98	7/1896	1	2	1.02
KY SHELBYVILLE 1E	15	7324-03	38-12	85-12	730	4/1888	98	4/1894	12	6	.28	1/1889	99	8/1896	11	6	.39	3/1888	99	3/1888	17	9	1.07
KY WILLIAMSBURG	15	8709-04	36-44	84-09	1000	7/1892	93	2/1893	30	19	.52	1/1893	93	11/1897	27	18	.50	10/1887	98	10/1887	19	17	1.11
KY WILLIAMSTOWN 3NW	15	8714-03	38-39	84-37	940	6/1902	99	6/1902	4	4	.27	6/1902	99	6/1902	3	4	.29	6/1902	99	6/1902	2	5	1.04
LA ALEXANDRIA	16	0098-05	31-19	92-28	87	4/1883	92	1/1965	0	0	.00	2/1888	93	1/1965	0	0	.00	7/1882	95	12/1884	22	11	1.13
LA AMITE	16	0205-06	30-43	90-30	180	5/1883	95	8/1889	2	7	.36	12/1888	96	9/1892	4	7	.39	7/1882	95	1/1888	2	7	1.08
LA BASTROP	16	0537-03	32-47	91-54	140	12/1893	64	1/1964	6	1	.01	12/1893	64	1/1964	6	1	.00	12/1893	65	1/1964	0	1	1.01
LA BATON ROUGE	16	0549-06	30-32	91-08	64	1/1822	80	1/1890	12	9	.41	1/1889	96	5/1891	14	9	.50	1/1843	84	1/1979	0	0	.99
LA BUNKIE	16	1287-05	30-57	92-10	80	5/1882	90	6/1956	9	4	.07	1/1889	94	5/1891	12	8	.39	5/1882	94	12/1957	0	1	1.00
LA CALHOUN EXP STN	16	1411-02	32-31	92-20	180	6/1888	93	1/1891	8	3	.28	7/1890	96	1/1891	6	3	.29	6/1888	98	6/1888	2	3	1.08
LA COVINGTON 4NNW	16	2151-06	30-32	90-07	40	8/1892	94	8/1892	7	7	.34	2/1893	96	2/1893	5	6	.50	8/1892	98	8/1892	1	5	1.11
LA DONALDSONVILLE	16	2534-09	30-07	90-59	40	7/1884	92	1/1890	13	7	.35	1/1888	95	2/1890	13	7	.39	7/1884	96	1/1888	9	7	1.08
LA FRANKLIN 3NW	16	3313-08	29-49	91-33	12	6/1882	88	1/1890	11	11	.33	6/1892	96	6/1892	9	9	.39	4/1882	90	1/1888	18	10	1.12
LA HOUMA	16	4407-09	29-35	90-44	15	10/1888	93	1/1890	19	7	.32	12/1888	91	2/1890	18	7	.29	10/1888	98	10/1888	29	10	1.10
LA JENNINGS	16	4700-07	30-12	92-40	25	9/1897	98	9/1897	27	8	.26	9/1897	98	9/1897	27	8	.29	9/1897	99	5/1981	100	1	1.35
LA LAFAYETTE CAA AP	16	5026-08	30-12	91-59	38	6/1884	97	1/1890	2	3	.15	4/1889	99	5/1891	1	3	.19	4/1884	98	1/1888	8	5	1.04
LA MELVILLE	16	6117-05	30-26	92-02	55	4/1888	96	1/1890	9	4	.33	2/1889	96	12/1896	4	3	.29	12/1885	98	12/1885	5	5	1.07
LA NEW ORLEANS AUDUBON	16	6664-09	29-55	90-08	6	4/1888	94	1/1890	7	2	.25	11/1888	95	2/1890	7	2	.29	4/1888	97	4/1888	5	3	1.04
LA PLAIN DEALING	16	7344-01	32-54	93-41	291	6/1892	98	1/1968	0	1	.09	6/1892	98	1/1968	0	1	.09	1/1892	100	1/1968	0	1	1.02
LA ST JOSEPH EXP STN	16	8163-03	31-57	91-14	78	9/1884	74	1/1896	26	15	.21	8/1907	95	8/1907	14	3	.19	8/1884	76	10/1891	32	7	1.10
LA THIBODAUX 3ESE	16	9013-09	29-46	90-47	15	5/1892	95	5/1892	9	7	.31	6/1892	96	6/1892	8	7	.39	8/1884	97	5/1889	9	7	1.08
LA WINNSBORO 5SSE	16	9806-03	32-06	91-43	75	6/1890	63	9/1959	2	1	.00	6/1890	62	9/1959	1	1	.00	6/1890	65	1/1960	1	1	.99
ME ACADIA NATIONAL PARK	17	0100-03	44-21	68-16	470	11/1885	87	11/1885	21	9	.36	12/1885	87	12/1885	21	7	.50	11/1885	90	11/1885	12	7	1.07
ME EASTPORT	17	2426-03	44-55	67-00	85	1/1822	84	1/1888	6	5	.36	12/1884	98	1/1885	8	7	.39	1/1833	82	4/1865	11	9	1.08

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STM-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
ME FARMINGTON	17	2765-02	44-41	70-09	420	10/1889	99	10/1889	8	5	.24	6/1891	98	11/1891	8	5	.29	11/1889	99	11/1889	4	5	1.04
ME GARDINER	17	3046-02	44-13	69-47	140	1/1837	93	1/1893	6	2	.21	4/1885	96	4/1885	10	4	.29	1/1837	96	1/1861	7	5	1.04
ME HOULTON	17	3897-01	46-08	67-50	410	1/1829	67	1/1903	5	3	.25	2/1892	89	2/1892	17	4	.29	6/1836	65	1/1903	5	4	1.05
ME LEWISTON	17	4566-02	44-06	70-13	180	4/1886	100	4/1886	4	1	.05	6/1886	100	6/1886	4	1	.00	4/1886	100	4/1886	0	0	.99
ME MILLINOCKET	17	5304-01	45-39	68-42	360	1/1903	99	1/1903	2	1	.14	2/1903	99	2/1903	2	1	.09	1/1903	99	1/1903	1	1	1.03
ME ORONO	17	6430-02	44-54	68-40	155	1/1870	90	1/1886	15	3	.35	10/1885	88	7/1896	16	3	.29	1/1869	95	1/1886	6	3	1.05
ME PORTLAND WSMO AP	17	6905-03	43-39	70-19	57	1/1820	95	1/1886	0	3	.39	4/1874	100	1/1886	0	3	.50	11/1840	91	1/1875	0	4	1.05
ME PRESQUE ISLE	17	6937-01	46-39	68-00	599	10/1909	97	10/1909	5	2	.19	10/1909	96	10/1909	8	2	.19	10/1909	99	10/1909	0	2	1.03
ME RIPOGENUS DAM	17	7174-01	45-53	69-11	965	9/1925	96	9/1925	3	1	.13	9/1925	97	9/1925	2	1	.09	1/1925	99	1/1925	1	1	1.02
ME WOODLAND	17	9891-02	45-09	67-24	140	2/1920	95	2/1920	13	3	.36	2/1920	95	2/1920	14	3	.39	7/1917	97	7/1917	7	3	1.05
MD BALTIMORE WSO CITY	18	0470-06	39-17	76-37	14	1/1817	76	1/1897	1	1	.01	1/1893	100	1/1893	5	3	.00	1/1818	76	1/1897	0	1	1.00
MD CAMBRIDGE WATER TRMT PLANT	18	1385-02	38-34	76-04	5	1/1893	91	1/1893	22	7	.24	1/1893	90	1/1893	24	8	.29	1/1893	91	1/1893	21	9	1.11
MD CHESTERTOWN	18	1750-05	39-13	76-04	40	7/1855	56	12/1939	0	1	.09	11/1893	73	12/1939	0	1	.09	6/1855	57	2/1887	37	5	1.09
MD COLLEGE PARK	18	1995-04	38-59	76-57	90	1/1894	97	1/1894	5	3	.15	1/1894	97	1/1894	4	3	.19	3/1861	78	1/1888	3	3	1.05
MD CUMBERLAND 2	18	2282-07	39-38	78-45	730	1/1859	90	1/1913	8	6	.26	5/1891	84	8/1893	29	11	.39	8/1871	99	9/1912	5	5	1.07
MD DENTON 2E	18	2523-02	38-53	75-48	50	3/1892	89	3/1892	25	9	.29	3/1893	90	3/1893	24	9	.39	12/1891	90	12/1891	25	13	1.13
MD GLEN DALE BELL STATION	18	3675-04	38-58	76-48	150	1/1921	100	1/1921	6	2	.09	1/1921	100	1/1921	5	2	.09	1/1921	100	1/1921	5	3	1.05
MD LAUREL 3W	18	5111-04	39-06	76-54	400	5/1895	92	5/1895	9	3	.10	5/1895	93	5/1895	8	3	.09	5/1895	99	5/1895	1	4	1.05
MD MILLINGTON 2WNW	18	5985-05	39-16	75-52	30	10/1898	97	10/1898	10	4	.16	10/1898	97	10/1898	10	4	.19	1/1899	99	1/1899	6	4	1.05
MD OAKLAND 1SE	18	6620-08	39-24	79-24	2420	4/1893	91	9/1893	12	12	.03	10/1893	91	10/1893	12	12	.00	1/1893	91	1/1893	17	3	1.02
MD OWINGS FERRY LANDING	18	6770-03	38-41	76-40	160	1/1917	95	1/1917	12	3	.16	1/1917	95	1/1917	13	3	.19	1/1917	96	1/1917	11	4	1.06
MD PATUXENT RIVER	18	6915-02	38-20	76-25	38	1/1892	99	1/1892	3	3	.14	1/1892	99	1/1892	3	3	.09	1/1892	100	1/1892	8	4	1.04
MD PRINCESS ANNE	18	7330-01	38-13	75-41	20	1/1823	63	1/1895	7	5	.36	7/1894	94	7/1894	7	5	.50	1/1894	95	1/1894	6	6	1.08
MD ROYAL OAK 2SSW	18	7806-02	38-43	76-11	10	11/1891	99	11/1891	11	4	.21	1/1893	100	1/1893	10	4	.29	11/1891	99	11/1891	11	4	1.05
MD SALISBURY	18	8000-01	38-22	75-35	10	5/1906	97	5/1906	12	6	.11	5/1906	97	5/1906	12	6	.09	5/1906	98	5/1906	12	7	1.04
MD WESTMINSTER POLICE BRKS	18	9440-06	39-33	76-58	765	1/1893	76	10/1901	29	7	.26	2/1895	77	12/1897	30	6	.29	1/1893	79	1/1893	26	8	1.09
MD WOODSTOCK COLLEGE	18	9750-06	39-20	76-52	460	12/1870	96	10/1888	10	3	.15	8/1891	94	8/1891	12	3	.19	12/1870	97	2/1887	2	2	1.04
MA AMHERST	19	0120-02	42-23	72-32	150	1/1836	100	1/1836	7	9	.46	1/1893	100	1/1893	10	8	.50	8/1835	100	8/1835	2	8	1.12
MA BEDFORD	19	0535-02	42-29	71-17	160	1/1885	96	1/1885	8	6	.32	1/1893	97	1/1893	3	5	.39	1/1885	96	1/1885	9	6	1.06
MA BLUE HILL OBSERVATORY	19	0736-02	42-13	71-07	629	2/1831	98	1/1888	0	2	.15	2/1885	100	2/1885	3	3	.09	3/1885	100	3/1885	2	4	1.05
MA CHESTNUT HILL	19	1447-02	42-20	71-09	120	11/1884	98	11/1884	4	1	.20	11/1884	98	11/1884	4	1	.19	1/1873	100	1/1873	0	1	1.03

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF
MA CLINTON	19	1561-02	42-24	71-41	398	1/1905	97	1/1905	6	0	.01	1/1905	98	1/1905	6	0	.00	1/1887	95	1/1887	5	1	1.00
MA FRAMINGHAM	19	2975-02	42-17	71-25	170	12/1884	99	12/1884	4	0	.00	12/1884	99	12/1884	4	0	.00	4/1843	72	4/1843	29	2	1.05
MA LAWRENCE	19	4105-02	42-42	71-10	57	1/1856	96	1/1886	2	2	.12	1/1885	100	1/1885	2	2	.09	1/1856	96	1/1856	4	3	1.03
MA NEW BEDFORD	19	5246-03	41-38	70-56	70	10/1812	98	1/1855	5	5	.48	5/1885	97	7/1885	9	4	.29	10/1813	99	2/1843	0	2	1.03
MA PLYMOUTH	19	6486-03	41-57	70-40	90	6/1886	96	6/1886	9	3	.23	5/1903	94	5/1903	12	3	.19	6/1886	97	6/1886	6	3	1.04
MA PROVINCETOWN	19	6681-03	42-03	70-11	20	3/1882	85	3/1882	26	12	.61	2/1885	86	1/1887	23	9	.69	3/1882	84	3/1882	24	9	1.10
MA STOCKBRIDGE	19	8181-01	42-18	73-20	860	12/1929	92	12/1929	15	9	.28	12/1929	92	12/1929	15	8	.29	12/1929	92	12/1929	15	7	1.09
MA TAUNTON	19	8367-03	41-54	71-04	20	2/1871	99	2/1871	1	1	.07	11/1884	99	12/1884	2	1	.00	6/1874	99	6/1874	0	1	1.00
MI ADRIAN 2NNE	20	0032-10	41-55	84-01	754	1/1870	93	1/1888	13	9	.22	11/1887	98	11/1887	12	9	.29	1/1870	93	1/1876	10	7	1.06
MI ALLEGAN	20	0128-08	42-31	85-50	670	8/1890	94	6/1896	14	10	.35	8/1890	94	6/1907	13	9	.39	10/1888	96	10/1888	10	12	1.10
MI ALMA	20	0146-06	43-23	84-40	760	3/1887	100	3/1887	15	9	.40	10/1887	98	1/1892	11	9	.39	1/1887	100	1/1887	11	9	1.06
MI ANN ARBOR UNIV OF MI	20	0230-10	42-18	83-43	900	1/1854	80	2/1880	7	5	.33	4/1889	99	4/1889	3	5	.39	4/1849	83	1/1876	16	10	1.07
MI BIG RAPIDS WATERWORKS	20	0779-06	43-42	85-29	930	4/1887	94	1/1888	13	8	.32	9/1887	92	1/1892	9	7	.39	1/1887	95	1/1887	11	8	1.11
MI CHATHAM EXP FARM	20	1484-02	46-21	86-56	875	7/1900	97	7/1900	8	1	.10	7/1900	98	5/1917	4	1	.09	7/1900	99	7/1900	0	3	1.02
MI CHEBOYGAN	20	1492-04	45-39	84-28	590	4/1890	96	6/1921	23	11	.42	4/1890	96	1/1897	28	16	.59	1/1890	99	1/1890	1	20	UNADJ
MI COLDWATER STATE SCHOOL	20	1675-09	41-57	85-00	984	7/1868	84	1/1898	6	2	.11	9/1887	90	1/1892	12	3	.09	7/1868	84	1/1878	21	4	1.05
MI EAST TAWAS	20	2423-04	44-17	83-30	586	1/1883	85	12/1886	27	10	.51	8/1887	88	9/1892	24	8	.50	1/1883	84	1/1883	16	14	UNADJ
MI FAYETTE 3SW	20	2737-02	45-41	86-42	765	12/1920	97	12/1920	8	3	.22	12/1920	97	9/1959	1	1	.00	12/1920	97	12/1920	9	4	1.10
MI HART	20	3632-05	43-42	86-22	675	8/1887	93	1/1897	7	1	.07	9/1887	91	6/1907	3	1	.00	5/1887	95	5/1887	5	2	UNADJ
MI HILLSDALE	20	3823-09	41-56	84-38	1080	2/1880	92	12/1886	11	5	.23	4/1897	99	4/1897	1	3	.29	1/1881	92	1/1881	15	5	1.06
MI IRON MOUNTAIN KINGSFORD WWTP	20	4090-01	45-47	88-05	1060	2/1899	98	2/1899	6	5	.19	2/1899	98	2/1899	5	5	.19	2/1899	98	2/1899	8	6	1.05
MI IRONWOOD	20	4104-01	46-27	90-11	1430	8/1901	98	8/1901	12	8	.27	8/1901	98	8/1901	12	8	.29	8/1901	98	1/1958	0	1	1.02
MI ISHPEMING	20	4127-01	46-29	87-39	1436	8/1898	97	12/1898	3	3	.16	8/1898	97	11/1898	3	3	.19	8/1898	98	8/1898	9	5	1.05
MI KALAMAZOO STATE HOSPITAL	20	4244-08	42-17	85-36	945	1/1876	98	1/1888	7	2	.13	1/1892	98	1/1892	6	2	.09	1/1876	100	1/1876	1	4	1.06
MI MIDLAND	20	5434-06	43-37	84-13	642	5/1896	89	5/1896	22	7	.39	6/1896	92	6/1896	17	7	.50	5/1896	92	5/1896	26	7	1.09
MI MOUNT CLEMENS ANG BASE	20	5650-10	42-36	82-49	580	8/1896	90	8/1896	25	3	.14	8/1896	90	8/1896	25	3	.09	8/1896	93	8/1896	20	4	1.03
MI MOUNT PLEASANT UNIVERSITY	20	5662-06	43-35	84-46	796	4/1887	83	4/1887	20	6	.36	9/1895	90	9/1895	12	3	.39	4/1887	83	12/1901	21	3	1.06
MI MUNISING	20	5690-02	46-24	86-39	620	9/1896	95	12/1898	21	5	.29	9/1896	95	12/1899	18	5	.39	9/1896	93	9/1896	28	6	1.08
MI NEWBERRY STATE HOSPITAL	20	5816-02	46-20	85-30	875	6/1896	94	1/1912	2	2	.15	9/1896	94	12/1896	12	3	.19	10/1896	97	10/1896	2	5	UNADJ
MI OWOSSO WASTEWATER PLANT	20	6300-09	43-01	84-11	738	1/1896	96	1/1896	10	4	.29	1/1896	96	2/1899	8	4	.29	1/1896	97	1/1896	12	4	1.04
MI SOUTH HAVEN	20	7690-08	42-24	86-17	620	9/1895	95	9/1925	11	3	.11	9/1895	96	9/1925	11	3	.09	9/1895	97	1/1927	7	2	1.02

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
MI STAMBAUGH 1S	20	7812-01	46-04	88-38	1485	2/1896	98	2/1896	9	5	.27	2/1896	98	2/1896	9	5	.29	2/1896	97	1/1963	0	0	.99
MN ADA	21	0018-01	47-18	96-31	906	12/1892	82	12/1892	17	10	.41	1/1893	84	9/1916	3	4	.39	12/1892	83	12/1892	16	7	1.10
MN ALBERT LEA 3SE	21	0075-08	43-37	93-25	1230	3/1885	92	3/1885	14	5	.27	1/1892	96	1/1892	11	5	.29	3/1885	94	7/1887	20	7	1.07
MN BAUDETTE	21	0515-02	48-43	94-37	1075	1/1909	96	1/1909	6	3	.39	1/1909	96	1/1909	6	3	.50	1/1909	97	1/1909	3	6	UNADJ
MN CLOQUET	21	1630-06	46-42	92-31	1265	4/1911	100	4/1911	1	1	.03	4/1911	100	4/1911	1	1	.00	4/1911	100	4/1911	0	1	1.00
MN DETROIT LAKES 1NNE	21	2142-01	46-50	95-51	1375	12/1895	97	12/1895	4	5	.44	12/1895	97	12/1895	4	5	.50	12/1895	99	12/1895	0	6	UNADJ
MN FAIRMONT	21	2698-08	43-38	94-28	1187	4/1887	99	4/1887	4	4	.21	1/1892	98	10/1892	5	4	.19	1/1887	100	1/1887	1	4	1.02
MN FARMINGTON 3NW	21	2737-09	44-40	93-11	980	4/1888	97	4/1888	3	0	.00	7/1892	97	7/1892	3	0	.00	1/1888	100	1/1888	0	1	.99
MN FOSSTON	21	2916-01	47-34	95-45	1310	7/1909	97	7/1909	14	6	.24	7/1909	98	7/1909	14	6	.29	7/1909	99	7/1909	0	6	UNADJ
MN GRAND MEADOW	21	3290-09	43-42	92-34	1350	7/1887	99	7/1887	3	5	.20	7/1893	99	7/1893	3	5	.19	1/1886	100	1/1887	3	5	1.04
MN HALLOCK	21	3455-01	48-46	96-57	820	2/1899	99	2/1899	17	10	.56	2/1899	99	2/1899	17	10	.69	7/1899	99	7/1899	0	10	UNADJ
MN ITASCA U OF MN	21	4106-01	47-13	95-12	1490	5/1911	97	5/1911	8	2	.20	6/1911	97	6/1911	9	2	.19	5/1911	100	5/1911	6	5	1.05
MN LEECH LAKE DAM	21	4652-02	47-15	94-13	1302	6/1887	97	6/1887	5	2	.17	9/1897	98	9/1897	4	2	.19	4/1887	100	4/1887	0	1	1.01
MN MAPLE PLAIN	21	5136-06	45-00	93-39	970	2/1892	93	2/1892	7	4	.44	2/1893	91	2/1893	9	4	.59	4/1887	92	4/1887	9	5	1.07
MN MILAN 1NW	21	5400-04	45-08	95-56	1020	8/1893	98	8/1893	4	1	.01	9/1893	98	9/1893	4	1	.00	8/1893	99	8/1893	3	3	1.06
MN MINNEAPOLIS WSFO AP	21	5435-06	44-53	93-13	834	10/1819	100	1/1891	4	3	.16	11/1890	99	11/1890	4	3	.09	7/1836	100	1/1891	4	3	1.03
MN MONTEVIDEO 1SW	21	5563-04	44-56	95-45	985	8/1889	99	8/1889	2	3	.32	1/1893	99	1/1893	2	3	.29	8/1889	99	8/1889	6	6	1.10
MN MORA	21	5615-06	45-53	93-18	990	7/1904	99	7/1904	4	3	.25	7/1904	100	7/1904	4	3	.29	7/1904	99	7/1904	6	4	1.05
MN MORRIS WC EXPERIMENT STATION	21	5638-04	45-35	95-55	1140	8/1885	99	8/1885	1	3	.32	1/1886	100	1/1886	1	3	.39	5/1885	99	5/1885	1	3	1.05
MN NEW ULM	21	5887-08	44-18	94-27	860	1/1864	87	1/1894	5	3	.17	8/1893	97	8/1893	7	3	.19	3/1864	87	1/1894	6	4	1.03
MN OLIVIA	21	6152-05	44-47	94-59	1094	3/1885	95	3/1887	10	8	.29	7/1892	99	7/1892	6	5	.39	1/1885	95	3/1885	16	7	1.08
MN PARK RAPIDS	21	6360-02	46-55	95-04	1434	3/1885	93	4/1887	9	3	.20	1/1893	99	1/1893	4	3	.29	1/1885	95	1/1885	6	3	1.05
MN PINE RIVER DAM	21	6547-06	46-40	94-07	1250	3/1887	99	3/1887	3	4	.30	9/1897	98	9/1897	4	4	.50	1/1887	100	1/1887	0	5	1.06
MN PIPESTONE	21	6565-07	44-01	96-19	1705	2/1899	96	2/1899	12	7	.43	2/1899	97	2/1899	12	7	.50	11/1892	91	11/1892	14	9	1.09
MN POKEGAMA DAM	21	6612-02	47-15	93-35	1280	1/1887	99	3/1887	6	3	.17	9/1897	98	9/1897	6	3	.19	1/1887	100	3/1887	2	3	1.04
MN ROSEAU 1E	21	7087-01	48-51	95-45	1047	3/1894	87	3/1894	17	6	.35	4/1895	87	12/1896	15	9	.39	3/1894	88	3/1894	12	4	UNADJ
MN SAINT PETER 2SW	21	7405-08	44-18	93-58	850	11/1877	87	6/1893	12	4	.39	5/1893	95	5/1893	11	4	.50	9/1887	97	9/1887	9	6	1.11
MN SANDY LAKE DAM LIBBY	21	7460-06	46-48	93-19	1234	8/1892	99	8/1892	2	0	.00	9/1897	99	9/1897	2	0	.00	1/1892	100	1/1892	1	1	.99
MN TWO HARBORS	21	8419-03	47-01	91-40	625	3/1894	99	3/1894	7	3	.39	3/1894	99	3/1894	7	3	.39	1/1894	100	1/1894	5	2	1.03
MN VIRGINIA	21	8543-03	47-30	92-33	1435	11/1893	97	11/1893	3	3	.16	11/1893	98	11/1893	2	3	.19	11/1893	99	11/1893	0	4	1.03
MN WALKER AH-GWAH-CHING	21	8618-01	47-04	94-35	1407	12/1907	97	12/1907	4	0	.01	12/1907	98	12/1907	3	0	.00	12/1907	98	12/1907	1	0	.99

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF
MN WINNEBAGO	21	9046-08	43-46	94-10	1110	10/1894	98	10/1894	9	3	.09	6/1895	99	6/1895	8	3	.09	10/1894	99	10/1894	5	2	1.01
MN WINNIBIGOSHISH DAM	21	9059-02	47-26	94-03	1315	6/1887	99	6/1887	2	1	.09	9/1897	98	9/1897	2	1	.09	4/1887	100	4/1887	0	0	.99
MN ZUMBROTA	21	9249-09	44-18	92-40	985	2/1895	98	2/1895	3	3	.25	4/1903	98	4/1903	4	3	.29	10/1893	92	10/1893	10	6	1.06
MS ABERDEEN	22	0021-06	33-50	88-33	207	4/1882	92	1/1888	10	6	.30	6/1889	95	6/1889	8	6	.39	4/1882	93	1/1886	16	7	1.09
MS BATESVILLE 2SW	22	0488-02	34-18	89-59	215	4/1882	97	12/1888	6	2	.26	1/1889	99	1/1889	6	2	.29	4/1882	97	1/1964	0	0	.99
MS BILOXI(CITY)	22	0792-10	30-24	88-54	15	1/1887	92	1/1890	12	15	.30	5/1893	97	5/1893	8	12	.39	1/1887	94	4/1888	28	14	1.11
MS BOONEVILLE	22	0955-03	34-40	88-34	490	4/1889	90	4/1889	22	12	.39	11/1889	91	11/1889	20	12	.50	4/1889	94	4/1889	17	10	1.06
MS BROOKHAVEN CITY	22	1094-07	31-33	90-27	425	1/1868	88	1/1892	9	5	.31	6/1889	98	10/1897	7	5	.29	8/1869	92	2/1889	4	7	1.08
MS CANTON	22	1389-05	32-36	90-02	228	4/1890	96	10/1929	21	4	.09	4/1890	96	10/1929	21	4	.09	8/1882	96	1/1949	0	0	.99
MS CLARKSDALE	22	1707-01	34-12	90-34	173	11/1892	85	11/1892	24	10	.36	11/1892	86	11/1892	24	9	.50	11/1892	85	11/1892	25	10	1.09
MS COLUMBIA	22	1865-08	31-15	89-50	155	6/1903	83	6/1903	31	12	.19	6/1903	85	6/1903	30	12	.19	6/1903	98	6/1903	18	13	1.11
MS COLUMBUS LUXAPALLILA	22	1880-06	33-31	88-24	142	1/1855	88	1/1961	14	3	.11	1/1890	97	1/1961	14	3	.09	5/1855	96	1/1961	14	3	1.06
MS CORINTH CITY	22	1962-03	34-55	88-31	385	4/1883	90	1/1895	30	13	.26	10/1895	94	12/1897	29	12	.29	7/1882	91	2/1887	36	14	1.09
MS CRYSTAL SPRINGS EXP STN	22	2094-07	31-58	90-22	487	4/1892	98	4/1892	6	6	.38	4/1892	98	4/1892	5	6	.39	4/1892	99	4/1892	5	5	1.05
MS FOREST	22	3107-05	32-19	89-29	480	4/1882	92	1/1959	9	2	.07	6/1889	97	1/1959	9	2	.09	4/1882	93	1/1959	8	2	1.01
MS GREENVILLE	22	3605-04	33-23	91-01	132	1/1887	99	12/1888	9	8	.49	2/1889	99	2/1889	8	8	.50	1/1887	100	1/1887	7	7	1.08
MS HATTIESBURG	22	3887-09	31-19	89-18	161	4/1890	92	12/1903	31	17	.31	4/1890	92	1/1906	28	16	.29	4/1890	97	4/1890	25	19	1.12
MS HERNANDO	22	3975-02	34-50	90-00	363	4/1882	89	3/1890	21	11	.32	5/1889	92	4/1890	20	10	.50	4/1882	90	1/1980	0	0	.99
MS HOLLY SPRINGS 4N	22	4173-02	34-49	89-26	483	8/1867	83	1/1888	11	8	.20	2/1889	97	2/1889	11	8	.19	8/1867	85	9/1888	16	8	1.06
MS KOSCIUSKO	22	4776-05	33-03	89-36	420	5/1889	96	1/1961	14	2	.08	5/1889	95	1/1961	14	2	.09	1/1889	99	1/1961	9	3	1.03
MS LAUREL	22	4939-09	31-41	89-07	225	2/1902	93	2/1902	22	11	.31	2/1902	94	2/1902	21	11	.39	2/1902	96	2/1902	26	11	1.11
MS LOUISVILLE	22	5247-06	33-08	89-04	581	12/1888	98	12/1888	12	6	.36	1/1889	99	12/1890	12	6	.50	12/1888	99	12/1888	1	4	1.04
MS MONTICELLO	22	5987-08	31-33	90-06	220	4/1907	98	4/1907	16	11	.29	4/1907	99	4/1907	15	11	.39	5/1907	99	5/1907	19	12	1.12
MS MOORHEAD	22	6009-04	33-27	90-31	117	4/1913	94	4/1913	27	9	.32	4/1913	95	4/1913	26	9	.50	4/1913	97	1/1955	11	2	1.03
MS NATCHEZ	22	6177-07	31-33	91-23	195	1/1799	68	1/1891	18	13	.32	5/1889	98	2/1891	16	13	.39	2/1799	65	1/1890	15	12	1.08
MS PONTOTOC EXP STN	22	7111-03	34-09	89-00	405	1/1889	98	12/1894	2	4	.28	1/1889	98	10/1894	2	4	.29	1/1889	98	1/1889	2	4	1.04
MS POPLARVILLE EXP STN	22	7128-10	30-51	89-33	313	4/1903	95	4/1903	10	3	.05	4/1903	96	4/1903	9	3	.00	4/1903	98	4/1903	2	3	1.04
MS PORT GIBSON	22	7132-07	31-58	91-00	120	8/1855	75	1/1974	0	0	.00	6/1889	98	1/1974	0	0	.00	8/1855	75	1/1974	0	0	.99
MS ROSEDALE	22	7582-01	33-51	91-01	150	11/1894	74	11/1894	32	10	.23	11/1894	75	11/1894	31	5	.29	11/1894	83	11/1894	22	5	1.12
MS STATE UNIVERSITY	22	8374-06	33-28	88-47	185	11/1886	94	10/1890	6	6	.29	1/1889	97	1/1889	7	7	.29	5/1884	97	1/1886	9	8	1.11
MS UNIVERSITY	22	9079-02	34-23	89-32	380	9/1854	70	1/1902	6	5	.26	1/1889	90	1/1902	6	5	.39	1/1855	72	1/1902	8	6	1.06

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
MS WATER VALLEY 1NNE	22	9400-02	34-10	89-38	380	2/1889	97	9/1894	4	5	.26	2/1889	93	2/1889	15	5	.29	1/1886	98	1/1886	2	3	1.03
MS WAVELAND	22	9426-10	30-18	89-23	8	7/1833	57	10/1889	16	9	.28	9/1890	93	9/1890	13	8	.39	9/1890	93	1/1971	36	1	1.07
MS WAYNESBORO 2W	22	9439-09	31-41	88-40	197	4/1882	93	12/1897	13	7	.24	3/1891	97	12/1895	16	7	.29	4/1882	95	12/1903	9	6	1.07
MS WOODVILLE	22	9793-07	31-06	91-14	400	3/1893	94	3/1893	18	10	.30	3/1893	95	3/1893	17	10	.39	3/1893	97	3/1893	20	12	1.13
MS YAZOO CITY 5NNE	22	9860-04	32-54	90-23	107	9/1893	97	4/1895	13	11	.39	9/1893	98	9/1893	14	11	.50	1/1886	100	1/1961	0	0	.99
MO APPLETON CITY	23	0204-03	38-12	94-02	800	1/1890	96	7/1896	7	7	.20	1/1893	96	1/1893	12	7	.29	12/1889	97	12/1889	3	8	1.06
MO ARCADIA	23	0224-05	37-35	90-37	926	6/1878	96	1/1897	1	2	.22	6/1896	99	6/1896	0	2	.19	1/1878	100	1/1878	0	4	1.05
MO BOWLING GREEN 2NE	23	0856-02	39-22	91-11	710	4/1883	85	1/1892	20	6	.29	12/1897	94	12/1897	13	5	.29	1/1878	95	1/1902	17	5	1.08
MO BRUNSWICK	23	1037-01	39-25	93-07	660	10/1889	98	1/1897	8	6	.36	1/1893	98	1/1893	12	7	.39	7/1874	93	1/1897	13	5	1.04
MO CARUTHERSVILLE	23	1364-06	36-12	89-40	280	2/1893	95	12/1933	0	2	.12	11/1898	97	12/1933	0	2	.19	1/1878	86	3/1884	36	11	1.16
MO CLINTON	23	1711-03	38-22	93-46	790	10/1906	97	10/1906	18	7	.30	10/1906	98	10/1906	18	7	.39	10/1906	98	10/1906	15	7	1.10
MO CONCEPTION	23	1822-01	40-15	94-41	1108	1/1888	99	1/1888	4	1	.08	10/1893	99	10/1893	4	1	.09	11/1883	98	11/1883	1	1	1.03
MO DONIPHAN	23	2289-05	36-35	90-49	330	5/1904	99	5/1904	11	4	.19	5/1904	100	5/1904	11	4	.09	4/1904	99	4/1904	15	4	1.04
MO JEFFERSON CITY WATER PLANT	23	4271-03	38-35	92-09	670	5/1891	96	1/1902	7	5	.38	8/1893	96	1/1902	7	5	.50	1/1891	98	1/1891	9	6	1.06
MO LAMAR	23	4705-04	37-30	94-16	980	3/1885	96	3/1885	13	7	.33	1/1893	100	1/1893	6	6	.39	12/1877	95	12/1877	18	9	1.08
MO LEBANON 2W	23	4825-04	37-40	92-39	1279	1/1890	100	2/1894	9	10	.37	1/1893	100	1/1893	9	10	.50	1/1878	90	1/1878	21	11	1.12
MO LEE'S SUMMIT REED WLR	23	4850-01	38-53	94-20	1000	6/1863	85	1/1888	7	4	.28	1/1893	97	1/1893	6	4	.29	10/1863	90	11/1872	10	6	1.07
MO LEXINGTON 3NE	23	4904-01	39-12	93-52	825	6/1878	90	1/1897	5	5	.19	1/1896	99	1/1896	6	6	.19	4/1875	95	11/1890	6	4	1.04
MO LOCKWOOD	23	5027-04	37-23	93-57	1078	9/1904	98	9/1904	3	2	.15	9/1904	98	9/1904	3	2	.09	1/1904	98	1/1904	2	2	1.02
MO MACON	23	5175-01	39-43	92-28	855	9/1899	98	1/1980	32	0	.07	9/1899	98	1/1980	32	0	.09	9/1899	98	12/1984	0	24	UNADJ
MO MARBLE HILL	23	5253-05	37-18	89-58	390	9/1891	95	3/1895	14	7	.37	1/1893	95	8/1980	0	0	.00	1/1893	97	1/1893	13	10	1.08
MO MEXICO	23	5541-02	39-11	91-53	775	1/1892	100	1/1892	7	5	.26	1/1893	99	1/1893	7	5	.29	1/1893	100	1/1893	6	4	1.05
MO MOUNTAIN GROVE	23	5834-04	37-09	92-16	1450	4/1901	100	4/1901	3	2	.24	4/1901	100	4/1901	3	2	.19	1/1901	100	1/1901	6	2	1.00
MO NEOSHO	23	5976-04	36-52	94-22	1011	7/1878	89	11/1887	8	2	.16	2/1893	99	2/1893	5	2	.19	2/1893	100	2/1893	5	2	1.03
MO ROLLA UNIV OF MO	23	7263-05	37-57	91-46	1180	4/1867	69	2/1979	0	0	.00	6/1907	96	2/1979	0	0	.00	1/1896	97	1/1896	5	8	1.06
MO STEFFENVILLE	23	8051-02	39-58	91-53	690	11/1897	99	4/1978	1	0	.00	11/1897	98	11/1897	11	4	.19	11/1897	99	11/1897	4	4	1.07
MO TRENTON	23	8444-01	40-05	93-38	837	7/1895	98	7/1895	15	8	.31	10/1895	99	10/1895	15	8	.39	1/1895	100	1/1895	14	11	1.18
MO UNIONVILLE	23	8523-01	40-29	93-00	1062	3/1893	97	3/1893	33	9	.18	3/1893	96	3/1893	32	9	.19	3/1893	97	3/1893	23	9	1.08
MO WARRENSBURG 2SSE	23	8712-03	38-44	93-43	840	7/1868	79	9/1887	14	11	.42	1/1899	96	1/1899	19	11	.50	1/1896	94	1/1896	18	10	1.11
MO WARRENTON 1N	23	8725-02	38-49	91-08	845	10/1859	75	8/1889	9	5	.46	1/1893	93	1/1893	13	5	.50	1/1893	93	1/1893	13	3	1.07
MO WARSAW #1	23	8733-03	38-15	93-22	705	2/1893	95	2/1893	14	7	.32	2/1893	95	1/1905	4	5	.39	11/1892	96	11/1892	18	8	1.08

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
MT ANACONDA	24	0199-01	46-08	112-57	5280	9/1905	98	9/1905	6	3	.01	9/1905	98	9/1905	6	3	.00	9/1905	99	9/1905	0	4	UNADJ
MT AUGUSTA	24	0364-04	47-29	112-23	4070	7/1896	95	9/1916	13	7	.36	7/1896	95	1/1900	17	8	.50	7/1896	96	1/1900	14	9	1.11
MT BIG TIMBER	24	0780-05	45-50	109-57	4100	4/1894	86	12/1902	10	10	.18	4/1894	86	12/1902	10	9	.19	4/1894	87	12/1902	8	3	UNADJ
MT BOZEMAN MONTANA ST UNIV	24	1044-02	45-40	111-03	4856	8/1868	92	1/1901	0	1	.15	4/1892	97	1/1901	0	1	.09	8/1868	92	1/1901	0	1	1.01
MT CASCADE 5S	24	1552-04	47-13	111-43	3390	4/1904	99	4/1904	4	4	.18	4/1904	99	4/1904	4	3	.29	4/1904	99	4/1904	4	4	1.03
MT CHINOOK	24	1722-03	48-35	109-14	2340	12/1895	91	1/1914	19	12	.76	12/1895	92	1/1914	19	12	1.00	12/1895	93	3/1899	6	14	UNADJ
MT CHOTEAU AP	24	1737-03	47-49	112-10	3945	6/1890	81	1/1922	9	5	.27	11/1891	80	1/1922	9	5	.29	6/1890	83	8/1902	14	9	UNADJ
MT CROW AGENCY	24	2112-05	45-36	107-27	3030	9/1888	94	6/1898	15	6	.43	2/1892	94	6/1895	17	7	.59	9/1879	99	1/1914	15	6	1.06
MT CUT BANK	24	2173-03	48-36	112-22	3838	12/1903	92	12/1903	8	9	.35	12/1903	92	12/1903	8	9	.39	12/1903	94	12/1903	5	7	UNADJ
MT DILLON WMCE	24	2409-02	45-12	112-38	5228	1/1895	98	1/1900	2	4	.29	1/1895	96	1/1900	2	3	.29	2/1895	100	2/1895	0	6	UNADJ
MT EKALAKA	24	2689-07	45-53	104-32	3425	1/1897	100	1/1897	6	8	.45	1/1897	95	1/1897	5	4	.50	1/1897	95	2/1897	8	7	1.13
MT ENNIS	24	2793-02	45-21	111-43	4953	1/1918	100	1/1918	2	4	.25	1/1918	100	1/1918	2	4	.29	1/1918	96	1/1918	4	4	UNADJ
MT FLATWILLOW 4ENE	24	3013-04	46-51	108-19	3138	7/1913	99	7/1913	4	2	.13	7/1913	99	7/1913	3	2	.09	7/1913	99	7/1913	0	3	UNADJ
MT FORKS 4NNE	24	3089-03	48-47	107-28	2600	1/1915	98	1/1915	13	5	.21	1/1915	98	1/1915	13	5	.19	1/1915	98	1/1915	6	4	1.05
MT FORT ASSINNIBOINE	24	3110-03	48-30	109-48	2687	1/1880	75	9/1906	16	15	.31	11/1891	73	9/1906	16	15	.29	1/1880	77	1/1918	0	1	1.04
MT FORTINE 1N	24	3139-01	48-47	114-54	3000	3/1906	100	3/1906	3	6	.26	3/1906	99	3/1906	6	6	.29	3/1906	100	3/1906	0	7	UNADJ
MT GLASGOW WSO AP	24	3558-06	48-13	106-37	2284	7/1893	95	1/1917	6	5	.38	7/1893	95	1/1917	6	5	.39	1/1894	97	2/1907	3	11	UNADJ
MT GLENDIVE	24	3581-06	47-06	104-43	2076	5/1889	98	1/1915	2	5	.24	11/1891	96	1/1915	1	5	.29	1/1889	100	1/1912	0	5	1.06
MT GREAT FALLS WSCMO AP	24	3751-04	47-29	111-22	3663	12/1891	99	1/1899	13	9	.34	12/1891	99	1/1899	13	9	.39	12/1891	99	1/1899	20	9	1.06
MT HAMILTON	24	3885-01	46-15	114-09	3529	7/1895	86	6/1910	12	7	.44	7/1895	86	1/1911	12	7	.59	6/1895	87	5/1896	12	12	UNADJ
MT HAUGAN 3E	24	3984-01	47-23	115-21	3100	1/1912	100	1/1912	9	5	.26	2/1912	100	2/1912	11	5	.29	2/1908	100	2/1908	15	6	1.07
MT HEBGEN DAM	24	4038-02	44-52	111-20	6489	6/1904	97	6/1904	13	2	.20	6/1904	97	6/1904	15	2	.19	6/1904	98	6/1904	3	2	1.06
MT HELENA WSO	24	4055-04	46-35	112-00	3828	4/1880	100	1/1905	5	4	.20	11/1891	99	1/1905	5	4	.19	4/1880	100	4/1880	0	13	UNADJ
MT HUNTLEY EXPERIMENT STATION	24	4345-05	45-55	108-15	2989	5/1906	99	5/1906	1	2	.22	5/1906	99	5/1906	2	2	.19	5/1906	99	5/1906	0	2	1.02
MT JORDAN	24	4522-06	47-19	106-54	2590	1/1905	81	1/1931	1	1	.16	1/1905	81	1/1931	1	1	.19	2/1905	82	2/1905	18	4	UNADJ
MT KALISPELL WSO AP	24	4558-01	48-18	114-16	2965	6/1896	99	1/1906	0	3	.24	6/1896	98	1/1906	0	3	.29	6/1896	99	6/1896	0	7	UNADJ
MT LIBBY 1NE RS	24	5015-01	48-24	115-32	2080	6/1895	84	2/1900	19	7	.20	6/1895	84	2/1900	19	6	.19	6/1895	99	9/1899	18	5	1.08
MT LIVINGSTON 12S	24	5080-05	45-29	110-34	4870	10/1895	89	5/1900	19	20	.48	10/1895	91	4/1900	16	15	.39	10/1895	91	10/1895	9	10	UNADJ
MT MALTA 7E	24	5338-03	48-24	107-44	2245	6/1905	99	2/1906	11	5	.34	6/1905	97	10/1905	11	5	.39	6/1905	97	10/1905	10	5	1.10
MT MEDICINE LAKE 3SE	24	5572-06	48-29	104-27	1952	1/1911	92	1/1911	27	5	.15	1/1911	93	1/1911	24	5	.19	1/1911	96	1/1911	4	7	UNADJ
MT MILDRED 5N	24	5668-07	46-46	104-58	2510	5/1918	96	5/1918	21	5	.13	5/1918	97	5/1918	21	5	.09	1/1909	97	1/1909	14	5	1.05

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
MT MILES CITY FAA AP	24	5690-07	46-26	105-52	2629	12/1877	99	1/1900	0	3	.17	11/1891	99	2/1896	4	4	.19	8/1877	99	1/1906	0	2	1.03
MT MOCCASIN EXPERIMENT STATION	24	5761-04	47-03	109-57	4300	4/1909	99	4/1909	1	1	.16	4/1909	99	4/1909	1	1	.19	1/1909100	1/1909	0	1	UNADJ	
MT NORRIS MADISON POWER HOUSE	24	6157-02	45-29	111-38	4745	2/1907	99	2/1907	1	3	.24	2/1907	99	2/1907	2	3	.29	2/1907100	2/1907	0	3	UNADJ	
MT PHILIPSBURG RS	24	6472-01	46-19	113-18	5270	9/1903	97	9/1903	7	7	.55	9/1903	97	9/1903	6	7	.69	10/1903	97	1/1917	4	5	1.05
MT PLEVNA	24	6601-07	46-25	104-30	2765	3/1912	99	3/1912	12	7	.54	3/1912100	3/1912	6	7	.79	3/1912	99	3/1912	10	7	1.09	
MT POPLAR	24	6660-06	48-07	105-12	1995	1/1889	95	9/1892	32	24	.66	11/1891	94	9/1929	42	20	.39	1/1888	96	1/1914	39	21	1.28
MT RED LODGE	24	6918-05	45-11	109-15	5575	4/1894	94	1/1900	4	7	.42	4/1894	94	1/1900	3	7	.50	3/1894	94	5/1898	5	4	1.08
MT SAINT IGNATIUS	24	7286-01	47-19	114-06	2900	2/1896	89	8/1902	8	12	.19	2/1896	89	8/1903	7	8	.19	2/1896	89	2/1896	11	3	UNADJ
MT SAVAGE	24	7382-06	47-27	104-21	1985	9/1905	99	9/1905	8	2	.16	9/1905	99	9/1905	8	2	.19	9/1905	99	1/1954	0	0	.99
MT VALIER	24	8501-03	48-19	112-15	3805	9/1911	99	9/1911	0	0	.00	9/1911	99	9/1911	0	0	.00	8/1911	99	8/1911	0	0	.99
MT VIRGINIA CITY	24	8597-02	45-18	111-57	5758	1/1888	86	6/1916	5	7	.38	11/1891	86	9/1916	5	7	.39	2/1871	82	1/1900	13	10	UNADJ
MT WEST YELLOWSTONE	24	8857-02	44-39	111-06	6657	7/1905	92	7/1905	12	9	.48	7/1905	79	7/1905	30	9	.69	7/1905	94	7/1905	27	10	1.09
MT WHITE SULPHUR SPRINGS #2	24	8930-04	46-31	110-53	5200	4/1894	79	1/1900	29	20	.40	4/1894	80	1/1900	28	17	.59	4/1894	83	8/1902	11	10	UNADJ
NE ALBION	25	0070-03	41-41	98-00	1760	4/1892	92	4/1892	11	4	.33	1/1893	93	1/1893	10	4	.39	4/1892	95	4/1892	8	6	1.09
NE ALLIANCE	25	0130-01	42-06	102-52	3980	9/1889	81	12/1896	26	10	.20	10/1900	89	10/1900	19	9	.19	8/1889	91	12/1893	7	7	UNADJ
NE ASHLAND 3NE	25	0375-06	41-04	96-20	1067	7/1888	94	7/1888	27	9	.26	3/1893	96	3/1893	24	8	.39	8/1883	98	8/1883	22	7	1.12
NE ATKINSON	25	0420-02	42-33	98-58	2125	6/1906	94	6/1906	9	3	.26	6/1906	94	6/1906	9	3	.29	6/1906	95	6/1906	8	3	1.07
NE AUBURN SESE	25	0435-09	40-23	95-45	930	11/1874	87	1/1892	16	8	.22	1/1899	98	1/1899	16	7	.19	11/1874	89	11/1878	25	8	1.10
NE BEATRICE 1N	25	0622-09	40-18	96-45	1297	1/1891	98	1/1891	4	5	.18	1/1893	99	1/1893	4	4	.19	4/1891	99	4/1891	1	3	1.00
NE BEAVER CITY	25	0640-08	40-08	99-50	2160	9/1890	97	7/1892	8	9	.29	1/1893	98	1/1893	8	8	.39	9/1890	97	9/1890	13	9	1.09
NE BRIDGEPORT	25	1145-01	41-40	103-06	3660	6/1897	99	6/1897	1	2	.24	6/1897	99	6/1897	1	2	.29	5/1897	99	5/1897	0	2	1.07
NE BROKEN BOW 2W	25	1200-05	41-25	99-41	2500	11/1894	97	11/1894	7	5	.30	9/1901	98	9/1901	4	4	.29	1/1895	99	1/1895	16	5	1.07
NE CRETE	25	2020-09	40-37	96-57	1435	1/1882	98	12/1894	2	3	.19	1/1893	98	1/1893	4	4	.19	1/1880100	1/1895	0	3	1.07	
NE CURTIS 1E	25	2100-07	40-38	100-30	2585	12/1893	91	4/1897	13	5	.25	5/1894	92	7/1895	11	5	.29	11/1893	93	1/1915	5	4	1.05
NE DAVID CITY	25	2205-06	41-15	97-08	1615	9/1888	95	3/1890	8	7	.31	12/1897	96	12/1897	5	6	.29	9/1888	97	9/1888	3	8	1.06
NE FAIRBURY 2SSE	25	2820-09	40-07	97-10	1340	4/1893	97	1/1892	8	8	.37	8/1895100	8/1895	4	7	.50	7/1875	99	1/1899	0	5	1.09	
NE FAIRMONT	25	2840-09	40-38	97-35	1640	11/1894	97	1/1950	4	1	.12	6/1896	98	1/1950	4	1	.09	11/1894	99	1/1950	0	2	1.04
NE FRANKLIN	25	3035-08	40-06	98-58	1855	1/1888	94	10/1889	22	16	.54	1/1888	94	1/1893	20	16	.79	1/1888	96	1/1888	29	16	1.17
NE GENEVA	25	3175-09	40-32	97-36	1630	1/1893	99	1/1893	2	6	.43	1/1893	99	1/1893	2	6	.50	8/1890	99	8/1890	0	6	1.07
NE GENOA 2W	25	3185-06	41-27	97-46	1590	12/1875	96	1/1892	7	6	.29	1/1893	97	1/1893	6	6	.39	12/1875	98	12/1875	5	6	1.10
NE GOTHENBURG	25	3365-05	40-56	100-10	2585	9/1894	98	5/1895	9	4	.14	9/1894	99	1/1902	6	3	.09	9/1894	99	9/1894	11	5	1.07

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STM-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
NE HALSEY 2W	25	3540-02	41-54	100-19	2705	4/1903	99	4/1903	10	6	.41	4/1903	99	4/1903	10	6	.39	2/1903	100	2/1903	9	7	1.12
NE HARRISON	25	3615-01	42-41	103-53	4850	3/1893	75	12/1900	28	24	.48	5/1914	98	5/1914	16	11	.50	3/1893	76	11/1900	33	11	1.18
NE HARTINGTON	25	3630-03	42-36	97-16	1370	8/1891	99	8/1891	5	5	.24	1/1893	99	1/1893	4	5	.29	8/1891	99	8/1891	5	7	1.07
NE HASTINGS	25	3660-08	40-35	98-21	1925	9/1890	94	12/1890	10	8	.52	5/1907	98	5/1907	7	6	.59	5/1880	89	4/1889	7	8	1.10
NE HAY SPRINGS	25	3710-01	42-41	102-41	3855	1/1886	97	10/1896	5	8	.27	1/1893	98	3/1894	8	8	.29	1/1886	99	1/1886	4	9	1.07
NE HEBRON	25	3735-09	40-10	97-35	1480	1/1886	99	1/1895	8	6	.38	1/1893	99	1/1893	9	7	.39	1/1886	99	1/1886	4	7	1.10
NE HOLDREGE	25	3910-08	40-26	99-22	2320	6/1890	93	6/1901	3	4	.24	4/1901	98	4/1901	3	4	.29	6/1890	98	6/1890	1	3	1.05
NE IMPERIAL	25	4110-07	40-31	101-38	3278	6/1890	97	1/1891	18	7	.28	12/1894	99	7/1895	13	6	.29	6/1890	99	6/1890	17	7	1.09
NE KIMBALL	25	4440-01	41-14	103-40	4705	11/1887	97	11/1887	2	4	.30	1/1893	98	1/1893	2	4	.39	11/1887	97	1/1945	0	2	1.03
NE LODGEPOLE	25	4900-01	41-09	102-38	3832	12/1894	92	12/1894	14	5	.34	12/1894	93	12/1907	11	4	.29	9/1894	94	1/1911	8	3	1.07
NE LOUP CITY 1N	25	4985-05	41-17	98-58	2120	12/1895	94	12/1895	6	5	.42	1/1902	97	1/1902	3	4	.50	11/1894	97	11/1894	9	7	1.09
NE MADISON	25	5080-03	41-50	97-27	1580	12/1884	88	7/1890	17	8	.39	1/1898	98	1/1898	9	6	.39	12/1884	90	12/1888	14	7	1.08
NE MCCOOK	25	5310-07	40-12	100-35	2580	2/1883	81	1/1914	18	7	.33	4/1909	94	4/1909	23	8	.50	6/1882	92	1/1883	31	12	1.18
NE MERRIMAN	25	5470-02	42-55	101-41	3250	2/1915	94	2/1915	10	8	.49	2/1915	94	2/1915	10	8	.59	1/1898	82	1/1898	18	13	UNADJ
NE MINDEN	25	5565-08	40-30	98-57	2170	1/1884	96	9/1897	2	8	.41	1/1900	99	1/1900	2	8	.50	1/1878	99	1/1878	1	8	1.11
NE NORTH LOUP	25	6040-05	41-30	98-46	1960	12/1888	98	11/1891	8	7	.29	4/1895	99	7/1895	12	6	.29	11/1887	97	12/1888	14	7	1.09
NE OAKDALE	25	6135-03	42-04	97-57	1720	1/1888	99	6/1893	3	4	.16	1/1893	99	1/1893	4	4	.09	8/1883	97	12/1888	3	4	1.03
NE PAWNEE CITY	25	6570-09	40-06	96-09	1185	1/1882	79	12/1887	22	4	.20	11/1903	98	11/1903	6	2	.19	2/1878	82	2/1885	18	4	1.08
NE PURDUM	25	6970-02	42-04	100-15	2690	5/1902	99	5/1902	1	2	.14	5/1902	99	5/1902	1	2	.19	4/1902	99	4/1902	0	2	1.08
NE RED CLOUD	25	7070-08	40-06	98-31	1720	3/1872	78	7/1893	17	6	.51	4/1901	97	4/1901	10	5	.79	3/1872	82	11/1889	10	6	1.09
NE SAINT PAUL	25	7515-05	41-12	98-27	1796	7/1895	97	7/1895	8	5	.31	1/1900	100	1/1900	3	4	.39	1/1896	100	1/1896	0	4	1.07
NE SEWARD	25	7715-06	40-54	97-05	1480	2/1885	87	9/1950	0	1	.00	1/1900	92	9/1950	0	1	.00	2/1885	94	1/1951	0	0	.99
NE SYRACUSE	25	8395-09	40-40	96-11	1100	6/1871	93	1/1895	13	12	.24	4/1894	99	4/1894	13	12	.29	6/1871	94	7/1875	21	17	1.11
NE TECUMSEH	25	8465-09	40-22	96-11	1130	6/1884	94	1/1905	12	6	.24	10/1893	93	10/1893	21	8	.39	4/1878	98	4/1878	4	7	1.06
NE TEKAMAH 1S	25	8480-03	41-45	96-14	1040	4/1890	98	6/1962	4	2	.19	1/1893	98	6/1962	5	2	.19	3/1890	99	3/1890	5	8	1.08
NE WAKEFIELD	25	8915-03	42-16	96-52	1413	4/1897	98	4/1897	6	4	.28	4/1897	98	4/1897	5	4	.29	10/1894	99	1/1954	0	1	1.00
NE WEEPING WATER	25	9090-06	40-52	96-09	1100	1/1882	91	7/1893	16	10	.51	6/1907	97	6/1907	10	9	.50	3/1878	98	3/1878	9	8	1.10
NE YORK	25	9510-06	40-52	97-36	1610	2/1892	98	1/1950	2	2	.07	6/1901	100	1/1950	2	2	.09	3/1884	95	1/1951	4	2	1.03
NV AUSTIN	26	0507-02	39-30	117-05	6605	1/1888	90	9/1959	13	3	.19	2/1888	88	9/1959	13	3	.19	2/1888	99	2/1888	26	17	1.25
NV BATTLE MOUNTAIN AP	26	0691-02	40-35	116-54	4539	2/1870	96	11/1877	16	7	.66	5/1902	96	5/1902	19	6	.59	1/1870	100	1/1870	0	7	UNADJ
NV BOULDER CITY	26	1071-04	35-59	114-51	2525	9/1931	97	9/1931	5	1	.01	9/1931	97	9/1931	5	1	.00	9/1931	97	9/1931	1	1	UNADJ

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
NV ELKO FAA AP	26	2573-02	40-50	115-47	5075	2/1870	98	1/1906	4	6	.51	2/1888	91	1/1914	2	4	.59	1/1870	100	1/1870	0	8	UNADJ
NV FALLON EXPERIMENT STATION	26	2780-01	39-27	118-47	3965	4/1889	92	9/1904	2	6	.32	4/1889	92	1/1907	1	3	.39	4/1889	93	4/1889	6	5	UNADJ
NV GOLCONDA	26	3245-01	40-57	117-29	4392	5/1878	95	1/1893	17	5	.41	7/1906	94	7/1906	19	5	.50	1/1878	100	1/1878	0	6	UNADJ
NV LOVELOCK	26	4698-01	40-11	118-28	3975	2/1888	93	2/1888	26	10	.64	5/1902	88	6/1914	29	10	.59	4/1888	96	4/1888	4	10	UNADJ
NV MCGILL	26	4950-02	39-24	114-46	6300	5/1891	82	1/1900	16	16	.33	1/1892	83	5/1905	10	8	.29	1/1888	100	1/1888	0	5	UNADJ
NV MINA	26	5168-03	38-23	118-06	4552	6/1889	92	7/1891	7	9	.53	3/1896	96	6/1905	4	3	.50	1/1896	100	1/1896	0	4	UNADJ
NV RENO WSFO AP	26	6779-01	39-30	119-47	4404	2/1870	98	12/1909	11	8	.46	2/1888	98	12/1909	11	8	.69	1/1870	100	1/1870	0	12	UNADJ
NV SEARCHLIGHT	26	7369-04	35-28	114-55	3540	12/1913	93	8/1942	9	2	.17	12/1913	93	12/1913	12	5	.50	1/1914	100	1/1914	0	5	UNADJ
NV WELLS	26	8988-02	41-07	114-58	5650	2/1870	78	1/1942	1	1	.13	6/1895	63	1/1942	1	1	.09	1/1870	100	1/1870	1	4	UNADJ
NV WINNEMUCCA WSO AP	26	9171-01	40-54	117-48	4297	7/1877	98	1/1888	1	5	.45	7/1877	98	4/1889	1	4	.50	1/1870	100	1/1870	0	7	UNADJ
NH BETHLEHEM	27	0703-01	44-17	71-41	1380	12/1892	97	12/1892	6	6	.31	12/1892	97	12/1892	6	6	.39	12/1892	97	12/1892	11	7	1.05
NH DURHAM	27	2174-02	43-09	70-57	74	4/1892	98	4/1892	6	6	.33	1/1893	98	1/1893	5	6	.50	6/1892	98	6/1892	7	7	1.08
NH FIRST CONNECTICUT LAKE	27	2999-01	45-05	71-17	1660	1/1918	100	1/1918	0	0	.00	1/1918	100	1/1918	0	0	.00	1/1918	100	1/1918	0	1	1.02
NH HANOVER	27	3850-02	43-42	72-17	603	11/1834	98	11/1836	5	2	.16	1/1889	100	1/1892	7	2	.00	11/1834	95	5/1861	2	2	1.03
NH KEENE	27	4399-02	42-55	72-16	480	1/1893	100	1/1893	12	6	.23	1/1893	100	1/1893	12	6	.29	1/1893	100	1/1893	11	6	1.07
NJ ATLANTIC CITY STATE MARINA	28	0325-03	39-23	74-26	10	1/1874	100	1/1889	2	3	.19	1/1874	100	1/1892	1	2	.19	1/1874	100	1/1874	6	5	1.06
NJ BELVIDERE	28	0734-01	40-50	75-05	263	9/1891	98	9/1891	4	3	.15	1/1893	99	1/1893	4	3	.09	8/1881	92	8/1881	13	4	1.05
NJ BOONTON 1SE	28	0907-01	40-54	74-24	280	11/1893	82	11/1893	18	5	.15	11/1893	83	11/1893	18	5	.19	9/1892	91	9/1892	10	4	1.04
NJ CHARLOTTEBURG	28	1582-01	41-02	74-26	760	4/1893	100	4/1893	2	0	.00	4/1893	99	4/1893	3	0	.00	4/1893	100	4/1893	0	1	1.01
NJ FLEMINGTON	28	3029-01	40-30	74-52	180	3/1898	99	3/1898	6	4	.22	3/1898	99	3/1898	5	4	.19	2/1879	85	2/1879	22	6	1.07
NJ HIGHTSTOWN 2W	28	3951-02	40-16	74-34	100	5/1891	94	5/1891	21	12	.21	8/1892	95	8/1892	22	12	.19	5/1891	94	5/1891	15	14	1.08
NJ INDIAN MILLS 2W	28	4229-02	39-48	74-47	100	5/1901	100	5/1901	0	1	.06	5/1901	100	5/1901	0	1	.00	5/1901	100	5/1901	0	1	1.01
NJ LONG BRANCH OAKHURST	28	4987-03	40-16	74-00	30	1/1874	69	1/1889	36	9	.32	11/1907	96	11/1907	20	5	.29	1/1874	69	8/1885	31	6	1.11
NJ MOORESTOWN	28	5728-02	39-58	74-58	45	4/1863	97	2/1867	13	8	.27	1/1893	97	1/1893	14	7	.29	1/1865	98	1/1865	7	7	1.09
NJ NEW BRUNSWICK 3SE	28	6055-02	40-28	74-26	86	1/1863	92	1/1863	13	6	.23	1/1892	100	1/1892	5	5	.19	1/1854	100	1/1863	0	3	1.06
NJ PLAINFIELD	28	7079-01	40-36	74-24	90	8/1888	96	1/1890	9	6	.11	1/1892	98	1/1892	7	6	.09	6/1887	98	6/1887	5	6	1.04
NJ TUCKERTON	28	8899-02	39-36	74-20	20	5/1898	89	5/1898	17	9	.27	5/1898	89	5/1898	16	9	.29	1/1898	91	1/1898	14	8	1.08
NM AZTEC RUINS NATL MONUMENT	29	0692-01	36-50	108-00	5644	1/1895	81	1/1925	0	4	.52	1/1895	80	1/1932	0	3	.39	3/1895	91	3/1895	9	11	UNADJ
NM BELL RANCH	29	0858-03	35-32	104-06	4500	1/1904	98	1/1904	2	1	.01	11/1904	96	11/1904	3	0	.00	1/1899	99	1/1899	1	1	UNADJ
NM CARLSBAD	29	1469-07	32-25	104-14	3120	1/1894	99	1/1902	6	7	.41	2/1900	97	2/1900	8	8	.59	1/1894	100	1/1894	0	12	UNADJ
NM CARRIZOZO	29	1515-05	33-39	105-53	5438	1/1908	97	1/1908	6	5	.39	6/1908	95	6/1908	7	4	.59	1/1908	100	1/1908	0	5	UNADJ

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF
NM CHAMA	29	1664-02	36-55	106-35	7850	12/1889	89	1/1906	20	12	.42	9/1891	84	5/1899	29	21	.59	7/1889	91	1/1906	19	12	1.12
NM CIMARRON 4SW	29	1813-02	36-28	104-57	6542	5/1904	99	5/1904	24	8	.11	5/1904	99	5/1904	24	8	.09	5/1904	99	5/1904	0	7	UNADJ
NM CLAYTON WSO AP	29	1887-03	36-27	103-09	4669	2/1896	89	4/1903	16	8	.26	2/1896	87	4/1903	16	8	.29	2/1896	89	10/1899	11	6	UNADJ
NM ELEPHANT BUTTE DAM	29	2848-05	33-09	107-11	4576	10/1908	99	10/1908	3	3	.34	10/1908	99	10/1908	3	3	.39	4/1907	100	4/1907	0	3	UNADJ
NM FORT BAYARD	29	3265-04	32-48	108-09	6142	1/1867	95	6/1922	1	2	.25	1/1895	97	1/1895	6	3	.69	1/1867	100	8/1871	2	3	1.07
NM FORT SUMNER	29	3294-07	34-28	104-15	4025	1/1864	66	11/1904	25	10	.41	6/1909	92	6/1909	24	8	.50	5/1864	67	6/1899	11	9	UNADJ
NM GAGE 4ESE	29	3368-08	32-13	108-01	4410	1/1906	96	1/1906	11	3	.23	12/1906	91	12/1906	14	3	.39	1/1899	97	1/1899	3	3	UNADJ
NM JEMEZ SPRINGS	29	4369-02	35-46	106-41	6262	1/1910	99	1/1910	5	7	.43	10/1910	97	10/1910	6	6	.50	1/1910	100	1/1910	4	7	1.16
NM JORNADA EXPERIMENTAL RANGE	29	4426-08	32-37	106-44	4266	1/1914	98	1/1914	7	4	.38	7/1914	93	7/1914	11	3	.59	1/1914	100	1/1914	0	4	UNADJ
NM LAS VEGAS SEWAGE FLT	29	4862-02	35-32	105-12	6349	9/1887	96	1/1902	10	8	.41	1/1892	98	1/1902	11	8	.50	1/1887	100	1/1902	8	8	1.10
NM LOS LUNAS 3SSW	29	5150-05	34-46	106-45	4840	4/1889	98	4/1896	23	7	.33	9/1891	90	12/1899	28	6	.39	1/1889	100	1/1889	0	8	UNADJ
NM LUNA RS	29	5273-04	33-50	108-56	7050	1/1900	99	1/1900	5	5	.55	1/1900	86	1/1918	12	2	.69	1/1900	100	1/1900	6	6	1.19
NM MOUNTAIN PARK	29	5960-06	32-57	105-51	6780	11/1894	77	8/1905	19	16	.54	11/1894	68	8/1905	26	19	.79	11/1894	80	11/1894	24	7	1.19
NM MOUNTAINAIR	29	5965-06	34-31	106-15	6520	1/1902	98	12/1927	17	8	.33	5/1902	84	1/1929	23	8	.50	1/1902	100	1/1902	0	16	UNADJ
NM OROGRANDE	29	6435-08	32-23	106-06	4179	12/1904	80	1/1908	35	7	.47	12/1904	79	1/1913	31	6	.59	12/1904	95	12/1904	4	11	UNADJ
NM RED RIVER	29	7323-02	36-42	105-24	8676	7/1906	96	7/1906	6	3	.14	7/1906	93	7/1906	11	3	.09	1/1906	100	1/1926	5	2	1.04
NM ROSWELL FAA AP	29	7610-07	33-18	104-32	3669	3/1893	99	3/1893	7	8	.46	6/1894	100	1/1905	6	4	.39	1/1878	100	1/1878	0	7	UNADJ
NM SAN JON	29	7867-03	35-07	103-20	4230	5/1907	99	5/1907	8	3	.17	6/1907	97	6/1907	10	3	.19	1/1907	100	1/1907	0	4	UNADJ
NM SANTA ROSA	29	8107-07	34-57	104-41	4620	1/1908	97	1/1908	20	8	.37	2/1908	89	2/1908	32	8	.50	1/1908	100	1/1908	0	6	UNADJ
NM SOCORRO	29	8387-05	34-05	106-53	4585	11/1849	67	1/1975	1	0	.00	1/1893	94	1/1975	1	0	.00	11/1849	72	10/1875	12	14	UNADJ
NM SPRINGER	29	8501-03	36-21	104-35	5878	1/1891	97	1/1905	16	6	.42	12/1891	91	1/1902	20	8	.59	1/1887	100	1/1887	0	9	UNADJ
NM STATE UNIVERSITY	29	8535-08	32-17	106-45	3881	9/1851	88	1/1893	6	4	.31	1/1892	100	9/1967	2	1	.00	9/1851	93	1/1886	1	4	UNADJ
NM TUCUMCARI 4NE	29	9156-03	35-12	103-41	4086	12/1904	98	12/1904	2	2	.04	12/1904	98	1/1916	2	1	.00	1/1905	100	1/1905	0	2	UNADJ
NM TULAROSA	29	9165-08	33-05	106-03	4430	4/1908	96	1/1973	51	1	.12	4/1908	81	1/1973	50	1	.09	1/1908	98	1/1908	2	15	UNADJ
NY ADDISON	30	0023-01	42-06	77-13	1025	9/1890	93	9/1890	28	11	.29	1/1895	95	1/1895	27	11	.50	7/1890	96	7/1890	23	11	1.11
NY ALBANY WSFOAP	30	0042-05	42-45	73-48	275	1/1795	86	7/1887	4	4	.12	1/1874	100	1/1889	3	3	.09	1/1826	98	5/1861	8	7	1.05
NY ALFRED	30	0085-01	42-15	77-47	1780	1/1852	65	1/1914	5	5	.25	1/1893	89	1/1914	5	5	.29	1/1852	68	4/1879	19	7	1.12
NY ALLEGANY STATE PARK	30	0093-01	42-06	78-45	1500	9/1924	99	9/1924	8	2	.09	9/1924	99	9/1924	8	2	.09	9/1924	99	9/1924	8	2	1.03
NY ANGELICA	30	0183-01	42-18	78-01	1420	5/1854	77	1/1891	8	10	.42	1/1893	97	1/1893	13	10	.59	1/1856	77	4/1879	14	12	1.11
NY AUBURN 2NE	30	0321-10	42-56	76-32	765	1/1827	71	1/1898	14	6	.14	9/1897	89	9/1897	14	5	.19	1/1827	68	6/1889	19	3	1.04
NY BAINBRIDGE 2E	30	0360-02	42-17	75-27	994	10/1936	91	10/1936	14	3	.02	10/1936	91	10/1936	15	3	.00	1/1908	92	1/1908	9	3	1.02

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION												
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF							
NY BATAVIA	30	0443-09	42-59	78-11	890	1/1932	99	1/1932	18	7	.11	1/1932	99	1/1932	18	7	.09	1/1931100	1/1931	16	5	1.03								
NY BINGHAMTON WSO AP	30	0687-02	42-13	75-59	1600	7/1890	99	7/1890	13	7	.28	7/1890	99	1/1893	11	7	.29	6/1890100	6/1890	11	8	1.07								
NY BRIDGEHAMPTON	30	0889-04	40-57	72-18	60	8/1930	99	8/1930	19	5	.11	8/1930	99	8/1930	19	5	.09	8/1930	99	8/1930	15	4	1.03							
NY BROCKPORT 2NW	30	0937-09	43-15	77-58	413	3/1890	84	3/1890	20	6	.28	1/1893	85	1/1893	18	8	.29	2/1890	85	2/1890	17	4	1.06							
NY BUFFALO WSCMO AP	30	1012-09	42-56	78-44	705	1/1831	87	1/1914	0	3	.18	1/1873100	1/1914	0	3	.19	1/1832	86	1/1888	1	6	1.06								
NY CANTON 4SE	30	1185-08	44-34	75-07	440	1/1854	93	9/1888	13	8	.24	1/1893	93	1/1893	18	7	.29	4/1855	86	9/1876	12	8	1.06							
NY CHASM FALLS	30	1387-08	44-45	74-13	1060	1/1927	89	1/1927	12	1	.13	1/1927	89	6/1940	5	1	.09	9/1926	95	9/1926	4	2	1.03							
NY CHAZY	30	1401-07	44-53	73-26	170	7/1899	95	7/1899	4	3	.37	12/1902	95	12/1902	4	3	.39	6/1891	85	6/1891	16	4	1.09							
NY COOPERSTOWN	30	1752-02	42-42	74-55	1200	1/1854	96	1/1854	4	5	.42	1/1893	95	1/1893	5	5	.39	1/1854	98	7/1870	2	4	1.06							
NY CORTLAND	30	1799-02	42-36	76-11	1129	3/1892	98	3/1892	6	2	.25	3/1892	98	1/1898	2	1	.19	9/1850	78	6/1897	0	0	.99							
NY DANNEMORA	30	1966-07	44-43	73-43	1340	1/1906	99	1/1906	4	2	.20	1/1906	99	1/1906	4	2	.19	1/1906	99	1/1906	1	2	1.04							
NY DANSVILLE	30	1974-10	42-34	77-42	685	2/1918	93	2/1918	10	5	.20	2/1918	93	2/1918	10	5	.19	7/1917	95	7/1917	7	4	1.05							
NY ELMIRA 2SE	30	2610-01	42-05	76-47	840	1/1852	71	1/1889	12	8	.32	2/1894	98	10/1896	10	8	.39	1/1851	77	1/1890	9	8	1.07							
NY FREDONIA	30	3033-09	42-27	79-18	760	1/1829	59	1/1915	0	2	.28	1/1914100	1/1914	0	2	.29	1/1830	58	1/1915	0	2	1.07								
NY GENEVA RESR FM	30	3184-10	42-53	77-02	718	1/1852	81	1/1895	2	6	.24	12/1892	78	10/1894	22	6	.29	11/1850	88	9/1874	10	7	1.11							
NY GLENHAM	30	3259-05	41-31	73-56	275	2/1932100	2/1932	2	1	.08	2/1932100	2/1932	2	1	.09	2/1932100	2/1932	0	1	1.01										
NY GLOVERSVILLE	30	3319-06	43-03	74-20	870	5/1892	98	5/1892	3	6	.21	1/1893	99	1/1893	3	6	.19	5/1892	99	5/1892	3	6	1.06							
NY HEMLOCK	30	3773-10	42-47	77-37	902	5/1898	98	4/1905	4	1	.04	5/1898	98	5/1898	4	1	.00	6/1898	98	6/1898	1	1	1.01							
NY INDIAN LAKE 2SW	30	4102-03	43-45	74-17	1660	9/1899	98	9/1899	5	0	.01	9/1899	99	5/1921	3	0	.00	9/1899	98	1/1926	1	0	.99							
NY ITHACA CORNELL UN	30	4174-10	42-27	76-27	960	1/1827	83	1/1875	1	7	.24	1/1893100	1/1893	2	6	.29	1/1828	80	1/1875	0	3	1.05								
NY LAKE PLACID 2S	30	4555-03	44-15	73-59	1940	8/1897	85	8/1897	26	4	.25	8/1897	86	8/1897	25	4	.29	8/1897	86	8/1897	20	4	1.06							
NY LAWRENCEVILLE	30	4647-08	44-45	74-39	500	7/1931	98	7/1931	1	1	.15	7/1931	98	7/1931	1	1	.19	7/1931	99	7/1931	0	1	1.02							
NY LITTLE FALLS CITY RESER	30	4791-06	43-04	74-52	900	1/1897	98	1/1897	4	2	.11	1/1897	98	1/1897	4	2	.09	1/1897	99	1/1897	1	1	1.02							
NY LITTLE FALLS MILL ST	30	4796-06	43-02	74-52	360	1/1897	50	11/1911	53	3	.12	1/1897	48	1/1921	45	2	.09	1/1897	83	1/1897	17	1	1.03							
NY LOCKPORT 2NE	30	4844-09	43-11	78-39	520	11/1848	72	1/1913	1	1	.12	1/1893	98	1/1913	1	1	.09	6/1870	85	1/1897	1	3	1.04							
NY LOWVILLE	30	4912-03	43-48	75-29	860	1/1827	75	1/1889	11	8	.33	12/1892	97	1/1893	8	8	.39	1/1827	77	8/1884	12	9	1.08							
NY MOHONK LAKE	30	5426-05	41-46	74-09	1245	1/1896	98	1/1896	4	0	.01	1/1896	97	2/1920	4	0	.00	1/1896	99	1/1896	1	0	.99							
NY MORRISVILLE 3S	30	5512-02	42-51	75-39	1390	8/1911	88	8/1911	32	12	.43	8/1911	89	8/1911	30	12	.59	8/1911	89	8/1911	29	9	1.08							
NY NEW YORK CENTRAL PARK	30	5801-04	40-47	73-58	130	10/1821100	7/1888	1	1	.05	1/1876100	10/1891	0	1	.00	1/1836	99	1/1870	1	3	1.06									
NY NORWICH	30	6085-02	42-32	75-32	1020	9/1906	95	11/1975	59	2	.18	9/1906	95	9/1975	60	2	.29	9/1906	97	9/1906	25	9	1.09							
NY OGDENBURG 4NE	30	6164-08	44-44	75-26	280	1/1838	63	10/1883	15	5	.38	2/1893	97	2/1893	8	3	.39	1/1838	67	10/1883	12	4	1.07							

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE					MAX/MIN TEMPERATURE					PRECIPITATION							
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
NY ONEONTA STATE UNIV	30	6232-02	42-28	75-04	1400	9/1894	94	9/1894	10	4	.29	9/1894	94	9/1894	9	4	.29	9/1894	95	9/1894	15	4	1.06
NY OSWEGO	30	6314-09	43-28	76-30	350	1/1844	96	1/1871	3	4	.24	7/1889	99	7/1889	3	3	.29	1/1844	95	1/1871	3	4	1.06
NY PENN YAN 8W	30	6517-10	42-40	77-11	997	1/1829	64	1/1928	22	7	.21	8/1897	79	1/1928	22	7	.19	1/1829	80	1/1875	35	11	1.12
NY PLATTSBURGH AFB	30	6659-07	44-39	73-28	165	1/1839	63	11/1898	48	17	.21	1/1895	59	2/1902	49	15	.19	1/1840	68	9/1876	37	3	1.10
NY PORT JERVIS	30	6774-02	41-23	74-41	470	1/1880	94	1/1890	4	3	.14	1/1893	98	1/1893	4	3	.09	1/1880	94	1/1880	13	4	1.06
NY POUGHKEEPSIE FAA AP	30	6820-05	41-38	73-53	155	1/1828	53	1/1891	38	8	.27	1/1893	68	1/1893	39	8	.29	1/1830	52	6/1933	10	4	1.02
NY ROCHESTER AIRPORT	30	7167-09	43-07	77-40	547	1/1830	98	1/1873	2	6	.21	1/1872	100	1/1892	1	4	.19	1/1829	99	1/1872	0	6	1.06
NY SARATOGA SPRINGS 4SW	30	7484-05	43-02	73-49	310	6/1903	98	6/1903	14	6	.25	6/1903	98	6/1903	14	6	.29	5/1903	99	5/1903	14	6	1.07
NY SCARSDALE	30	7497-04	40-59	73-48	199	1/1904	98	1/1904	3	3	.25	1/1904	98	1/1904	3	3	.29	1/1904	98	1/1904	2	3	1.06
NY SETAUKET STRONG	30	7633-04	40-58	73-06	40	8/1885	99	8/1885	1	1	.10	8/1885	99	8/1885	1	1	.09	8/1885	99	8/1885	0	1	1.03
NY SOUTH WALES EMERY PARK	30	8058-09	42-43	78-36	1090	10/1931	91	10/1931	16	2	.11	10/1931	93	10/1931	15	2	.09	10/1931	94	10/1931	10	3	1.02
NY STILLWATER RESERVOIR	30	8248-03	43-53	75-02	1690	1/1927	99	1/1927	1	2	.14	1/1927	99	1/1927	1	2	.19	5/1921	96	5/1921	3	1	1.02
NY SYRACUSE WSO AP	30	8383-10	43-07	76-07	421	1/1843	61	11/1888	18	13	.59	9/1902	99	9/1902	5	8	.59	1/1843	61	8/1884	20	8	1.12
NY TROY LOCK & DAM 2	30	8600-05	42-45	73-41	24	1/1829	37	11/1899	44	7	.60	11/1898	47	12/1922	43	3	.59	1/1829	37	4/1896	40	4	1.10
NY TUPPER LAKE SUNMOUNT	30	8631-03	44-14	74-26	1680	6/1899	82	6/1899	26	3	.19	6/1899	82	6/1899	26	3	.19	6/1899	85	6/1899	20	3	1.05
NY UTICA 3W	30	8739-06	43-06	75-17	500	1/1826	55	1/1927	19	6	.22	1/1893	60	1/1893	49	17	.29	1/1826	66	8/1884	31	9	1.09
NY WALDEN	30	8906-05	41-33	74-10	380	1/1925	77	1/1925	25	4	.24	1/1925	77	1/1925	24	4	.39	1/1922	99	1/1922	4	3	1.04
NY WANAKENA RANGER SCHOOL	30	8944-03	44-09	74-54	1510	6/1910	98	6/1910	5	1	.01	6/1910	97	6/1910	6	1	.00	6/1910	98	6/1910	4	1	1.00
NY WATERTOWN	30	9000-09	43-58	75-52	497	1/1856	71	8/1892	2	4	.26	1/1893	97	1/1893	3	4	.29	1/1856	73	6/1890	3	4	1.07
NY WEST POINT	30	9292-05	41-23	73-58	320	1/1824	93	11/1884	13	6	.30	3/1890	90	10/1891	18	6	.19	4/1836	90	9/1876	9	3	1.04
NY YORKTOWN HEIGHTS 1W	30	9670-05	41-16	73-48	670	1/1888	95	1/1889	10	2	.23	1/1893	95	1/1893	10	2	.29	1/1888	95	1/1888	5	2	1.04
NC ALBEMARLE	31	0090-05	35-22	80-11	610	7/1911	99	7/1911	8	6	.32	7/1911	99	7/1911	8	6	.39	7/1911	99	7/1911	17	7	1.09
NC BANNER ELK	31	0506-02	36-10	81-52	3750	9/1907	97	9/1907	6	4	.25	9/1907	98	9/1907	6	4	.29	9/1907	98	9/1907	5	4	1.04
NC CHAPEL HILL 2W	31	1677-03	35-55	79-06	500	1/1820	74	1/1894	13	5	.16	1/1891	94	4/1891	14	6	.19	4/1856	81	1/1894	17	4	1.05
NC EDENTON	31	2635-08	36-03	76-37	20	1/1896	98	1/1957	13	1	.02	1/1896	99	1/1957	13	1	.00	1/1896	99	1/1896	5	3	1.06
NC ELIZABETH CITY	31	2719-08	36-19	76-12	8	4/1911	94	4/1911	7	4	.30	4/1911	96	4/1911	5	4	.29	4/1911	97	4/1911	2	4	1.04
NC FAYETTEVILLE	31	3017-06	35-04	78-52	96	3/1871	85	8/1892	5	5	.29	2/1895	99	2/1895	3	5	.39	2/1871	89	1/1889	10	7	1.07
NC GOLDSBORO 1SSW	31	3510-07	35-21	78-01	82	1/1856	83	6/1895	5	3	.23	5/1891	96	1/1893	7	4	.29	3/1860	88	1/1896	1	2	1.03
NC HATTERAS	31	3897-08	35-13	75-41	5	9/1874	99	1/1888	1	4	.28	1/1882	100	4/1887	1	4	.29	9/1874	99	9/1874	0	7	UNADJ
NC HENDERSON 2NNW	31	3969-03	36-22	78-25	480	6/1893	98	6/1893	13	7	.26	6/1893	98	6/1893	13	7	.29	6/1893	99	6/1893	16	9	1.07
NC HENDERSONVILLE 1NE	31	3976-01	35-20	82-27	2160	10/1890	92	3/1894	13	4	.18	6/1898	98	6/1898	8	2	.29	10/1890	91	10/1890	10	3	1.07

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STATE & STATION NAME	MEAN TEMPERATURE											MAX/MIN TEMPERATURE											PRECIPITATION										
	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF										
NC HIGHLANDS	31	4055-01	35-03	83-11	3840	1/1877	87	10/1904	11	4	.23	1/1891	90	10/1904	11	5	.19	4/1878	87	1/1894	10	5	1.07										
NC KINSTON 5SE	31	4684-07	35-13	77-32	55	9/1899	91	9/1899	19	11	.29	9/1899	91	9/1899	19	11	.39	9/1899	92	9/1899	13	7	1.07										
NC LENOIR	31	4938-02	35-55	81-32	1200	8/1871	95	11/1947	0	1	.20	1/1891	95	1/1900	8	4	.39	8/1871	99	1/1872	4	7	1.06										
NC LOUISBURG	31	5123-03	36-06	78-19	260	1/1891	98	3/1891	4	6	.38	7/1891	97	7/1891	3	6	.50	1/1891	99	1/1891	6	8	1.06										
NC LUMBERTON 6NW	31	5177-06	34-42	79-04	130	4/1882	93	1/1963	1	0	.00	7/1893	98	1/1963	0	0	.00	4/1882	96	1/1963	0	0	.99										
NC MARION	31	5340-01	35-41	82-00	1425	5/1888	90	2/1890	10	6	.35	1/1891	92	1/1891	9	6	.39	4/1888	92	4/1888	13	6	1.07										
NC MARSHALL	31	5356-01	35-48	82-41	2050	11/1898	94	1/1912	13	4	.33	11/1898	94	1/1912	13	4	.39	1/1899	96	1/1899	19	5	1.07										
NC MONROE	31	5771-05	34-58	80-30	586	1/1888	93	1/1888	16	11	.15	2/1896	100	2/1896	8	3	.19	1/1888	93	1/1888	14	4	1.06										
NC MOREHEAD CITY 2WNW	31	5830-07	34-44	76-44	10	2/1896	91	2/1896	12	4	.26	2/1896	92	1/1897	11	4	.29	3/1896	91	3/1896	12	4	1.07										
NC MORGANTON	31	5838-01	35-45	81-41	1160	2/1889	97	2/1889	4	4	.41	1/1891	98	1/1891	3	4	.59	2/1889	99	2/1889	4	4	1.07										
NC MOUNT AIRY	31	5890-02	36-31	80-37	1030	5/1889	98	4/1893	3	3	.24	1/1891	98	11/1893	2	3	.29	4/1889	98	4/1889	2	4	1.03										
NC NASHVILLE	31	6044-08	35-58	77-58	205	5/1904	98	5/1904	3	1	.18	5/1904	98	5/1904	3	1	.19	6/1904	99	6/1904	0	1	1.03										
NC REIDSVILLE 2NW	31	7202-03	36-23	79-42	890	12/1901	98	12/1901	1	3	.18	12/1901	98	12/1901	1	3	.19	11/1901	99	11/1901	1	3	1.03										
NC SALISBURY	31	7615-04	35-41	80-29	700	4/1882	96	4/1882	8	8	.46	1/1891	99	1/1891	5	8	.59	4/1882	97	3/1886	7	9	1.08										
NC SMITHFIELD	31	7994-07	35-31	78-21	150	8/1889	96	9/1962	0	2	.22	1/1891	98	9/1962	0	2	.29	8/1889	97	12/1963	0	1	1.02										
NC SOUTHPORT 5N	31	8113-06	34-00	78-01	20	1/1822	78	1/1895	8	5	.27	1/1891	98	1/1893	10	6	.39	1/1844	81	12/1962	5	1	1.01										
NC STATESVILLE 2NNE	31	8292-04	35-49	80-53	950	5/1866	80	3/1901	7	3	.23	1/1901	93	1/1901	7	3	.29	6/1866	84	1/1902	1	3	1.02										
NC TARBORO 1S	31	8500-08	35-53	77-32	35	8/1871	83	4/1891	4	4	.22	1/1887	95	7/1891	3	4	.29	8/1871	94	1/1890	4	5	1.07										
NC WAYNESVILLE 1E	31	9147-01	35-29	82-58	2658	5/1894	92	1/1907	17	6	.40	5/1894	93	1/1907	17	6	.59	5/1894	92	5/1894	26	6	1.06										
ND BOTTINEAU	32	0941-02	48-50	100-27	1640	2/1892	94	5/1905	2	1	.01	5/1892	94	1/1906	1	1	.00	1/1892	99	1/1892	1	0	UNADJ										
ND CROSBY	32	1871-01	48-54	103-18	1952	4/1907	98	4/1907	12	8	.32	4/1907	98	4/1907	12	8	.39	4/1907	98	4/1907	1	11	UNADJ										
ND DICKINSON EXP STN	32	2188-07	46-53	102-48	2460	11/1891	99	1/1902	3	3	.23	1/1893	98	1/1907	3	3	.19	11/1891	99	1/1908	0	1	1.00										
ND DUNN CENTER 2SW	32	2365-04	47-21	102-39	2232	4/1919	98	4/1919	4	4	.34	4/1919	99	4/1919	4	4	.39	1/1918	100	1/1918	9	7	1.06										
ND FORT YATES	32	3207-08	46-06	100-38	1635	1/1882	78	10/1898	31	20	.37	5/1892	76	2/1895	30	18	.59	1/1882	83	1/1882	17	7	UNADJ										
ND FULLERTON 1ESE	32	3287-09	46-09	98-24	1435	2/1898	100	2/1898	4	4	.37	2/1898	100	2/1898	4	4	.50	1/1898	100	1/1898	6	4	1.06										
ND GRAFTON	32	3594-03	48-25	97-25	827	1/1891	96	1/1891	8	2	.50	5/1892	97	11/1896	7	2	.50	1/1891	98	1/1967	0	0	.99										
ND GRAND FORKS UNIVERSITY	32	3621-03	47-56	97-05	830	6/1887	95	6/1889	3	5	.50	5/1892	98	9/1905	1	5	.39	6/1887	96	1/1967	1	0	.99										
ND HETTINGER	32	4178-07	45-59	102-39	2680	1/1907	93	1/1907	23	9	.36	6/1907	92	6/1907	23	9	.39	1/1907	98	1/1907	21	11	1.11										
ND HILLSBORO 3N	32	4203-06	47-27	97-04	910	11/1905	97	11/1905	9	4	.24	11/1905	97	11/1905	9	4	.29	11/1905	98	1/1973	36	1	1.10										
ND JAMESTOWN STATE HOSPITAL	32	4418-05	46-53	98-41	1467	1/1892	98	1/1907	0	0	.00	2/1893	98	1/1907	1	0	.00	7/1891	99	7/1891	1	1	UNADJ										
ND LANGDON EXPERIMENT STN	32	4958-03	48-45	98-20	1615	6/1896	91	11/1897	17	9	.32	4/1897	90	11/1897	17	7	.29	6/1896	91	6/1896	9	5	UNADJ										

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE					MAX/MIN TEMPERATURE					PRECIPITATION							
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
ND LISBON	ND	5220-09	46-26	97-40	1089	4/1897	95	4/1897	14	4	.23	4/1903	98	4/1903	9	4	.29	4/1897	96	4/1897	4	5	UNADJ
ND MANDAN EXPERIMENT STN	ND	5479-08	46-48	100-54	1750	8/1913	98	8/1913	1	0	.00	8/1913	98	8/1913	1	0	.00	8/1913	99	8/1913	0	0	.99
ND MAYVILLE	ND	5660-06	47-30	97-19	935	3/1893	91	12/1904	5	4	.43	3/1893	91	12/1904	6	4	.50	1/1893	93	1/1969	0	1	1.02
ND MOTT	ND	6155-07	46-22	102-18	2530	7/1907	99	7/1907	14	4	.22	7/1907	99	7/1907	13	4	.19	7/1907	99	1/1950	12	2	1.04
ND NAPOLEON	ND	6255-09	46-30	99-46	1980	6/1889	99	1/1900	18	7	.28	5/1892	99	1/1900	17	7	.39	5/1889	99	5/1889	0	6	UNADJ
ND NEW ENGLAND	ND	6315-07	46-33	102-52	2639	7/1888	88	3/1894	31	11	.46	6/1894	92	1/1935	15	4	.09	7/1888	92	1/1930	7	3	1.02
ND PEMBINA	ND	6947-03	48-58	97-14	790	8/1871	90	3/1892	29	13	.93	5/1898	96	5/1898	24	11	1.00	8/1871	94	8/1871	6	12	UNADJ
ND RICHARDTON ABBEY	ND	7530-07	46-53	102-19	2470	3/1916	99	3/1916	11	3	.19	3/1916	99	3/1916	11	3	.19	3/1916	99	3/1916	9	3	1.06
ND STEELE	ND	8366-05	46-52	99-54	1865	4/1889	91	11/1893	23	10	.52	5/1894	92	5/1894	23	10	.59	4/1889	93	4/1889	6	11	UNADJ
ND TOWNER 2NE	ND	8792-02	48-21	100-24	1480	2/1896	89	2/1899	19	22	.47	2/1896	89	2/1899	19	23	.59	1/1896	90	1/1896	10	7	UNADJ
ND WAHPETON 3N	ND	9100-09	46-19	96-36	956	7/1889	96	7/1889	14	7	.35	5/1892	96	5/1892	15	7	.39	7/1889	97	7/1889	11	6	1.10
ND WILLOW CITY	ND	9445-02	48-39	100-18	1460	9/1891	97	6/1908	10	6	.33	6/1892	97	6/1908	10	6	.39	6/1891	99	6/1891	0	7	UNADJ
OH BUCYRUS	OH	1072-02	40-49	82-58	955	9/1889	94	12/1899	9	6	.31	5/1893	97	5/1893	10	6	.50	4/1890	94	4/1890	12	6	1.07
OH CADIZ	OH	1152-07	40-16	81-00	1260	9/1903	98	9/1903	2	2	.19	9/1903	98	9/1903	1	2	.19	9/1903	97	9/1903	10	4	1.05
OH CHIPPEWA LAKE	OH	1541-03	41-04	81-54	1060	1/1857	71	2/1884	12	10	.17	1/1895	99	1/1895	2	2	.19	3/1857	75	2/1884	11	3	1.04
OH CIRCLEVILLE	OH	1592-05	39-37	82-57	670	1/1895	95	1/1895	15	8	.31	1/1895	95	1/1895	15	8	.39	9/1887	97	9/1887	10	10	1.08
OH COSHOCTON WFC	OH	1890-06	40-15	81-52	760	8/1915	98	8/1915	4	6	.26	8/1915	98	8/1915	4	6	.29	10/1908	98	10/1908	10	6	1.05
OH DELAWARE	OH	2119-05	40-17	83-04	860	2/1896	99	2/1896	11	11	.34	2/1896	99	2/1896	11	11	.39	2/1896	100	2/1896	12	11	1.08
OH FINDLAY SEWAGE PLANT	OH	2791-01	41-03	83-40	768	4/1886	97	5/1888	9	6	.33	6/1893	99	6/1893	8	6	.39	1/1886	99	1/1886	7	9	1.07
OH GREENVILLE WATER PLANT	OH	3375-04	40-06	84-39	1024	2/1886	100	2/1886	5	7	.33	6/1893	100	6/1893	6	7	.50	2/1886	100	2/1886	9	6	1.05
OH HILLSBORO	OH	3758-08	39-08	83-37	1100	1/1836	81	1/1909	18	14	.40	4/1893	93	4/1893	31	16	.50	4/1855	82	2/1887	23	15	1.11
OH HIRAM	OH	3780-03	41-18	81-09	1230	9/1855	80	11/1882	7	9	.53	6/1893	99	6/1893	7	7	.79	9/1855	80	6/1883	4	5	1.07
OH KENTON	OH	4189-04	40-39	83-36	995	4/1862	86	1/1890	19	11	.30	1/1893	99	4/1893	27	11	.39	4/1862	87	1/1890	16	10	1.09
OH MCCONNELSVILLE LOCK 7	OH	5041-10	39-39	81-51	660	4/1884	100	4/1884	9	6	.34	6/1893	100	6/1893	9	6	.50	4/1884	99	4/1884	8	6	1.05
OH MILLERSBURG 1W	OH	5297-06	40-33	81-56	900	4/1919	98	4/1919	17	6	.14	3/1919	99	3/1919	17	6	.09	12/1916	97	12/1916	20	7	1.06
OH MILLPORT 2NW	OH	5315-07	40-43	80-54	1145	2/1893	96	2/1893	4	3	.26	6/1893	96	6/1893	4	3	.29	8/1892	99	8/1892	1	4	1.04
OH NAPOLEON	OH	5669-01	41-22	84-09	683	9/1885	96	9/1885	14	7	.16	4/1893	99	4/1893	9	5	.09	8/1885	98	8/1885	7	6	1.04
OH NORWALK	OH	6118-02	41-16	82-37	670	1/1861	80	1/1881	17	15	.29	3/1894	98	3/1894	5	3	.39	6/1861	80	6/1894	6	3	1.04
OH OBERLIN	OH	6196-02	41-16	82-13	816	1/1854	82	1/1883	15	7	.31	2/1891	98	6/1892	16	7	.39	1/1854	82	11/1882	14	8	1.06
OH PHILO 3SW	OH	6600-10	39-50	81-55	1020	6/1895	99	6/1895	1	0	.00	6/1895	100	6/1895	1	0	.00	6/1895	99	6/1895	0	0	.99
OH PORTSMOUTH	OH	6781-09	38-45	82-53	540	1/1824	99	1/1859	6	6	.33	6/1893	99	6/1893	7	6	.39	1/1830	99	1/1859	5	6	1.06

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
OH TIFFIN	33	8313-02	41-07	83-11	738	4/1873	91	2/1880	15	12	.23	8/1893	98	8/1893	10	11	.29	4/1873	91	1/1878	14	11	1.06
OH UPPER SANDUSKY	33	8534-02	40-50	83-17	854	11/1882	97	11/1882	9	6	.15	6/1893	98	6/1893	10	6	.09	11/1882	98	11/1882	8	5	1.04
OH URBANA SEWAGE PLANT	33	8552-04	40-06	83-47	1000	1/1854	86	1/1896	3	7	.42	12/1895	99	12/1895	3	7	.59	1/1852	88	1/1896	0	5	1.06
OH WARREN 3S	33	8769-03	41-12	80-49	900	11/1882	92	8/1887	7	4	.19	1/1893	99	1/1893	1	3	.19	1/1882	96	2/1884	7	4	1.05
OH WAUSEON WATER PLANT	33	8822-01	41-31	84-09	750	1/1870	99	2/1880	10	8	.30	2/1893	99	2/1893	10	8	.39	3/1871	99	1/1875	5	6	1.07
OH WAVERLY	33	8830-09	39-07	82-59	560	6/1883	97	6/1883	4	6	.29	6/1893	99	6/1893	3	6	.29	1/1883	98	4/1884	8	7	1.06
OH WOOSTER EXP STN	33	9312-06	40-47	81-55	1020	1/1864	92	11/1882	3	7	.39	1/1891	100	1/1893	2	7	.39	9/1868	90	11/1882	7	9	1.07
OK ADA	34	0017-08	34-47	96-41	1015	2/1907	98	2/1907	14	6	.27	2/1907	98	2/1907	15	6	.29	2/1907	98	2/1907	21	5	1.06
OK ALTUS IRRIGATION RES STN	34	0179-07	34-35	99-20	1380	6/1903	86	1/1968	0	0	.00	4/1913	98	1/1968	0	0	.00	4/1913	99	1/1968	0	0	.99
OK ANTLERS	34	0256-09	34-15	95-38	520	3/1918	91	3/1918	36	10	.19	3/1918	93	3/1918	37	10	.29	12/1917	95	1/1960	39	4	1.12
OK ARDMORE	34	0292-08	34-12	97-09	860	7/1901	98	7/1901	17	9	.18	7/1901	98	7/1901	17	9	.19	7/1901	98	7/1901	17	8	1.07
OK BARTLESVILLE 2W	34	0548-03	36-45	96-00	715	11/1907	96	11/1907	32	8	.23	11/1907	96	11/1907	32	8	.29	11/1907	98	11/1907	15	7	1.08
OK BEAVER	34	0593-01	36-48	100-32	2475	2/1896	94	1/1954	27	5	.18	2/1896	94	1/1959	32	4	.09	2/1896	97	1/1959	36	5	1.19
OK BOISE CITY 2E	34	0908-01	36-44	102-29	4145	2/1908	96	2/1908	13	9	.29	2/1908	97	1/1926	12	8	.19	9/1925	97	9/1925	2	10	UNADJ
OK BUFFALO	34	1243-01	36-50	99-37	1795	3/1907	90	3/1907	22	8	.25	3/1907	91	3/1907	21	8	.39	3/1907	92	3/1907	15	7	1.12
OK CARNEGIE 2ENE	34	1504-07	35-07	98-34	1290	5/1914	98	5/1914	30	15	.22	5/1914	98	5/1914	30	15	.29	5/1914	99	1/1964	12	1	1.02
OK CHEROKEE POWER PLANT	34	1724-02	36-46	98-21	1180	7/1915	94	1/1960	5	1	.09	7/1915	94	1/1960	5	1	.09	6/1915	95	1/1960	1	1	1.01
OK CLAREMORE 2ENE	34	1828-03	36-19	95-35	588	5/1900	84	5/1900	36	21	.25	5/1900	84	5/1900	36	22	.39	5/1900	84	5/1900	37	11	1.14
OK DURANT-USDA	34	2678-08	34-01	96-23	660	9/1901	97	12/1975	7	1	.03	9/1901	97	12/1975	7	1	.00	9/1901	98	9/1901	6	8	1.12
OK ENID	34	2912-02	36-25	97-52	1245	2/1894	90	9/1912	13	12	.19	2/1894	90	9/1912	13	12	.19	2/1894	91	2/1899	21	14	1.14
OK ERICK 4E	34	2944-04	35-12	99-48	1985	9/1904	94	9/1951	1	1	.00	9/1904	95	9/1951	1	1	.00	9/1904	97	1/1952	0	2	1.05
OK GEARY	34	3497-04	35-38	98-19	1595	12/1911	98	12/1911	13	5	.27	12/1911	98	12/1911	13	5	.29	12/1911	98	1/1971	33	1	1.09
OK GOODWELL RESEARCH STATION	34	3628-01	36-36	101-37	3310	2/1910	97	2/1910	3	4	.36	3/1910	97	3/1910	4	4	.39	1/1910	100	1/1910	0	4	UNADJ
OK GUTHRIE	34	3821-05	35-53	97-27	1030	6/1889	97	1/1912	32	17	.35	12/1892	97	2/1899	40	19	.39	12/1892	96	1/1967	49	6	1.17
OK HAMMON 1NNE	34	3871-04	35-38	99-22	1775	8/1913	94	8/1913	12	4	.39	8/1913	94	8/1913	10	4	.50	8/1913	98	8/1913	4	4	1.08
OK HENNESSEY 2SE	34	4055-05	36-05	97-52	1150	4/1895	92	2/1898	27	8	.41	4/1895	93	6/1919	18	7	.39	5/1895	96	1/1904	19	6	1.13
OK HOBART FAA AP	34	4204-07	35-00	99-03	1552	5/1903	98	1/1917	3	4	.23	5/1903	99	1/1917	2	4	.29	5/1903	99	1/1905	21	6	1.09
OK HOLDENVILLE	34	4235-06	35-05	96-24	860	4/1901	99	4/1901	15	9	.31	4/1901	99	6/1921	10	6	.29	4/1901	99	4/1901	12	7	1.11
OK HOOKER	34	4298-01	36-52	101-13	2995	6/1906	98	6/1906	20	13	.35	6/1906	98	6/1906	20	13	.39	6/1906	99	6/1906	20	13	1.31
OK HUGO	34	4384-09	34-00	95-31	570	1/1913	97	1/1913	4	5	.28	1/1913	99	1/1913	3	5	.29	1/1913	99	1/1913	2	5	1.05
OK JEFFERSON	34	4573-02	36-43	97-48	1045	1/1894	95	2/1898	28	16	.34	1/1894	95	2/1898	28	16	.39	1/1894	98	5/1897	29	15	1.18

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	1A	SC-DATE	ZE	#M	CONF	BGN-POR	1A	SC-DATE	ZE	#M	CONF	BGN-POR	1A	SC-DATE	ZE	#M	CONF
OK KENTON	34	4766-01	36-54	102-58	4350	11/1900	96	11/1900	17	11	.25	11/1900	98	11/1900	17	10	.39	11/1900	97	11/1900	17	10	1.11
OK KINGFISHER 2SE	34	4861-05	35-51	97-54	1100	4/1897	99	2/1898	10	11	.40	4/1897	99	2/1898	10	11	.50	4/1897	100	1/1964	20	3	1.09
OK LAWTON	34	5063-07	34-37	98-27	1150	7/1912	97	7/1912	15	7	.34	7/1912	98	7/1912	15	7	.50	4/1912	99	1/1949	4	3	1.14
OK MANGUM RESEARCH STATION	34	5509-07	34-50	99-26	1520	2/1892	95	6/1909	14	9	.41	7/1892	95	6/1909	14	9	.50	7/1892	97	1/1957	0	1	1.00
OK MEEKER 4W	34	5779-05	35-30	96-59	925	1/1894	93	12/1984	100	0	.11	1/1894	94	12/1984	100	0	.19	1/1894	96	1/1968	62	4	1.27
OK MIAMI	34	5855-03	36-53	94-53	805	12/1917	97	12/1917	18	11	.33	12/1917	97	12/1917	17	11	.39	12/1917	98	12/1917	16	11	1.06
OK MUSKOGEE	34	6130-06	35-46	95-20	583	4/1899	97	4/1899	26	14	.22	4/1899	97	4/1899	25	14	.29	4/1899	97	4/1899	30	15	1.13
OK MUTUAL	34	6139-02	36-14	99-10	1865	10/1907	95	1/1956	3	2	.14	10/1907	96	1/1956	3	2	.19	10/1907	98	1/1956	0	2	1.03
OK NEWKIRK	34	6278-02	36-53	97-03	1150	9/1897	92	9/1897	19	12	.44	9/1897	93	9/1897	18	12	.50	9/1897	95	1/1955	34	9	1.12
OK OKEENE	34	6629-04	36-07	98-19	1200	5/1903	94	5/1903	16	7	.29	5/1903	94	5/1903	16	7	.39	4/1903	97	4/1903	17	8	1.09
OK OKEMAH	34	6638-05	35-26	96-18	935	5/1912	99	5/1912	14	5	.18	5/1912	99	5/1912	11	5	.19	5/1912	99	1/1920	16	5	1.08
OK OKMULGEE WATERWORKS	34	6670-06	35-37	96-01	647	9/1903	95	1/1978	4	0	.01	9/1903	95	1/1978	4	0	.00	9/1903	97	1/1978	2	0	1.00
OK PAULS VALLEY 3WSW	34	6926-08	34-44	97-16	950	4/1892	87	4/1896	19	6	.15	7/1892	87	4/1896	19	5	.19	7/1892	88	12/1898	14	10	1.11
OK PAWHUSKA	34	6935-03	36-40	96-21	835	1/1898	95	1/1898	23	9	.27	1/1898	95	1/1898	16	8	.39	1/1898	97	1/1898	24	10	1.12
OK PERRY	34	7012-02	36-17	97-18	1025	11/1898	93	11/1898	19	12	.28	11/1898	93	11/1898	18	12	.29	11/1898	94	11/1898	21	15	1.13
OK POTEAU	34	7246-09	35-03	94-38	670	9/1917	96	9/1917	13	6	.13	9/1917	97	9/1917	12	6	.09	9/1917	98	9/1917	13	5	1.06
OK STILLWATER 2W	34	8501-05	36-07	97-05	895	1/1893	98	1/1965	0	0	.00	1/1893	98	1/1965	0	0	.00	1/1893	99	1/1894	8	5	1.11
OK TAHLEQUAH	34	8677-06	35-56	94-58	850	4/1894	81	8/1979	48	1	.21	4/1894	82	7/1979	48	1	.19	4/1894	87	5/1895	51	15	1.22
OK WAURIKA	34	9395-08	34-10	98-00	875	1/1910	99	1/1910	15	11	.40	1/1910	99	1/1910	13	11	.50	1/1910	99	1/1910	21	10	1.16
OK WEATHERFORD	34	9422-04	35-32	98-42	1670	7/1901	98	1/1913	8	4	.21	7/1901	98	1/1913	8	4	.19	7/1901	98	1/1972	26	1	1.07
OK WEBBERS FALLS SWSW	34	9445-06	35-29	95-12	550	4/1900	94	4/1900	13	8	.37	4/1900	95	4/1900	12	8	.50	2/1900	97	2/1900	8	7	1.11
OR ASHLAND	35	0304-03	42-13	122-43	1750	1/1889	100	1/1918	11	5	.13	5/1889	100	1/1918	11	5	.19	1/1879	100	1/1879	0	9	UNADJ
OR ASTORIA WSO AP	35	0328-01	46-09	123-53	8	1/1867	93	1/1931	6	6	.29	4/1892	98	1/1931	6	6	.29	8/1850	98	1/1911	23	14	1.07
OR BAKER FAA AP	35	0412-08	44-50	117-49	3368	7/1889	98	1/1912	2	3	.18	7/1889	98	1/1912	2	3	.19	7/1889	99	1/1912	7	3	1.05
OR BEND	35	0694-07	44-04	121-19	3650	4/1901	99	8/1903	22	11	.36	4/1901	95	8/1903	23	10	.50	1/1902	100	1/1902	0	10	UNADJ
OR BROOKINGS	35	1055-01	42-03	124-17	70	1/1913	99	1/1913	7	8	.58	8/1913	98	8/1913	8	6	.79	4/1912	100	4/1912	4	6	1.09
OR CASCADIA	35	1433-02	44-24	122-29	860	1/1919	86	1/1919	30	14	.32	1/1919	86	1/1919	30	13	.39	1/1908	99	1/1908	14	15	1.08
OR CONDON	35	1765-06	45-14	120-11	2830	8/1894	86	5/1900	41	18	.40	8/1894	86	5/1900	43	19	.50	8/1894	87	5/1898	43	21	1.17
OR CORVALLIS STATE UNIV	35	1862-02	44-38	123-12	225	4/1889	99	4/1889	4	7	.32	5/1889	96	1/1907	8	6	.29	1/1889	100	1/1889	6	8	1.04
OR COTTAGE GROVE 1S	35	1897-02	43-47	123-04	650	8/1916	99	8/1916	2	1	.00	8/1916	99	8/1916	2	1	.00	8/1916	99	8/1916	2	1	.99
OR CRATER LAKE	35	1946-05	42-54	122-08	6475	10/1919	88	10/1919	34	8	.60	10/1919	88	10/1919	34	8	.69	10/1919	89	10/1919	24	8	1.10

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF
OR DANNER	35	2135-09	42-56	117-20	4225	8/1929	90	8/1929	13	1	.15	8/1929	91	8/1929	12	1	.19	8/1929	99	8/1929	1	2	1.01
OR DRAIN	35	2406-03	43-40	123-19	292	1/1903	92	1/1903	8	6	.22	1/1903	93	1/1903	8	5	.29	1/1903	93	1/1903	8	4	1.04
OR DUFUR	35	2440-06	45-27	121-08	1330	6/1910	99	6/1910	5	4	.19	6/1910	98	6/1910	5	4	.19	1/1909	100	1/1909	0	5	UNADJ
OR FOREST GROVE	35	2997-02	45-32	123-06	180	1/1890	92	1/1917	9	5	.22	1/1890	92	1/1917	9	5	.29	1/1890	93	12/1899	25	5	1.07
OR FREMONT	35	3095-05	43-20	121-10	4512	3/1918	91	3/1918	14	2	.23	3/1918	92	3/1918	13	2	.29	10/1909	96	10/1909	3	3	UNADJ
OR GRANTS PASS	35	3445-03	42-25	123-20	960	3/1889	99	3/1889	5	6	.37	5/1889	99	7/1893	5	6	.39	1/1889	99	1/1911	13	6	1.08
OR HEADWORKS PORTLAND WTRB	35	3770-02	45-27	122-09	748	1/1901	94	9/1901	9	3	.13	1/1901	93	9/1901	9	3	.09	1/1899	100	1/1899	0	3	1.02
OR HEPPNER	35	3827-06	45-22	119-33	1885	6/1889	95	1/1912	7	3	.11	6/1889	94	1/1912	7	3	.09	6/1889	99	3/1903	16	8	1.06
OR HERMISTON 2S	35	3847-06	45-49	119-17	624	8/1907	99	8/1907	3	7	.23	8/1907	99	8/1907	5	7	.29	7/1906	99	7/1906	0	9	UNADJ
OR HOOD RIVER EXPERIMENT STN	35	4003-06	45-41	121-31	500	1/1891	99	1/1913	10	5	.23	1/1891	98	1/1913	10	5	.29	1/1884	100	12/1912	10	5	1.06
OR KLAMATH FALLS 2SSW	35	4506-07	42-12	121-47	4098	1/1884	91	12/1893	14	10	.41	5/1889	91	1/1909	4	5	.39	1/1884	95	1/1884	5	11	UNADJ
OR LAKEVIEW 2NNW	35	4670-07	42-13	120-22	4778	1/1884	98	1/1913	5	7	.55	4/1887	92	1/1913	9	7	.69	1/1884	99	1/1884	2	10	UNADJ
OR MALHEUR REFUGE HDQ	35	5162-07	43-17	118-50	4109	7/1937	96	7/1937	8	2	.12	7/1937	96	7/1937	8	2	.09	7/1937	98	7/1937	6	2	1.04
OR MCKENZIE BRIDGE RS	35	5362-04	44-11	122-07	1478	2/1902	73	1/1936	10	2	.25	2/1902	73	1/1936	10	2	.29	2/1902	78	1/1936	2	2	1.02
OR MC MINNVILLE	35	5384-02	45-14	123-11	148	1/1888	100	1/1903	18	14	.49	9/1889	94	1/1903	21	14	.69	1/1888	99	1/1888	12	12	1.08
OR MILTON-FREEWATER	35	5593-06	45-57	118-25	970	1/1914	100	1/1914	13	6	.23	12/1914	96	12/1914	13	5	.29	1/1914	100	1/1914	13	6	1.05
OR MORO	35	5734-06	45-29	120-43	1870	1/1898	79	5/1900	20	21	.32	1/1898	79	5/1900	20	24	.39	11/1897	86	5/1898	14	4	1.09
OR NEWPORT	35	6032-01	44-35	124-03	143	11/1891	96	11/1891	18	9	.54	11/1891	97	11/1891	18	9	.69	11/1891	97	11/1891	15	9	1.08
OR NORTH BEND	35	6073-01	43-25	124-15	6	1/1902	100	1/1902	18	10	.48	1/1902	100	1/1902	18	10	.69	1/1902	100	7/1903	19	10	1.10
OR PAISLEY	35	6426-07	42-42	120-32	4360	2/1892	77	9/1938	18	3	.18	3/1904	88	9/1938	18	3	.19	2/1892	77	4/1894	21	10	UNADJ
OR PILOT ROCK 1SE	35	6634-06	45-29	118-49	1720	3/1909	100	3/1909	22	9	.17	3/1909	95	3/1909	25	8	.19	1/1908	100	1/1908	17	10	1.05
OR PRINEVILLE 4NW	35	6883-07	44-21	120-54	2840	1/1897	99	9/1927	1	3	.16	1/1897	95	6/1910	15	6	.29	1/1897	100	1/1897	0	8	UNADJ
OR PROSPECT 2SW	35	6907-03	42-44	122-31	2482	10/1905	97	10/1905	9	8	.16	10/1905	97	10/1905	11	8	.19	1/1905	99	1/1905	18	7	1.05
OR RIDDLE	35	7169-03	42-57	123-21	680	12/1891	88	7/1903	26	19	.32	2/1913	97	12/1946	0	1	.19	12/1891	89	1/1914	12	9	1.08
OR ROSEBURG KQEN	35	7331-03	43-12	123-21	465	8/1877	99	1/1895	1	6	.29	8/1877	99	1/1895	1	6	.29	7/1877	99	1/1906	1	4	1.03
OR ROUND GROVE	35	7354-05	42-20	120-53	4888	3/1920	94	3/1920	15	2	.20	3/1920	94	3/1920	14	2	.19	3/1920	96	3/1920	19	3	1.07
OR THREE LYNX	35	8466-04	45-07	122-04	1120	3/1925	100	3/1925	0	0	.00	3/1925	100	3/1925	0	0	.00	10/1923	99	10/1923	0	0	.99
OR TILLAMOOK 1W	35	8494-01	45-27	123-52	10	1/1889	80	1/1939	12	7	.23	11/1894	75	1/1939	15	7	.19	1/1889	81	9/1891	38	20	1.15
OR UNION EXP STN	35	8746-08	45-13	117-53	2765	10/1911	99	10/1911	1	2	.20	10/1911	99	10/1911	1	2	.19	1/1911	100	1/1911	2	3	1.03
OR VALE	35	8797-09	43-59	117-15	2240	12/1891	99	1/1908	18	9	.37	12/1891	91	1/1923	18	5	.29	1/1891	100	1/1891	0	13	UNADJ
OR WALLOWA	35	8997-08	45-34	117-32	2923	1/1903	100	1/1903	13	12	.37	3/1903	97	12/1915	16	11	.29	1/1903	100	1/1903	18	13	1.08

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	MEAN TEMPERATURE											MAX/MIN TEMPERATURE											PRECIPITATION										
	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF				
PA ALLENTOWN WSO AP	36	0106-02	40-39	75-26	387	11/1922	98	11/1922	1	2	.09	11/1922	100	11/1922	0	2	.09	1/1912	100	1/1912	0	3	1.05										
PA CHAMBERSBURG 1ESE	36	1354-04	39-56	77-38	640	7/1858	67	6/1918	4	4	.12	1/1894	79	12/1897	24	12	.19	2/1860	71	11/1892	22	7	1.08										
PA EISENHOWER NATL HIST SITE	36	2537-04	39-48	77-16	520	1/1839	74	1/1904	6	4	.14	3/1895	92	3/1895	15	9	.19	1/1839	76	1/1904	4	4	1.05										
PA ERIE WSO AP	36	2682-10	42-05	80-11	731	6/1873	100	12/1887	8	7	.21	6/1873	100	1/1889	9	6	.29	6/1873	100	1/1889	5	6	1.10										
PA FRANKLIN	36	3028-10	41-23	79-49	990	10/1867	93	1/1898	5	5	.41	1/1897	100	1/1897	5	5	.50	9/1868	94	1/1898	2	5	1.09										
PA FREELAND	36	3056-01	41-01	75-54	1900	3/1920	96	3/1920	11	2	.30	3/1920	96	3/1920	7	2	.59	7/1914	97	7/1914	2	2	1.01										
PA GREENVILLE 2NE	36	3526-10	41-25	80-22	1130	3/1871	78	8/1887	20	12	.41	2/1894	91	2/1894	16	11	.39	3/1871	78	6/1898	14	11	1.08										
PA HARRISBURG FAA	36	3699-04	40-13	76-51	338	7/1840	88	1/1889	2	4	.22	1/1889	100	1/1889	2	4	.19	8/1840	83	1/1891	0	7	1.07										
PA JOHNSTOWN	36	4385-08	40-20	78-55	1214	1/1868	83	12/1888	9	3	.19	1/1894	97	1/1894	9	3	.19	2/1868	88	11/1884	4	5	1.04										
PA MONTROSE	36	5915-06	41-50	75-52	1560	9/1903	96	9/1903	9	4	.24	9/1903	95	9/1903	9	4	.29	9/1903	97	9/1903	9	5	1.07										
PA NEW CASTLE 1N	36	6233-09	41-01	80-22	825	1/1866	85	8/1887	14	3	.20	1/1894	88	1/1894	13	2	.19	1/1870	84	9/1893	13	3	1.06										
PA PALMERTON	36	6689-02	40-48	75-37	410	5/1917	97	5/1917	7	2	.08	5/1917	98	5/1917	7	2	.09	4/1917	99	4/1917	4	2	1.02										
PA READING 3N	36	7322-03	40-22	75-56	270	8/1866	89	3/1890	5	4	.19	1/1898	100	1/1898	4	4	.19	4/1839	79	4/1862	8	6	1.06										
PA RIDGWAY	36	7477-07	41-25	78-45	1360	2/1913	97	2/1913	17	7	.28	2/1913	97	2/1913	17	7	.39	1/1891	84	9/1927	0	3	1.03										
PA SELINGSGROVE 2S	36	7931-05	40-46	76-52	420	1/1889	98	1/1889	13	12	.41	1/1894	98	1/1894	14	12	.59	8/1888	98	8/1888	9	10	1.12										
PA STATE COLLEGE	36	8449-07	40-48	77-52	1170	9/1882	97	7/1883	7	7	.31	1/1893	100	1/1893	6	6	.29	9/1882	97	9/1882	3	5	1.05										
PA STROUDSBURG	36	8596-01	41-00	75-11	480	1/1911	89	1/1911	19	8	.25	1/1911	90	1/1911	19	7	.39	1/1911	91	1/1911	18	7	1.06										
PA TOWANDA 1ESE	36	8905-06	41-45	76-25	745	10/1894	99	10/1894	1	3	.15	10/1894	99	10/1894	1	3	.09	10/1894	99	10/1894	0	2	1.05										
PA UNIONTOWN 1NE	36	9050-09	39-55	79-43	956	1/1889	98	1/1889	3	2	.18	1/1894	98	1/1894	3	2	.19	1/1888	98	1/1888	2	3	1.04										
PA WARREN	36	9298-10	41-51	79-09	1210	7/1896	99	7/1896	15	9	.45	7/1896	99	7/1896	15	9	.69	1/1885	100	1/1885	4	8	1.11										
PA WELLSBORO 3S	36	9408-06	41-42	77-16	1860	4/1879	98	3/1882	3	5	.30	1/1897	98	1/1897	3	5	.29	4/1879	100	1/1907	0	4	1.07										
PA WEST CHESTER 1W	36	9464-03	39-58	75-38	450	7/1843	90	1/1855	3	4	.28	1/1893	97	1/1893	3	4	.39	7/1817	80	1/1860	1	4	1.08										
PA WILLIAMSPORT WSO AP	36	9728-05	41-15	76-55	527	2/1873	84	7/1888	15	7	.20	2/1895	100	2/1895	7	6	.19	1/1873	85	9/1877	22	8	1.11										
PA YORK PUMP STATION 3SSW	36	9933-04	39-55	76-45	390	10/1886	85	6/1888	13	2	.06	1/1894	88	1/1894	12	1	.00	9/1886	87	9/1886	13	2	1.02										
RI BLOCK ISLAND WSO AP	37	0896-01	41-10	71-35	110	9/1880	99	9/1880	5	5	.14	9/1880	99	1/1888	5	4	.09	9/1880	99	9/1880	5	5	1.04										
RI KINGSTON	37	4266-01	41-29	71-32	100	7/1889	99	4/1917	3	2	.14	7/1889	99	4/1917	3	2	.09	4/1889	100	4/1889	0	2	1.03										
RI PROVIDENCE WSO AP	37	6698-01	41-44	71-26	51	12/1831	97	1/1835	7	7	.26	12/1884	96	12/1884	11	6	.19	12/1831	99	2/1843	5	5	1.05										
SC AIKEN 4NE	38	0074-05	33-36	81-41	400	1/1856	86	11/1896	17	13	.16	1/1893	88	5/1898	16	11	.09	5/1854	88	1/1903	16	6	1.03										
SC ANDERSON	38	0165-02	34-32	82-40	800	6/1884	83	6/1900	9	5	.20	7/1901	98	7/1901	7	4	.19	6/1884	94	5/1887	13	6	1.06										
SC BEAUFORT 7SW	38	0559-07	32-23	80-46	20	4/1862	78	1/1900	30	19	.44	8/1889	91	6/1962	0	1	.09	4/1862	81	1/1927	4	7	1.05										
SC BLACKVILLE 3W	38	0764-07	33-22	81-19	324	6/1884	94	12/1894	10	11	.34	10/1888	94	11/1894	10	11	.50	6/1884	95	1/1891	18	13	1.06										

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	1A	SC-DATE	ZE	#M	CONF	BGN-POR	1A	SC-DATE	ZE	#M	CONF	BGN-POR	1A	SC-DATE	ZE	#M	CONF
SC CALHOUN FALLS	38	1277-05	34-05	82-35	530	1/1917	97	1/1917	22	9	.20	1/1917	97	1/1917	22	9	.29	1/1892	98	1/1892	16	10	1.06
SC CAMDEN 3W	38	1310-03	34-15	80-39	140	1/1854	58	3/1899	18	5	.44	8/1906	93	8/1906	9	4	.59	5/1849	99	1/1892	0	6	1.05
SC CHARLESTON	38	1549-07	32-47	79-56	10	1/1823	99	1/1898	0	1	.08	1/1871	100	1/1898	0	1	.09	1/1785	82	1/1898	0	1	1.02
SC CHERAW	38	1588-04	34-42	79-53	140	4/1882	96	1/1900	12	6	.30	1/1888	96	1/1900	12	6	.39	4/1882	97	1/1887	14	10	1.07
SC CLEMSON UNIVERSITY	38	1770-02	34-41	82-49	819	1/1896	100	1/1896	4	6	.40	5/1896	94	5/1896	10	6	.59	1/1892	100	1/1892	0	4	1.03
SC COLUMBIA U OF SC	38	1944-06	33-59	81-01	242	6/1872	94	1/1906	3	6	.27	6/1887	99	12/1904	4	7	.39	6/1872	98	1/1965	2	1	1.02
SC CONWAY	38	1997-04	33-50	79-03	20	2/1888	89	5/1894	12	3	.18	6/1890	88	5/1894	12	3	.19	2/1888	97	1/1891	3	6	1.05
SC DARLINGTON 1N	38	2260-04	34-19	79-53	160	7/1893	89	2/1895	19	7	.20	9/1901	95	9/1901	13	6	.19	9/1895	97	9/1895	5	6	1.04
SC GEORGETOWN 2E	38	3468-04	33-21	79-15	10	8/1893	88	1/1911	27	12	.28	8/1893	89	1/1911	27	12	.29	6/1893	92	6/1893	26	11	1.10
SC GREENVILLE-SPARTANBURG AP	38	3747-02	34-54	82-13	957	4/1884	95	3/1894	22	11	.34	5/1893	97	1/1918	14	8	.19	1/1878	100	3/1884	15	10	1.07
SC GREENWOOD 3NE	38	3754-05	34-13	82-07	615	6/1884	95	3/1896	9	12	.36	10/1888	95	3/1895	10	12	.29	6/1884	96	5/1887	18	11	1.08
SC KERSHAW	38	4690-03	34-33	80-35	530	5/1916	94	12/1956	14	3	.12	5/1916	95	1/1958	14	2	.09	5/1916	97	5/1916	19	10	1.07
SC KINGSTREE 1SE	38	4753-04	33-39	79-49	58	5/1882	94	5/1893	6	4	.26	10/1888	94	4/1894	6	4	.29	4/1882	95	1/1889	10	7	1.05
SC LAURENS	38	5017-02	34-30	82-02	589	9/1901	81	5/1904	23	10	.30	9/1901	82	5/1904	23	9	.39	9/1901	82	9/1901	24	8	1.10
SC LITTLE MOUNTAIN	38	5200-05	34-12	81-25	711	10/1893	99	1/1907	3	4	.27	7/1894	98	1/1907	4	4	.29	10/1893	99	10/1893	5	5	1.04
SC NEWBERRY	38	6209-05	34-17	81-37	476	2/1887	98	2/1887	3	5	.32	1/1893	99	12/1903	2	5	.29	5/1887	100	5/1887	1	5	1.05
SC ORANGEBURG 2	38	6527-06	33-30	80-52	160	10/1916	98	10/1916	2	6	.36	10/1916	99	10/1916	2	6	.50	10/1916	98	10/1916	13	9	1.07
SC SALUDA	38	7631-05	33-59	81-46	480	4/1902	92	8/1978	13	1	.04	4/1902	93	8/1978	13	1	.00	1/1902	98	1/1902	15	12	1.08
SC SANTUCK	38	7722-02	34-38	81-31	520	8/1893	98	8/1893	4	6	.32	1/1895	100	1/1895	4	6	.39	9/1893	99	9/1893	6	6	1.06
SC SUMMERVILLE	38	8426-07	33-00	80-11	60	9/1898	98	9/1898	13	9	.16	9/1898	99	9/1898	14	9	.19	7/1898	99	7/1898	13	8	1.06
SC SUMTER	38	8440-06	33-56	80-21	177	12/1901	69	12/1901	34	18	.27	12/1901	69	12/1901	34	18	.29	12/1901	69	12/1901	34	8	1.11
SC WALHALLA	38	8887-02	34-45	83-05	980	7/1889	84	2/1892	20	8	.18	7/1896	88	7/1896	14	5	.19	7/1889	86	12/1892	25	8	1.06
SC WINNSBORO	38	9327-03	34-22	81-05	560	3/1887	90	4/1896	17	8	.25	1/1888	87	5/1895	18	9	.29	1/1887	94	1/1887	12	8	1.06
SC WINTHROP COLLEGE	38	9350-03	34-56	81-02	690	1/1900	100	1/1900	1	3	.33	1/1900	100	1/1900	1	3	.50	1/1900	100	1/1900	1	4	1.04
SC YEMASSEE	38	9469-07	32-41	80-51	25	4/1882	88	10/1975	73	2	.20	8/1895	96	10/1975	73	2	.29	4/1882	88	1/1891	21	8	1.08
SD ABERDEEN WSO AP	39	0020-03	45-27	98-26	1296	3/1890	99	3/1890	18	12	.39	1/1893	99	3/1894	18	12	.39	3/1890	100	3/1890	0	11	UNADJ
SD ACADEMY	39	0043-08	43-28	99-05	1675	9/1898	99	9/1898	9	8	.39	9/1898	99	9/1898	9	8	.50	7/1898	99	7/1898	9	6	1.09
SD ALEXANDRIA	39	0128-09	43-39	97-47	1350	3/1882	92	1/1890	17	8	.28	1/1893	97	1/1893	19	8	.29	3/1882	91	12/1888	19	11	1.14
SD CANTON 4WNW	39	1392-09	43-18	96-40	1345	8/1889	89	8/1892	23	11	.37	11/1896	93	11/1896	19	9	.50	7/1889	90	7/1889	30	10	1.16
SD CLARK	39	1739-07	44-53	97-44	1780	7/1889	92	8/1889	20	10	.27	4/1893	92	4/1893	17	10	.29	7/1889	94	1/1965	0	0	.99
SD COTTONWOOD 2E	39	1972-05	43-58	101-52	2414	7/1909	96	7/1909	6	2	.29	7/1909	96	7/1909	7	2	.39	7/1909	98	7/1909	2	2	UNADJ

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION												
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF							
SD DUPREE	39	2429-01	45-03	101-36	2365	3/1922	99	3/1922	10	4	.15	3/1922	100	3/1922	10	4	.19	1/1922	99	1/1922	10	4	1.04							
SD EUREKA	39	2797-02	45-47	99-38	1870	10/1897	87	2/1899	16	10	.25	10/1897	87	2/1899	16	10	.29	9/1897	88	9/1897	12	6	UNADJ							
SD FAULKTON	39	2927-02	45-02	99-08	1580	1/1892	97	1/1892	17	7	.21	1/1893	97	4/1897	12	7	.19	3/1892	97	3/1892	20	8	1.12							
SD FORESTBURG 3NE	39	3029-07	44-02	98-04	1231	5/1891	99	1/1910	0	1	.14	1/1893	100	1/1910	0	1	.19	5/1891	100	5/1891	4	6	1.09							
SD GANN VALLEY	39	3217-07	44-02	98-58	1750	1/1889	99	1/1902	8	7	.35	1/1893	97	12/1895	16	9	.39	4/1886	99	4/1886	14	10	1.15							
SD HIGHMORE 1W	39	3832-06	44-31	99-28	1890	3/1887	92	12/1889	9	1	.10	4/1894	95	9/1907	3	1	.00	2/1887	94	9/1894	2	0	1.00							
SD HOT SPRINGS	39	4007-04	43-26	103-28	3535	1/1897	91	2/1897	21	12	.35	1/1897	92	2/1897	21	10	.39	1/1897	92	1/1897	16	4	1.07							
SD HOWARD	39	4037-07	44-01	97-31	1560	8/1890	95	8/1890	26	13	.26	1/1893	96	12/1898	26	12	.19	9/1890	97	5/1892	20	11	1.12							
SD KENNEBEC	39	4516-06	43-55	99-52	1700	5/1892	96	1/1909	8	8	.38	1/1893	97	1/1909	7	8	.50	5/1892	98	5/1892	11	12	1.12							
SD MELLETTTE	39	5456-03	45-09	98-30	1290	5/1892	94	5/1892	21	9	.34	6/1895	95	6/1895	18	9	.39	5/1892	95	5/1892	21	10	1.12							
SD MENNO	39	5481-09	43-14	97-35	1324	5/1896	97	5/1896	9	10	.49	5/1896	98	5/1896	9	10	.59	5/1896	99	5/1896	8	11	1.15							
SD MILBANK 2SSW	39	5536-03	45-12	96-38	1156	4/1890	97	4/1890	22	13	.32	3/1893	96	8/1893	23	13	.39	12/1889	97	1/1964	33	1	1.08							
SD MURDO	39	5891-06	43-53	100-43	2300	2/1908	96	2/1908	13	8	.49	2/1908	96	2/1908	12	8	.59	12/1907	96	12/1907	31	9	1.16							
SD OAHE DAM	39	6170-06	44-27	100-25	1660	9/1909	86	9/1909	15	3	.19	9/1909	86	9/1909	15	4	.19	9/1909	88	1/1951	4	0	1.00							
SD PIERRE FAA AP	39	6597-06	44-23	100-17	1726	1/1866	98	9/1900	4	6	.25	7/1891	100	12/1900	4	5	.29	4/1866	97	1/1892	2	6	1.07							
SD RAPID CITY	39	6947-05	44-05	103-16	3370	1/1888	99	1/1898	5	5	.40	1/1888	99	1/1898	5	5	.39	1/1888	99	1/1898	5	4	1.06							
SD VERMILLION 2SE	39	8622-09	42-45	96-55	1190	1/1884	87	8/1891	12	4	.32	1/1893	91	1/1893	11	4	.29	12/1883	87	12/1888	14	5	1.07							
SD WATERTOWN FAA AP	39	8932-07	44-55	97-09	1746	12/1891	96	12/1891	16	10	.22	1/1893	98	1/1893	15	10	.29	11/1891	97	11/1891	17	13	1.13							
SD WOOD	39	9442-08	43-30	100-29	2180	3/1913	98	3/1913	3	3	.34	3/1913	98	3/1913	3	3	.39	1/1913	99	1/1913	1	3	1.09							
TN CLARKSVILLE SEWAGE PLANT	40	1790-03	36-33	87-22	382	1/1854	93	1/1889	6	4	.28	5/1890	96	9/1894	7	4	.29	1/1854	94	1/1889	5	5	1.03							
TN COPPERHILL	40	2024-01	35-00	84-23	1535	4/1914	98	4/1914	15	5	.20	4/1914	98	4/1914	15	5	.19	4/1914	99	4/1914	7	6	1.04							
TN COVINGTON 1W	40	2108-04	35-34	89-40	310	3/1883	97	1/1902	0	3	.20	2/1893	93	2/1893	11	4	.19	3/1883	98	3/1884	2	3	1.04							
TN CROSSVILLE EXPERIMENT STN	40	2202-02	36-01	85-08	1810	3/1912	97	3/1912	30	14	.32	3/1912	98	3/1912	29	14	.39	3/1912	98	3/1912	31	14	1.08							
TN DICKSON	40	2489-03	36-04	87-23	780	5/1885	84	9/1892	27	11	.28	7/1900	97	7/1900	20	8	.29	6/1884	84	7/1887	33	12	1.10							
TN DOVER 1W	40	2589-03	36-29	87-51	475	1/1898	96	1/1898	9	5	.16	1/1898	97	1/1898	4	3	.19	1/1898	97	1/1898	7	6	1.04							
TN JACKSON EXPERIMENT STN	40	4561-04	35-37	88-50	400	4/1891	97	4/1891	3	4	.23	1/1900	98	1/1900	4	4	.19	4/1891	97	4/1891	5	5	1.07							
TN LEWISBURG EXPERIMENT STN	40	5187-03	35-27	86-48	787	6/1888	92	9/1896	3	4	.20	5/1899	100	5/1899	0	3	.19	6/1888	92	5/1897	4	4	1.03							
TN MCMINNVILLE	40	5882-02	35-41	85-48	940	8/1872	89	9/1901	5	7	.24	11/1894	97	11/1894	10	7	.29	8/1872	90	1/1903	5	6	1.02							
TN MURFREESBORO 5N	40	6371-03	35-55	86-22	550	3/1883	99	3/1883	8	8	.23	7/1894	99	7/1894	9	8	.19	2/1882	100	2/1882	8	8	1.05							
TN NEWPORT 1NW	40	6534-01	35-59	83-12	1036	3/1888	96	4/1891	6	5	.45	8/1896	99	2/1902	5	5	.50	3/1888	97	11/1889	13	6	1.05							
TN ROGERSVILLE 1NE	40	7884-01	36-25	82-59	1355	5/1883	97	1/1973	0	0	.00	2/1896	99	1/1903	3	3	.19	5/1883	98	4/1884	3	5	1.03							

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
TN TULLAHOMA	40	9155-02	35-21	86-12	1048	4/1889	94	9/1890	8	7	.25	1/1896	98	1/1896	7	6	.19	3/1889	95	3/1889	8	6	1.05
TN UNION CITY	40	9219-04	36-25	89-04	335	4/1884	86	6/1912	17	10	.41	12/1895	95	6/1898	26	12	.59	4/1884	87	4/1884	31	13	1.14
TN WAYNESBORO	40	9502-03	35-18	87-46	750	10/1884	96	10/1884	15	12	.31	2/1897	96	2/1897	21	12	.39	10/1884	98	10/1884	13	10	1.06
TX ALBANY	41	0120-03	32-44	99-17	1440	5/1892	94	5/1892	15	10	.58	1/1902	97	1/1902	13	10	.79	1/1892	97	1/1892	3	10	UNADJ
TX ALICE	41	0144-09	27-44	98-04	201	1/1893	79	1/1893	26	7	.40	1/1893	79	12/1896	25	9	.50	1/1893	82	1/1893	18	7	UNADJ
TX ALPINE	41	0174-05	30-22	103-40	4480	3/1900	64	3/1908	36	20	.63	3/1900	65	3/1908	35	22	.79	3/1900	72	12/1906	23	8	UNADJ
TX BALLINGER 1SW	41	0493-02	31-44	99-58	1575	8/1895	97	8/1895	4	3	.33	12/1896	98	12/1896	4	3	.39	7/1895	99	7/1895	1	5	UNADJ
TX BALMORHEA	41	0498-05	30-59	103-45	3220	9/1923	96	9/1923	6	4	.41	9/1923	96	6/1971	10	1	.00	9/1923	99	9/1923	0	3	UNADJ
TX BEEVILLE 5NE	41	0639-07	28-27	97-42	255	8/1895	99	8/1895	5	4	.39	12/1896	98	12/1896	6	4	.50	1/1895	100	1/1923	5	3	1.11
TX BLANCO	41	0832-06	30-06	98-25	1370	10/1896	94	1/1975	0	0	.00	10/1896	95	1/1975	0	0	.00	5/1896	99	1/1975	0	0	.99
TX BOERNE	41	0902-06	29-48	98-43	1422	2/1878	88	12/1888	20	13	.39	3/1904	99	3/1904	17	9	.39	7/1877	87	1/1889	12	8	1.11
TX BRENHAM	41	1048-07	30-09	96-24	353	8/1885	97	12/1888	5	2	.24	12/1896	99	12/1896	5	2	.29	9/1885	98	1/1966	0	0	.99
TX BROWNWOOD	41	1138-03	31-43	99-00	1385	1/1889	93	1/1889	17	8	.53	1/1893	92	12/1896	19	8	.69	12/1888	95	12/1888	4	7	UNADJ
TX CLARKSVILLE 2NE	41	1772-04	33-38	95-02	435	6/1870	70	9/1893	24	7	.38	3/1903	93	3/1903	15	6	.50	1/1872	79	1/1890	22	5	1.11
TX CORPUS CHRISTI WSO AP	41	2015-07	27-46	97-30	41	2/1887	100	2/1887	2	6	.42	2/1887	100	2/1887	2	6	.69	2/1887	100	2/1887	0	6	UNADJ
TX CORSICANA	41	2019-03	32-05	96-28	425	10/1874	95	1/1889	6	5	.44	12/1896	99	12/1896	5	5	.50	10/1874	96	1/1963	4	2	1.01
TX CROSBYTON	41	2121-01	33-39	101-15	3010	1/1886	96	1/1900	7	6	.52	2/1894	96	1/1900	6	6	.69	4/1886	99	1/1965	12	1	1.03
TX DANEVANG 1W	41	2266-08	29-03	96-14	70	2/1896	98	2/1896	9	6	.35	3/1896	98	8/1899	8	6	.39	3/1896	98	1/1961	15	2	1.03
TX DILLEY	41	2458-09	28-40	99-10	582	5/1916	99	5/1916	3	4	.35	5/1916	99	5/1916	3	4	.39	3/1910	99	3/1910	1	8	UNADJ
TX DUBLIN	41	2598-03	32-06	98-20	1502	9/1895	92	9/1895	11	7	.38	12/1896	94	12/1896	10	7	.50	9/1895	94	1/1970	0	0	.99
TX EAGLE PASS	41	2679-09	28-42	100-29	805	10/1849	83	2/1899	4	4	.48	12/1896	96	12/1896	5	4	.59	10/1849	86	2/1887	3	7	UNADJ
TX EL PASO WSO AP	41	2797-05	31-48	106-24	3918	5/1878	100	1/1895	7	9	.55	5/1878	100	1/1895	7	9	.69	1/1878	100	1/1878	0	14	UNADJ
TX ENCINAL	41	2906-09	28-02	99-22	588	2/1908	95	2/1908	24	8	.33	4/1908	96	4/1908	21	8	.29	10/1907	95	10/1907	4	7	UNADJ
TX FALFURRIAS	41	3063-09	27-14	98-08	120	4/1907	97	12/1975	10	2	.03	4/1907	97	12/1975	10	2	.00	3/1907	98	3/1907	2	8	UNADJ
TX FLATONIA	41	3183-07	29-40	97-07	520	1/1908	99	1/1908	8	8	.47	1/1908	99	1/1908	7	8	.59	1/1908	99	1/1908	7	9	1.16
TX FORT STOCKTON	41	3280-05	30-53	102-52	2980	7/1859	77	1/1905	8	4	.28	6/1904	97	6/1904	8	4	.29	10/1859	84	1/1889	9	5	UNADJ
TX GAINESVILLE	41	3415-03	33-38	97-08	760	2/1889	96	3/1890	14	6	.36	1/1893	98	4/1896	13	6	.39	5/1889	97	1/1890	8	5	1.12
TX GREENVILLE	41	3734-03	33-12	96-13	610	3/1900	98	3/1900	7	6	.23	3/1900	98	3/1900	7	6	.19	3/1900	98	3/1900	3	3	1.05
TX HALLETTSVILLE 3S	41	3873-07	29-24	96-57	261	10/1891	97	10/1891	19	7	.41	1/1893	98	1/1893	16	6	.50	10/1891	97	10/1891	17	7	1.14
TX HASKELL	41	3992-02	33-10	99-44	1605	4/1890	91	1/1957	2	0	.00	3/1893	92	1/1957	2	0	.00	4/1890	96	1/1964	0	0	.99
TX LAMPASAS	41	5018-06	31-03	98-11	1024	4/1888	96	2/1890	10	6	.28	12/1896	99	12/1896	5	4	.29	4/1888	96	2/1890	10	5	1.08

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
TX LIBERTY	41	5196-08	30-03	94-48	35	5/1904	97	5/1904	14	9	.41	7/1904	99	7/1904	12	9	.50	10/1903	99	10/1903	11	7	1.09
TX LLANO	41	5272-06	30-45	98-41	1040	8/1891	95	8/1891	7	6	.43	6/1902	97	6/1902	9	6	.50	8/1891	98	8/1891	1	7	UNADJ
TX LULING	41	5429-07	29-40	97-39	398	4/1882	96	12/1888	7	8	.34	9/1888	96	2/1892	7	8	.39	4/1882	95	1/1889	7	10	1.10
TX MARSHALL	41	5618-04	32-32	94-21	352	7/1892	86	7/1892	21	7	.36	5/1893	87	3/1896	18	7	.39	7/1892	86	12/1963	0	0	.99
TX MCCAMEY	41	5707-06	31-08	102-12	2450	2/1932	99	2/1932	9	3	.09	2/1932	99	2/1932	9	3	.09	2/1932	100	2/1932	0	1	UNADJ
TX MEXIA	41	5869-03	31-41	96-29	535	5/1888	83	3/1890	16	6	.28	9/1904	99	9/1904	0	1	.39	5/1888	84	1/1889	16	4	1.13
TX MIAMI	41	5875-01	35-42	100-38	2755	6/1905	96	6/1905	20	11	.46	7/1905	96	7/1905	20	11	.50	3/1888	83	1/1961	13	3	1.09
TX MULESHOE 1	41	6135-01	34-14	102-45	3760	7/1927	99	7/1927	9	5	.16	7/1927	99	7/1927	9	5	.19	8/1921	99	8/1921	17	9	1.14
TX NEW BRAUNFELS	41	6276-07	29-44	98-07	710	1/1854	76	12/1888	5	5	.60	5/1891	96	2/1892	6	5	.79	1/1854	76	1/1889	10	8	1.10
TX PECOS	41	6892-05	31-25	103-30	2610	3/1889	56	3/1908	38	14	.29	1/1904	66	3/1908	38	13	.39	3/1889	57	11/1907	30	4	UNADJ
TX PLAINVIEW	41	7079-01	34-11	101-42	3370	9/1889	93	1/1915	15	9	.40	3/1894	96	1/1915	15	9	.50	9/1889	96	9/1893	1	11	UNADJ
TX QUANAH 5SE	41	7336-02	34-15	99-41	1495	9/1891	85	11/1900	13	5	.28	1/1893	86	11/1900	13	4	.28	5/1891	88	1/1948	1	0	.99
TX RIO GRANDE CITY 3W	41	7622-09	26-23	98-52	176	10/1849	70	1/1963	2	0	.00	12/1896	71	1/1963	2	0	.00	9/1849	85	9/1874	8	9	UNADJ
TX SAN ANTONIO WSFO	41	7945-07	29-32	98-28	788	1/1846	84	1/1893	5	9	.45	1/1885	100	1/1893	5	9	.59	9/1849	85	7/1886	0	11	UNADJ
TX SEMINOLE	41	8201-01	32-43	102-40	3340	8/1922	91	12/1963	5	2	.07	8/1922	93	12/1963	5	2	.09	8/1922	93	8/1922	6	12	UNADJ
TX SYNDER	41	8433-02	32-43	100-55	2335	2/1889	75	8/1895	25	6	.67	5/1911	97	5/1911	10	5	.79	2/1889	77	1/1892	22	5	UNADJ
TX STRATFORD	41	8692-01	36-21	102-05	3693	7/1911	68	7/1911	56	24	.36	7/1911	68	1/1962	6	1	.00	7/1911	81	7/1911	19	10	UNADJ
TX TEMPLE	41	8910-03	31-05	97-22	700	4/1882	93	2/1890	18	12	.37	5/1891	95	9/1892	18	11	.29	4/1882	95	1/1966	33	5	1.09
TX VEGA	41	9330-01	35-15	102-25	4010	4/1923	98	4/1923	15	6	.28	4/1923	99	4/1923	15	6	.39	3/1923	99	3/1923	17	6	1.16
TX WEATHERFORD	41	9532-03	32-46	97-49	1065	5/1882	92	3/1890	4	3	.37	1/1897	97	1/1897	3	3	.39	4/1882	94	1/1889	9	6	1.12
UT ALTON	42	0086-04	37-26	112-29	7040	1/1915	100	1/1915	4	6	.39	7/1915	99	7/1915	3	5	.59	6/1915	99	6/1915	12	8	1.16
UT BEAVER	42	0519-04	38-17	112-38	5940	1/1893	85	1/1937	12	7	.35	1/1893	81	1/1937	13	6	.29	5/1889	87	1/1958	18	4	1.09
UT BLANDING	42	0738-07	37-37	109-28	6130	12/1904	96	1/1929	0	2	.23	12/1904	96	1/1929	0	2	.29	12/1904	99	12/1904	22	8	1.20
UT BLUFF	42	0788-07	37-17	109-33	4315	7/1911	89	7/1911	24	9	.26	7/1911	90	7/1911	24	9	.29	6/1911	99	6/1911	1	10	UNADJ
UT CORINNE	42	1731-03	41-35	112-08	4240	2/1870	99	1/1898	33	17	.59	2/1897	96	2/1897	33	17	.79	2/1870	98	6/1881	27	16	1.16
UT DESERET	42	2101-01	39-17	112-39	4585	8/1891	95	1/1893	8	5	.43	9/1891	93	1/1893	5	4	.59	8/1891	96	8/1891	4	6	UNADJ
UT DUCHESNE	42	2253-06	40-10	110-24	5510	1/1906	99	1/1906	16	12	.81	4/1906	98	4/1906	16	11	.89	1/1906	99	1/1906	1	12	UNADJ
UT ELBERTA	42	2418-03	39-57	111-57	4690	1/1902	100	1/1902	4	6	.30	1/1902	97	1/1902	5	6	.39	1/1902	100	1/1902	0	5	UNADJ
UT ESCALANTE	42	2592-04	37-46	111-36	5810	8/1901	88	6/1920	9	3	.31	8/1901	88	1/1922	6	2	.39	5/1901	91	1/1941	3	2	1.06
UT FILLMORE	42	2828-04	38-57	112-19	5120	4/1892	100	4/1892	4	4	.37	1/1893	99	9/1971	3	1	.09	1/1892	100	1/1892	3	7	1.09
UT FORT DUCHESNE	42	2996-06	40-17	109-52	5050	12/1887	98	1/1893	13	9	1.42	11/1897	96	9/1924	8	5	1.29	12/1887	99	12/1887	0	9	UNADJ

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
UT GREEN RIVER AVIATION	42	3418-07	39-00	110-10	4070	3/1893	88	12/1918	29	9	.70	3/1893	88	1/1919	29	9	.89	7/1891	95	7/1891	5	18	UNADJ
UT HANKSVILLE	42	3611-07	38-22	110-43	4308	12/1910	98	12/1910	13	6	.35	12/1910	96	7/1919	13	6	.39	1/1910100	1/1910	0	7	UNADJ	
UT HEBER	42	3809-05	40-30	111-25	5630	1/1893100	1/1893	0	4	.46	5/1893	99	5/1893	1	4	.59	1/1893100	1/1893	0	5	1.10		
UT HIAWATHA	42	3896-05	39-29	111-01	7280	9/1921	95	9/1921	23	7	.63	9/1921	95	9/1921	23	7	.69	11/1916	98	11/1916	25	8	1.16
UT KANAB	42	4508-04	37-03	112-32	4950	10/1902	91	6/1908	34	13	.30	10/1902	86	6/1908	36	12	.39	1/1876	75	6/1908	55	13	1.28
UT LAKETOWN	42	4856-05	41-49	111-19	5980	11/1900	99	11/1900	7	4	.28	11/1900	99	11/1900	7	4	.39	1/1900100	1/1900	0	5	UNADJ	
UT LEVAN	42	5065-04	39-33	111-52	5315	1/1890100	11/1892	8	6	.38	4/1895	99	4/1895	6	5	.39	5/1889	99	5/1889	6	6	1.05	
UT LOA	42	5148-04	38-24	111-39	7080	1/1892	84	1/1922	10	4	.51	1/1893	84	8/1912	18	10	.59	1/1892	88	4/1915	10	7	UNADJ
UT LOGAN USU	42	5186-03	41-45	111-48	4790	9/1890	98	10/1890	12	10	.54	1/1893	99	5/1893	11	9	.59	11/1890	99	11/1890	17	12	1.09
UT MANTI	42	5402-04	39-15	111-38	5740	5/1892	98	12/1907	2	4	.37	1/1893	94	6/1907	4	4	.39	5/1892	98	1/1893	17	8	1.11
UT MOAB 4NW	42	5733-07	38-36	109-36	3965	10/1889	99	10/1889	12	11	.48	1/1893	98	1/1893	15	11	.59	8/1889	99	8/1889	1	13	UNADJ
UT MODENA	42	5752-01	37-48	113-55	5480	1/1901	99	1/1901	9	4	.17	1/1901	99	1/1901	9	4	.19	1/1901100	1/1901	6	3	1.08	
UT MORGAN	42	5826-05	41-02	111-41	5060	2/1903100	2/1903	13	8	.56	2/1903	94	4/1912	12	7	.79	1/1903100	1/1903	0	8	UNADJ		
UT OGDEN PIONEER P H	42	6404-03	41-15	111-57	4350	2/1870	98	1/1903	18	6	.16	1/1902	98	1/1902	18	6	.19	2/1870	99	6/1881	13	7	1.07
UT PANGUITCH	42	6601-04	37-49	112-27	6720	12/1911	90	12/1911	43	17	.36	12/1911	91	12/1911	39	16	.50	6/1904	98	6/1904	2	19	UNADJ
UT PAROWAN POWER PLANT	42	6686-04	37-50	112-50	6000	9/1890	99	1/1908	21	11	.31	1/1893	96	1/1908	23	12	.29	9/1890	96	9/1890	3	11	UNADJ
UT RICHFIELD RADIO KSVC	42	7260-04	38-46	112-05	5270	8/1889	89	5/1905	37	11	.33	1/1893	89	9/1918	24	7	.19	8/1889	97	8/1889	3	15	UNADJ
UT RIVERDALE	42	7318-03	41-09	112-00	4400	1/1914100	1/1914	5	4	.35	2/1914	98	2/1914	6	4	.39	1/1914100	1/1914	2	4	1.04		
UT SAINT GEORGE	42	7516-02	37-09	113-35	2760	6/1889	99	12/1915	16	11	.46	1/1893	97	1/1917	16	10	.59	1/1878100	1/1878	0	13	UNADJ	
UT SCIPIO	42	7714-04	39-15	112-06	5300	1/1895100	9/1924	0	1	.00	6/1895	97	6/1924	3	1	.00	7/1894	99	1/1929	0	2	1.04	
UT SNAKE CREEK PH	42	7909-05	40-33	111-30	6000	1/1914100	1/1914	4	2	.11	1/1914100	1/1914	4	2	.09	12/1913	99	12/1913	4	2	1.00		
UT SPANISH FORK PH	42	8119-03	40-05	111-36	4720	7/1909	99	7/1909	3	6	.25	7/1909	99	7/1909	3	6	.29	7/1909	99	7/1909	2	7	1.06
UT THOMPSON	42	8705-07	38-58	109-43	5100	5/1911	95	5/1911	9	0	.02	5/1911	90	5/1911	13	0	.00	5/1911	99	5/1911	0	1	UNADJ
UT TOOEE	42	8771-03	40-32	112-18	5070	1/1896100	1/1896	8	6	.19	3/1896	98	6/1923	4	2	.00	3/1896100	3/1896	13	7	1.06		
UT UTAH LAKE LEHI	42	8973-03	40-22	111-54	4497	1/1905	94	1/1905	13	2	.15	1/1905	93	10/1909	11	2	.09	6/1904	99	6/1904	0	2	1.01
UT VERNAL AP	42	9111-06	40-27	109-31	5280	1/1915	98	1/1915	18	6	.85	1/1928	97	1/1928	15	5	1.00	1/1928	97	1/1928	3	4	UNADJ
UT WENDOVER AUTOB	42	9382-01	40-44	114-02	4237	1/1911100	1/1911	1	7	.51	9/1911	96	9/1911	4	6	.59	6/1911	99	6/1911	0	5	UNADJ	
UT WOODRUFF	42	9595-05	41-32	111-09	6315	1/1897	87	1/1924	2	0	.01	1/1897	87	1/1924	2	0	.00	1/1897	86	1/1897	14	12	UNADJ
UT ZION NATIONAL PARK	42	9717-02	37-13	112-59	4050	1/1904	93	12/1924	8	5	.24	1/1904	94	12/1924	8	5	.29	1/1904	96	1/1904	40	9	1.25
VT BURLINGTON AP	43	1081-02	44-28	73-09	332	1/1828	90	1/1879	2	5	.42	1/1892100	1/1892	1	4	.39	1/1828	91	1/1884	0	3	1.04	
VT CAVENDISH	43	1243-03	43-23	72-36	800	3/1903	98	3/1903	6	1	.04	3/1903	98	3/1903	5	1	.00	3/1903	98	3/1903	4	1	1.00

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
VT CHELSEA	43	1360-01	43-59	72-27	800	3/1885	95	6/1893	12	7	.37	10/1895	97	10/1895	10	6	.59	3/1885	97	3/1885	6	7	1.06
VT CORNWALL	43	1580-02	43-57	73-13	490	1/1894	97	1/1894	9	4	.24	1/1894	97	1/1894	9	4	.29	5/1886	93	5/1886	16	5	1.06
VT ENOSBURG FALLS	43	2769-01	44-55	72-49	422	6/1891	93	6/1891	11	3	.32	8/1891	93	1/1900	9	2	.29	6/1891	93	6/1891	6	4	1.08
VT NORTHFIELD 3SSE	43	5740-01	44-06	72-37	1410	3/1887	96	3/1887	15	8	.29	3/1887	96	11/1891	11	7	.39	3/1887	96	3/1887	9	5	1.06
VT SAINT JOHNSBURY	43	7054-01	44-25	72-01	699	1/1853	74	3/1885	11	3	.07	3/1894	100	3/1894	2	1	.00	1/1854	73	3/1883	9	4	1.03
VA BLACKSBURG 3SE	44	0766-06	37-11	80-25	2000	4/1891	99	4/1891	6	4	.28	12/1891	98	12/1891	5	4	.39	4/1891	99	4/1891	5	5	1.05
VA BURKES GARDEN	44	1209-06	37-05	81-20	3300	4/1896	99	4/1896	5	5	.28	4/1896	99	4/1896	5	5	.29	1/1896	99	1/1896	8	6	1.04
VA CHARLOTTESVILLE	44	1593-03	38-02	78-31	870	7/1837	64	6/1897	3	1	.01	1/1893	96	1/1899	2	1	.00	1/1849	76	1/1900	0	1	1.02
VA COLUMBIA 2SSE	44	1929-02	37-44	78-09	290	12/1898	96	12/1898	8	5	.15	1/1900	97	12/1898	7	5	.19	8/1898	99	8/1898	4	5	1.03
VA CULPEPER	44	2155-04	38-28	78-00	420	8/1907	97	8/1907	9	4	.19	8/1907	98	8/1907	9	4	.19	8/1907	99	8/1907	7	4	1.04
VA DALE ENTERPRISE	44	2208-05	38-27	78-56	1400	1/1880	99	12/1883	5	4	.27	1/1893	99	1/1907	1	2	.19	1/1880	99	1/1880	1	2	1.03
VA DANVILLE BRIDGE ST	44	2245-03	36-35	79-23	410	4/1916	99	4/1916	1	4	.23	5/1916	99	5/1916	0	4	.19	1/1891	96	11/1899	2	5	1.04
VA FARMVILLE 2N	44	2941-02	37-20	78-23	450	3/1897	70	2/1899	38	11	.25	3/1897	71	12/1899	37	9	.29	2/1897	71	2/1899	37	4	1.11
VA FREDERICKSBURG NATIONAL PARK	44	3192-01	38-19	77-27	90	5/1893	97	5/1893	13	10	.45	5/1893	97	5/1893	13	10	.59	1/1893	99	1/1893	19	12	1.09
VA HOPEWELL	44	4101-01	37-18	77-18	40	10/1916	96	10/1916	6	4	.24	10/1916	97	4/1938	3	2	.19	10/1916	98	10/1916	9	4	1.03
VA HOT SPRINGS	44	4128-05	38-00	79-50	2238	3/1892	97	3/1892	13	6	.34	6/1892	97	11/1899	13	6	.29	6/1892	99	6/1892	6	5	1.04
VA LEXINGTON	44	4876-05	37-47	79-26	1060	1/1861	87	5/1889	11	7	.40	7/1889	98	12/1891	12	7	.59	1/1861	91	4/1885	10	8	1.08
VA LINCOLN	44	4909-04	39-07	77-43	500	10/1900	96	10/1900	4	2	.14	10/1900	97	10/1900	4	2	.19	1/1901	99	1/1901	1	1	1.00
VA NORFOLK WSO AP	44	6139-01	36-54	76-12	24	1/1871	81	1/1910	2	2	.17	3/1909	99	3/1909	2	2	.19	1/1871	79	1/1910	1	2	1.04
VA PENNINGTON GAP	44	6626-06	36-45	83-03	1510	7/1931	98	7/1931	1	1	.11	7/1931	98	7/1931	1	1	.09	7/1931	99	7/1931	0	1	1.01
VA ROCKY MOUNT	44	7338-03	37-00	79-54	1232	5/1894	92	10/1961	1	1	.00	5/1894	93	10/1961	1	1	.00	5/1894	97	5/1894	2	3	1.03
VA STAUNTON SEWAGE PLANT	44	8062-05	38-09	79-02	1385	9/1868	81	12/1891	20	12	.33	1/1893	97	9/1898	19	10	.29	9/1868	82	4/1885	25	11	1.09
VA WILLIAMSBURG 2N	44	9151-01	37-18	76-42	70	11/1900	94	11/1900	15	5	.20	11/1900	95	11/1900	15	5	.19	11/1900	98	1/1959	0	0	.99
VA WOODSTOCK 2NE	44	9263-04	38-54	78-28	660	1/1897	98	1/1897	15	7	.45	1/1897	97	1/1897	16	7	.59	9/1889	97	9/1889	11	9	1.06
WA ABERDEEN	45	0008-01	46-58	123-49	10	1/1891	99	11/1895	16	12	.23	7/1891	98	10/1895	9	8	.19	1/1891	100	1/1904	6	6	1.04
WA BELLINGHAM 2N	45	0564-03	48-47	122-29	140	1/1857	72	2/1890	7	7	.32	6/1895	99	6/1895	2	6	.39	6/1857	71	1/1890	6	8	1.03
WA BLAINE	45	0729-03	49-00	122-45	60	8/1893	94	9/1896	17	13	.42	8/1893	93	1/1910	6	9	.50	8/1893	96	9/1896	22	12	1.09
WA BUCKLEY 1NE	45	0945-04	47-10	122-00	685	1/1913	100	1/1913	0	3	.22	1/1913	100	1/1913	0	3	.29	1/1913	100	1/1913	0	3	1.02
WA CEDAR LAKE	45	1233-05	47-25	121-44	1560	7/1909	98	7/1909	9	2	.19	7/1909	99	7/1909	9	2	.19	7/1898	99	7/1898	8	3	1.02
WA CENTRALIA	45	1276-03	46-43	122-57	185	1/1893	90	6/1897	8	8	.24	1/1893	88	6/1897	9	8	.29	1/1890	99	7/1897	7	5	1.03
WA CLEARBROOK	45	1484-03	48-58	122-20	64	3/1903	98	3/1903	8	3	.17	3/1903	98	3/1903	8	3	.19	3/1903	99	3/1903	5	2	1.01

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STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE					MAX/MIN TEMPERATURE					PRECIPITATION							
						BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF
WA CLE ELUM	45	1504-06	47-11	120-57	1930	1/1899	100	1/1899	16	13	.56	1/1899	97	1/1899	19	13	.79	1/1899	99	1/1899	27	13	1.13
WA COLFAX 1NW	45	1586-10	46-53	117-23	1955	1/1892	100	1/1900	16	10	.39	2/1892	96	1/1912	20	9	.29	1/1881	92	12/1899	9	10	1.06
WA COLVILLE AP	45	1650-09	48-33	117-53	1885	12/1859	82	9/1897	9	7	.29	9/1899	99	9/1899	7	4	.39	12/1859	81	1/1900	5	4	1.05
WA CONCONULLY	45	1666-07	48-33	119-45	2320	8/1894	94	1/1905	14	10	.49	8/1894	90	1/1905	13	8	.59	7/1894	94	1/1921	10	7	1.10
WA DAVENPORT	45	2007-07	47-39	118-08	2440	3/1893	84	2/1900	17	9	.33	3/1893	82	2/1900	19	7	.39	3/1893	84	4/1899	17	9	1.09
WA DAYTON 1WSW	45	2030-10	46-19	118-00	1557	7/1891	94	6/1899	15	7	.18	4/1893	95	12/1915	11	4	.09	12/1879	89	1/1904	10	6	1.05
WA ELLENSBURG	45	2505-08	46-58	120-33	1480	2/1884	93	1/1901	14	9	.42	2/1893	98	1/1901	14	9	.50	1/1884	94	1/1890	3	11	UNADJ
WA EVERETT	45	2675-03	47-59	122-11	60	9/1894	78	9/1896	34	13	.34	9/1894	77	9/1896	34	12	.39	9/1894	77	9/1896	32	9	1.09
WA FORKS 1E	45	2914-01	47-57	124-22	350	2/1908	94	2/1908	14	8	.28	1/1909	94	2/1908	14	8	.39	1/1907	100	1/1907	6	8	1.11
WA GOLDENDALE 2E	45	3226-08	45-49	120-46	1800	11/1905	97	11/1905	15	8	.34	2/1906	98	11/1905	11	7	.39	1/1905	100	1/1905	0	10	UNADJ
WA GRAPEVIEW 3SW	45	3284-04	47-18	122-52	30	10/1907	98	10/1907	3	3	.14	10/1907	98	10/1907	3	3	.19	1/1907	100	1/1907	2	3	1.03
WA KENNEWICK	45	4154-08	46-13	119-06	390	12/1884	88	7/1904	12	10	.36	2/1894	96	1/1915	4	7	.39	11/1884	90	10/1891	5	16	UNADJ
WA LAURIER	45	4549-09	49-00	118-14	1644	1/1910	100	1/1910	2	1	.00	4/1910	99	4/1910	2	0	.00	1/1910	100	1/1910	0	1	.99
WA LONG BEACH EXP STN	45	4748-01	46-22	124-02	25	9/1883	96	12/1899	6	2	.24	9/1883	96	12/1899	5	2	.29	1/1878	100	1/1878	0	3	1.05
WA LONGMIRE RAINIER NPS	45	4764-05	46-45	121-49	2762	1/1909	94	1/1909	14	3	.17	1/1909	94	1/1909	14	3	.19	1/1909	100	1/1909	8	3	1.02
WA LONGVIEW	45	4769-04	46-09	122-55	12	1/1925	99	1/1925	6	5	.06	7/1925	99	7/1925	5	5	.00	1/1925	100	1/1925	6	5	1.01
WA ODESSA	45	6039-07	47-20	118-41	1540	1/1903	100	1/1903	15	7	.32	3/1903	98	3/1903	17	7	.39	1/1903	100	1/1903	0	6	UNADJ
WA OLGA 3E	45	6096-00	48-37	122-48	80	2/1890	100	2/1890	1	1	.09	8/1891	99	10/1892	1	1	.09	1/1890	100	1/1890	0	0	.99
WA POMEROY	45	6610-10	46-28	117-37	1810	1/1891	100	1/1905	10	9	.31	10/1891	78	11/1917	24	7	.39	6/1881	92	1/1905	10	9	1.06
WA PORT ANGELES	45	6624-02	48-07	123-24	40	10/1891	98	12/1894	10	8	.16	10/1891	98	9/1898	10	8	.19	1/1883	100	1/1883	0	6	UNADJ
WA PORT TOWNSEND	45	6678-02	48-07	122-45	100	1/1859	87	1/1898	7	8	.32	10/1891	94	3/1895	10	9	.39	1/1860	90	8/1873	0	9	UNADJ
WA PULLMAN 2NW	45	6789-10	46-46	117-12	2545	1/1893	97	1/1911	5	4	.23	5/1893	97	1/1911	5	4	.29	1/1893	100	1/1893	8	6	1.07
WA PUYALLUP EXPERIMENT STN 2W	45	6803-03	47-12	122-20	50	1/1914	100	1/1914	0	2	.17	1/1914	98	1/1914	2	2	.19	1/1914	100	1/1914	8	2	1.02
WA RAYMOND 2S	45	6914-01	46-39	123-43	30	3/1895	96	3/1895	12	8	.34	3/1895	96	10/1896	12	8	.39	3/1895	96	9/1910	4	4	1.04
WA RITZVILLE 1SSE	45	7059-08	47-07	118-22	1830	1/1916	100	1/1916	1	2	.19	2/1916	99	2/1916	2	2	.19	4/1899	99	4/1899	0	2	1.03
WA SEATTLE NMFC	45	7458-03	47-39	122-18	19	1/1909	99	1/1909	6	6	.33	1/1909	95	1/1909	10	6	.39	1/1909	100	1/1909	3	6	1.06
WA SEDRO WOOLLEY	45	7507-03	48-30	122-14	60	8/1896	99	8/1896	5	4	.21	8/1896	99	8/1896	6	4	.29	8/1896	99	8/1896	3	4	1.04
WA SNOQUALMIE FALLS	45	7773-04	47-33	120-51	440	1/1899	100	1/1899	3	3	.16	2/1899	97	2/1899	5	3	.19	1/1898	100	1/1898	4	4	1.03
WA SPOKANE WSO AP	45	7938-09	47-38	117-32	2356	2/1881	100	1/1903	1	5	.39	2/1881	100	1/1903	1	5	.50	1/1878	100	1/1903	1	6	1.05
WA STEHEKIN 4NW	45	8059-06	48-21	120-43	1270	2/1906	87	2/1906	19	4	.38	2/1906	88	2/1906	19	4	.50	2/1906	88	2/1906	18	4	1.06
WA SUNNYSIDE	45	8207-08	46-19	120-00	747	1/1894	100	1/1894	9	5	.25	10/1894	98	11/1898	6	5	.29	2/1894	99	2/1894	1	4	UNADJ

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	MEAN TEMPERATURE						MAX/MIN TEMPERATURE						PRECIPITATION					
						BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF	BGN-FOR	ZA	SC-DATE	ZE	#M	CONF
WA VANCOUVER 4NNE	45	8773-04	45-41	122-39	210	12/1849	81	1/1896	1	2	.17	8/1891	95	9/1893	4	3	.19	12/1849	79	1/1896	3	1	1.02
WA WALLA WALLA WSO CITY	45	8931-08	46-02	118-20	949	1/1872	100	1/1915	0	1	.13	12/1885	99	1/1915	0	1	.19	1/1873	100	1/1886	3	4	1.06
WA WATERVILLE	45	9012-07	47-39	120-04	2620	1/1890	100	1/1908	17	9	.38	10/1891	94	6/1925	19	5	.39	1/1890	100	1/1915	31	7	1.17
WA WENATCHEE	45	9074-08	47-25	120-19	640	1/1912	100	1/1912	21	9	.29	5/1912	99	5/1912	21	8	.29	5/1912	100	5/1912	0	8	UNADJ
WA WILBUR	45	9238-07	47-45	118-40	2230	4/1892	92	1/1899	20	12	.44	4/1892	91	1/1899	17	11	.59	3/1892	92	1/1971	8	2	1.02
WA WINTHROP 1WSW	45	9376-06	48-28	120-11	1755	2/1906	95	2/1906	7	4	.24	3/1906	91	3/1906	10	4	.29	3/1906	97	3/1906	3	3	1.04
WV BENS RUN 1SSE	46	0687-01	39-28	81-06	644	10/1900	96	10/1900	5	3	.19	10/1900	97	10/1900	5	3	.19	10/1900	97	10/1900	4	3	1.03
WV BUCKHANNON 2W	46	1220-02	39-00	80-16	1445	10/1891	94	9/1893	7	3	.11	10/1891	94	9/1893	7	3	.09	8/1887	96	8/1887	8	5	1.03
WV GARY	46	3353-05	37-22	81-33	1426	2/1920	99	2/1920	1	1	.12	2/1920	100	2/1920	0	1	.09	6/1917	99	6/1917	0	1	1.02
WV GLENVILLE 1ENE	46	3544-02	38-56	80-49	720	1/1893	98	1/1893	10	9	.40	1/1893	98	1/1893	10	9	.50	8/1887	99	8/1887	14	9	1.07
WV LEWISBURG 2SSW	46	5224-05	37-46	80-28	2185	1/1854	66	1/1901	23	7	.32	5/1900	94	5/1900	23	8	.39	1/1854	65	4/1890	22	7	1.07
WV MANNINGTON 7WNW	46	5626-02	39-32	80-30	1100	3/1901	96	3/1901	13	5	.02	3/1901	96	3/1901	13	3	.00	1/1901	99	1/1901	11	5	1.02
WV MARTINSBURG FAA AIRPORT	46	5707-06	39-24	77-59	531	11/1891	98	11/1891	6	4	.14	11/1891	98	1/1893	6	4	.09	10/1891	99	10/1891	6	4	1.02
WV PARSONS 1SE	46	6867-04	39-06	79-40	1680	1/1899	93	1/1899	10	7	.35	1/1899	93	1/1899	10	7	.50	1/1899	94	1/1899	10	7	1.06
WV PICKENS 1	46	6991-04	38-40	80-13	2770	4/1902	96	4/1902	13	6	.49	4/1902	96	4/1902	13	6	.69	4/1902	97	4/1902	7	3	1.04
WV SPENCER 1SE	46	8384-03	38-48	81-21	740	2/1892	89	2/1892	21	7	.34	3/1892	89	2/1897	17	7	.39	2/1892	92	2/1892	20	9	1.07
WV WELLSBURG WATER TRMT PLANT	46	9368-01	40-17	80-37	660	10/1899	98	10/1899	2	3	.24	10/1899	98	10/1899	2	3	.29	2/1878	86	1/1900	0	3	1.04
WV WILLIAMSON	46	9605-03	37-40	82-17	673	9/1900	96	9/1900	11	2	.14	9/1900	97	9/1900	11	2	.19	9/1900	99	9/1900	6	4	1.01
WV WINFIELD LOCK & DAM	46	9683-03	38-32	81-55	571	10/1900	94	10/1900	8	4	.19	10/1900	94	10/1900	8	4	.19	10/1900	96	10/1900	3	3	1.02
WI ANTIGO 1SSW	47	0239-03	45-08	89-09	1450	5/1894	96	5/1894	8	3	.21	5/1894	96	2/1898	5	3	.19	5/1894	94	5/1894	10	4	1.04
WI ASHLAND EXPERIMENT FARM	47	0349-01	46-34	90-58	650	3/1893	87	3/1893	22	14	.22	3/1893	87	3/1894	21	14	.19	7/1856	70	4/1887	18	8	1.08
WI BRODHEAD	47	1078-08	42-37	89-23	790	11/1897	98	11/1897	4	5	.33	11/1897	98	11/1897	4	5	.39	11/1897	98	11/1897	1	5	1.06
WI DARLINGTON	47	2001-07	42-41	90-07	930	3/1901	93	3/1901	20	6	.22	3/1901	93	3/1901	20	6	.19	1/1901	94	1/1901	17	5	1.06
WI FOND DU LAC	47	2839-06	43-48	88-27	760	1/1888	98	1/1888	3	7	.33	5/1891	98	12/1891	3	7	.39	1/1886	100	1/1886	10	7	1.07
WI HANCOCK EXPERIMENT FARM	47	3405-05	44-07	89-32	1076	11/1902	97	11/1902	6	6	.36	11/1902	97	11/1902	6	6	.39	11/1902	97	11/1902	7	5	1.06
WI HATFIELD HYDRO PLANT	47	3471-04	44-24	90-44	953	9/1908	97	9/1908	4	2	.21	9/1908	97	9/1908	4	2	.29	9/1908	99	9/1908	1	3	1.05
WI LANCASTER 4WSW	47	4546-07	42-50	90-47	1042	1/1888	91	1/1891	9	6	.33	1/1892	93	1/1892	9	6	.39	1/1888	91	1/1929	10	3	1.04
WI MANITOWOC	47	5017-06	44-06	87-41	660	10/1851	89	1/1888	4	5	.27	1/1892	100	1/1892	4	5	.29	2/1858	96	1/1961	0	0	.99
WI MARSHFIELD EXPERIMENT FARM	47	5120-05	44-39	90-08	1250	1/1913	100	1/1913	0	3	.23	1/1913	100	1/1913	0	3	.29	1/1913	100	1/1913	3	4	1.03
WI MEDFORD	47	5255-02	45-08	90-21	1470	10/1890	99	10/1890	19	9	.32	2/1891	99	12/1891	22	9	.39	6/1889	99	6/1889	16	8	1.08
WI MINOCQUA DAM	47	5516-02	45-53	89-44	1580	9/1903	96	9/1903	9	2	.17	9/1903	96	9/1903	9	2	.19	9/1903	98	9/1903	9	3	1.02

UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	MEAN TEMPERATURE											MAX/MIN TEMPERATURE											PRECIPITATION										
	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF										
WI NEW LONDON	47	5932-05	44-23	88-44	760	10/1856	70	11/1889	8	7	.32	3/1896	99	3/1896	3	6	.39	1/1857	71	12/1890	6	6	1.06										
WI OCONTO 4W	47	6208-03	44-54	87-57	660	12/1890	97	12/1890	16	12	.37	2/1891	99	12/1891	16	12	.39	12/1890	99	12/1890	18	12	1.10										
WI OSHKOSH	47	6330-06	44-02	88-33	750	9/1888	96	9/1895	8	4	.18	2/1891	96	12/1891	9	4	.19	9/1888	96	12/1893	7	4	1.03										
WI PORTAGE	47	6718-08	43-32	89-26	800	12/1890	93	3/1898	5	4	.20	3/1896	99	3/1896	6	4	.29	8/1887	99	8/1887	7	8	1.06										
WI PRAIRIE DU CHIEN	47	6827-07	43-02	91-09	658	1/1822	69	1/1900	6	3	.17	2/1891	98	10/1892	12	5	.19	5/1836	70	1/1900	0	3	1.03										
WI RACINE	47	6922-09	42-42	87-46	595	11/1855	70	6/1887	27	14	.42	5/1896	98	5/1896	22	12	.50	5/1896	98	5/1896	25	11	1.08										
WI SPOONER EXPERIMENT FARM	47	8027-01	45-49	91-53	1100	8/1894	96	8/1894	3	3	.21	8/1894	96	8/1894	3	3	.19	4/1894	97	4/1894	16	8	1.05										
WI STANLEY	47	8110-01	44-58	90-56	1120	9/1903	95	9/1903	12	9	.33	9/1903	95	9/1903	12	9	.39	9/1903	96	9/1903	19	9	1.14										
WI VIROQUA 2NW	47	8827-07	43-34	90-54	1200	3/1889	95	3/1889	20	7	.26	6/1891	97	12/1891	19	7	.29	4/1889	96	4/1889	15	6	1.05										
WI WATERTOWN	47	8919-08	43-11	88-44	820	6/1891	99	6/1891	9	6	.27	6/1891	99	12/1891	9	6	.29	5/1891	99	5/1891	12	7	1.06										
WI WAUKESHA	47	8937-09	43-01	88-14	860	1/1856	70	1/1888	10	6	.20	3/1894	96	3/1894	4	4	.19	3/1856	73	1/1863	24	6	1.09										
WY ALTA 1NNW	48	0140-02	43-47	111-02	6430	8/1909	98	8/1909	6	4	.36	8/1909	98	8/1909	6	4	.50	6/1909	99	6/1909	8	5	1.06										
WY BASIN	48	0540-04	44-23	108-03	3837	3/1898	92	10/1901	8	3	.34	3/1898	93	10/1901	7	3	.39	3/1898	98	3/1898	2	3	UNADJ										
WY BORDER 3N	48	0915-03	42-15	111-02	6120	1/1902100	1/1902	5	4	.38	1/1902	99	1/1902	6	4	.59	1/1902100	1/1902	9	6	1.08												
WY BUFFALO BILL DAM	48	1175-04	44-30	109-11	5156	1/1905	98	1/1905	5	1	.10	1/1905	99	1/1905	3	1	.09	1/1905100	1/1905	0	1	UNADJ											
WY CHEYENNE WSFO	48	1675-08	41-09	104-49	6126	1/1871100	1/1885	2	6	.39	11/1872	99	4/1887	2	6	.39	1/1871100	1/1885	12	9	1.11												
WY CHUGWATER	48	1730-08	41-45	104-49	5282	10/1900	99	10/1900	2	1	.15	11/1900	97	11/1900	3	1	.19	11/1900	99	11/1900	0	1	1.03										
WY COLONY	48	1905-06	44-56	104-12	3570	9/1914	98	9/1914	4	3	.29	1/1915	99	1/1915	5	3	.29	4/1914100	4/1914	0	2	1.07											
WY DIVERSION DAM	48	2595-09	43-14	108-56	5575	10/1907	90	10/1907	15	10	.07	10/1907	90	10/1907	15	10	.00	10/1907	90	10/1907	9	4	UNADJ										
WY DUBOIS	48	2715-09	43-34	109-38	6925	4/1907	94	4/1907	18	3	.21	4/1907	92	4/1907	21	3	.29	6/1905	96	6/1905	3	3	UNADJ										
WY EVANSTON 1E	48	3100-03	41-16	110-57	6810	10/1889	92	10/1895	8	4	.35	5/1898	99	5/1898	6	3	.39	10/1889	92	10/1889	8	3	UNADJ										
WY FARSON	48	3170-03	42-07	109-26	6590	4/1908	92	4/1908	25	10	.83	4/1908	85	4/1908	38	10	1.00	4/1908	90	4/1908	11	13	UNADJ										
WY GREEN RIVER	48	4065-03	41-32	109-28	6089	4/1897	91	10/1899	14	12	.71	4/1897	88	1/1921	9	7	.79	4/1897	91	4/1897	9	11	UNADJ										
WY LAKE YELLOWSTONE	48	5345-01	44-33	110-24	7770	2/1904	89	2/1904	19	6	.55	2/1904	89	2/1904	19	6	.79	2/1904	93	2/1904	12	7	1.10										
WY LARAMIE FAA AP	48	5415-10	41-19	105-41	7266	9/1866	85	1/1892	0	3	.31	1/1892	94	11/1892	5	3	.39	7/1867	89	10/1886	4	5	UNADJ										
WY LUSK	48	5830-07	42-46	104-28	5020	2/1889	97	11/1889	12	7	.34	10/1891	96	10/1891	9	5	.39	2/1889	97	2/1889	3	7	UNADJ										
WY MIDWEST	48	6195-05	43-24	106-17	4815	7/1922	97	7/1922	10	4	.30	7/1922	97	7/1922	10	4	.39	7/1922	97	7/1922	2	4	UNADJ										
WY MORAN SWNW	48	6440-02	43-51	110-35	6798	3/1911100	3/1911	4	1	.20	3/1911	99	3/1911	4	1	.19	3/1911100	3/1911	0	1	1.01												
WY NEWCASTLE	48	6660-07	43-51	104-13	4315	7/1906	94	7/1906	11	8	.41	7/1906	95	7/1906	11	8	.50	7/1906	95	7/1906	5	7	UNADJ										
WY PATHFINDER DAM	48	7105-10	42-28	106-51	5930	1/1899	99	1/1899	9	1	.04	1/1899	98	1/1899	9	1	.00	1/1899100	1/1899	0	1	UNADJ											
WY PAVILLION	48	7115-09	43-15	108-41	5440	3/1919	98	3/1919	5	1	.01	3/1919	97	3/1919	6	1	.00	4/1919	99	4/1919	1	1	UNADJ										

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UNITED STATES HISTORICAL CLIMATOLOGY NETWORK

STATE & STATION NAME	MEAN TEMPERATURE											MAX/MIN TEMPERATURE											PRECIPITATION										
	STATE	STN-DIV	LAT-N	LONG-W	ELV(FT)	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF	BGN-POR	ZA	SC-DATE	ZE	#M	CONF				
WY PINE BLUFFS	48	7235-08	41-11	104-04	5075	11/1900	91	11/1900	13	16	.41	4/1900	81	4/1900	19	14	.50	4/1900	90	4/1900	10	10	UNADJ										
WY PINEDALE	48	7260-03	42-52	109-52	7175	1/1906	81	1/1906	43	14	.63	1/1906	68	1/1940	50	12	.50	1/1906	87	1/1906	40	15	1.19										
WY POWELL FIELD STATION	48	7388-04	44-47	108-45	4370	2/1907	100	2/1907	11	6	.24	2/1907	100	2/1907	12	6	.29	2/1907	100	2/1907	0	5	UNADJ										
WY RIVERTON	48	7760-09	43-01	108-23	4954	2/1907	88	2/1907	22	8	.33	2/1907	88	2/1907	21	7	.39	2/1907	90	2/1907	10	8	UNADJ										
WY SARATOGA	48	7990-10	41-27	106-49	6790	10/1889	89	10/1889	28	13	.83	3/1900	80	1/1906	36	13	1.00	10/1889	89	4/1905	4	16	UNADJ										
WY SHERIDAN FIELD STATION	48	8160-05	44-50	106-50	3750	9/1891	94	3/1893	11	3	.19	10/1891	89	1/1918	3	1	.00	9/1891	98	1/1893	0	5	UNADJ										
WY TORRINGTON EXP FARM	48	8995-08	42-05	104-13	4098	1/1922	99	1/1922	1	3	.33	1/1922	99	1/1922	1	3	.39	1/1922	100	1/1922	0	3	1.07										
WY WHEATLAND 4N	48	9615-08	42-07	104-57	4638	7/1890	89	12/1900	33	11	.31	11/1891	87	8/1929	8	3	.09	5/1889	88	6/1896	29	11	1.18										
WY WORLAND	48	9770-04	44-01	107-57	4060	2/1907	94	2/1907	19	10	.53	2/1907	95	2/1907	17	10	.69	2/1907	95	2/1907	5	10	UNADJ										
WY YELLOWSTONE PARK	48	9905-01	44-58	110-42	6200	11/1886	97	1/1905	3	3	.41	1/1887	97	1/1905	6	3	.50	1/1889	99	1/1889	1	4	UNADJ										

APPENDIX B

Data Quality Assessments for each Station in the HCN

In another data file and in hard copy, a list of relative ranks of various factors are given which may be important to data analysts. A relative rating system is given for 8 distinct station characteristics. This includes:

1. The serial completion date (SC-DATE).
2. The percent of original data available (%A).
3. The percent of adjusted data estimated (%E).
4. The beginning period of record for original data (BPOR).
5. The average confidence factor over the period of adjusted data (CONF).
6. The number of potential discontinuities during the period of adjusted data (#M).
7. For the adjusted data, the consistency of the station on an annual basis with its nearest 20 neighbors over the past 40 years (CONS40).
8. For the adjusted data, the consistency of the station on an annual basis with its nearest 20 neighbors for the full period of record (CONSFULL).

Items 7 and 8 are assessed by calculating the trend of the difference (or log ratio) series of the station of interest with each of its 20 nearest neighbors. If the station is consistent with its neighbors, there should not be an overwhelming number of trends of one sign. The number of station pairs with positive trends, minus negative trends, is given. A value above 12 has about a 1% chance of occurrence (if the station are truly consistent with their neighbors over time). A large value, 14 or more, may imply there is an undocumented move or local modifications of the environment; i.e., heat island, growth of trees, etc.

In order to judge the quality of each station relative to the network, each category is assigned a numeric value between 0 and 9. These are related to the decile rankings (R) of each category; 0 implies the lower 10 percentile, 1 implies 10 to 20 percentile, ... 9 implies 90 to 100 percentile. For the 8 characteristics of data quality (listed above), the lowest deciles are assigned to:

1. Longest records.
2. Greatest data available.
3. Stations with fewest estimated adjusted data.
4. Longest records.
5. Lowest confidence factor (narrowest intervals).
6. Fewest discontinuities.
7. Most consistent, lowest difference.
8. Most consistent, lowest difference.

The interpretation and utility of categories 7 and 8, the consistency between neighboring stations, are best demonstrated by inspecting Figures 1 through 6. Three stations are depicted in these figures: Little Falls Mill Street, Stillwater Reservoir, and Mohonk Lake, all in New York. The decile rankings for the maximum/minimum temperature data for categories 7 and 8

for each of these stations were 9 and 9, 9 and 9, and 3 and 2, respectively. The decile rankings for the mean temperature data for categories 7 and 8 for each of these stations were 9 and 9, 2 and 4, and 7 and 3, respectively. Little Falls Mill Street is not a particularly attractive station for use in a historical climate network, based on its low standing with respect to its consistency with neighboring stations. Figures 1 and 2 indicate how this might have arisen. Despite a few years of data beginning in the nineteenth century, much of the data for this station is missing in the intervening years. Even when observations begin again in the middle of the twentieth century, there are frequent gaps in the data record (less than 50% of the original data are available). Apparently, either as a result or a symptom of the inconsistent record, the data have also been compromised and have become inconsistent with its neighbors. A different type of problem occurs at Stillwater Reservoir. Stillwater Reservoir has the consistency of its mean temperature, relative to its neighbors, rated in the 20th percentile (decile rank of 2). We may be tempted to conclude that this station relates reasonably well compared to its neighbors. Additional inspection of the maximum/minimum records, however, suggest that Stillwater Reservoir has a serious problem with respect to the maximum and minimum temperatures as the decile ranks are 9. Indeed, Figures 3 and 4 indicate that even after attempting to adjust for known discontinuities, the maximum temperatures at this station are inconsistent with its neighbors, such as Mohonk Lake (Figures 5 and 6). As a result, the range at Stillwater Reservoir drops rather dramatically during the most recent 40 years. Such a station may have undocumented changes which were not adjusted, or a discontinuity which could not be properly accounted for. In either case, the use of the relative rankings is a useful tool as a guide to the selection of appropriate long-term stations.

Little Falls Mill St, NY Original Temperature - Fall

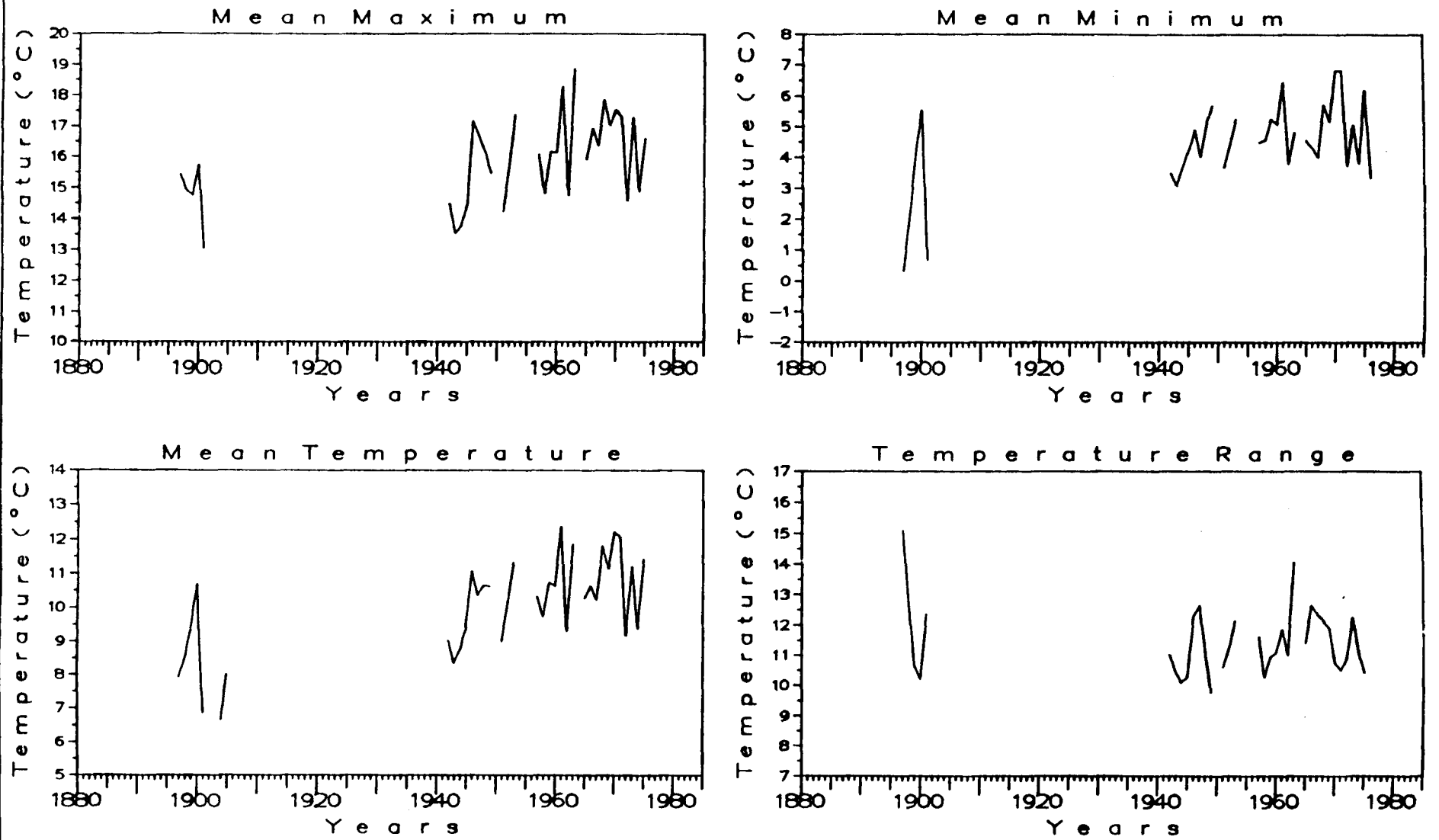


FIGURE 1

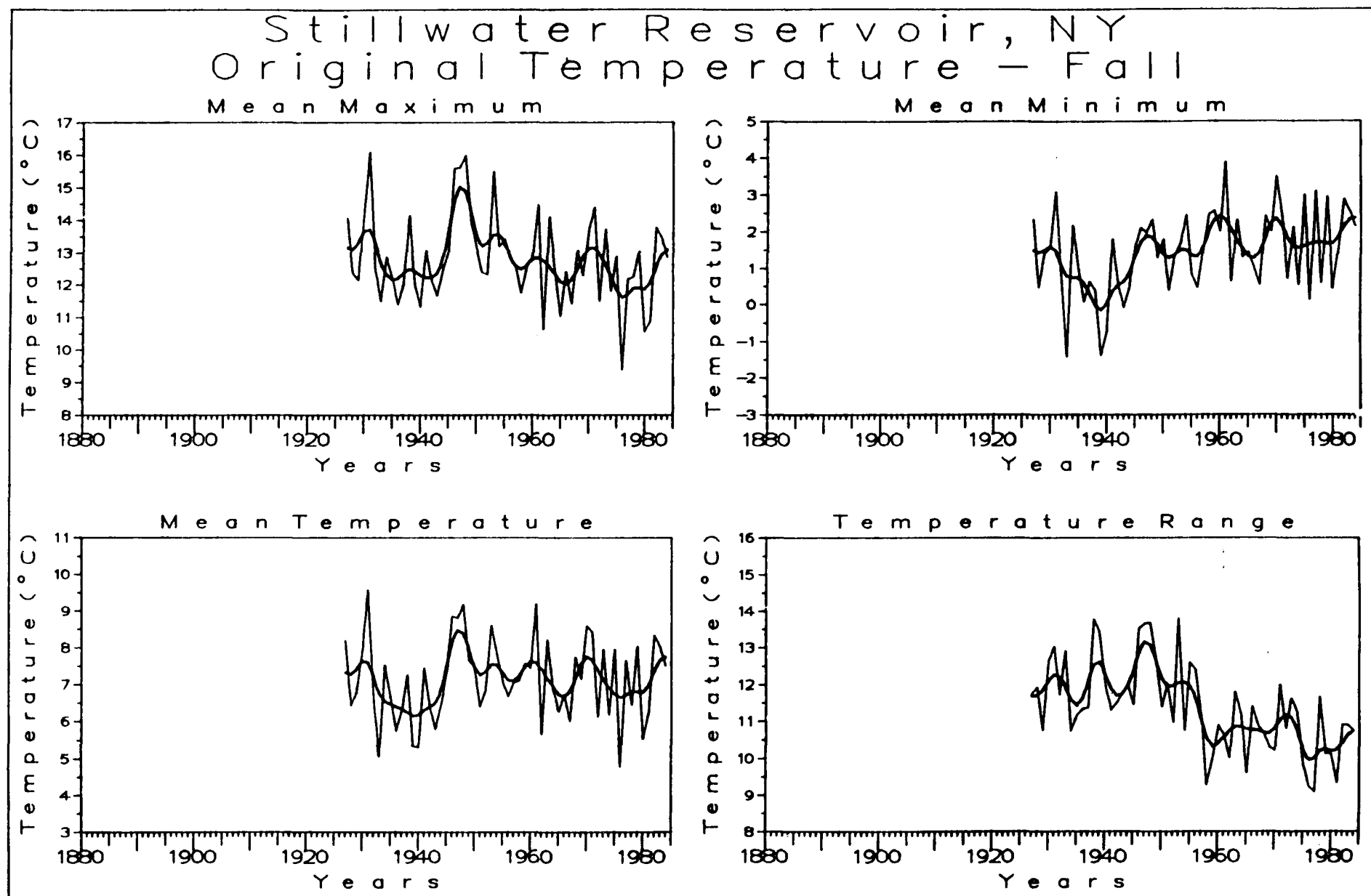
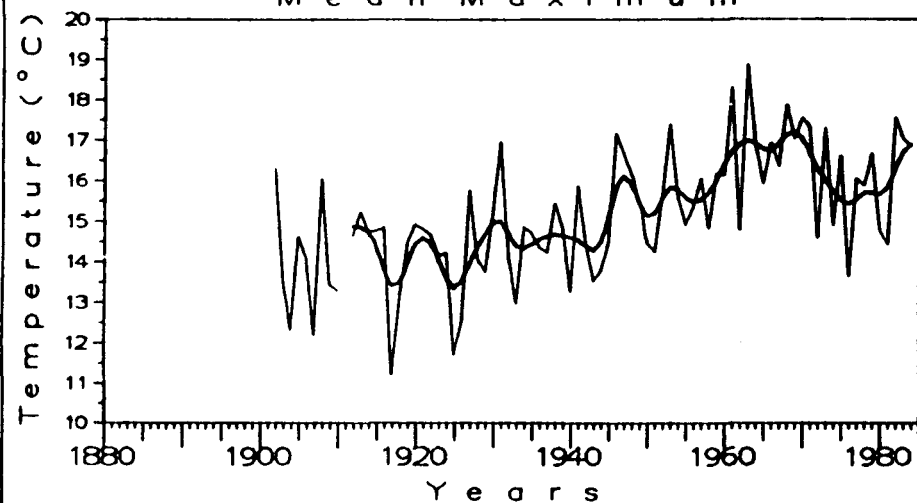


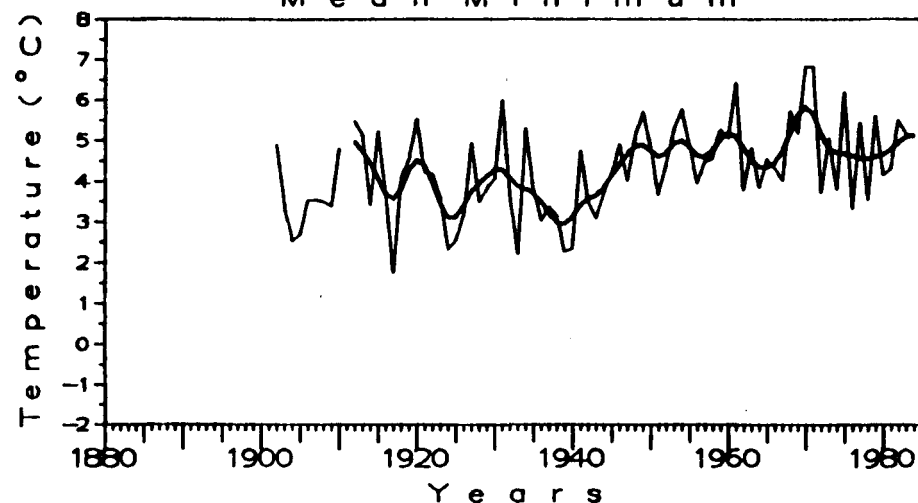
FIGURE 3

Little Falls Mill St, NY Adjusted Temperature — Fall

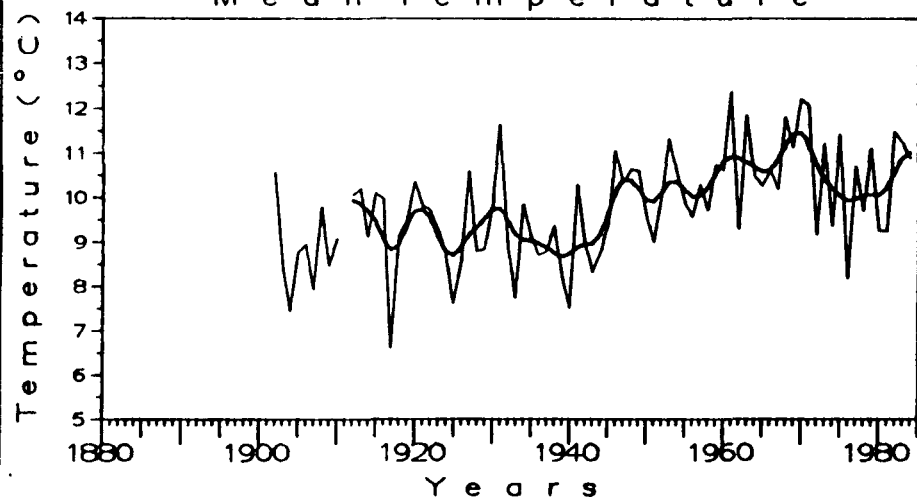
Mean Maximum



Mean Minimum



Mean Temperature



Temperature Range

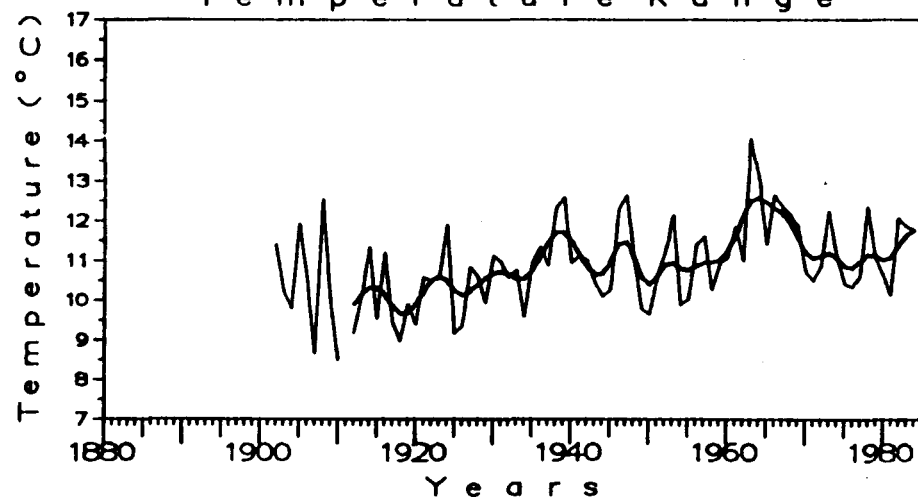


FIGURE 2

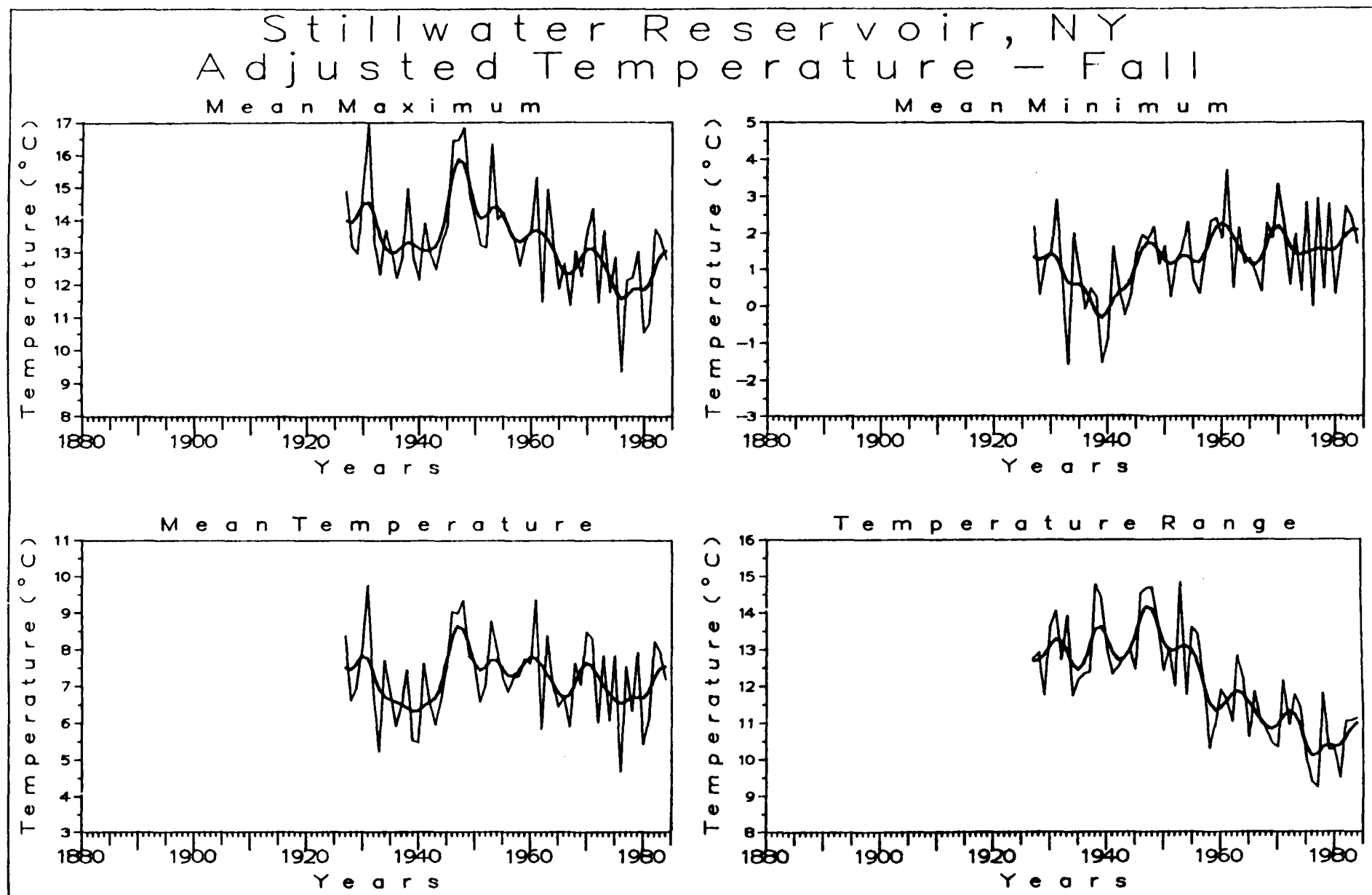


FIGURE 4

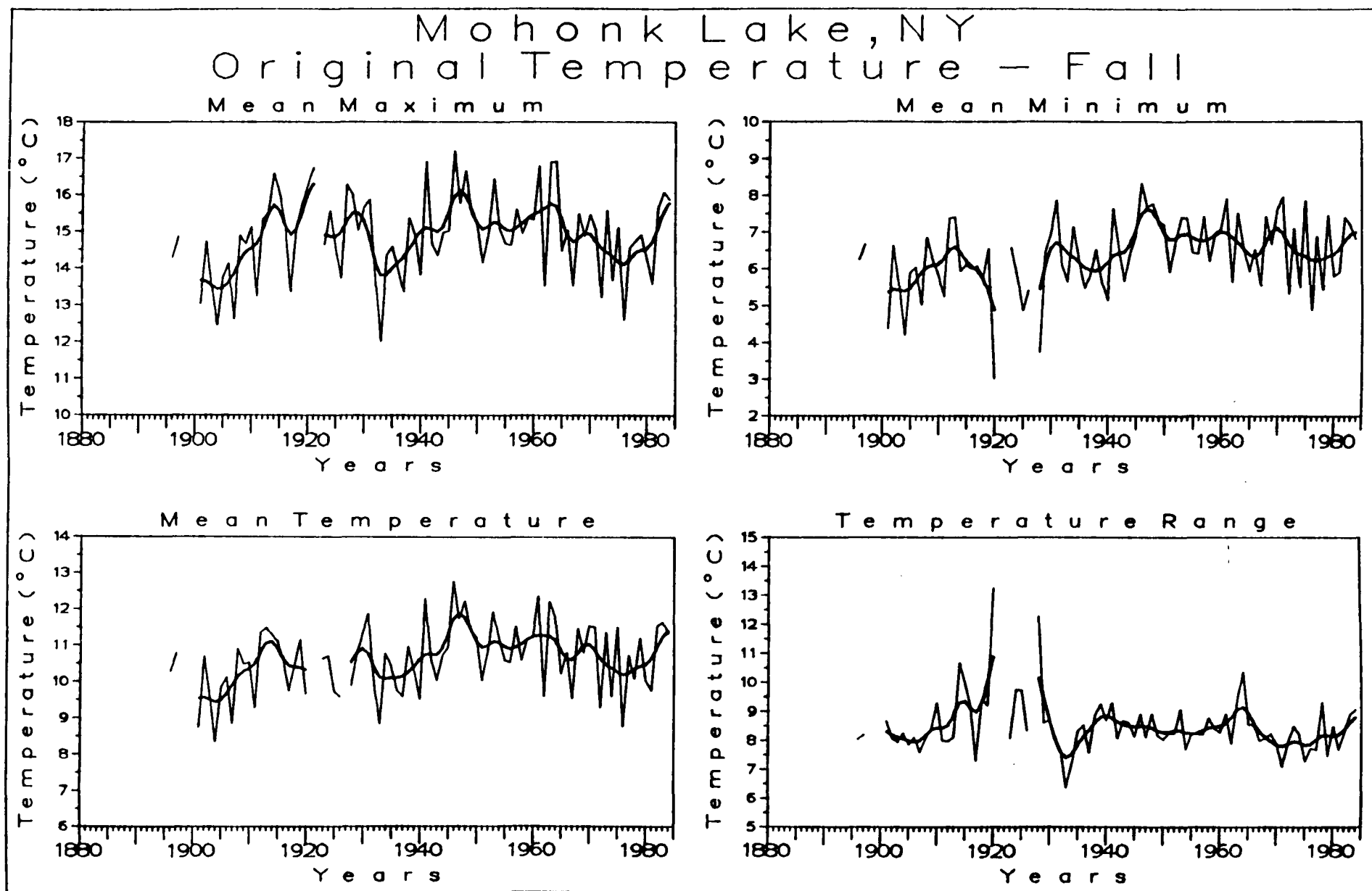


FIGURE 5

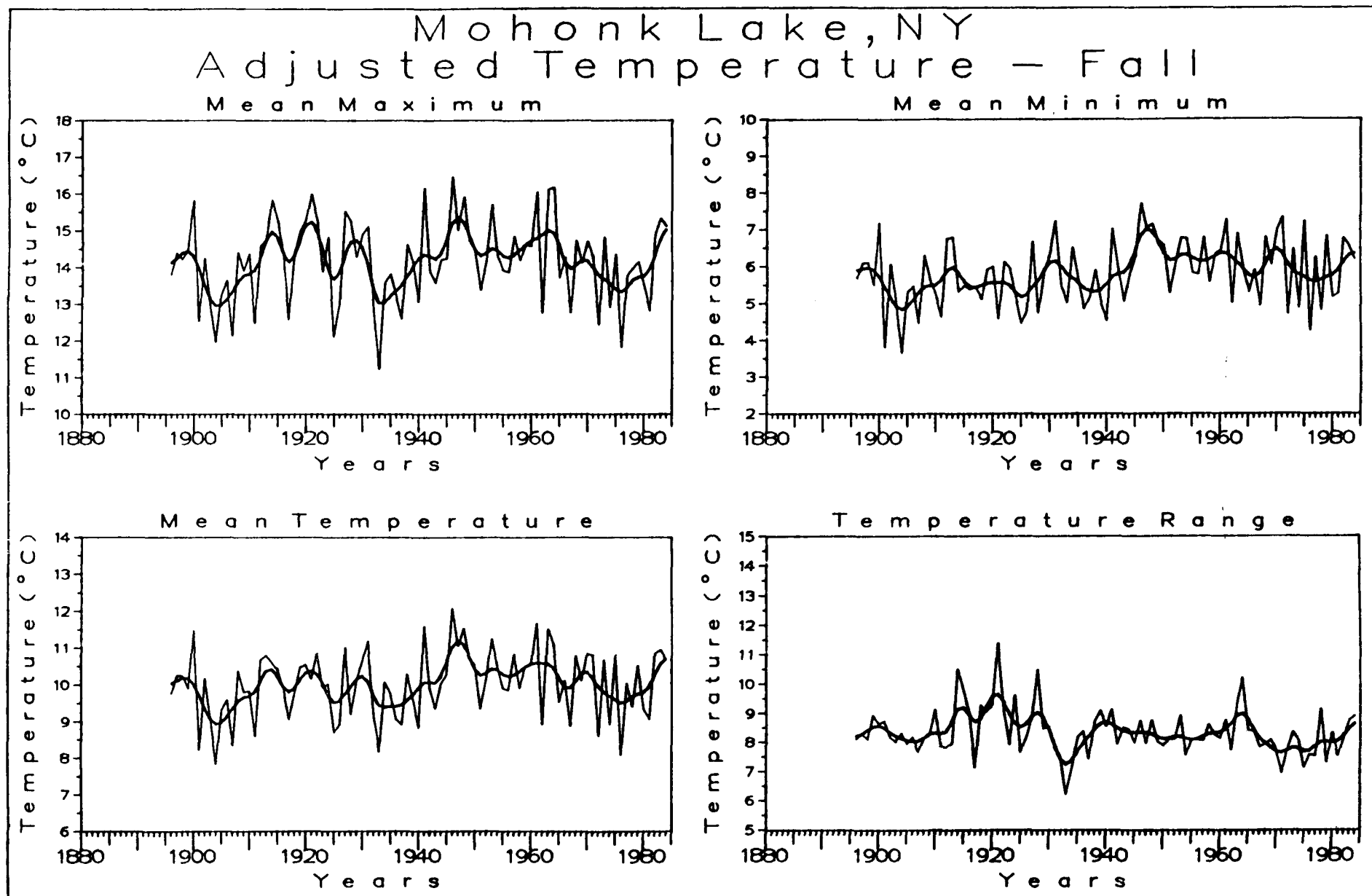


FIGURE 6

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
AL BREWTON 3SSE	01	1084-07	31-04	87-03	85	12/1890	4	068	9	06/1934	9	007	3	02	1	0.12	1	06	3	14	7
AL CLANTON	01	1694-03	32-51	86-38	580	02/1893	5	098	3	02/1893	3	004	2	04	3	0.18	2	20	9	16	8
AL FAIRHOPE 2NE	01	2813-08	30-33	87-53	23	03/1918	9	098	3	03/1918	8	002	1	01	0	0.07	0	12	6	06	3
AL GREENSBORO	01	3511-06	32-42	87-35	220	06/1856	0	082	8	01/1888	1	016	7	07	6	0.37	7	04	2	18	9
AL HIGHLAND HOME	01	3816-07	31-57	86-19	594	05/1892	5	097	4	05/1892	2	006	3	06	5	0.38	7	08	4	10	5
AL MUSCLE SHOALS FAA AP	01	5749-01	34-45	85-37	536	12/1940	9	098	3	12/1940	9	002	1	01	0	0.10	0	02	1	02	1
AL ST BERNARD	01	7157-02	34-10	86-49	800	09/1907	8	097	4	09/1907	7	002	1	03	2	0.40	8	18	9	06	3
AL SCOTTSBORO	01	7304-02	34-41	86-03	615	04/1882	2	088	7	09/1896	4	026	9	15	9	0.29	5	00	0	12	6
AL SELMA	01	7366-06	32-25	87-00	147	01/1858	0	075	9	12/1888	1	015	7	05	4	0.29	5	08	4	02	1
AL TALLADEGA	01	8024-04	33-26	86-05	555	01/1888	3	091	7	01/1888	1	024	9	10	8	0.43	8	16	8	08	4
AL THOMASVILLE	01	8178-07	31-55	87-44	405	09/1891	4	093	6	09/1891	2	009	5	04	3	0.28	5	02	1	04	2
AL TROY	01	8323-07	31-47	85-57	498	02/1872	1	072	9	04/1891	2	032	9	18	9	0.30	5	20	9	16	8
AL TUSCALOOSA OLIVER DAM	01	8385-03	33-13	87-35	152	01/1854	0	074	9	01/1889	1	009	5	07	6	0.32	6	06	3	12	6
AL UNION SPRINGS 4S	01	8438-06	32-06	85-43	460	09/1887	3	095	5	09/1887	0	019	8	14	9	0.39	8	00	0	02	1
AL VALLEY HEAD	01	8469-02	34-34	85-37	1042	06/1885	2	096	5	06/1885	0	014	7	12	9	0.53	9	08	4	10	5

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
AZ AJO	02	0080-07	32-22	112-52	1800	01/1915	9	100	0	01/1915	8	006	3	03	2	0.28	5	00	0	06	3
AZ BUCKEYE	02	1026-06	33-22	112-35	870	01/1893	5	099	2	01/1893	3	012	6	11	8	0.40	8	10	5	12	6
AZ CANYON-DE-CHELLY	02	1248-02	36-09	109-32	5540	12/1908	8	085	8	12/1908	7	016	7	05	4	0.37	7	02	1	06	3
AZ CHILDS	02	1614-03	34-21	111-42	2650	09/1915	9	094	6	09/1915	8	006	3	00	0	0.02	0	16	8	02	1
AZ DOUGLAS	02	2659-07	31-21	109-32	4040	12/1903	7	099	2	12/1903	6	004	2	06	5	0.40	8	02	1	00	0
AZ FORT VALLEY	02	3160-02	35-16	111-44	7347	01/1909	8	100	0	01/1909	7	000	0	02	1	0.24	4	08	4	08	4
AZ GRAND CANYON NATL PARK 2	02	3596-02	36-03	112-09	6785	01/1903	7	099	2	07/1903	6	005	2	06	5	0.42	8	18	9	06	3
AZ HOLBROOK	02	4089-02	34-54	110-10	5080	01/1887	3	096	5	01/1904	6	012	6	06	5	0.65	9	20	9	12	6
AZ KINGMAN 2	02	4645-01	35-12	114-01	3539	06/1901	7	094	6	06/1901	5	025	9	11	8	0.57	9	02	1	12	6
AZ LEES FERRY	02	4849-02	36-52	111-36	3210	10/1921	9	088	7	10/1921	9	021	8	03	2	0.25	4	18	9	08	4
AZ MESA EXPERIMENT FARM	02	5467-06	33-25	111-52	1230	03/1896	6	100	0	01/1917	8	000	0	01	0	0.17	2	14	7	20	9
AZ MIAMI	02	5512-04	33-24	110-53	3560	12/1913	9	098	3	12/1913	8	001	0	03	2	0.20	3	12	6	18	9
AZ PARKER	02	6250-05	34-10	114-17	425	10/1893	5	096	5	01/1916	8	002	1	03	2	0.28	5	06	3	12	6
AZ PRESCOTT	02	6796-03	34-34	112-28	5205	01/1865	1	098	3	06/1908	7	013	6	11	8	0.31	6	08	4	06	3
AZ ROOSEVELT 1WNW	02	7281-04	33-40	111-09	2205	01/1905	8	098	3	01/1905	6	006	3	04	3	0.33	6	18	9	16	8
AZ SACATON	02	7370-06	33-04	111-45	1285	04/1908	8	097	4	04/1908	7	002	1	02	1	0.20	3	16	8	00	0
AZ SAFFORD AGRICULTURAL CENTER	02	7390-07	32-49	109-41	2954	08/1898	6	098	3	08/1898	4	017	7	09	8	0.40	8	10	5	18	9
AZ SAINT JOHNS	02	7435-02	34-31	109-23	5790	09/1901	7	093	6	09/1901	5	024	9	13	9	0.52	9	20	9	14	7
AZ SELIGMAN	02	7716-03	35-19	112-53	5250	08/1888	3	075	9	08/1917	8	009	5	03	2	0.36	7	02	1	12	6
AZ TOMBSTONE	02	8619-07	31-42	110-03	4610	05/1889	3	092	6	09/1892	2	027	9	09	8	0.46	9	16	8	12	6
AZ TUCSON U OF AZ	02	8815-07	32-15	110-57	2444	11/1875	1	099	2	01/1899	5	002	1	05	4	0.51	9	12	6	16	8
AZ WHITERIVER	02	9271-02	33-50	109-58	5280	11/1871	1	090	7	06/1878	0	011	5	05	4	0.34	6	06	3	14	7
AZ WICKENBURG	02	9287-06	33-59	112-44	2050	11/1875	1	077	9	01/1909	7	028	9	14	9	0.36	7	20	9	00	0
AZ WILLIAMS	02	9359-02	35-15	112-11	6750	08/1888	3	086	8	03/1903	6	009	5	06	5	0.32	6	08	4	16	8
AZ YUMA CITRUS	02	9652-05	32-37	114-39	191	09/1920	9	098	3	09/1920	9	001	0	01	0	0.10	0	16	8	16	8

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
AR BRINKLEY	03	0936-06	34-53	91-11	200	04/1882	2	092	6	01/1889	1	017	7	11	8	0.42	8	04	2	12	6
AR CONWAY	03	1596-05	35-06	92-27	332	01/1885	2	099	2	01/1889	1	011	5	09	8	0.34	6	04	2	04	2
AR CORNING	03	1632-03	36-24	90-35	293	11/1892	5	091	7	11/1892	3	009	5	06	5	0.20	3	02	1	02	1
AR EUREKA SPRINGS 3WNW	03	2356-01	36-25	93-47	1420	01/1888	3	086	8	01/1889	1	022	8	10	8	0.44	8	12	6	08	4
AR FAYETTEVILLE EXP STN	03	2444-01	36-06	94-10	1270	02/1881	1	092	6	01/1889	1	002	1	02	1	0.08	0	20	9	04	2
AR GRAVETTE	03	2930-01	36-26	94-27	1260	05/1898	6	098	3	05/1898	4	006	3	04	3	0.24	4	18	9	08	4
AR MAMMOTH SPRING	03	4572-02	36-29	91-32	650	05/1904	7	094	6	05/1904	6	012	6	10	8	0.47	9	12	6	08	4
AR MENA	03	4756-04	34-34	94-16	1130	01/1888	3	097	4	03/1890	2	006	3	06	5	0.38	7	14	7	04	2
AR NEWPORT	03	5186-03	35-36	91-17	220	06/1887	3	096	5	04/1888	1	026	9	16	9	0.56	9	14	7	16	8
AR OZARK	03	5508-04	35-29	93-51	490	10/1891	4	092	6	10/1891	2	016	7	09	8	0.27	4	08	4	12	6
AR PINE BLUFF	03	5754-09	34-13	92-01	215	04/1888	3	098	3	01/1889	1	008	4	05	4	0.25	4	14	7	08	4
AR POCAHONTAS 1	03	5820-03	36-16	90-58	315	04/1894	5	097	4	04/1894	3	006	3	03	2	0.13	1	10	5	06	3
AR PRESCOTT	03	5908-08	33-48	93-23	308	04/1882	2	091	7	03/1890	2	008	4	04	3	0.37	7	00	0	12	6
AR SUBIACO	03	6928-04	35-18	93-39	500	09/1897	6	097	4	09/1897	4	009	5	05	4	0.28	5	12	6	04	2

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
CA AVALON PLEASURE PIER	04	0395-06	33-21	118-19	25	12/1909	8	097	4	12/1909	7	021	8	08	7	0.65	9	18	9	16	8
CA BERKELEY	04	0693-04	37-52	122-15	345	11/1886	3	099	2	11/1886	0	001	0	05	4	0.42	8	04	2	10	5
CA BLYTHE	04	0924-07	33-37	114-36	268	01/1909	8	099	2	01/1909	7	011	5	09	8	0.35	7	06	3	16	8
CA BRAWLEY 2SW	04	1048-07	32-57	115-33	-100	01/1909	8	095	5	01/1909	7	008	4	04	3	0.33	6	08	4	10	5
CA CEDARVILLE	04	1614-03	41-32	120-10	4670	05/1894	5	098	3	05/1894	3	011	5	08	7	0.76	9	12	6	04	2
CA CHICO UNIV FARM	04	1715-02	39-42	121-49	185	01/1870	1	098	3	01/1870	0	005	2	06	5	0.44	8	02	1	12	6
CA CHULA VISTA	04	1758-06	32-37	117-05	56	09/1918	9	099	2	09/1918	8	005	2	01	0	0.01	0	12	6	06	3
CA COLFAX	04	1912-02	39-06	120-57	2410	08/1870	1	099	2	08/1870	0	001	0	03	2	0.61	9	16	8	00	0
CA CUYAMACA	04	2239-06	32-59	116-35	4640	01/1899	7	100	0	01/1899	5	003	1	03	2	0.48	9	02	1	00	0
CA DAVIS	04	2294-02	38-32	121-46	60	11/1871	1	096	5	11/1871	0	014	7	07	6	0.66	9	10	5	04	2
CA DEATH VALLEY	04	2319-07	36-28	116-52	-194	07/1911	9	096	5	07/1911	7	010	5	04	3	0.45	8	18	9	10	5
CA ELECTRA PH	04	2728-05	38-20	120-40	715	01/1905	8	100	0	01/1905	6	008	4	04	3	0.21	3	20	9	20	9
CA EUREKA	04	2910-01	40-48	124-10	43	12/1886	3	099	2	12/1886	0	003	1	01	0	0.13	1	02	1	04	2
CA FAIRMONT	04	2941-07	34-42	118-26	3060	02/1912	9	084	8	02/1912	8	017	7	04	3	0.35	7	12	6	10	5
CA FORT BRAGG 1E	04	3161-01	39-27	123-48	165	06/1895	6	056	9	01/1909	7	043	9	06	5	0.25	4	14	7	06	3
CA FRESNO WSO AP	04	3257-05	36-46	119-43	326	01/1887	3	100	0	01/1887	0	008	4	11	8	0.38	7	04	2	16	8
CA HANFORD 1S	04	3747-05	36-18	119-39	245	06/1899	7	098	3	06/1899	5	010	5	08	7	0.51	9	16	8	02	1
CA HAPPY CAMP RS	04	3761-01	41-48	123-22	1120	01/1914	9	098	3	01/1914	8	019	8	07	6	0.45	8	02	1	04	2
CA HEALDSBURG	04	3875-01	38-37	122-52	102	04/1893	5	099	2	01/1899	5	003	1	06	5	0.26	4	12	6	10	5
CA INDEPENDENCE	04	4232-07	36-48	118-12	3950	11/1862	0	080	9	01/1899	5	010	5	06	5	0.36	7	12	6	08	4
CA INDIO U S DATE GARDEN	04	4259-07	33-44	116-15	11	10/1877	1	098	3	01/1907	7	004	2	04	3	0.32	6	06	3	08	4
CA LAKE SPAULDING	04	4713-02	39-19	120-38	5156	01/1914	9	100	0	01/1914	8	016	7	05	4	0.61	9	14	7	16	8
CA LEMON COVE	04	4890-05	36-23	119-02	513	01/1895	6	100	0	02/1895	3	011	5	06	5	0.52	9	08	4	18	9
CA LIVERMORE	04	4997-04	37-40	121-46	480	08/1870	1	099	2	08/1870	0	010	5	09	8	0.55	9	02	1	16	8
CA LODI	04	5032-05	38-07	121-17	40	01/1882	2	081	9	12/1912	8	030	9	07	6	0.40	8	18	9	04	2
CA MARYSVILLE	04	5385-02	39-09	121-36	57	05/1857	0	082	8	06/1897	4	030	9	10	8	0.37	7	12	6	00	0
CA MERCED MUNICIPAL AP	04	5532-05	37-17	120-31	153	03/1872	1	099	2	01/1891	2	014	7	09	8	0.46	9	06	3	04	2
CA MOUNT SHASTA WSO CITY	04	5983-02	41-19	122-19	3539	10/1891	4	098	3	10/1891	2	012	6	07	6	0.73	9	04	2	04	2
CA NAPA STATE HOSPITAL	04	6074-01	38-17	122-16	35	01/1876	1	099	2	01/1921	9	004	2	01	0	0.12	1	14	7	08	4
CA NEEDLES FAA AP	04	6118-07	34-46	114-37	914	08/1883	2	090	7	02/1907	7	009	5	05	4	0.40	8	12	6	04	2
CA OJAI	04	6399-06	34-27	119-14	750	01/1906	8	100	0	01/1906	6	013	6	06	5	0.43	8	04	2	10	5
CA ORLAND	04	6506-02	39-45	122-12	254	01/1883	2	099	2	01/1883	0	003	1	04	3	0.34	6	08	4	18	9

MEAN TEMPERATURE

STATE & STATION NAME	ST#	SIN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
CA ORLEANS	04	6508-01	41-18	123-32	410	04/1903	7	099	2	11/1905	6	016	7	04	3	0.36	7	08	4	12	6
CA PASADENA	04	6719-06	34-09	118-09	864	01/1893	5	085	8	08/1898	4	020	8	12	9	0.34	6	14	7	18	9
CA PASO ROBLES	04	6730-04	35-38	120-41	700	01/1894	5	096	5	01/1910	7	003	1	06	5	0.28	5	02	1	00	0
CA PETALUMA FIRE STN #3	04	6826-01	38-14	122-38	27	02/1893	5	080	9	02/1897	4	025	9	12	9	0.39	8	08	4	18	9
CA QUINCY	04	7195-02	39-55	120-57	3408	04/1895	6	097	4	04/1895	3	027	9	13	9	0.81	9	06	3	20	9
CA REDDING FIRE STN #4	04	7300-02	40-33	122-23	470	01/1875	1	099	2	01/1875	0	018	8	15	9	0.86	9	18	9	02	1
CA REDLANDS	04	7306-06	34-03	117-11	1318	05/1892	5	099	2	01/1899	5	000	0	05	4	0.41	8	14	7	06	3
CA SAN LUIS OBISPO POLY	04	7851-04	35-18	120-40	315	09/1887	3	094	6	09/1887	0	010	5	07	6	0.45	8	06	3	12	6
CA SANTA BARBARA	04	7902-06	34-25	119-41	5	03/1893	5	098	3	02/1895	3	017	7	11	8	0.54	9	20	9	10	5
CA SANTA CRUZ	04	7916-04	36-59	122-01	130	01/1873	1	100	0	01/1873	0	008	4	07	6	0.58	9	12	6	10	5
CA SANTA ROSA	04	7965-01	38-27	122-42	167	09/1891	4	098	3	09/1891	2	010	5	08	7	0.50	9	20	9	12	6
CA SUSANVILLE AP	04	8702-03	40-22	120-34	4146	01/1893	5	088	7	02/1894	3	029	9	14	9	0.74	9	10	5	10	5
CA TAHOE CITY	04	8758-03	39-10	120-08	6230	04/1909	8	099	2	04/1909	7	007	3	06	5	0.46	9	08	4	06	3
CA TEJON RANCHO	04	8839-05	35-02	118-45	1425	11/1898	7	091	7	05/1912	8	005	2	05	4	0.51	9	00	0	12	6
CA TUSTIN IRVINE RANCH	04	9087-06	33-44	117-47	118	01/1899	7	087	8	01/1899	5	018	8	04	3	0.50	9	16	8	02	1
CA UKIAH	04	9122-01	39-09	123-12	623	01/1892	5	100	0	01/1892	2	005	2	11	8	0.59	9	04	2	04	2
CA VACAVILLE	04	9200-02	38-22	121-57	105	09/1887	3	098	3	09/1887	0	007	3	06	5	0.35	7	08	4	14	7
CA WASCO	04	9452-05	35-36	119-20	345	07/1899	7	095	5	07/1899	5	015	7	05	4	0.40	8	08	4	20	9
CA WEAVERVILLE RS	04	9490-01	40-44	122-56	2050	01/1894	5	076	9	12/1953	9	008	4	01	0	0.02	0	02	1	16	8
CA WILLOWS 6W	04	9699-02	39-31	122-18	233	01/1878	1	098	3	12/1910	7	000	0	04	3	0.31	6	20	9	12	6
CA YOSEMITE PARK HEADQUARTERS	04	9855-05	37-45	119-35	3966	08/1906	8	098	3	08/1906	7	019	8	06	5	0.65	9	14	7	06	3
CA YREKA	04	9866-01	41-43	122-38	2625	02/1893	5	087	8	01/1915	8	010	5	04	3	0.26	4	12	6	06	3

MEAN TEMPERATURE

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CO BOULDER	05	0848-04	40-02	105-16	5375	10/1893	5	096	5	10/1893	3	019	8	13	9	0.47	9	06	3	16	8
CO CANON CITY	05	1294-01	38-26	105-15	5335	07/1886	3	096	5	12/1913	8	008	4	03	2	0.07	0	16	8	00	0
CO CHEESMAN	05	1528-04	39-13	105-17	6875	12/1902	7	098	3	12/1902	6	000	0	00	0	0.00	0	16	8	14	7
CO CHEYENNE WELLS	05	1564-03	38-49	102-21	4250	03/1889	3	095	5	09/1895	4	012	6	05	4	0.47	9	00	0	04	2
CO COLLEBRAN	05	1741-02	39-15	107-58	5980	01/1900	7	099	2	01/1900	5	026	9	14	9	0.45	8	04	2	06	3
CO DEL NORTE	05	2184-05	37-40	106-21	7884	05/1891	4	069	9	05/1904	6	029	9	19	9	0.46	9	06	3	02	1
CO DILLON 1E	05	2281-02	39-38	106-02	9065	05/1910	8	098	3	05/1910	7	012	6	06	5	0.34	6	12	6	18	9
CO DURANGO	05	2432-02	37-17	107-53	6600	08/1886	3	091	7	04/1894	3	004	2	06	5	0.63	9	12	6	02	1
CO EADS	05	2446-01	38-29	102-47	4215	04/1907	8	088	7	04/1907	7	029	9	08	7	0.47	9	04	2	08	4
CO FORT COLLINS	05	3005-04	40-35	105-05	5004	01/1873	1	091	7	01/1887	0	000	0	03	2	0.32	6	20	9	20	9
CO FORT MORGAN	05	3038-04	40-15	103-48	4321	02/1897	6	097	4	02/1897	4	007	3	03	2	0.35	7	06	3	10	5
CO FRUITA 1W	05	3146-02	39-10	108-45	4480	10/1889	4	090	7	06/1893	3	024	9	19	9	0.68	9	16	8	02	1
CO GUNNISON	05	3662-02	38-32	106-56	7664	01/1884	2	090	7	04/1894	3	013	6	09	8	0.85	9	10	5	08	4
CO HERMIT 7ESE	05	3951-05	37-46	107-08	9000	08/1894	6	089	7	08/1896	4	021	8	14	9	0.41	8	20	9	16	8
CO HOLLY	05	4076-01	38-03	102-07	3390	09/1899	7	092	6	09/1899	5	014	7	05	4	0.42	8	18	9	08	4
CO LAS ANIMAS	05	4834-01	38-04	103-13	3891	01/1867	1	096	5	01/1890	1	009	5	04	3	0.42	8	06	3	04	2
CO MANASSA	05	5322-05	37-10	105-56	7687	05/1892	5	085	8	01/1901	5	030	9	15	9	0.74	9	12	6	14	7
CO MONTROSE #2	05	5722-02	38-29	107-53	5785	03/1885	2	091	7	01/1912	8	001	0	02	1	0.36	7	08	4	14	7
CO SAGUACHE	05	7337-05	38-05	106-08	7692	09/1886	3	088	7	04/1894	3	020	8	05	4	0.32	6	18	9	18	9
CO STEAMBOAT SPRINGS	05	7936-02	40-30	106-50	6770	09/1891	4	086	8	09/1891	2	019	8	10	8	0.50	9	02	1	08	4
CO TELLURIDE	05	8204-02	37-56	107-49	8800	12/1900	7	089	7	12/1900	5	023	9	09	8	0.55	9	12	6	12	6
CO TRINIDAD	05	8429-01	37-10	104-29	6030	05/1886	2	078	9	02/1899	5	023	9	16	9	0.31	6	08	4	04	2
CO WRAY 1E	05	9243-03	40-05	102-11	3520	01/1893	5	092	6	09/1895	4	018	8	13	9	0.54	9	12	6	06	3

MEAN TEMPERATURE

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CT FALLS VILLAGE	06	2658-01	41-57	73-22	550	02/1916	9	098	3	02/1916	8	004	2	00	0	0.01	0	08	4	16	8
CT GROTON	06	3207-03	41-21	72-03	40	02/1871	1	096	5	01/1885	0	013	6	06	5	0.20	3	16	8	10	5
CT NORWALK GAS PLANT	06	5893-03	41-07	73-25	37	01/1892	5	099	2	01/1892	2	003	1	05	4	0.37	7	04	2	14	7
CT STORRS	06	8138-02	41-48	72-15	650	07/1892	5	096	5	07/1892	2	007	3	05	4	0.30	5	18	9	12	6

MEAN TEMPERATURE

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DE BRIDGEVILLE 1NW	07	1330-02	38-45	75-37	50	01/1892	5	099	2	01/1892	2	004	2	02	1	0.14	1	02	1	14	7
DE DOVER	07	2730-02	39-09	75-31	30	08/1870	1	081	9	01/1907	7	010	5	07	6	0.20	3	00	0	04	2
DE MILFORD 4SE	07	5915-02	38-54	75-28	30	12/1857	0	074	9	01/1894	3	011	5	08	7	0.30	5	08	4	04	2
DE NEWARK UNIV FARM	07	6410-01	39-40	75-44	90	10/1888	3	065	9	01/1941	9	000	0	02	1	0.10	0	12	6	12	6
DE WILMINGTON PORTER RESERVOIR	07	9605-01	39-46	75-32	274	04/1894	5	083	8	04/1894	3	025	9	04	3	0.15	1	10	5	16	8

MEAN TEMPERATURE

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FL APALACHICOLA WSO AP	08	0211-01	29-44	85-02	20	11/1903	7	098	3	11/1903	6	001	0	05	4	0.24	4	16	8	00	0
FL ARCADIA	08	0228-04	27-14	81-51	63	11/1899	7	091	7	11/1899	5	014	7	07	6	0.38	7	02	1	06	3
FL BARTOW	08	0478-04	27-54	81-51	125	01/1887	3	099	2	01/1887	0	007	3	08	7	0.51	9	00	0	08	4
FL BELLE GLADE EXP STN	08	0611-05	26-39	80-38	15	06/1924	9	099	2	06/1924	9	006	3	02	1	0.08	0	16	8	18	9
FL DE FUNIAK SPRINGS	08	2220-01	30-44	86-07	230	10/1896	6	094	6	10/1896	4	012	6	04	3	0.16	1	08	4	18	9
FL EVERGLADES	08	2850-05	25-51	81-23	5	12/1926	9	094	6	12/1926	9	006	3	02	1	0.16	1	14	7	08	4
FL FEDERAL POINT	08	2915-02	29-45	81-32	5	01/1892	5	099	2	01/1892	2	006	3	03	2	0.11	1	18	9	10	5
FL FERNANDINA BEACH	08	2944-02	30-39	81-28	13	11/1891	4	092	6	11/1891	2	023	9	11	8	0.37	7	02	1	12	6
FL FORT LAUDERDALE	08	3163-06	26-06	80-12	16	11/1912	9	096	5	11/1912	8	028	9	11	8	0.23	3	18	9	14	7
FL FORT MYERS WSO AP	08	3186-05	26-35	81-52	15	10/1891	4	099	2	10/1891	2	014	7	13	9	0.31	6	02	1	06	3
FL FORT PIERCE	08	3207-04	27-28	80-21	25	01/1840	0	063	9	01/1902	6	004	2	05	4	0.26	4	12	6	00	0
FL HOMESTEAD EXP STN	08	4091-06	25-30	80-30	11	08/1910	8	092	6	08/1910	7	017	7	11	8	0.18	2	20	9	06	3
FL INVERNESS 3SE	08	4289-03	28-44	82-19	40	02/1899	7	093	6	02/1899	5	015	7	08	7	0.22	3	14	7	16	8
FL KEY WEST WBO AP	08	4570-07	24-33	81-45	4	01/1830	0	091	7	01/1888	1	002	1	06	5	0.41	8	08	4	02	1
FL LAKE CITY 2E	08	4731-02	30-11	82-36	195	01/1857	0	075	9	10/1891	2	014	7	08	7	0.33	6	00	0	16	8
FL MADISON 4N	08	5275-02	30-32	83-26	180	10/1889	4	086	8	05/1896	4	012	6	06	5	0.23	3	12	6	12	6
FL OCALA	08	6414-03	29-12	82-05	75	10/1832	0	065	9	10/1889	1	021	8	13	9	0.35	7	06	3	20	9
FL PENSACOLA FAA AP	08	6997-01	30-28	87-12	112	11/1879	1	099	2	01/1889	1	000	0	04	3	0.25	4	16	8	06	3
FL SAINT LEO	08	7851-03	28-20	82-16	190	01/1890	4	097	4	10/1891	2	014	7	07	6	0.22	3	12	6	16	8
FL TALLAHASSEE WSO AP	08	8758-01	30-23	84-22	55	03/1883	2	098	3	01/1888	1	003	1	05	4	0.29	5	18	9	08	4
FL TARPON SPRINGS	08	8824-04	28-09	82-45	8	08/1884	2	098	3	01/1954	9	000	0	00	0	0.00	0	02	1	08	4
FL TITUSVILLE	08	8942-03	28-37	80-49	5	02/1901	7	093	6	02/1901	5	022	8	11	8	0.28	5	06	3	10	5

MEAN TEMPERATURE

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GA ALBANY 3SE	09	0140-07	31-32	84-08	180	04/1878	1	092	6	04/1891	2	001	0	05	4	0.26	4	06	3	00	0
GA BAINBRIDGE INT PAPER CO	09	0586-07	30-48	84-39	190	04/1882	2	089	7	12/1891	2	021	8	14	9	0.41	8	06	3	12	6
GA BRUNSWICK	09	1340-09	31-10	81-30	13	04/1878	1	075	9	01/1921	9	004	2	04	3	0.18	2	12	6	14	7
GA COVINGTON	09	2318-05	33-36	83-52	770	04/1878	1	071	9	01/1929	9	005	2	02	1	0.12	1	16	8	14	7
GA DAHLONEGA	09	2475-02	34-32	83-59	1430	04/1874	1	085	8	04/1893	3	011	5	06	5	0.22	3	02	1	04	2
GA EASTMAN 1W	09	2966-05	32-12	83-12	400	04/1882	2	088	7	03/1899	5	007	3	02	1	0.15	1	14	7	04	2
GA FORT GAINES	09	3516-07	31-36	85-03	340	04/1882	2	091	7	04/1891	2	009	5	05	4	0.27	4	08	4	08	4
GA GAINESVILLE	09	3621-02	34-18	83-51	1170	02/1872	1	095	5	01/1907	7	009	5	08	7	0.26	4	18	9	02	1
GA GLENNVILLE	09	3754-09	31-56	81-55	170	01/1905	8	100	0	01/1905	6	003	1	03	2	0.19	2	08	4	02	1
GA HAWKINSVILLE	09	4170-05	32-17	83-28	265	03/1892	5	094	6	11/1898	4	015	7	10	8	0.17	2	02	1	10	5
GA MILLEDGEVILLE	09	5874-05	33-05	83-15	400	04/1878	1	088	7	01/1902	6	015	7	11	8	0.35	7	06	3	16	8
GA MILLEN 4N	09	5882-06	32-52	81-58	195	04/1882	2	093	6	01/1900	5	005	2	05	4	0.40	8	02	1	06	3
GA NEWNAN 4NE	09	6335-04	33-26	84-47	920	04/1882	2	093	6	04/1891	2	011	5	07	6	0.32	6	16	8	14	7
GA QUITMAN 2NW	09	7276-08	30-48	83-35	185	04/1882	2	093	6	12/1893	3	018	8	12	9	0.40	8	10	5	04	2
GA ROME	09	7600-01	34-15	85-09	620	04/1878	1	096	5	01/1905	6	000	0	03	2	0.28	5	10	5	08	4
GA SAVANNAH WSO AP	09	7847-09	32-08	81-12	46	06/1832	0	087	8	01/1900	5	005	2	07	6	0.28	5	14	7	12	6
GA TALBOTTON 1NE	09	8535-04	32-42	84-32	710	04/1878	1	085	8	05/1891	2	005	2	08	7	0.45	8	02	1	12	6
GA TIFTON EXP STN	09	8703-08	31-29	83-32	371	02/1911	8	087	8	02/1911	7	018	8	17	9	0.21	3	12	6	16	8
GA TOCCOA	09	8740-03	34-35	83-19	1019	01/1879	1	093	6	01/1914	8	002	1	02	1	0.12	1	14	7	08	4
GA WARRENTON	09	9141-06	33-25	82-40	510	06/1884	2	091	7	04/1906	6	008	4	05	4	0.29	5	02	1	16	8
GA WASHINGTON 2ESE	09	9157-03	33-43	82-43	620	05/1884	2	090	7	01/1959	9	019	8	01	0	0.13	1	06	3	20	9
GA WAYCROSS 4NE	09	9186-09	31-15	82-19	145	04/1882	2	091	7	12/1899	5	003	1	07	6	0.32	6	16	8	00	0
GA WEST POINT	09	9291-04	32-52	85-11	575	04/1882	2	092	6	04/1891	2	010	5	03	2	0.16	1	12	6	16	8

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ID ABERDEEN EXPERIMENT STATION	10	0010-09	42-57	112-50	4405	04/1914	9	100	0	04/1914	8	003	1	02	1	0.17	2	12	6	16	8
ID ARROWROCK DAM	10	0448-04	43-36	115-55	3275	12/1911	9	098	3	12/1911	8	007	3	03	2	0.22	3	06	3	02	1
ID ASHTON	10	0470-09	44-04	111-27	5260	02/1897	6	098	3	01/1900	5	012	6	07	6	0.48	9	04	2	08	4
ID CALDWELL	10	1380-05	43-40	116-41	2370	10/1904	8	099	2	10/1904	6	003	1	05	4	0.31	6	06	3	06	3
ID CAMBRIDGE	10	1408-05	44-34	116-41	2650	01/1894	5	093	6	09/1903	6	012	6	06	5	0.74	9	08	4	12	6
ID CHALLIS	10	1663-08	44-30	114-14	5175	01/1895	6	082	8	02/1904	6	020	8	24	9	0.36	7	14	7	20	9
ID COEUR D'ALENE RS	10	1956-01	47-41	116-45	2158	01/1884	2	086	8	06/1913	8	003	1	04	3	0.18	2	04	2	16	8
ID GLENNS FERRY	10	3631-05	42-56	115-19	2510	04/1905	8	091	7	04/1905	6	016	7	09	8	0.49	9	14	7	14	7
ID GRACE	10	3732-10	42-35	111-44	5550	02/1907	8	099	2	02/1907	7	006	3	02	1	0.20	3	06	3	14	7
ID HAILEY AP	10	3942-04	43-31	114-18	5306	04/1894	5	086	8	01/1900	5	018	8	06	5	0.45	8	08	4	04	2
ID HAZELTON	10	4140-07	42-36	114-08	4060	05/1917	9	096	5	05/1917	8	003	1	00	0	0.01	0	14	7	14	7
ID HOLLISTER	10	4295-06	42-21	114-35	4550	03/1908	8	097	4	03/1908	7	010	5	03	2	0.18	2	10	5	16	8
ID JEROME	10	4670-07	42-44	114-31	3785	10/1915	9	096	5	10/1915	8	010	5	02	1	0.03	0	18	9	02	1
ID KELLOGG	10	4831-04	47-32	116-08	2320	02/1905	8	100	0	02/1905	6	011	5	05	4	0.23	3	00	0	14	7
ID KOOSKIA	10	5011-03	46-09	115-59	1280	12/1908	8	097	4	12/1908	7	019	8	06	5	0.30	5	20	9	20	9
ID LEWISTON WSO AP	10	5241-03	46-23	117-01	1413	01/1889	3	096	5	09/1904	6	008	4	09	8	0.30	5	20	9	02	1
ID LIFTON PUMPING STATION	10	5275-10	42-07	111-18	5926	11/1919	9	099	2	11/1919	8	000	0	01	0	0.07	0	12	6	02	1
ID MACKAY RS	10	5462-08	43-55	113-37	5897	01/1908	8	098	3	01/1908	7	003	1	04	3	0.36	7	18	9	12	6
ID MALAD CITY	10	5559-10	42-10	112-17	4470	02/1904	7	086	8	02/1904	6	020	8	14	9	0.30	5	06	3	18	9
ID MOSCOW U OF ID	10	6152-02	46-44	116-58	2660	02/1892	5	099	2	11/1897	4	004	2	04	3	0.29	5	14	7	14	7
ID NEW MEADOWS RS	10	6388-04	44-58	116-17	3870	06/1903	7	098	3	06/1912	8	005	2	04	3	0.30	5	16	8	08	4
ID OAKLEY	10	6542-10	42-14	113-53	4600	07/1893	5	099	2	07/1893	3	000	0	04	3	0.41	8	06	3	14	7
ID OROFINO	10	6681-03	46-29	116-16	1320	09/1903	7	097	4	09/1903	6	009	5	07	6	0.28	5	10	5	00	0
ID PAYETTE	10	6891-05	44-05	116-56	2150	04/1890	4	094	6	01/1907	7	011	5	07	6	0.41	8	16	8	12	6
ID PORTHILL	10	7264-01	49-00	116-30	1775	08/1889	4	099	2	01/1902	6	006	3	04	3	0.24	4	10	5	04	2
ID PRIEST RIVER EXPERIMENT STN	10	7386-01	48-21	116-50	2380	02/1898	6	092	6	01/1900	5	012	6	01	0	0.07	0	12	6	18	9
ID SALMON 1N	10	8080-08	45-11	113-54	3931	11/1905	8	098	3	11/1905	6	020	8	09	8	0.57	9	02	1	04	2
ID SANDPOINT EXP STN	10	8137-01	48-18	116-34	2100	10/1910	8	099	2	10/1910	7	012	6	04	3	0.18	2	06	3	04	2

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
IL ALEDO	11	0072-01	41-13	90-45	720	08/1879	1	080	9	01/1898	4	025	9	11	8	0.25	4	08	4	10	5
IL ANNA 1E	11	0187-08	37-28	89-14	645	05/1875	1	091	7	01/1897	4	008	4	09	8	0.29	5	04	2	20	9
IL AURORA	11	0338-02	41-45	88-21	644	10/1857	0	086	8	09/1889	1	007	3	06	5	0.36	7	12	6	12	6
IL CARLINVILLE	11	1280-06	39-17	89-52	625	01/1891	4	099	2	01/1891	2	002	1	07	6	0.21	3	14	7	12	6
IL CHARLESTON	11	1436-07	39-29	88-10	680	01/1896	6	097	4	01/1961	9	015	7	02	1	0.11	1	10	5	04	2
IL DANVILLE	11	2140-05	40-08	87-39	558	05/1895	6	091	7	05/1895	3	023	9	10	8	0.23	3	16	8	08	4
IL DECATUR	11	2193-04	39-50	89-01	620	04/1875	1	086	8	01/1889	1	005	2	03	2	0.19	2	10	5	14	7
IL DIXON 1NW	11	2348-01	41-50	89-31	700	02/1881	1	095	5	01/1893	3	013	6	11	8	0.26	4	12	6	02	1
IL DUQUOIN 4SE	11	2483-08	37-59	89-12	420	12/1886	3	095	5	01/1892	2	014	7	08	7	0.38	7	08	4	08	4
IL GALVA	11	3335-01	41-10	90-03	855	05/1862	0	089	7	01/1894	3	012	6	05	4	0.19	2	08	4	08	4
IL GRIGGSVILLE	11	3717-06	39-43	90-44	700	04/1882	2	098	3	07/1887	0	010	5	11	8	0.44	8	04	2	02	1
IL HARRISBURG	11	3879-09	37-45	88-33	380	02/1898	6	099	2	02/1898	4	009	5	08	7	0.17	2	18	9	20	9
IL HILLSBORO	11	4108-06	39-09	89-29	630	05/1895	6	099	2	05/1895	3	008	4	09	8	0.44	8	02	1	16	8
IL HOOPESTON 1NE	11	4198-05	40-28	87-40	710	02/1887	3	084	8	06/1891	2	013	6	07	6	0.12	1	14	7	04	2
IL JACKSONVILLE 2E	11	4442-06	39-44	90-12	610	01/1858	0	072	9	01/1892	2	006	3	04	3	0.20	3	14	7	10	5
IL LA HARPE	11	4823-03	40-35	90-58	700	05/1895	6	099	2	05/1895	3	006	3	07	6	0.36	7	00	0	14	7
IL LINCOLN	11	5079-04	40-10	89-22	580	02/1906	8	099	2	02/1906	6	009	5	08	7	0.20	3	02	1	06	3
IL MARENGO	11	5326-02	42-15	88-36	820	01/1856	0	098	3	09/1892	2	008	4	09	8	0.27	4	00	0	04	2
IL MCLEANSBORO	11	5515-09	38-06	88-30	480	04/1882	2	098	3	12/1884	0	017	7	16	9	0.38	7	04	2	00	0
IL MINONK	11	5712-04	40-54	89-03	750	01/1886	2	089	7	08/1890	2	024	9	13	9	0.23	3	06	3	06	3
IL MONMOUTH	11	5768-03	40-55	90-38	770	02/1881	1	091	7	08/1890	2	011	5	05	4	0.12	1	08	4	06	3
IL MORRISON	11	5833-01	41-49	89-58	603	06/1880	1	087	8	01/1891	2	020	8	11	8	0.25	4	10	5	02	1
IL MOUNT CARROLL	11	5901-01	42-05	89-59	700	05/1887	3	095	5	01/1889	1	009	5	08	7	0.49	9	20	9	04	2
IL MT VERNON 3NE	11	5943-09	38-21	88-52	490	01/1879	1	084	8	05/1891	2	019	8	15	9	0.51	9	02	1	06	3
IL OLNEY 2S	11	6446-07	38-42	88-04	480	07/1887	3	097	4	06/1964	9	000	0	00	0	0.00	0	16	8	14	7
IL OTTAWA 4SW	11	6526-02	41-20	88-55	525	01/1854	0	086	8	08/1890	2	012	6	12	9	0.25	4	12	6	20	9
IL PALESTINE	11	6558-07	39-00	87-37	515	07/1882	2	098	3	07/1882	0	020	8	12	9	0.22	3	14	7	06	3
IL PANA	11	6579-06	39-23	89-05	696	06/1869	1	084	8	01/1899	5	012	6	07	6	0.12	1	20	9	16	8

MEAN TEMPERATURE

STATE & STATION NAME	ST#	SIN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
IL PARIS WATERWORKS	11	6610-07	39-38	87-42	680	12/1886	3	094	6	12/1886	0	012	6	12	9	0.17	2	02	1	04	2
IL PONTIAC	11	6910-05	40-53	88-38	650	03/1886	2	088	7	09/1889	1	018	8	24	9	0.18	2	04	2	00	0
IL RUSHVILLE	11	7551-03	40-07	90-35	675	01/1889	3	094	6	01/1902	6	007	3	09	8	0.34	6	16	8	18	9
IL SPARTA	11	8147-08	38-08	89-43	520	02/1887	3	099	2	02/1887	0	009	5	09	8	0.32	6	10	5	02	1
IL URBANA	11	8740-05	40-06	88-14	743	08/1888	3	098	3	01/1890	1	009	5	04	3	0.12	1	02	1	16	8
IL WALNUT	11	8916-01	41-33	89-36	690	01/1892	5	099	2	01/1892	2	007	3	09	8	0.20	3	02	1	06	3
IL WHITE HALL 1E	11	9241-06	39-26	90-23	578	07/1854	0	086	8	01/1913	8	007	3	04	3	0.05	0	08	4	04	2
IL WINDSOR	11	9354-07	39-26	88-36	685	08/1885	2	085	8	06/1890	2	015	7	24	9	0.23	3	08	4	00	0

MEAN TEMPERATURE

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IN ANDERSON SEWAGE PLANT	12	0177-05	40-06	85-43	845	06/1895	6	099	2	06/1895	4	007	3	07	6	0.36	7	00	0	10	5
IN ANGOLA	12	0200-03	41-38	84-59	1010	01/1885	2	083	8	12/1886	0	028	9	06	5	0.26	4	00	0	04	2
IN BERNE	12	0676-03	40-40	84-57	858	01/1910	8	100	0	01/1910	7	006	3	03	2	0.12	1	14	7	20	9
IN BLOOMINGTON IN UNIV	12	0784-08	39-10	86-31	825	01/1868	1	080	9	09/1898	4	009	5	10	8	0.34	6	04	2	18	9
IN BROOKVILLE	12	1030-09	39-25	85-00	670	12/1884	2	061	9	06/1902	6	035	9	07	6	0.19	2	02	1	04	2
IN CAMBRIDGE CITY	12	1229-06	39-49	85-10	950	04/1892	5	099	2	04/1892	2	005	2	05	4	0.25	4	06	3	06	3
IN COLUMBUS	12	1747-05	39-12	85-55	621	09/1884	2	099	2	11/1884	0	006	3	08	7	0.35	7	02	1	16	8
IN CRAWFORDSVILLE 2NW	12	1873-04	40-04	86-56	745	01/1885	2	084	8	04/1887	0	030	9	10	8	0.31	6	18	9	10	5
IN DELPHI 3NNE	12	2149-02	40-37	86-40	560	07/1885	2	098	3	04/1887	0	005	2	05	4	0.22	3	02	1	02	1
IN GOSHEN COLLEGE	12	3418-02	41-34	85-50	805	06/1914	9	098	3	06/1914	8	007	3	06	5	0.17	2	16	8	14	7
IN GREENCASTLE 1E	12	3513-04	39-39	86-51	835	10/1884	2	079	9	01/1917	8	010	5	06	5	0.17	2	16	8	16	8
IN GREENFIELD	12	3527-05	39-47	85-45	865	07/1883	2	081	9	11/1884	0	021	8	10	8	0.27	4	08	4	04	2
IN HOBART	12	4008-01	41-32	87-15	600	07/1919	9	098	3	07/1919	8	022	8	07	6	0.20	3	12	6	04	2
IN HUNTINGTON WATERWORKS	12	4181-03	40-51	85-30	725	11/1893	5	097	4	11/1893	3	008	4	06	5	0.15	1	06	3	04	2
IN LAPORTE	12	4837-01	41-36	86-43	810	01/1851	0	066	9	01/1928	9	014	7	05	4	0.20	3	20	9	10	5
IN MADISON SEWAGE PLANT	12	5237-09	38-44	85-24	455	11/1854	0	070	9	11/1884	0	015	7	09	8	0.38	7	02	1	16	8
IN MARION 2N	12	5337-05	40-34	85-40	790	11/1885	2	098	3	11/1885	0	015	7	08	7	0.20	3	18	9	14	7
IN MT VERNON	12	6001-07	37-57	87-53	415	02/1887	3	097	4	02/1887	0	012	6	04	3	0.22	3	20	9	04	2
IN OOLITIC PURDUE EXP FM	12	6580-08	38-53	86-33	650	02/1893	5	082	8	12/1900	5	018	8	04	3	0.22	3	16	8	12	6
IN PAOLI	12	6705-08	38-32	86-29	640	03/1898	6	098	3	03/1898	4	003	1	07	6	0.37	7	00	0	18	9
IN PRINCETON 1W	12	7125-07	38-21	87-35	482	08/1884	2	097	4	05/1886	0	006	3	10	8	0.28	5	06	3	12	6
IN RENSSELAER	12	7298-01	40-56	87-09	650	07/1864	1	071	9	09/1889	1	015	7	05	4	0.22	3	06	3	18	9
IN ROCHESTER	12	7482-02	41-04	86-13	770	04/1904	7	086	8	04/1904	6	022	8	09	8	0.18	2	06	3	12	6
IN ROCKVILLE	12	7522-04	39-46	87-14	690	01/1862	0	081	9	11/1884	0	006	3	04	3	0.11	1	08	4	10	5
IN RUSHVILLE	12	7646-05	39-36	85-27	955	02/1883	2	098	3	11/1884	0	007	3	04	3	0.22	3	14	7	04	2
IN SALEM	12	7755-08	38-37	86-05	800	08/1884	2	087	8	02/1887	0	021	8	09	8	0.37	7	04	2	10	5
IN SCOTTSBURG	12	7875-09	38-42	85-46	550	05/1894	5	099	2	05/1894	3	014	7	08	7	0.19	2	12	6	04	2

MEAN TEMPERATURE

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IN SEYMOUR 2N	12	7935-08	38-59	85-54	573	12/1887	3	097	4	12/1887	1	015	7	10	8	0.31	6	18	9	06	3
IN SHOALS HIGHWAY 50 BRIDGE	12	8036-07	38-40	86-48	550	12/1912	9	098	3	12/1912	8	008	4	05	4	0.25	4	14	7	20	9
IN VEVAY	12	9080-09	38-45	85-04	470	08/1864	1	096	5	01/1872	0	006	3	04	3	0.32	6	20	9	06	3
IN VINCENNES 5NE	12	9113-07	38-44	87-30	450	04/1894	5	099	2	04/1894	3	010	5	09	8	0.28	5	08	4	06	3
IN WASHINGTON	12	9253-07	38-40	87-11	485	06/1896	6	098	3	06/1896	4	023	9	17	9	0.21	3	16	8	00	0
IN WHEATFIELD 2NNW	12	9511-01	41-14	87-04	650	09/1916	9	097	4	09/1916	8	007	3	05	4	0.17	2	02	1	14	7
IN WHITESTOWN	12	9557-05	40-00	86-21	935	03/1896	6	100	0	03/1896	4	010	5	07	6	0.24	4	20	9	20	9
IN WINAMAC 2SSE	12	9670-01	41-02	86-35	690	08/1897	6	084	8	06/1918	8	008	4	04	3	0.19	2	12	6	10	5

MEAN TEMPERATURE

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IA ALBIA	13	0112-08	41-02	92-48	940	01/1891	4	097	4	05/1898	4	019	8	13	9	0.30	5	18	9	06	3
IA ALGONA 3W	13	0133-02	43-04	94-18	1230	06/1861	0	085	8	01/1894	3	010	5	06	5	0.24	4	08	4	16	8
IA BELLE PLAINE	13	0600-06	41-53	92-16	810	08/1889	4	098	3	01/1891	2	016	7	07	6	0.20	3	04	2	16	8
IA CHARLES CITY	13	1402-02	43-03	92-40	1013	01/1891	4	100	0	01/1891	2	003	1	04	3	0.18	2	14	7	00	0
IA CLARINDA	13	1533-07	40-44	95-02	1030	01/1872	1	087	8	12/1887	1	007	3	06	5	0.29	5	02	1	00	0
IA CLINTON #1	13	1635-06	41-48	90-16	585	11/1857	0	091	7	01/1892	2	009	5	10	8	0.37	7	08	4	08	4
IA ESTERVILLE 2N	13	2724-01	43-25	94-50	1302	04/1895	6	097	4	04/1895	3	013	6	06	5	0.23	3	18	9	04	2
IA FAIRFIELD	13	2789-09	41-02	91-57	740	01/1855	0	073	9	01/1891	2	012	6	16	9	0.34	6	02	1	16	8
IA FAYETTE	13	2864-03	42-50	91-48	1010	06/1888	3	098	3	01/1891	2	016	7	10	8	0.32	6	16	8	18	9
IA FOREST CITY 2NNE	13	2977-02	43-17	93-38	1300	04/1894	5	097	4	04/1894	3	020	8	14	9	0.33	6	08	4	20	9
IA FORT DODGE	13	2999-05	42-30	94-12	1115	08/1851	0	065	9	07/1887	0	019	8	08	7	0.26	4	10	5	04	2
IA INDIANOLA	13	4063-08	41-22	93-33	940	06/1882	2	093	6	01/1888	1	013	6	07	6	0.25	4	20	9	16	8
IA IOWA FALLS	13	4142-05	42-32	93-16	1170	11/1863	0	082	8	01/1893	3	011	5	08	7	0.32	6	10	5	16	8
IA LE MARS	13	4735-01	42-48	96-10	1195	03/1896	6	099	2	03/1896	4	014	7	11	8	0.31	6	06	3	16	8
IA LOGAN	13	4894-04	41-38	95-48	1052	05/1866	1	099	2	01/1889	1	002	1	06	5	0.33	6	06	3	12	6
IA MOUNT AYR SSW	13	5769-08	40-39	94-18	1270	06/1892	5	096	5	06/1892	2	021	8	14	9	0.42	8	06	3	10	5
IA MOUNT PLEASANT	13	5796-09	40-57	91-33	736	12/1863	1	086	8	08/1885	0	010	5	08	7	0.36	7	14	7	18	9
IA NEW HAMPTON	13	5952-03	43-03	92-19	1160	03/1897	6	097	4	03/1897	4	008	4	08	7	0.31	6	08	4	08	4
IA ROCK RAPIDS	13	7147-01	43-26	96-10	1350	04/1893	5	092	6	01/1901	5	009	5	04	3	0.22	3	14	7	20	9
IA ROCKWELL CITY	13	7161-04	42-24	94-37	1210	09/1894	6	094	6	09/1894	3	006	3	04	3	0.27	4	02	1	06	3
IA STORM LAKE 2E	13	7979-01	42-38	95-11	1425	08/1889	4	094	6	08/1889	1	020	8	15	9	0.33	6	14	7	02	1
IA TOLEDO	13	8296-05	41-59	92-35	890	01/1894	5	099	2	01/1894	3	011	5	07	6	0.23	3	02	1	04	2
IA WASHINGTON	13	8688-09	41-17	91-41	756	10/1875	1	094	6	01/1893	3	006	3	06	5	0.24	4	20	9	20	9

MEAN TEMPERATURE

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KS ANTHONY	14	0264-08	37-09	98-05	1340	09/1906	8	095	5	09/1906	7	025	9	11	8	0.33	6	12	6	08	4
KS ASHLAND	14	0365-07	37-12	99-46	1970	06/1888	3	098	3	10/1948	9	002	1	03	2	0.16	1	14	7	14	7
KS ATCHISON	14	0405-03	39-34	95-07	945	05/1865	1	088	7	03/1879	0	019	8	08	7	0.16	1	00	0	10	5
KS COLDWATER	14	1704-08	37-16	99-20	2083	07/1888	3	084	8	01/1907	7	010	5	03	2	0.14	1	16	8	06	3
KS COLUMBUS 1SW	14	1740-09	37-10	94-51	900	08/1891	4	098	3	08/1891	2	009	5	03	2	0.09	0	08	4	12	6
KS EL DORADO	14	2401-09	37-49	96-50	1340	02/1886	2	086	8	01/1890	1	016	7	06	5	0.23	3	02	1	16	8
KS ELLSWORTH	14	2459-05	38-44	98-14	1530	09/1866	1	073	9	11/1891	2	024	9	16	9	0.35	7	08	4	18	9
KS ESKRIDGE 1SE	14	2602-06	38-51	96-06	1420	08/1897	6	089	7	08/1897	4	017	7	07	6	0.24	4	04	2	08	4
KS FORT SCOTT	14	2835-09	37-51	94-42	845	01/1843	0	072	9	07/1886	0	012	6	08	7	0.35	7	14	7	00	0
KS HAYS 1S	14	3527-05	38-52	99-20	2010	01/1885	2	092	6	11/1889	1	008	4	03	2	0.24	4	06	3	16	8
KS HORTON	14	3810-03	39-40	95-31	1029	06/1888	3	098	3	06/1888	1	008	4	04	3	0.14	1	20	9	20	9
KS INDEPENDENCE	14	3954-09	37-15	95-42	780	01/1872	1	100	0	01/1872	0	008	4	06	5	0.28	5	02	1	02	1
KS JETMORE	14	4081-07	38-05	99-54	2302	02/1901	7	092	6	02/1901	5	013	6	05	4	0.24	4	16	8	08	4
KS LAKIN	14	4464-07	37-56	101-15	2998	09/1889	4	093	6	05/1896	4	009	5	07	6	0.54	9	20	9	20	9
KS LARNED	14	4530-08	38-10	99-05	1994	09/1860	0	077	9	01/1905	6	012	6	08	7	0.21	3	14	7	06	3
KS LAWRENCE	14	4559-06	38-58	95-16	1000	07/1857	0	095	5	09/1866	0	003	1	04	3	0.14	1	14	7	14	7
KS LEAVENWORTH 4SSE	14	4588-03	39-16	94-53	860	01/1830	0	087	8	01/1919	8	009	5	04	3	0.23	3	20	9	16	8
KS LIBERAL	14	4695-07	37-03	100-55	2834	02/1892	5	085	8	04/1903	6	016	7	07	6	0.43	8	06	3	18	9
KS MANHATTAN	14	4972-03	39-12	96-35	1065	01/1858	0	098	3	11/1878	0	013	6	08	7	0.29	5	08	4	10	5
KS MCPHERSON	14	5152-05	38-23	97-40	1495	11/1891	4	099	2	11/1891	2	001	0	02	1	0.14	1	02	1	16	8
KS MEDICINE LODGE 2N	14	5173-08	37-18	98-35	1540	06/1895	6	098	3	12/1950	9	007	3	04	3	0.16	1	04	2	06	3
KS MINNEAPOLIS	14	5363-02	39-08	97-43	1310	08/1889	4	098	3	12/1949	9	012	6	03	2	0.14	1	10	5	12	6
KS NORTON 9SSE	14	5856-01	39-42	99-50	2360	06/1890	4	090	7	07/1897	4	011	5	05	4	0.21	3	02	1	02	1
KS OBERLIN	14	5906-01	39-50	100-32	2610	05/1913	9	099	2	05/1913	8	023	9	08	7	0.30	5	12	6	06	3
KS OLATHE 3E	14	5972-06	38-53	94-46	1055	01/1864	1	078	9	01/1894	3	010	5	06	5	0.18	2	02	1	10	5
KS OTTAWA	14	6128-06	38-37	95-17	900	06/1895	6	099	2	06/1895	4	004	2	03	2	0.20	3	08	4	18	9
KS PHILLIPSBURG	14	6374-02	39-44	99-19	1907	09/1891	4	094	6	01/1907	7	004	2	06	5	0.31	6	10	5	08	4
KS SAINT FRANCIS	14	7093-01	39-46	101-48	3300	05/1908	8	099	2	05/1908	7	004	2	06	5	0.39	8	08	4	16	8
KS SCOTT CITY	14	7271-04	38-29	100-54	2970	12/1889	4	086	8	01/1896	4	013	6	04	3	0.30	5	14	7	14	7
KS SEDAN	14	7305-09	37-07	96-10	820	03/1885	2	098	3	11/1887	1	005	2	07	6	0.37	7	12	6	08	4
KS WAKEENEY	14	8495-04	39-01	99-53	2450	01/1883	2	099	2	01/1883	0	001	0	02	1	0.18	2	20	9	08	4

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSPULL	R
KY ANCHORAGE	15	0155-02	38-16	85-32	730	04/1895	6	092	6	04/1895	3	019	8	08	7	0.25	4	16	8	02	1
KY BEREA COLLEGE	15	0619-03	37-34	84-18	1070	02/1901	7	097	4	02/1901	5	008	4	05	4	0.27	4	04	2	02	1
KY BOWLING GREEN FAA AP	15	0909-02	36-58	86-26	534	05/1878	1	095	5	07/1886	0	003	1	03	2	0.19	2	00	0	08	4
KY FARMERS 2S	15	2791-03	38-07	83-33	680	12/1904	8	095	5	12/1904	6	015	7	08	7	0.31	6	18	9	14	7
KY FRANKFORT LOCK 4	15	3028-03	38-14	84-52	504	06/1881	2	094	6	08/1882	0	013	6	07	6	0.38	7	08	4	14	7
KY GREENSBURG	15	3430-02	37-15	85-30	590	04/1892	5	099	2	04/1892	2	006	3	05	4	0.29	5	08	4	12	6
KY HOPKINSVILLE	15	3994-01	36-50	87-30	590	05/1896	6	099	2	05/1896	4	002	1	03	2	0.20	3	02	1	14	7
KY LEITCHFIELD 2N	15	4703-02	37-31	86-18	620	11/1895	6	099	2	11/1895	4	004	2	05	4	0.28	5	00	0	16	8
KY MIDDLESBORO	15	5389-04	36-36	83-44	1175	01/1891	4	090	7	01/1908	7	009	5	08	7	0.28	5	12	6	08	4
KY OWENSBORO	15	6091-01	37-46	87-09	405	07/1896	6	098	3	07/1896	4	002	1	02	1	0.24	4	14	7	10	5
KY SHELBYVILLE 1E	15	7324-03	38-12	85-12	730	04/1888	3	098	3	04/1894	3	012	6	06	5	0.28	5	02	1	18	9
KY WILLIAMSBURG	15	8709-04	36-44	84-09	1000	07/1892	5	093	6	02/1893	3	030	9	19	9	0.52	9	14	7	16	8
KY WILLIAMSTOWN 3NW	15	8714-03	38-39	84-37	940	06/1902	7	099	2	06/1902	6	004	2	04	3	0.27	4	10	5	20	9

MEAN TEMPERATURE

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LA ALEXANDRIA	16	0098-05	31-19	92-28	87	04/1883	2	092	6	01/1965	9	000	0	00	0	0.00	0	06	3	14	7
LA AMITE	16	0205-06	30-43	90-30	180	05/1883	2	095	5	08/1889	1	002	1	07	6	0.36	7	02	1	04	2
LA BASTROP	16	0537-03	32-47	91-54	140	12/1893	5	064	9	01/1964	9	006	3	01	0	0.01	0	12	6	08	4
LA BATON ROUGE	16	0549-06	30-32	91-08	64	01/1822	0	080	9	01/1890	1	012	6	09	8	0.41	8	00	0	02	1
LA BUNKIE	16	1287-05	30-57	92-10	80	05/1882	2	090	7	06/1956	9	009	5	04	3	0.07	0	04	2	02	1
LA CALHOUN EXP STN	16	1411-02	32-31	92-20	180	06/1888	3	093	6	01/1891	2	008	4	03	2	0.28	5	12	6	14	7
LA COVINGTON 4NNW	16	2151-06	30-32	90-07	40	08/1892	5	094	6	08/1892	2	007	3	07	6	0.34	6	14	7	08	4
LA DONALDSONVILLE	16	2534-09	30-07	90-59	40	07/1884	2	092	6	01/1890	1	013	6	07	6	0.35	7	14	7	14	7
LA FRANKLIN 3NW	16	3313-08	29-49	91-33	12	06/1882	2	088	7	01/1890	1	011	5	11	8	0.33	6	04	2	10	5
LA HOUMA	16	4407-09	29-35	90-44	15	10/1888	3	093	6	01/1890	1	019	8	07	6	0.32	6	18	9	18	9
LA JENNINGS	16	4700-07	30-12	92-40	25	09/1897	6	098	3	09/1897	4	027	9	08	7	0.26	4	10	5	10	5
LA KROTZ SPRINGS 2N	16	4945-05	30-34	91-45	40	04/1888	3	096	5	01/1890	1	009	5	04	3	0.33	6	08	4	16	8
LA LAFAYETTE CAA AP	16	5026-08	30-12	91-59	38	06/1884	2	097	4	01/1890	1	002	1	03	2	0.15	1	12	6	08	4
LA NEW ORLEANS AUDUBON	16	6664-09	29-55	90-08	6	04/1888	3	094	6	01/1890	1	007	3	02	1	0.25	4	20	9	20	9
LA PLAIN DEALING	16	7344-01	32-54	93-41	291	06/1892	5	098	3	01/1968	9	000	0	01	0	0.09	0	10	5	14	7
LA ST JOSEPH EXP STN	16	8163-03	31-57	91-14	78	09/1884	2	074	9	01/1896	4	026	9	15	9	0.21	3	06	3	14	7
LA THIBODAUX 3ESE	16	9013-09	29-46	90-47	15	05/1892	5	095	5	05/1892	2	009	5	07	6	0.31	6	16	8	12	6
LA WINNSBORO 5SSE	16	9806-03	32-06	91-43	75	06/1890	4	063	9	09/1959	9	002	1	01	0	0.00	0	00	0	12	6

MEAN TEMPERATURE

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ME ACADIA NATIONAL PARK	17	0100-03	44-21	68-16	470	11/1885	2	087	8	11/1885	0	021	8	09	8	0.36	7	06	3	12	6
ME EASTPORT	17	2426-03	44-55	67-00	85	01/1822	0	084	8	01/1888	1	006	3	05	4	0.36	7	14	7	04	2
ME FARMINGTON	17	2765-02	44-41	70-09	420	10/1889	4	099	2	10/1889	1	008	4	05	4	0.24	4	18	9	02	1
ME GARDINER	17	3046-02	44-13	69-47	140	01/1837	0	093	6	01/1893	3	006	3	02	1	0.21	3	08	4	20	9
ME HOULTON	17	3897-01	46-08	67-50	410	01/1829	0	067	9	01/1903	6	005	2	03	2	0.25	4	06	3	06	3
ME LEWISTON	17	4566-02	44-06	70-13	180	04/1886	2	100	0	04/1886	0	004	2	01	0	0.05	0	16	8	18	9
ME MILLINOCKET	17	5304-01	45-39	68-42	360	01/1903	7	099	2	01/1903	6	002	1	01	0	0.14	1	10	5	06	3
ME ORONO	17	6430-02	44-54	68-40	155	01/1870	1	090	7	01/1886	0	015	7	03	2	0.35	7	20	9	10	5
ME PORTLAND WSMO AP	17	6905-03	43-39	70-19	57	01/1820	0	095	5	01/1886	0	000	0	03	2	0.39	8	12	6	18	9
ME PRESQUE ISLE	17	6937-01	46-39	68-00	599	10/1909	8	097	4	10/1909	7	005	2	02	1	0.19	2	04	2	14	7
ME RIPOGENUS DAM	17	7174-01	45-53	69-11	965	09/1925	9	096	5	09/1925	9	003	1	01	0	0.13	1	10	5	12	6
ME WOODLAND	17	9891-02	45-09	67-24	140	02/1920	9	095	5	02/1920	9	013	6	03	2	0.36	7	04	2	10	5

MEAN TEMPERATURE

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MD BALTIMORE WSO CITY	18	0470-06	39-17	76-37	14	01/1817	0	076	9	01/1897	4	001	0	01	0	0.01	0	20	9	20	9
MD CAMBRIDGE WATER TRMT PLANT	18	1385-02	38-34	76-04	5	01/1893	5	091	7	01/1893	3	022	8	07	6	0.24	4	02	1	06	3
MD CHESTERTOWN	18	1750-05	39-13	76-04	40	07/1855	0	056	9	12/1939	9	000	0	01	0	0.09	0	06	3	16	8
MD COLLEGE PARK	18	1995-04	38-59	76-57	90	01/1894	5	097	4	01/1894	3	005	2	03	2	0.15	1	10	5	10	5
MD CUMBERLAND 2	18	2282-07	39-38	78-45	730	01/1859	0	090	7	01/1913	8	008	4	06	5	0.26	4	10	5	08	4
MD DENTON 2E	18	2523-02	38-53	75-48	50	03/1892	5	089	7	03/1892	2	025	9	09	8	0.29	5	14	7	06	3
MD EASTON POLICE BARRACKS	18	2700-02	38-45	76-04	40	11/1891	4	099	2	11/1891	2	011	5	04	3	0.21	3	20	9	12	6
MD GLEN DALE BELL STATION	18	3675-04	38-58	76-48	150	01/1921	9	100	0	01/1921	9	006	3	02	1	0.09	0	06	3	02	1
MD LAUREL 3W	18	5111-04	39-06	76-54	400	05/1895	6	092	6	05/1895	3	009	5	03	2	0.10	0	08	4	04	2
MD MILLINGTON 2WNW	18	5985-05	39-16	75-52	30	10/1898	7	097	4	10/1898	4	010	5	04	3	0.16	1	18	9	08	4
MD OAKLAND 1SE	18	6620-08	39-24	79-24	2420	04/1893	5	091	7	09/1893	3	012	6	12	9	0.03	0	10	5	14	7
MD OWINGS FERRY LANDING	18	6770-03	38-41	76-40	160	01/1917	9	095	5	01/1917	8	012	6	03	2	0.16	1	06	3	02	1
MD PRINCESS ANNE	18	7330-01	38-13	75-41	20	01/1823	0	063	9	01/1895	3	007	3	05	4	0.36	7	02	1	02	1
MD SALISBURY	18	8000-01	38-22	75-35	10	05/1906	8	097	4	05/1906	6	012	6	06	5	0.11	1	14	7	18	9
MD SOLOMONS	18	8405-03	38-19	76-27	12	01/1892	5	099	2	01/1892	2	003	1	03	2	0.14	1	20	9	20	9
MD WESTMINSTER POLICE BRKS	18	9440-06	39-33	76-58	765	01/1893	5	076	9	10/1901	5	029	9	07	6	0.26	4	12	6	18	9
MD WOODSTOCK COLLEGE	18	9750-06	39-20	76-52	460	12/1870	1	096	5	10/1888	1	010	5	03	2	0.15	1	10	5	14	7

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MA AMHERST	19	0120-02	42-23	72-32	150	01/1836	0	100	0	01/1836	0	007	3	09	8	0.46	9	08	4	02	1
MA BEDFORD	19	0535-02	42-29	71-17	160	01/1885	2	096	5	01/1885	0	008	4	06	5	0.32	6	16	8	06	3
MA BLUE HILL OBSERVATORY	19	0736-02	42-13	71-07	629	02/1831	0	098	3	01/1888	1	000	0	02	1	0.15	1	02	1	02	1
MA CHESTNUT HILL	19	1447-02	42-20	71-09	120	11/1884	2	098	3	11/1884	0	004	2	01	0	0.20	3	18	9	06	3
MA CLINTON	19	1561-02	42-24	71-41	398	01/1905	8	097	4	01/1905	6	006	3	00	0	0.01	0	20	9	20	9
MA FRAMINGHAM	19	2975-02	42-17	71-25	170	12/1884	2	099	2	12/1884	0	004	2	00	0	0.00	0	06	3	16	8
MA LAWRENCE	19	4105-02	42-42	71-10	57	01/1856	0	096	5	01/1886	0	002	1	02	1	0.12	1	14	7	04	2
MA NEW BEDFORD	19	5246-03	41-38	70-56	70	10/1812	0	098	3	01/1855	0	005	2	05	4	0.48	9	20	9	14	7
MA PLYMOUTH	19	6486-03	41-57	70-40	90	06/1886	3	096	5	06/1886	0	009	5	03	2	0.23	3	10	5	06	3
MA PROVINCETOWN	19	6681-03	42-03	70-11	20	03/1882	2	085	8	03/1882	0	026	9	12	9	0.61	9	06	3	18	9
MA STOCKBRIDGE	19	8181-01	42-18	73-20	860	12/1929	9	092	6	12/1929	9	015	7	09	8	0.28	5	06	3	10	5
MA TAUNTON	19	8367-03	41-54	71-04	20	02/1871	1	099	2	02/1871	0	001	0	01	0	0.07	0	08	4	00	0

MEAN TEMPERATURE

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MI ADRIAN 2NNE	20	0032-10	41-55	84-01	754	01/1870	1	093	6	01/1888	1	013	6	09	8	0.22	3	20	9	04	2
MI ALLEGAN	20	0128-08	42-31	85-50	670	08/1890	4	094	6	06/1896	4	014	7	10	8	0.35	7	16	8	14	7
MI ALMA	20	0146-06	43-23	84-40	760	03/1887	3	100	0	03/1887	0	015	7	09	8	0.40	8	02	1	02	1
MI ANN ARBOR UNIV OF MI	20	0230-10	42-18	83-43	900	01/1854	0	080	9	02/1880	0	007	3	05	4	0.33	6	04	2	06	3
MI BIG RAPIDS WATERWORKS	20	0779-06	43-42	85-29	930	04/1887	3	094	6	01/1888	1	013	6	08	7	0.32	6	04	2	04	2
MI CHATHAM EXP FARM	20	1484-02	46-21	86-56	875	07/1900	7	097	4	07/1900	5	008	4	01	0	0.10	0	04	2	18	9
MI CHEBOYGAN	20	1492-04	45-39	84-28	590	04/1890	4	096	5	06/1921	9	023	9	11	8	0.42	8	06	3	04	2
MI COLDWATER STATE SCHOOL	20	1675-09	41-57	85-00	984	07/1868	1	084	8	01/1898	4	006	3	02	1	0.11	1	06	3	00	0
MI EAST TAWAS	20	2423-04	44-17	83-30	586	01/1883	2	085	8	12/1886	0	027	9	10	8	0.51	9	16	8	20	9
MI FAYETTE 3SW	20	2737-02	45-41	86-42	765	12/1920	9	097	4	12/1920	9	008	4	03	2	0.22	3	00	0	14	7
MI HART	20	3632-05	43-42	86-22	675	08/1887	3	093	6	01/1897	4	007	3	01	0	0.07	0	04	2	02	1
MI HILLSDALE	20	3823-09	41-56	84-38	1080	02/1880	1	092	6	12/1886	0	011	5	05	4	0.23	3	12	6	06	3
MI IRON MOUNTAIN KINGSFORD WWTP	20	4090-01	45-47	88-05	1060	02/1899	7	098	3	02/1899	5	006	3	05	4	0.19	2	16	8	14	7
MI IRONWOOD	20	4104-01	46-27	90-11	1430	08/1901	7	098	3	08/1901	5	012	6	08	7	0.27	4	14	7	00	0
MI ISHPEMING	20	4127-01	46-29	87-39	1436	08/1898	6	097	4	12/1898	5	003	1	03	2	0.16	1	14	7	16	8
MI KALAMAZOO STATE HOSPITAL	20	4244-08	42-17	85-36	945	01/1876	1	098	3	01/1888	1	007	3	02	1	0.13	1	12	6	18	9
MI MIDLAND	20	5434-06	43-37	84-13	642	05/1896	6	089	7	05/1896	4	022	8	07	6	0.39	8	04	2	18	9
MI MOUNT CLEMENS ANG BASE	20	5650-10	42-36	82-49	580	08/1896	6	090	7	08/1896	4	025	9	03	2	0.14	1	14	7	16	8
MI MOUNT PLEASANT UNIVERSITY	20	5662-06	43-35	84-46	796	04/1887	3	083	8	04/1887	0	020	8	06	5	0.36	7	18	9	20	9
MI MUNISING	20	5690-02	46-24	86-39	620	09/1896	6	095	5	12/1898	5	021	8	05	4	0.29	5	08	4	20	9
MI NEWBERRY STATE HOSPITAL	20	5816-02	46-20	85-30	875	06/1896	6	094	6	01/1912	8	002	1	02	1	0.15	1	12	6	06	3
MI OWOSSO WASTEWATER PLANT	20	6300-09	43-01	84-11	738	01/1896	6	096	5	01/1896	4	010	5	04	3	0.29	5	00	0	12	6
MI SOUTH HAVEN	20	7690-08	42-24	86-17	620	09/1895	6	095	5	09/1925	9	011	5	03	2	0.11	1	20	9	08	4
MI STAMBAUGH 1S	20	7812-01	46-04	88-38	1485	02/1896	6	098	3	02/1896	4	009	5	05	4	0.27	4	04	2	12	6

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	IA	R	SC-DATE	R	IE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MN ADA	21	0018-01	47-18	96-31	906	12/1892	5	082	8	12/1892	3	017	7	10	8	0.41	8	02	1	06	3
MN ALBERT LEA 3SE	21	0075-08	43-37	93-25	1230	03/1885	2	092	6	03/1885	0	014	7	05	4	0.27	4	04	2	16	8
MN BAUDETTE	21	0515-02	48-43	94-37	1075	01/1909	8	096	5	01/1909	7	006	3	03	2	0.39	8	04	2	02	1
MN CLOQUET	21	1630-06	46-42	92-31	1265	04/1911	8	100	0	04/1911	7	001	0	01	0	0.03	0	06	3	06	3
MN DETROIT LAKES 1NNE	21	2142-01	46-50	95-51	1375	12/1895	6	097	4	12/1895	4	004	2	05	4	0.44	8	16	8	04	2
MN FAIRMONT	21	2698-08	43-38	94-28	1187	04/1887	3	099	2	04/1887	0	004	2	04	3	0.21	3	08	4	04	2
MN FARMINGTON 3NW	21	2737-09	44-40	93-11	980	04/1888	3	097	4	04/1888	1	003	1	00	0	0.00	0	20	9	04	2
MN FOSSTON	21	2916-01	47-34	95-45	1310	07/1909	8	097	4	07/1909	7	014	7	06	5	0.24	4	14	7	14	7
MN GRAND MEADOW	21	3290-09	43-42	92-34	1350	07/1887	3	099	2	07/1887	0	003	1	05	4	0.20	3	08	4	10	5
MN HALLOCK	21	3455-01	48-46	96-57	820	02/1899	7	099	2	02/1899	5	017	7	10	8	0.56	9	14	7	02	1
MN ITASCA U OF MN	21	4106-01	47-13	95-12	1490	05/1911	8	097	4	05/1911	7	008	4	02	1	0.20	3	12	6	02	1
MN LEECH LAKE DAM	21	4652-02	47-15	94-13	1302	06/1887	3	097	4	06/1887	0	005	2	02	1	0.17	2	02	1	16	8
MN MAPLE PLAIN	21	5136-06	45-00	93-39	970	02/1892	5	093	6	02/1892	2	007	3	04	3	0.44	8	16	8	14	7
MN MILAN 1NW	21	5400-04	45-08	95-56	1020	08/1893	5	098	3	08/1893	3	004	2	01	0	0.01	0	04	2	08	4
MN MINNEAPOLIS WSFO AP	21	5435-06	44-53	93-13	834	10/1819	0	100	0	01/1891	2	004	2	03	2	0.16	1	06	3	02	1
MN MONTEVIDEO 1SW	21	5563-04	44-56	95-45	985	08/1889	4	099	2	08/1889	1	002	1	03	2	0.32	6	02	1	20	9
MN MORA	21	5615-06	45-53	93-18	990	07/1904	7	099	2	07/1904	6	004	2	03	2	0.25	4	12	6	08	4
MN MORRIS WC EXPERIMENT STATION	21	5638-04	45-35	95-55	1140	08/1885	2	099	2	08/1885	0	001	0	03	2	0.32	6	20	9	12	6
MN NEW ULM	21	5887-08	44-18	94-27	860	01/1864	1	087	8	01/1894	3	005	2	03	2	0.17	2	02	1	14	7
MN OLIVIA	21	6152-05	44-47	94-59	1094	03/1885	2	095	5	03/1887	0	010	5	08	7	0.29	5	12	6	06	3
MN PARK RAPIDS	21	6360-02	46-55	95-04	1434	03/1885	2	093	6	04/1887	0	009	5	03	2	0.20	3	10	5	20	9
MN PINE RIVER DAM	21	6547-06	46-40	94-07	1250	03/1887	3	099	2	03/1887	0	003	1	04	3	0.30	5	16	8	04	2
MN PIPESTONE	21	6565-07	44-01	96-19	1705	02/1899	7	096	5	02/1899	5	012	6	07	6	0.43	8	06	3	12	6
MN POKEGAMA DAM	21	6612-02	47-15	93-35	1280	01/1887	3	099	2	03/1887	0	006	3	03	2	0.17	2	20	9	20	9
MN ROSEAU 1E	21	7087-01	48-51	95-45	1047	03/1894	5	087	8	03/1894	3	017	7	06	5	0.35	7	20	9	16	8

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSPULL	R
MN SAINT PETER 2SW	21	7405-08	44-18	93-58	850	11/1877	1	087	8	06/1893	3	012	6	04	3	0.39	8	08	4	08	4
MN SANDY LAKE DAM LIBBY	21	7460-06	46-48	93-19	1234	08/1892	5	099	2	08/1892	2	002	1	00	0	0.00	0	00	0	04	2
MN TWO HARBORS	21	8419-03	47-01	91-40	625	03/1894	5	099	2	03/1894	3	007	3	03	2	0.39	8	12	6	12	6
MN VIRGINIA	21	8543-03	47-30	92-33	1435	11/1893	5	097	4	11/1893	3	003	1	03	2	0.16	1	18	9	14	7
MN WALKER AH-GWAH-CHING	21	8618-01	47-04	94-35	1407	12/1907	8	097	4	12/1907	7	004	2	00	0	0.01	0	04	2	04	2
MN WINNEBAGO	21	9046-08	43-46	94-10	1110	10/1894	6	098	3	10/1894	3	009	5	03	2	0.09	0	12	6	14	7
MN WINNIBIGOSHISH DAM	21	9059-02	47-26	94-03	1315	06/1887	3	099	2	06/1887	0	002	1	01	0	0.09	0	00	0	12	6
MN ZUMBROTA	21	9249-09	44-18	92-40	985	02/1895	6	098	3	02/1895	3	003	1	03	2	0.25	4	00	0	06	3

MEAN TEMPERATURE

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MS ABERDEEN	22	0021-06	33-50	88-33	207	04/1882	2	092	6	01/1888	1	010	5	06	5	0.30	5	12	6	04	2
MS BATESVILLE 2SW	22	0488-02	34-18	89-59	215	04/1882	2	097	4	12/1888	1	006	3	02	1	0.26	4	02	1	12	6
MS BILOXI(CITY)	22	0792-10	30-24	88-54	15	01/1887	3	092	6	01/1890	1	012	6	15	9	0.30	5	06	3	12	6
MS BOONEVILLE	22	0955-03	34-40	88-34	490	04/1889	3	090	7	04/1889	1	022	8	12	9	0.39	8	12	6	20	9
MS BROOKHAVEN CITY	22	1094-07	31-33	90-27	425	01/1868	1	088	7	01/1892	2	009	5	05	4	0.31	6	14	7	12	6
MS CANTON	22	1389-05	32-36	90-02	228	04/1890	4	096	5	10/1929	9	021	8	04	3	0.09	0	02	1	10	5
MS CLARKSDALE	22	1707-01	34-12	90-34	173	11/1892	5	085	8	11/1892	3	024	9	10	8	0.36	7	08	4	06	3
MS COLUMBIA	22	1865-08	31-15	89-50	155	06/1903	7	083	8	06/1903	6	031	9	12	9	0.19	2	04	2	06	3
MS COLUMBUS LUXAPALLILA	22	1880-06	33-31	88-24	142	01/1855	0	088	7	01/1961	9	014	7	03	2	0.11	1	02	1	14	7
MS CORINTH CITY	22	1962-03	34-55	88-31	385	04/1883	2	090	7	01/1895	3	030	9	13	9	0.26	4	08	4	06	3
MS CRYSTAL SPRINGS EXP STN	22	2094-07	31-58	90-22	487	04/1892	5	098	3	04/1892	2	006	3	06	5	0.38	7	08	4	00	0
MS FOREST	22	3107-05	32-19	89-29	480	04/1882	2	092	6	01/1959	9	009	5	02	1	0.07	0	04	2	12	6
MS GREENVILLE	22	3605-04	33-23	91-01	132	01/1887	3	099	2	12/1888	1	009	5	08	7	0.49	9	12	6	08	4
MS HATTIESBURG	22	3887-09	31-19	89-18	161	04/1890	4	092	6	12/1903	6	031	9	17	9	0.31	6	06	3	08	4
MS HERNANDO	22	3975-02	34-50	90-00	363	04/1882	2	089	7	03/1890	2	021	8	11	8	0.32	6	00	0	14	7
MS HOLLY SPRINGS 4N	22	4173-02	34-49	89-26	483	08/1867	1	083	8	01/1888	1	011	5	08	7	0.20	3	00	0	20	9
MS KOSCIUSKO	22	4776-05	33-03	89-36	420	05/1889	3	096	5	01/1961	9	014	7	02	1	0.08	0	18	9	18	9
MS LAUREL	22	4939-09	31-41	89-07	225	02/1902	7	093	6	02/1902	6	022	8	11	8	0.31	6	12	6	02	1
MS LOUISVILLE	22	5247-06	33-08	89-04	581	12/1888	3	098	3	12/1888	1	012	6	06	5	0.36	7	14	7	12	6
MS MONTICELLO	22	5987-08	31-33	90-06	220	04/1907	8	098	3	04/1907	7	016	7	11	8	0.29	5	20	9	16	8
MS MOORHEAD	22	6009-04	33-27	90-31	117	04/1913	9	094	6	04/1913	8	027	9	09	8	0.32	6	04	2	00	0
MS NATCHEZ	22	6177-07	31-33	91-23	195	01/1799	0	068	9	01/1891	2	018	8	13	9	0.32	6	06	3	12	6
MS PONTOTOC EXP STN	22	7111-03	34-09	89-00	405	01/1889	3	098	3	12/1894	3	002	1	04	3	0.28	5	12	6	04	2
MS POPLARVILLE EXP STN	22	7128-10	30-51	89-33	313	04/1903	7	095	5	04/1903	6	010	5	03	2	0.05	0	04	2	06	3
MS PORT GIBSON	22	7132-07	31-58	91-00	120	08/1855	0	075	9	01/1974	9	000	0	00	0	0.00	0	04	2	16	8

MEAN TEMPERATURE

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MS ROSEDALE	22	7582-01	33-51	91-01	150	11/1894	6	074	9	11/1894	3	032	9	10	8	0.23	3	16	8	02	1
MS STATE UNIVERSITY	22	8374-06	33-28	88-47	185	11/1886	3	094	6	10/1890	2	006	3	06	5	0.29	5	18	9	14	7
MS UNIVERSITY	22	9079-02	34-23	89-32	380	09/1854	0	070	9	01/1902	6	006	3	05	4	0.26	4	20	9	18	9
MS WATER VALLEY 1NNE	22	9400-02	34-10	89-38	380	02/1889	3	097	4	09/1894	3	004	2	05	4	0.26	4	16	8	02	1
MS WAVELAND	22	9426-10	30-18	89-23	8	07/1833	0	057	9	10/1889	1	016	7	09	8	0.28	5	12	6	12	6
MS WAYNESBORO 2W	22	9439-09	31-41	88-40	197	04/1882	2	093	6	12/1897	4	013	6	07	6	0.24	4	14	7	02	1
MS WOODVILLE	22	9793-07	31-06	91-14	400	03/1893	5	094	6	03/1893	3	018	8	10	8	0.30	5	12	6	02	1
MS YAZOO CITY 5NNE	22	9860-04	32-54	90-23	107	09/1893	5	097	4	04/1895	3	013	6	11	8	0.39	8	20	9	20	9

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MO APPLETON CITY	23	0204-03	38-12	94-02	800	01/1890	4	096	5	07/1896	4	007	3	07	6	0.20	3	04	2	16	8
MO ARCADIA	23	0224-05	37-35	90-37	926	06/1878	1	096	5	01/1897	4	001	0	02	1	0.22	3	16	8	12	6
MO BRUNSWICK	23	1037-01	39-25	93-07	660	10/1889	4	098	3	01/1897	4	008	4	06	5	0.36	7	08	4	10	5
MO CARUTHERSVILLE	23	1364-06	36-12	89-40	280	02/1893	5	095	5	12/1933	9	000	0	02	1	0.12	1	16	8	16	8
MO CLINTON	23	1711-03	38-22	93-46	790	10/1906	8	097	4	10/1906	7	018	8	07	6	0.30	5	18	9	10	5
MO CONCEPTION	23	1822-01	40-15	94-41	1108	01/1888	3	099	2	01/1888	1	004	2	01	0	0.08	0	12	6	04	2
MO DONIPHAN	23	2289-05	36-35	90-49	330	05/1904	7	099	2	05/1904	6	011	5	04	3	0.19	2	10	5	10	5
MO HARRISONVILLE	23	3649-03	38-39	94-20	900	06/1863	0	085	8	01/1888	1	007	3	04	3	0.28	5	12	6	06	3
MO JEFFERSON CITY WATER PLANT	23	4271-03	38-35	92-09	670	05/1891	4	096	5	01/1902	6	007	3	05	4	0.38	7	16	8	14	7
MO LAMAR	23	4705-04	37-30	94-16	980	03/1885	2	096	5	03/1885	0	013	6	07	6	0.33	6	04	2	12	6
MO LEBANON 2W	23	4825-04	37-40	92-39	1279	01/1890	4	100	0	02/1894	3	009	5	10	8	0.37	7	00	0	14	7
MO LEXINGTON 3NE	23	4904-01	39-12	93-52	825	06/1878	1	090	7	01/1897	4	005	2	05	4	0.19	2	06	3	12	6
MO LOCKWOOD	23	5027-04	37-23	93-57	1078	09/1904	7	098	3	09/1904	6	003	1	02	1	0.15	1	10	5	18	9
MO LOUISIANA STARK'S NURSERY	23	5093-02	39-26	91-04	469	04/1883	2	085	8	01/1892	2	020	8	06	5	0.29	5	02	1	14	7
MO MACON	23	5175-01	39-43	92-28	855	09/1899	7	098	3	01/1980	9	032	9	00	0	0.07	0	04	2	16	8
MO MARBLE HILL	23	5253-05	37-18	89-58	390	09/1891	4	095	5	03/1895	3	014	7	07	6	0.37	7	18	9	16	8
MO MEXICO	23	5541-02	39-11	91-53	775	01/1892	5	100	0	01/1892	2	007	3	05	4	0.26	4	20	9	08	4
MO MOUNTAIN GROVE	23	5834-04	37-09	92-16	1450	04/1901	7	100	0	04/1901	5	003	1	02	1	0.24	4	08	4	14	7
MO NEOSHO	23	5976-04	36-52	94-22	1011	07/1878	1	089	7	11/1887	1	008	4	02	1	0.16	1	08	4	00	0
MO ROLLA UNIV OF MO	23	7263-05	37-57	91-46	1180	04/1867	1	069	9	02/1979	9	000	0	00	0	0.00	0	06	3	04	2
MO STEFFENVILLE	23	8051-02	39-58	91-53	690	11/1897	6	099	2	04/1978	9	001	0	00	0	0.00	0	10	5	08	4
MO TRENTON	23	8444-01	40-05	93-38	837	07/1895	6	098	3	07/1895	4	015	7	08	7	0.31	6	12	6	08	4
MO UNIONVILLE	23	8523-01	40-29	93-00	1062	03/1893	5	097	4	03/1893	3	033	9	09	8	0.18	2	06	3	02	1
MO WARRENSBURG 2SSE	23	8712-03	38-44	93-43	840	07/1868	1	079	9	09/1887	0	014	7	11	8	0.42	8	14	7	18	9
MO WARRENTON 1N	23	8725-02	38-49	91-08	845	10/1859	0	075	9	08/1889	1	009	5	05	4	0.46	9	14	7	16	8
MO WARSAW #1	23	8733-03	38-15	93-22	705	02/1893	5	095	5	02/1893	3	014	7	07	6	0.32	6	10	5	08	4

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MT ANACONDA	24	0199-01	46-08	112-57	5280	09/1905	8	098	3	09/1905	6	006	3	03	2	0.01	0	20	9	16	8
MT AUGUSTA	24	0364-04	47-29	112-23	4070	07/1896	6	095	5	09/1916	8	013	6	07	6	0.36	7	14	7	04	2
MT BIG TIMBER	24	0780-05	45-50	109-57	4100	04/1894	5	086	8	12/1902	6	010	5	10	8	0.18	2	08	4	08	4
MT BOZEMAN MONTANA ST UNIV	24	1044-02	45-40	111-03	4856	08/1868	1	092	6	01/1901	5	000	0	01	0	0.15	1	20	9	18	9
MT CASCADE SS	24	1552-04	47-13	111-43	3390	04/1904	7	099	2	04/1904	6	004	2	04	3	0.18	2	14	7	08	4
MT CHINOOK	24	1722-03	48-35	109-14	2340	12/1895	6	091	7	01/1914	8	019	8	12	9	0.76	9	08	4	00	0
MT CHOTEAU AP	24	1737-03	47-49	112-10	3945	06/1890	4	081	9	01/1922	9	009	5	05	4	0.27	4	08	4	14	7
MT CROW AGENCY	24	2112-05	45-36	107-27	3030	09/1888	3	094	6	06/1898	4	015	7	06	5	0.43	8	18	9	06	3
MT CUT BANK	24	2173-03	48-36	112-22	3838	12/1903	7	092	6	12/1903	6	008	4	09	8	0.35	7	00	0	16	8
MT DILLON WMCE	24	2409-02	45-12	112-38	5228	01/1895	6	098	3	01/1900	5	002	1	04	3	0.29	5	10	5	18	9
MT EKALAKA	24	2689-07	45-53	104-32	3425	01/1897	6	100	0	01/1897	4	006	3	08	7	0.45	8	10	5	14	7
MT ENNIS	24	2793-02	45-21	111-43	4953	01/1918	9	100	0	01/1918	8	002	1	04	3	0.25	4	02	1	12	6
MT FLATWILLOW 4ENE	24	3013-04	46-51	108-19	3138	07/1913	9	099	2	07/1913	8	004	2	02	1	0.13	1	06	3	06	3
MT FORKS 4NNE	24	3089-03	48-47	107-28	2600	01/1915	9	098	3	01/1915	8	013	6	05	4	0.21	3	20	9	14	7
MT FORT ASSINNIBOINE	24	3110-03	48-30	109-48	2687	01/1880	1	075	9	09/1906	7	016	7	15	9	0.31	6	04	2	14	7
MT FORTINE 1N	24	3139-01	48-47	114-54	3000	03/1906	8	100	0	03/1906	6	003	1	06	5	0.26	4	20	9	20	9
MT GLASGOW WSO AP	24	3558-06	48-13	106-37	2284	07/1893	5	095	5	01/1917	8	006	3	05	4	0.38	7	04	2	10	5
MT GLENDIVE	24	3581-06	47-06	104-43	2076	05/1889	3	098	3	01/1915	8	002	1	05	4	0.24	4	02	1	02	1
MT GREAT FALLS WSCMO AP	24	3751-04	47-29	111-22	3663	12/1891	4	099	2	01/1899	5	013	6	09	8	0.34	6	12	6	06	3
MT HAMILTON	24	3885-01	46-15	114-09	3529	07/1895	6	086	8	06/1910	7	012	6	07	6	0.44	8	16	8	14	7
MT HAUGAN 3E	24	3984-01	47-23	115-21	3100	01/1912	9	100	0	01/1912	8	009	5	05	4	0.26	4	14	7	12	6
MT HEBGEN DAM	24	4038-02	44-52	111-20	6489	06/1904	7	097	4	06/1904	6	013	6	02	1	0.20	3	00	0	14	7
MT HELENA WSO	24	4055-04	46-35	112-00	3828	04/1880	1	100	0	01/1905	6	005	2	04	3	0.20	3	08	4	02	1
MT HUNTLEY EXPERIMENT STATION	24	4345-05	45-55	108-15	2989	05/1906	8	099	2	05/1906	6	001	0	02	1	0.22	3	14	7	18	9
MT JORDAN	24	4522-06	47-19	106-54	2590	01/1905	8	081	9	01/1931	9	001	0	01	0	0.16	1	06	3	12	6
MT KALISPELL WSO AP	24	4558-01	48-18	114-16	2965	06/1896	6	099	2	01/1906	6	000	0	03	2	0.24	4	08	4	12	6
MT LIBBY 1NE RS	24	5015-01	48-24	115-32	2080	06/1895	6	084	8	02/1900	5	019	8	07	6	0.20	3	02	1	08	4
MT LIVINGSTON 12S	24	5080-05	45-29	110-34	4870	10/1895	6	089	7	05/1900	5	019	8	20	9	0.48	9	08	4	02	1
MT MALTA 7E	24	5338-03	48-24	107-44	2245	06/1905	8	099	2	02/1906	6	011	5	05	4	0.34	6	12	6	04	2
MT MEDICINE LAKE 3SE	24	5572-06	48-29	104-27	1952	01/1911	8	092	6	01/1911	7	027	9	05	4	0.15	1	16	8	16	8
MT MILDRED 5N	24	5668-07	46-46	104-58	2510	05/1918	9	096	5	05/1918	8	021	8	05	4	0.13	1	00	0	12	6
MT MILES CITY FAA AP	24	5690-07	46-26	105-52	2629	12/1877	1	099	2	01/1900	5	000	0	03	2	0.17	2	06	3	16	8

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MT MOCCASIN EXPERIMENT STATION	24	5761-04	47-03	109-57	4300	04/1909	8	099	2	04/1909	7	001	0	01	0	0.16	1	08	4	04	2
MT NORRIS MADISON POWER HOUSE	24	6157-02	45-29	111-38	4745	02/1907	8	099	2	02/1907	7	001	0	03	2	0.24	4	08	4	16	8
MT PHILIPSBURG RS	24	6472-01	46-19	113-18	5270	09/1903	7	097	4	09/1903	6	007	3	07	6	0.55	9	10	5	20	9
MT PLEVNA	24	6601-07	46-25	104-30	2765	03/1912	9	099	2	03/1912	8	012	6	07	6	0.54	9	18	9	12	6
MT POPLAR	24	6660-06	48-07	105-12	1995	01/1889	3	095	5	09/1892	2	032	9	24	9	0.66	9	12	6	08	4
MT RED LODGE	24	6918-05	45-11	109-15	5575	04/1894	5	094	6	01/1900	5	004	2	07	6	0.42	8	10	5	10	5
MT SAINT IGNATIUS	24	7286-01	47-19	114-06	2900	02/1896	6	089	7	08/1902	6	008	4	12	9	0.19	2	14	7	02	1
MT SAVAGE	24	7382-06	47-27	104-21	1985	09/1905	8	099	2	09/1905	6	008	4	02	1	0.16	1	14	7	02	1
MT VALIER	24	8501-03	48-19	112-15	3805	09/1911	9	099	2	09/1911	7	000	0	00	0	0.00	0	16	8	08	4
MT VIRGINIA CITY	24	8597-02	45-18	111-57	5758	01/1888	3	086	8	06/1916	8	005	2	07	6	0.38	7	00	0	06	3
MT WEST YELLOWSTONE	24	8857-02	44-39	111-06	6657	07/1905	8	092	6	07/1905	6	012	6	09	8	0.48	9	02	1	04	2
MT WHITE SULPHUR SPRINGS #2	24	8930-04	46-31	110-53	5200	04/1894	5	079	9	01/1900	5	029	9	20	9	0.40	8	16	8	10	5

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	IA	R	SC-DATE	R	IE	R	#M	R	CONF	R	CONS40	R	CONSPULL	R
NE ALBION	25	0070-03	41-41	98-00	1760	04/1892	5	092	6	04/1892	2	011	5	04	3	0.33	6	06	3	18	9
NE ALLIANCE	25	0130-01	42-06	102-52	3980	09/1889	4	081	9	12/1896	4	026	9	10	8	0.20	3	02	1	02	1
NE ASHLAND 3NE	25	0375-06	41-04	96-20	1067	07/1888	3	094	6	07/1888	1	027	9	09	8	0.26	4	02	1	16	8
NE ATKINSON	25	0420-02	42-33	98-58	2125	06/1906	8	094	6	06/1906	7	009	5	03	2	0.26	4	10	5	12	6
NE AUBURN 5ESE	25	0435-09	40-23	95-45	930	11/1874	1	087	8	01/1892	2	016	7	08	7	0.22	3	14	7	12	6
NE BEATRICE 1N	25	0622-09	40-18	96-45	1297	01/1891	4	098	3	01/1891	2	004	2	05	4	0.18	2	08	4	14	7
NE BEAVER CITY	25	0640-08	40-08	99-50	2160	09/1890	4	097	4	07/1892	2	008	4	09	8	0.29	5	02	1	16	8
NE BRIDGEPORT	25	1145-01	41-40	103-06	3660	06/1897	6	099	2	06/1897	4	001	0	02	1	0.24	4	14	7	06	3
NE BROKEN BOW 2W	25	1200-05	41-25	99-41	2500	11/1894	6	097	4	11/1894	3	007	3	05	4	0.30	5	00	0	10	5
NE CRETE	25	2020-09	40-37	96-57	1435	01/1882	2	098	3	12/1894	3	002	1	03	2	0.19	2	12	6	00	0
NE CURTIS 1E	25	2100-07	40-38	100-30	2585	12/1893	5	091	7	04/1897	4	013	6	05	4	0.25	4	16	8	14	7
NE DAVID CITY	25	2205-06	41-15	97-08	1615	09/1888	3	095	5	03/1890	2	008	4	07	6	0.31	6	20	9	20	9
NE FAIRBURY 2SSE	25	2820-09	40-07	97-10	1340	04/1893	5	097	4	01/1892	2	008	4	08	7	0.37	7	10	5	12	6
NE FAIRMONT	25	2840-09	40-38	97-35	1640	11/1894	6	097	4	01/1950	9	004	2	01	0	0.12	1	16	8	10	5
NE FRANKLIN	25	3035-08	40-06	98-58	1855	01/1888	3	094	6	10/1889	1	022	8	16	9	0.54	9	06	3	00	0
NE GENEVA	25	3175-09	40-32	97-36	1630	01/1893	5	099	2	01/1893	3	002	1	06	5	0.43	8	18	9	14	7
NE GENOA 2W	25	3185-06	41-27	97-46	1590	12/1875	1	096	5	01/1892	2	007	3	06	5	0.29	5	00	0	04	2
NE GOTHENBURG	25	3365-05	40-56	100-10	2585	09/1894	6	098	3	05/1895	3	009	5	04	3	0.14	1	14	7	12	6
NE HALSEY 2W	25	3540-02	41-54	100-19	2705	04/1903	7	099	2	04/1903	6	010	5	06	5	0.41	8	00	0	16	8
NE HARRISON	25	3615-01	42-41	103-53	4850	03/1893	5	075	9	12/1900	5	028	9	24	9	0.48	9	12	6	18	9
NE HARTINGTON	25	3630-03	42-36	97-16	1370	08/1891	4	099	2	08/1891	2	005	2	05	4	0.24	4	02	1	04	2
NE HASTINGS	25	3660-08	40-35	98-21	1925	09/1890	4	094	6	12/1890	2	010	5	08	7	0.52	9	18	9	06	3
NE HAY SPRINGS	25	3710-01	42-41	102-41	3855	01/1886	2	097	4	10/1896	4	005	2	08	7	0.27	4	20	9	16	8
NE HEBRON	25	3735-09	40-10	97-35	1480	01/1886	2	099	2	01/1895	3	008	4	06	5	0.38	7	12	6	04	2
NE HOLDREGE	25	3910-08	40-26	99-22	2320	06/1890	4	093	6	06/1901	5	003	1	04	3	0.24	4	02	1	12	6
NE IMPERIAL	25	4110-07	40-31	101-38	3278	06/1890	4	097	4	01/1891	2	018	8	07	6	0.28	5	16	8	20	9
NE KIMBALL	25	4440-01	41-14	103-40	4705	11/1887	3	097	4	11/1887	1	002	1	04	3	0.30	5	04	2	12	6
NE LODGEPOLE	25	4900-01	41-09	102-38	3832	12/1894	6	092	6	12/1894	3	014	7	05	4	0.34	6	16	8	16	8
NE LOUP CITY 1N	25	4985-05	41-17	98-58	2120	12/1895	6	094	6	12/1895	4	006	3	05	4	0.42	8	08	4	16	8
NE MADISON	25	5080-03	41-50	97-27	1580	12/1884	2	088	7	07/1890	2	017	7	08	7	0.39	8	18	9	02	1
NE MCCOOK	25	5310-07	40-12	100-35	2580	02/1883	2	081	9	01/1914	8	018	8	07	6	0.33	6	02	1	10	5
NE MERRIMAN	25	5470-02	42-55	101-41	3250	02/1915	9	094	6	02/1915	8	010	5	08	7	0.49	9	08	4	10	5

MEAN TEMPERATURE

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NE MINDEN	25	5565-08	40-30	98-57	2170	01/1884	2	096	5	09/1897	4	002	1	08	7	0.41	8	10	5	06	3
NE NORTH LOUP	25	6040-05	41-30	98-46	1960	12/1888	3	098	3	11/1891	2	008	4	07	6	0.29	5	14	7	12	6
NE OAKDALE	25	6135-03	42-04	97-57	1720	01/1888	3	099	2	06/1893	3	003	1	04	3	0.16	1	20	9	20	9
NE PAWNEE CITY	25	6570-09	40-06	96-09	1185	01/1882	2	079	9	12/1887	1	022	8	04	3	0.20	3	02	1	06	3
NE PURDUM	25	6970-02	42-04	100-15	2690	05/1902	7	099	2	05/1902	6	001	0	02	1	0.14	1	14	7	02	1
NE RED CLOUD	25	7070-08	40-06	98-31	1720	03/1872	1	078	9	07/1893	3	017	7	06	5	0.51	9	18	9	20	9
NE SAINT PAUL	25	7515-05	41-12	98-27	1796	07/1895	6	097	4	07/1895	4	008	4	05	4	0.31	6	10	5	04	2
NE SEWARD	25	7715-06	40-54	97-05	1480	02/1885	2	087	8	09/1950	9	000	0	01	0	0.00	0	04	2	20	9
NE SYRACUSE	25	8395-09	40-40	96-11	1100	06/1871	1	093	6	01/1895	3	013	6	12	9	0.24	4	20	9	06	3
NE TECUMSEH	25	8465-09	40-22	96-11	1130	06/1884	2	094	6	01/1905	6	012	6	06	5	0.24	4	12	6	00	0
NE TEKAMAH 1S	25	8480-03	41-45	96-14	1040	04/1890	4	098	3	06/1962	9	004	2	02	1	0.19	2	16	8	14	7
NE WAKEFIELD	25	8915-03	42-16	96-52	1413	04/1897	6	098	3	04/1897	4	006	3	04	3	0.28	5	02	1	06	3
NE WEEPING WATER	25	9090-06	40-52	96-09	1100	01/1882	2	091	7	07/1893	3	016	7	10	8	0.51	9	08	4	14	7
NE YORK	25	9510-06	40-52	97-36	1610	02/1892	5	098	3	01/1950	9	002	1	02	1	0.07	0	14	7	12	6

MEAN TEMPERATURE

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NV AUSTIN	26	0507-02	39-30	117-05	6605	01/1888	3	090	7	09/1959	9	013	6	03	2	0.19	2	04	2	12	6
NV BATTLE MOUNTAIN AP	26	0691-02	40-35	116-54	4539	02/1870	1	096	5	11/1877	0	016	7	07	6	0.66	9	02	1	16	8
NV BOULDER CITY	26	1071-04	35-59	114-51	2525	09/1931	9	097	4	09/1931	9	005	2	01	0	0.01	0	08	4	02	1
NV ELKO FAA AP	26	2573-02	40-50	115-47	5075	02/1870	1	098	3	01/1906	6	004	2	06	5	0.51	9	18	9	20	9
NV FALLON EXPERIMENT STATION	26	2780-01	39-27	118-47	3965	04/1889	3	092	6	09/1904	6	002	1	06	5	0.32	6	16	8	02	1
NV GOLCONDA	26	3245-01	40-57	117-29	4392	05/1878	1	095	5	01/1893	3	017	7	05	4	0.41	8	18	9	00	0
NV LOVELOCK	26	4698-01	40-11	118-28	3975	02/1888	3	093	6	02/1888	1	026	9	10	8	0.64	9	16	8	00	0
NV MCGILL	26	4950-02	39-24	114-46	6300	05/1891	4	082	8	01/1900	5	016	7	16	9	0.33	6	08	4	02	1
NV MINA	26	5168-03	38-23	118-06	4552	06/1889	4	092	6	07/1891	2	007	3	09	8	0.53	9	02	1	08	4
NV RENO WSFO AP	26	6779-01	39-30	119-47	4404	02/1870	1	098	3	12/1909	7	011	5	08	7	0.46	9	06	3	16	8
NV SEARCHLIGHT	26	7369-04	35-28	114-55	3540	12/1913	9	093	6	08/1942	9	009	5	02	1	0.17	2	10	5	20	9
NV WELLS	26	8988-02	41-07	114-58	5650	02/1870	1	078	9	01/1942	9	001	0	01	0	0.13	1	08	4	10	5
NV WINNEMUCCA WSO AP	26	9171-01	40-54	117-48	4297	07/1877	1	098	3	01/1888	1	001	0	05	4	0.45	8	10	5	16	8

MEAN TEMPERATURE

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NH BETHLEHEM	27	0703-01	44-17	71-41	1380	12/1892	5	097	4	12/1892	3	006	3	06	5	0.31	6	02	1	10	5
NH DURHAM	27	2174-02	43-09	70-57	74	04/1892	5	098	3	04/1892	2	006	3	06	5	0.33	6	00	0	02	1
NH FIRST CONNECTICUT LAKE	27	2999-01	45-05	71-17	1660	01/1918	9	100	0	01/1918	8	000	0	00	0	0.00	0	16	8	06	3
NH HANOVER	27	3850-02	43-42	72-17	603	11/1834	0	098	3	11/1836	0	005	2	02	1	0.16	1	20	9	04	2
NH KEENE	27	4399-02	42-55	72-16	480	01/1893	5	100	0	01/1893	3	012	6	06	5	0.23	3	06	3	06	3

MEAN TEMPERATURE

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NJ ATLANTIC CITY STATE MARINA	28	0325-03	39-23	74-26	10	01/1874	1	100	0	01/1889	1	002	1	03	2	0.19	2	14	7	04	2
NJ BELVIDERE	28	0734-01	40-50	75-05	263	09/1891	4	098	3	09/1891	2	004	2	03	2	0.15	1	02	1	12	6
NJ BOONTON 1SE	28	0907-01	40-54	74-24	280	11/1893	5	082	8	11/1893	3	018	8	05	4	0.15	1	10	5	04	2
NJ CHARLOTTEBURG	28	1582-01	41-02	74-26	760	04/1893	5	100	0	04/1893	3	002	1	00	0	0.00	0	14	7	14	7
NJ FLEMINGTON	28	3029-01	40-30	74-52	180	03/1898	6	099	2	03/1898	4	006	3	04	3	0.22	3	02	1	12	6
NJ HIGHTSTOWN 2W	28	3951-02	40-16	74-34	100	05/1891	4	094	6	05/1891	2	021	8	12	9	0.21	3	08	4	08	4
NJ INDIAN MILLS 2W	28	4229-02	39-48	74-47	100	05/1901	7	100	0	05/1901	5	000	0	01	0	0.06	0	04	2	20	9
NJ LONG BRANCH OAKHURST	28	4987-03	40-16	74-00	30	01/1874	1	069	9	01/1889	1	036	9	09	8	0.32	6	06	3	20	9
NJ MOORESTOWN	28	5728-02	39-58	74-58	45	04/1863	0	097	4	02/1867	0	013	6	08	7	0.27	4	10	5	04	2
NJ NEW BRUNSWICK 3SE	28	6055-02	40-28	74-26	86	01/1863	0	092	6	01/1863	0	013	6	06	5	0.23	3	16	8	08	4
NJ PLAINFIELD	28	7079-01	40-36	74-24	90	08/1888	3	096	5	01/1890	1	009	5	06	5	0.11	1	02	1	02	1
NJ TUCKERTON	28	8899-02	39-36	74-20	20	05/1898	6	089	7	05/1898	4	017	7	09	8	0.27	4	16	8	08	4

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
NM AZTEC RUINS NATL MONUMENT	29	0692-01	36-50	108-00	5644	01/1895	6	081	9	01/1925	9	000	0	04	3	0.52	9	10	5	08	4
NM BELL RANCH	29	0858-03	35-32	104-06	4500	01/1904	7	098	3	01/1904	6	002	1	01	0	0.01	0	20	9	04	2
NM CARLSBAD	29	1469-07	32-25	104-14	3120	01/1894	5	099	2	01/1902	6	006	3	07	6	0.41	8	04	2	16	8
NM CARRIZOZO	29	1515-05	33-39	105-53	5438	01/1908	8	097	4	01/1908	7	006	3	05	4	0.39	8	08	4	14	7
NM CHAMA	29	1664-02	36-55	106-35	7850	12/1889	4	089	7	01/1906	6	020	8	12	9	0.42	8	02	1	20	9
NM CIMARRON 4SW	29	1813-02	36-28	104-57	6542	05/1904	7	099	2	05/1904	6	024	9	08	7	0.11	1	02	1	10	5
NM CLAYTON WSO AP	29	1887-03	36-27	103-09	4669	02/1896	6	089	7	04/1903	6	016	7	08	7	0.26	4	08	4	06	3
NM ELEPHANT BUTTE DAM	29	2848-05	33-09	107-11	4576	10/1908	8	099	2	10/1908	7	003	1	03	2	0.34	6	02	1	12	6
NM FORT BAYARD	29	3265-04	32-48	108-09	6142	01/1867	1	095	5	06/1922	9	001	0	02	1	0.25	4	12	6	20	9
NM FORT SUMNER	29	3294-07	34-28	104-15	4025	01/1864	1	066	9	11/1904	6	025	9	10	8	0.41	8	10	5	04	2
NM GAGE 4ESE	29	3368-08	32-13	108-01	4410	01/1906	8	096	5	01/1906	6	011	5	03	2	0.23	3	08	4	02	1
NM JEMEZ SPRINGS	29	4369-02	35-46	106-41	6262	01/1910	8	099	2	01/1910	7	005	2	07	6	0.43	8	02	1	20	9
NM JORNADA EXPERIMENTAL RANGE	29	4426-08	32-37	106-44	4266	01/1914	9	098	3	01/1914	8	007	3	04	3	0.38	7	06	3	04	2
NM LAS VEGAS SEWAGE PLT	29	4862-02	35-32	105-12	6349	09/1887	3	096	5	01/1902	6	010	5	08	7	0.41	8	06	3	10	5
NM LOS LUNAS 3SSW	29	5150-05	34-46	106-45	4840	04/1889	3	098	3	04/1896	4	023	9	07	6	0.33	6	16	8	06	3
NM LUNA RS	29	5273-04	33-50	108-56	7050	01/1900	7	099	2	01/1900	5	005	2	05	4	0.55	9	06	3	04	2
NM MOUNTAIN PARK	29	5960-06	32-57	105-51	6780	11/1894	6	077	9	08/1905	6	019	8	16	9	0.54	9	10	5	10	5
NM MOUNTAINAIR	29	5965-06	34-31	106-15	6520	01/1902	7	098	3	12/1927	9	017	7	08	7	0.33	6	16	8	02	1
NM OROGRANDE	29	6435-08	32-23	106-06	4179	12/1904	8	080	9	01/1908	7	035	9	07	6	0.47	9	08	4	12	6
NM RED RIVER	29	7323-02	36-42	105-24	8676	07/1906	8	096	5	07/1906	7	006	3	03	2	0.14	1	20	9	08	4
NM ROSWELL FAA AP	29	7610-07	33-18	104-32	3669	03/1893	5	099	2	03/1893	3	007	3	08	7	0.46	9	00	0	06	3
NM SAN JON	29	7867-03	35-07	103-20	4230	05/1907	8	099	2	05/1907	7	008	4	03	2	0.17	2	02	1	08	4
NM SANTA ROSA	29	8107-07	34-57	104-41	4620	01/1908	8	097	4	01/1908	7	020	8	08	7	0.37	7	06	3	16	8
NM SOCORRO	29	8387-05	34-05	106-53	4585	11/1849	0	067	9	01/1975	9	001	0	00	0	0.00	0	18	9	10	5
NM SPRINGER	29	8501-03	36-21	104-35	5878	01/1891	4	097	4	01/1905	6	016	7	06	5	0.42	8	14	7	18	9
NM STATE UNIVERSITY	29	8535-08	32-17	106-45	3881	09/1851	0	088	7	01/1893	3	006	3	04	3	0.31	6	14	7	02	1
NM TUCUMCARI 4NE	29	9156-03	35-12	103-41	4086	12/1904	8	098	3	12/1904	6	002	1	02	1	0.04	0	04	2	04	2
NM TULAROSA	29	9165-08	33-05	106-03	4430	04/1908	8	096	5	01/1973	9	051	9	01	0	0.12	1	20	9	00	0

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
NY ADDISON	30	0023-01	42-06	77-13	1025	09/1890	4	093	6	09/1890	2	028	9	11	8	0.29	5	10	5	08	4
NY ALBANY WSFOAP	30	0042-05	42-45	73-48	275	01/1795	0	086	8	07/1887	0	004	2	04	3	0.12	1	14	7	02	1
NY ALFRED	30	0085-01	42-15	77-47	1780	01/1852	0	065	9	01/1914	8	005	2	05	4	0.25	4	18	9	08	4
NY ALLEGANY STATE PARK	30	0093-01	42-06	78-45	1500	09/1924	9	099	2	09/1924	9	008	4	02	1	0.09	0	02	1	02	1
NY ANGELICA	30	0183-01	42-18	78-01	1420	05/1854	0	077	9	01/1891	2	008	4	10	8	0.42	8	12	6	14	7
NY AUBURN 2NE	30	0321-10	42-56	76-32	765	01/1827	0	071	9	01/1898	4	014	7	06	5	0.14	1	06	3	08	4
NY BAINBRIDGE 2E	30	0360-02	42-17	75-27	994	10/1936	9	091	7	10/1936	9	014	7	03	2	0.02	0	06	3	06	3
NY BATAVIA	30	0443-09	42-59	78-11	890	01/1932	9	099	2	01/1932	9	018	8	07	6	0.11	1	04	2	18	9
NY BINGHAMTON WSO AP	30	0687-02	42-13	75-59	1600	07/1890	4	099	2	07/1890	2	013	6	07	6	0.28	5	18	9	06	3
NY BRIDGEHAMPTON	30	0889-04	40-57	72-18	60	08/1930	9	099	2	08/1930	9	019	8	05	4	0.11	1	12	6	06	3
NY BROCKPORT 2NW	30	0937-09	43-15	77-58	413	03/1890	4	084	8	03/1890	2	020	8	06	5	0.28	5	04	2	10	5
NY BUFFALO WSCMO AP	30	1012-09	42-56	78-44	705	01/1831	0	087	8	01/1914	8	000	0	03	2	0.18	2	10	5	04	2
NY CANTON 4SE	30	1185-08	44-34	75-07	440	01/1854	0	093	6	09/1888	1	013	6	08	7	0.24	4	04	2	02	1
NY CARMEL 1SW	30	1207-05	41-25	73-42	490	01/1888	3	095	5	01/1889	1	010	5	02	1	0.23	3	10	5	06	3
NY CHASM FALLS	30	1387-08	44-45	74-13	1060	01/1927	9	089	7	01/1927	9	012	6	01	0	0.13	1	20	9	08	4
NY CHAZY	30	1401-07	44-53	73-26	170	07/1899	7	095	5	07/1899	5	004	2	03	2	0.37	7	08	4	02	1
NY COOPERSTOWN	30	1752-02	42-42	74-55	1200	01/1854	0	096	5	01/1854	0	004	2	05	4	0.42	8	02	1	06	3
NY CORTLAND	30	1799-02	42-36	76-11	1129	03/1892	5	098	3	03/1892	2	006	3	02	1	0.25	4	12	6	00	0
NY DANNEMORA	30	1966-07	44-43	73-43	1340	01/1906	8	099	2	01/1906	6	004	2	02	1	0.20	3	04	2	14	7
NY DANSVILLE	30	1974-10	42-34	77-42	685	02/1918	9	093	6	02/1918	8	010	5	05	4	0.20	3	12	6	16	8
NY ELMIRA 2SE	30	2610-01	42-05	76-47	840	01/1852	0	071	9	01/1889	1	012	6	08	7	0.32	6	16	8	06	3
NY FREDONIA	30	3033-09	42-27	79-18	760	01/1829	0	059	9	01/1915	8	000	0	02	1	0.28	5	06	3	06	3
NY GENEVA RESR FM	30	3184-10	42-53	77-02	718	01/1852	0	081	9	01/1895	3	002	1	06	5	0.24	4	06	3	06	3
NY GLENHAM	30	3259-05	41-31	73-56	275	02/1932	9	100	0	02/1932	9	002	1	01	0	0.08	0	02	1	06	3
NY GLOVERSVILLE	30	3319-06	43-03	74-20	870	05/1892	5	098	3	05/1892	2	003	1	06	5	0.21	3	04	2	06	3
NY HEMLOCK	30	3773-10	42-47	77-37	902	05/1898	6	098	3	04/1905	6	004	2	01	0	0.04	0	20	9	20	9
NY INDIAN LAKE 2SW	30	4102-03	43-45	74-17	1660	09/1899	7	098	3	09/1899	5	005	2	00	0	0.01	0	14	7	16	8
NY ITHACA CORNELL UN	30	4174-10	42-27	76-27	960	01/1827	0	083	8	01/1875	0	001	0	07	6	0.24	4	04	2	10	5
NY LAKE PLACID 2S	30	4555-03	44-15	73-59	1940	08/1897	6	085	8	08/1897	4	026	9	04	3	0.25	4	04	2	16	8
NY LAWRENCEVILLE	30	4647-08	44-45	74-39	500	07/1931	9	098	3	07/1931	9	001	0	01	0	0.15	1	02	1	04	2
NY LITTLE FALLS CITY RESER	30	4791-06	43-04	74-52	900	01/1897	6	098	3	01/1897	4	004	2	02	1	0.11	1	04	2	18	9
NY LITTLE FALLS MILL ST	30	4796-06	43-02	74-52	360	01/1897	6	050	9	11/1911	8	053	9	03	2	0.12	1	20	9	20	9

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NY LOCKPORT 2NE	30	4844-09	43-11	78-39	520	11/1848	0	072	9	01/1913	8	001	0	01	0	0.12	1	18	9	10	5
NY LOWVILLE	30	4912-03	43-48	75-29	860	01/1827	0	075	9	01/1889	1	011	5	08	7	0.33	6	14	7	00	0
NY MOHONK LAKE	30	5426-05	41-46	74-09	1245	01/1896	6	098	3	01/1896	4	004	2	00	0	0.01	0	14	7	06	3
NY MORRISVILLE 3S	30	5512-02	42-51	75-39	1390	08/1911	9	088	7	08/1911	7	032	9	12	9	0.43	8	18	9	14	7
NY NEW YORK CENTRAL PARK	30	5801-04	40-47	73-58	130	10/1821	0	100	0	07/1888	1	001	0	01	0	0.05	0	18	9	10	5
NY NORWICH	30	6085-02	42-32	75-32	1020	09/1906	8	095	5	11/1975	9	059	9	02	1	0.18	2	08	4	10	5
NY OGDENBURG 4NE	30	6164-08	44-44	75-26	280	01/1838	0	063	9	10/1883	0	015	7	05	4	0.38	7	08	4	14	7
NY ONEONTA STATE UNIV	30	6232-02	42-28	75-04	1400	09/1894	6	094	6	09/1894	3	010	5	04	3	0.29	5	20	9	18	9
NY OSWEGO	30	6314-09	43-28	76-30	350	01/1844	0	096	5	01/1871	0	003	1	04	3	0.24	4	06	3	16	8
NY PENN YAN 8W	30	6517-10	42-40	77-11	997	01/1829	0	064	9	01/1928	9	022	8	07	6	0.21	3	14	7	16	8
NY PLATTSBURGH AFB	30	6659-07	44-39	73-28	165	01/1839	0	063	9	11/1898	4	048	9	17	9	0.21	3	14	7	06	3
NY PORT JERVIS	30	6774-02	41-23	74-41	470	01/1880	1	094	6	01/1890	1	004	2	03	2	0.14	1	12	6	04	2
NY POUGHKEEPSIE FAA AP	30	6820-05	41-38	73-53	155	01/1828	0	053	9	01/1891	2	038	9	08	7	0.27	4	16	8	08	4
NY ROCHESTER AIRPORT	30	7167-09	43-07	77-40	547	01/1830	0	098	3	01/1873	0	002	1	06	5	0.21	3	02	1	08	4
NY SARATOGA SPRINGS 4SW	30	7484-05	43-02	73-49	310	06/1903	7	098	3	06/1903	6	014	7	06	5	0.25	4	10	5	02	1
NY SCARSDALE	30	7497-04	40-59	73-48	199	01/1904	7	098	3	01/1904	6	003	1	03	2	0.25	4	18	9	10	5
NY SCHENECTADY	30	7513-05	42-50	73-55	220	01/1829	0	037	9	11/1899	5	044	9	07	6	0.60	9	18	9	18	9
NY SETAUKET STRONG	30	7633-04	40-58	73-06	40	08/1885	2	099	2	08/1885	0	001	0	01	0	0.10	0	02	1	16	8
NY SOUTH WALES EMERY PARK	30	8058-09	42-43	78-36	1090	10/1931	9	091	7	10/1931	9	016	7	02	1	0.11	1	14	7	08	4
NY STILLWATER RESERVOIR	30	8248-03	43-53	75-02	1690	01/1927	9	099	2	01/1927	9	001	0	02	1	0.14	1	04	2	08	4
NY SYRACUSE WSO AP	30	8383-10	43-07	76-07	421	01/1843	0	061	9	11/1888	1	018	8	13	9	0.59	9	14	7	14	7
NY TUPPER LAKE SUNMOUNT	30	8631-03	44-14	74-26	1680	06/1899	7	082	8	06/1899	5	026	9	03	2	0.19	2	18	9	02	1
NY UTICA 3W	30	8739-06	43-06	75-17	500	01/1826	0	055	9	01/1927	9	019	8	06	5	0.22	3	14	7	08	4
NY WALDEN	30	8906-05	41-33	74-10	380	01/1925	9	077	9	01/1925	9	025	9	04	3	0.24	4	02	1	20	9
NY WANAKENA RANGER SCHOOL	30	8944-03	44-09	74-54	1510	06/1910	8	098	3	06/1910	7	005	2	01	0	0.01	0	10	5	08	4
NY WATERTOWN	30	9000-09	43-58	75-52	497	01/1856	0	071	9	08/1892	2	002	1	04	3	0.26	4	04	2	08	4
NY WEST POINT	30	9292-05	41-23	73-58	320	01/1824	0	093	6	11/1884	0	013	6	06	5	0.30	5	08	4	04	2

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STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
NC ALBEMARLE	31	0090-05	35-22	80-11	610	07/1911	9	099	2	07/1911	7	008	4	06	5	0.32	6	14	7	20	9
NC BANNER ELK	31	0506-02	36-10	81-52	3750	09/1907	8	097	4	09/1907	7	006	3	04	3	0.25	4	08	4	00	0
NC CHAPEL HILL 2W	31	1677-03	35-55	79-06	500	01/1820	0	074	9	01/1894	3	013	6	05	4	0.16	1	04	2	12	6
NC EDENTON	31	2635-08	36-03	76-37	20	01/1896	6	098	3	01/1957	9	013	6	01	0	0.02	0	18	9	18	9
NC ELIZABETH CITY	31	2719-08	36-19	76-12	8	04/1911	8	094	6	04/1911	7	007	3	04	3	0.30	5	20	9	20	9
NC FAYETTEVILLE	31	3017-06	35-04	78-52	96	03/1871	1	085	8	08/1892	2	005	2	05	4	0.29	5	04	2	04	2
NC GOLDSBORO 1SSW	31	3510-07	35-21	78-01	82	01/1856	0	083	8	06/1895	4	005	2	03	2	0.23	3	06	3	08	4
NC HATTERAS	31	3897-08	35-13	75-41	5	09/1874	1	099	2	01/1888	1	001	0	04	3	0.28	5	04	2	10	5
NC HENDERSON 2NNW	31	3969-03	36-22	78-25	480	06/1893	5	098	3	06/1893	3	013	6	07	6	0.26	4	02	1	06	3
NC HENDERSONVILLE 1NE	31	3976-01	35-20	82-27	2160	10/1890	4	092	6	03/1894	3	013	6	04	3	0.18	2	20	9	12	6
NC HIGHLANDS	31	4055-01	35-03	83-11	3840	01/1877	1	087	8	10/1904	6	011	5	04	3	0.23	3	16	8	16	8
NC KINSTON 5SE	31	4684-07	35-13	77-32	55	09/1899	7	091	7	09/1899	5	019	8	11	8	0.29	5	06	3	12	6
NC LENOIR	31	4938-02	35-55	81-32	1200	08/1871	1	095	5	11/1947	9	000	0	01	0	0.20	3	14	7	02	1
NC LOUISBURG	31	5123-03	36-06	78-19	260	01/1891	4	098	3	03/1891	2	004	2	06	5	0.38	7	16	8	04	2
NC LUMBERTON 6NW	31	5177-06	34-42	79-04	130	04/1882	2	093	6	01/1963	9	001	0	00	0	0.00	0	20	9	20	9
NC MARION	31	5340-01	35-41	82-00	1425	05/1888	3	090	7	02/1890	1	010	5	06	5	0.35	7	08	4	06	3
NC MARSHALL	31	5356-01	35-48	82-41	2050	11/1898	7	094	6	01/1912	8	013	6	04	3	0.33	6	06	3	10	5
NC MONROE	31	5771-05	34-58	80-30	586	01/1888	3	093	6	01/1888	1	016	7	11	8	0.15	1	18	9	14	7
NC MOREHEAD CITY 2WNW	31	5830-07	34-44	76-44	10	02/1896	6	091	7	02/1896	4	012	6	04	3	0.26	4	16	8	00	0
NC MORGANTON	31	5838-01	35-45	81-41	1160	02/1889	3	097	4	02/1889	1	004	2	04	3	0.41	8	20	9	06	3
NC MOUNT AIRY	31	5890-02	36-31	80-37	1030	05/1889	3	098	3	04/1893	3	003	1	03	2	0.24	4	14	7	08	4
NC NASHVILLE	31	6044-08	35-58	77-58	205	05/1904	7	098	3	05/1904	6	003	1	01	0	0.18	2	18	9	18	9
NC REIDSVILLE 2NW	31	7202-03	36-23	79-42	890	12/1901	7	098	3	12/1901	5	001	0	03	2	0.18	2	12	6	06	3
NC SALISBURY	31	7615-04	35-41	80-29	700	04/1882	2	096	5	04/1882	0	008	4	08	7	0.46	9	18	9	14	7
NC SMITHFIELD	31	7994-07	35-31	78-21	150	08/1889	4	096	5	09/1962	9	000	0	02	1	0.22	3	12	6	16	8
NC SOUTHPORT 5N	31	8113-06	34-00	78-01	20	01/1822	0	078	9	01/1895	3	008	4	05	4	0.27	4	02	1	08	4
NC STATESVILLE 2NNE	31	8292-04	35-49	80-53	950	05/1866	1	080	9	03/1901	5	007	3	03	2	0.23	3	00	0	16	8
NC TARBORO 1S	31	8500-08	35-53	77-32	35	08/1871	1	083	8	04/1891	2	004	2	04	3	0.22	3	10	5	12	6
NC WAYNESVILLE 1E	31	9147-01	35-29	82-58	2658	05/1894	5	092	6	01/1907	7	017	7	06	5	0.40	8	02	1	02	1

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STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
ND BOTTINEAU	32	0941-02	48-50	100-27	1640	02/1892	5	094	6	05/1905	6	002	1	01	0	0.01	0	12	6	04	2
ND CROSBY	32	1871-01	48-54	103-18	1952	04/1907	8	098	3	04/1907	7	012	6	08	7	0.32	6	14	7	12	6
ND DICKINSON EXP STN	32	2188-07	46-53	102-48	2460	11/1891	4	099	2	01/1902	6	003	1	03	2	0.23	3	06	3	04	2
ND DUNN CENTER 2SW	32	2365-04	47-21	102-39	2232	04/1919	9	098	3	04/1919	8	004	2	04	3	0.34	6	00	0	08	4
ND FORT YATES	32	3207-08	46-06	100-38	1635	01/1882	2	078	9	10/1898	4	031	9	20	9	0.37	7	06	3	12	6
ND FULLERTON 1ESE	32	3287-09	46-09	98-24	1435	02/1898	6	100	0	02/1898	4	004	2	04	3	0.37	7	16	8	14	7
ND GRAFTON	32	3594-03	48-25	97-25	827	01/1891	4	096	5	01/1891	2	008	4	02	1	0.50	9	10	5	02	1
ND GRAND FORKS UNIVERSITY	32	3621-03	47-56	97-05	830	06/1887	3	095	5	06/1889	1	003	1	05	4	0.50	9	20	9	20	9
ND HETTINGER	32	4178-07	45-59	102-39	2680	01/1907	8	093	6	01/1907	7	023	9	09	8	0.36	7	08	4	08	4
ND HILLSBORO 3N	32	4203-06	47-27	97-04	910	11/1905	8	097	4	11/1905	6	009	5	04	3	0.24	4	10	5	08	4
ND JAMESTOWN STATE HOSPITAL	32	4418-05	46-53	98-41	1467	01/1892	5	098	3	01/1907	7	000	0	00	0	0.00	0	08	4	12	6
ND LANGDON EXPERIMENT STN	32	4958-03	48-45	98-20	1615	06/1896	6	091	7	11/1897	4	017	7	09	8	0.32	6	10	5	20	9
ND LISBON	32	5220-09	46-26	97-40	1089	04/1897	6	095	5	04/1897	4	014	7	04	3	0.23	3	04	2	04	2
ND MANDAN EXPERIMENT STN	32	5479-08	46-48	100-54	1750	08/1913	9	098	3	08/1913	8	001	0	00	0	0.00	0	18	9	18	9
ND MAYVILLE	32	5660-06	47-30	97-19	935	03/1893	5	091	7	12/1904	6	005	2	04	3	0.43	8	06	3	08	4
ND MOTT	32	6155-07	46-22	102-18	2530	07/1907	8	099	2	07/1907	7	014	7	04	3	0.22	3	02	1	20	9
ND NAPOLEON	32	6255-09	46-30	99-46	1980	06/1889	4	099	2	01/1900	5	018	8	07	6	0.28	5	00	0	08	4
ND NEW ENGLAND	32	6315-07	46-33	102-52	2639	07/1888	3	088	7	03/1894	3	031	9	11	8	0.46	9	10	5	18	9
ND PEMBINA	32	6947-03	48-58	97-14	790	08/1871	1	090	7	03/1892	2	029	9	13	9	0.93	9	06	3	04	2
ND RICHARDTON ABBEY	32	7530-07	46-53	102-19	2470	03/1916	9	099	2	03/1916	8	011	5	03	2	0.19	2	16	8	10	5
ND STEELE	32	8366-05	46-52	99-54	1865	04/1889	3	091	7	11/1893	3	023	9	10	8	0.52	9	04	2	16	8
ND TOWNER 2NE	32	8792-02	48-21	100-24	1480	02/1896	6	089	7	02/1899	5	019	8	22	9	0.47	9	20	9	02	1
ND WAHPETON 3N	32	9100-09	46-19	96-36	956	07/1889	4	096	5	07/1889	1	014	7	07	6	0.35	7	12	6	08	4
ND WILLOW CITY	32	9445-02	48-39	100-18	1460	09/1891	4	097	4	06/1908	7	010	5	06	5	0.33	6	02	1	08	4

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
OH BUCYRUS	33	1072-02	40-49	82-58	955	09/1889	4	094	6	12/1899	5	009	5	06	5	0.31	6	02	1	12	6
OH CADIZ	33	1152-07	40-16	81-00	1260	09/1903	7	098	3	09/1903	6	002	1	02	1	0.19	2	02	1	04	2
OH CHIPPEWA LAKE	33	1541-03	41-04	81-54	1060	01/1857	0	071	9	02/1884	0	012	6	10	8	0.17	2	04	2	12	6
OH CIRCLEVILLE	33	1592-05	39-37	82-57	670	01/1895	6	095	5	01/1895	3	015	7	08	7	0.31	6	16	8	02	1
OH COSHOCTON WPC	33	1890-06	40-15	81-52	760	08/1915	9	098	3	08/1915	8	004	2	06	5	0.26	4	04	2	08	4
OH DELAWARE	33	2119-05	40-17	83-04	860	02/1896	6	099	2	02/1896	4	011	5	11	8	0.34	6	14	7	10	5
OH FINDLAY SEWAGE PLANT	33	2791-01	41-03	83-40	768	04/1886	2	097	4	05/1888	1	009	5	06	5	0.33	6	06	3	16	8
OH GREENVILLE WATER PLANT	33	3375-04	40-06	84-39	1024	02/1886	2	100	0	02/1886	0	005	2	07	6	0.33	6	18	9	08	4
OH HILLSBORO	33	3758-08	39-08	83-37	1100	01/1836	0	081	9	01/1909	7	018	8	14	9	0.40	8	04	2	10	5
OH HIRAM	33	3780-03	41-18	81-09	1230	09/1855	0	080	9	11/1882	0	007	3	09	8	0.53	9	16	8	02	1
OH IRONTON 1NE	33	3975-09	38-32	82-40	670	11/1882	2	098	3	11/1882	0	010	5	06	5	0.25	4	20	9	20	9
OH KENTON	33	4189-04	40-39	83-36	995	04/1862	0	086	8	01/1890	1	019	8	11	8	0.30	5	04	2	10	5
OH MCCONNELSVILLE LOCK 7	33	5041-10	39-39	81-51	660	04/1884	2	100	0	04/1884	0	009	5	06	5	0.34	6	08	4	06	3
OH MILLERSBURG 1W	33	5297-06	40-33	81-56	900	04/1919	9	098	3	04/1919	8	017	7	06	5	0.14	1	08	4	08	4
OH MILLPORT 2NW	33	5315-07	40-43	80-54	1145	02/1893	5	096	5	02/1893	3	004	2	03	2	0.26	4	08	4	02	1
OH NAPOLEON	33	5669-01	41-22	84-09	683	09/1885	2	096	5	09/1885	0	014	7	07	6	0.16	1	08	4	06	3
OH NORWALK	33	6118-02	41-16	82-37	670	01/1861	0	080	9	01/1881	0	017	7	15	9	0.29	5	20	9	16	8
OH OBERLIN	33	6196-02	41-16	82-13	816	01/1854	0	082	8	01/1883	0	015	7	07	6	0.31	6	14	7	20	9
OH PHILO 3SW	33	6600-10	39-50	81-55	1020	06/1895	6	099	2	06/1895	4	001	0	00	0	0.00	0	20	9	16	8
OH PORTSMOUTH	33	6781-09	38-45	82-53	540	01/1824	0	099	2	01/1859	0	006	3	06	5	0.33	6	06	3	18	9
OH TIFFIN	33	8313-02	41-07	83-11	738	04/1873	1	091	7	02/1880	0	015	7	12	9	0.23	3	10	5	06	3
OH UPPER SANDUSKY	33	8534-02	40-50	83-17	854	11/1882	2	097	4	11/1882	0	009	5	06	5	0.15	1	14	7	02	1
OH URBANA SEWAGE PLANT	33	8552-04	40-06	83-47	1000	01/1854	0	086	8	01/1896	4	003	1	07	6	0.42	8	02	1	04	2
OH WARREN 3S	33	8769-03	41-12	80-49	900	11/1882	2	092	6	08/1887	0	007	3	04	3	0.19	2	14	7	18	9
OH WAUSEON WATER PLANT	33	8822-01	41-31	84-09	750	01/1870	1	099	2	02/1880	0	010	5	08	7	0.30	5	16	8	06	3
OH WAVERLY	33	8830-09	39-07	82-59	560	06/1883	2	097	4	06/1883	0	004	2	06	5	0.29	5	18	9	14	7
OH WOOSTER EXP STN	33	9312-06	40-47	81-55	1020	01/1864	1	092	6	11/1882	0	003	1	07	6	0.39	8	02	1	12	6

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
OK ADA	34	0017-08	34-47	96-41	1015	02/1907	8	098	3	02/1907	7	014	7	06	5	0.27	4	20	9	18	9
OK ALTUS IRRIGATION RES STN	34	0179-07	34-35	99-20	1380	06/1903	7	086	8	01/1968	9	000	0	00	0	0.00	0	02	1	10	5
OK ANTLERS	34	0256-09	34-15	95-38	520	03/1918	9	091	7	03/1918	8	036	9	10	8	0.19	2	04	2	12	6
OK ARDMORE	34	0292-08	34-12	97-09	860	07/1901	7	098	3	07/1901	5	017	7	09	8	0.18	2	20	9	02	1
OK BARTLESVILLE 2W	34	0548-03	36-45	96-00	715	11/1907	8	096	5	11/1907	7	032	9	08	7	0.23	3	14	7	18	9
OK BEAVER	34	0593-01	36-48	100-32	2475	02/1896	6	094	6	01/1954	9	027	9	05	4	0.18	2	08	4	08	4
OK BOISE CITY 2E	34	0908-01	36-44	102-29	4145	02/1908	8	096	5	02/1908	7	013	6	09	8	0.29	5	16	8	18	9
OK BUFFALO	34	1243-01	36-50	99-37	1795	03/1907	8	090	7	03/1907	7	022	8	08	7	0.25	4	00	0	14	7
OK CARNEGIE 2ENE	34	1504-07	35-07	98-34	1290	05/1914	9	098	3	05/1914	8	030	9	15	9	0.22	3	10	5	18	9
OK CHEROKEE POWER PLANT	34	1724-02	36-46	98-21	1180	07/1915	9	094	6	01/1960	9	005	2	01	0	0.09	0	06	3	00	0
OK CLAREMORE 2ENE	34	1828-03	36-19	95-35	588	05/1900	7	084	8	05/1900	5	036	9	21	9	0.25	4	00	0	08	4
OK DURANT-USDA	34	2678-08	34-01	96-23	660	09/1901	7	097	4	12/1975	9	007	3	01	0	0.03	0	14	7	08	4
OK ENID	34	2912-02	36-25	97-52	1245	02/1894	5	090	7	09/1912	8	013	6	12	9	0.19	2	18	9	18	9
OK ERICK 4E	34	2944-04	35-12	99-48	1985	09/1904	7	094	6	09/1951	9	001	0	01	0	0.00	0	10	5	00	0
OK GEARY	34	3497-04	35-38	98-19	1595	12/1911	9	098	3	12/1911	8	013	6	05	4	0.27	4	20	9	16	8
OK GOODWELL RESEARCH STATION	34	3628-01	36-36	101-37	3310	02/1910	8	097	4	02/1910	7	003	1	04	3	0.36	7	06	3	04	2
OK GUTHRIE	34	3821-05	35-53	97-27	1030	06/1889	4	097	4	01/1912	8	032	9	17	9	0.35	7	14	7	04	2
OK HAMMON 1NNE	34	3871-04	35-38	99-22	1775	08/1913	9	094	6	08/1913	8	012	6	04	3	0.39	8	02	1	16	8
OK HENNESSEY 2SE	34	4055-05	36-05	97-52	1150	04/1895	6	092	6	02/1898	4	027	9	08	7	0.41	8	18	9	10	5
OK HOBART FAA AP	34	4204-07	35-00	99-03	1552	05/1903	7	098	3	01/1917	8	003	1	04	3	0.23	3	10	5	08	4
OK HOLDENVILLE	34	4235-06	35-05	96-24	860	04/1901	7	099	2	04/1901	5	015	7	09	8	0.31	6	08	4	04	2
OK HOOKER	34	4298-01	36-52	101-13	2995	06/1906	8	098	3	06/1906	7	020	8	13	9	0.35	7	06	3	12	6
OK HUGO	34	4384-09	34-00	95-31	570	01/1913	9	097	4	01/1913	8	004	2	05	4	0.28	5	06	3	00	0
OK JEFFERSON	34	4573-02	36-43	97-48	1045	01/1894	5	095	5	02/1898	4	028	9	16	9	0.34	6	06	3	12	6
OK KENTON	34	4766-01	36-54	102-58	4350	11/1900	7	096	5	11/1900	5	017	7	11	8	0.25	4	14	7	06	3
OK KINGFISHER 2SE	34	4861-05	35-51	97-54	1100	04/1897	6	099	2	02/1898	4	010	5	11	8	0.40	8	04	2	00	0
OK LAWTON	34	5063-07	34-37	98-27	1150	07/1912	9	097	4	07/1912	8	015	7	07	6	0.34	6	02	1	04	2
OK MANGUM RESEARCH STATION	34	5509-07	34-50	99-26	1520	02/1892	5	095	5	06/1909	7	014	7	09	8	0.41	8	06	3	06	3
OK MEEKER 4W	34	5779-05	35-30	96-59	925	01/1894	5	093	6	12/1984	9	100	9	00	0	0.11	1	06	3	10	5
OK MIAMI	34	5855-03	36-53	94-53	805	12/1917	9	097	4	12/1917	8	018	8	11	8	0.33	6	08	4	12	6
OK MUSKOGEE	34	6130-06	35-46	95-20	583	04/1899	7	097	4	04/1899	5	026	9	14	9	0.22	3	14	7	14	7
OK MUTUAL	34	6139-02	36-14	99-10	1865	10/1907	8	095	5	01/1956	9	003	1	02	1	0.14	1	14	7	18	9

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	IA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
OK NEWKIRK	34	6278-02	36-53	97-03	1150	09/1897	6	092	6	09/1897	4	019	8	12	9	0.44	8	14	7	14	7
OK OKEENE	34	6629-04	36-07	98-19	1200	05/1903	7	094	6	05/1903	6	016	7	07	6	0.29	5	04	2	04	2
OK OKEMAH	34	6638-05	35-26	96-18	935	05/1912	9	099	2	05/1912	8	014	7	05	4	0.18	2	02	1	06	3
OK OKMULGEE WATERWORKS	34	6670-06	35-37	96-01	647	09/1903	7	095	5	01/1978	9	004	2	00	0	0.01	0	00	0	12	6
OK PAULS VALLEY 3WSW	34	6926-08	34-44	97-16	950	04/1892	5	087	8	04/1896	4	019	8	06	5	0.15	1	16	8	14	7
OK PAWHUSKA	34	6935-03	36-40	96-21	835	01/1898	6	095	5	01/1898	4	023	9	09	8	0.27	4	00	0	08	4
OK PERRY	34	7012-02	36-17	97-18	1025	11/1898	7	093	6	11/1898	4	019	8	12	9	0.28	5	04	2	02	1
OK POTEAU	34	7246-09	35-03	94-38	670	09/1917	9	096	5	09/1917	8	013	6	06	5	0.13	1	12	6	06	3
OK STILLWATER 2W	34	8501-05	36-07	97-05	895	01/1893	5	098	3	01/1965	9	000	0	00	0	0.00	0	20	9	12	6
OK TAHLEQUAH	34	8677-06	35-56	94-58	850	04/1894	5	081	9	08/1979	9	048	9	01	0	0.21	3	06	3	04	2
OK WAURIKA	34	9395-08	34-10	98-00	875	01/1910	8	099	2	01/1910	7	015	7	11	8	0.40	8	06	3	00	0
OK WEATHERFORD	34	9422-04	35-32	98-42	1670	07/1901	7	098	3	01/1913	8	008	4	04	3	0.21	3	10	5	18	9
OK WEBBERS FALLS 5WSW	34	9445-06	35-29	95-12	550	04/1900	7	094	6	04/1900	5	013	6	08	7	0.37	7	08	4	20	9

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
OR ASHLAND	35	0304-03	42-13	122-43	1750	01/1889	3	100	0	01/1918	8	011	5	05	4	0.13	1	20	9	14	7
OR ASTORIA WSO AP	35	0328-01	46-09	123-53	8	01/1867	1	093	6	01/1931	9	006	3	06	5	0.29	5	10	5	10	5
OR BAKER FAA AP	35	0412-08	44-50	117-49	3368	07/1889	4	098	3	01/1912	8	002	1	03	2	0.18	2	20	9	18	9
OR BEND	35	0694-07	44-04	121-19	3650	04/1901	7	099	2	08/1903	6	022	8	11	8	0.36	7	08	4	08	4
OR BROOKINGS	35	1055-01	42-03	124-17	70	01/1913	9	099	2	01/1913	8	007	3	08	7	0.58	9	12	6	18	9
OR CASCADIA	35	1433-02	44-24	122-29	860	01/1919	9	086	8	01/1919	8	030	9	14	9	0.32	6	06	3	00	0
OR CONDON	35	1765-06	45-14	120-11	2830	08/1894	6	086	8	05/1900	5	041	9	18	9	0.40	8	16	8	04	2
OR CORVALLIS STATE UNIV	35	1862-02	44-38	123-12	225	04/1889	3	099	2	04/1889	1	004	2	07	6	0.32	6	00	0	08	4
OR COTTAGE GROVE 1S	35	1897-02	43-47	123-04	650	08/1916	9	099	2	08/1916	8	002	1	01	0	0.00	0	18	9	08	4
OR CRATER LAKE	35	1946-05	42-54	122-08	6475	10/1919	9	088	7	10/1919	8	034	9	08	7	0.60	9	20	9	18	9
OR DANNER	35	2135-09	42-56	117-20	4225	08/1929	9	090	7	08/1929	9	013	6	01	0	0.15	1	14	7	06	3
OR DRAIN	35	2406-03	43-40	123-19	292	01/1903	7	092	6	01/1903	6	008	4	06	5	0.22	3	06	3	04	2
OR DUFUR	35	2440-06	45-27	121-08	1330	06/1910	8	099	2	06/1910	7	005	2	04	3	0.19	2	00	0	12	6
OR FOREST GROVE	35	2997-02	45-32	123-06	180	01/1890	4	092	6	01/1917	8	009	5	05	4	0.22	3	06	3	02	1
OR FREMONT	35	3095-05	43-20	121-10	4512	03/1918	9	091	7	03/1918	8	014	7	02	1	0.23	3	04	2	08	4
OR GRANTS PASS	35	3445-03	42-25	123-20	960	03/1889	3	099	2	03/1889	1	005	2	06	5	0.37	7	04	2	12	6
OR HEADWORKS PORTLAND WTRB	35	3770-02	45-27	122-09	748	01/1901	7	094	6	09/1901	5	009	5	03	2	0.13	1	18	9	18	9
OR HEPPNER	35	3827-06	45-22	119-33	1885	06/1889	4	095	5	01/1912	8	007	3	03	2	0.11	1	08	4	06	3
OR HERMISTON 2S	35	3847-06	45-49	119-17	624	08/1907	8	099	2	08/1907	7	003	1	07	6	0.23	3	12	6	08	4
OR HOOD RIVER EXPERIMENT STN	35	4003-06	45-41	121-31	500	01/1891	4	099	2	01/1913	8	010	5	05	4	0.23	3	02	1	02	1
OR KLAMATH FALLS 2SSW	35	4506-07	42-12	121-47	4098	01/1884	2	091	7	12/1893	3	014	7	10	8	0.41	8	12	6	16	8
OR LAKEVIEW 2NNW	35	4670-07	42-13	120-22	4778	01/1884	2	098	3	01/1913	8	005	2	07	6	0.55	9	00	0	14	7
OR MALHEUR REFUGE HDQ	35	5162-07	43-17	118-50	4109	07/1937	9	096	5	07/1937	9	008	4	02	1	0.12	1	10	5	08	4
OR MCKENZIE BRIDGE RS	35	5362-04	44-11	122-07	1478	02/1902	7	073	9	01/1936	9	010	5	02	1	0.25	4	20	9	06	3
OR MCMINNVILLE	35	5384-02	45-14	123-11	148	01/1888	3	100	0	01/1903	6	018	8	14	9	0.49	9	12	6	06	3
OR MILTON-FREEWATER	35	5593-06	45-57	118-25	970	01/1914	9	100	0	01/1914	8	013	6	06	5	0.23	3	18	9	04	2
OR MORO	35	5734-06	45-29	120-43	1870	01/1898	6	079	9	05/1900	5	020	8	21	9	0.32	6	16	8	14	7
OR NEWPORT	35	6032-01	44-35	124-03	143	11/1891	4	096	5	11/1891	2	018	8	09	8	0.54	9	02	1	10	5
OR NORTH BEND	35	6073-01	43-25	124-15	6	01/1902	7	100	0	01/1902	6	018	8	10	8	0.48	9	12	6	02	1
OR PAISLEY	35	6426-07	42-42	120-32	4360	02/1892	5	077	9	09/1938	9	018	8	03	2	0.18	2	18	9	12	6
OR PILOT ROCK 1SE	35	6634-06	45-29	118-49	1720	03/1909	8	100	0	03/1909	7	022	8	09	8	0.17	2	04	2	12	6
OR PRINEVILLE 4NW	35	6883-07	44-21	120-54	2840	01/1897	6	099	2	09/1927	9	001	0	03	2	0.16	1	08	4	12	6

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	XA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSPULL	R
OR PROSPECT 2SW	35	6907-03	42-44	122-31	2482	10/1905	8	097	4	10/1905	6	009	5	08	7	0.16	1	16	8	10	5
OR RIDDLE	35	7169-03	42-57	123-21	680	12/1891	4	088	7	07/1903	6	026	9	19	9	0.32	6	14	7	20	9
OR ROSEBURG KQEN	35	7331-03	43-12	123-21	465	08/1877	1	099	2	01/1895	3	001	0	06	5	0.29	5	14	7	18	9
OR ROUND GROVE	35	7354-05	42-20	120-53	4888	03/1920	9	094	6	03/1920	9	015	7	02	1	0.20	3	06	3	06	3
OR THREE LYNX	35	8466-04	45-07	122-04	1120	03/1925	9	100	0	03/1925	9	000	0	00	0	0.00	0	10	5	20	9
OR TILLAMOOK 1W	35	8494-01	45-27	123-52	10	01/1889	3	080	9	01/1939	9	012	6	07	6	0.23	3	08	4	14	7
OR UNION EXP STN	35	8746-08	45-13	117-53	2765	10/1911	9	099	2	10/1911	8	001	0	02	1	0.20	3	12	6	06	3
OR VALE	35	8797-09	43-59	117-15	2240	12/1891	4	099	2	01/1908	7	018	8	09	8	0.37	7	04	2	18	9
OR WALLOWA	35	8997-08	45-34	117-32	2923	01/1903	7	100	0	01/1903	6	013	6	12	9	0.37	7	14	7	02	1

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
PA ALLENTOWN WSO AP	36	0106-02	40-39	75-26	387	11/1922	9	098	3	11/1922	9	001	0	02	1	0.09	0	18	9	14	7
PA CHAMBERSBURG 1ESE	36	1354-04	39-56	77-38	640	07/1858	0	067	9	06/1918	8	004	2	04	3	0.12	1	16	8	14	7
PA EISENHOWER NATL HIST SITE	36	2537-04	39-48	77-16	520	01/1839	0	074	9	01/1904	6	006	3	04	3	0.14	1	16	8	02	1
PA ERIE WSO AP	36	2682-10	42-05	80-11	731	06/1873	1	100	0	12/1887	1	008	4	07	6	0.21	3	20	9	02	1
PA FRANKLIN	36	3028-10	41-23	79-49	990	10/1867	1	093	6	01/1898	4	005	2	05	4	0.41	8	02	1	08	4
PA FREELAND	36	3056-01	41-01	75-54	1900	03/1920	9	096	5	03/1920	9	011	5	02	1	0.30	5	16	8	10	5
PA GREENVILLE 2NE	36	3526-10	41-25	80-22	1130	03/1871	1	078	9	08/1887	0	020	8	12	9	0.41	8	14	7	12	6
PA HARRISBURG FAA	36	3699-04	40-13	76-51	338	07/1840	0	088	7	01/1889	1	002	1	04	3	0.22	3	06	3	06	3
PA JOHNSTOWN	36	4385-08	40-20	78-55	1214	01/1868	1	083	8	12/1888	1	009	5	03	2	0.19	2	18	9	14	7
PA MONTROSE	36	5915-06	41-50	75-52	1560	09/1903	7	096	5	09/1903	6	009	5	04	3	0.24	4	06	3	02	1
PA NEW CASTLE 1N	36	6233-09	41-01	80-22	825	01/1866	1	085	8	08/1887	0	014	7	03	2	0.20	3	12	6	20	9
PA PALMERTON	36	6689-02	40-48	75-37	410	05/1917	9	097	4	05/1917	8	007	3	02	1	0.08	0	20	9	04	2
PA READING 3N	36	7322-03	40-22	75-56	270	08/1866	1	089	7	03/1890	2	005	2	04	3	0.19	2	04	2	14	7
PA RIDGWAY	36	7477-07	41-25	78-45	1360	02/1913	9	097	4	02/1913	8	017	7	07	6	0.28	5	10	5	18	9
PA SELINGROVE 2S	36	7931-05	40-46	76-52	420	01/1889	3	098	3	01/1889	1	013	6	12	9	0.41	8	06	3	20	9
PA STATE COLLEGE	36	8449-07	40-48	77-52	1170	09/1882	2	097	4	07/1883	0	007	3	07	6	0.31	6	06	3	12	6
PA STROUDSBURG	36	8596-01	41-00	75-11	480	01/1911	8	089	7	01/1911	7	019	8	08	7	0.25	4	06	3	16	8
PA TOWANDA 1ESE	36	8905-06	41-45	76-25	745	10/1894	6	099	2	10/1894	3	001	0	03	2	0.15	1	06	3	00	0
PA UNIONTOWN 1NE	36	9050-09	39-55	79-43	956	01/1889	3	098	3	01/1889	1	003	1	02	1	0.18	2	10	5	04	2
PA WARREN	36	9298-10	41-51	79-09	1210	07/1896	6	099	2	07/1896	4	015	7	09	8	0.45	8	06	3	10	5
PA WELLSBORO 3S	36	9408-06	41-42	77-16	1860	04/1879	1	098	3	03/1882	0	003	1	05	4	0.30	5	18	9	12	6
PA WEST CHESTER 1W	36	9464-03	39-58	75-38	450	07/1843	0	090	7	01/1855	0	003	1	04	3	0.28	5	14	7	00	0
PA WILLIAMSPORT WSO AP	36	9728-05	41-15	76-55	527	02/1873	1	084	8	07/1888	1	015	7	07	6	0.20	3	10	5	06	3
PA YORK PUMP STATION 3SSW	36	9933-04	39-55	76-45	390	10/1886	3	085	8	06/1888	1	013	6	02	1	0.06	0	20	9	12	6

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
RI BLOCK ISLAND WSO AP	37	0896-01	41-10	71-35	110	09/1880	1	099	2	09/1880	0	005	2	05	4	0.14	1	12	6	04	2
RI KINGSTON	37	4266-01	41-29	71-32	100	07/1889	4	099	2	04/1917	8	003	1	02	1	0.14	1	00	0	08	4
RI PROVIDENCE WSO AP	37	6698-01	41-44	71-26	51	12/1831	0	097	4	01/1835	0	007	3	07	6	0.26	4	10	5	20	9

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSPULL	R
SC AIKEN 4NE	38	0074-05	33-36	81-41	400	01/1856	0	086	8	11/1896	4	017	7	13	9	0.16	1	20	9	04	2
SC ANDERSON	38	0165-02	34-32	82-40	800	06/1884	2	083	8	06/1900	5	009	5	05	4	0.20	3	14	7	08	4
SC BEAUFORT 7SW	38	0559-07	32-23	80-46	20	04/1862	0	078	9	01/1900	5	030	9	19	9	0.44	8	18	9	00	0
SC BLACKVILLE 3W	38	0764-07	33-22	81-19	324	06/1884	2	094	6	12/1894	3	010	5	11	8	0.34	6	10	5	12	6
SC CALHOUN FALLS	38	1277-05	34-05	82-35	530	01/1917	9	097	4	01/1917	8	022	8	09	8	0.20	3	08	4	04	2
SC CAMDEN 3W	38	1310-03	34-15	80-39	140	01/1854	0	058	9	03/1899	5	018	8	05	4	0.44	8	06	3	14	7
SC CHARLESTON	38	1549-07	32-47	79-56	10	01/1823	0	099	2	01/1898	4	000	0	01	0	0.08	0	08	4	04	2
SC CHERAW	38	1588-04	34-42	79-53	140	04/1882	2	096	5	01/1900	5	012	6	06	5	0.30	5	18	9	12	6
SC CLEMSON UNIVERSITY	38	1770-02	34-41	82-49	819	01/1896	6	100	0	01/1896	4	004	2	06	5	0.40	8	08	4	18	9
SC COLUMBIA U OF SC	38	1944-06	33-59	81-01	242	06/1872	1	094	6	01/1906	6	003	1	06	5	0.27	4	00	0	08	4
SC CONWAY	38	1997-04	33-50	79-03	20	02/1888	3	089	7	05/1894	3	012	6	03	2	0.18	2	04	2	12	6
SC DARLINGTON 1N	38	2260-04	34-19	79-53	160	07/1893	5	089	7	02/1895	3	019	8	07	6	0.20	3	14	7	04	2
SC GEORGETOWN 2E	38	3468-04	33-21	79-15	10	08/1893	5	088	7	01/1911	7	027	9	12	9	0.28	5	14	7	14	7
SC GREENVILLE-SPARTANBURG AP	38	3747-02	34-54	82-13	957	04/1884	2	095	5	03/1894	3	022	8	11	8	0.34	6	02	1	18	9
SC GREENWOOD 3NE	38	3754-05	34-13	82-07	615	06/1884	2	095	5	03/1896	4	009	5	12	9	0.36	7	10	5	02	1
SC KERSHAW	38	4690-03	34-33	80-35	530	05/1916	9	094	6	12/1956	9	014	7	03	2	0.12	1	06	3	18	9
SC KINGSTREE 1SE	38	4753-04	33-39	79-49	58	05/1882	2	094	6	05/1893	3	006	3	04	3	0.26	4	20	9	02	1
SC LAURENS	38	5017-02	34-30	82-02	589	09/1901	7	081	9	05/1904	6	023	9	10	8	0.30	5	02	1	10	5
SC LITTLE MOUNTAIN	38	5200-05	34-12	81-25	711	10/1893	5	099	2	01/1907	7	003	1	04	3	0.27	4	16	8	16	8
SC NEWBERRY	38	6209-05	34-17	81-37	476	02/1887	3	098	3	02/1887	0	003	1	05	4	0.32	6	14	7	06	3
SC ORANGEBURG 2	38	6527-06	33-30	80-52	160	10/1916	9	098	3	10/1916	8	002	1	06	5	0.36	7	18	9	12	6
SC SALUDA	38	7631-05	33-59	81-46	480	04/1902	7	092	6	08/1978	9	013	6	01	0	0.04	0	20	9	14	7
SC SANTUCK	38	7722-02	34-38	81-31	520	08/1893	5	098	3	08/1893	3	004	2	06	5	0.32	6	04	2	08	4
SC SUMMERVILLE	38	8426-07	33-00	80-11	60	09/1898	7	098	3	09/1898	4	013	6	09	8	0.16	1	04	2	04	2
SC SUMTER	38	8440-06	33-56	80-21	177	12/1901	7	069	9	12/1901	5	034	9	18	9	0.27	4	08	4	10	5
SC WALHALLA	38	8887-02	34-45	83-05	980	07/1889	4	084	8	02/1892	2	020	8	08	7	0.18	2	20	9	16	8
SC WINNSBORO	38	9327-03	34-22	81-05	560	03/1887	3	090	7	04/1896	4	017	7	08	7	0.25	4	00	0	08	4
SC WINTHROP COLLEGE	38	9350-03	34-56	81-02	690	01/1900	7	100	0	01/1900	5	001	0	03	2	0.33	6	08	4	04	2
SC YEMASSEE	38	9469-07	32-41	80-51	25	04/1882	2	088	7	10/1975	9	073	9	02	1	0.20	3	10	5	04	2

MEAN TEMPERATURE

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SD ABERDEEN WSO AP	39	0020-03	45-27	98-26	1296	03/1890	4	099	2	03/1890	2	018	8	12	9	0.39	8	20	9	06	3
SD ACADEMY	39	0043-08	43-28	99-05	1675	09/1898	7	099	2	09/1898	4	009	5	08	7	0.39	8	00	0	02	1
SD ALEXANDRIA	39	0128-09	43-39	97-47	1350	03/1882	2	092	6	01/1890	1	017	7	08	7	0.28	5	08	4	12	6
SD CANTON 4WNW	39	1392-09	43-18	96-40	1345	08/1889	4	089	7	08/1892	2	023	9	11	8	0.37	7	14	7	04	2
SD CLARK	39	1739-07	44-53	97-44	1780	07/1889	4	092	6	08/1889	1	020	8	10	8	0.27	4	06	3	08	4
SD COTTONWOOD 2E	39	1972-05	43-58	101-52	2414	07/1909	8	096	5	07/1909	7	006	3	02	1	0.29	5	04	2	08	4
SD DUPREE	39	2429-01	45-03	101-36	2365	03/1922	9	099	2	03/1922	9	010	5	04	3	0.15	1	12	6	16	8
SD EUREKA	39	2797-02	45-47	99-38	1870	10/1897	6	087	8	02/1899	5	016	7	10	8	0.25	4	10	5	12	6
SD FAULKTON	39	2927-02	45-02	99-08	1580	01/1892	5	097	4	01/1892	2	017	7	07	6	0.21	3	16	8	10	5
SD FORESTBURG 3NE	39	3029-07	44-02	98-04	1231	05/1891	4	099	2	01/1910	7	000	0	01	0	0.14	1	14	7	10	5
SD GANN VALLEY	39	3217-07	44-02	98-58	1750	01/1889	3	099	2	01/1902	6	008	4	07	6	0.35	7	08	4	20	9
SD HIGHMORE 1W	39	3832-06	44-31	99-28	1890	03/1887	3	092	6	12/1889	1	009	5	01	0	0.10	0	14	7	16	8
SD HOPEWELL 1SE	39	3987-06	44-30	100-52	1922	09/1909	8	086	8	09/1909	7	015	7	03	2	0.19	2	18	9	06	3
SD HOT SPRINGS	39	4007-04	43-26	103-28	3535	01/1897	6	091	7	02/1897	4	021	8	12	9	0.35	7	20	9	02	1
SD HOWARD	39	4037-07	44-01	97-31	1560	08/1890	4	095	5	08/1890	2	026	9	13	9	0.26	4	04	2	00	0
SD KENNEBEC	39	4516-06	43-55	99-52	1700	05/1892	5	096	5	01/1909	7	008	4	08	7	0.38	7	02	1	12	6
SD MELLETTE	39	5456-03	45-09	98-30	1290	05/1892	5	094	6	05/1892	2	021	8	09	8	0.34	6	18	9	12	6
SD MENNO	39	5481-09	43-14	97-35	1324	05/1896	6	097	4	05/1896	4	009	5	10	8	0.49	9	02	1	16	8
SD MILBANK 2SSW	39	5536-03	45-12	96-38	1156	04/1890	4	097	4	04/1890	2	022	8	13	9	0.32	6	00	0	16	8
SD MURDO	39	5891-06	43-53	100-43	2300	02/1908	8	096	5	02/1908	7	013	6	08	7	0.49	9	08	4	02	1
SD PIERRE FAA AP	39	6597-06	44-23	100-17	1726	01/1866	1	098	3	09/1900	5	004	2	06	5	0.25	4	12	6	02	1
SD RAPID CITY	39	6947-05	44-05	103-16	3370	01/1888	3	099	2	01/1898	4	005	2	05	4	0.40	8	04	2	14	7
SD VERMILLION 2SE	39	8622-09	42-45	96-55	1190	01/1884	2	087	8	08/1891	2	012	6	04	3	0.32	6	16	8	04	2
SD WATERTOWN FAA AP	39	8932-07	44-55	97-09	1746	12/1891	4	096	5	12/1891	2	016	7	10	8	0.22	3	00	0	06	3
SD WOOD	39	9442-08	43-30	100-29	2180	03/1913	9	098	3	03/1913	8	003	1	03	2	0.34	6	02	1	14	7

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
TN CLARKSVILLE SEWAGE PLANT	40	1790-03	36-33	87-22	382	01/1854	0	093	6	01/1889	1	006	3	04	3	0.28	5	16	8	06	3
TN COPPERHILL	40	2024-01	35-00	84-23	1535	04/1914	9	098	3	04/1914	8	015	7	05	4	0.20	3	20	9	10	5
TN COVINGTON 1W	40	2108-04	35-34	89-40	310	03/1883	2	097	4	01/1902	6	000	0	03	2	0.20	3	20	9	14	7
TN CROSSVILLE EXPERIMENT STN	40	2202-02	36-01	85-08	1810	03/1912	9	097	4	03/1912	8	030	9	14	9	0.32	6	18	9	20	9
TN DICKSON	40	2489-03	36-04	87-23	780	05/1885	2	084	8	09/1892	2	027	9	11	8	0.28	5	06	3	04	2
TN DOVER 1W	40	2589-03	36-29	87-51	475	01/1898	6	096	5	01/1898	4	009	5	05	4	0.16	1	18	9	14	7
TN JACKSON EXPERIMENT STN	40	4561-04	35-37	88-50	400	04/1891	4	097	4	04/1891	2	003	1	04	3	0.23	3	18	9	06	3
TN LEWISBURG EXPERIMENT STN	40	5187-03	35-27	86-48	787	06/1888	3	092	6	09/1896	4	003	1	04	3	0.20	3	20	9	20	9
TN MCMINNVILLE	40	5882-02	35-41	85-48	940	08/1872	1	089	7	09/1901	5	005	2	07	6	0.24	4	06	3	00	0
TN MURFREESBORO 5N	40	6371-03	35-55	86-22	550	03/1883	2	099	2	03/1883	0	008	4	08	7	0.23	3	02	1	16	8
TN NEWPORT 1NW	40	6534-01	35-59	83-12	1036	03/1888	3	096	5	04/1891	2	006	3	05	4	0.45	8	02	1	12	6
TN ROGERSVILLE 1NE	40	7884-01	36-25	82-59	1355	05/1883	2	097	4	01/1973	9	000	0	00	0	0.00	0	14	7	12	6
TN TULLAHOMA	40	9155-02	35-21	86-12	1048	04/1889	3	094	6	09/1890	2	008	4	07	6	0.25	4	16	8	16	8
TN UNION CITY	40	9219-04	36-25	89-04	335	04/1884	2	086	8	06/1912	8	017	7	10	8	0.41	8	04	2	12	6
TN WAYNESBORO	40	9502-03	35-18	87-46	750	10/1884	2	096	5	10/1884	0	015	7	12	9	0.31	6	06	3	04	2

MEAN TEMPERATURE

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TX ALBANY	41	0120-03	32-44	99-17	1440	05/1892	5	094	6	05/1892	2	015	7	10	8	0.58	9	04	2	14	7
TX ALICE	41	0144-09	27-44	98-04	201	01/1893	5	079	9	01/1893	3	026	9	07	6	0.40	8	06	3	02	1
TX ALPINE	41	0174-05	30-22	103-40	4480	03/1900	7	064	9	03/1908	7	036	9	20	9	0.63	9	12	6	20	9
TX BALLINGER 1SW	41	0493-02	31-44	99-58	1575	08/1895	6	097	4	08/1895	4	004	2	03	2	0.33	6	02	1	12	6
TX BALMORHEA	41	0498-05	30-59	103-45	3220	09/1923	9	096	5	09/1923	9	006	3	04	3	0.41	8	08	4	12	6
TX BEEVILLE 5NE	41	0639-07	28-27	97-42	255	08/1895	6	099	2	08/1895	4	005	2	04	3	0.39	8	16	8	10	5
TX BLANCO	41	0832-06	30-06	98-25	1370	10/1896	6	094	6	01/1975	9	000	0	00	0	0.00	0	14	7	02	1
TX BOERNE	41	0902-06	29-48	98-43	1422	02/1878	1	088	7	12/1888	1	020	8	13	9	0.39	8	16	8	04	2
TX BRENHAM	41	1048-07	30-09	96-24	353	08/1885	2	097	4	12/1888	1	005	2	02	1	0.24	4	16	8	20	9
TX BROWNWOOD	41	1138-03	31-43	99-00	1385	01/1889	3	093	6	01/1889	1	017	7	08	7	0.53	9	16	8	18	9
TX CLARKSVILLE 2NE	41	1772-04	33-38	95-02	435	06/1870	1	070	9	09/1893	3	024	9	07	6	0.38	7	18	9	20	9
TX CORPUS CHRISTI WSO AP	41	2015-07	27-46	97-30	41	02/1887	3	100	0	02/1887	0	002	1	06	5	0.42	8	20	9	18	9
TX CORSICANA	41	2019-03	32-05	96-28	425	10/1874	1	095	5	01/1889	1	006	3	05	4	0.44	8	02	1	00	0
TX CROSBYTON	41	2121-01	33-39	101-15	3010	01/1886	2	096	5	01/1900	5	007	3	06	5	0.52	9	20	9	18	9
TX DANEVANG 1W	41	2266-08	29-03	96-14	70	02/1896	6	098	3	02/1896	4	009	5	06	5	0.35	7	18	9	20	9
TX DILLEY	41	2458-09	28-40	99-10	582	05/1916	9	099	2	05/1916	8	003	1	04	3	0.35	7	14	7	04	2
TX DUBLIN	41	2598-03	32-06	98-20	1502	09/1895	6	092	6	09/1895	4	011	5	07	6	0.38	7	12	6	08	4
TX EAGLE PASS	41	2679-09	28-42	100-29	805	10/1849	0	083	8	02/1899	5	004	2	04	3	0.48	9	04	2	04	2
TX EL PASO WSO AP	41	2797-05	31-48	106-24	3918	05/1878	1	100	0	01/1895	3	007	3	09	8	0.55	9	02	1	12	6
TX ENCINAL	41	2906-09	28-02	99-22	588	02/1908	8	095	5	02/1908	7	024	9	08	7	0.33	6	18	9	04	2
TX FALFURRIAS	41	3063-09	27-14	98-08	120	04/1907	8	097	4	12/1975	9	010	5	02	1	0.03	0	20	9	00	0
TX FLATONIA	41	3183-07	29-40	97-07	520	01/1908	8	099	2	01/1908	7	008	4	08	7	0.47	9	02	1	14	7
TX FORT STOCKTON	41	3280-05	30-53	102-52	2980	07/1859	0	077	9	01/1905	6	008	4	04	3	0.28	5	02	1	04	2
TX GAINESVILLE	41	3415-03	33-38	97-08	760	02/1889	3	096	5	03/1890	2	014	7	06	5	0.36	7	06	3	14	7
TX GREENVILLE	41	3734-03	33-12	96-13	610	03/1900	7	098	3	03/1900	5	007	3	06	5	0.23	3	16	8	14	7
TX HALLETTSVILLE 3S	41	3873-07	29-24	96-57	261	10/1891	4	097	4	10/1891	2	019	8	07	6	0.41	8	08	4	14	7
TX HASKELL	41	3992-02	33-10	99-44	1605	04/1890	4	091	7	01/1957	9	002	1	00	0	0.00	0	12	6	02	1
TX LAMPASAS	41	5018-06	31-03	98-11	1024	04/1888	3	096	5	02/1890	1	010	5	06	5	0.28	5	06	3	02	1
TX LIBERTY	41	5196-08	30-03	94-48	35	05/1904	7	097	4	05/1904	6	014	7	09	8	0.41	8	00	0	16	8
TX LLANO	41	5272-06	30-45	98-41	1040	08/1891	4	095	5	08/1891	2	007	3	06	5	0.43	8	02	1	12	6
TX LULING	41	5429-07	29-40	97-39	398	04/1882	2	096	5	12/1888	1	007	3	08	7	0.34	6	04	2	14	7
TX MARSHALL	41	5618-04	32-32	94-21	352	07/1892	5	086	8	07/1892	2	021	8	07	6	0.36	7	16	8	20	9

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STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
TX MCCAMEY	41	5707-06	31-08	102-12	2450	02/1932	9	099	2	02/1932	9	009	5	03	2	0.09	0	06	3	08	4
TX MEXIA	41	5869-03	31-41	96-29	535	05/1888	3	083	8	03/1890	2	016	7	06	5	0.28	5	04	2	10	5
TX MIAMI	41	5875-01	35-42	100-38	2755	06/1905	8	096	5	06/1905	6	020	8	11	8	0.46	9	02	1	04	2
TX MULESHOE 1	41	6135-01	34-14	102-45	3760	07/1927	9	099	2	07/1927	9	009	5	05	4	0.16	1	18	9	12	6
TX NEW BRAUNFELS	41	6276-07	29-44	98-07	710	01/1854	0	076	9	12/1888	1	005	2	05	4	0.60	9	10	5	12	6
TX PECOS	41	6892-05	31-25	103-30	2610	03/1889	3	056	9	03/1908	7	038	9	14	9	0.29	5	04	2	16	8
TX PLAINVIEW	41	7079-01	34-11	101-42	3370	09/1889	4	093	6	01/1915	8	015	7	09	8	0.40	8	04	2	14	7
TX QUANAH 5SE	41	7336-02	34-15	99-41	1495	09/1891	4	085	8	11/1900	5	013	6	05	4	0.28	5	04	2	12	6
TX RIO GRANDE CITY 3W	41	7622-09	26-23	98-52	176	10/1849	0	070	9	01/1963	9	002	1	00	0	0.00	0	00	0	12	6
TX SAN ANTONIO WSFO	41	7945-07	29-32	98-28	788	01/1846	0	084	8	01/1893	3	005	2	09	8	0.45	8	10	5	02	1
TX SEMINOLE	41	8201-01	32-43	102-40	3340	08/1922	9	091	7	12/1963	9	005	2	02	1	0.07	0	04	2	12	6
TX SYNDER	41	8433-02	32-43	100-55	2335	02/1889	3	075	9	08/1895	4	025	9	06	5	0.67	9	10	5	02	1
TX STRATFORD	41	8692-01	36-21	102-05	3693	07/1911	9	068	9	07/1911	7	056	9	24	9	0.36	7	02	1	18	9
TX TEMPLE	41	8910-03	31-05	97-22	700	04/1882	2	093	6	02/1890	1	018	8	12	9	0.37	7	16	8	02	1
TX VEGA	41	9330-01	35-15	102-25	4010	04/1923	9	098	3	04/1923	9	015	7	06	5	0.28	5	12	6	06	3
TX WEATHERFORD	41	9532-03	32-46	97-49	1065	05/1882	2	092	6	03/1890	2	004	2	03	2	0.37	7	08	4	18	9

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STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
UT ALTON	42	0086-04	37-26	112-29	7040	01/1915	9	100	0	01/1915	8	004	2	06	5	0.39	8	04	2	10	5
UT BEAVER	42	0519-04	38-17	112-38	5940	01/1893	5	085	8	01/1937	9	012	6	07	6	0.35	7	12	6	06	3
UT BLANDING	42	0738-07	37-37	109-28	6130	12/1904	8	096	5	01/1929	9	000	0	02	1	0.23	3	04	2	12	6
UT BLUFF	42	0788-07	37-17	109-33	4315	07/1911	9	089	7	07/1911	7	024	9	09	8	0.26	4	16	8	18	9
UT CORINNE	42	1731-03	41-35	112-08	4240	02/1870	1	099	2	01/1898	4	033	9	17	9	0.59	9	02	1	08	4
UT DESERET	42	2101-01	39-17	112-39	4585	08/1891	4	095	5	01/1893	3	008	4	05	4	0.43	8	16	8	06	3
UT DUCHESNE	42	2253-06	40-10	110-24	5510	01/1906	8	099	2	01/1906	6	016	7	12	9	0.81	9	06	3	06	3
UT ELBERTA	42	2418-03	39-57	111-57	4690	01/1902	7	100	0	01/1902	6	004	2	06	5	0.30	5	04	2	10	5
UT ESCALANTE	42	2592-04	37-46	111-36	5810	08/1901	7	088	7	06/1920	9	009	5	03	2	0.31	6	12	6	16	8
UT FILLMORE	42	2828-04	38-57	112-19	5120	04/1892	5	100	0	04/1892	2	004	2	04	3	0.37	7	14	7	16	8
UT FORT DUCHESNE	42	2996-06	40-17	109-52	5050	12/1887	3	098	3	01/1893	3	013	6	09	8	1.42	9	16	8	12	6
UT GREEN RIVER AVIATION	42	3418-07	39-00	110-10	4070	03/1893	5	088	7	12/1918	8	029	9	09	8	0.70	9	16	8	10	5
UT HANKSVILLE	42	3611-07	38-22	110-43	4308	12/1910	8	098	3	12/1910	7	013	6	06	5	0.35	7	18	9	20	9
UT HEBER	42	3809-05	40-30	111-25	5630	01/1893	5	100	0	01/1893	3	000	0	04	3	0.46	9	04	2	04	2
UT HIAWATHA	42	3896-05	39-29	111-01	7280	09/1921	9	095	5	09/1921	9	023	9	07	6	0.63	9	14	7	16	8
UT KANAB	42	4508-04	37-03	112-32	4950	10/1902	7	091	7	06/1908	7	034	9	13	9	0.30	5	00	0	00	0
UT LAKETOWN	42	4856-05	41-49	111-19	5980	11/1900	7	099	2	11/1900	5	007	3	04	3	0.28	5	02	1	06	3
UT LEVAN	42	5065-04	39-33	111-52	5315	01/1890	4	100	0	11/1892	3	008	4	06	5	0.38	7	08	4	16	8
UT LOA	42	5148-04	38-24	111-39	7080	01/1892	5	084	8	01/1922	9	010	5	04	3	0.51	9	08	4	10	5
UT LOGAN USU	42	5186-03	41-45	111-48	4790	09/1890	4	098	3	10/1890	2	012	6	10	8	0.54	9	04	2	10	5
UT MANTI	42	5402-04	39-15	111-38	5740	05/1892	5	098	3	12/1907	7	002	1	04	3	0.37	7	10	5	00	0
UT MOAB 4NW	42	5733-07	38-36	109-36	3965	10/1889	4	099	2	10/1889	1	012	6	11	8	0.48	9	04	2	14	7
UT MODENA	42	5752-01	37-48	113-55	5480	01/1901	7	099	2	01/1901	5	009	5	04	3	0.17	2	02	1	02	1
UT MORGAN	42	5826-05	41-02	111-41	5060	02/1903	7	100	0	02/1903	6	013	6	08	7	0.56	9	04	2	10	5
UT OGDEN PIONEER P H	42	6404-03	41-15	111-57	4350	02/1870	1	098	3	01/1903	6	018	8	06	5	0.16	1	16	8	16	8
UT PANGUITCH	42	6601-04	37-49	112-27	6720	12/1911	9	090	7	12/1911	8	043	9	17	9	0.36	7	04	2	06	3
UT PAROWAN POWER PLANT	42	6686-04	37-50	112-50	6000	09/1890	4	099	2	01/1908	7	021	8	11	8	0.31	6	20	9	12	6
UT RICHFIELD RADIO K SVC	42	7260-04	38-46	112-05	5270	08/1889	4	089	7	05/1905	6	037	9	11	8	0.33	6	16	8	04	2
UT RIVERDALE	42	7318-03	41-09	112-00	4400	01/1914	9	100	0	01/1914	8	005	2	04	3	0.35	7	14	7	10	5
UT SAINT GEORGE	42	7516-02	37-09	113-35	2760	06/1889	4	099	2	12/1915	8	016	7	11	8	0.46	9	18	9	10	5
UT SCIPIO	42	7714-04	39-15	112-06	5300	01/1895	6	100	0	09/1924	9	000	0	01	0	0.00	0	02	1	08	4
UT SNAKE CREEK PH	42	7909-05	40-33	111-30	6000	01/1914	9	100	0	01/1914	8	004	2	02	1	0.11	1	20	9	14	7

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UT SPANISH FORK PH	42	8119-03	40-05	111-36	4720	07/1909	8	099	2	07/1909	7	003	1	06	5	0.25	4	00	0	20	9
UT THOMPSON	42	8705-07	38-58	109-43	5100	05/1911	8	095	5	05/1911	7	009	5	00	0	0.02	0	02	1	02	1
UT TOOEELE	42	8771-03	40-32	112-18	5070	01/1896	6	100	0	01/1896	4	008	4	06	5	0.19	2	14	7	04	2
UT UTAH LAKE LEHI	42	8973-03	40-22	111-54	4497	01/1905	8	094	6	01/1905	6	013	6	02	1	0.15	1	02	1	12	6
UT VERNAL AP	42	9111-06	40-27	109-31	5280	01/1915	9	098	3	01/1915	8	018	8	06	5	0.85	9	10	5	04	2
UT WENDOVER AUTOB	42	9382-01	40-44	114-02	4237	01/1911	8	100	0	01/1911	7	001	0	07	6	0.51	9	02	1	20	9
UT WOODRUFF	42	9595-05	41-32	111-09	6315	01/1897	6	087	8	01/1924	9	002	1	00	0	0.01	0	16	8	02	1
UT ZION NATIONAL PARK	42	9717-02	37-13	112-59	4050	01/1904	7	093	6	12/1924	9	008	4	05	4	0.24	4	14	7	16	8

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VT BURLINGTON AP	43	1081-02	44-28	73-09	332	01/1828	0	090	7	01/1879	0	002	1	05	4	0.42	8	16	8	20	9
VT CAVENDISH	43	1243-03	43-23	72-36	800	03/1903	7	098	3	03/1903	6	006	3	01	0	0.04	0	14	7	12	6
VT CHELSEA	43	1360-01	43-59	72-27	800	03/1885	2	095	5	06/1893	3	012	6	07	6	0.37	7	14	7	14	7
VT CORNWALL	43	1580-02	43-57	73-13	490	01/1894	5	097	4	01/1894	3	009	5	04	3	0.24	4	02	1	08	4
VT ENOSBURG FALLS	43	2769-01	44-55	72-49	422	06/1891	4	093	6	06/1891	2	011	5	03	2	0.32	6	08	4	08	4
VT NORTHFIELD 3SSE	43	5740-01	44-06	72-37	1410	03/1887	3	096	5	03/1887	0	015	7	08	7	0.29	5	06	3	10	5
VT SAINT JOHNSBURY	43	7054-01	44-25	72-01	699	01/1853	0	074	9	03/1885	0	011	5	03	2	0.07	0	08	4	04	2

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VA BLACKSBURG 3SE	44	0766-06	37-11	80-25	2000	04/1891	4	099	2	04/1891	2	006	3	04	3	0.28	5	16	8	04	2
VA BURKES GARDEN	44	1209-06	37-05	81-20	3300	04/1896	6	099	2	04/1896	4	005	2	05	4	0.28	5	04	2	06	3
VA CHARLOTTESVILLE	44	1593-03	38-02	78-31	870	07/1837	0	064	9	06/1897	4	003	1	01	0	0.01	0	14	7	06	3
VA COLUMBIA 2SSE	44	1929-02	37-44	78-09	290	12/1898	7	096	5	12/1898	5	008	4	05	4	0.15	1	10	5	04	2
VA CULPEPER	44	2155-04	38-28	78-00	420	08/1907	8	097	4	08/1907	7	009	5	04	3	0.19	2	06	3	16	8
VA DALE ENTERPRISE	44	2208-05	38-27	78-56	1400	01/1880	1	099	2	12/1883	0	005	2	04	3	0.27	4	16	8	06	3
VA DANVILLE BRIDGE ST	44	2245-03	36-35	79-23	410	04/1916	9	099	2	04/1916	8	001	0	04	3	0.23	3	02	1	14	7
VA FARMVILLE 2N	44	2941-02	37-20	78-23	450	03/1897	6	070	9	02/1899	5	038	9	11	8	0.25	4	10	5	00	0
VA FREDERICKSBURG NATIONAL PARK	44	3192-01	38-19	77-27	90	05/1893	5	097	4	05/1893	3	013	6	10	8	0.45	8	10	5	04	2
VA HOPEWELL	44	4101-01	37-18	77-18	40	10/1916	9	096	5	10/1916	8	006	3	04	3	0.24	4	06	3	04	2
VA HOT SPRINGS	44	4128-05	38-00	79-50	2238	03/1892	5	097	4	03/1892	2	013	6	06	5	0.34	6	04	2	12	6
VA LEXINGTON	44	4876-05	37-47	79-26	1060	01/1861	0	087	8	05/1889	1	011	5	07	6	0.40	8	12	6	16	8
VA LINCOLN	44	4909-04	39-07	77-43	500	10/1900	7	096	5	10/1900	5	004	2	02	1	0.14	1	08	4	08	4
VA NORFOLK WSO AP	44	6139-01	36-54	76-12	24	01/1871	1	081	9	01/1910	7	002	1	02	1	0.17	2	00	0	08	4
VA PENNINGTON GAP	44	6626-06	36-45	83-03	1510	07/1931	9	098	3	07/1931	9	001	0	01	0	0.11	1	12	6	04	2
VA ROCKY MOUNT	44	7338-03	37-00	79-54	1232	05/1894	5	092	6	10/1961	9	001	0	01	0	0.00	0	12	6	10	5
VA STAUNTON SEWAGE PLANT	44	8062-05	38-09	79-02	1385	09/1868	1	081	9	12/1891	2	020	8	12	9	0.33	6	16	8	08	4
VA WILLIAMSBURG 2N	44	9151-01	37-18	76-42	70	11/1900	7	094	6	11/1900	5	015	7	05	4	0.20	3	14	7	06	3
VA WOODSTOCK 2NE	44	9263-04	38-54	78-28	660	01/1897	6	098	3	01/1897	4	015	7	07	6	0.45	8	12	6	04	2

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WA ABERDEEN	45	0008-01	46-58	123-49	10	01/1891	4	099	2	11/1895	4	016	7	12	9	0.23	3	14	7	16	8
WA BELLINGHAM 2N	45	0564-03	48-47	122-29	140	01/1857	0	072	9	02/1890	1	007	3	07	6	0.32	6	10	5	16	8
WA BLAINE	45	0729-03	49-00	122-45	60	08/1893	5	094	6	09/1896	4	017	7	13	9	0.42	8	02	1	10	5
WA BUCKLEY 1NE	45	0945-04	47-10	122-00	685	01/1913	9	100	0	01/1913	8	000	0	03	2	0.22	3	04	2	16	8
WA CEDAR LAKE	45	1233-05	47-25	121-44	1560	07/1909	8	098	3	07/1909	7	009	5	02	1	0.19	2	16	8	06	3
WA CENTRALIA	45	1276-03	46-43	122-57	185	01/1893	5	090	7	06/1897	4	008	4	08	7	0.24	4	06	3	08	4
WA CLEARBROOK	45	1484-03	48-58	122-20	64	03/1903	7	098	3	03/1903	6	008	4	03	2	0.17	2	02	1	14	7
WA CLE ELUM	45	1504-06	47-11	120-57	1930	01/1899	7	100	0	01/1899	5	016	7	13	9	0.56	9	18	9	02	1
WA COLFAX 1NW	45	1586-10	46-53	117-23	1955	01/1892	5	100	0	01/1900	5	016	7	10	8	0.39	8	00	0	18	9
WA COLVILLE AP	45	1650-09	48-33	117-53	1885	12/1859	0	082	8	09/1897	4	009	5	07	6	0.29	5	12	6	04	2
WA CONCONULLY	45	1666-07	48-33	119-45	2320	08/1894	6	094	6	01/1905	6	014	7	10	8	0.49	9	00	0	20	9
WA DAVENPORT	45	2007-07	47-39	118-08	2440	03/1893	5	084	8	02/1900	5	017	7	09	8	0.33	6	18	9	14	7
WA DAYTON 1WSW	45	2030-10	46-19	118-00	1557	07/1891	4	094	6	06/1899	5	015	7	07	6	0.18	2	10	5	14	7
WA ELLENSBURG	45	2505-08	46-58	120-33	1480	02/1884	2	093	6	01/1901	5	014	7	09	8	0.42	8	02	1	00	0
WA EVERETT	45	2675-03	47-59	122-11	60	09/1894	6	078	9	09/1896	4	034	9	13	9	0.34	6	04	2	02	1
WA FORKS 1E	45	2914-01	47-57	124-22	350	02/1908	8	094	6	02/1908	7	014	7	08	7	0.28	5	20	9	12	6
WA GOLDENDALE 2E	45	3226-08	45-49	120-46	1800	11/1905	8	097	4	11/1905	6	015	7	08	7	0.34	6	12	6	14	7
WA GRAPEVIEW 3SW	45	3284-04	47-18	122-52	30	10/1907	8	098	3	10/1907	7	003	1	03	2	0.14	1	14	7	20	9
WA KENNEWICK	45	4154-08	46-13	119-06	390	12/1884	2	088	7	07/1904	6	012	6	10	8	0.36	7	14	7	18	9
WA LAURIER	45	4549-09	49-00	118-14	1644	01/1910	8	100	0	01/1910	7	002	1	01	0	0.00	0	18	9	18	9
WA LONG BEACH EXP STN	45	4748-01	46-22	124-02	25	09/1883	2	096	5	12/1899	5	006	3	02	1	0.24	4	08	4	00	0
WA LONGMIRE RAINIER NPS	45	4764-05	46-45	121-49	2762	01/1909	8	094	6	01/1909	7	014	7	03	2	0.17	2	16	8	06	3
WA LONGVIEW	45	4769-04	46-09	122-55	12	01/1925	9	099	2	01/1925	9	006	3	05	4	0.06	0	04	2	06	3
WA ODESSA	45	6039-07	47-20	118-41	1540	01/1903	7	100	0	01/1903	6	015	7	07	6	0.32	6	20	9	14	7
WA OLGA 3E	45	6096-00	48-37	122-48	80	02/1890	4	100	0	02/1890	1	001	0	01	0	0.09	0	18	9	14	7
WA POMEROY	45	6610-10	46-28	117-37	1810	01/1891	4	100	0	01/1905	6	010	5	09	8	0.31	6	04	2	10	5
WA PORT ANGELES	45	6624-02	48-07	123-24	40	10/1891	4	098	3	12/1894	3	010	5	08	7	0.16	1	08	4	02	1
WA PORT TOWNSEND	45	6678-02	48-07	122-45	100	01/1859	0	087	8	01/1898	4	007	3	08	7	0.32	6	06	3	06	3
WA PULLMAN 2NW	45	6789-10	46-46	117-12	2545	01/1893	5	097	4	01/1911	7	005	2	04	3	0.23	3	08	4	08	4
WA PUYALLUP EXPERIMENT STN 2W	45	6803-03	47-12	122-20	50	01/1914	9	100	0	01/1914	8	000	0	02	1	0.17	2	10	5	20	9
WA RAYMOND 2S	45	6914-01	46-39	123-43	30	03/1895	6	096	5	03/1895	3	012	6	08	7	0.34	6	18	9	14	7
WA RITZVILLE 1SSE	45	7059-08	47-07	118-22	1830	01/1916	9	100	0	01/1916	8	001	0	02	1	0.19	2	12	6	04	2

MEAN TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
WA SEATTLE NMFC	45	7458-03	47-39	122-18	19	01/1909	8	099	2	01/1909	7	006	3	06	5	0.33	6	08	4	08	4
WA SEDRO WOOLLEY	45	7507-03	48-30	122-14	60	08/1896	6	099	2	08/1896	4	005	2	04	3	0.21	3	04	2	14	7
WA SNOQUALMIE FALLS	45	7773-04	47-33	120-51	440	01/1899	7	100	0	01/1899	5	003	1	03	2	0.16	1	14	7	06	3
WA SPOKANE WSO AP	45	7938-09	47-38	117-32	2356	02/1881	1	100	0	01/1903	6	001	0	05	4	0.39	8	02	1	06	3
WA STEHEKIN 4NW	45	8059-06	48-21	120-43	1270	02/1906	8	087	8	02/1906	6	019	8	04	3	0.38	7	14	7	10	5
WA SUNNYSIDE	45	8207-08	46-19	120-00	747	01/1894	5	100	0	01/1894	3	009	5	05	4	0.25	4	08	4	20	9
WA VANCOUVER 4NNE	45	8773-04	45-41	122-39	210	12/1849	0	081	9	01/1896	4	001	0	02	1	0.17	2	20	9	04	2
WA WALLA WALLA WSO CITY	45	8931-08	46-02	118-20	949	01/1872	1	100	0	01/1915	8	000	0	01	0	0.13	1	00	0	08	4
WA WATERVILLE	45	9012-07	47-39	120-04	2620	01/1890	4	100	0	01/1908	7	017	7	09	8	0.38	7	12	6	10	5
WA WENATCHEE	45	9074-08	47-25	120-19	640	01/1912	9	100	0	01/1912	8	021	8	09	8	0.29	5	02	1	10	5
WA WILBUR	45	9238-07	47-45	118-40	2230	04/1892	5	092	6	01/1899	5	020	8	12	9	0.44	8	06	3	00	0
WA WINTHROP 1WSW	45	9376-06	48-28	120-11	1755	02/1906	8	095	5	02/1906	6	007	3	04	3	0.24	4	12	6	20	9

MEAN TEMPERATURE

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WV BENS RUN 1SSE	46	0687-01	39-28	81-06	644	10/1900	7	096	5	10/1900	5	005	2	03	2	0.19	2	16	8	14	7
WV BUCKHANNON 2W	46	1220-02	39-00	80-16	1445	10/1891	4	094	6	09/1893	3	007	3	03	2	0.11	1	02	1	08	4
WV GARY	46	3353-05	37-22	81-33	1426	02/1920	9	099	2	02/1920	9	001	0	01	0	0.12	1	00	0	04	2
WV GLENVILLE 1ENE	46	3544-02	38-56	80-49	720	01/1893	5	098	3	01/1893	3	010	5	09	8	0.40	8	04	2	14	7
WV LEWISBURG 2SSW	46	5224-05	37-46	80-28	2185	01/1854	0	066	9	01/1901	5	023	9	07	6	0.32	6	04	2	10	5
WV MANNINGTON 7WNW	46	5626-02	39-32	80-30	1100	03/1901	7	096	5	03/1901	5	013	6	05	4	0.02	0	02	1	04	2
WV MARTINSBURG FAA AIRPORT	46	5707-06	39-24	77-59	531	11/1891	4	098	3	11/1891	2	006	3	04	3	0.14	1	18	9	16	8
WV PARSONS 1SE	46	6867-04	39-06	79-40	1680	01/1899	7	093	6	01/1899	5	010	5	07	6	0.35	7	10	5	16	8
WV PICKENS 1	46	6991-04	38-40	80-13	2770	04/1902	7	096	5	04/1902	6	013	6	06	5	0.49	9	08	4	20	9
WV SPENCER 1SE	46	8384-03	38-48	81-21	740	02/1892	5	089	7	02/1892	2	021	8	07	6	0.34	6	14	7	04	2
WV WELLSBURG WATER TRMT PLANT	46	9368-01	40-17	80-37	660	10/1899	7	098	3	10/1899	5	002	1	03	2	0.24	4	20	9	14	7
WV WILLIAMSON	46	9605-03	37-40	82-17	673	09/1900	7	096	5	09/1900	5	011	5	02	1	0.14	1	10	5	14	7
WV WINFIELD LOCK & DAM	46	9683-03	38-32	81-55	571	10/1900	7	094	6	10/1900	5	008	4	04	3	0.19	2	06	3	08	4

MEAN TEMPERATURE

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WI ANTIGO 1SSW	47	0239-03	45-08	89-09	1450	05/1894	5	096	5	05/1894	3	008	4	03	2	0.21	3	04	2	10	5
WI ASHLAND EXPERIMENT FARM	47	0349-01	46-34	90-58	650	03/1893	5	087	8	03/1893	3	022	8	14	9	0.22	3	02	1	02	1
WI BRODHEAD	47	1078-08	42-37	89-23	790	11/1897	6	098	3	11/1897	4	004	2	05	4	0.33	6	08	4	18	9
WI DARLINGTON	47	2001-07	42-41	90-07	930	03/1901	7	093	6	03/1901	5	020	8	06	5	0.22	3	04	2	08	4
WI FOND DU LAC	47	2839-06	43-48	88-27	760	01/1888	3	098	3	01/1888	1	003	1	07	6	0.33	6	08	4	06	3
WI HANCOCK EXPERIMENT FARM	47	3405-05	44-07	89-32	1076	11/1902	7	097	4	11/1902	6	006	3	06	5	0.36	7	00	0	16	8
WI HATFIELD HYDRO PLANT	47	3471-04	44-24	90-44	953	09/1908	8	097	4	09/1908	7	004	2	02	1	0.21	3	20	9	08	4
WI LANCASTER 4WSW	47	4546-07	42-50	90-47	1042	01/1888	3	091	7	01/1891	2	009	5	06	5	0.33	6	14	7	20	9
WI MANITOWOC	47	5017-06	44-06	87-41	660	10/1851	0	089	7	01/1888	1	004	2	05	4	0.27	4	12	6	06	3
WI MARSHFIELD EXPERIMENT FARM	47	5120-05	44-39	90-08	1250	01/1913	9	100	0	01/1913	8	000	0	03	2	0.23	3	18	9	06	3
WI MEDFORD	47	5255-02	45-08	90-21	1470	10/1890	4	099	2	10/1890	2	019	8	09	8	0.32	6	10	5	20	9
WI MINOCQUA DAM	47	5516-02	45-53	89-44	1580	09/1903	7	096	5	09/1903	6	009	5	02	1	0.17	2	08	4	14	7
WI NEW LONDON	47	5932-05	44-23	88-44	760	10/1856	0	070	9	11/1889	1	008	4	07	6	0.32	6	14	7	04	2
WI OCONTO 4W	47	6208-03	44-54	87-57	660	12/1890	4	097	4	12/1890	2	016	7	12	9	0.37	7	10	5	08	4
WI OSHKOSH	47	6330-06	44-02	88-33	750	09/1888	3	096	5	09/1895	4	008	4	04	3	0.18	2	04	2	10	5
WI PORTAGE	47	6718-08	43-32	89-26	800	12/1890	4	093	6	03/1898	4	005	2	04	3	0.20	3	12	6	08	4
WI PRAIRIE DU CHIEN	47	6827-07	43-02	91-09	658	01/1822	0	069	9	01/1900	5	006	3	03	2	0.17	2	00	0	14	7
WI RACINE	47	6922-09	42-42	87-46	595	11/1855	0	070	9	06/1887	0	027	9	14	9	0.42	8	06	3	18	9
WI SPOONER EXPERIMENT FARM	47	8027-01	45-49	91-53	1100	08/1894	6	096	5	08/1894	3	003	1	03	2	0.21	3	04	2	10	5
WI STANLEY	47	8110-01	44-58	90-56	1120	09/1903	7	095	5	09/1903	6	012	6	09	8	0.33	6	08	4	06	3
WI VIROQUA 2NW	47	8827-07	43-34	90-54	1200	03/1889	3	095	5	03/1889	1	020	8	07	6	0.26	4	20	9	06	3
WI WATERTOWN	47	8919-08	43-11	88-44	820	06/1891	4	099	2	06/1891	2	009	5	06	5	0.27	4	12	6	14	7
WI WAUKESHA	47	8937-09	43-01	88-14	860	01/1856	0	070	9	01/1888	1	010	5	06	5	0.20	3	20	9	20	9

MEAN TEMPERATURE

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WY ALTA 1NNW	48	0140-02	43-47	111-02	6430	08/1909	8	098	3	08/1909	7	006	3	04	3	0.36	7	18	9	10	5
WY BASIN	48	0540-04	44-23	108-03	3837	03/1898	6	092	6	10/1901	5	008	4	03	2	0.34	6	12	6	10	5
WY BORDER 3N	48	0915-03	42-15	111-02	6120	01/1902	7	100	0	01/1902	6	005	2	04	3	0.38	7	08	4	02	1
WY BUFFALO BILL DAM	48	1175-04	44-30	109-11	5156	01/1905	8	098	3	01/1905	6	005	2	01	0	0.10	0	14	7	08	4
WY CHEYENNE WSFO	48	1675-08	41-09	104-49	6126	01/1871	1	100	0	01/1885	0	002	1	06	5	0.39	8	04	2	12	6
WY CHUGWATER	48	1730-08	41-45	104-49	5282	10/1900	7	099	2	10/1900	5	002	1	01	0	0.15	1	08	4	08	4
WY COLONY	48	1905-06	44-56	104-12	3570	09/1914	9	098	3	09/1914	8	004	2	03	2	0.29	5	04	2	00	0
WY DIVERSION DAM	48	2595-09	43-14	108-56	5575	10/1907	8	090	7	10/1907	7	015	7	10	8	0.07	0	02	1	12	6
WY DUBOIS	48	2715-09	43-34	109-38	6925	04/1907	8	094	6	04/1907	7	018	8	03	2	0.21	3	18	9	20	9
WY EVANSTON 1E	48	3100-03	41-16	110-57	6810	10/1889	4	092	6	10/1895	4	008	4	04	3	0.35	7	20	9	12	6
WY FARSON	48	3170-03	42-07	109-26	6590	04/1908	8	092	6	04/1908	7	025	9	10	8	0.83	9	10	5	18	9
WY GREEN RIVER	48	4065-03	41-32	109-28	6089	04/1897	6	091	7	10/1899	5	014	7	12	9	0.71	9	16	8	08	4
WY LAKE YELLOWSTONE	48	5345-01	44-33	110-24	7770	02/1904	7	089	7	02/1904	6	019	8	06	5	0.55	9	14	7	18	9
WY LARAMIE FAA AP	48	5415-10	41-19	105-41	7266	09/1866	1	085	8	01/1892	2	000	0	03	2	0.31	6	18	9	04	2
WY LUSK	48	5830-07	42-46	104-28	5020	02/1889	3	097	4	11/1889	1	012	6	07	6	0.34	6	18	9	00	0
WY MIDWEST	48	6195-05	43-24	106-17	4815	07/1922	9	097	4	07/1922	9	010	5	04	3	0.30	5	00	0	02	1
WY MORAN SWNW	48	6440-02	43-51	110-35	6798	03/1911	8	100	0	03/1911	7	004	2	01	0	0.20	3	04	2	20	9
WY NEWCASTLE	48	6660-07	43-51	104-13	4315	07/1906	8	094	6	07/1906	7	011	5	08	7	0.41	8	14	7	18	9
WY PATHFINDER DAM	48	7105-10	42-28	106-51	5930	01/1899	7	099	2	01/1899	5	009	5	01	0	0.04	0	10	5	06	3
WY PAVILLION	48	7115-09	43-15	108-41	5440	03/1919	9	098	3	03/1919	8	005	2	01	0	0.01	0	18	9	08	4
WY PINE BLUFFS	48	7235-08	41-11	104-04	5075	11/1900	7	091	7	11/1900	5	013	6	16	9	0.41	8	04	2	02	1
WY PINEDALE	48	7260-03	42-52	109-52	7175	01/1906	8	081	9	01/1906	6	043	9	14	9	0.63	9	18	9	08	4
WY POWELL FIELD STATION	48	7388-04	44-47	108-45	4370	02/1907	8	100	0	02/1907	7	011	5	06	5	0.24	4	12	6	16	8
WY RIVERTON	48	7760-09	43-01	108-23	4954	02/1907	8	088	7	02/1907	7	022	8	08	7	0.33	6	20	9	06	3
WY SARATOGA	48	7990-10	41-27	106-49	6790	10/1889	4	089	7	10/1889	1	028	9	13	9	0.83	9	10	5	02	1
WY SHERIDAN FIELD STATION	48	8160-05	44-50	106-50	3750	09/1891	4	094	6	03/1893	3	011	5	03	2	0.19	2	12	6	20	9
WY TORRINGTON EXP FARM	48	8995-08	42-05	104-13	4098	01/1922	9	099	2	01/1922	9	001	0	03	2	0.33	6	04	2	14	7
WY WHEATLAND 4N	48	9615-08	42-07	104-57	4638	07/1890	4	089	7	12/1900	5	033	9	11	8	0.31	6	10	5	14	7
WY WORLAND	48	9770-04	44-01	107-57	4060	02/1907	8	094	6	02/1907	7	019	8	10	8	0.53	9	06	3	02	1
WY YELLOWSTONE PARK	48	9905-01	44-58	110-42	6200	11/1886	3	097	4	01/1905	6	003	1	03	2	0.41	8	10	5	00	0

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
AL BREWTON 3SSE	01	1084-07	31-04	87-03	85	12/1891	2	068	9	01/1919	8	029	9	05	5	0.19	3	15	8	16	9
AL CLANTON	01	1694-03	32-51	86-38	580	02/1893	3	098	4	02/1893	1	004	2	04	4	0.19	3	15	8	12	7
AL FAIRHOPE 2NE	01	2813-08	30-33	87-53	23	03/1918	9	098	4	03/1918	8	002	1	01	1	0.09	1	16	9	09	4
AL GREENSBORO	01	3511-06	32-42	87-35	220	03/1892	2	099	2	03/1892	0	017	8	07	7	0.50	8	08	3	06	2
AL HIGHLAND HOME	01	3816-07	31-57	86-19	594	05/1892	2	098	4	05/1892	0	004	2	06	6	0.50	8	09	4	08	3
AL MUSCLE SHOALS FAA AP	01	5749-01	34-45	85-37	536	12/1940	9	098	4	12/1940	9	002	1	01	1	0.09	1	06	2	07	2
AL ST BERNARD	01	7157-02	34-10	86-49	800	09/1907	8	097	5	09/1907	6	002	1	03	2	0.59	9	11	6	08	3
AL SCOTTSBORO	01	7304-02	34-41	86-03	615	10/1891	1	092	8	01/1893	1	029	9	14	9	0.39	7	03	0	11	6
AL SELMA	01	7366-06	32-25	87-00	147	10/1889	1	092	8	02/1891	0	014	7	05	5	0.39	7	02	0	05	1
AL TALLADEGA	01	8024-04	33-26	86-05	555	10/1893	4	093	7	10/1893	2	018	8	10	8	0.50	8	13	7	08	3
AL THOMASVILLE	01	8178-07	31-55	87-44	405	09/1891	1	094	7	09/1891	0	008	4	04	4	0.29	5	10	5	15	8
AL TROY	01	8323-07	31-47	85-57	498	06/1908	8	097	5	06/1908	7	017	8	09	8	0.29	5	14	8	16	9
AL TUSCALOOSA OLIVER DAM	01	8385-03	33-13	87-35	152	03/1884	0	092	8	09/1891	0	007	4	06	6	0.39	7	09	4	07	2
AL UNION SPRINGS 4S	01	8438-06	32-06	85-43	460	11/1887	0	094	7	05/1891	0	019	8	14	9	0.50	8	01	0	08	3
AL VALLEY HEAD	01	8469-02	34-34	85-37	1042	01/1893	3	097	5	01/1893	1	015	7	12	9	0.69	9	09	4	14	8

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
AZ AJO	02	0080-07	32-22	112-52	1800	01/1915	9	100	0	01/1915	8	006	3	03	2	0.39	7	12	7	12	7
AZ BUCKEYE	02	1026-06	33-22	112-35	870	03/1893	3	096	6	03/1893	2	014	7	08	7	0.50	8	12	7	12	7
AZ CANYON-DE-CHELLY	02	1248-02	36-09	109-32	5540	12/1908	8	086	9	01/1938	9	001	0	01	1	0.19	3	09	4	17	9
AZ CHILDS	02	1614-03	34-21	111-42	2650	09/1915	9	096	6	09/1915	8	003	2	00	0	0.00	0	13	7	05	1
AZ DOUGLAS	02	2659-07	31-21	109-32	4040	12/1903	7	099	2	12/1903	6	004	2	06	6	0.59	9	09	4	03	0
AZ FORT VALLEY	02	3160-02	35-16	111-44	7347	01/1909	8	099	2	01/1909	7	001	0	02	1	0.39	7	08	3	10	5
AZ GRAND CANYON NATL PARK 2	02	3596-02	36-03	112-09	6785	10/1903	7	097	5	10/1903	5	005	3	05	5	0.59	9	09	4	06	2
AZ HOLBROOK	02	4089-02	34-54	110-10	5080	10/1891	1	093	7	12/1913	8	021	8	05	5	0.69	9	17	9	12	7
AZ KINGMAN 2	02	4645-01	35-12	114-01	3539	06/1901	7	094	7	06/1901	5	023	9	11	9	0.79	9	02	0	04	1
AZ LEES FERRY	02	4849-02	36-52	111-36	3210	10/1921	9	088	9	10/1921	8	020	8	03	2	0.29	5	13	7	04	1
AZ MESA EXPERIMENT FARM	02	5467-06	33-25	111-52	1230	03/1896	5	097	5	01/1917	8	000	0	01	1	0.19	3	15	8	13	7
AZ MIAMI	02	5512-04	33-24	110-53	3560	12/1913	9	088	4	12/1913	8	001	0	03	2	0.19	3	10	5	11	6
AZ PARKER	02	6250-05	34-10	114-17	425	10/1893	4	096	6	01/1916	8	002	1	03	2	0.39	7	13	7	15	8
AZ PRESCOTT	02	6796-03	34-34	112-28	5205	06/1898	6	099	2	01/1909	7	013	6	11	9	0.29	5	04	0	07	2
AZ ROOSEVELT 1WNW	02	7281-04	33-40	111-09	2205	08/1905	7	098	4	08/1905	6	006	3	04	4	0.59	9	13	7	15	8
AZ SACATON	02	7370-06	33-04	111-45	1285	04/1908	8	097	5	04/1908	7	003	2	02	1	0.19	3	10	5	06	2
AZ SAFFORD AGRICULTURAL CENTER	02	7390-07	32-49	109-41	2954	08/1898	6	098	4	08/1898	4	017	8	09	8	0.50	8	08	3	07	2
AZ SAINT JOHNS	02	7435-02	34-31	109-23	5790	09/1901	7	091	8	09/1901	5	026	9	12	9	0.59	9	15	8	11	6
AZ SELIGMAN	02	7716-03	35-19	112-53	5250	12/1904	7	090	8	12/1904	6	010	5	03	2	0.59	9	10	5	17	9
AZ TOMBSTONE	02	8619-07	31-42	110-03	4610	07/1893	4	091	8	06/1903	5	022	9	08	7	0.50	8	09	4	12	7
AZ TUCSON U OF AZ	02	8815-07	32-15	110-57	2444	10/1891	1	099	2	01/1899	4	002	1	05	5	0.79	9	06	2	15	8
AZ WHITERIVER	02	9271-02	33-50	109-58	5280	06/1897	5	088	9	06/1897	3	013	6	04	4	0.39	7	12	7	12	7
AZ WICKENBURG	02	9287-06	33-59	112-44	2050	03/1908	8	096	6	03/1908	7	030	9	12	9	0.50	8	11	6	06	2
AZ WILLIAMS	02	9359-02	35-15	112-11	6750	04/1897	5	093	7	03/1903	5	009	5	06	6	0.39	7	17	9	11	6
AZ YUMA CITRUS	02	9652-05	32-37	114-39	191	09/1920	9	098	4	09/1920	8	001	0	01	1	0.09	1	12	7	15	8

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
AR BRINKLEY	03	0936-06	34-53	91-11	200	08/1888	0	095	6	04/1890	0	016	7	11	9	0.59	9	07	2	11	6
AR CONWAY	03	1596-05	35-06	92-27	332	01/1897	5	099	2	01/1897	3	012	6	09	8	0.39	7	08	3	05	1
AR CORNING	03	1632-03	36-24	90-35	293	11/1892	2	090	8	01/1893	1	010	5	06	6	0.29	5	04	0	04	1
AR EUREKA SPRINGS 3WNW	03	2356-01	36-25	93-47	1420	05/1902	7	099	2	05/1902	5	010	5	06	6	0.59	9	10	5	17	9
AR FAYETTEVILLE EXP STN	03	2444-01	36-06	94-10	1270	01/1893	3	099	2	01/1893	1	001	0	01	1	0.00	0	18	9	11	6
AR GRAVETTE	03	2930-01	36-26	94-27	1260	04/1898	6	099	2	04/1898	4	005	3	04	4	0.29	5	16	9	02	0
AR MAMMOTH SPRING	03	4572-02	36-29	91-32	650	05/1904	7	095	6	05/1904	6	012	6	10	8	0.59	9	03	0	12	7
AR MENA	03	4756-04	34-34	94-16	1130	01/1891	1	098	4	01/1891	0	006	3	06	6	0.39	7	13	7	10	5
AR NEWPORT	03	5186-03	35-36	91-17	220	07/1888	0	095	6	02/1892	0	029	9	16	9	0.79	9	10	5	09	4
AR OZARK	03	5508-04	35-29	93-51	490	01/1892	2	092	8	01/1892	0	016	7	08	7	0.29	5	03	0	11	6
AR PINE BLUFF	03	5754-09	34-13	92-01	215	07/1888	0	097	5	01/1891	0	008	4	05	5	0.29	5	09	4	09	4
AR POCAHONTAS 1	03	5820-03	36-16	90-58	315	04/1894	4	098	4	04/1894	2	006	3	03	2	0.09	1	14	8	05	1
AR PRESCOTT	03	5908-08	33-48	93-23	308	07/1888	0	096	6	01/1891	0	008	4	04	4	0.50	8	11	6	14	8
AR SUBIACO	03	6928-04	35-18	93-39	500	09/1897	6	097	5	09/1897	4	010	5	05	5	0.29	5	12	7	06	2

MAXIMUM/MINIMUM TEMPERATURE

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CA AVALON PLEASURE PIER	04	0395-06	33-21	118-19	25	12/1909	8	097	5	12/1909	7	021	8	08	7	0.79	9	10	5	13	7
CA BERKELEY	04	0693-04	37-52	122-15	345	01/1893	3	099	2	01/1893	1	001	0	05	5	0.50	8	07	2	02	0
CA BLYTHE	04	0924-07	33-37	114-36	268	01/1913	9	098	4	01/1913	7	017	8	08	7	0.50	8	13	7	12	7
CA BRAWLEY 2SW	04	1048-07	32-57	115-33	-100	07/1909	8	094	7	07/1909	7	008	4	04	4	0.39	7	09	4	08	3
CA CEDARVILLE	04	1614-03	41-32	120-10	4670	05/1894	4	098	4	01/1961	9	014	7	03	2	0.29	5	12	7	08	3
CA CHICO UNIV FARM	04	1715-02	39-42	121-49	185	07/1902	7	095	6	07/1902	5	006	3	05	5	0.39	7	13	7	07	2
CA CHULA VISTA	04	1758-06	32-37	117-05	56	09/1918	9	099	2	09/1918	8	005	3	01	1	0.00	0	12	7	09	4
CA COLFAX	04	1912-02	39-06	120-57	2410	01/1905	7	098	4	01/1905	6	003	2	02	1	0.59	9	12	7	04	1
CA CUYAMACA	04	2239-06	32-59	116-35	4640	01/1910	8	098	4	01/1910	7	004	2	03	2	0.59	9	07	2	13	7
CA DAVIS	04	2294-02	38-32	121-46	60	06/1908	8	099	2	06/1908	7	014	7	04	4	0.19	3	09	4	14	8
CA DEATH VALLEY	04	2319-07	36-28	116-52	-194	07/1911	8	095	6	07/1911	7	011	6	04	4	0.69	9	04	0	14	8
CA ELECTRA PH	04	2728-05	38-20	120-40	715	01/1905	7	098	4	01/1905	6	009	5	04	4	0.29	5	20	9	16	9
CA EUREKA	04	2910-01	40-48	124-10	43	12/1886	0	099	2	07/1893	2	003	2	01	1	0.00	0	08	3	09	4
CA FAIRMONT	04	2941-07	34-42	118-26	3060	02/1912	9	084	9	02/1912	7	017	8	04	4	0.29	5	09	4	15	8
CA FORT BRAGG 1E	04	3161-01	39-27	123-48	165	06/1895	5	057	9	11/1909	7	042	9	06	6	0.39	7	07	2	05	1
CA FRESNO WSO AP	04	3257-05	36-46	119-43	326	09/1887	0	100	0	01/1914	8	000	0	04	4	0.29	5	16	9	09	4
CA HANFORD 1S	04	3747-05	36-18	119-39	245	06/1899	6	097	5	01/1917	8	012	6	07	7	0.39	7	10	5	12	7
CA HAPPY CAMP RS	04	3761-01	41-48	123-22	1120	03/1914	9	092	8	03/1914	8	028	9	06	6	0.69	9	08	3	06	2
CA HEALDSBURG	04	3875-01	38-37	122-52	102	03/1899	6	099	2	03/1899	4	004	2	06	6	0.39	7	11	6	09	4
CA INDEPENDENCE	04	4232-07	36-48	118-12	3950	01/1893	3	092	8	02/1898	4	012	6	06	6	0.39	7	11	6	13	7
CA INDIO U S DATE GARDEN	04	4259-07	33-44	116-15	11	05/1904	7	098	4	05/1904	6	006	3	05	5	0.29	5	16	9	05	1
CA LAKE SPAULDING	04	4713-02	39-19	120-38	5156	01/1914	9	099	2	01/1914	8	017	8	05	5	0.69	9	08	3	13	7
CA LEMON COVE	04	4890-05	36-23	119-02	513	01/1895	4	098	4	01/1923	9	003	2	01	1	0.29	5	10	5	06	2
CA LIVERMORE	04	4997-04	37-40	121-46	480	01/1903	7	100	0	01/1903	5	013	6	08	7	0.59	9	08	3	19	9
CA LODI	04	5032-05	38-07	121-17	40	01/1893	3	080	9	12/1912	7	030	9	07	7	0.50	8	14	8	01	0
CA MARYSVILLE	04	5385-02	39-09	121-36	57	02/1897	5	090	8	02/1897	3	030	9	10	8	0.39	7	06	2	03	0
CA MERCED MUNICIPAL AP	04	5532-05	37-17	120-31	153	06/1899	6	099	2	06/1899	4	016	7	08	7	0.59	9	06	2	05	1
CA MOUNT SHASTA WSO CITY	04	5983-02	41-19	122-19	3539	01/1904	7	099	2	01/1904	6	009	5	06	6	0.79	9	05	1	05	1
CA NAPA STATE HOSPITAL	04	6074-01	38-17	122-16	35	01/1893	3	096	6	01/1921	8	004	2	01	1	0.09	1	11	6	11	6
CA NEEDLES FAA AP	04	6118-07	34-46	114-37	914	01/1893	3	092	8	01/1918	8	005	3	04	4	0.39	7	08	3	06	2
CA OJAI	04	6399-06	34-27	119-14	750	01/1910	8	100	0	01/1910	7	013	6	06	6	0.59	9	09	4	11	6
CA ORLAND	04	6506-02	39-45	122-12	254	03/1903	7	098	4	03/1903	5	007	4	04	4	0.19	3	11	6	14	8

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
CA ORLEANS	04	6508-01	41-18	123-32	410	04/1903	7	100	0	11/1905	6	014	7	04	4	0.50	8	01	0	15	8
CA PASADENA	04	6719-06	34-09	118-09	864	01/1893	3	085	9	09/1920	8	003	2	04	4	0.19	3	09	4	15	8
CA PASO ROBLES	04	6730-04	35-38	120-41	700	01/1894	4	093	7	06/1903	5	010	5	07	7	0.39	7	00	0	01	0
CA PETALUMA FIRE STN #3	04	6826-01	38-14	122-38	27	02/1913	9	098	4	02/1913	7	009	5	06	6	0.39	7	09	4	12	7
CA QUINCY	04	7195-02	39-55	120-57	3408	04/1895	4	096	6	12/1909	7	030	9	12	9	1.09	9	05	1	14	8
CA REDDING FIRE STN #4	04	7300-02	40-33	122-23	470	01/1893	3	099	2	01/1893	1	021	8	15	9	0.89	9	17	9	12	7
CA REDLANDS	04	7306-06	34-03	117-11	1318	04/1898	6	099	2	08/1898	4	001	0	05	5	0.50	8	06	2	05	1
CA SAN LUIS OBISPO POLY	04	7851-04	35-18	120-40	315	08/1894	4	099	2	09/1914	8	003	2	04	4	0.29	5	11	6	10	5
CA SANTA BARBARA	04	7902-06	34-25	119-41	5	03/1893	3	098	4	02/1895	2	017	8	11	9	0.69	9	18	9	06	2
CA SANTA CRUZ	04	7916-04	36-59	122-01	130	09/1893	4	100	0	09/1893	2	005	3	05	5	0.69	9	12	7	11	6
CA SANTA ROSA	04	7965-01	38-27	122-42	167	06/1902	7	099	2	06/1902	5	011	6	07	7	0.59	9	16	9	13	7
CA SUSANVILLE AP	04	8702-03	40-22	120-34	4146	04/1895	4	087	9	04/1895	2	029	9	14	9	0.89	9	06	2	12	7
CA TAHOE CITY	04	8758-03	39-10	120-08	6230	04/1909	8	099	2	04/1909	7	007	4	06	6	0.50	8	15	8	17	9
CA TEJON RANCHO	04	8839-05	35-02	118-45	1425	11/1898	6	091	8	11/1898	4	010	5	05	5	0.79	9	17	9	05	1
CA TUSTIN IRVINE RANCH	04	9087-06	33-44	117-47	118	01/1899	6	087	9	01/1905	6	012	6	04	4	0.59	9	10	5	02	0
CA UKIAH	04	9122-01	39-09	123-12	623	01/1893	3	100	0	01/1893	1	005	3	10	8	0.89	9	07	2	06	2
CA VACAVILLE	04	9200-02	38-22	121-57	105	01/1905	7	095	6	01/1905	6	005	3	04	4	0.29	5	16	9	13	7
CA WASCO	04	9452-05	35-36	119-20	345	07/1899	6	097	5	07/1899	4	013	6	05	5	0.69	9	10	5	12	7
CA WEAVERVILLE RS	04	9490-01	40-44	122-56	2050	01/1894	4	077	9	12/1953	9	008	4	01	1	0.00	0	07	2	14	8
CA WILLOWS 6W	04	9699-02	39-31	122-18	233	09/1893	4	089	8	06/1911	7	001	0	03	2	0.50	8	12	7	15	8
CA YOSEMITE PARK HEADQUARTERS	04	9855-05	37-45	119-35	3966	08/1906	8	099	2	08/1906	6	019	8	06	6	0.79	9	11	6	18	9
CA YREKA	04	9866-01	41-43	122-38	2625	02/1893	3	087	9	01/1915	8	010	5	04	4	0.29	5	11	6	14	8

MAXIMUM/MINIMUM TEMPERATURE

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CO BOULDER	05	0848-04	40-02	105-16	5375	10/1893	4	096	6	10/1893	2	019	8	14	9	0.59	9	10	5	09	4
CO CANON CITY	05	1294-01	38-26	105-15	5335	03/1888	0	094	7	12/1913	8	009	5	03	2	0.09	1	16	9	06	2
CO CHEESMAN	05	1528-04	39-13	105-17	6875	12/1902	7	098	4	12/1902	5	000	0	00	0	0.00	0	09	4	20	9
CO CHEYENNE WELLS	05	1564-03	38-49	102-21	4250	04/1897	5	099	2	04/1897	3	011	6	05	5	0.50	8	16	9	06	2
CO COLLBRAN	05	1741-02	39-15	107-58	5980	11/1900	6	092	8	11/1900	5	026	9	12	9	0.69	9	13	7	08	3
CO DEL NORTE	05	2184-05	37-40	106-21	7884	01/1893	3	069	9	05/1904	6	029	9	21	9	0.59	9	05	1	07	2
CO DILLON 1E	05	2281-02	39-38	106-02	9065	09/1910	8	098	4	09/1910	7	012	6	06	6	0.50	8	05	1	09	4
CO DURANGO	05	2432-02	37-17	107-53	6600	10/1894	4	099	2	10/1894	2	003	2	06	6	0.89	9	04	0	08	3
CO EADS	05	2446-01	38-29	102-47	4215	04/1907	8	089	8	04/1907	6	029	9	07	7	0.50	8	07	2	03	0
CO FORT COLLINS	05	3005-04	40-35	105-05	5004	02/1888	0	096	6	11/1892	1	000	0	03	2	0.29	5	10	5	14	8
CO FORT MORGAN	05	3038-04	40-15	103-48	4321	02/1897	5	098	4	02/1897	3	006	3	03	2	0.39	7	06	2	14	8
CO FRUITA 1W	05	3146-02	39-10	108-45	4480	04/1891	1	089	8	08/1897	3	022	9	17	9	0.89	9	13	7	03	0
CO GUNNISON	05	3662-02	38-32	106-56	7664	07/1893	4	097	5	04/1894	2	013	6	09	8	1.09	9	05	1	03	0
CO HERMIT 7ESE	05	3951-05	37-46	107-08	9000	08/1894	4	091	8	08/1897	3	019	8	13	9	0.39	7	19	9	14	8
CO HOLLY	05	4076-01	38-03	102-07	3390	09/1899	6	093	7	12/1920	8	014	7	06	6	0.29	5	12	7	20	9
CO LAS ANIMAS	05	4834-01	38-04	103-13	3891	05/1891	1	096	6	10/1892	1	009	5	04	4	0.50	8	07	2	11	6
CO MANASSA	05	5322-05	37-10	105-56	7687	01/1893	3	085	9	01/1901	5	030	9	15	9	0.89	9	14	8	14	8
CO MONTROSE #2	05	5722-02	38-29	107-53	5785	01/1893	3	090	8	05/1899	4	011	6	06	6	0.50	8	09	4	13	7
CO SAGUACHE	05	7337-05	38-05	106-08	7692	04/1894	4	092	8	08/1897	3	020	8	05	5	0.39	7	15	8	18	9
CO STEAMBOAT SPRINGS	05	7936-02	40-30	106-50	6770	09/1891	1	086	9	12/1899	4	011	6	11	9	0.50	8	15	8	13	7
CO TELLURIDE	05	8204-02	37-56	107-49	8800	12/1900	6	089	8	12/1900	5	022	9	09	8	0.69	9	09	4	16	9
CO TRINIDAD	05	8429-01	37-10	104-29	6030	11/1899	6	089	8	12/1911	7	021	8	14	9	0.29	5	08	3	04	1
CO WRAY 1E	05	9243-03	40-05	102-11	3520	04/1893	3	093	7	04/1893	2	020	8	15	9	0.69	9	20	9	08	3

MAXIMUM/MINIMUM TEMPERATURE

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CT FALLS VILLAGE	06	2658-01	41-57	73-22	550	02/1916	9	098	4	02/1916	8	003	2	00	0	0.00	0	10	5	12	7
CT GROTON	06	3207-03	41-21	72-03	40	06/1885	0	096	6	06/1885	0	013	6	06	6	0.19	3	13	7	11	6
CT NORWALK GAS PLANT	06	5893-03	41-07	73-25	37	01/1892	2	099	2	01/1892	0	003	2	05	5	0.50	8	08	3	08	3
CT STORRS	06	8138-02	41-48	72-15	650	02/1893	3	087	9	02/1893	1	016	7	05	5	0.29	5	07	2	07	2

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
DE BRIDGEVILLE 1NW	07	1330-02	38-45	75-37	50	01/1892	2	100	0	01/1892	0	004	2	02	1	0.19	3	14	8	12	7
DE DOVER	07	2730-02	39-09	75-31	30	10/1891	1	087	9	12/1898	4	017	8	10	8	0.29	5	02	0	13	7
DE MILFORD 4SE	07	5915-02	38-54	75-28	30	05/1893	3	092	8	05/1893	2	013	6	08	7	0.39	7	13	7	09	4
DE NEWARK UNIV FARM	07	6410-01	39-40	75-44	90	04/1894	4	068	9	01/1941	9	000	0	02	1	0.09	1	10	5	10	5
DE WILMINGTON PORTER RESERVOIR	07	9605-01	39-46	75-32	274	04/1894	4	081	9	08/1897	3	022	9	05	5	0.19	3	13	7	10	5

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
FL APALACHICOLA WSO AP	08	0211-01	29-44	85-02	20	11/1903	7	100	0	11/1903	5	000	0	05	5	0.29	5	09	4	07	2
FL ARCADIA	08	0228-04	27-14	81-51	63	11/1899	6	092	8	11/1899	4	013	6	07	7	0.59	9	10	5	06	2
FL BARTOW	08	0478-04	27-54	81-51	125	01/1893	3	099	2	01/1893	1	008	4	08	7	0.69	9	04	0	12	7
FL BELLE GLADE EXP STN	08	0611-05	26-39	80-38	15	06/1924	9	099	2	06/1924	9	006	3	02	1	0.09	1	12	7	10	5
FL DE FUNIAK SPRINGS	08	2220-01	30-44	86-07	230	10/1896	5	094	7	10/1896	3	016	7	05	5	0.19	3	16	9	15	8
FL EVERGLADES	08	2850-05	25-51	81-23	5	12/1926	9	095	6	12/1926	9	005	3	02	1	0.19	3	13	7	19	9
FL FEDERAL POINT	08	2915-02	29-45	81-32	5	02/1892	2	098	4	02/1892	0	006	3	03	2	0.09	1	11	6	08	3
FL FERNANDINA BEACH	08	2944-02	30-39	81-28	13	01/1892	2	093	7	01/1898	4	024	9	11	9	0.39	7	07	2	11	6
FL FORT LAUDERDALE	08	3163-06	26-06	80-12	16	11/1912	9	096	6	11/1912	7	028	9	11	9	0.29	5	18	9	14	8
FL FORT MYERS WSO AP	08	3186-05	26-35	81-52	15	10/1891	1	099	2	10/1891	0	014	7	13	9	0.39	7	11	6	04	1
FL FORT PIERCE	08	3207-04	27-28	80-21	25	01/1901	6	099	2	01/1901	5	007	4	05	5	0.39	7	10	5	03	0
FL HOMESTEAD EXP STN	08	4091-06	25-30	80-30	11	08/1910	8	093	7	08/1910	7	017	8	09	8	0.19	3	18	9	11	6
FL INVERNESS 3SE	08	4289-03	28-44	82-19	40	02/1899	6	094	7	02/1899	4	014	7	08	7	0.29	5	07	2	11	6
FL KEY WEST WBO AP	08	4570-07	24-33	81-45	4	07/1872	0	100	0	01/1888	0	002	1	06	6	0.50	8	13	7	12	7
FL LAKE CITY 2E	08	4731-02	30-11	82-36	195	12/1892	2	098	4	11/1896	3	007	4	07	7	0.39	7	07	2	12	7
FL MADISON 4N	08	5275-02	30-32	83-26	180	01/1892	2	085	9	12/1899	4	008	4	05	5	0.29	5	10	5	17	9
FL OCALA	08	6414-03	29-12	82-05	75	01/1898	6	096	6	09/1960	9	002	1	01	1	0.09	1	07	2	13	7
FL PENSACOLA FAA AP	08	6997-01	30-28	87-12	112	11/1879	0	100	0	01/1889	0	000	0	04	4	0.29	5	11	6	08	3
FL SAINT LEO	08	7851-03	28-20	82-16	190	10/1891	1	096	6	01/1903	5	012	6	05	5	0.29	5	13	7	12	7
FL TALLAHASSEE WSO AP	08	8758-01	30-23	84-22	55	01/1893	3	100	0	01/1893	1	003	2	05	5	0.39	7	14	8	12	7
FL TARPON SPRINGS	08	8824-04	28-09	82-45	8	10/1891	1	097	5	01/1954	9	000	0	00	0	0.00	0	10	5	09	4
FL TITUSVILLE	08	8942-03	28-37	80-49	5	02/1901	6	093	7	02/1901	5	022	9	11	9	0.39	7	03	0	08	3

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
GA ALBANY 3SE	09	0140-07	31-32	84-08	180	11/1891	1	096	6	03/1892	0	003	2	05	5	0.29	5	08	3	07	2
GA BAINBRIDGE INT PAPER CO	09	0586-07	30-48	84-39	190	06/1892	2	092	8	06/1892	1	022	9	14	9	0.50	8	04	0	08	3
GA BRUNSWICK	09	1340-09	31-10	81-30	13	01/1895	4	080	9	02/1897	3	029	9	12	9	0.29	5	09	4	12	7
GA COVINGTON	09	2318-05	33-36	83-52	770	07/1893	4	076	9	01/1929	9	005	3	02	1	0.09	1	09	4	07	2
GA DAHLONEGA	09	2475-02	34-32	83-59	1430	02/1892	2	099	2	11/1896	3	007	4	06	6	0.29	5	13	7	03	0
GA EASTMAN 1W	09	2966-05	32-12	83-12	400	11/1891	1	092	8	11/1896	3	008	4	02	1	0.19	3	09	4	02	0
GA FORT GAINES	09	3516-07	31-36	85-03	340	11/1891	1	094	7	03/1892	0	010	5	05	5	0.29	5	18	9	04	1
GA GAINESVILLE	09	3621-02	34-18	83-51	1170	10/1891	1	095	6	01/1907	6	009	5	08	7	0.39	7	16	9	16	9
GA GLENNVILLE	09	3754-09	31-56	81-55	170	01/1905	7	100	0	01/1905	6	003	2	03	2	0.19	3	06	2	04	1
GA HAWKINSVILLE	09	4170-05	32-17	83-28	265	03/1892	2	095	6	10/1896	3	014	7	10	8	0.19	3	18	9	11	6
GA MILLEDGEVILLE	09	5874-05	33-05	83-15	400	10/1891	1	093	7	06/1895	3	020	8	16	9	0.50	8	08	3	08	3
GA MILLEN 4N	09	5882-06	32-52	81-58	195	11/1891	1	095	6	12/1899	4	005	3	05	5	0.39	7	10	5	03	0
GA NEWMAN 4NE	09	6335-04	33-26	84-47	920	10/1891	1	095	6	03/1892	0	013	6	07	7	0.39	7	09	4	09	4
GA QUITMAN 2NW	09	7276-08	30-48	83-35	185	11/1891	1	095	6	11/1891	0	021	8	12	9	0.59	9	09	4	02	0
GA ROME	09	7600-01	34-15	85-09	620	03/1892	2	100	0	12/1892	1	000	0	04	4	0.39	7	06	2	11	6
GA SAVANNAH WSO AP	09	7847-09	32-08	81-12	46	01/1874	0	100	0	01/1900	4	005	3	07	7	0.29	5	07	2	04	1
GA TALBOTTON 1NE	09	8535-04	32-42	84-32	710	03/1892	2	097	5	03/1892	0	004	2	08	7	0.59	9	18	9	10	5
GA TIFTON EXP STN	09	8703-08	31-29	83-32	371	02/1911	8	087	9	02/1911	7	018	8	16	9	0.19	3	08	3	08	3
GA TOCCOA	09	8740-03	34-35	83-19	1019	10/1891	1	097	5	01/1901	5	015	7	06	6	0.19	3	06	2	08	3
GA WARRENTON	09	9141-06	33-25	82-40	510	11/1891	1	094	7	01/1917	8	004	2	03	2	0.29	5	14	8	10	5
GA WASHINGTON 2ESE	09	9157-03	33-43	82-43	620	11/1891	1	092	8	01/1959	9	019	8	01	1	0.09	1	03	0	09	4
GA WAYCROSS 4NE	09	9186-09	31-15	82-19	145	06/1892	2	095	6	12/1899	4	003	2	07	7	0.39	7	18	9	14	8
GA WEST POINT	09	9291-04	32-52	85-11	575	10/1891	1	094	7	03/1892	0	010	5	02	1	0.19	3	07	2	10	5

MAXIMUM/MINIMUM TEMPERATURE

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ID ABERDEEN EXPERIMENT STATION	10	0010-09	42-57	112-50	4405	04/1914	9	100	0	04/1914	8	003	2	02	1	0.19	3	05	1	12	7
ID ARROWROCK DAM	10	0448-04	43-36	115-55	3275	12/1911	9	098	4	12/1911	7	007	4	03	2	0.29	5	11	6	08	3
ID ASHTON	10	0470-09	44-04	111-27	5260	02/1897	5	097	5	01/1900	4	012	6	07	7	0.59	9	14	8	11	6
ID CALDWELL	10	1380-05	43-40	116-41	2370	11/1904	7	100	0	11/1904	6	003	2	05	5	0.29	5	10	5	07	2
ID CAMBRIDGE	10	1408-05	44-34	116-41	2650	10/1894	4	092	8	09/1903	5	012	6	06	6	1.00	9	09	4	13	7
ID CHALLIS	10	1663-08	44-30	114-14	5175	01/1895	4	082	9	02/1904	6	022	9	24	9	0.39	7	11	6	11	6
ID COEUR D'ALENE RS	10	1956-01	47-41	116-45	2158	07/1893	4	085	9	01/1900	4	018	8	19	9	0.29	5	05	1	12	7
ID GLENNS FERRY	10	3631-05	42-56	115-19	2510	04/1905	7	090	8	04/1905	6	018	8	09	8	0.50	8	01	0	11	6
ID GRACE	10	3732-10	42-35	111-44	5550	02/1907	8	098	4	02/1907	6	007	4	02	1	0.19	3	06	2	13	7
ID HAILEY AP	10	3942-04	43-31	114-18	5306	04/1894	4	085	9	01/1900	4	019	8	05	5	0.59	9	08	3	05	1
ID HAZELTON	10	4140-07	42-36	114-08	4060	05/1917	9	097	5	05/1917	8	002	1	00	0	0.00	0	09	4	14	8
ID HOLLISTER	10	4295-06	42-21	114-35	4550	05/1908	8	092	8	05/1908	7	012	6	03	2	0.19	3	04	0	11	6
ID JEROME	10	4670-07	42-44	114-31	3785	06/1916	9	096	6	06/1916	8	011	6	02	1	0.00	0	19	9	10	5
ID KELLOGG	10	4831-04	47-32	116-08	2320	02/1905	7	098	4	02/1905	6	011	6	05	5	0.29	5	08	3	06	2
ID KOOSKIA	10	5011-03	46-09	115-59	1280	12/1908	8	096	6	12/1908	7	020	8	06	6	0.39	7	17	9	19	9
ID LEWISTON WSO AP	10	5241-03	46-23	117-01	1413	11/1894	4	097	5	06/1904	6	009	5	10	8	0.29	5	18	9	07	2
ID LIFTON PUMPING STATION	10	5275-10	42-07	111-18	5926	11/1919	9	099	2	11/1919	8	000	0	01	1	0.09	1	08	3	13	7
ID MACKAY RS	10	5462-08	43-55	113-37	5897	01/1908	8	096	6	01/1908	7	004	2	04	4	0.39	7	18	9	14	8
ID MALAD CITY	10	5559-10	42-10	112-17	4470	02/1904	7	087	9	02/1904	6	019	8	11	9	0.39	7	04	0	12	7
ID MOSCOW U OF ID	10	6152-02	46-44	116-58	2660	11/1893	4	099	2	11/1897	4	003	2	04	4	0.29	5	13	7	13	7
ID NEW MEADOWS RS	10	6388-04	44-58	116-17	3870	06/1903	7	095	6	09/1909	7	009	5	05	5	0.39	7	13	7	07	2
ID OAKLEY	10	6542-10	42-14	113-53	4600	07/1893	4	098	4	11/1896	3	001	0	05	5	0.39	7	10	5	05	1
ID OROFINO	10	6681-03	46-29	116-16	1320	09/1903	7	097	5	09/1903	5	010	5	07	7	0.39	7	11	6	16	9
ID PAYETTE	10	6891-05	44-05	116-56	2150	08/1892	2	094	7	01/1907	6	011	6	07	7	0.50	8	05	1	13	7
ID PORTHILL	10	7264-01	49-00	116-30	1775	10/1894	4	099	2	01/1902	5	006	3	04	4	0.29	5	09	4	03	0
ID PRIEST RIVER EXPERIMENT STN	10	7386-01	48-21	116-50	2380	02/1898	6	092	8	01/1900	4	012	6	02	1	0.00	0	14	8	13	7
ID SALMON 1N	10	8080-08	45-11	113-54	3931	11/1905	8	096	6	11/1905	6	022	9	08	7	0.59	9	14	8	08	3
ID SANDPOINT EXP STN	10	8137-01	48-18	116-34	2100	10/1910	8	099	2	10/1910	7	010	5	04	4	0.19	3	02	0	11	6

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
IL ALEDO	11	0072-01	41-13	90-45	720	01/1901	6	099	2	01/1901	5	022	9	10	8	0.29	5	07	2	07	2
IL ANNA 1E	11	0187-08	37-28	89-14	645	02/1896	5	100	0	02/1896	3	007	4	09	8	0.29	5	18	9	17	9
IL AURORA	11	0338-02	41-45	88-21	644	09/1887	0	092	8	01/1893	1	008	4	06	6	0.50	8	13	7	06	2
IL CARLINVILLE	11	1280-06	39-17	89-52	625	01/1893	3	099	2	01/1893	1	002	1	07	7	0.29	5	15	8	12	7
IL CHARLESTON	11	1436-07	39-29	88-10	680	02/1896	5	097	5	01/1961	9	015	7	02	1	0.09	1	15	8	03	0
IL DANVILLE	11	2140-05	40-08	87-39	558	03/1897	5	091	8	03/1897	3	021	8	10	8	0.29	5	09	4	06	2
IL DECATUR	11	2193-04	39-50	89-01	620	12/1893	4	099	2	12/1893	2	000	0	03	2	0.19	3	11	6	13	7
IL DIXON 1NW	11	2348-01	41-50	89-31	700	10/1887	0	094	7	01/1893	1	013	6	11	9	0.29	5	10	5	14	8
IL DUQUOIN 4SE	11	2483-08	37-59	89-12	420	10/1888	0	089	8	01/1895	2	015	7	08	7	0.50	8	03	0	08	3
IL GALVA	11	3335-01	41-10	90-03	855	01/1893	3	100	0	01/1893	1	012	6	05	5	0.19	3	03	0	06	2
IL GRIGGSVILLE	11	3717-06	39-43	90-44	700	05/1887	0	093	7	01/1893	1	009	5	11	9	0.59	9	08	3	11	6
IL HARRISBURG	11	3879-09	37-45	88-33	380	03/1898	6	099	2	03/1898	4	010	5	08	7	0.19	3	10	5	14	8
IL HILLSBORO	11	4108-06	39-09	89-29	630	05/1895	5	098	4	05/1895	3	009	5	09	8	0.69	9	12	7	12	7
IL HOOPESTON 1NE	11	4198-05	40-28	87-40	710	09/1887	0	083	9	01/1893	1	012	6	05	5	0.09	1	07	2	04	1
IL JACKSONVILLE 2E	11	4442-06	39-44	90-12	610	05/1895	5	100	0	05/1895	3	002	1	03	2	0.29	5	09	4	17	9
IL LA HARPE	11	4823-03	40-35	90-58	700	05/1895	5	099	2	05/1895	3	006	3	07	7	0.39	7	08	3	12	7
IL LINCOLN	11	5079-04	40-10	89-22	580	02/1906	8	099	2	02/1906	6	009	5	07	7	0.19	3	18	9	16	9
IL MARENGO	11	5326-02	42-15	88-36	820	01/1893	3	098	4	06/1893	2	007	4	08	7	0.29	5	07	2	08	3
IL MCLEANSBORO	11	5515-09	38-06	88-30	480	06/1888	0	092	8	01/1895	2	019	8	15	9	0.39	7	06	2	10	5
IL MINONK	11	5712-04	40-54	89-03	750	10/1896	5	096	6	10/1896	3	020	8	11	9	0.29	5	07	2	02	0
IL MONMOUTH	11	5768-03	40-55	90-38	770	02/1893	3	099	2	02/1893	1	009	5	05	5	0.09	1	03	0	08	3
IL MORRISON	11	5833-01	41-49	89-58	603	05/1895	5	098	4	05/1895	3	014	7	10	8	0.29	5	14	8	02	0
IL MOUNT CARROLL	11	5901-01	42-05	89-59	700	12/1897	6	098	4	12/1897	4	007	4	08	7	0.59	9	14	8	17	9
IL MT VERNON 3NE	11	5943-09	38-21	88-52	490	05/1895	5	099	2	12/1895	3	015	7	13	9	0.50	8	12	7	04	1
IL OLNEY 2S	11	6446-07	38-42	88-04	480	11/1896	5	097	5	06/1964	9	000	0	00	0	0.00	0	10	5	08	3
IL OTTAWA 4SW	11	6526-02	41-20	88-55	525	09/1887	0	092	8	01/1893	1	013	6	12	9	0.29	5	07	2	14	8
IL PALESTINE	11	6558-07	39-00	87-37	515	01/1893	3	099	2	01/1900	4	023	9	12	9	0.19	3	12	7	10	5
IL PANA	11	6579-06	39-23	89-05	696	01/1893	3	095	6	01/1893	1	017	8	09	8	0.19	3	15	8	18	9

MAXIMUM/MINIMUM TEMPERATURE

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IL PARIS WATERWORKS	11	6610-07	39-38	87-42	680	04/1893	3	098	4	04/1893	2	006	3	07	7	0.09	1	01	0	09	4
IL PONTIAC	11	6910-05	40-53	88-38	650	01/1903	7	100	0	01/1903	5	005	3	04	4	0.19	3	12	7	12	7
IL RUSHVILLE	11	7551-03	40-07	90-35	675	01/1893	3	095	6	01/1893	1	018	8	10	8	0.39	7	13	7	07	2
IL SPARTA	11	8147-08	38-08	89-43	520	01/1893	3	100	0	01/1895	2	013	6	09	8	0.29	5	06	2	09	4
IL URBANA	11	8740-05	40-06	88-14	743	10/1888	0	099	2	06/1897	3	001	0	03	2	0.09	1	02	0	13	7
IL WALNUT	11	8916-01	41-33	89-36	690	01/1893	3	099	2	01/1893	1	007	4	09	8	0.19	3	11	6	13	7
IL WHITE HALL 1E	11	9241-06	39-26	90-23	578	03/1894	4	095	6	03/1894	2	025	9	12	9	0.09	1	06	2	10	5
IL WINDSOR	11	9354-07	39-26	88-36	685	09/1887	0	084	9	01/1893	1	012	6	24	9	0.29	5	06	2	06	2

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
IN ANDERSON SEWAGE PLANT	12	0177-05	40-06	85-43	845	06/1895	5	099	2	06/1895	3	007	4	07	7	0.39	7	08	3	07	2
IN ANGOLA	12	0200-03	41-38	84-59	1010	02/1887	0	083	9	01/1894	2	026	9	06	6	0.29	5	05	1	06	2
IN BERNE	12	0676-03	40-40	84-57	858	01/1910	8	100	0	01/1910	7	006	3	03	2	0.09	1	12	7	15	8
IN BLOOMINGTON IN UNIV	12	0784-08	39-10	86-31	825	02/1896	5	096	6	02/1896	3	011	6	10	8	0.59	9	06	2	08	3
IN BROOKVILLE	12	1030-09	39-25	85-00	670	05/1925	9	098	4	05/1925	9	009	5	05	5	0.09	1	07	2	08	3
IN CAMBRIDGE CITY	12	1229-06	39-49	85-10	950	04/1892	2	099	2	06/1892	1	005	3	05	5	0.29	5	08	3	09	4
IN COLUMBUS	12	1747-05	39-12	85-55	621	10/1893	4	098	4	10/1893	2	006	3	08	7	0.39	7	09	4	14	8
IN CRAWFORDSVILLE 2NW	12	1873-04	40-04	86-56	745	12/1892	2	088	9	01/1917	8	016	7	06	6	0.19	3	12	7	10	5
IN DELPHI 3NNE	12	2149-02	40-37	86-40	560	12/1887	0	093	7	01/1893	1	005	3	05	5	0.19	3	13	7	06	2
IN GOSHEN COLLEGE	12	3418-02	41-34	85-50	805	06/1914	9	099	2	06/1914	8	007	4	06	6	0.19	3	09	4	11	6
IN GREENCASTLE 1E	12	3513-04	39-39	86-51	835	10/1895	5	087	9	01/1917	8	011	6	06	6	0.19	3	09	4	16	9
IN GREENFIELD	12	3527-05	39-47	85-45	865	11/1903	7	098	4	11/1903	5	002	1	06	6	0.29	5	06	2	09	4
IN HOBART	12	4008-01	41-32	87-15	600	07/1919	9	098	4	07/1919	8	021	8	07	7	0.19	3	15	8	10	5
IN HUNTINGTON WATERWORKS	12	4181-03	40-51	85-30	725	11/1893	4	097	5	11/1893	2	008	4	06	6	0.19	3	04	0	09	4
IN LAPORTE	12	4837-01	41-36	86-43	810	05/1897	5	098	4	01/1928	9	014	7	05	5	0.29	5	16	9	13	7
IN MADISON SEWAGE PLANT	12	5237-09	38-44	85-24	455	04/1893	3	096	6	04/1893	2	007	4	07	7	0.50	8	07	2	10	5
IN MARION 2N	12	5337-05	40-34	85-40	790	03/1891	1	099	2	01/1893	1	009	5	06	6	0.19	3	10	5	17	9
IN MT VERNON	12	6001-07	37-57	87-53	415	01/1893	3	098	4	10/1893	2	011	6	04	4	0.19	3	16	9	12	7
IN OOLITIC PURDUE EXP FM	12	6580-08	38-53	86-33	650	02/1893	3	082	9	01/1919	8	000	0	02	1	0.09	1	13	7	16	9
IN PAOLI	12	6705-08	38-32	86-29	640	03/1898	6	099	2	03/1898	4	003	2	07	7	0.50	8	04	0	11	6
IN PRINCETON 1W	12	7125-07	38-21	87-35	482	01/1899	6	098	4	01/1899	4	006	3	09	8	0.29	5	10	5	10	5
IN RENSSELAER	12	7298-01	40-56	87-09	650	05/1900	6	096	6	05/1900	5	004	2	02	1	0.19	3	02	0	12	7
IN ROCHESTER	12	7482-02	41-04	86-13	770	04/1904	7	087	9	04/1904	6	021	8	08	7	0.19	3	07	2	11	6
IN ROCKVILLE	12	7522-04	39-46	87-14	690	07/1887	0	096	6	01/1893	1	003	2	02	1	0.09	1	17	9	08	3
IN RUSHVILLE	12	7646-05	39-36	85-27	955	02/1887	0	096	6	06/1892	1	008	4	04	4	0.29	5	12	7	01	0
IN SALEM	12	7755-08	38-37	86-05	800	01/1897	5	095	6	01/1897	3	012	6	07	7	0.39	7	06	2	16	9
IN SCOTTSBURG	12	7875-09	38-42	85-46	550	03/1896	5	099	2	03/1896	3	014	7	08	7	0.19	3	10	5	06	2

MAXIMUM/MINIMUM TEMPERATURE

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IN SEYMOUR 2N	12	7935-08	38-59	85-54	573	09/1892	2	098	4	09/1892	1	016	7	10	8	0.39	7	17	9	06	2
IN SHOALS HIGHWAY 50 BRIDGE	12	8036-07	38-40	86-48	550	12/1912	9	100	0	12/1912	7	008	4	05	5	0.29	5	12	7	12	7
IN VEVAY	12	9080-09	38-45	85-04	470	12/1887	0	096	6	02/1891	0	007	4	04	4	0.29	5	20	9	05	1
IN VINCENNES 5NE	12	9113-07	38-44	87-30	450	04/1894	4	099	2	04/1894	2	010	5	09	8	0.39	7	12	7	16	9
IN WASHINGTON	12	9253-07	38-40	87-11	485	06/1896	5	099	2	06/1896	3	023	9	17	9	0.29	5	11	6	05	1
IN WHEATFIELD 2NNW	12	9511-01	41-14	87-04	650	09/1916	9	097	5	09/1916	8	007	4	05	5	0.19	3	08	3	11	6
IN WHITESTOWN	12	9557-05	40-00	86-21	935	03/1896	5	100	0	03/1896	3	010	5	07	7	0.29	5	18	9	10	5
IN WINAMAC 2SSE	12	9670-01	41-02	86-35	690	08/1897	6	084	9	06/1918	8	008	4	04	4	0.19	3	13	7	11	6

MAXIMUM/MINIMUM TEMPERATURE

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IA ALBIA	13	0112-08	41-02	92-48	940	11/1897	6	098	4	11/1897	4	022	9	13	9	0.39	7	08	3	02	0
IA ALGONA 3W	13	0133-02	43-04	94-18	1230	01/1893	3	099	2	01/1893	1	011	6	06	6	0.29	5	18	9	05	1
IA BELLE PLAINE	13	0600-06	41-53	92-16	810	09/1890	1	098	4	01/1892	0	015	7	07	7	0.19	3	08	3	13	7
IA CHARLES CITY	13	1402-02	43-03	92-40	1013	06/1891	1	098	4	12/1891	0	005	3	04	4	0.19	3	10	5	08	3
IA CLARINDA	13	1533-07	40-44	95-02	1030	05/1890	1	098	4	07/1891	0	007	4	06	6	0.39	7	13	7	03	0
IA CLINTON #1	13	1635-06	41-48	90-16	585	01/1893	3	099	2	01/1893	1	009	5	10	8	0.39	7	12	7	12	7
IA ESTERVILLE 2N	13	2724-01	43-25	94-50	1302	04/1895	4	098	4	04/1895	2	013	6	06	6	0.29	5	10	5	13	7
IA FAIRFIELD	13	2789-09	41-02	91-57	740	04/1891	1	090	8	01/1893	1	011	6	10	8	0.39	7	06	2	13	7
IA FAYETTE	13	2864-03	42-50	91-48	1010	01/1893	3	098	4	01/1893	1	015	7	10	8	0.39	7	09	4	12	7
IA FOREST CITY 2NNE	13	2977-02	43-17	93-38	1300	04/1894	4	097	5	04/1894	2	019	8	14	9	0.39	7	07	2	19	9
IA FORT DODGE	13	2999-05	42-30	94-12	1115	02/1900	6	098	4	02/1900	5	007	4	06	6	0.19	3	11	6	15	8
IA INDIANOLA	13	4063-08	41-22	93-33	940	05/1890	1	097	5	07/1891	0	010	5	06	6	0.29	5	17	9	08	3
IA IOWA FALLS	13	4142-05	42-32	93-16	1170	01/1893	3	099	2	01/1893	1	011	6	08	7	0.39	7	08	3	15	8
IA LE MARS	13	4735-01	42-48	96-10	1195	04/1896	5	100	0	04/1896	3	014	7	11	9	0.39	7	03	0	13	7
IA LOGAN	13	4894-04	41-38	95-48	1052	04/1890	1	099	2	07/1891	0	002	1	06	6	0.39	7	03	0	10	5
IA MOUNT AYR 5SW	13	5769-08	40-39	94-18	1270	06/1892	2	096	6	06/1892	1	021	8	14	9	0.59	9	11	6	07	2
IA MOUNT PLEASANT	13	5796-09	40-57	91-33	736	10/1898	6	098	4	10/1898	4	013	6	07	7	0.39	7	14	8	08	3
IA NEW HAMPTON	13	5952-03	43-03	92-19	1160	03/1897	5	098	4	03/1897	3	009	5	09	8	0.39	7	07	2	09	4
IA ROCK RAPIDS	13	7147-01	43-26	96-10	1350	04/1893	3	093	7	04/1893	2	012	6	04	4	0.29	5	12	7	13	7
IA ROCKWELL CITY	13	7161-04	42-24	94-37	1210	09/1894	4	094	7	09/1894	2	006	3	04	4	0.29	5	03	0	12	7
IA STORM LAKE 2E	13	7979-01	42-38	95-11	1425	02/1891	1	094	7	01/1892	0	017	8	15	9	0.39	7	04	0	08	3
IA TOLEDO	13	8296-05	41-59	92-35	890	09/1895	5	099	2	09/1895	3	013	6	07	7	0.29	5	06	2	07	2
IA WASHINGTON	13	8688-09	41-17	91-41	756	04/1890	1	099	2	01/1893	1	006	3	06	6	0.29	5	20	9	13	7

MAXIMUM/MINIMUM TEMPERATURE

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KS ANTHONY	14	0264-08	37-09	98-05	1340	09/1906	8	095	6	09/1906	6	025	9	11	9	0.39	7	02	0	03	0
KS ASHLAND	14	0365-07	37-12	99-46	1970	02/1889	0	097	5	01/1950	9	000	0	02	1	0.09	1	11	6	11	6
KS ATCHISON	14	0405-03	39-34	95-07	945	10/1891	1	098	4	12/1892	1	011	6	06	6	0.09	1	09	4	09	4
KS COLDWATER	14	1704-08	37-16	99-20	2083	07/1888	0	084	9	03/1904	6	012	6	05	5	0.19	3	12	7	12	7
KS COLUMBUS 1SW	14	1740-09	37-10	94-51	900	08/1891	1	098	4	12/1892	1	009	5	03	2	0.09	1	09	4	07	2
KS EL DORADO	14	2401-09	37-49	96-50	1340	01/1893	3	090	8	01/1893	1	013	6	04	4	0.29	5	13	7	10	5
KS ELLSWORTH	14	2459-05	38-44	98-14	1530	01/1888	0	083	9	01/1894	2	023	9	13	9	0.39	7	12	7	14	8
KS ESKRIDGE 1SE	14	2602-06	38-51	96-06	1420	08/1897	6	090	8	08/1897	3	017	8	07	7	0.29	5	03	0	10	5
KS FORT SCOTT	14	2835-09	37-51	94-42	845	06/1896	5	097	5	06/1896	3	003	2	05	5	0.29	5	09	4	09	4
KS HAYS 1S	14	3527-05	38-52	99-20	2010	05/1893	3	096	6	05/1893	2	006	3	02	1	0.19	3	02	0	08	3
KS HORTON	14	3810-03	39-40	95-31	1029	01/1890	1	099	2	01/1891	0	007	4	04	4	0.19	3	20	9	15	8
KS INDEPENDENCE	14	3954-09	37-15	95-42	780	01/1888	0	099	2	12/1892	1	010	5	06	6	0.29	5	09	4	03	0
KS JETMORE	14	4081-07	38-05	99-54	2302	02/1901	6	093	7	02/1901	5	012	6	05	5	0.29	5	10	5	13	7
KS LAKIN	14	4464-07	37-56	101-15	2998	09/1889	1	093	7	05/1896	3	008	4	07	7	0.69	9	11	6	11	6
KS LARNED	14	4530-08	38-10	99-05	1994	07/1891	1	086	9	01/1894	2	022	9	14	9	0.19	3	10	5	04	1
KS LAWRENCE	14	4559-06	38-58	95-16	1000	09/1894	4	093	7	09/1894	2	007	4	03	2	0.09	1	06	2	06	2
KS LEAVENWORTH 4SSE	14	4588-03	39-16	94-53	860	01/1901	6	091	8	01/1901	5	023	9	14	9	0.39	7	10	5	05	1
KS LIBERAL	14	4695-07	37-03	100-55	2834	12/1892	2	084	9	04/1903	5	015	7	09	8	0.59	9	07	2	14	8
KS MANHATTAN	14	4972-03	39-12	96-35	1065	06/1893	3	099	2	06/1893	2	015	7	08	7	0.29	5	12	7	13	7
KS MCPHERSON	14	5152-05	38-23	97-40	1495	11/1891	1	100	0	12/1892	1	001	0	02	1	0.19	3	10	5	04	1
KS MEDICINE LODGE 2N	14	5173-08	37-18	98-35	1540	06/1895	5	098	4	12/1950	9	006	3	04	4	0.19	3	10	5	15	8
KS MINNEAPOLIS	14	5363-02	39-08	97-43	1310	08/1889	1	097	5	12/1949	9	016	7	03	2	0.09	1	07	2	09	4
KS NORTON 9SSE	14	5856-01	39-42	99-50	2360	06/1890	1	090	8	01/1911	7	004	2	03	2	0.09	1	16	9	16	9
KS OBERLIN	14	5906-01	39-50	100-32	2610	05/1913	9	099	2	05/1913	8	020	8	08	7	0.39	7	05	1	16	9
KS OLATHE 3E	14	5972-06	38-53	94-46	1055	05/1893	3	094	7	09/1915	8	005	3	05	5	0.19	3	08	3	05	1
KS OTTAWA	14	6128-06	38-37	95-17	900	06/1895	5	099	2	06/1895	3	004	2	03	2	0.19	3	08	3	12	7
KS PHILLIPSBURG	14	6374-02	39-44	99-19	1907	09/1891	1	094	7	01/1893	1	008	4	07	7	0.39	7	06	2	05	1
KS SAINT FRANCIS	14	7093-01	39-46	101-48	3300	05/1908	8	100	0	05/1908	7	004	2	06	6	0.50	8	04	0	12	7
KS SCOTT CITY	14	7271-04	38-29	100-54	2970	07/1895	5	092	8	09/1900	5	009	5	04	4	0.39	7	07	2	08	3
KS SEDAN	14	7305-09	37-07	96-10	820	12/1887	0	097	5	12/1892	1	003	2	07	7	0.59	9	11	6	05	1
KS WAKEENEY	14	8495-04	39-01	99-53	2450	01/1893	3	098	4	01/1893	1	002	1	02	1	0.19	3	20	9	10	5

MAXIMUM/MINIMUM TEMPERATURE

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KY ANCHORAGE	15	0155-02	38-16	85-32	730	04/1895	4	092	8	04/1895	2	019	8	08	7	0.29	5	07	2	09	4
KY BEREA COLLEGE	15	0619-03	37-34	84-18	1070	02/1901	6	098	4	02/1901	5	008	4	05	5	0.39	7	07	2	11	6
KY BOWLING GREEN FAA AP	15	0909-02	36-58	86-26	534	04/1890	1	098	4	02/1895	2	002	1	03	2	0.19	3	14	8	20	9
KY FARMERS 2S	15	2791-03	38-07	83-33	680	12/1904	7	096	6	01/1917	8	016	7	08	7	0.29	5	16	9	06	2
KY FRANKFORT LOCK 4	15	3028-03	38-14	84-52	504	04/1895	4	098	4	04/1895	2	011	6	06	6	0.29	5	13	7	17	9
KY GREENSBURG	15	3430-02	37-15	85-30	590	07/1896	5	099	2	07/1896	3	006	3	05	5	0.29	5	09	4	04	1
KY HOPKINSVILLE	15	3994-01	36-50	87-30	590	05/1896	5	099	2	05/1896	3	002	1	03	2	0.19	3	07	2	08	3
KY LEITCHFIELD 2N	15	4703-02	37-31	86-18	620	11/1895	5	099	2	11/1895	3	004	2	05	5	0.39	7	11	6	16	9
KY MIDDLESBORO	15	5389-04	36-36	83-44	1175	12/1892	2	090	8	12/1906	6	009	5	09	8	0.50	8	06	2	09	4
KY OWENSBORO	15	6091-01	37-46	87-09	405	09/1896	5	098	4	09/1896	3	002	1	02	1	0.29	5	06	2	12	7
KY SHELBYVILLE 1E	15	7324-03	38-12	85-12	730	01/1889	0	099	2	08/1896	3	011	6	06	6	0.39	7	08	3	09	4
KY WILLIAMSBURG	15	8709-04	36-44	84-09	1000	01/1893	3	093	7	11/1897	4	027	9	18	9	0.50	8	08	3	08	3
KY WILLIAMSTOWN 3NW	15	8714-03	38-39	84-37	940	06/1902	7	099	2	06/1902	5	003	2	04	4	0.29	5	06	2	13	7

MAXIMUM/MINIMUM TEMPERATURE

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LA ALEXANDRIA	16	0098-05	31-19	92-28	87	02/1888	0	093	7	01/1965	9	000	0	00	0	0.00	0	09	4	08	3
LA AMITE	16	0205-06	30-43	90-30	180	12/1888	0	096	6	09/1892	1	004	2	07	7	0.39	7	04	0	06	2
LA BASTROP	16	0537-03	32-47	91-54	140	12/1893	4	064	9	01/1964	9	006	3	01	1	0.00	0	17	9	09	4
LA BATON ROUGE	16	0549-06	30-32	91-08	64	01/1889	0	096	6	05/1891	0	014	7	09	8	0.50	8	09	4	05	1
LA BUNKIE	16	1287-05	30-57	92-10	80	01/1889	0	094	7	05/1891	0	012	6	08	7	0.39	7	06	2	08	3
LA CALHOUN EXP STN	16	1411-02	32-31	92-20	180	07/1890	1	096	6	01/1891	0	006	3	03	2	0.29	5	06	2	13	7
LA COVINGTON 4NNW	16	2151-06	30-32	90-07	40	02/1893	3	096	6	02/1893	1	005	3	06	6	0.50	8	05	1	14	8
LA DONALDSONVILLE	16	2534-09	30-07	90-59	40	01/1888	0	095	6	02/1890	0	013	6	07	7	0.39	7	11	6	18	9
LA FRANKLIN 3NW	16	3313-08	29-49	91-33	12	06/1892	2	096	6	06/1892	1	009	5	09	8	0.39	7	10	5	12	7
LA HOUMA	16	4407-09	29-35	90-44	15	12/1888	0	091	8	02/1890	0	018	8	07	7	0.29	5	14	8	11	6
LA JENNINGS	16	4700-07	30-12	92-40	25	09/1897	6	098	4	09/1897	4	027	9	08	7	0.29	5	10	5	10	5
LA KROTZ SPRINGS 2N	16	4945-05	30-34	91-45	40	02/1889	0	096	6	12/1896	3	004	2	03	2	0.29	5	02	0	19	9
LA LAFAYETTE CAA AP	16	5026-08	30-12	91-59	38	04/1889	0	099	2	05/1891	0	001	0	03	2	0.19	3	17	9	09	4
LA NEW ORLEANS AUDUBON	16	6664-09	29-55	90-08	6	11/1888	0	095	6	02/1890	0	007	4	02	1	0.29	5	17	9	12	7
LA PLAIN DEALING	16	7344-01	32-54	93-41	291	06/1892	2	098	4	01/1968	9	000	0	01	1	0.09	1	12	7	08	3
LA ST JOSEPH EXP STN	16	8163-03	31-57	91-14	78	08/1907	8	095	6	08/1907	6	014	7	03	2	0.19	3	18	9	12	7
LA THIBODAUX 3ESE	16	9013-09	29-46	90-47	15	06/1892	2	096	6	06/1892	1	008	4	07	7	0.39	7	11	6	13	7
LA WINNSBORO 5SSE	16	9806-03	32-06	91-43	75	06/1890	1	062	9	09/1959	9	001	0	01	1	0.00	0	10	5	08	3

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
ME ACADIA NATIONAL PARK	17	0100-03	44-21	68-16	470	12/1885	0	087	9	12/1885	0	021	8	07	7	0.50	8	07	2	09	4
ME EASTPORT	17	2426-03	44-55	67-00	85	12/1884	0	098	4	01/1885	0	008	4	07	7	0.39	7	10	5	03	0
ME FARMINGTON	17	2765-02	44-41	70-09	420	06/1891	1	098	4	11/1891	0	008	4	05	5	0.29	5	10	5	12	7
ME GARDINER	17	3046-02	44-13	69-47	140	04/1885	0	096	6	04/1885	0	010	5	04	4	0.29	5	09	4	19	9
ME HOULTON	17	3897-01	46-08	67-50	410	02/1892	2	089	8	02/1892	0	017	8	04	4	0.29	5	06	2	13	7
ME LEWISTON	17	4566-02	44-06	70-13	180	06/1886	0	100	0	06/1886	0	004	2	01	1	0.00	0	11	6	06	2
ME MILLINOCKET	17	5304-01	45-39	68-42	360	02/1903	7	099	2	02/1903	5	002	1	01	1	0.09	1	06	2	00	0
ME ORONO	17	6430-02	44-54	68-40	155	10/1885	0	088	9	07/1896	3	016	7	03	2	0.29	5	19	9	13	7
ME PORTLAND WSMO AP	17	6905-03	43-39	70-19	57	04/1874	0	100	0	01/1886	0	000	0	03	2	0.50	8	06	2	06	2
ME PRESQUE ISLE	17	6937-01	46-39	68-00	599	10/1909	8	096	6	10/1909	7	008	4	02	1	0.19	3	05	1	10	5
ME RIPOGENUS DAM	17	7174-01	45-53	69-11	965	09/1925	9	097	5	09/1925	9	002	1	01	1	0.09	1	11	6	08	3
ME WOODLAND	17	9891-02	45-09	67-24	140	02/1920	9	095	6	02/1920	8	014	7	03	2	0.39	7	14	8	03	0

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MD BALTIMORE WSO CITY	18	0470-06	39-17	76-37	14	01/1893	3	100	0	01/1893	1	005	3	03	2	0.00	0	19	9	18	9
MD CAMBRIDGE WATER TRMT PLANT	18	1385-02	38-34	76-04	5	01/1893	3	090	8	01/1893	1	024	9	08	7	0.29	5	02	0	04	1
MD CHESTERTOWN	18	1750-05	39-13	76-04	40	11/1893	4	073	9	12/1939	9	000	0	01	1	0.09	1	08	3	13	7
MD COLLEGE PARK	18	1995-04	38-59	76-57	90	01/1894	4	097	5	01/1894	2	004	2	03	2	0.19	3	05	1	14	8
MD CUMBERLAND 2	18	2282-07	39-38	78-45	730	05/1891	1	084	9	08/1893	2	029	9	11	9	0.39	7	12	7	14	8
MD DENTON 2E	18	2523-02	38-53	75-48	50	03/1893	3	090	8	03/1893	2	024	9	09	8	0.39	7	09	4	06	2
MD EASTON POLICE BARRACKS	18	2700-02	38-45	76-04	40	01/1893	3	100	0	01/1893	1	010	5	04	4	0.29	5	14	8	15	8
MD GLEN DALE BELL STATION	18	3675-04	38-58	76-48	150	01/1921	9	100	0	01/1921	8	005	3	02	1	0.09	1	07	2	13	7
MD LAUREL 3W	18	5111-04	39-06	76-54	400	05/1895	5	093	7	05/1895	3	008	4	03	2	0.09	1	07	2	06	2
MD MILLINGTON 2WNW	18	5985-05	39-16	75-52	30	10/1898	6	097	5	10/1898	4	010	5	04	4	0.19	3	13	7	06	2
MD OAKLAND 1SE	18	6620-08	39-24	79-24	2420	10/1893	4	091	8	10/1893	2	012	6	12	9	0.00	0	09	4	12	7
MD OWINGS FERRY LANDING	18	6770-03	38-41	76-40	160	01/1917	9	095	6	01/1917	8	013	6	03	2	0.19	3	09	4	04	1
MD PRINCESS ANNE	18	7330-01	38-13	75-41	20	07/1894	4	094	7	07/1894	2	007	4	05	5	0.50	8	09	4	04	1
MD SALISBURY	18	8000-01	38-22	75-35	10	05/1906	8	097	5	05/1906	6	012	6	06	6	0.09	1	12	7	14	8
MD SOLOMONS	18	8405-03	38-19	76-27	12	01/1892	2	099	2	01/1892	0	003	2	03	2	0.09	1	12	7	12	7
MD WESTMINSTER POLICE BRKS	18	9440-06	39-33	76-58	765	02/1895	4	077	9	12/1897	4	030	9	06	6	0.29	5	14	8	11	6
MD WOODSTOCK COLLEGE	18	9750-06	39-20	76-52	460	08/1891	1	094	7	08/1891	0	012	6	03	2	0.19	3	09	4	12	7

MAXIMUM/MINIMUM TEMPERATURE

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MA AMHERST	19	0120-02	42-23	72-32	150	01/1893	3	100	0	01/1893	1	010	5	08	7	0.50	8	04	0	06	2
MA BEDFORD	19	0535-02	42-29	71-17	160	01/1893	3	097	5	01/1893	1	003	2	05	5	0.39	7	04	0	09	4
MA BLUE HILL OBSERVATORY	19	0736-02	42-13	71-07	629	02/1885	0	100	0	02/1885	0	003	2	03	2	0.09	1	06	2	06	2
MA CHESTNUT HILL	19	1447-02	42-20	71-09	120	11/1884	0	098	4	11/1884	0	004	2	01	1	0.19	3	17	9	17	9
MA CLINTON	19	1561-02	42-24	71-41	398	01/1905	7	098	4	01/1905	6	006	3	00	0	0.00	0	14	8	14	8
MA FRAMINGHAM	19	2975-02	42-17	71-25	170	12/1884	0	099	2	12/1884	0	004	2	00	0	0.00	0	18	9	07	2
MA LAWRENCE	19	4105-02	42-42	71-10	57	01/1885	0	100	0	01/1885	0	002	1	02	1	0.09	1	08	3	10	5
MA NEW BEDFORD	19	5246-03	41-38	70-56	70	05/1885	0	097	5	07/1885	0	009	5	04	4	0.29	5	20	9	10	5
MA PLYMOUTH	19	6486-03	41-57	70-40	90	05/1903	7	094	7	05/1903	5	012	6	03	2	0.19	3	09	4	17	9
MA PROVINCETOWN	19	6681-03	42-03	70-11	20	02/1885	0	086	9	01/1887	0	023	9	09	8	0.69	9	07	2	10	5
MA STOCKBRIDGE	19	8181-01	42-18	73-20	860	12/1929	9	092	8	12/1929	9	015	7	08	7	0.29	5	12	7	07	2
MA TAUNTON	19	8367-03	41-54	71-04	20	11/1884	0	099	2	12/1884	0	002	1	01	1	0.00	0	12	7	11	6

MAXIMUM/MINIMUM TEMPERATURE

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MI ADRIAN 2NNE	20	0032-10	41-55	84-01	754	11/1887	0	098	4	11/1887	0	012	6	09	8	0.29	5	13	7	08	3
MI ALLEGAN	20	0128-08	42-31	85-50	670	08/1890	1	094	7	06/1907	6	013	6	09	8	0.39	7	14	8	10	5
MI ALMA	20	0146-06	43-23	84-40	760	10/1887	0	098	4	01/1892	0	011	6	09	8	0.39	7	04	0	08	3
MI ANN ARBOR UNIV OF MI	20	0230-10	42-18	83-43	900	04/1889	0	099	2	04/1889	0	003	2	05	5	0.39	7	14	8	13	7
MI BIG RAPIDS WATERWORKS	20	0779-06	43-42	85-29	930	09/1887	0	092	8	01/1892	0	009	5	07	7	0.39	7	06	2	13	7
MI CHATHAM EXP FARM	20	1484-02	46-21	86-56	875	07/1900	6	098	4	05/1917	8	004	2	01	1	0.09	1	03	0	16	9
MI CHEBOYGAN	20	1492-04	45-39	84-28	590	04/1890	1	096	6	01/1897	3	028	9	16	9	0.59	9	10	5	05	1
MI COLDWATER STATE SCHOOL	20	1675-09	41-57	85-00	984	09/1887	0	090	8	01/1892	0	012	6	03	2	0.09	1	15	8	11	6
MI EAST TAWAS	20	2423-04	44-17	83-30	586	08/1887	0	088	9	09/1892	1	024	9	08	7	0.50	8	10	5	15	8
MI FAYETTE 3SW	20	2737-02	45-41	86-42	765	12/1920	9	097	5	09/1959	9	001	0	01	1	0.00	0	06	2	06	2
MI HART	20	3632-05	43-42	86-22	675	09/1887	0	091	8	06/1907	6	003	2	01	1	0.00	0	14	8	07	2
MI HILLSDALE	20	3823-09	41-56	84-38	1080	04/1897	5	099	2	04/1897	3	001	0	03	2	0.29	5	12	7	12	7
MI IRON MOUNTAIN KINGSFORD WWTP	20	4090-01	45-47	88-05	1060	02/1899	6	098	4	02/1899	4	005	3	05	5	0.19	3	07	2	04	1
MI IRONWOOD	20	4104-01	46-27	90-11	1430	08/1901	7	098	4	08/1901	5	012	6	08	7	0.29	5	14	8	18	9
MI ISHPERING	20	4127-01	46-29	87-39	1436	08/1898	6	097	5	11/1898	4	003	2	03	2	0.19	3	18	9	10	5
MI KALAMAZOO STATE HOSPITAL	20	4244-08	42-17	85-36	945	01/1892	2	098	4	01/1892	0	006	3	02	1	0.09	1	06	2	13	7
MI MIDLAND	20	5434-06	43-37	84-13	642	06/1896	5	092	8	06/1896	3	017	8	07	7	0.50	8	12	7	19	9
MI MOUNT CLEMENS ANG BASE	20	5650-10	42-36	82-49	580	08/1896	5	090	8	08/1896	3	025	9	03	2	0.09	1	12	7	10	5
MI MOUNT PLEASANT UNIVERSITY	20	5662-06	43-35	84-46	796	09/1895	5	090	8	09/1895	3	012	6	03	2	0.39	7	15	8	12	7
MI MUNISING	20	5690-02	46-24	86-39	620	09/1896	5	095	6	12/1899	4	018	8	05	5	0.39	7	13	7	20	9
MI NEWBERRY STATE HOSPITAL	20	5816-02	46-20	85-30	875	09/1896	5	094	7	12/1896	3	012	6	03	2	0.19	3	09	4	04	1
MI OWOSSO WASTEWATER PLANT	20	6300-09	43-01	84-11	738	01/1896	5	096	6	02/1899	4	008	4	04	4	0.29	5	12	7	02	0
MI SOUTH HAVEN	20	7690-08	42-24	86-17	620	09/1895	5	096	6	09/1925	9	011	6	03	2	0.09	1	18	9	07	2
MI STAMBAUGH 1S	20	7812-01	46-04	88-38	1485	02/1896	5	098	4	02/1896	3	009	5	05	5	0.29	5	08	3	11	6

MAXIMUM/MINIMUM TEMPERATURE

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MN ADA	21	0018-01	47-18	96-31	906	01/1893	3	084	9	09/1916	8	003	2	04	4	0.39	7	09	4	08	3
MN ALBERT LEA 3SE	21	0075-08	43-37	93-25	1230	01/1892	2	096	6	01/1892	0	011	6	05	5	0.29	5	07	2	09	4
MN BAUDETTE	21	0515-02	48-43	94-37	1075	01/1909	8	096	6	01/1909	7	006	3	03	2	0.50	8	07	2	05	1
MN CLOQUET	21	1630-06	46-42	92-31	1265	04/1911	8	100	0	04/1911	7	001	0	01	1	0.00	0	08	3	15	8
MN DETROIT LAKES 1NNE	21	2142-01	46-50	95-51	1375	12/1895	5	097	5	12/1895	3	004	2	05	5	0.50	8	15	8	09	4
MN FAIRMONT	21	2698-08	43-38	94-28	1187	01/1892	2	098	4	10/1892	1	005	3	04	4	0.19	3	17	9	07	2
MN FARMINGTON 3NW	21	2737-09	44-40	93-11	980	07/1892	2	097	5	07/1892	1	003	2	00	0	0.00	0	14	8	06	2
MN FOSSTON	21	2916-01	47-34	95-45	1310	07/1909	8	098	4	07/1909	7	014	7	06	6	0.29	5	08	3	11	6
MN GRAND MEADOW	21	3290-09	43-42	92-34	1350	07/1893	4	099	2	07/1893	2	003	2	05	5	0.19	3	16	9	18	9
MN HALLOCK	21	3455-01	48-46	96-57	820	02/1899	6	099	2	02/1899	4	017	8	10	8	0.69	9	15	8	09	4
MN ITASCA U OF MN	21	4106-01	47-13	95-12	1490	06/1911	8	097	5	06/1911	7	009	5	02	1	0.19	3	10	5	09	4
MN LEECH LAKE DAM	21	4652-02	47-15	94-13	1302	09/1897	6	098	4	09/1897	4	004	2	02	1	0.19	3	05	1	15	8
MN MAPLE PLAIN	21	5136-06	45-00	93-39	970	02/1893	3	091	8	02/1893	1	009	5	04	4	0.59	9	11	6	13	7
MN MILAN 1NW	21	5400-04	45-08	95-56	1020	09/1893	4	098	4	09/1893	2	004	2	01	1	0.00	0	11	6	02	0
MN MINNEAPOLIS WSFO AP	21	5435-06	44-53	93-13	834	11/1890	1	099	2	11/1890	0	004	2	03	2	0.09	1	03	0	11	6
MN MONTEVIDEO 1SW	21	5563-04	44-56	95-45	985	01/1893	3	099	2	01/1893	1	002	1	03	2	0.29	5	10	5	14	8
MN MORA	21	5615-06	45-53	93-18	990	07/1904	7	100	0	07/1904	6	004	2	03	2	0.29	5	09	4	01	0
MN MORRIS WC EXPERIMENT STATION	21	5638-04	45-35	95-55	1140	01/1886	0	100	0	01/1886	0	001	0	03	2	0.39	7	13	7	16	9
MN NEW ULM	21	5887-08	44-18	94-27	860	08/1893	4	097	5	08/1893	2	007	4	03	2	0.19	3	04	0	12	7
MN OLIVIA	21	6152-05	44-47	94-59	1094	07/1892	2	099	2	07/1892	1	006	3	05	5	0.39	7	11	6	06	2
MN PARK RAPIDS	21	6360-02	46-55	95-04	1434	01/1893	3	099	2	01/1893	1	004	2	03	2	0.29	5	08	3	13	7
MN PINE RIVER DAM	21	6547-06	46-40	94-07	1250	09/1897	6	098	4	09/1897	4	004	2	04	4	0.50	8	13	7	12	7
MN PIPESTONE	21	6565-07	44-01	96-19	1705	02/1899	6	097	5	02/1899	4	012	6	07	7	0.50	8	11	6	13	7
MN POKEGAMA DAM	21	6612-02	47-15	93-35	1280	09/1897	6	098	4	09/1897	4	006	3	03	2	0.19	3	17	9	13	7
MN ROSEAU 1E	21	7087-01	48-51	95-45	1047	04/1895	4	087	9	12/1896	3	015	7	09	8	0.39	7	20	9	16	9

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MN SAINT PETER 2SW	21	7405-08	44-18	93-58	850	05/1893	3	095	6	05/1893	2	011	6	04	4	0.50	8	08	3	06	2
MN SANDY LAKE DAM LIBBY	21	7460-06	46-48	93-19	1234	09/1897	6	099	2	09/1897	4	002	1	00	0	0.00	0	13	7	11	6
MN TWO HARBORS	21	8419-03	47-01	91-40	625	03/1894	4	099	2	03/1894	2	007	4	03	2	0.39	7	06	2	10	5
MN VIRGINIA	21	8543-03	47-30	92-33	1435	11/1893	4	098	4	11/1893	2	002	1	03	2	0.19	3	15	8	12	7
MN WALKER AH-GWAH-CHING	21	8618-01	47-04	94-35	1407	12/1907	8	098	4	12/1907	7	003	2	00	0	0.00	0	14	8	15	8
MN WINNEBAGO	21	9046-08	43-46	94-10	1110	06/1895	5	099	2	06/1895	3	008	4	03	2	0.09	1	09	4	09	4
MN WINNIBIGOSHISH DAM	21	9059-02	47-26	94-03	1315	09/1897	6	098	4	09/1897	4	002	1	01	1	0.09	1	08	3	05	1
MN ZUMBROTA	21	9249-09	44-18	92-40	985	04/1903	7	098	4	04/1903	5	004	2	03	2	0.29	5	05	1	09	4

MAXIMUM/MINIMUM TEMPERATURE

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MS ABERDEEN	22	0021-06	33-50	88-33	207	06/1889	1	095	6	06/1889	0	008	4	06	6	0.39	7	17	9	14	8
MS BATESVILLE 2SW	22	0488-02	34-18	89-59	215	01/1889	0	099	2	01/1889	0	006	3	02	1	0.29	5	10	5	08	3
MS BILOXI(CITY)	22	0792-10	30-24	88-54	15	05/1893	3	097	5	05/1893	2	008	4	12	9	0.39	7	03	0	00	0
MS BOONEVILLE	22	0955-03	34-40	88-34	490	11/1889	1	091	8	11/1889	0	020	8	12	9	0.50	8	10	5	09	4
MS BROOKHAVEN CITY	22	1094-07	31-33	90-27	425	06/1889	1	098	4	10/1897	4	007	4	05	5	0.29	5	13	7	07	2
MS CANTON	22	1389-05	32-36	90-02	228	04/1890	1	096	6	10/1929	9	021	8	04	4	0.09	1	05	1	12	7
MS CLARKSDALE	22	1707-01	34-12	90-34	173	11/1892	2	086	9	11/1892	1	024	9	09	8	0.50	8	10	5	12	7
MS COLUMBIA	22	1865-08	31-15	89-50	155	06/1903	7	085	9	06/1903	5	030	9	12	9	0.19	3	10	5	16	9
MS COLUMBUS LUXAPALLILA	22	1880-06	33-31	88-24	142	01/1890	1	097	5	01/1961	9	014	7	03	2	0.09	1	04	0	09	4
MS CORINTH CITY	22	1962-03	34-55	88-31	385	10/1895	5	094	7	12/1897	4	029	9	12	9	0.29	5	05	1	07	2
MS CRYSTAL SPRINGS EXP STN	22	2094-07	31-58	90-22	487	04/1892	2	098	4	04/1892	0	005	3	06	6	0.39	7	11	6	09	4
MS FOREST	22	3107-05	32-19	89-29	480	06/1889	1	097	5	01/1959	9	009	5	02	1	0.09	1	07	2	09	4
MS GREENVILLE	22	3605-04	33-23	91-01	132	02/1889	0	099	2	02/1889	0	008	4	08	7	0.50	8	10	5	06	2
MS HATTIESBURG	22	3887-09	31-19	89-18	161	04/1890	1	092	8	01/1906	6	028	9	16	9	0.29	5	09	4	01	0
MS HERNANDO	22	3975-02	34-50	90-00	363	05/1889	0	092	8	04/1890	0	020	8	10	8	0.50	8	12	7	07	2
MS HOLLY SPRINGS 4N	22	4173-02	34-49	89-26	483	02/1889	0	097	5	02/1889	0	011	6	08	7	0.19	3	03	0	16	9
MS KOSCIUSKO	22	4776-05	33-03	89-36	420	05/1889	0	095	6	01/1961	9	014	7	02	1	0.09	1	10	5	13	7
MS LAUREL	22	4939-09	31-41	89-07	225	02/1902	7	094	7	02/1902	5	021	8	11	9	0.39	7	08	3	07	2
MS LOUISVILLE	22	5247-06	33-08	89-04	581	01/1889	0	099	2	12/1890	0	012	6	06	6	0.50	8	12	7	14	8
MS MONTICELLO	22	5987-08	31-33	90-06	220	04/1907	8	099	2	04/1907	6	015	7	11	9	0.39	7	10	5	15	8
MS MOORHEAD	22	6009-04	33-27	90-31	117	04/1913	9	095	6	04/1913	7	026	9	09	8	0.50	8	13	7	11	6
MS NATCHEZ	22	6177-07	31-33	91-23	195	05/1889	0	098	4	02/1891	0	016	7	13	9	0.39	7	06	2	06	2
MS PONTOTOC EXP STN	22	7111-03	34-09	89-00	405	01/1889	0	098	4	10/1894	2	002	1	04	4	0.29	5	12	7	11	6
MS POPLARVILLE EXP STN	22	7128-10	30-51	89-33	313	04/1903	7	096	6	04/1903	5	009	5	03	2	0.00	0	16	9	13	7
MS PORT GIBSON	22	7132-07	31-58	91-00	120	06/1889	1	098	4	01/1974	9	000	0	00	0	0.00	0	08	3	08	3

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MS ROSEDALE	22	7582-01	33-51	91-01	150	11/1894	4	075	9	11/1894	2	031	9	05	5	0.29	5	09	4	02	0
MS STATE UNIVERSITY	22	8374-06	33-28	88-47	185	01/1889	0	097	5	01/1889	0	007	4	07	7	0.29	5	11	6	13	7
MS UNIVERSITY	22	9079-02	34-23	89-32	380	01/1889	0	090	8	01/1902	5	006	3	05	5	0.39	7	13	7	16	9
MS WATER VALLEY 1NNE	22	9400-02	34-10	89-38	380	02/1889	0	093	7	02/1889	0	015	7	05	5	0.29	5	12	7	09	4
MS WAVELAND	22	9426-10	30-18	89-23	8	09/1890	1	093	7	09/1890	0	013	6	08	7	0.39	7	11	6	12	7
MS WAYNESBORO 2W	22	9439-09	31-41	88-40	197	03/1891	1	097	5	12/1895	3	016	7	07	7	0.29	5	11	6	09	4
MS WOODVILLE	22	9793-07	31-06	91-14	400	03/1893	3	095	6	03/1893	2	017	8	10	8	0.39	7	07	2	05	1
MS YAZOO CITY 5NNE	22	9860-04	32-54	90-23	107	09/1893	4	098	4	09/1893	2	014	7	11	9	0.50	8	11	6	19	9

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MO APPLETON CITY	23	0204-03	38-12	94-02	800	01/1893	3	096	6	01/1893	1	012	6	07	7	0.29	5	06	2	10	5
MO ARCADIA	23	0224-05	37-35	90-37	926	06/1896	5	099	2	06/1896	3	000	0	02	1	0.19	3	10	5	04	1
MO BRUNSWICK	23	1037-01	39-25	93-07	660	01/1893	3	098	4	01/1893	1	012	6	07	7	0.39	7	09	4	14	8
MO CARUTHERSVILLE	23	1364-06	36-12	89-40	280	11/1898	6	097	5	12/1933	9	000	0	02	1	0.19	3	11	6	11	6
MO CLINTON	23	1711-03	38-22	93-46	790	10/1906	8	098	4	10/1906	6	018	8	07	7	0.39	7	20	9	10	5
MO CONCEPTION	23	1822-01	40-15	94-41	1108	10/1893	4	099	2	10/1893	2	004	2	01	1	0.09	1	13	7	15	8
MO DONIPHAN	23	2289-05	36-35	90-49	330	05/1904	7	100	0	05/1904	6	011	6	04	4	0.09	1	13	7	09	4
MO HARRISONVILLE	23	3649-03	38-39	94-20	900	01/1893	3	097	5	01/1893	1	006	3	04	4	0.29	5	09	4	10	5
MO JEFFERSON CITY WATER PLANT	23	4271-03	38-35	92-09	670	08/1893	4	096	6	01/1902	5	007	4	05	5	0.50	8	15	8	09	4
MO LAMAR	23	4705-04	37-30	94-16	980	01/1893	3	100	0	01/1893	1	006	3	06	6	0.39	7	09	4	12	7
MO LEBANON 2W	23	4825-04	37-40	92-39	1279	01/1893	3	100	0	01/1893	1	009	5	10	8	0.50	8	07	2	10	5
MO LEXINGTON 3NE	23	4904-01	39-12	93-52	825	01/1896	5	099	2	01/1896	3	006	3	06	6	0.19	3	08	3	18	9
MO LOCKWOOD	23	5027-04	37-23	93-57	1078	09/1904	7	098	4	09/1904	6	003	2	02	1	0.09	1	12	7	16	9
MO LOUISIANA STARK'S NURSERY	23	5093-02	39-26	91-04	469	12/1897	6	094	7	12/1897	4	013	6	05	5	0.29	5	08	3	09	4
MO MACON	23	5175-01	39-43	92-28	855	09/1899	6	098	4	01/1980	9	032	9	00	0	0.09	1	02	0	13	7
MO MARBLE HILL	23	5253-05	37-18	89-58	390	01/1893	3	095	6	08/1980	9	000	0	00	0	0.00	0	17	9	07	2
MO MEXICO	23	5541-02	39-11	91-53	775	01/1893	3	099	2	01/1893	1	007	4	05	5	0.29	5	19	9	11	6
MO MOUNTAIN GROVE	23	5834-04	37-09	92-16	1450	04/1901	7	100	0	04/1901	5	003	2	02	1	0.19	3	03	0	10	5
MO NEOSHO	23	5976-04	36-52	94-22	1011	02/1893	3	099	2	02/1893	1	005	3	02	1	0.19	3	07	2	06	2
MO ROLLA UNIV OF MO	23	7263-05	37-57	91-46	1180	06/1907	8	096	6	02/1979	9	000	0	00	0	0.00	0	13	7	11	6
MO STEFFENVILLE	23	8051-02	39-58	91-53	690	11/1897	6	098	4	11/1897	4	011	6	04	4	0.19	3	07	2	02	0
MO TRENTON	23	8444-01	40-05	93-38	837	10/1895	5	099	2	10/1895	3	015	7	08	7	0.39	7	14	8	10	5
MO UNIONVILLE	23	8523-01	40-29	93-00	1062	03/1893	3	096	6	03/1893	2	032	9	09	8	0.19	3	08	3	15	8
MO WARRENSBURG 2SSE	23	8712-03	38-44	93-43	840	01/1899	6	096	6	01/1899	4	019	8	11	9	0.50	8	10	5	13	7
MO WARRENTON 1N	23	8725-02	38-49	91-08	845	01/1893	3	093	7	01/1893	1	013	6	05	5	0.50	8	11	6	09	4
MO WARSAW #1	23	8733-03	38-15	93-22	705	02/1893	3	095	6	01/1905	6	004	2	05	5	0.39	7	15	8	12	7

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MT ANACONDA	24	0199-01	46-08	112-57	5280	09/1905	7	098	4	09/1905	6	006	3	03	2	0.00	0	13	7	11	6
MT AUGUSTA	24	0364-04	47-29	112-23	4070	07/1896	5	095	6	01/1900	4	017	8	08	7	0.50	8	10	5	15	8
MT BIG TIMBER	24	0780-05	45-50	109-57	4100	04/1894	4	086	9	12/1902	5	010	5	09	8	0.19	3	10	5	08	3
MT BOZEMAN MONTANA ST UNIV	24	1044-02	45-40	111-03	4856	04/1892	2	097	5	01/1901	5	000	0	01	1	0.09	1	17	9	14	8
MT CASCADE 5S	24	1552-04	47-13	111-43	3390	04/1904	7	099	2	04/1904	6	004	2	03	2	0.29	5	11	6	06	2
MT CHINOOK	24	1722-03	48-35	109-14	2340	12/1895	5	092	8	01/1914	8	019	8	12	9	1.00	9	15	8	10	5
MT CHOTEAU AP	24	1737-03	47-49	112-10	3945	11/1891	1	080	9	01/1922	8	009	5	05	5	0.29	5	12	7	13	7
MT CROW AGENCY	24	2112-05	45-36	107-27	3030	02/1892	2	094	7	06/1895	3	017	8	07	7	0.59	9	12	7	02	0
MT CUT BANK	24	2173-03	48-36	112-22	3838	12/1903	7	092	8	12/1903	6	008	4	09	8	0.39	7	05	1	03	0
MT DILLON WMCE	24	2409-02	45-12	112-38	5228	01/1895	4	096	6	01/1900	4	002	1	03	2	0.29	5	10	5	14	8
MT EKALAKA	24	2689-07	45-53	104-32	3425	01/1897	5	095	6	01/1897	3	005	3	04	4	0.50	8	09	4	05	1
MT ENNIS	24	2793-02	45-21	111-43	4953	01/1918	9	100	0	01/1918	8	002	1	04	4	0.29	5	06	2	11	6
MT FLATWILLOW 4ENE	24	3013-04	46-51	108-19	3138	07/1913	9	099	2	07/1913	8	003	2	02	1	0.09	1	08	3	09	4
MT FORKS 4NNE	24	3089-03	48-47	107-28	2600	01/1915	9	098	4	01/1915	8	013	6	05	5	0.19	3	12	7	11	6
MT FORT ASSINNIBOINE	24	3110-03	48-30	109-48	2687	11/1891	1	073	9	09/1906	6	016	7	15	9	0.29	5	13	7	15	8
MT FORTINE 1N	24	3139-01	48-47	114-54	3000	03/1906	8	099	2	03/1906	6	006	3	06	6	0.29	5	13	7	11	6
MT GLASGOW WSO AP	24	3558-06	48-13	106-37	2284	07/1893	4	095	6	01/1917	8	006	3	05	5	0.39	7	04	0	07	2
MT GLENDIVE	24	3581-06	47-06	104-43	2076	11/1891	1	096	6	01/1915	8	001	0	05	5	0.29	5	09	4	05	1
MT GREAT FALLS WSCMO AP	24	3751-04	47-29	111-22	3663	12/1891	2	099	2	01/1899	4	013	6	09	8	0.39	7	17	9	18	9
MT HAMILTON	24	3885-01	46-15	114-09	3529	07/1895	5	086	9	01/1911	7	012	6	07	7	0.59	9	13	7	09	4
MT HAUGAN 3E	24	3984-01	47-23	115-21	3100	02/1912	9	100	0	02/1912	7	011	6	05	5	0.29	5	10	5	10	5
MT HEBGEN DAM	24	4038-02	44-52	111-20	6489	06/1904	7	097	5	06/1904	6	015	7	02	1	0.19	3	02	0	11	6
MT HELENA WSO	24	4055-04	46-35	112-00	3828	11/1891	1	099	2	01/1905	6	005	3	04	4	0.19	3	09	4	15	8
MT HUNTLEY EXPERIMENT STATION	24	4345-05	45-55	108-15	2989	05/1906	8	099	2	05/1906	6	002	1	02	1	0.19	3	10	5	16	9
MT JORDAN	24	4522-06	47-19	106-54	2590	01/1905	7	081	9	01/1931	9	001	0	01	1	0.19	3	05	1	07	2
MT KALISPELL WSO AP	24	4558-01	48-18	114-16	2965	06/1896	5	098	4	01/1906	6	000	0	03	2	0.29	5	04	0	04	1
MT LIBBY 1NE RS	24	5015-01	48-24	115-32	2080	06/1895	5	084	9	02/1900	5	019	8	06	6	0.19	3	17	9	16	9
MT LIVINGSTON 12S	24	5080-05	45-29	110-34	4870	10/1895	5	091	8	04/1900	5	016	7	15	9	0.39	7	10	5	01	0
MT MALTA 7E	24	5338-03	48-24	107-44	2245	06/1905	7	097	5	10/1905	6	011	6	05	5	0.39	7	11	6	06	2
MT MEDICINE LAKE 3SE	24	5572-06	48-29	104-27	1952	01/1911	8	093	7	01/1911	7	024	9	05	5	0.19	3	17	9	10	5
MT MILDRED 5N	24	5668-07	46-46	104-58	2510	05/1918	9	097	5	05/1918	8	021	8	05	5	0.09	1	09	4	16	9
MT MILES CITY FAA AP	24	5690-07	46-26	105-52	2629	11/1891	1	099	2	02/1896	3	004	2	04	4	0.19	3	13	7	11	6

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MT MOCCASIN EXPERIMENT STATION	24	5761-04	47-03	109-57	4300	04/1909	8	099	2	04/1909	7	001	0	01	1	0.19	3	13	7	03	0
MT NORRIS MADISON POWER HOUSE	24	6157-02	45-29	111-38	4745	02/1907	8	099	2	02/1907	6	002	1	03	2	0.29	5	10	5	11	6
MT PHILIPSBURG RS	24	6472-01	46-19	113-18	5270	09/1903	7	097	5	09/1903	5	006	3	07	7	0.69	9	07	2	11	6
MT PLEVNA	24	6601-07	46-25	104-30	2765	03/1912	9	100	0	03/1912	7	006	3	07	7	0.79	9	18	9	12	7
MT POPLAR	24	6660-06	48-07	105-12	1995	11/1891	1	094	7	09/1929	9	042	9	20	9	0.39	7	11	6	10	5
MT RED LODGE	24	6918-05	45-11	109-15	5575	04/1894	4	094	7	01/1900	4	003	2	07	7	0.50	8	08	3	08	3
MT SAINT IGNATIUS	24	7286-01	47-19	114-06	2900	02/1896	5	089	8	08/1903	5	007	4	08	7	0.19	3	09	4	05	1
MT SAVAGE	24	7382-06	47-27	104-21	1985	09/1905	7	099	2	09/1905	6	008	4	02	1	0.19	3	12	7	07	2
MT VALIER	24	8501-03	48-19	112-15	3805	09/1911	8	099	2	09/1911	7	000	0	00	0	0.00	0	09	4	03	0
MT VIRGINIA CITY	24	8597-02	45-18	111-57	5758	11/1891	1	086	9	09/1916	8	005	3	07	7	0.39	7	05	1	09	4
MT WEST YELLOWSTONE	24	8857-02	44-39	111-06	6657	07/1905	7	079	9	07/1905	6	030	9	09	8	0.69	9	15	8	13	7
MT WHITE SULPHUR SPRINGS #2	24	8930-04	46-31	110-53	5200	04/1894	4	080	9	01/1900	4	028	9	17	9	0.59	9	07	2	08	3

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
NE ALBION	25	0070-03	41-41	98-00	1760	01/1893	3	093	7	01/1893	1	010	5	04	4	0.39	7	09	4	10	5
NE ALLIANCE	25	0130-01	42-06	102-52	3980	10/1900	6	089	8	10/1900	5	019	8	09	8	0.19	3	08	3	03	0
NE ASHLAND 3NE	25	0375-06	41-04	96-20	1067	03/1893	3	096	6	03/1893	2	024	9	08	7	0.39	7	08	3	02	0
NE ATKINSON	25	0420-02	42-33	98-58	2125	06/1906	8	094	7	06/1906	6	009	5	03	2	0.29	5	09	4	08	3
NE AUBURN 5ESE	25	0435-09	40-23	95-45	930	01/1899	6	098	4	01/1899	4	016	7	07	7	0.19	3	04	0	10	5
NE BEATRICE 1N	25	0622-09	40-18	96-45	1297	01/1893	3	099	2	01/1893	1	004	2	04	4	0.19	3	12	7	09	4
NE BEAVER CITY	25	0640-08	40-08	99-50	2160	01/1893	3	098	4	01/1893	1	008	4	08	7	0.39	7	09	4	17	9
NE BRIDGEPORT	25	1145-01	41-40	103-06	3660	06/1897	5	099	2	06/1897	3	001	0	02	1	0.29	5	14	8	07	2
NE BROKEN BOW 2W	25	1200-05	41-25	99-41	2500	09/1901	7	098	4	09/1901	5	004	2	04	4	0.29	5	13	7	14	8
NE CRETE	25	2020-09	40-37	96-57	1435	01/1893	3	098	4	01/1893	1	004	2	04	4	0.19	3	12	7	11	6
NE CURTIS 1E	25	2100-07	40-38	100-30	2585	05/1894	4	092	8	07/1895	3	011	6	05	5	0.29	5	11	6	11	6
NE DAVID CITY	25	2205-06	41-15	97-08	1615	12/1897	6	096	6	12/1897	4	005	3	06	6	0.29	5	18	9	14	8
NE FAIRBURY 2SSE	25	2820-09	40-07	97-10	1340	08/1895	5	100	0	08/1895	3	004	2	07	7	0.50	8	11	6	13	7
NE FAIRMONT	25	2840-09	40-38	97-35	1640	06/1896	5	098	4	01/1950	9	004	2	01	1	0.09	1	09	4	17	9
NE FRANKLIN	25	3035-08	40-06	98-58	1855	01/1888	0	094	7	01/1893	1	020	8	16	9	0.79	9	03	0	01	0
NE GENEVA	25	3175-09	40-32	97-36	1630	01/1893	3	099	2	01/1893	1	002	1	06	6	0.50	8	13	7	10	5
NE GENOA 2W	25	3185-06	41-27	97-46	1590	01/1893	3	097	5	01/1893	1	006	3	06	6	0.39	7	03	0	05	1
NE GOTHENBURG	25	3365-05	40-56	100-10	2585	09/1894	4	099	2	01/1902	5	006	3	03	2	0.09	1	03	0	02	0
NE HALSEY 2W	25	3540-02	41-54	100-19	2705	04/1903	7	099	2	04/1903	5	010	5	06	6	0.39	7	08	3	11	6
NE HARRISON	25	3615-01	42-41	103-53	4850	05/1914	9	098	4	05/1914	8	016	7	11	9	0.50	8	05	1	12	7
NE HARTINGTON	25	3630-03	42-36	97-16	1370	01/1893	3	099	2	01/1893	1	004	2	05	5	0.29	5	10	5	13	7
NE HASTINGS	25	3660-08	40-35	98-21	1925	05/1907	8	098	4	05/1907	6	007	4	06	6	0.59	9	12	7	11	6
NE HAY SPRINGS	25	3710-01	42-41	102-41	3855	01/1893	3	098	4	03/1894	2	008	4	08	7	0.29	5	13	7	12	7
NE HEBRON	25	3735-09	40-10	97-35	1480	01/1893	3	099	2	01/1893	1	009	5	07	7	0.39	7	13	7	11	6
NE HOLDREGE	25	3910-08	40-26	99-22	2320	04/1901	7	098	4	04/1901	5	003	2	04	4	0.29	5	10	5	05	1
NE IMPERIAL	25	4110-07	40-31	101-38	3278	12/1894	4	099	2	07/1895	3	013	6	06	6	0.29	5	14	8	06	2
NE KIMBALL	25	4440-01	41-14	103-40	4705	01/1893	3	098	4	01/1893	1	002	1	04	4	0.39	7	02	0	15	8
NE LODGEPOLE	25	4900-01	41-09	102-38	3832	12/1894	4	093	7	12/1907	7	011	6	04	4	0.29	5	15	8	14	8
NE LOUP CITY 1N	25	4985-05	41-17	98-58	2120	01/1902	7	097	5	01/1902	5	003	2	04	4	0.50	8	07	2	12	7
NE MADISON	25	5080-03	41-50	97-27	1580	01/1898	6	098	4	01/1898	4	009	5	06	6	0.39	7	17	9	12	7
NE MCCOOK	25	5310-07	40-12	100-35	2580	04/1909	8	094	7	04/1909	7	023	9	08	7	0.50	8	10	5	10	5
NE MERRIMAN	25	5470-02	42-55	101-41	3250	02/1915	9	094	7	02/1915	8	010	5	08	7	0.59	9	11	6	11	6

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MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
NE MINDEN	25	5565-08	40-30	98-57	2170	01/1900	6	099	2	01/1900	4	002	1	08	7	0.50	8	15	8	08	3
NE NORTH LOUP	25	6040-05	41-30	98-46	1960	04/1895	4	099	2	07/1895	3	012	6	06	6	0.29	5	11	6	10	5
NE OAKDALE	25	6135-03	42-04	97-57	1720	01/1893	3	099	2	01/1893	1	004	2	04	4	0.09	1	14	8	14	8
NE PAWNEE CITY	25	6570-09	40-06	96-09	1185	11/1903	7	098	4	11/1903	5	006	3	02	1	0.19	3	11	6	08	3
NE PURDUM	25	6970-02	42-04	100-15	2690	05/1902	7	099	2	05/1902	5	001	0	02	1	0.19	3	09	4	11	6
NE RED CLOUD	25	7070-08	40-06	98-31	1720	04/1901	7	097	5	04/1901	5	010	5	05	5	0.79	9	10	5	11	6
NE SAINT PAUL	25	7515-05	41-12	98-27	1796	01/1900	6	100	0	01/1900	4	003	2	04	4	0.39	7	17	9	16	9
NE SEWARD	25	7715-06	40-54	97-05	1480	01/1900	6	092	8	09/1950	9	000	0	01	1	0.00	0	15	8	04	1
NE SYRACUSE	25	8395-09	40-40	96-11	1100	04/1894	4	099	2	04/1894	2	013	6	12	9	0.29	5	14	8	13	7
NE TECUMSEH	25	8465-09	40-22	96-11	1130	10/1893	4	093	7	10/1893	2	021	8	08	7	0.39	7	04	0	14	8
NE TEKAMAH 1S	25	8480-03	41-45	96-14	1040	01/1893	3	098	4	06/1962	9	005	3	02	1	0.19	3	06	2	04	1
NE WAKEFIELD	25	8915-03	42-16	96-52	1413	04/1897	5	098	4	04/1897	3	005	3	04	4	0.29	5	12	7	02	0
NE WEEPING WATER	25	9090-06	40-52	96-09	1100	06/1907	8	097	5	06/1907	6	010	5	09	8	0.50	8	03	0	20	9
NE YORK	25	9510-06	40-52	97-36	1610	06/1901	7	100	0	01/1950	9	002	1	02	1	0.09	1	06	2	07	2

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
NV AUSTIN	26	0507-02	39-30	117-05	6605	02/1888	0	088	9	09/1959	9	013	6	03	2	0.19	3	07	2	04	1
NV BATTLE MOUNTAIN AP	26	0691-02	40-35	116-54	4539	05/1902	7	096	6	05/1902	5	019	8	06	6	0.59	9	05	1	17	9
NV BOULDER CITY	26	1071-04	35-59	114-51	2525	09/1931	9	097	5	09/1931	9	005	3	01	1	0.00	0	14	8	15	8
NV ELKO FAA AP	26	2573-02	40-50	115-47	5075	02/1888	0	091	8	01/1914	8	002	1	04	4	0.59	9	14	8	13	7
NV FALLON EXPERIMENT STATION	26	2780-01	39-27	118-47	3965	04/1889	0	092	8	01/1907	6	001	0	03	2	0.39	7	10	5	05	1
NV GOLCONDA	26	3245-01	40-57	117-29	4392	07/1906	8	094	7	07/1906	6	019	8	05	5	0.50	8	17	9	11	6
NV LOVELOCK	26	4698-01	40-11	118-28	3975	05/1902	7	088	9	06/1914	8	029	9	10	8	0.59	9	11	6	15	8
NV MCGILL	26	4950-02	39-24	114-46	6300	01/1892	2	083	9	05/1905	6	010	5	08	7	0.29	5	13	7	11	6
NV MINA	26	5168-03	38-23	118-06	4552	03/1896	5	096	6	06/1905	6	004	2	03	2	0.50	8	12	7	07	2
NV RENO WSFO AP	26	6779-01	39-30	119-47	4404	02/1888	0	098	4	12/1909	7	011	6	08	7	0.69	9	04	0	18	9
NV SEARCHLIGHT	26	7369-04	35-28	114-55	3540	12/1913	9	093	7	12/1913	8	012	6	05	5	0.50	8	10	5	19	9
NV WELLS	26	8988-02	41-07	114-58	5650	06/1895	5	063	9	01/1942	9	001	0	01	1	0.09	1	09	4	08	3
NV WINNEMUCCA WSO AP	26	9171-01	40-54	117-48	4297	07/1877	0	098	4	04/1889	0	001	0	04	4	0.50	8	04	0	09	4

MAXIMUM/MINIMUM TEMPERATURE

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NH BETHLEHEM	27	0703-01	44-17	71-41	1380	12/1892	2	097	5	12/1892	1	006	3	06	6	0.39	7	10	5	08	3
NH DURHAM	27	2174-02	43-09	70-57	74	01/1893	3	098	4	01/1893	1	005	3	06	6	0.50	8	09	4	05	1
NH FIRST CONNECTICUT LAKE	27	2999-01	45-05	71-17	1660	01/1918	9	100	0	01/1918	8	000	0	00	0	0.00	0	12	7	04	1
NH HANOVER	27	3850-02	43-42	72-17	603	01/1889	0	100	0	01/1892	0	007	4	02	1	0.00	0	18	9	15	8
NH KEENE	27	4399-02	42-55	72-16	480	01/1893	3	100	0	01/1893	1	012	6	06	6	0.29	5	11	6	09	4

MAXIMUM/MINIMUM TEMPERATURE

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NJ ATLANTIC CITY STATE MARINA	28	0325-03	39-23	74-26	10	01/1874	0	100	0	01/1892	0	001	0	02	1	0.19	3	09	4	11	6
NJ BELVIDERE	28	0734-01	40-50	75-05	263	01/1893	3	099	2	01/1893	1	004	2	03	2	0.09	1	12	7	12	7
NJ BOONTON 1SE	28	0907-01	40-54	74-24	280	11/1893	4	083	9	11/1893	2	018	8	05	5	0.19	3	09	4	14	8
NJ CHARLOTTEBURG	28	1582-01	41-02	74-26	760	04/1893	3	099	2	04/1893	2	003	2	00	0	0.00	0	13	7	11	6
NJ FLEMINGTON	28	3029-01	40-30	74-52	180	03/1898	6	099	2	03/1898	4	005	3	04	4	0.19	3	06	2	09	4
NJ HIGHTSTOWN 2W	28	3951-02	40-16	74-34	100	08/1892	2	095	6	08/1892	1	022	9	12	9	0.19	3	08	3	10	5
NJ INDIAN MILLS 2W	28	4229-02	39-48	74-47	100	05/1901	7	100	0	05/1901	5	000	0	01	1	0.00	0	10	5	16	9
NJ LONG BRANCH OAKHURST	28	4987-03	40-16	74-00	30	11/1907	8	096	6	11/1907	6	020	8	05	5	0.29	5	14	8	19	9
NJ MOORESTOWN	28	5728-02	39-58	74-58	45	01/1893	3	097	5	01/1893	1	014	7	07	7	0.29	5	11	6	05	1
NJ NEW BRUNSWICK 3SE	28	6055-02	40-28	74-26	86	01/1892	2	100	0	01/1892	0	005	3	05	5	0.19	3	10	5	01	0
NJ PLAINFIELD	28	7079-01	40-36	74-24	90	01/1892	2	098	4	01/1892	0	007	4	06	6	0.09	1	05	1	12	7
NJ TUCKERTON	28	8899-02	39-36	74-20	20	05/1898	6	089	8	05/1898	4	016	7	09	8	0.29	5	05	1	05	1

MAXIMUM/MINIMUM TEMPERATURE

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NM AZTEC RUINS NATL MONUMENT	29	0692-01	36-50	108-00	5644	01/1895	4	080	9	01/1932	9	000	0	03	2	0.39	7	12	7	07	2
NM BELL RANCH	29	0858-03	35-32	104-06	4500	11/1904	7	096	6	11/1904	6	003	2	00	0	0.00	0	16	9	02	0
NM CARLSBAD	29	1469-07	32-25	104-14	3120	02/1900	6	097	5	02/1900	5	008	4	08	7	0.59	9	05	1	09	4
NM CARRIZOZO	29	1515-05	33-39	105-53	5438	06/1908	8	095	6	06/1908	7	007	4	04	4	0.59	9	05	1	09	4
NM CHAMA	29	1664-02	36-55	106-35	7850	09/1891	1	084	9	05/1899	4	029	9	21	9	0.59	9	05	1	14	8
NM CIMARRON 4SW	29	1813-02	36-28	104-57	6542	05/1904	7	099	2	05/1904	6	024	9	08	7	0.09	1	14	8	18	9
NM CLAYTON WSO AP	29	1887-03	36-27	103-09	4669	02/1896	5	087	9	04/1903	5	016	7	08	7	0.29	5	13	7	05	1
NM ELEPHANT BUTTE DAM	29	2848-05	33-09	107-11	4576	10/1908	8	099	2	10/1908	7	003	2	03	2	0.39	7	10	5	04	1
NM FORT BAYARD	29	3265-04	32-48	108-09	6142	01/1895	4	097	5	01/1895	2	006	3	03	2	0.69	9	11	6	16	9
NM FORT SUMNER	29	3294-07	34-28	104-15	4025	06/1909	8	092	8	06/1909	7	024	9	08	7	0.50	8	08	3	05	1
NM GAGE 4ESE	29	3368-08	32-13	108-01	4410	12/1906	8	091	8	12/1906	6	014	7	03	2	0.39	7	07	2	11	6
NM JEMEZ SPRINGS	29	4369-02	35-46	106-41	6262	10/1910	8	097	5	10/1910	7	006	3	06	6	0.50	8	10	5	06	2
NM JORNADA EXPERIMENTAL RANGE	29	4426-08	32-37	106-44	4266	07/1914	9	093	7	07/1914	8	011	6	03	2	0.59	9	09	4	13	7
NM LAS VEGAS SEWAGE PLT	29	4862-02	35-32	105-12	6349	01/1892	2	098	4	01/1902	5	011	6	08	7	0.50	8	05	1	11	6
NM LOS LUNAS 3SSW	29	5150-05	34-46	106-45	4840	09/1891	1	090	8	12/1899	4	028	9	06	6	0.39	7	16	9	06	2
NM LUNA RS	29	5273-04	33-50	108-56	7050	01/1900	6	086	9	01/1918	8	012	6	02	1	0.69	9	03	0	01	0
NM MOUNTAIN PARK	29	5960-06	32-57	105-51	6780	11/1894	4	068	9	08/1905	6	026	9	19	9	0.79	9	13	7	12	7
NM MOUNTAINAIR	29	5965-06	34-31	106-15	6520	05/1902	7	084	9	01/1929	9	023	9	08	7	0.50	8	18	9	09	4
NM OROGRANDE	29	6435-08	32-23	106-06	4179	12/1904	7	079	9	01/1913	7	031	9	06	6	0.59	9	06	2	19	9
NM RED RIVER	29	7323-02	36-42	105-24	8676	07/1906	8	093	7	07/1906	6	011	6	03	2	0.09	1	20	9	01	0
NM ROSWELL FAA AP	29	7610-07	33-18	104-32	3669	06/1894	4	100	0	01/1905	6	006	3	04	4	0.39	7	11	6	05	1
NM SAN JON	29	7867-03	35-07	103-20	4230	06/1907	8	097	5	06/1907	6	010	5	03	2	0.19	3	08	3	13	7
NM SANTA ROSA	29	8107-07	34-57	104-41	4620	02/1908	8	089	8	02/1908	7	032	9	08	7	0.50	8	04	0	08	3
NM SOCORRO	29	8387-05	34-05	106-53	4585	01/1893	3	094	7	01/1975	9	001	0	00	0	0.00	0	11	6	11	6
NM SPRINGER	29	8501-03	36-21	104-35	5878	12/1891	2	091	8	01/1902	5	020	8	08	7	0.59	9	09	4	07	2
NM STATE UNIVERSITY	29	8535-08	32-17	106-45	3881	01/1892	2	100	0	09/1967	9	002	1	01	1	0.00	0	12	7	12	7
NM TUCUMCARI 4NE	29	9156-03	35-12	103-41	4086	12/1904	7	098	4	01/1916	8	002	1	01	1	0.00	0	12	7	15	8
NM TULAROSA	29	9165-08	33-05	106-03	4430	04/1908	8	081	9	01/1973	9	050	9	01	1	0.09	1	12	7	10	5

MAXIMUM/MINIMUM TEMPERATURE

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NY ADDISON	30	0023-01	42-06	77-13	1025	01/1895	4	095	6	01/1895	2	027	9	11	9	0.50	8	17	9	12	7
NY ALBANY WSFOAP	30	0042-05	42-45	73-48	275	01/1874	0	100	0	01/1889	0	003	2	03	2	0.09	1	10	5	03	0
NY ALFRED	30	0085-01	42-15	77-47	1780	01/1893	3	089	8	01/1914	8	005	3	05	5	0.29	5	10	5	07	2
NY ALLEGANY STATE PARK	30	0093-01	42-06	78-45	1500	09/1924	9	099	2	09/1924	9	008	4	02	1	0.09	1	12	7	11	6
NY ANGELICA	30	0183-01	42-18	78-01	1420	01/1893	3	097	5	01/1893	1	013	6	10	8	0.59	9	13	7	12	7
NY AUBURN 2NE	30	0321-10	42-56	76-32	765	09/1897	6	089	8	09/1897	4	014	7	05	5	0.19	3	09	4	08	3
NY BAINBRIDGE 2E	30	0360-02	42-17	75-27	994	10/1936	9	091	8	10/1936	9	015	7	03	2	0.00	0	14	8	16	9
NY BATAVIA	30	0443-09	42-59	78-11	890	01/1932	9	099	2	01/1932	9	018	8	07	7	0.09	1	04	0	11	6
NY BINGHAMTON WSO AP	30	0687-02	42-13	75-59	1600	07/1890	1	099	2	01/1893	1	011	6	07	7	0.29	5	11	6	11	6
NY BRIDGEHAMPTON	30	0889-04	40-57	72-18	60	08/1930	9	099	2	08/1930	9	019	8	05	5	0.09	1	13	7	13	7
NY BROCKPORT 2NW	30	0937-09	43-15	77-58	413	01/1893	3	085	9	01/1893	1	018	8	08	7	0.29	5	05	1	14	8
NY BUFFALO WSCMO AP	30	1012-09	42-56	78-44	705	01/1873	0	100	0	01/1914	8	000	0	03	2	0.19	3	08	3	07	2
NY CANTON 4SE	30	1185-08	44-34	75-07	440	01/1893	3	093	7	01/1893	1	018	8	07	7	0.29	5	05	1	14	8
NY CARMEL 1SW	30	1207-05	41-25	73-42	490	01/1893	3	095	6	01/1893	1	010	5	02	1	0.29	5	10	5	15	8
NY CHASM FALLS	30	1387-08	44-45	74-13	1060	01/1927	9	089	8	06/1940	9	005	3	01	1	0.09	1	08	3	17	9
NY CHAZY	30	1401-07	44-53	73-26	170	12/1902	7	095	6	12/1902	5	004	2	03	2	0.39	7	07	2	08	3
NY COOPERSTOWN	30	1752-02	42-42	74-55	1200	01/1893	3	095	6	01/1893	1	005	3	05	5	0.39	7	05	1	05	1
NY CORTLAND	30	1799-02	42-36	76-11	1129	03/1892	2	098	4	01/1898	4	002	1	01	1	0.19	3	09	4	10	5
NY DANNEMORA	30	1966-07	44-43	73-43	1340	01/1906	8	099	2	01/1906	6	004	2	02	1	0.19	3	10	5	02	0
NY DANSVILLE	30	1974-10	42-34	77-42	685	02/1918	9	093	7	02/1918	8	010	5	05	5	0.19	3	05	1	08	3
NY ELMIRA 2SE	30	2610-01	42-05	76-47	840	02/1894	4	098	4	10/1896	3	010	5	08	7	0.39	7	18	9	08	3
NY FREDONIA	30	3033-09	42-27	79-18	760	01/1914	9	100	0	01/1914	8	000	0	02	1	0.29	5	14	8	08	3
NY GENEVA RESR FM	30	3184-10	42-53	77-02	718	12/1892	2	078	9	10/1894	2	022	9	06	6	0.29	5	03	0	08	3
NY GLENHAM	30	3259-05	41-31	73-56	275	02/1932	9	100	0	02/1932	9	002	1	01	1	0.09	1	14	8	07	2
NY GLOVERSVILLE	30	3319-06	43-03	74-20	870	01/1893	3	099	2	01/1893	1	003	2	06	6	0.19	3	04	0	05	1
NY HEMLOCK	30	3773-10	42-47	77-37	902	05/1898	6	098	4	05/1898	4	004	2	01	1	0.00	0	17	9	13	7
NY INDIAN LAKE 2SW	30	4102-03	43-45	74-17	1660	09/1899	6	099	2	05/1921	8	003	2	00	0	0.00	0	12	7	10	5
NY ITHACA CORNELL UN	30	4174-10	42-27	76-27	960	01/1893	3	100	0	01/1893	1	002	1	06	6	0.29	5	06	2	05	1
NY LAKE PLACID 2S	30	4555-03	44-15	73-59	1940	08/1897	6	086	9	08/1897	3	025	9	04	4	0.29	5	15	8	10	5
NY LAWRENCEVILLE	30	4647-08	44-45	74-39	500	07/1931	9	098	4	07/1931	9	001	0	01	1	0.19	3	05	1	03	0
NY LITTLE FALLS CITY RESER	30	4791-06	43-04	74-52	900	01/1897	5	098	4	01/1897	3	004	2	02	1	0.09	1	16	9	08	3
NY LITTLE FALLS MILL ST	30	4796-06	43-02	74-52	360	01/1897	5	048	9	01/1921	8	045	9	02	1	0.09	1	16	9	17	9

MAXIMUM/MINIMUM TEMPERATURE

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NY LOCKPORT 2NE	30	4844-09	43-11	78-39	520	01/1893	3	098	4	01/1913	7	001	0	01	1	0.09	1	12	7	08	3
NY LOWVILLE	30	4912-03	43-48	75-29	860	12/1892	2	097	5	01/1893	1	008	4	08	7	0.39	7	10	5	12	7
NY MOHONK LAKE	30	5426-05	41-46	74-09	1245	01/1896	5	097	5	02/1920	8	004	2	00	0	0.00	0	08	3	07	2
NY MORRISVILLE 3S	30	5512-02	42-51	75-39	1390	08/1911	8	089	8	08/1911	7	030	9	12	9	0.59	9	13	7	11	6
NY NEW YORK CENTRAL PARK	30	5801-04	40-47	73-58	130	01/1876	0	100	0	10/1891	0	000	0	01	1	0.00	0	09	4	10	5
NY NORWICH	30	6085-02	42-32	75-32	1020	09/1906	8	095	6	09/1975	9	060	9	02	1	0.29	5	06	2	14	8
NY OGDENBURG 4NE	30	6164-08	44-44	75-26	280	02/1893	3	097	5	02/1893	1	008	4	03	2	0.39	7	14	8	13	7
NY ONEONTA STATE UNIV	30	6232-02	42-28	75-04	1400	09/1894	4	094	7	09/1894	2	009	5	04	4	0.29	5	19	9	19	9
NY OSWEGO	30	6314-09	43-28	76-30	350	07/1889	1	099	2	07/1889	0	003	2	03	2	0.29	5	12	7	05	1
NY PENN YAN 8W	30	6517-10	42-40	77-11	997	08/1897	6	079	9	01/1928	9	022	9	07	7	0.19	3	10	5	12	7
NY PLATTSBURGH AFB	30	6659-07	44-39	73-28	165	01/1895	4	059	9	02/1902	5	049	9	15	9	0.19	3	10	5	09	4
NY PORT JERVIS	30	6774-02	41-23	74-41	470	01/1893	3	098	4	01/1893	1	004	2	03	2	0.09	1	10	5	01	0
NY POUGHKEEPSIE FAA AP	30	6820-05	41-38	73-53	155	01/1893	3	068	9	01/1893	1	039	9	08	7	0.29	5	14	8	08	3
NY ROCHESTER AIRPORT	30	7167-09	43-07	77-40	547	01/1872	0	100	0	01/1892	0	001	0	04	4	0.19	3	14	8	09	4
NY SARATOGA SPRINGS 4SW	30	7484-05	43-02	73-49	310	06/1903	7	098	4	06/1903	5	014	7	06	6	0.29	5	07	2	06	2
NY SCARSDALE	30	7497-04	40-59	73-48	199	01/1904	7	098	4	01/1904	6	003	2	03	2	0.29	5	12	7	04	1
NY SCHENECTADY	30	7513-05	42-50	73-55	220	11/1898	6	047	9	12/1922	9	043	9	03	2	0.59	9	18	9	14	8
NY SETAUKET STRONG	30	7633-04	40-58	73-06	40	08/1885	0	099	2	08/1885	0	001	0	01	1	0.09	1	04	0	13	7
NY SOUTH WALES EMERY PARK	30	8058-09	42-43	78-36	1090	10/1931	9	093	7	10/1931	9	015	7	02	1	0.09	1	13	7	10	5
NY STILLWATER RESERVOIR	30	8248-03	43-53	75-02	1690	01/1927	9	099	2	01/1927	9	001	0	02	1	0.19	3	19	9	20	9
NY SYRACUSE WSO AP	30	8383-10	43-07	76-07	421	09/1902	7	099	2	09/1902	5	005	3	08	7	0.59	9	09	4	14	8
NY TUPPER LAKE SUNMOUNT	30	8631-03	44-14	74-26	1680	06/1899	6	082	9	06/1899	4	026	9	03	2	0.19	3	14	8	05	1
NY UTICA 3W	30	8739-06	43-06	75-17	500	01/1893	3	060	9	01/1893	1	049	9	17	9	0.29	5	06	2	10	5
NY WALDEN	30	8906-05	41-33	74-10	380	01/1925	9	077	9	01/1925	9	024	9	04	4	0.39	7	05	1	18	9
NY WANAKENA RANGER SCHOOL	30	8944-03	44-09	74-54	1510	06/1910	8	097	5	06/1910	7	006	3	01	1	0.00	0	08	3	02	0
NY WATERTOWN	30	9000-09	43-58	75-52	497	01/1893	3	097	5	01/1893	1	003	2	04	4	0.29	5	11	6	10	5
NY WEST POINT	30	9292-05	41-23	73-58	320	03/1890	1	090	8	10/1891	0	018	8	06	6	0.19	3	11	6	04	1

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
NC ALBEMARLE	31	0090-05	35-22	80-11	610	07/1911	8	099	2	07/1911	7	008	4	06	6	0.39	7	14	8	13	7
NC BANNER ELK	31	0506-02	36-10	81-52	3750	09/1907	8	098	4	09/1907	6	006	3	04	4	0.29	5	07	2	14	8
NC CHAPEL HILL 2W	31	1677-03	35-55	79-06	500	01/1891	1	094	7	04/1891	0	014	7	06	6	0.19	3	08	3	14	8
NC EDENTON	31	2635-08	36-03	76-37	20	01/1896	5	099	2	01/1957	9	013	6	01	1	0.00	0	14	8	01	0
NC ELIZABETH CITY	31	2719-08	36-19	76-12	8	04/1911	8	096	6	04/1911	7	005	3	04	4	0.29	5	12	7	11	6
NC FAYETTEVILLE	31	3017-06	35-04	78-52	96	02/1895	4	099	2	02/1895	2	003	2	05	5	0.39	7	09	4	06	2
NC GOLDSBORO 1SSW	31	3510-07	35-21	78-01	82	05/1891	1	096	6	01/1893	1	007	4	04	4	0.29	5	06	2	05	1
NC HATTERAS	31	3897-08	35-13	75-41	5	01/1882	0	100	0	04/1887	0	001	0	04	4	0.29	5	16	9	09	4
NC HENDERSON 2NNW	31	3969-03	36-22	78-25	480	06/1893	3	098	4	06/1893	2	013	6	07	7	0.29	5	05	1	09	4
NC HENDERSONVILLE 1NE	31	3976-01	35-20	82-27	2160	06/1898	6	098	4	06/1898	4	008	4	02	1	0.29	5	14	8	08	3
NC HIGHLANDS	31	4055-01	35-03	83-11	3840	01/1891	1	090	8	10/1904	6	011	6	05	5	0.19	3	12	7	20	9
NC KINSTON 5SE	31	4684-07	35-13	77-32	55	09/1899	6	091	8	09/1899	4	019	8	11	9	0.39	7	07	2	10	5
NC LENOIR	31	4938-02	35-55	81-32	1200	01/1891	1	095	6	01/1900	4	008	4	04	4	0.39	7	09	4	06	2
NC LOUISBURG	31	5123-03	36-06	78-19	260	07/1891	1	097	5	07/1891	0	003	2	06	6	0.50	8	11	6	16	9
NC LUMBERTON 6NW	31	5177-06	34-42	79-04	130	07/1893	4	098	4	01/1963	9	000	0	00	0	0.00	0	14	8	15	8
NC MARION	31	5340-01	35-41	82-00	1425	01/1891	1	092	8	01/1891	0	009	5	06	6	0.39	7	14	8	08	3
NC MARSHALL	31	5356-01	35-48	82-41	2050	11/1898	6	094	7	01/1912	7	013	6	04	4	0.39	7	12	7	12	7
NC MONROE	31	5771-05	34-58	80-30	586	02/1896	5	100	0	02/1896	3	008	4	03	2	0.19	3	12	7	14	8
NC MOREHEAD CITY 2WNW	31	5830-07	34-44	76-44	10	02/1896	5	092	8	01/1897	3	011	6	04	4	0.29	5	18	9	11	6
NC MORGANTON	31	5838-01	35-45	81-41	1160	01/1891	1	098	4	01/1891	0	003	2	04	4	0.59	9	10	5	06	2
NC MOUNT AIRY	31	5890-02	36-31	80-37	1030	01/1891	1	098	4	11/1893	2	002	1	03	2	0.29	5	10	5	13	7
NC NASHVILLE	31	6044-08	35-58	77-58	205	05/1904	7	098	4	05/1904	6	003	2	01	1	0.19	3	12	7	10	5
NC REIDSVILLE 2NW	31	7202-03	36-23	79-42	890	12/1901	7	098	4	12/1901	5	001	0	03	2	0.19	3	09	4	12	7
NC SALISBURY	31	7615-04	35-41	80-29	700	01/1891	1	099	2	01/1891	0	005	3	08	7	0.59	9	11	6	07	2
NC SMITHFIELD	31	7994-07	35-31	78-21	150	01/1891	1	098	4	09/1962	9	000	0	02	1	0.29	5	14	8	09	4
NC SOUTHPORT 5N	31	8113-06	34-00	78-01	20	01/1891	1	098	4	01/1893	1	010	5	06	6	0.39	7	05	1	05	1
NC STATESVILLE 2NNE	31	8292-04	35-49	80-53	950	01/1901	6	093	7	01/1901	5	007	4	03	2	0.29	5	09	4	15	8
NC TARBORO 1S	31	8500-08	35-53	77-32	35	01/1887	0	095	6	07/1891	0	003	2	04	4	0.29	5	04	0	09	4
NC WAYNESVILLE 1E	31	9147-01	35-29	82-58	2658	05/1894	4	093	7	01/1907	6	017	8	06	6	0.59	9	15	8	06	2

MAXIMUM/MINIMUM TEMPERATURE

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ND BOTTINEAU	32	0941-02	48-50	100-27	1640	05/1892	2	094	7	01/1906	6	001	0	01	1	0.00	0	10	5	03	0
ND CROSBY	32	1871-01	48-54	103-18	1952	04/1907	8	098	4	04/1907	6	012	6	08	7	0.39	7	13	7	07	2
ND DICKINSON EXP STN	32	2188-07	46-53	102-48	2460	01/1893	3	098	4	01/1907	6	003	2	03	2	0.19	3	04	0	10	5
ND DUNN CENTER 2SW	32	2365-04	47-21	102-39	2232	04/1919	9	099	2	04/1919	8	004	2	04	4	0.39	7	11	6	14	8
ND FORT YATES	32	3207-08	46-06	100-38	1635	05/1892	2	076	9	02/1895	2	030	9	18	9	0.59	9	09	4	08	3
ND FULLERTON 1ESE	32	3287-09	46-09	98-24	1435	02/1898	6	100	0	02/1898	4	004	2	04	4	0.50	8	14	8	11	6
ND GRAFTON	32	3594-03	48-25	97-25	827	05/1892	2	097	5	11/1896	3	007	4	02	1	0.50	8	05	1	02	0
ND GRAND FORKS UNIVERSITY	32	3621-03	47-56	97-05	830	05/1892	2	098	4	09/1905	6	001	0	05	5	0.39	7	19	9	14	8
ND HETTINGER	32	4178-07	45-59	102-39	2680	06/1907	8	092	8	06/1907	6	023	9	09	8	0.39	7	03	0	13	7
ND HILLSBORO 3N	32	4203-06	47-27	97-04	910	11/1905	8	097	5	11/1905	6	009	5	04	4	0.29	5	13	7	12	7
ND JAMESTOWN STATE HOSPITAL	32	4418-05	46-53	98-41	1467	02/1893	3	098	4	01/1907	6	001	0	00	0	0.00	0	04	0	11	6
ND LANGDON EXPERIMENT STN	32	4958-03	48-45	98-20	1615	04/1897	5	090	8	11/1897	4	017	8	07	7	0.29	5	11	6	15	8
ND LISBON	32	5220-09	46-26	97-40	1089	04/1903	7	098	4	04/1903	5	009	5	04	4	0.29	5	12	7	02	0
ND MANDAN EXPERIMENT STN	32	5479-08	46-48	100-54	1750	08/1913	9	098	4	08/1913	8	001	0	00	0	0.00	0	14	8	16	9
ND MAYVILLE	32	5660-06	47-30	97-19	935	03/1893	3	091	8	12/1904	6	006	3	04	4	0.50	8	06	2	10	5
ND MOTT	32	6155-07	46-22	102-18	2530	07/1907	8	099	2	07/1907	6	013	6	04	4	0.19	3	12	7	18	9
ND NAPOLEON	32	6255-09	46-30	99-46	1980	05/1892	2	099	2	01/1900	4	017	8	07	7	0.39	7	14	8	07	2
ND NEW ENGLAND	32	6315-07	46-33	102-52	2639	06/1894	4	092	8	01/1935	9	015	7	04	4	0.09	1	09	4	11	6
ND PEMBINA	32	6947-03	48-58	97-14	790	05/1898	6	096	6	05/1898	4	024	9	11	9	1.00	9	04	0	13	7
ND RICHARDTON ABBEY	32	7530-07	46-53	102-19	2470	03/1916	9	099	2	03/1916	8	011	6	03	2	0.19	3	14	8	08	3
ND STEELE	32	8366-05	46-52	99-54	1865	05/1894	4	092	8	05/1894	2	023	9	10	8	0.59	9	04	0	13	7
ND TOWNER 2NE	32	8792-02	48-21	100-24	1480	02/1896	5	089	8	02/1899	4	019	8	23	9	0.59	9	18	9	02	0
ND WAHPETON 3N	32	9100-09	46-19	96-36	956	05/1892	2	096	6	05/1892	0	015	7	07	7	0.39	7	03	0	15	8
ND WILLOW CITY	32	9445-02	48-39	100-18	1460	06/1892	2	097	5	06/1908	7	010	5	06	6	0.39	7	11	6	13	7

MAXIMUM/MINIMUM TEMPERATURE

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OH BUCYRUS	33	1072-02	40-49	82-58	955	05/1893	3	097	5	05/1893	2	010	5	06	6	0.50	8	05	1	09	4
OH CADIZ	33	1152-07	40-16	81-00	1260	09/1903	7	098	4	09/1903	5	001	0	02	1	0.19	3	04	0	09	4
OH CHIPPEWA LAKE	33	1541-03	41-04	81-54	1060	01/1895	4	099	2	01/1895	2	002	1	02	1	0.19	3	07	2	06	2
OH CIRCLEVILLE	33	1592-05	39-37	82-57	670	01/1895	4	095	6	01/1895	2	015	7	08	7	0.39	7	07	2	13	7
OH COSHOCTON WPC	33	1890-06	40-15	81-52	760	08/1915	9	098	4	08/1915	8	004	2	06	6	0.29	5	06	2	01	0
OH DELAWARE	33	2119-05	40-17	83-04	860	02/1896	5	099	2	02/1896	3	011	6	11	9	0.39	7	03	0	14	8
OH FINDLAY SEWAGE PLANT	33	2791-01	41-03	83-40	768	06/1893	3	099	2	06/1893	2	008	4	06	6	0.39	7	16	9	12	7
OH GREENVILLE WATER PLANT	33	3375-04	40-06	84-39	1024	06/1893	3	100	0	06/1893	2	006	3	07	7	0.50	8	13	7	09	4
OH HILLSBORO	33	3758-08	39-08	83-37	1100	04/1893	3	093	7	04/1893	2	031	9	16	9	0.50	8	17	9	09	4
OH HIRAM	33	3780-03	41-18	81-09	1230	06/1893	3	099	2	06/1893	2	007	4	07	7	0.79	9	17	9	06	2
OH IRONTON 1NE	33	3975-09	38-32	82-40	670	06/1893	3	098	4	06/1893	2	009	5	05	5	0.29	5	18	9	18	9
OH KENTON	33	4189-04	40-39	83-36	995	01/1893	3	099	2	04/1893	2	027	9	11	9	0.39	7	15	8	05	1
OH MCCONNELSVILLE LOCK 7	33	5041-10	39-39	81-51	660	06/1893	3	100	0	06/1893	2	009	5	06	6	0.50	8	16	9	05	1
OH MILLERSBURG 1W	33	5297-06	40-33	81-56	900	03/1919	9	099	2	03/1919	8	017	8	06	6	0.09	1	03	0	04	1
OH MILLPORT 2NW	33	5315-07	40-43	80-54	1145	06/1893	3	096	6	06/1893	2	004	2	03	2	0.29	5	07	2	06	2
OH NAPOLEON	33	5669-01	41-22	84-09	683	04/1893	3	099	2	04/1893	2	009	5	05	5	0.09	1	13	7	18	9
OH NORWALK	33	6118-02	41-16	82-37	670	03/1894	4	098	4	03/1894	2	005	3	03	2	0.39	7	06	2	15	8
OH OBERLIN	33	6196-02	41-16	82-13	816	02/1891	1	098	4	06/1892	1	016	7	07	7	0.39	7	14	8	20	9
OH PHILO 3SW	33	6600-10	39-50	81-55	1020	06/1895	5	100	0	06/1895	3	001	0	00	0	0.00	0	18	9	12	7
OH PORTSMOUTH	33	6781-09	38-45	82-53	540	06/1893	3	099	2	06/1893	2	007	4	06	6	0.39	7	09	4	17	9
OH TIFFIN	33	8313-02	41-07	83-11	738	08/1893	4	098	4	08/1893	2	010	5	11	9	0.29	5	16	9	11	6
OH UPPER SANDUSKY	33	8534-02	40-50	83-17	854	06/1893	3	098	4	06/1893	2	010	5	06	6	0.09	1	12	7	16	9
OH URBANA SEWAGE PLANT	33	8552-04	40-06	83-47	1000	12/1895	5	099	2	12/1895	3	003	2	07	7	0.59	9	09	4	03	0
OH WARREN 3S	33	8769-03	41-12	80-49	900	01/1893	3	099	2	01/1893	1	001	0	03	2	0.19	3	10	5	10	5
OH WAUSEON WATER PLANT	33	8822-01	41-31	84-09	750	02/1893	3	099	2	02/1893	1	010	5	08	7	0.39	7	10	5	03	0
OH WAVERLY	33	8830-09	39-07	82-59	560	06/1893	3	099	2	06/1893	2	003	2	06	6	0.29	5	11	6	12	7
OH WOOSTER EXP STN	33	9312-06	40-47	81-55	1020	01/1891	1	100	0	01/1893	1	002	1	07	7	0.39	7	11	6	02	0

MAXIMUM/MINIMUM TEMPERATURE

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OK ADA	34	0017-08	34-47	96-41	1015	02/1907	8	098	4	02/1907	6	015	7	06	6	0.29	5	13	7	10	5
OK ALTUS IRRIGATION RES STN	34	0179-07	34-35	99-20	1380	04/1913	9	098	4	01/1968	9	000	0	00	0	0.00	0	09	4	16	9
OK ANTLERS	34	0256-09	34-15	95-38	520	03/1918	9	093	7	03/1918	8	037	9	10	8	0.29	5	08	3	12	7
OK ARDMORE	34	0292-08	34-12	97-09	860	07/1901	7	098	4	07/1901	5	017	8	09	8	0.19	3	13	7	07	2
OK BARTLESVILLE 2W	34	0548-03	36-45	96-00	715	11/1907	8	096	6	11/1907	6	032	9	08	7	0.29	5	13	7	16	9
OK BEAVER	34	0593-01	36-48	100-32	2475	02/1896	5	094	7	01/1959	9	032	9	04	4	0.09	1	08	3	10	5
OK BOISE CITY 2E	34	0908-01	36-44	102-29	4145	02/1908	8	097	5	01/1926	9	012	6	08	7	0.19	3	17	9	16	9
OK BUFFALO	34	1243-01	36-50	99-37	1795	03/1907	8	091	8	03/1907	6	021	8	08	7	0.39	7	07	2	12	7
OK CARNEGIE 2ENE	34	1504-07	35-07	98-34	1290	05/1914	9	098	4	05/1914	8	030	9	15	9	0.29	5	10	5	11	6
OK CHEROKEE POWER PLANT	34	1724-02	36-46	98-21	1180	07/1915	9	094	7	01/1960	9	005	3	01	1	0.09	1	10	5	11	6
OK CLAREMORE 2ENE	34	1828-03	36-19	95-35	588	05/1900	6	084	9	05/1900	5	036	9	22	9	0.39	7	01	0	05	1
OK DURANT-USDA	34	2678-08	34-01	96-23	660	09/1901	7	097	5	12/1975	9	007	4	01	1	0.00	0	07	2	04	1
OK ENID	34	2912-02	36-25	97-52	1245	02/1894	4	090	8	09/1912	7	013	6	12	9	0.19	3	07	2	08	3
OK ERICK 4E	34	2944-04	35-12	99-48	1985	09/1904	7	095	6	09/1951	9	001	0	01	1	0.00	0	10	5	08	3
OK GEARY	34	3497-04	35-38	98-19	1595	12/1911	9	098	4	12/1911	7	013	6	05	5	0.29	5	16	9	12	7
OK GOODWELL RESEARCH STATION	34	3628-01	36-36	101-37	3310	03/1910	8	097	5	03/1910	7	004	2	04	4	0.39	7	02	0	05	1
OK GUTHRIE	34	3821-05	35-53	97-27	1030	12/1892	2	097	5	02/1899	4	040	9	19	9	0.39	7	07	2	12	7
OK HAMMON 1NNE	34	3871-04	35-38	99-22	1775	08/1913	9	094	7	08/1913	8	010	5	04	4	0.50	8	11	6	02	0
OK HENNESSEY 2SE	34	4055-05	36-05	97-52	1150	04/1895	4	093	7	06/1919	8	018	8	07	7	0.39	7	05	1	11	6
OK HOBART FAA AP	34	4204-07	35-00	99-03	1552	05/1903	7	099	2	01/1917	8	002	1	04	4	0.29	5	16	9	11	6
OK HOLDENVILLE	34	4235-06	35-05	96-24	860	04/1901	7	099	2	06/1921	8	010	5	06	6	0.29	5	08	3	02	0
OK HOOKER	34	4298-01	36-52	101-13	2995	06/1906	8	098	4	06/1906	6	020	8	13	9	0.39	7	10	5	06	2
OK HUGO	34	4384-09	34-00	95-31	570	01/1913	9	099	2	01/1913	7	003	2	05	5	0.29	5	10	5	05	1
OK JEFFERSON	34	4573-02	36-43	97-48	1045	01/1894	4	095	6	02/1898	4	028	9	16	9	0.39	7	06	2	14	8
OK KENTON	34	4766-01	36-54	102-58	4350	11/1900	6	098	4	11/1900	5	017	8	10	8	0.39	7	03	0	07	2
OK KINGFISHER 2SE	34	4861-05	35-51	97-54	1100	04/1897	5	099	2	02/1898	4	010	5	11	9	0.50	8	15	8	08	3
OK LAWTON	34	5063-07	34-37	98-27	1150	07/1912	9	098	4	07/1912	7	015	7	07	7	0.50	8	13	7	12	7
OK MANGUM RESEARCH STATION	34	5509-07	34-50	99-26	1520	07/1892	2	095	6	06/1909	7	014	7	09	8	0.50	8	05	1	06	2
OK MEEKER 4W	34	5779-05	35-30	96-59	925	01/1894	4	094	7	12/1984	9	100	9	00	0	0.19	3	07	2	12	7
OK MIAMI	34	5855-03	36-53	94-53	805	12/1917	9	097	5	12/1917	8	017	8	11	9	0.39	7	11	6	07	2
OK MUSKOGEE	34	6130-06	35-46	95-20	583	04/1899	6	097	5	04/1899	4	025	9	14	9	0.29	5	07	2	08	3
OK MUTUAL	34	6139-02	36-14	99-10	1865	10/1907	8	096	6	01/1956	9	003	2	02	1	0.19	3	07	2	15	8

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	SIN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
OK NEWKIRK	34	6278-02	36-53	97-03	1150	09/1897	6	093	7	09/1897	4	018	8	12	9	0.50	8	17	9	17	9
OK OKEENE	34	6629-04	36-07	98-19	1200	05/1903	7	094	7	05/1903	5	016	7	07	7	0.39	7	01	0	04	1
OK OKEMAH	34	6638-05	35-26	96-18	935	05/1912	9	099	2	05/1912	7	011	6	05	5	0.19	3	08	3	07	2
OK OKMULGEE WATERWORKS	34	6670-06	35-37	96-01	647	09/1903	7	095	6	01/1978	9	004	2	00	0	0.00	0	19	9	13	7
OK PAULS VALLEY 3WSW	34	6926-08	34-44	97-16	950	07/1892	2	087	9	04/1896	3	019	8	05	5	0.19	3	08	3	10	5
OK PAWHUSKA	34	6935-03	36-40	96-21	835	01/1898	6	095	6	01/1898	4	016	7	08	7	0.39	7	08	3	13	7
OK PERRY	34	7012-02	36-17	97-18	1025	11/1898	6	093	7	11/1898	4	018	8	12	9	0.29	5	09	4	04	1
OK POTEAU	34	7246-09	35-03	94-38	670	09/1917	9	097	5	09/1917	8	012	6	06	6	0.09	1	08	3	05	1
OK STILLWATER 2W	34	8501-05	36-07	97-05	895	01/1893	3	098	4	01/1965	9	000	0	00	0	0.00	0	17	9	08	3
OK TAHLEQUAH	34	8677-06	35-56	94-58	850	04/1894	4	082	9	07/1979	9	048	9	01	1	0.19	3	09	4	12	7
OK WAURIKA	34	9395-08	34-10	98-00	875	01/1910	8	099	2	01/1910	7	013	6	11	9	0.50	8	08	3	13	7
OK WEATHERFORD	34	9422-04	35-32	98-42	1670	07/1901	7	098	4	01/1913	7	008	4	04	4	0.19	3	08	3	11	6
OK WEBBERS FALLS 5WSW	34	9445-06	35-29	95-12	550	04/1900	6	095	6	04/1900	5	012	6	08	7	0.50	8	12	7	14	8

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	SIN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
OR ASHLAND	35	0304-03	42-13	122-43	1750	05/1889	0	100	0	01/1918	8	011	6	05	5	0.19	3	16	9	08	3
OR ASTORIA WSO AP	35	0328-01	46-09	123-53	8	04/1892	2	098	4	01/1931	9	006	3	06	6	0.29	5	03	0	15	8
OR BAKER FAA AP	35	0412-08	44-50	117-49	3368	07/1889	1	098	4	01/1912	7	002	1	03	2	0.19	3	20	9	12	7
OR BEND	35	0694-07	44-04	121-19	3650	04/1901	7	095	6	08/1903	5	023	9	10	8	0.50	8	05	1	04	1
OR BROOKINGS	35	1055-01	42-03	124-17	70	08/1913	9	098	4	08/1913	8	008	4	06	6	0.79	9	15	8	11	6
OR CASCADIA	35	1433-02	44-24	122-29	860	01/1919	9	086	9	01/1919	8	030	9	13	9	0.39	7	01	0	12	7
OR CONDON	35	1765-06	45-14	120-11	2830	08/1894	4	086	9	05/1900	5	043	9	19	9	0.50	8	10	5	08	3
OR CORVALLIS STATE UNIV	35	1862-02	44-38	123-12	225	05/1889	0	096	6	01/1907	6	008	4	06	6	0.29	5	08	3	10	5
OR COTTAGE GROVE 1S	35	1897-02	43-47	123-04	650	08/1916	9	099	2	08/1916	8	002	1	01	1	0.00	0	10	5	15	8
OR CRATER LAKE	35	1946-05	42-54	122-08	6475	10/1919	9	088	9	10/1919	8	034	9	08	7	0.69	9	17	9	16	9
OR DANNER	35	2135-09	42-56	117-20	4225	08/1929	9	091	8	08/1929	9	012	6	01	1	0.19	3	14	8	09	4
OR DRAIN	35	2406-03	43-40	123-19	292	01/1903	7	093	7	01/1903	5	008	4	05	5	0.29	5	09	4	03	0
OR DUFUR	35	2440-06	45-27	121-08	1330	06/1910	8	098	4	06/1910	7	005	3	04	4	0.19	3	13	7	05	1
OR FOREST GROVE	35	2997-02	45-32	123-06	180	01/1890	1	092	8	01/1917	8	009	5	05	5	0.29	5	10	5	08	3
OR FREMONT	35	3095-05	43-20	121-10	4512	03/1918	9	092	8	03/1918	8	013	6	02	1	0.29	5	05	1	12	7
OR GRANTS PASS	35	3445-03	42-25	123-20	960	05/1889	0	099	2	07/1893	2	005	3	06	6	0.39	7	10	5	13	7
OR HEADWORKS PORTLAND WTRB	35	3770-02	45-27	122-09	748	01/1901	6	093	7	09/1901	5	009	5	03	2	0.09	1	18	9	16	9
OR HEPPNER	35	3827-06	45-22	119-33	1885	06/1889	1	094	7	01/1912	7	007	4	03	2	0.09	1	15	8	15	8
OR HERMISTON 2S	35	3847-06	45-49	119-17	624	08/1907	8	099	2	08/1907	6	005	3	07	7	0.29	5	10	5	07	2
OR HOOD RIVER EXPERIMENT STN	35	4003-06	45-41	121-31	500	01/1891	1	098	4	01/1913	7	010	5	05	5	0.29	5	06	2	05	1
OR KLAMATH FALLS 2SSW	35	4506-07	42-12	121-47	4098	05/1889	0	091	8	01/1909	7	004	2	05	5	0.39	7	12	7	10	5
OR LAKEVIEW 2NNW	35	4670-07	42-13	120-22	4778	04/1887	0	092	8	01/1913	7	009	5	07	7	0.69	9	05	1	10	5
OR MALHEUR REFUGE HDQ	35	5162-07	43-17	118-50	4109	07/1937	9	096	6	07/1937	9	008	4	02	1	0.09	1	09	4	09	4
OR MCKENZIE BRIDGE RS	35	5362-04	44-11	122-07	1478	02/1902	7	073	9	01/1936	9	010	5	02	1	0.29	5	13	7	10	5
OR MCMINNVILLE	35	5384-02	45-14	123-11	148	09/1889	1	094	7	01/1903	5	021	8	14	9	0.69	9	14	8	12	7
OR MILTON-FREEWATER	35	5593-06	45-57	118-25	970	12/1914	9	096	6	12/1914	8	013	6	05	5	0.29	5	15	8	01	0
OR MORO	35	5734-06	45-29	120-43	1870	01/1898	6	079	9	05/1900	5	020	8	24	9	0.39	7	09	4	02	0
OR NEWPORT	35	6032-01	44-35	124-03	143	11/1891	1	097	5	11/1891	0	018	8	09	8	0.69	9	14	8	13	7
OR NORTH BEND	35	6073-01	43-25	124-15	6	01/1902	7	100	0	01/1902	5	018	8	10	8	0.69	9	10	5	06	2
OR PAISLEY	35	6426-07	42-42	120-32	4360	03/1904	7	088	9	09/1938	9	018	8	03	2	0.19	3	12	7	13	7
OR PILOT ROCK 1SE	35	6634-06	45-29	118-49	1720	03/1909	8	095	6	03/1909	7	025	9	08	7	0.19	3	12	7	13	7
OR PRINEVILLE 4NW	35	6883-07	44-21	120-54	2840	01/1897	5	095	6	06/1910	7	015	7	06	6	0.29	5	09	4	07	2

MAXIMUM/MINIMUM TEMPERATURE

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OR PROSPECT 2SW	35	6907-03	42-44	122-31	2482	10/1905	7	097	5	10/1905	6	011	6	08	7	0.19	3	14	8	14	8
OR RIDDLE	35	7169-03	42-57	123-21	680	02/1913	9	097	5	12/1946	9	000	0	01	1	0.19	3	11	6	10	5
OR ROSEBURG KQEN	35	7331-03	43-12	123-21	465	08/1877	0	099	2	01/1895	2	001	0	06	6	0.29	5	11	6	07	2
OR ROUND GROVE	35	7354-05	42-20	120-53	4888	03/1920	9	094	7	03/1920	8	014	7	02	1	0.19	3	05	1	06	2
OR THREE LYNX	35	8466-04	45-07	122-04	1120	03/1925	9	100	0	03/1925	9	000	0	00	0	0.00	0	08	3	15	8
OR TILLAMOOK 1W	35	8494-01	45-27	123-52	10	11/1894	4	075	9	01/1939	9	015	7	07	7	0.19	3	08	3	10	5
OR UNION EXP STN	35	8746-08	45-13	117-53	2765	10/1911	8	099	2	10/1911	7	001	0	02	1	0.19	3	08	3	05	1
OR VALE	35	8797-09	43-59	117-15	2240	12/1891	2	091	8	01/1923	9	018	8	05	5	0.29	5	07	2	09	4
OR WALLOWA	35	8997-08	45-34	117-32	2923	03/1903	7	097	5	12/1915	8	016	7	11	9	0.29	5	09	4	05	1

MAXIMUM/MINIMUM TEMPERATURE

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PA ALLENTOWN WSO AP	36	0106-02	40-39	75-26	387	11/1922	9	100	0	11/1922	9	000	0	02	1	0.09	1	10	5	16	9
PA CHAMBERSBURG 1ESE	36	1354-04	39-56	77-38	640	01/1894	4	079	9	12/1897	4	024	9	12	9	0.19	3	12	7	12	7
PA EISENHOWER NATL HIST SITE	36	2537-04	39-48	77-16	520	03/1895	4	092	8	03/1895	2	015	7	09	8	0.19	3	09	4	15	8
PA ERIE WSO AP	36	2682-10	42-05	80-11	731	06/1873	0	100	0	01/1889	0	009	5	06	6	0.29	5	17	9	04	1
PA FRANKLIN	36	3028-10	41-23	79-49	990	01/1897	5	100	0	01/1897	3	005	3	05	5	0.50	8	11	6	12	7
PA FREELAND	36	3056-01	41-01	75-54	1900	03/1920	9	096	6	03/1920	8	007	4	02	1	0.59	9	12	7	06	2
PA GREENVILLE 2NE	36	3526-10	41-25	80-22	1130	02/1894	4	091	8	02/1894	2	016	7	11	9	0.39	7	14	8	13	7
PA HARRISBURG FAA	36	3699-04	40-13	76-51	338	01/1889	0	100	0	01/1889	0	002	1	04	4	0.19	3	07	2	05	1
PA JOHNSTOWN	36	4385-08	40-20	78-55	1214	01/1894	4	097	5	01/1894	2	009	5	03	2	0.19	3	11	6	07	2
PA MONTROSE	36	5915-06	41-50	75-52	1560	09/1903	7	095	6	09/1903	5	009	5	04	4	0.29	5	02	0	12	7
PA NEW CASTLE 1N	36	6233-09	41-01	80-22	825	01/1894	4	088	9	01/1894	2	013	6	02	1	0.19	3	06	2	15	8
PA PALMERTON	36	6689-02	40-48	75-37	410	05/1917	9	098	4	05/1917	8	007	4	02	1	0.09	1	11	6	02	0
PA READING 3N	36	7322-03	40-22	75-56	270	01/1898	6	100	0	01/1898	4	004	2	04	4	0.19	3	02	0	04	1
PA RIDGWAY	36	7477-07	41-25	78-45	1360	02/1913	9	097	5	02/1913	7	017	8	07	7	0.39	7	09	4	09	4
PA SELINGSGROVE 2S	36	7931-05	40-46	76-52	420	01/1894	4	098	4	01/1894	2	014	7	12	9	0.59	9	07	2	11	6
PA STATE COLLEGE	36	8449-07	40-48	77-52	1170	01/1893	3	100	0	01/1893	1	006	3	06	6	0.29	5	14	8	16	9
PA STROUDSBURG	36	8596-01	41-00	75-11	480	01/1911	8	090	8	01/1911	7	019	8	07	7	0.39	7	09	4	11	6
PA TOWANDA 1ESE	36	8905-06	41-45	76-25	745	10/1894	4	099	2	10/1894	2	001	0	03	2	0.09	1	07	2	08	3
PA UNIONTOWN 1NE	36	9050-09	39-55	79-43	956	01/1894	4	098	4	01/1894	2	003	2	02	1	0.19	3	12	7	03	0
PA WARREN	36	9298-10	41-51	79-09	1210	07/1896	5	099	2	07/1896	3	015	7	09	8	0.69	9	05	1	16	9
PA WELLSBORO 3S	36	9408-06	41-42	77-16	1860	01/1897	5	098	4	01/1897	3	003	2	05	5	0.29	5	12	7	08	3
PA WEST CHESTER 1W	36	9464-03	39-58	75-38	450	01/1893	3	097	5	01/1893	1	003	2	04	4	0.39	7	17	9	10	5
PA WILLIAMSPORT WSO AP	36	9728-05	41-15	76-55	527	02/1895	4	100	0	02/1895	2	007	4	06	6	0.19	3	12	7	06	2
PA YORK PUMP STATION 3SSW	36	9933-04	39-55	76-45	390	01/1894	4	088	9	01/1894	2	012	6	01	1	0.00	0	19	9	08	3

MAXIMUM/MINIMUM TEMPERATURE

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RI BLOCK ISLAND WSO AP	37	0896-01	41-10	71-35	110	09/1880	0	099	2	01/1888	0	005	3	04	4	0.09	1	06	2	06	2
RI KINGSTON	37	4266-01	41-29	71-32	100	07/1889	1	099	2	04/1917	8	003	2	02	1	0.09	1	11	6	05	1
RI PROVIDENCE WSO AP	37	6698-01	41-44	71-26	51	12/1884	0	096	6	12/1884	0	011	6	06	6	0.19	3	05	1	11	6

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
SC AIKEN 4NE	38	0074-05	33-36	81-41	400	01/1893	3	088	9	05/1898	4	016	7	11	9	0.09	1	19	9	13	7
SC ANDERSON	38	0165-02	34-32	82-40	800	07/1901	7	098	4	07/1901	5	007	4	04	4	0.19	3	10	5	03	0
SC BEAUFORT 7SW	38	0559-07	32-23	80-46	20	08/1889	1	091	8	06/1962	9	000	0	01	1	0.09	1	18	9	05	1
SC BLACKVILLE 3W	38	0764-07	33-22	81-19	324	10/1888	0	094	7	11/1894	2	010	5	11	9	0.50	8	05	1	08	3
SC CALHOUN FALLS	38	1277-05	34-05	82-35	530	01/1917	9	097	5	01/1917	8	022	9	09	8	0.29	5	08	3	13	7
SC CAMDEN 3W	38	1310-03	34-15	80-39	140	08/1906	8	093	7	08/1906	6	009	5	04	4	0.59	9	12	7	16	9
SC CHARLESTON	38	1549-07	32-47	79-56	10	01/1871	0	100	0	01/1898	4	000	0	01	1	0.09	1	06	2	05	1
SC CHERAW	38	1588-04	34-42	79-53	140	01/1888	0	096	6	01/1900	4	012	6	06	6	0.39	7	15	8	16	9
SC CLEMSON UNIVERSITY	38	1770-02	34-41	82-49	819	05/1896	5	094	7	05/1896	3	010	5	06	6	0.59	9	06	2	17	9
SC COLUMBIA U OF SC	38	1944-06	33-59	81-01	242	06/1887	0	099	2	12/1904	6	004	2	07	7	0.39	7	07	2	03	0
SC CONWAY	38	1997-04	33-50	79-03	20	06/1890	1	088	9	05/1894	2	012	6	03	2	0.19	3	09	4	05	1
SC DARLINGTON 1N	38	2260-04	34-19	79-53	160	09/1901	7	095	6	09/1901	5	013	6	06	6	0.19	3	15	8	04	1
SC GEORGETOWN 2E	38	3468-04	33-21	79-15	10	08/1893	4	089	8	01/1911	7	027	9	12	9	0.29	5	11	6	12	7
SC GREENVILLE-SPARTANBURG AP	38	3747-02	34-54	82-13	957	05/1893	3	097	5	01/1918	8	014	7	08	7	0.19	3	04	0	07	2
SC GREENWOOD 3NE	38	3754-05	34-13	82-07	615	10/1888	0	095	6	03/1895	2	010	5	12	9	0.29	5	07	2	08	3
SC KERSHAW	38	4690-03	34-33	80-35	530	05/1916	9	095	6	01/1958	9	014	7	02	1	0.09	1	09	4	10	5
SC KINGSTREE 1SE	38	4753-04	33-39	79-49	58	10/1888	0	094	7	04/1894	2	006	3	04	4	0.29	5	14	8	12	7
SC LAURENS	38	5017-02	34-30	82-02	589	09/1901	7	082	9	05/1904	6	023	9	09	8	0.39	7	12	7	11	6
SC LITTLE MOUNTAIN	38	5200-05	34-12	81-25	711	07/1894	4	098	4	01/1907	6	004	2	04	4	0.29	5	12	7	13	7
SC NEWBERRY	38	6209-05	34-17	81-37	476	01/1893	3	099	2	12/1903	6	002	1	05	5	0.29	5	12	7	05	1
SC ORANGEBURG 2	38	6527-06	33-30	80-52	160	10/1916	9	099	2	10/1916	8	002	1	06	6	0.50	8	11	6	14	8
SC SALUDA	38	7631-05	33-59	81-46	480	04/1902	7	093	7	08/1978	9	013	6	01	1	0.00	0	09	4	19	9
SC SANTUCK	38	7722-02	34-38	81-31	520	01/1895	4	100	0	01/1895	2	004	2	06	6	0.39	7	06	2	07	2
SC SUMMERVILLE	38	8426-07	33-00	80-11	60	09/1898	6	099	2	09/1898	4	014	7	09	8	0.19	3	02	0	09	4
SC SUMTER	38	8440-06	33-56	80-21	177	12/1901	7	069	9	12/1901	5	034	9	18	9	0.29	5	12	7	11	6
SC WALHALLA	38	8887-02	34-45	83-05	980	07/1896	5	088	9	07/1896	3	014	7	05	5	0.19	3	14	8	13	7
SC WINNSBORO	38	9327-03	34-22	81-05	560	01/1888	0	087	9	05/1895	3	018	8	09	8	0.29	5	06	2	08	3
SC WINTHROP COLLEGE	38	9350-03	34-56	81-02	690	01/1900	6	100	0	01/1900	4	001	0	03	2	0.50	8	13	7	09	4
SC YEMASSEE	38	9469-07	32-41	80-51	25	08/1895	5	096	6	10/1975	9	073	9	02	1	0.29	5	15	8	19	9

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
SD ABERDEEN WSO AP	39	0020-03	45-27	98-26	1296	01/1893	3	099	2	03/1894	2	018	8	12	9	0.39	7	17	9	02	0
SD ACADEMY	39	0043-08	43-28	99-05	1675	09/1898	6	099	2	09/1898	4	009	5	08	7	0.50	8	04	0	07	2
SD ALEXANDRIA	39	0128-09	43-39	97-47	1350	01/1893	3	097	5	01/1893	1	019	8	08	7	0.29	5	02	0	16	9
SD CANTON 4WNW	39	1392-09	43-18	96-40	1345	11/1896	5	093	7	11/1896	3	019	8	09	8	0.50	8	10	5	03	0
SD CLARK	39	1739-07	44-53	97-44	1780	04/1893	3	092	8	04/1893	2	017	8	10	8	0.29	5	09	4	02	0
SD COTTONWOOD 2E	39	1972-05	43-58	101-52	2414	07/1909	8	096	6	07/1909	7	007	4	02	1	0.39	7	05	1	07	2
SD DUPREE	39	2429-01	45-03	101-36	2365	03/1922	9	100	0	03/1922	9	010	5	04	4	0.19	3	09	4	08	3
SD EUREKA	39	2797-02	45-47	99-38	1870	10/1897	6	087	9	02/1899	4	016	7	10	8	0.29	5	04	0	11	6
SD FAULKTON	39	2927-02	45-02	99-08	1580	01/1893	3	097	5	04/1897	3	012	6	07	7	0.19	3	11	6	07	2
SD FORESTBURG 3NE	39	3029-07	44-02	98-04	1231	01/1893	3	100	0	01/1910	7	000	0	01	1	0.19	3	18	9	19	9
SD GANN VALLEY	39	3217-07	44-02	98-58	1750	01/1893	3	097	5	12/1895	3	016	7	09	8	0.39	7	06	2	15	8
SD HIGHMORE 1W	39	3832-06	44-31	99-28	1890	04/1894	4	095	6	09/1907	6	003	2	01	1	0.00	0	10	5	10	5
SD HOPEWELL 1SE	39	3987-06	44-30	100-52	1922	09/1909	8	086	9	09/1909	7	015	7	04	4	0.19	3	11	6	02	0
SD HOT SPRINGS	39	4007-04	43-26	103-28	3535	01/1897	5	092	8	02/1897	3	021	8	10	8	0.39	7	17	9	07	2
SD HOWARD	39	4037-07	44-01	97-31	1560	01/1893	3	096	6	12/1898	4	026	9	12	9	0.19	3	08	3	13	7
SD KENNEBEC	39	4516-06	43-55	99-52	1700	01/1893	3	097	5	01/1909	7	007	4	08	7	0.50	8	13	7	05	1
SD MELLETTE	39	5456-03	45-09	98-30	1290	06/1895	5	095	6	06/1895	3	018	8	09	8	0.39	7	11	6	15	8
SD MENNO	39	5481-09	43-14	97-35	1324	05/1896	5	098	4	05/1896	3	009	5	10	8	0.59	9	05	1	09	4
SD MILBANK 2SSW	39	5536-03	45-12	96-38	1156	03/1893	3	096	6	08/1893	2	023	9	13	9	0.39	7	08	3	01	0
SD MURDO	39	5891-06	43-53	100-43	2300	02/1908	8	096	6	02/1908	7	012	6	08	7	0.59	9	07	2	15	8
SD PIERRE FAA AP	39	6597-06	44-23	100-17	1726	07/1891	1	100	0	12/1900	5	004	2	05	5	0.29	5	10	5	14	8
SD RAPID CITY	39	6947-05	44-05	103-16	3370	01/1888	0	099	2	01/1898	4	005	3	05	5	0.39	7	09	4	05	1
SD VERMILLION 2SE	39	8622-09	42-45	96-55	1190	01/1893	3	091	8	01/1893	1	011	6	04	4	0.29	5	15	8	05	1
SD WATERTOWN FAA AP	39	8932-07	44-55	97-09	1746	01/1893	3	098	4	01/1893	1	015	7	10	8	0.29	5	09	4	10	5
SD WOOD	39	9442-08	43-30	100-29	2180	03/1913	9	098	4	03/1913	7	003	2	03	2	0.39	7	09	4	18	9

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
TN CLARKSVILLE SEWAGE PLANT	40	1790-03	36-33	87-22	382	05/1890	1	096	6	09/1894	2	007	4	04	4	0.29	5	15	8	07	2
TN COPPERHILL	40	2024-01	35-00	84-23	1535	04/1914	9	098	4	04/1914	8	015	7	05	5	0.19	3	16	9	10	5
TN COVINGTON 1W	40	2108-04	35-34	89-40	310	02/1893	3	093	7	02/1893	1	011	6	04	4	0.19	3	14	8	11	6
TN CROSSVILLE EXPERIMENT STN	40	2202-02	36-01	85-08	1810	03/1912	9	098	4	03/1912	7	029	9	14	9	0.39	7	09	4	09	4
TN DICKSON	40	2489-03	36-04	87-23	780	07/1900	6	097	5	07/1900	5	020	8	08	7	0.29	5	10	5	14	8
TN DOVER 1W	40	2589-03	36-29	87-51	475	01/1898	6	097	5	01/1898	4	004	2	03	2	0.19	3	15	8	10	5
TN JACKSON EXPERIMENT STN	40	4561-04	35-37	88-50	400	01/1900	6	098	4	01/1900	4	004	2	04	4	0.19	3	15	8	11	6
TN LEWISBURG EXPERIMENT STN	40	5187-03	35-27	86-48	787	05/1899	6	100	0	05/1899	4	000	0	03	2	0.19	3	17	9	15	8
TN MCMINNVILLE	40	5882-02	35-41	85-48	940	11/1894	4	097	5	11/1894	2	010	5	07	7	0.29	5	15	8	02	0
TN MURFREESBORO 5N	40	6371-03	35-55	86-22	550	07/1894	4	099	2	07/1894	2	009	5	08	7	0.19	3	06	2	10	5
TN NEWPORT 1NW	40	6534-01	35-59	83-12	1036	08/1896	5	099	2	02/1902	5	005	3	05	5	0.50	8	10	5	08	3
TN ROGERSVILLE 1NE	40	7884-01	36-25	82-59	1355	02/1896	5	099	2	01/1903	5	003	2	03	2	0.19	3	11	6	13	7
TN TULLAHOMA	40	9155-02	35-21	86-12	1048	01/1896	5	098	4	01/1896	3	007	4	06	6	0.19	3	04	0	13	7
TN UNION CITY	40	9219-04	36-25	89-04	335	12/1895	5	095	6	06/1898	4	026	9	12	9	0.59	9	04	0	07	2
TN WAYNESBORO	40	9502-03	35-18	87-46	750	02/1897	5	096	6	02/1897	3	021	8	12	9	0.39	7	11	6	11	6

MAXIMUM/MINIMUM TEMPERATURE

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TX ALBANY	41	0120-03	32-44	99-17	1440	01/1902	7	097	5	01/1902	5	013	6	10	8	0.79	9	10	5	09	4
TX ALICE	41	0144-09	27-44	98-04	201	01/1893	3	079	9	12/1896	3	025	9	09	8	0.50	8	05	1	10	5
TX ALPINE	41	0174-05	30-22	103-40	4480	03/1900	6	065	9	03/1908	7	035	9	22	9	0.79	9	06	2	12	7
TX BALLINGER 1SW	41	0493-02	31-44	99-58	1575	12/1896	5	098	4	12/1896	3	004	2	03	2	0.39	7	06	2	05	1
TX BALMORHEA	41	0498-05	30-59	103-45	3220	09/1923	9	096	6	06/1971	9	010	5	01	1	0.00	0	11	6	04	1
TX BEEVILLE 5NE	41	0639-07	28-27	97-42	255	12/1896	5	098	4	12/1896	3	006	3	04	4	0.50	8	10	5	13	7
TX BLANCO	41	0832-06	30-06	98-25	1370	10/1896	5	095	6	01/1975	9	000	0	00	0	0.00	0	17	9	04	1
TX BOERNE	41	0902-06	29-48	98-43	1422	03/1904	7	099	2	03/1904	6	017	8	09	8	0.39	7	16	9	09	4
TX BRENHAM	41	1048-07	30-09	96-24	353	12/1896	5	099	2	12/1896	3	005	3	02	1	0.29	5	06	2	06	2
TX BROWNWOOD	41	1138-03	31-43	99-00	1385	01/1893	3	092	8	12/1896	3	019	8	08	7	0.69	9	11	6	11	6
TX CLARKSVILLE 2NE	41	1772-04	33-38	95-02	435	03/1903	7	093	7	03/1903	5	015	7	06	6	0.50	8	17	9	15	8
TX CORPUS CHRISTI WSO AP	41	2015-07	27-46	97-30	41	02/1887	0	100	0	02/1887	0	002	1	06	6	0.69	9	13	7	17	9
TX CORSICANA	41	2019-03	32-05	96-28	425	12/1896	5	099	2	12/1896	3	005	3	05	5	0.50	8	08	3	06	2
TX CROSBYTON	41	2121-01	33-39	101-15	3010	02/1894	4	096	6	01/1900	4	006	3	06	6	0.69	9	14	8	05	1
TX DANEVANG 1W	41	2266-08	29-03	96-14	70	03/1896	5	098	4	08/1899	4	008	4	06	6	0.39	7	17	9	16	9
TX DILLEY	41	2458-09	28-40	99-10	582	05/1916	9	099	2	05/1916	8	003	2	04	4	0.39	7	09	4	10	5
TX DUBLIN	41	2598-03	32-06	98-20	1502	12/1896	5	094	7	12/1896	3	010	5	07	7	0.50	8	06	2	11	6
TX EAGLE PASS	41	2679-09	28-42	100-29	805	12/1896	5	096	6	12/1896	3	005	3	04	4	0.59	9	03	0	03	0
TX EL PASO WSO AP	41	2797-05	31-48	106-24	3918	05/1878	0	100	0	01/1895	2	007	4	09	8	0.69	9	20	9	11	6
TX ENCINAL	41	2906-09	28-02	99-22	588	04/1908	8	096	6	04/1908	7	021	8	08	7	0.29	5	17	9	11	6
TX FALFURRIAS	41	3063-09	27-14	98-08	120	04/1907	8	097	5	12/1975	9	010	5	02	1	0.00	0	18	9	13	7
TX FLATONIA	41	3183-07	29-40	97-07	520	01/1908	8	099	2	01/1908	7	007	4	08	7	0.59	9	09	4	14	8
TX FORT STOCKTON	41	3280-05	30-53	102-52	2980	06/1904	7	097	5	06/1904	6	008	4	04	4	0.29	5	07	2	03	0
TX GAINESVILLE	41	3415-03	33-38	97-08	760	01/1893	3	098	4	04/1896	3	013	6	06	6	0.39	7	10	5	11	6
TX GREENVILLE	41	3734-03	33-12	96-13	610	03/1900	6	098	4	03/1900	5	007	4	06	6	0.19	3	05	1	10	5
TX HALLETTSVILLE 3S	41	3873-07	29-24	96-57	261	01/1893	3	098	4	01/1893	1	016	7	06	6	0.50	8	04	0	01	0
TX HASKELL	41	3992-02	33-10	99-44	1605	03/1893	3	092	8	01/1957	9	002	1	00	0	0.00	0	06	2	10	5
TX LAMPASAS	41	5018-06	31-03	98-11	1024	12/1896	5	099	2	12/1896	3	005	3	04	4	0.29	5	06	2	02	0
TX LIBERTY	41	5196-08	30-03	94-48	35	07/1904	7	099	2	07/1904	6	012	6	09	8	0.50	8	13	7	14	8
TX LLANO	41	5272-06	30-45	98-41	1040	06/1902	7	097	5	06/1902	5	009	5	06	6	0.50	8	04	0	11	6
TX LULING	41	5429-07	29-40	97-39	398	09/1888	0	096	6	02/1892	0	007	4	08	7	0.39	7	09	4	05	1
TX MARSHALL	41	5618-04	32-32	94-21	352	05/1893	3	087	9	03/1896	3	018	8	07	7	0.39	7	08	3	15	8

MAXIMUM/MINIMUM TEMPERATURE

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TX MCCAMEY	41	5707-06	31-08	102-12	2450	02/1932	9	099	2	02/1932	9	009	5	03	2	0.09	1	04	0	11	6
TX MEXIA	41	5869-03	31-41	96-29	535	09/1904	7	099	2	09/1904	6	000	0	01	1	0.39	7	09	4	10	5
TX MIAMI	41	5875-01	35-42	100-38	2755	07/1905	7	096	6	07/1905	6	020	8	11	9	0.50	8	16	9	04	1
TX MULESHOE 1	41	6135-01	34-14	102-45	3760	07/1927	9	099	2	07/1927	9	009	5	05	5	0.19	3	11	6	17	9
TX NEW BRAUNFELS	41	6276-07	29-44	98-07	710	05/1891	1	096	6	02/1892	0	006	3	05	5	0.79	9	17	9	16	9
TX PECOS	41	6892-05	31-25	103-30	2610	01/1904	7	066	9	03/1908	7	038	9	13	9	0.39	7	03	0	07	2
TX PLAINVIEW	41	7079-01	34-11	101-42	3370	03/1894	4	096	6	01/1915	8	015	7	09	8	0.50	8	14	8	12	7
TX QUANAH SSE	41	7336-02	34-15	99-41	1495	01/1893	3	086	9	11/1900	5	013	6	04	4	0.29	5	07	2	07	2
TX RIO GRANDE CITY 3W	41	7622-09	26-23	98-52	176	12/1896	5	071	9	01/1963	9	002	1	00	0	0.00	0	12	7	14	8
TX SAN ANTONIO WSFO	41	7945-07	29-32	98-28	788	01/1885	0	100	0	01/1893	1	005	3	09	8	0.59	9	08	3	14	8
TX SEMINOLE	41	8201-01	32-43	102-40	3340	08/1922	9	093	7	12/1963	9	005	3	02	1	0.09	1	09	4	11	6
TX SYNDER	41	8433-02	32-43	100-55	2335	05/1911	8	097	5	05/1911	7	010	5	05	5	0.79	9	13	7	11	6
TX STRATFORD	41	8692-01	36-21	102-05	3693	07/1911	8	068	9	01/1962	9	006	3	01	1	0.00	0	10	5	02	0
TX TEMPLE	41	8910-03	31-05	97-22	700	05/1891	1	095	6	09/1892	1	018	8	11	9	0.29	5	10	5	14	8
TX VEGA	41	9330-01	35-15	102-25	4010	04/1923	9	099	2	04/1923	9	015	7	06	6	0.39	7	09	4	20	9
TX WEATHERFORD	41	9532-03	32-46	97-49	1065	01/1897	5	097	5	01/1897	3	003	2	03	2	0.39	7	15	8	10	5

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
UT ALTON	42	0086-04	37-26	112-29	7040	07/1915	9	099	2	07/1915	8	003	2	05	5	0.59	9	05	1	15	8
UT BEAVER	42	0519-04	38-17	112-38	5940	01/1893	3	081	9	01/1937	9	013	6	06	6	0.29	5	09	4	09	4
UT BLANDING	42	0738-07	37-37	109-28	6130	12/1904	7	096	6	01/1929	9	000	0	02	1	0.29	5	03	0	08	3
UT BLUFF	42	0788-07	37-17	109-33	4315	07/1911	8	090	8	07/1911	7	024	9	09	8	0.29	5	12	7	09	4
UT CORINNE	42	1731-03	41-35	112-08	4240	02/1897	5	096	6	02/1897	3	033	9	17	9	0.79	9	09	4	14	8
UT DESERET	42	2101-01	39-17	112-39	4585	09/1891	1	093	7	01/1893	1	005	3	04	4	0.59	9	11	6	04	1
UT DUCHESNE	42	2253-06	40-10	110-24	5510	04/1906	8	098	4	04/1906	6	016	7	11	9	0.89	9	08	3	03	0
UT ELBERTA	42	2418-03	39-57	111-57	4690	01/1902	7	097	5	01/1902	5	005	3	06	6	0.39	7	03	0	09	4
UT ESCALANTE	42	2592-04	37-46	111-36	5810	08/1901	7	088	9	01/1922	8	006	3	02	1	0.39	7	08	3	13	7
UT FILLMORE	42	2828-04	38-57	112-19	5120	01/1893	3	099	2	09/1971	9	003	2	01	1	0.09	1	16	9	11	6
UT FORT DUCHESNE	42	2996-06	40-17	109-52	5050	11/1897	6	096	6	09/1924	9	008	4	05	5	1.29	9	08	3	13	7
UT GREEN RIVER AVIATION	42	3418-07	39-00	110-10	4070	03/1893	3	088	9	01/1919	8	029	9	09	8	0.89	9	05	1	04	1
UT HANKSVILLE	42	3611-07	38-22	110-43	4308	12/1910	8	096	6	07/1919	8	013	6	06	6	0.39	7	19	9	13	7
UT HEBER	42	3809-05	40-30	111-25	5630	05/1893	3	099	2	05/1893	2	001	0	04	4	0.59	9	11	6	11	6
UT HIAWATHA	42	3896-05	39-29	111-01	7280	09/1921	9	095	6	09/1921	8	023	9	07	7	0.69	9	15	8	17	9
UT KANAB	42	4508-04	37-03	112-32	4950	10/1902	7	086	9	06/1908	7	036	9	12	9	0.39	7	03	0	08	3
UT LAKETOWN	42	4856-05	41-49	111-19	5980	11/1900	6	099	2	11/1900	5	007	4	04	4	0.39	7	02	0	13	7
UT LEVAN	42	5065-04	39-33	111-52	5315	04/1895	4	099	2	04/1895	2	006	3	05	5	0.39	7	11	6	09	4
UT LOA	42	5148-04	38-24	111-39	7080	01/1893	3	084	9	08/1912	7	018	8	10	8	0.59	9	10	5	07	2
UT LOGAN USU	42	5186-03	41-45	111-48	4790	01/1893	3	099	2	05/1893	2	011	6	09	8	0.59	9	08	3	06	2
UT MANTI	42	5402-04	39-15	111-38	5740	01/1893	3	094	7	06/1907	6	004	2	04	4	0.39	7	11	6	07	2
UT MOAB 4NW	42	5733-07	38-36	109-36	3965	01/1893	3	098	4	01/1893	1	015	7	11	9	0.59	9	12	7	08	3
UT MODENA	42	5752-01	37-48	113-55	5480	01/1901	6	099	2	01/1901	5	009	5	04	4	0.19	3	13	7	16	9
UT MORGAN	42	5826-05	41-02	111-41	5060	02/1903	7	094	7	04/1912	7	012	6	07	7	0.79	9	14	8	06	2
UT OGDEN PIONEER P H	42	6404-03	41-15	111-57	4350	01/1902	7	098	4	01/1902	5	018	8	06	6	0.19	3	09	4	10	5
UT PANGUITCH	42	6601-04	37-49	112-27	6720	12/1911	9	091	8	12/1911	7	039	9	16	9	0.50	8	07	2	13	7
UT PAROWAN POWER PLANT	42	6686-04	37-50	112-50	6000	01/1893	3	096	6	01/1908	7	023	9	12	9	0.29	5	16	9	03	0
UT RICHFIELD RADIO KSVK	42	7260-04	38-46	112-05	5270	01/1893	3	089	8	09/1918	8	024	9	07	7	0.19	3	13	7	11	6
UT RIVERDALE	42	7318-03	41-09	112-00	4400	02/1914	9	098	4	02/1914	8	006	3	04	4	0.39	7	17	9	09	4
UT SAINT GEORGE	42	7516-02	37-09	113-35	2760	01/1893	3	097	5	01/1917	8	016	7	10	8	0.59	9	09	4	04	1
UT SCIPIO	42	7714-04	39-15	112-06	5300	06/1895	5	097	5	06/1924	9	003	2	01	1	0.00	0	13	7	01	0
UT SNAKE CREEK PH	42	7909-05	40-33	111-30	6000	01/1914	9	100	0	01/1914	8	004	2	02	1	0.09	1	13	7	09	4

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UT SPANISH FORK PH	42	8119-03	40-05	111-36	4720	07/1909	8	099	2	07/1909	7	003	2	06	6	0.29	5	01	0	13	7
UT THOMPSON	42	8705-07	38-58	109-43	5100	05/1911	8	090	8	05/1911	7	013	6	00	0	0.00	0	07	2	18	9
UT TOOELE	42	8771-03	40-32	112-18	5070	03/1896	5	098	4	06/1923	9	004	2	02	1	0.00	0	12	7	06	2
UT UTAH LAKE LEHI	42	8973-03	40-22	111-54	4497	01/1905	7	093	7	10/1909	7	011	6	02	1	0.09	1	07	2	15	8
UT VERNAL AP	42	9111-06	40-27	109-31	5280	01/1928	9	097	5	01/1928	9	015	7	05	5	1.00	9	13	7	16	9
UT WENDOVER AUTOB	42	9382-01	40-44	114-02	4237	09/1911	8	096	6	09/1911	7	004	2	06	6	0.59	9	13	7	07	2
UT WOODRUFF	42	9595-05	41-32	111-09	6315	01/1897	5	087	9	01/1924	9	002	1	00	0	0.00	0	12	7	06	2
UT ZION NATIONAL PARK	42	9717-02	37-13	112-59	4050	01/1904	7	094	7	12/1924	9	008	4	05	5	0.29	5	06	2	07	2

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VT BURLINGTON AP	43	1081-02	44-28	73-09	332	01/1892	2	100	0	01/1892	0	001	0	04	4	0.39	7	13	7	14	8
VT CAVENDISH	43	1243-03	43-23	72-36	800	03/1903	7	098	4	03/1903	5	005	3	01	1	0.00	0	15	8	14	8
VT CHELSEA	43	1360-01	43-59	72-27	800	10/1895	5	097	5	10/1895	3	010	5	06	6	0.59	9	05	1	18	9
VT CORNWALL	43	1580-02	43-57	73-13	490	01/1894	4	097	5	01/1894	2	009	5	04	4	0.29	5	14	8	12	7
VT ENOSBURG FALLS	43	2769-01	44-55	72-49	422	08/1891	1	093	7	01/1900	4	009	5	02	1	0.29	5	08	3	12	7
VT NORTHFIELD 3SSE	43	5740-01	44-06	72-37	1410	03/1887	0	096	6	11/1891	0	011	6	07	7	0.39	7	09	4	14	8
VT SAINT JOHNSBURY	43	7054-01	44-25	72-01	699	03/1894	4	100	0	03/1894	2	002	1	01	1	0.00	0	05	1	01	0

MAXIMUM/MINIMUM TEMPERATURE

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VA BLACKSBURG 3SE	44	0766-06	37-11	80-25	2000	12/1891	2	098	4	12/1891	0	005	3	04	4	0.39	7	14	8	07	2
VA BURKES GARDEN	44	1209-06	37-05	81-20	3300	04/1896	5	099	2	04/1896	3	005	3	05	5	0.29	5	01	0	12	7
VA CHARLOTTESVILLE	44	1593-03	38-02	78-31	870	01/1893	3	096	6	01/1899	4	002	1	01	1	0.00	0	12	7	06	2
VA COLUMBIA 2SSE	44	1929-02	37-44	78-09	290	01/1900	6	097	5	12/1898	4	007	4	05	5	0.19	3	05	1	07	2
VA CULPEPER	44	2155-04	38-28	78-00	420	08/1907	8	098	4	08/1907	6	009	5	04	4	0.19	3	05	1	12	7
VA DALE ENTERPRISE	44	2208-05	38-27	78-56	1400	01/1893	3	099	2	01/1907	6	001	0	02	1	0.19	3	14	8	17	9
VA DANVILLE BRIDGE ST	44	2245-03	36-35	79-23	410	05/1916	9	099	2	05/1916	8	000	0	04	4	0.19	3	08	3	12	7
VA FARMVILLE 2N	44	2941-02	37-20	78-23	450	03/1897	5	071	9	12/1899	4	037	9	09	8	0.29	5	09	4	15	8
VA FREDERICKSBURG NATIONAL PARK	44	3192-01	38-19	77-27	90	05/1893	3	097	5	05/1893	2	013	6	10	8	0.59	9	12	7	06	2
VA HOPEWELL	44	4101-01	37-18	77-18	40	10/1916	9	097	5	04/1938	9	003	2	02	1	0.19	3	14	8	05	1
VA HOT SPRINGS	44	4128-05	38-00	79-50	2238	06/1892	2	097	5	11/1899	4	013	6	06	6	0.29	5	10	5	05	1
VA LEXINGTON	44	4876-05	37-47	79-26	1060	07/1889	1	098	4	12/1891	0	012	6	07	7	0.59	9	14	8	18	9
VA LINCOLN	44	4909-04	39-07	77-43	500	10/1900	6	097	5	10/1900	5	004	2	02	1	0.19	3	08	3	09	4
VA NORFOLK WSO AP	44	6139-01	36-54	76-12	24	03/1909	8	099	2	03/1909	7	002	1	02	1	0.19	3	02	0	17	9
VA PENNINGTON GAP	44	6626-06	36-45	83-03	1510	07/1931	9	098	4	07/1931	9	001	0	01	1	0.09	1	13	7	18	9
VA ROCKY MOUNT	44	7338-03	37-00	79-54	1232	05/1894	4	093	7	10/1961	9	001	0	01	1	0.00	0	12	7	07	2
VA STAUNTON SEWAGE PLANT	44	8062-05	38-09	79-02	1385	01/1893	3	097	5	09/1898	4	019	8	10	8	0.29	5	08	3	10	5
VA WILLIAMSBURG 2N	44	9151-01	37-18	76-42	70	11/1900	6	095	6	11/1900	5	015	7	05	5	0.19	3	14	8	11	6
VA WOODSTOCK 2NE	44	9263-04	38-54	78-28	660	01/1897	5	097	5	01/1897	3	016	7	07	7	0.59	9	04	0	10	5

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WA ABERDEEN	45	0008-01	46-58	123-49	10	07/1891	1	098	4	10/1895	3	009	5	08	7	0.19	3	09	4	08	3
WA BELLINGHAM 2N	45	0564-03	48-47	122-29	140	06/1895	5	099	2	06/1895	3	002	1	06	6	0.39	7	14	8	06	2
WA BLAINE	45	0729-03	49-00	122-45	60	08/1893	4	093	7	01/1910	7	006	3	09	8	0.50	8	08	3	06	2
WA BUCKLEY 1NE	45	0945-04	47-10	122-00	685	01/1913	9	100	0	01/1913	7	000	0	03	2	0.29	5	09	4	08	3
WA CEDAR LAKE	45	1233-05	47-25	121-44	1560	07/1909	8	099	2	07/1909	7	009	5	02	1	0.19	3	12	7	10	5
WA CENTRALIA	45	1276-03	46-43	122-57	185	01/1893	3	088	9	06/1897	3	009	5	08	7	0.29	5	05	1	05	1
WA CLEARBROOK	45	1484-03	48-58	122-20	64	03/1903	7	098	4	03/1903	5	008	4	03	2	0.19	3	15	8	13	7
WA CLE ELUM	45	1504-06	47-11	120-57	1930	01/1899	6	097	5	01/1899	4	019	8	13	9	0.79	9	07	2	14	8
WA COLFAX 1NW	45	1586-10	46-53	117-23	1955	02/1892	2	096	6	01/1912	7	020	8	09	8	0.29	5	04	0	04	1
WA COLVILLE AP	45	1650-09	48-33	117-53	1885	09/1899	6	099	2	09/1899	4	007	4	04	4	0.39	7	01	0	08	3
WA CONCONULLY	45	1666-07	48-33	119-45	2320	08/1894	4	090	8	01/1905	6	013	6	08	7	0.59	9	08	3	09	4
WA DAVENPORT	45	2007-07	47-39	118-08	2440	03/1893	3	082	9	02/1900	5	019	8	07	7	0.39	7	13	7	14	8
WA DAYTON 1WSW	45	2030-10	46-19	118-00	1557	04/1893	3	095	6	12/1915	8	011	6	04	4	0.09	1	08	3	10	5
WA ELLENSBURG	45	2505-08	46-58	120-33	1480	02/1893	3	098	4	01/1901	5	014	7	09	8	0.50	8	13	7	09	4
WA EVERETT	45	2675-03	47-59	122-11	60	09/1894	4	077	9	09/1896	3	034	9	12	9	0.39	7	08	3	08	3
WA FORKS 1E	45	2914-01	47-57	124-22	350	01/1909	8	094	7	02/1908	7	014	7	08	7	0.39	7	09	4	14	8
WA GOLDENDALE 2E	45	3226-08	45-49	120-46	1800	02/1906	8	098	4	11/1905	6	011	6	07	7	0.39	7	09	4	07	2
WA GRAPEVIEW 3SW	45	3284-04	47-18	122-52	30	10/1907	8	098	4	10/1907	6	003	2	03	2	0.19	3	09	4	12	7
WA KENNEWICK	45	4154-08	46-13	119-06	390	02/1894	4	096	6	01/1915	8	004	2	07	7	0.39	7	08	3	12	7
WA LAURIER	45	4549-09	49-00	118-14	1644	04/1910	8	099	2	04/1910	7	002	1	00	0	0.00	0	10	5	07	2
WA LONG BEACH EXP STN	45	4748-01	46-22	124-02	25	09/1883	0	096	6	12/1899	4	005	3	02	1	0.29	5	05	1	15	8
WA LONGMIRE RAINIER NPS	45	4764-05	46-45	121-49	2762	01/1909	8	094	7	01/1909	7	014	7	03	2	0.19	3	12	7	10	5
WA LONGVIEW	45	4769-04	46-09	122-55	12	07/1925	9	099	2	07/1925	9	005	3	05	5	0.00	0	16	9	13	7
WA ODESSA	45	6039-07	47-20	118-41	1540	03/1903	7	098	4	03/1903	5	017	8	07	7	0.39	7	18	9	10	5
WA OLGA 3E	45	6096-00	48-37	122-48	80	08/1891	1	099	2	10/1892	1	001	0	01	1	0.09	1	14	8	02	0
WA POMEROY	45	6610-10	46-28	117-37	1810	10/1891	1	078	9	11/1917	8	024	9	07	7	0.39	7	04	0	08	3
WA PORT ANGELES	45	6624-02	48-07	123-24	40	10/1891	1	098	4	09/1898	4	010	5	08	7	0.19	3	06	2	03	0
WA PORT TOWNSEND	45	6678-02	48-07	122-45	100	10/1891	1	094	7	03/1895	2	010	5	09	8	0.39	7	05	1	05	1
WA PULLMAN 2NW	45	6789-10	46-46	117-12	2545	05/1893	3	097	5	01/1911	7	005	3	04	4	0.29	5	03	0	10	5
WA PUYALLUP EXPERIMENT STN 2W	45	6803-03	47-12	122-20	50	01/1914	9	098	4	01/1914	8	002	1	02	1	0.19	3	07	2	07	2
WA RAYMOND 2S	45	6914-01	46-39	123-43	30	03/1895	4	096	6	10/1896	3	012	6	08	7	0.39	7	12	7	14	8
WA RITZVILLE 1SSE	45	7059-08	47-07	118-22	1830	02/1916	9	099	2	02/1916	8	002	1	02	1	0.19	3	09	4	16	9

MAXIMUM/MINIMUM TEMPERATURE

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WA SEATTLE NMFC	45	7458-03	47-39	122-18	19	01/1909	8	095	6	01/1909	7	010	5	06	6	0.39	7	08	3	10	5
WA SEDRO WOOLLEY	45	7507-03	48-30	122-14	60	08/1896	5	099	2	08/1896	3	006	3	04	4	0.29	5	15	8	14	8
WA SNOQUALMIE FALLS	45	7773-04	47-33	120-51	440	02/1899	6	097	5	02/1899	4	005	3	03	2	0.19	3	08	3	07	2
WA SPOKANE WSO AP	45	7938-09	47-38	117-32	2356	02/1881	0	100	0	01/1903	5	001	0	05	5	0.50	8	09	4	12	7
WA STEHEKIN 4NW	45	8059-06	48-21	120-43	1270	02/1906	8	088	9	02/1906	6	019	8	04	4	0.50	8	12	7	15	8
WA SUNNYSIDE	45	8207-08	46-19	120-00	747	10/1894	4	098	4	11/1898	4	006	3	05	5	0.29	5	09	4	11	6
WA VANCOUVER 4NNE	45	8773-04	45-41	122-39	210	08/1891	1	095	6	09/1893	2	004	2	03	2	0.19	3	15	8	07	2
WA WALLA WALLA WSO CITY	45	8931-08	46-02	118-20	949	12/1885	0	099	2	01/1915	8	000	0	01	1	0.19	3	05	1	10	5
WA WATERVILLE	45	9012-07	47-39	120-04	2620	10/1891	1	094	7	06/1925	9	019	8	05	5	0.39	7	07	2	04	1
WA WENATCHEE	45	9074-08	47-25	120-19	640	05/1912	9	099	2	05/1912	7	021	8	08	7	0.29	5	03	0	12	7
WA WILBUR	45	9238-07	47-45	118-40	2230	04/1892	2	091	8	01/1899	4	017	8	11	9	0.59	9	20	9	13	7
WA WINTHROP 1WSW	45	9376-06	48-28	120-11	1755	03/1906	8	091	8	03/1906	6	010	5	04	4	0.29	5	08	3	18	9

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WV BENS RUN 1SSE	46	0687-01	39-28	81-06	644	10/1900	6	097	5	10/1900	5	005	3	03	2	0.19	3	14	8	07	2
WV BUCKHANNON 2W	46	1220-02	39-00	80-16	1445	10/1891	1	094	7	09/1893	2	007	4	03	2	0.09	1	07	2	03	0
WV GARY	46	3353-05	37-22	81-33	1426	02/1920	9	100	0	02/1920	8	000	0	01	1	0.09	1	09	4	01	0
WV GLENVILLE 1ENE	46	3544-02	38-56	80-49	720	01/1893	3	098	4	01/1893	1	010	5	09	8	0.50	8	13	7	13	7
WV LEWISBURG 2SSW	46	5224-05	37-46	80-28	2185	05/1900	6	094	7	05/1900	5	023	9	08	7	0.39	7	14	8	12	7
WV MANNINGTON 7WNW	46	5626-02	39-32	80-30	1100	03/1901	6	096	6	03/1901	5	013	6	03	2	0.00	0	10	5	20	9
WV MARTINSBURG FAA AIRPORT	46	5707-06	39-24	77-59	531	11/1891	1	098	4	01/1893	1	006	3	04	4	0.09	1	17	9	14	8
WV PARSONS 1SE	46	6867-04	39-06	79-40	1680	01/1899	6	093	7	01/1899	4	010	5	07	7	0.50	8	11	6	12	7
WV PICKENS 1	46	6991-04	38-40	80-13	2770	04/1902	7	096	6	04/1902	5	013	6	06	6	0.69	9	11	6	13	7
WV SPENCER 1SE	46	8384-03	38-48	81-21	740	03/1892	2	089	8	02/1897	3	017	8	07	7	0.39	7	13	7	03	0
WV WELLSBURG WATER TRMT PLANT	46	9368-01	40-17	80-37	660	10/1899	6	098	4	10/1899	4	002	1	03	2	0.29	5	15	8	10	5
WV WILLIAMSON	46	9605-03	37-40	82-17	673	09/1900	6	097	5	09/1900	5	011	6	02	1	0.19	3	10	5	11	6
WV WINFIELD LOCK & DAM	46	9683-03	38-32	81-55	571	10/1900	6	094	7	10/1900	5	008	4	04	4	0.19	3	09	4	14	8

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WI ANTIGO 1SSW	47	0239-03	45-08	89-09	1450	05/1894	4	096	6	02/1898	4	005	3	03	2	0.19	3	07	2	10	5
WI ASHLAND EXPERIMENT FARM	47	0349-01	46-34	90-58	650	03/1893	3	087	9	03/1894	2	021	8	14	9	0.19	3	05	1	12	7
WI BRODHEAD	47	1078-08	42-37	89-23	790	11/1897	6	098	4	11/1897	4	004	2	05	5	0.39	7	13	7	15	8
WI DARLINGTON	47	2001-07	42-41	90-07	930	03/1901	6	093	7	03/1901	5	020	8	06	6	0.19	3	10	5	03	0
WI FOND DU LAC	47	2839-06	43-48	88-27	760	05/1891	1	098	4	12/1891	0	003	2	07	7	0.39	7	10	5	09	4
WI HANCOCK EXPERIMENT FARM	47	3405-05	44-07	89-32	1076	11/1902	7	097	5	11/1902	5	006	3	06	6	0.39	7	11	6	09	4
WI HATFIELD HYDRO PLANT	47	3471-04	44-24	90-44	953	09/1908	8	097	5	09/1908	7	004	2	02	1	0.29	5	13	7	09	4
WI LANCASTER 4WSW	47	4546-07	42-50	90-47	1042	01/1892	2	093	7	01/1892	0	009	5	06	6	0.39	7	12	7	13	7
WI MANITOWOC	47	5017-06	44-06	87-41	660	01/1892	2	100	0	01/1892	0	004	2	05	5	0.29	5	13	7	10	5
WI MARSHFIELD EXPERIMENT FARM	47	5120-05	44-39	90-08	1250	01/1913	9	100	0	01/1913	7	000	0	03	2	0.29	5	09	4	12	7
WI MEDFORD	47	5255-02	45-08	90-21	1470	02/1891	1	099	2	12/1891	0	022	9	09	8	0.39	7	05	1	13	7
WI MINOCQUA DAM	47	5516-02	45-53	89-44	1580	09/1903	7	096	6	09/1903	5	009	5	02	1	0.19	3	16	9	06	2
WI NEW LONDON	47	5932-05	44-23	88-44	760	03/1896	5	099	2	03/1896	3	003	2	06	6	0.39	7	05	1	12	7
WI OCONTO 4W	47	6208-03	44-54	87-57	660	02/1891	1	099	2	12/1891	0	016	7	12	9	0.39	7	10	5	08	3
WI OSHKOSH	47	6330-06	44-02	88-33	750	02/1891	1	096	6	12/1891	0	009	5	04	4	0.19	3	08	3	16	9
WI PORTAGE	47	6718-08	43-32	89-26	800	03/1896	5	099	2	03/1896	3	006	3	04	4	0.29	5	14	8	15	8
WI PRAIRIE DU CHIEN	47	6827-07	43-02	91-09	658	02/1891	1	098	4	10/1892	1	012	6	05	5	0.19	3	04	0	07	2
WI RACINE	47	6922-09	42-42	87-46	595	05/1896	5	098	4	05/1896	3	022	9	12	9	0.50	8	07	2	08	3
WI SPOONER EXPERIMENT FARM	47	8027-01	45-49	91-53	1100	08/1894	4	096	6	08/1894	2	003	2	03	2	0.19	3	06	2	09	4
WI STANLEY	47	8110-01	44-58	90-56	1120	09/1903	7	095	6	09/1903	5	012	6	09	8	0.39	7	14	8	10	5
WI VIROQUA 2NW	47	8827-07	43-34	90-54	1200	06/1891	1	097	5	12/1891	0	019	8	07	7	0.29	5	18	9	04	1
WI WATERTOWN	47	8919-08	43-11	88-44	820	06/1891	1	099	2	12/1891	0	009	5	06	6	0.29	5	12	7	13	7
WI WAUKESHA	47	8937-09	43-01	88-14	860	03/1894	4	096	6	03/1894	2	004	2	04	4	0.19	3	17	9	19	9

MAXIMUM/MINIMUM TEMPERATURE

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
WY ALTA 1NNW	48	0140-02	43-47	111-02	6430	08/1909	8	098	4	08/1909	7	006	3	04	4	0.50	8	14	8	09	4
WY BASIN	48	0540-04	44-23	108-03	3837	03/1898	6	093	7	10/1901	5	007	4	03	2	0.39	7	12	7	06	2
WY BORDER 3N	48	0915-03	42-15	111-02	6120	01/1902	7	099	2	01/1902	5	006	3	04	4	0.59	9	05	1	11	6
WY BUFFALO BILL DAM	48	1175-04	44-30	109-11	5156	01/1905	7	099	2	01/1905	6	003	2	01	1	0.09	1	10	5	16	9
WY CHEYENNE WSFO	48	1675-08	41-09	104-49	6126	11/1872	0	099	2	04/1887	0	002	1	06	6	0.39	7	05	1	10	5
WY CHUGWATER	48	1730-08	41-45	104-49	5282	11/1900	6	097	5	11/1900	5	003	2	01	1	0.19	3	09	4	02	0
WY COLONY	48	1905-06	44-56	104-12	3570	01/1915	9	099	2	01/1915	8	005	3	03	2	0.29	5	10	5	04	1
WY DIVERSION DAM	48	2595-09	43-14	108-56	5575	10/1907	8	090	8	10/1907	6	015	7	10	8	0.00	0	04	0	11	6
WY DUBOIS	48	2715-09	43-34	109-38	6925	04/1907	8	092	8	04/1907	6	021	8	03	2	0.29	5	12	7	15	8
WY EVANSTON 1E	48	3100-03	41-16	110-57	6810	05/1898	6	099	2	05/1898	4	006	3	03	2	0.39	7	20	9	13	7
WY FARSON	48	3170-03	42-07	109-26	6590	04/1908	8	085	9	04/1908	7	038	9	10	8	1.00	9	03	0	14	8
WY GREEN RIVER	48	4065-03	41-32	109-28	6089	04/1897	5	088	9	01/1921	8	009	5	07	7	0.79	9	15	8	19	9
WY LAKE YELLOWSTONE	48	5345-01	44-33	110-24	7770	02/1904	7	089	8	02/1904	6	019	8	06	6	0.79	9	06	2	10	5
WY LARAMIE FAA AP	48	5415-10	41-19	105-41	7266	01/1892	2	094	7	11/1892	1	005	3	03	2	0.39	7	14	8	12	7
WY LUSK	48	5830-07	42-46	104-28	5020	10/1891	1	096	6	10/1891	0	009	5	05	5	0.39	7	10	5	17	9
WY MIDWEST	48	6195-05	43-24	106-17	4815	07/1922	9	097	5	07/1922	9	010	5	04	4	0.39	7	06	2	12	7
WY MORAN SWNW	48	6440-02	43-51	110-35	6798	03/1911	8	099	2	03/1911	7	004	2	01	1	0.19	3	14	8	16	9
WY NEWCASTLE	48	6660-07	43-51	104-13	4315	07/1906	8	095	6	07/1906	6	011	6	08	7	0.50	8	15	8	18	9
WY PATHFINDER DAM	48	7105-10	42-28	106-51	5930	01/1899	6	098	4	01/1899	4	009	5	01	1	0.00	0	12	7	03	0
WY PAVILLION	48	7115-09	43-15	108-41	5440	03/1919	9	097	5	03/1919	8	006	3	01	1	0.00	0	12	7	05	1
WY PINE BLUFFS	48	7235-08	41-11	104-04	5075	04/1900	6	081	9	04/1900	5	019	8	14	9	0.50	8	05	1	08	3
WY PINEDALE	48	7260-03	42-52	109-52	7175	01/1906	8	068	9	01/1940	9	050	9	12	9	0.50	8	16	9	13	7
WY POWELL FIELD STATION	48	7388-04	44-47	108-45	4370	02/1907	8	100	0	02/1907	6	012	6	06	6	0.29	5	12	7	15	8
WY RIVERTON	48	7760-09	43-01	108-23	4954	02/1907	8	088	9	02/1907	6	021	8	07	7	0.39	7	15	8	05	1
WY SARATOGA	48	7990-10	41-27	106-49	6790	03/1900	6	080	9	01/1906	6	036	9	13	9	1.00	9	07	2	14	8
WY SHERIDAN FIELD STATION	48	8160-05	44-50	106-50	3750	10/1891	1	089	8	01/1918	8	003	2	01	1	0.00	0	18	9	14	8
WY TORRINGTON EXP FARM	48	8995-08	42-05	104-13	4098	01/1922	9	099	2	01/1922	8	001	0	03	2	0.39	7	15	8	11	6
WY WHEATLAND 4N	48	9615-08	42-07	104-57	4638	11/1891	1	087	9	08/1929	9	008	4	03	2	0.09	1	13	7	08	3
WY WORLAND	48	9770-04	44-01	107-57	4060	02/1907	8	095	6	02/1907	6	017	8	10	8	0.69	9	13	7	03	0
WY YELLOWSTONE PARK	48	9905-01	44-58	110-42	6200	01/1887	0	097	5	01/1905	6	006	3	03	2	0.50	8	05	1	06	2

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
AL BREWTON 3SSE	01	1084-07	31-04	87-03	85	12/1890	4	069	9	05/1909	7	039	9	05	4	1.13	7	04	2	08	4
AL CLANTON	01	1694-03	32-51	86-38	580	01/1893	5	099	3	01/1893	4	001	2	05	4	1.03	1	16	8	18	9
AL FAIRHOPE 2NE	01	2813-08	30-33	87-53	23	03/1918	9	099	3	03/1918	8	000	1	01	0	1.01	0	00	0	00	0
AL GREENSBORO	01	3511-06	32-42	87-35	220	01/1855	0	087	8	12/1887	2	009	6	07	6	1.11	7	08	4	04	2
AL HIGHLAND HOME	01	3816-07	31-57	86-19	594	01/1892	5	100	1	01/1892	4	009	6	07	6	1.08	5	12	6	18	9
AL MUSCLE SHOALS FAA AP	01	5749-01	34-45	85-37	536	12/1940	9	098	4	12/1940	9	010	6	02	1	1.02	1	08	4	04	2
AL ST BERNARD	01	7157-02	34-10	86-49	800	08/1907	8	098	4	08/1907	7	001	2	03	2	1.03	1	04	2	08	4
AL SCOTTSBORO	01	7304-02	34-41	86-03	615	01/1882	2	096	6	12/1893	4	022	9	10	8	1.08	5	16	8	04	2
AL SELMA	01	7366-06	32-25	87-00	147	01/1858	0	080	9	12/1888	2	007	5	04	3	1.05	3	00	0	10	5
AL TALLADEGA	01	8024-04	33-26	86-05	555	01/1888	3	096	6	01/1888	2	016	7	08	7	1.09	6	12	6	12	6
AL THOMASVILLE	01	8178-07	31-55	87-44	405	01/1891	5	100	1	01/1891	3	003	3	04	3	1.03	1	12	6	06	3
AL TROY	01	8323-07	31-47	85-57	498	01/1872	1	073	9	04/1891	3	036	9	10	8	1.09	6	00	0	02	1
AL TUSCALOOSA OLIVER DAM	01	8385-03	33-13	87-35	152	01/1854	0	081	9	01/1890	3	003	3	05	4	1.04	2	14	7	08	4
AL UNION SPRINGS 4S	01	8438-06	32-06	85-43	460	01/1868	1	099	3	01/1892	4	015	7	12	9	1.10	6	04	2	20	9
AL VALLEY HEAD	01	8469-02	34-34	85-37	1042	12/1885	3	098	4	12/1885	1	009	6	11	9	1.07	5	12	6	18	9

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AZ AJO	02	0080-07	32-22	112-52	1800	01/1913	9	100	1	01/1913	8	000	1	06	5	UNAD	9	18	9	08	4
AZ BUCKEYE	02	1026-06	33-22	112-35	870	01/1889	4	099	3	01/1889	2	001	2	08	7	UNAD	9	00	0	12	6
AZ CANYON-DE-CHELLY	02	1248-02	36-09	109-32	5540	12/1908	8	087	8	12/1908	7	012	6	03	2	UNAD	9	10	5	02	1
AZ CHILDS	02	1614-03	34-21	111-42	2650	09/1915	9	097	5	09/1915	8	002	3	00	0	0.99	0	16	8	16	8
AZ DOUGLAS	02	2659-07	31-21	109-32	4040	12/1903	8	099	3	12/1903	6	000	1	06	5	UNAD	9	02	1	16	8
AZ FORT VALLEY	02	3160-02	35-16	111-44	7347	01/1909	8	099	3	01/1909	7	001	2	02	1	1.03	1	12	6	14	7
AZ GRAND CANYON NATL PARK 2	02	3596-02	36-03	112-09	6785	01/1903	7	099	3	01/1921	8	000	1	03	2	1.07	5	16	8	10	5
AZ HOLBROOK	02	4089-02	34-54	110-10	5080	01/1887	3	099	3	01/1887	1	001	2	08	7	UNAD	9	04	2	16	8
AZ KINGMAN 2	02	4645-01	35-12	114-01	3539	06/1901	7	097	5	06/1901	6	003	3	11	9	UNAD	9	08	4	12	6
AZ LEES FERRY	02	4849-02	36-52	111-36	3210	01/1916	9	088	8	11/1942	9	002	3	02	1	UNAD	9	02	1	00	0
AZ MESA EXPERIMENT FARM	02	5467-06	33-25	111-52	1230	03/1896	6	100	1	03/1896	5	000	1	03	2	UNAD	9	10	5	00	0
AZ MIAMI	02	5512-04	33-24	110-53	3560	12/1913	9	099	3	12/1913	8	001	2	02	1	1.04	2	20	9	10	5
AZ PARKER	02	6250-05	34-10	114-17	425	01/1893	5	100	1	01/1893	4	000	1	07	6	UNAD	9	14	7	16	8
AZ PRESCOTT	02	6796-03	34-34	112-28	5205	03/1865	1	099	3	01/1909	7	019	8	11	9	1.16	7	14	7	02	1
AZ ROOSEVELT 1WNW	02	7281-04	33-40	111-09	2205	01/1905	8	100	1	01/1905	7	004	3	04	3	1.07	5	02	1	04	2
AZ SACATON	02	7370-06	33-04	111-45	1285	01/1908	8	099	3	01/1908	7	001	2	03	2	UNAD	9	12	6	16	8
AZ SAFFORD AGRICULTURAL CENTER	02	7390-07	32-49	109-41	2954	08/1898	7	098	4	08/1898	5	001	2	06	5	UNAD	9	16	8	00	0
AZ SAINT JOHNS	02	7435-02	34-31	109-23	5790	07/1889	4	084	8	07/1889	3	015	7	09	8	UNAD	9	10	5	00	0
AZ SELIGMAN	02	7716-03	35-19	112-53	5250	08/1889	4	078	9	12/1902	6	009	6	04	3	UNAD	9	16	8	18	9
AZ TOMBSTONE	02	8619-07	31-42	110-03	4610	04/1889	4	093	7	04/1889	2	007	5	10	8	UNAD	9	18	9	12	6
AZ TUCSON U OF AZ	02	8815-07	32-15	110-57	2444	05/1867	1	100	1	05/1867	0	000	1	10	8	UNAD	9	14	7	08	4
AZ WHITERIVER	02	9271-02	33-50	109-58	5280	01/1872	1	097	5	01/1872	0	016	7	07	6	1.14	7	10	5	06	3
AZ WICKENBURG	02	9287-06	33-59	112-44	2050	11/1875	1	077	9	11/1875	0	022	9	10	8	UNAD	9	08	4	20	9
AZ WILLIAMS	02	9359-02	35-15	112-11	6750	05/1888	4	086	8	03/1903	6	014	7	08	7	1.10	6	06	3	20	9
AZ YUMA CITRUS	02	9652-05	32-37	114-39	191	09/1920	9	099	3	09/1920	8	000	1	01	0	UNAD	9	16	8	06	3

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AR BRINKLEY	03	0936-06	34-53	91-11	200	04/1882	2	094	6	03/1884	1	022	9	10	8	1.08	5	08	4	20	9
AR CONWAY	03	1596-05	35-06	92-27	332	01/1884	2	099	3	05/1887	2	014	7	09	8	1.09	6	02	1	18	9
AR CORNING	03	1632-03	36-24	90-35	293	11/1892	5	097	5	11/1892	4	012	6	05	4	1.05	3	12	6	06	3
AR EUREKA SPRINGS 3WNW	03	2356-01	36-25	93-47	1420	01/1888	3	086	8	11/1888	2	017	8	07	6	1.11	7	10	5	08	4
AR FAYETTEVILLE EXP STN	03	2444-01	36-06	94-10	1270	10/1870	1	084	8	06/1887	2	004	3	02	1	1.02	1	14	7	14	7
AR GRAVETTE	03	2930-01	36-26	94-27	1260	04/1898	7	100	1	04/1898	5	007	5	06	5	1.07	5	08	4	06	3
AR MAMMOTH SPRING	03	4572-02	36-29	91-32	650	05/1904	8	096	6	05/1904	6	015	7	10	8	1.08	5	02	1	02	1
AR MENA	03	4756-04	34-34	94-16	1130	01/1887	3	099	3	01/1890	3	007	5	06	5	1.10	6	08	4	08	4
AR NEWPORT	03	5186-03	35-36	91-17	220	04/1884	2	097	5	04/1884	1	032	9	18	9	1.13	7	02	1	06	3
AR OZARK	03	5508-04	35-29	93-51	490	10/1891	5	093	7	10/1891	3	009	6	05	4	1.07	5	14	7	00	0
AR PINE BLUFF	03	5754-09	34-13	92-01	215	05/1884	3	096	6	01/1886	1	014	7	06	5	1.08	5	00	0	12	6
AR POCAHONTAS 1	03	5820-03	36-16	90-58	315	04/1894	6	100	1	04/1894	4	004	3	03	2	1.04	2	02	1	16	8
AR PRESCOTT	03	5908-08	33-48	93-23	308	04/1882	2	093	7	05/1887	2	007	5	05	4	1.09	6	14	7	00	0
AR SUBIACO	03	6928-04	35-18	93-39	500	09/1897	7	098	4	09/1897	5	008	5	06	5	1.06	4	18	9	10	5

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CA AVALON PLEASURE PIER	04	0395-06	33-21	118-19	25	12/1909	8	099	3	12/1909	7	000	1	05	4	UNAD	9	02	1	04	2
CA BERKELEY	04	0693-04	37-52	122-15	345	12/1886	3	099	3	12/1886	1	000	1	09	8	UNAD	9	18	9	12	6
CA BLYTHE	04	0924-07	33-37	114-36	268	01/1909	8	100	1	01/1909	7	000	1	09	8	UNAD	9	02	1	06	3
CA BRAWLEY 2SW	04	1048-07	32-57	115-33	-100	01/1909	8	100	1	01/1909	7	000	1	04	3	UNAD	9	20	9	20	9
CA CEDARVILLE	04	1614-03	41-32	120-10	4670	05/1894	6	099	3	05/1894	4	000	1	08	7	UNAD	9	08	4	08	4
CA CHICO UNIV FARM	04	1715-02	39-42	121-49	185	11/1870	1	099	3	11/1870	0	000	1	06	5	UNAD	9	08	4	12	6
CA CHULA VISTA	04	1758-06	32-37	117-05	56	09/1918	9	099	3	09/1918	8	000	1	01	0	UNAD	9	12	6	20	9
CA COLFAX	04	1912-02	39-06	120-57	2410	01/1870	1	100	1	01/1870	0	000	1	03	2	1.07	5	20	9	08	4
CA CUYAMACA	04	2239-06	32-59	116-35	4640	07/1887	3	099	3	07/1887	2	000	1	05	4	1.17	7	20	9	06	3
CA DAVIS	04	2294-02	38-32	121-46	60	11/1871	1	099	3	11/1871	0	000	1	06	5	UNAD	9	14	7	02	1
CA DEATH VALLEY	04	2319-07	36-28	116-52	-194	07/1911	9	099	3	07/1911	8	001	2	03	2	UNAD	9	14	7	18	9
CA ELECTRA PH	04	2728-05	38-20	120-40	715	12/1903	8	099	3	12/1903	6	003	3	03	2	1.02	1	06	3	20	9
CA EUREKA	04	2910-01	40-48	124-10	43	01/1878	2	100	1	01/1878	0	008	5	02	1	1.03	1	02	1	02	1
CA FAIRMONT	04	2941-07	34-42	118-26	3060	01/1909	8	100	1	01/1909	7	000	1	03	2	UNAD	9	04	2	04	2
CA FORT BRAGG 1E	04	3161-01	39-27	123-48	165	12/1860	0	074	9	08/1894	4	007	5	06	5	1.06	4	10	5	10	5
CA FRESNO WSO AP	04	3257-05	36-46	119-43	326	07/1877	1	099	3	07/1877	0	000	1	11	9	UNAD	9	04	2	12	6
CA HANFORD 1S	04	3747-05	36-18	119-39	245	12/1880	2	091	7	10/1898	5	001	2	09	8	UNAD	9	08	4	16	8
CA HAPPY CAMP RS	04	3761-01	41-48	123-22	1120	01/1914	9	100	1	01/1914	8	010	6	07	6	1.08	5	20	9	10	5
CA HEALDSBURG	04	3875-01	38-37	122-52	102	09/1876	1	099	3	09/1876	0	012	6	08	7	1.07	5	02	1	02	1
CA INDEPENDENCE	04	4232-07	36-48	118-12	3950	12/1862	0	085	8	07/1887	2	005	4	07	6	UNAD	9	06	3	20	9
CA INDIO U S DATE GARDEN	04	4259-07	33-44	116-15	11	01/1877	1	099	3	01/1877	0	002	3	05	4	UNAD	9	18	9	06	3
CA LAKE SPAULDING	04	4713-02	39-19	120-38	5156	01/1895	6	100	1	01/1895	4	000	1	06	5	1.08	5	10	5	12	6
CA LEMON COVE	04	4890-05	36-23	119-02	513	01/1899	7	100	1	01/1899	5	000	1	03	2	UNAD	9	04	2	08	4
CA LIVERMORE	04	4997-04	37-40	121-46	480	04/1870	1	100	1	04/1870	0	000	1	09	8	UNAD	9	00	0	14	7
CA LODI	04	5032-05	38-07	121-17	40	10/1882	2	083	9	07/1920	8	009	6	07	6	UNAD	9	16	8	00	0
CA MARYSVILLE	04	5385-02	39-09	121-36	57	01/1862	0	092	7	10/1870	0	001	2	13	9	UNAD	9	02	1	10	5
CA MERCED MUNICIPAL AP	04	5532-05	37-17	120-31	153	01/1872	1	099	3	01/1872	0	001	2	09	8	UNAD	9	10	5	08	4
CA MOUNT SHASTA WSO CITY	04	5983-02	41-19	122-19	3539	01/1888	3	100	1	01/1888	2	005	4	06	5	1.10	6	10	5	06	3
CA NAPA STATE HOSPITAL	04	6074-01	38-17	122-16	35	01/1877	1	100	1	01/1877	0	000	1	04	3	UNAD	9	08	4	00	0
CA NEEDLES FAA AP	04	6118-07	34-46	114-37	914	09/1883	2	093	7	07/1891	3	000	1	07	6	UNAD	9	10	5	08	4
CA OJAI	04	6399-06	34-27	119-14	750	05/1905	8	100	1	05/1905	7	014	7	07	6	1.14	7	10	5	20	9
CA ORLAND	04	6506-02	39-45	122-12	254	01/1883	2	100	1	01/1883	1	000	1	02	1	UNAD	9	20	9	20	9

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CA ORLEANS	04	6508-01	41-18	123-32	410	10/1885	3	083	9	12/1916	8	000	1	02	1	1.03	1	06	3	12	6
CA PASADENA	04	6719-06	34-09	118-09	864	11/1889	4	090	7	04/1896	5	021	8	09	8	1.16	7	06	3	20	9
CA PASO ROBLES	04	6730-04	35-38	120-41	700	11/1886	3	099	3	09/1894	4	000	1	08	7	UNAD	9	02	1	20	9
CA PETALUMA FIRE STN #3	04	6826-01	38-14	122-38	27	11/1871	1	083	9	09/1910	8	003	3	08	7	UNAD	9	08	4	10	5
CA QUINCY	04	7195-02	39-55	120-57	3408	01/1895	6	099	3	12/1971	9	042	9	02	1	1.22	7	14	7	14	7
CA REDDING FIRE STN #4	04	7300-02	40-33	122-23	470	01/1875	1	100	1	01/1875	0	016	7	13	9	1.18	7	10	5	20	9
CA REDLANDS	04	7306-06	34-03	117-11	1318	01/1889	4	100	1	01/1889	2	000	1	06	5	UNAD	9	08	4	18	9
CA SAN LUIS OBISPO POLY	04	7851-04	35-18	120-40	315	07/1869	1	099	3	07/1869	0	004	3	07	6	1.10	6	04	2	08	4
CA SANTA BARBARA	04	7902-06	34-25	119-41	5	07/1867	1	098	4	07/1867	0	001	2	10	8	UNAD	9	06	3	08	4
CA SANTA CRUZ	04	7916-04	36-59	122-01	130	11/1873	1	098	4	09/1877	0	003	3	06	5	1.07	5	16	8	16	8
CA SANTA ROSA	04	7965-01	38-27	122-42	167	08/1888	4	099	3	08/1888	2	006	4	05	4	1.05	3	10	5	00	0
CA SUSANVILLE AP	04	8702-03	40-22	120-34	4146	10/1885	3	087	8	03/1920	8	012	6	08	7	UNAD	9	10	5	04	2
CA TAHOE CITY	04	8758-03	39-10	120-08	6230	09/1903	7	093	7	09/1903	6	007	5	05	4	1.08	5	04	2	08	4
CA TEJON RANCHO	04	8839-05	35-02	118-45	1425	01/1895	6	100	1	01/1895	4	000	1	07	6	UNAD	9	16	8	06	3
CA TUSTIN IRVINE RANCH	04	9087-06	33-44	117-47	118	01/1877	1	100	1	01/1877	0	000	1	03	2	UNAD	9	12	6	06	3
CA UKIAH	04	9122-01	39-09	123-12	623	01/1877	1	100	1	01/1877	0	013	7	12	9	1.12	7	12	6	06	3
CA VACAVILLE	04	9200-02	38-22	121-57	105	01/1880	2	100	1	01/1880	0	000	1	06	5	UNAD	9	10	5	14	7
CA WASCO	04	9452-05	35-36	119-20	345	07/1899	7	099	3	07/1899	6	000	1	06	5	UNAD	9	14	7	10	5
CA WEAVERVILLE RS	04	9490-01	40-44	122-56	2050	07/1871	1	083	9	01/1913	8	012	6	06	5	1.07	5	08	4	12	6
CA WILLOWS 6W	04	9699-02	39-31	122-18	233	12/1878	2	099	3	12/1878	0	000	1	08	7	UNAD	9	02	1	12	6
CA YOSEMITE PARK HEADQUARTERS	04	9855-05	37-45	119-35	3966	01/1904	8	099	3	01/1904	6	005	4	05	4	1.10	6	12	6	14	7
CA YREKA	04	9866-01	41-43	122-38	2625	09/1871	1	098	4	06/1885	1	002	3	08	7	UNAD	9	12	6	14	7

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CO BOULDER	05	0848-04	40-02	105-16	5375	01/1893	5	097	5	01/1893	4	019	8	16	9	1.15	7	04	2	08	4
CO CANON CITY	05	1294-01	38-26	105-15	5335	01/1888	3	097	5	01/1888	2	003	3	08	7	UNAD	9	02	1	02	1
CO CHEESMAN	05	1528-04	39-13	105-17	6875	09/1902	7	099	3	09/1902	6	000	1	00	0	UNAD	9	12	6	14	7
CO CHEYENNE WELLS	05	1564-03	38-49	102-21	4250	03/1889	4	095	6	03/1889	2	005	4	06	5	UNAD	9	10	5	10	5
CO COLLBRAN	05	1741-02	39-15	107-58	5980	01/1892	5	095	6	01/1892	4	030	9	14	9	1.18	7	12	6	06	3
CO DEL NORTE	05	2184-05	37-40	106-21	7884	04/1891	5	069	9	01/1901	6	025	9	07	6	UNAD	9	16	8	02	1
CO DILLON 1E	05	2281-02	39-38	106-02	9065	06/1888	4	081	9	12/1899	6	011	6	08	7	UNAD	9	20	9	02	1
CO DURANGO	05	2432-02	37-17	107-53	6600	01/1886	3	096	6	04/1894	4	000	1	06	5	1.12	7	02	1	10	5
CO EADS	05	2446-01	38-29	102-47	4215	04/1907	8	092	7	04/1907	7	008	5	11	9	UNAD	9	08	4	10	5
CO FORT COLLINS	05	3005-04	40-35	105-05	5004	11/1872	1	093	7	10/1886	1	000	1	03	2	UNAD	9	14	7	02	1
CO FORT MORGAN	05	3038-04	40-15	103-48	4321	01/1895	6	100	1	01/1895	4	000	1	05	4	UNAD	9	16	8	14	7
CO FRUITA 1W	05	3146-02	39-10	108-45	4480	12/1889	4	089	8	12/1889	3	010	6	12	9	UNAD	9	12	6	20	9
CO GUNNISON	05	3662-02	38-32	106-56	7664	03/1884	2	094	6	12/1892	4	001	2	10	8	UNAD	9	18	9	06	3
CO HERMIT 7ESE	05	3951-05	37-46	107-08	9000	06/1894	6	093	7	06/1894	4	021	8	12	9	1.11	7	02	1	08	4
CO HOLLY	05	4076-01	38-03	102-07	3390	01/1894	6	095	6	01/1894	4	005	4	06	5	UNAD	9	04	2	02	1
CO LAS ANIMAS	05	4834-01	38-04	103-13	3891	01/1867	1	099	3	01/1867	0	001	2	06	5	UNAD	9	06	3	08	4
CO MANASSA	05	5322-05	37-10	105-56	7687	05/1892	5	086	8	07/1897	5	014	7	15	9	UNAD	9	02	1	02	1
CO MONTROSE #2	05	5722-02	38-29	107-53	5785	01/1885	3	100	1	01/1885	1	000	1	07	6	UNAD	9	10	5	06	3
CO SAGUACHE	05	7337-05	38-05	106-08	7692	09/1886	3	088	8	04/1894	4	007	5	07	6	UNAD	9	12	6	12	6
CO STEAMBOAT SPRINGS	05	7936-02	40-30	106-50	6770	09/1891	5	087	8	09/1891	3	012	6	04	3	UNAD	9	06	3	04	2
CO TELLURIDE	05	8204-02	37-56	107-49	8800	12/1900	7	089	8	01/1957	9	000	1	01	0	1.03	1	10	5	08	4
CO TRINIDAD	05	8429-01	37-10	104-29	6030	08/1877	1	078	9	08/1896	5	009	6	08	7	UNAD	9	12	6	04	2
CO WRAY 1E	05	9243-03	40-05	102-11	3520	01/1890	4	092	7	01/1890	3	023	9	16	9	1.15	7	06	3	16	8

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CT FALLS VILLAGE	06	2658-01	41-57	73-22	550	05/1889	4	099	3	05/1889	2	001	2	01	0	1.01	0	08	4	04	2
CT GROTON	06	3207-03	41-21	72-03	40	01/1856	0	089	8	01/1856	0	016	7	07	6	1.08	5	12	6	20	9
CT NORWALK GAS PLANT	06	5893-03	41-07	73-25	37	02/1892	5	100	1	02/1892	4	002	3	05	4	1.08	5	18	9	18	9
CT STORRS	06	8138-02	41-48	72-15	650	01/1889	4	098	4	01/1889	2	002	3	04	3	1.06	4	00	0	10	5

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DE BRIDGEVILLE 1NW	07	1330-02	38-45	75-37	50	01/1892	5	100	1	01/1892	4	000	1	02	1	1.04	2	08	4	10	5
DE DOVER	07	2730-02	39-09	75-31	30	07/1870	1	081	9	01/1907	7	005	4	05	4	1.07	5	06	3	12	6
DE MILFORD 4SE	07	5915-02	38-54	75-28	30	01/1858	0	075	9	01/1894	4	010	6	07	6	1.08	5	16	8	14	7
DE NEWARK UNIV FARM	07	6410-01	39-40	75-44	90	10/1888	4	066	9	10/1888	2	043	9	06	5	1.12	7	02	1	00	0
DE WILMINGTON PORTER RESERVOIR	07	9605-01	39-46	75-32	274	04/1894	6	099	3	04/1894	4	000	1	03	2	1.04	2	18	9	10	5

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FL APALACHICOLA WSO AP	08	0211-01	29-44	85-02	20	11/1903	7	099	3	11/1903	6	000	1	05	4	1.11	7	16	8	06	3
FL ARCADIA	08	0228-04	27-14	81-51	63	11/1899	7	094	6	01/1966	9	010	6	03	2	1.06	4	20	9	20	9
FL BARTOW	08	0478-04	27-54	81-51	125	01/1887	3	099	3	01/1887	1	013	7	09	8	1.13	7	12	6	12	6
FL BELLE GLADE EXP STN	08	0611-05	26-39	80-38	15	05/1924	9	099	3	05/1924	9	005	4	02	1	1.02	1	16	8	12	6
FL DE FUNIAK SPRINGS	08	2220-01	30-44	86-07	230	10/1896	6	095	6	10/1896	5	020	8	08	7	1.10	6	16	8	02	1
FL EVERGLADES	08	2850-05	25-51	81-23	5	11/1926	9	098	4	11/1926	9	000	1	02	1	1.02	1	18	9	20	9
FL FEDERAL POINT	08	2915-02	29-45	81-32	5	02/1892	5	099	3	02/1892	4	005	4	04	3	1.04	2	08	4	06	3
FL FERNANDINA BEACH	08	2944-02	30-39	81-28	13	08/1891	5	093	7	05/1897	5	030	9	10	8	1.14	7	08	4	12	6
FL FORT LAUDERDALE	08	3163-06	26-06	80-12	16	11/1912	9	096	6	01/1954	9	017	8	03	2	1.06	4	06	3	06	3
FL FORT MYERS WSO AP	08	3186-05	26-35	81-52	15	01/1891	5	100	1	01/1891	3	000	1	13	9	UNAD	9	16	8	06	3
FL FORT PIERCE	08	3207-04	27-28	80-21	25	03/1852	0	067	9	01/1892	4	010	6	07	6	UNAD	9	12	6	20	9
FL HOMESTEAD EXP STN	08	4091-06	25-30	80-30	11	07/1910	9	094	6	07/1910	8	016	7	07	6	1.06	4	14	7	04	2
FL INVERNESS 3SE	08	4289-03	28-44	82-19	40	02/1899	7	095	6	02/1899	5	014	7	09	8	1.07	5	12	6	02	1
FL KEY WEST WBO AP	08	4570-07	24-33	81-45	4	10/1832	0	091	7	01/1870	0	000	1	13	9	UNAD	9	12	6	12	6
FL LAKE CITY 2E	08	4731-02	30-11	82-36	195	12/1857	0	078	9	05/1891	3	021	8	09	8	1.08	5	00	0	10	5
FL MADISON 4N	08	5275-02	30-32	83-26	180	10/1889	4	088	8	04/1893	4	012	6	04	3	1.08	5	12	6	04	2
FL Ocala	08	6414-03	29-12	82-05	75	11/1889	4	096	6	03/1891	3	012	6	09	8	1.09	6	14	7	06	3
FL PENSACOLA FAA AP	08	6997-01	30-28	87-12	112	11/1879	2	099	3	01/1889	2	000	1	05	4	1.06	4	02	1	00	0
FL SAINT LEO	08	7851-03	28-20	82-16	190	01/1890	4	097	5	03/1891	3	016	7	08	7	1.11	7	08	4	10	5
FL TALLAHASSEE WSO AP	08	8758-01	30-23	84-22	55	04/1885	3	100	1	01/1888	2	004	3	06	5	1.07	5	04	2	00	0
FL TARPON SPRINGS	08	8824-04	28-09	82-45	8	08/1884	3	098	4	01/1954	9	001	2	01	0	1.03	1	18	9	18	9
FL TITUSVILLE	08	8942-03	28-37	80-49	5	02/1901	7	094	6	02/1901	6	020	8	10	8	1.11	7	06	3	16	8

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GA ALBANY 3SE	09	0140-07	31-32	84-08	180	04/1878	2	093	7	04/1891	3	000	1	07	6	1.07	5	18	9	14	7
GA BAINBRIDGE INT PAPER CO	09	0586-07	30-48	84-39	190	04/1884	2	092	7	05/1891	3	020	8	13	9	1.11	7	06	3	16	8
GA BRUNSWICK	09	1340-09	31-10	81-30	13	04/1878	2	077	9	01/1921	8	003	3	04	3	1.04	2	08	4	08	4
GA COVINGTON	09	2318-05	33-36	83-52	770	06/1875	1	090	7	04/1884	1	013	7	08	7	1.06	4	14	7	14	7
GA DAHLONEGA	09	2475-02	34-32	83-59	1430	05/1874	1	085	8	04/1884	1	008	5	05	4	1.05	3	02	1	00	0
GA EASTMAN 1W	09	2966-05	32-12	83-12	400	04/1882	2	090	7	05/1891	3	017	8	04	3	1.05	3	02	1	04	2
GA FORT GAINES	09	3516-07	31-36	85-03	340	04/1882	2	094	6	01/1905	7	012	6	04	3	1.04	2	12	6	16	8
GA GAINESVILLE	09	3621-02	34-18	83-51	1170	01/1872	1	095	6	12/1906	7	007	5	07	6	1.04	2	00	0	08	4
GA GLENNVILLE	09	3754-09	31-56	81-55	170	11/1904	8	099	3	11/1904	7	000	1	02	1	1.06	4	20	9	20	9
GA HAWKINSVILLE	09	4170-05	32-17	83-28	265	03/1892	5	096	6	03/1892	4	026	9	10	8	1.06	4	10	5	08	4
GA MILLEDGEVILLE	09	5874-05	33-05	83-15	400	04/1878	2	090	7	01/1902	6	025	9	11	9	1.08	5	18	9	16	8
GA MILLEN 4N	09	5882-06	32-52	81-58	195	04/1882	2	094	6	01/1895	4	009	6	06	5	1.06	4	04	2	14	7
GA NEWMAN 4NE	09	6335-04	33-26	84-47	920	04/1882	2	094	6	04/1887	2	016	7	07	6	1.06	4	04	2	08	4
GA QUITMAN 2NW	09	7276-08	30-48	83-35	185	04/1882	2	096	6	04/1891	3	023	9	12	9	1.10	6	12	6	16	8
GA ROME	09	7600-01	34-15	85-09	620	06/1855	0	099	3	11/1869	0	001	2	04	3	1.05	3	20	9	08	4
GA SAVANNAH WSO AP	09	7847-09	32-08	81-12	46	08/1836	0	092	7	01/1900	6	012	6	07	6	1.09	6	04	2	08	4
GA TALBOTTON 1NE	09	8535-04	32-42	84-32	710	04/1878	2	085	8	04/1891	3	009	6	09	8	1.09	6	02	1	12	6
GA TIFTON EXP STN	09	8703-08	31-29	83-32	371	02/1911	9	087	8	02/1911	8	018	8	05	4	1.08	5	02	1	04	2
GA TOCCOA	09	8740-03	34-35	83-19	1019	01/1879	2	094	6	01/1905	7	005	4	05	4	1.03	1	18	9	20	9
GA WARRENTON	09	9141-06	33-25	82-40	510	06/1884	3	092	7	04/1891	3	009	6	05	4	1.05	3	20	9	16	8
GA WASHINGTON 2ESE	09	9157-03	33-43	82-43	620	05/1884	3	096	6	05/1887	2	026	9	11	9	1.07	5	14	7	02	1
GA WAYCROSS 4NE	09	9186-09	31-15	82-19	145	04/1882	2	093	7	01/1892	4	014	7	08	7	1.08	5	18	9	12	6
GA WEST POINT	09	9291-04	32-52	85-11	575	04/1882	2	093	7	04/1887	2	016	7	03	2	1.04	2	08	4	02	1

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STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
ID ABERDEEN EXPERIMENT STATION	10	0010-09	42-57	112-50	4405	04/1914	9	100	1	04/1914	8	000	1	01	0	UNAD	9	16	8	14	7
ID ARROWROCK DAM	10	0448-04	43-36	115-55	3275	12/1911	9	098	4	12/1911	8	005	4	02	1	1.04	2	04	2	04	2
ID ASHTON	10	0470-09	44-04	111-27	5260	02/1897	6	100	1	02/1897	5	000	1	08	7	UNAD	9	14	7	12	6
ID CALDWELL	10	1380-05	43-40	116-41	2370	11/1904	8	099	3	01/1961	9	000	1	00	0	0.99	0	20	9	20	9
ID CAMBRIDGE	10	1408-05	44-34	116-41	2650	01/1894	6	100	1	03/1902	6	007	5	05	4	1.09	6	12	6	18	9
ID CHALLIS	10	1663-08	44-30	114-14	5175	01/1896	6	083	9	11/1904	7	012	6	06	5	UNAD	9	02	1	20	9
ID COEUR D'ALENE RS	10	1956-01	47-41	116-45	2158	01/1884	2	088	8	01/1914	8	003	3	04	3	1.03	1	08	4	02	1
ID GLENNS FERRY	10	3631-05	42-56	115-19	2510	01/1905	8	095	6	01/1905	7	005	4	12	9	UNAD	9	06	3	02	1
ID GRACE	10	3732-10	42-35	111-44	5550	01/1907	8	100	1	01/1907	7	000	1	02	1	1.02	1	08	4	08	4
ID HAILEY AP	10	3942-04	43-31	114-18	5306	11/1892	5	085	8	07/1899	6	019	8	07	6	1.15	7	08	4	02	1
ID HAZELTON	10	4140-07	42-36	114-08	4060	05/1917	9	099	3	05/1917	8	000	1	00	0	0.99	0	16	8	20	9
ID HOLLISTER	10	4295-06	42-21	114-35	4550	05/1908	8	099	3	05/1908	7	006	4	03	2	1.03	1	20	9	14	7
ID JEROME	10	4670-07	42-44	114-31	3785	10/1915	9	099	3	10/1915	8	011	6	03	2	1.06	4	08	4	08	4
ID KELLOGG	10	4831-04	47-32	116-08	2320	02/1905	8	098	4	02/1905	7	011	6	05	4	1.05	3	16	8	08	4
ID KOOSKIA	10	5011-03	46-09	115-59	1280	11/1908	8	098	4	11/1908	7	019	8	06	5	1.06	4	20	9	20	9
ID LEWISTON WSO AP	10	5241-03	46-23	117-01	1413	01/1878	2	100	1	01/1913	8	017	8	09	8	1.09	6	10	5	04	2
ID LIFTON PUMPING STATION	10	5275-10	42-07	111-18	5926	10/1919	9	099	3	10/1919	8	000	1	00	0	UNAD	9	02	1	08	4
ID MACKAY RS	10	5462-08	43-55	113-37	5897	01/1908	8	099	3	01/1908	7	001	2	04	3	UNAD	9	08	4	04	2
ID MALAD CITY	10	5559-10	42-10	112-17	4470	02/1904	8	087	8	02/1904	6	019	8	06	5	1.10	6	02	1	04	2
ID MOSCOW U OF ID	10	6152-02	46-44	116-58	2660	01/1892	5	100	1	01/1892	4	004	3	04	3	1.05	3	04	2	08	4
ID NEW MEADOWS RS	10	6388-04	44-58	116-17	3870	06/1903	7	099	3	06/1903	6	003	3	05	4	1.06	4	12	6	04	2
ID OAKLEY	10	6542-10	42-14	113-53	4600	07/1893	5	099	3	07/1893	4	000	1	04	3	UNAD	9	12	6	04	2
ID OROFINO	10	6681-03	46-29	116-16	1320	09/1903	7	099	3	09/1903	6	009	6	07	6	1.02	1	14	7	02	1
ID PAYETTE	10	6891-05	44-05	116-56	2150	04/1890	4	100	1	04/1890	3	000	1	08	7	UNAD	9	06	3	08	4
ID PORTHILL	10	7264-01	49-00	116-30	1775	08/1889	4	099	3	01/1902	6	005	4	05	4	1.04	2	12	6	06	3
ID PRIEST RIVER EXPERIMENT STN	10	7386-01	48-21	116-50	2380	02/1898	7	093	7	09/1899	6	009	6	01	0	1.02	1	10	5	02	1
ID SALMON 1N	10	8080-08	45-11	113-54	3931	01/1906	8	096	6	01/1906	7	004	3	09	8	UNAD	9	12	6	06	3
ID SANDPOINT EXP STN	10	8137-01	48-18	116-34	2100	10/1910	9	099	3	10/1910	8	010	6	06	5	1.07	5	06	3	14	7

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PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	IA	R	SC-DATE	R	IE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
IL ALEDO	11	0072-01	41-13	90-45	720	06/1874	1	085	8	01/1964	9	000	1	01	0	1.01	0	04	2	04	2
IL ANNA 1E	11	0187-08	37-28	89-14	645	01/1875	1	091	7	01/1897	5	010	6	08	7	1.06	4	10	5	16	8
IL AURORA	11	0338-02	41-45	88-21	644	10/1857	0	090	7	01/1880	0	002	3	07	6	1.06	4	20	9	12	6
IL CARLINVILLE	11	1280-06	39-17	89-52	625	01/1891	5	100	1	01/1891	3	006	4	07	6	1.06	4	02	1	14	7
IL CHARLESTON	11	1436-07	39-29	88-10	680	01/1896	6	099	3	01/1961	9	015	7	02	1	1.05	3	10	5	10	5
IL DANVILLE	11	2140-05	40-08	87-39	558	05/1895	6	091	7	05/1895	4	036	9	12	9	1.10	6	16	8	08	4
IL DECATUR	11	2193-04	39-50	89-01	620	08/1868	1	085	8	06/1882	1	011	6	03	2	1.08	5	16	8	00	0
IL DIXON 1NW	11	2348-01	41-50	89-31	700	01/1881	2	096	6	01/1881	0	026	9	14	9	1.10	6	18	9	18	9
IL DUQUOIN 4SE	11	2483-08	37-59	89-12	420	03/1887	3	097	5	03/1887	2	021	8	09	8	1.10	6	12	6	04	2
IL GALVA	11	3335-01	41-10	90-03	855	05/1862	0	088	8	01/1894	4	010	6	05	4	1.04	2	08	4	12	6
IL GRIGGSVILLE	11	3717-06	39-43	90-44	700	01/1882	2	099	3	01/1890	3	006	4	10	8	1.08	5	14	7	12	6
IL HARRISBURG	11	3879-09	37-45	88-33	380	01/1898	7	100	1	01/1898	5	012	6	11	9	1.06	4	12	6	12	6
IL HILLSBORO	11	4108-06	39-09	89-29	630	05/1895	6	099	3	05/1895	4	019	8	09	8	1.09	6	18	9	18	9
IL HOOPESTON 1NE	11	4198-05	40-28	87-40	710	01/1887	3	085	8	01/1887	1	016	7	03	2	1.05	3	20	9	10	5
IL JACKSONVILLE 2E	11	4442-06	39-44	90-12	610	03/1861	0	075	9	01/1890	3	006	4	04	3	1.07	5	08	4	12	6
IL LA HARPE	11	4823-03	40-35	90-58	700	04/1895	6	100	1	04/1895	4	010	6	07	6	1.09	6	20	9	18	9
IL LINCOLN	11	5079-04	40-10	89-22	580	02/1906	8	099	3	02/1906	7	014	7	08	7	1.06	4	08	4	10	5
IL MARENGO	11	5326-02	42-15	88-36	820	01/1856	0	099	3	01/1856	0	006	4	07	6	1.07	5	16	8	00	0
IL MCLEANSBORO	11	5515-09	38-06	88-30	480	01/1882	2	099	3	03/1882	1	017	8	13	9	1.09	6	08	4	06	3
IL MINONK	11	5712-04	40-54	89-03	750	01/1886	3	089	8	01/1886	1	034	9	11	9	1.11	7	04	2	14	7
IL MONMOUTH	11	5768-03	40-55	90-38	770	01/1881	2	092	7	02/1891	3	009	6	05	4	1.03	1	06	3	04	2
IL MORRISON	11	5833-01	41-49	89-58	603	06/1880	2	088	8	01/1942	9	009	6	02	1	1.01	0	08	4	08	4
IL MOUNT CARROLL	11	5901-01	42-05	89-59	700	05/1887	3	097	5	05/1887	2	013	7	07	6	1.07	5	02	1	16	8
IL MT VERNON 3NE	11	5943-09	38-21	88-52	490	05/1878	2	085	8	04/1882	1	021	8	11	9	1.10	6	14	7	10	5
IL OLNEY 2S	11	6446-07	38-42	88-04	480	01/1887	3	098	4	01/1965	9	000	1	00	0	0.99	0	16	8	16	8
IL OTTAWA 4SW	11	6526-02	41-20	88-55	525	01/1856	0	085	8	01/1887	1	007	5	09	8	1.08	5	08	4	02	1
IL PALESTINE	11	6558-07	39-00	87-37	515	06/1882	2	099	3	06/1882	1	015	7	11	9	1.07	5	00	0	08	4
IL PANA	11	6579-06	39-23	89-05	696	06/1869	1	086	8	04/1882	1	012	6	09	8	1.08	5	10	5	10	5

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
IL PARIS WATERWORKS	11	6610-07	39-38	87-42	680	12/1886	3	094	6	12/1886	1	010	6	07	6	1.06	4	04	2	04	2
IL PONTIAC	11	6910-05	40-53	88-38	650	10/1885	3	088	8	10/1885	1	029	9	06	5	1.09	6	14	7	14	7
IL RUSHVILLE	11	7551-03	40-07	90-35	675	01/1889	4	095	6	01/1889	2	010	6	10	8	1.09	6	02	1	08	4
IL SPARTA	11	8147-08	38-08	89-43	520	01/1887	3	099	3	01/1887	1	011	6	11	9	1.09	6	20	9	04	2
IL URBANA	11	8740-05	40-06	88-14	743	08/1888	4	099	3	08/1888	2	000	1	03	2	1.02	1	14	7	16	8
IL WALNUT	11	8916-01	41-33	89-36	690	01/1892	5	099	3	11/1893	4	005	4	07	6	1.05	3	12	6	04	2
IL WHITE HALL 1E	11	9241-06	39-26	90-23	578	07/1854	0	086	8	01/1909	7	007	5	06	5	1.02	1	04	2	18	9
IL WINDSOR	11	9354-07	39-26	88-36	685	08/1885	3	085	8	01/1887	1	023	9	06	5	1.10	6	08	4	08	4

PRECIPITATION

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IN ANDERSON SEWAGE PLANT	12	0177-05	40-06	85-43	845	06/1895	6	099	3	06/1895	4	011	6	06	5	1.06	4	02	1	10	5
IN ANGOLA	12	0200-03	41-38	84-59	1010	12/1884	3	083	9	12/1884	1	019	8	05	4	1.06	4	20	9	16	8
IN BERNE	12	0676-03	40-40	84-57	858	01/1910	8	100	1	01/1910	8	008	5	03	2	1.03	1	12	6	00	0
IN BLOOMINGTON IN UNIV	12	0784-08	39-10	86-31	825	03/1868	1	082	9	06/1882	1	021	8	13	9	1.08	5	20	9	10	5
IN BROOKVILLE	12	1030-09	39-25	85-00	670	07/1882	2	062	9	06/1902	6	033	9	07	6	1.10	6	08	4	18	9
IN CAMBRIDGE CITY	12	1229-06	39-49	85-10	950	04/1892	5	100	1	04/1892	4	005	4	05	4	1.04	2	16	8	04	2
IN COLUMBUS	12	1747-05	39-12	85-55	621	01/1884	2	100	1	01/1884	1	000	1	04	3	1.04	2	04	2	20	9
IN CRAWFORDSVILLE 2NW	12	1873-04	40-04	86-56	745	04/1885	3	083	9	04/1916	8	029	9	08	7	1.08	5	08	4	12	6
IN DELPHI 3NNE	12	2149-02	40-37	86-40	560	07/1885	3	099	3	07/1885	1	003	3	04	3	1.04	2	06	3	20	9
IN GOSHEN COLLEGE	12	3418-02	41-34	85-50	805	06/1914	9	098	4	06/1914	8	009	6	06	5	1.04	2	12	6	06	3
IN GREENCASTLE 1E	12	3513-04	39-39	86-51	835	08/1882	2	080	9	01/1917	8	006	4	07	6	1.04	2	16	8	10	5
IN GREENFIELD	12	3527-05	39-47	85-45	865	04/1883	2	081	9	04/1883	1	021	8	08	7	1.12	7	08	4	00	0
IN HOBART	12	4008-01	41-32	87-15	600	07/1919	9	098	4	07/1919	8	021	8	07	6	1.07	5	02	1	08	4
IN HUNTINGTON WATERWORKS	12	4181-03	40-51	85-30	725	10/1882	2	093	7	10/1882	1	015	7	08	7	1.04	2	12	6	16	8
IN LAPORTE	12	4837-01	41-36	86-43	810	03/1849	0	068	9	09/1984	9	100	9	00	0	1.20	7	20	9	06	3
IN MADISON SEWAGE PLANT	12	5237-09	38-44	85-24	455	01/1858	0	073	9	01/1881	0	014	7	07	6	1.07	5	20	9	10	5
IN MARION 2N	12	5337-05	40-34	85-40	790	11/1885	3	098	4	11/1885	1	005	4	04	3	1.04	2	04	2	12	6
IN MT VERNON	12	6001-07	37-57	87-53	415	02/1887	3	099	3	02/1887	2	007	5	05	4	1.04	2	06	3	20	9
IN OOLITIC PURDUE EXP FM	12	6580-08	38-53	86-33	650	02/1893	5	081	9	10/1905	7	016	7	02	1	1.04	2	06	3	06	3
IN PAOLI	12	6705-08	38-32	86-29	640	03/1898	7	099	3	03/1898	5	006	4	07	6	1.05	3	08	4	16	8
IN PRINCETON 1W	12	7125-07	38-21	87-35	482	08/1882	2	098	4	08/1882	1	007	5	10	8	1.05	3	14	7	10	5
IN RENSSELAER	12	7298-01	40-56	87-09	650	07/1864	1	073	9	10/1886	1	018	8	06	5	1.12	7	14	7	12	6
IN ROCHESTER	12	7482-02	41-04	86-13	770	04/1904	8	090	7	04/1904	6	022	9	09	8	1.06	4	06	3	02	1
IN ROCKVILLE	12	7522-04	39-46	87-14	690	01/1860	0	078	9	09/1884	1	007	5	06	5	1.05	3	10	5	02	1
IN RUSHVILLE	12	7646-05	39-36	85-27	955	01/1881	2	099	3	01/1881	0	009	6	04	3	1.05	3	18	9	10	5
IN SALEM	12	7755-08	38-37	86-05	800	07/1882	2	087	8	02/1887	2	019	8	08	7	1.06	4	08	4	04	2
IN SCOTTSBURG	12	7875-09	38-42	85-46	550	05/1894	6	099	3	05/1894	4	024	9	10	8	1.08	5	16	8	04	2

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
IN SEYMOUR 2N	12	7935-08	38-59	85-54	573	12/1887	3	097	5	12/1887	2	021	8	10	8	1.07	5	12	6	14	7
IN SHOALS HIGHWAY 50 BRIDGE	12	8036-07	38-40	86-48	550	01/1911	9	100	1	01/1911	8	002	3	05	4	1.02	1	04	2	04	2
IN VEVAY	12	9080-09	38-45	85-04	470	02/1865	1	098	4	02/1865	0	003	3	04	3	1.06	4	10	5	04	2
IN VINCENNES 5NE	12	9113-07	38-44	87-30	450	10/1882	2	094	6	10/1882	1	019	8	11	9	1.09	6	16	8	12	6
IN WASHINGTON	12	9253-07	38-40	87-11	485	06/1896	6	098	4	06/1896	5	027	9	16	9	1.07	5	02	1	04	2
IN WHEATFIELD 2NNW	12	9511-01	41-14	87-04	650	09/1916	9	098	4	09/1916	8	009	6	04	3	1.02	1	08	4	04	2
IN WHITESTOWN	12	9557-05	40-00	86-21	935	03/1896	6	100	1	03/1896	5	009	6	07	6	1.06	4	04	2	18	9
IN WINAMAC 2SSE	12	9670-01	41-02	86-35	690	05/1897	6	085	8	01/1908	7	015	7	04	3	1.04	2	12	6	08	4

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	IA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
IA ALBIA	13	0112-08	41-02	92-48	940	01/1891	5	098	4	01/1891	3	036	9	15	9	1.11	7	06	3	10	5
IA ALGONA 3W	13	0133-02	43-04	94-18	1230	06/1861	0	094	6	07/1876	0	005	4	06	5	1.07	5	08	4	06	3
IA BELLE PLAINE	13	0600-06	41-53	92-16	810	08/1889	4	099	3	08/1889	3	016	7	07	6	1.07	5	10	5	18	9
IA CHARLES CITY	13	1402-02	43-03	92-40	1013	01/1875	1	100	1	01/1892	4	003	3	04	3	1.03	1	10	5	14	7
IA CLARINDA	13	1533-07	40-44	95-02	1030	01/1872	1	090	7	07/1875	0	015	7	08	7	1.08	5	16	8	12	6
IA CLINTON #1	13	1635-06	41-48	90-16	585	08/1859	0	094	6	01/1879	0	014	7	11	9	1.13	7	12	6	12	6
IA ESTERVILLE 2N	13	2724-01	43-25	94-50	1302	04/1895	6	097	5	04/1895	4	015	7	07	6	1.07	5	14	7	02	1
IA FAIRFIELD	13	2789-09	41-02	91-57	740	05/1857	0	078	9	01/1909	7	002	3	05	4	1.07	5	04	2	04	2
IA FAYETTE	13	2864-03	42-50	91-48	1010	06/1888	4	099	3	06/1888	2	025	9	10	8	1.10	6	20	9	08	4
IA FOREST CITY 2NNE	13	2977-02	43-17	93-38	1300	01/1894	6	098	4	01/1894	4	019	8	15	9	1.11	7	02	1	04	2
IA FORT DODGE	13	2999-05	42-30	94-12	1115	08/1851	0	070	9	01/1901	6	004	3	05	4	1.05	3	10	5	00	0
IA INDIANOLA	13	4063-08	41-22	93-33	940	10/1875	1	090	7	08/1879	0	019	8	08	7	1.11	7	08	4	02	1
IA IOWA FALLS	13	4142-05	42-32	93-16	1170	11/1863	0	082	9	02/1887	2	015	7	09	8	1.09	6	18	9	06	3
IA LE MARS	13	4735-01	42-48	96-10	1195	06/1876	1	087	8	05/1895	4	015	7	12	9	1.08	5	08	4	14	7
IA LOGAN	13	4894-04	41-38	95-48	1052	05/1866	1	099	3	01/1874	0	007	5	06	5	1.09	6	12	6	16	8
IA MOUNT AYR 5SW	13	5769-08	40-39	94-18	1270	06/1892	5	096	6	01/1935	9	020	8	06	5	1.09	6	10	5	06	3
IA MOUNT PLEASANT	13	5796-09	40-57	91-33	736	12/1863	1	089	8	06/1875	0	006	4	10	8	1.08	5	06	3	12	6
IA NEW HAMPTON	13	5952-03	43-03	92-19	1160	04/1897	6	097	5	04/1897	5	009	6	09	8	1.07	5	20	9	10	5
IA ROCK RAPIDS	13	7147-01	43-26	96-10	1350	05/1893	5	092	7	05/1893	4	007	5	04	3	1.08	5	18	9	18	9
IA ROCKWELL CITY	13	7161-04	42-24	94-37	1210	11/1893	5	095	6	11/1893	4	026	9	06	5	1.10	6	08	4	16	8
IA STORM LAKE 2E	13	7979-01	42-38	95-11	1425	10/1876	1	085	8	05/1886	1	015	7	08	7	1.08	5	16	8	10	5
IA TOLEDO	13	8296-05	41-59	92-35	890	01/1894	6	099	3	01/1894	4	007	5	06	5	1.05	3	10	5	10	5
IA WASHINGTON	13	8688-09	41-17	91-41	756	10/1875	1	097	5	01/1894	4	006	4	06	5	1.06	4	08	4	04	2

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
KS ANTHONY	14	0264-08	37-09	98-05	1340	10/1896	6	098	4	01/1961	9	050	9	05	4	1.26	7	20	9	20	9
KS ASHLAND	14	0365-07	37-12	99-46	1970	06/1888	4	099	3	01/1908	7	003	3	06	5	1.10	6	16	8	12	6
KS ATCHISON	14	0405-03	39-34	95-07	945	02/1866	1	088	8	02/1866	0	012	6	03	2	1.05	3	04	2	04	2
KS COLDWATER	14	1704-08	37-16	99-20	2083	07/1888	4	088	8	02/1896	5	013	7	03	2	1.09	6	02	1	02	1
KS COLUMBUS 1SW	14	1740-09	37-10	94-51	900	08/1890	4	098	4	08/1890	3	008	5	03	2	1.02	1	10	5	04	2
KS EL DORADO	14	2401-09	37-49	96-50	1340	01/1886	3	087	8	01/1886	1	018	8	05	4	1.09	6	08	4	06	3
KS ELLSWORTH	14	2459-05	38-44	98-14	1530	09/1866	1	075	9	01/1889	2	025	9	09	8	1.14	7	02	1	06	3
KS ESKRIDGE 1SE	14	2602-06	38-51	96-06	1420	07/1897	6	091	7	07/1897	5	016	7	07	6	1.07	5	10	5	18	9
KS FORT SCOTT	14	2835-09	37-51	94-42	845	01/1843	0	076	9	01/1892	4	002	3	04	3	1.05	3	02	1	18	9
KS HAYS 1S	14	3527-05	38-52	99-20	2010	09/1867	1	099	3	01/1891	3	000	1	01	0	1.03	1	16	8	14	7
KS HORTON	14	3810-03	39-40	95-31	1029	06/1888	4	099	3	06/1888	2	006	4	03	2	1.03	1	10	5	10	5
KS INDEPENDENCE	14	3954-09	37-15	95-42	780	01/1872	1	100	1	01/1872	0	011	6	06	5	1.07	5	06	3	06	3
KS JETMORE	14	4081-07	38-05	99-54	2302	01/1901	7	095	6	01/1901	6	010	6	06	5	1.09	6	14	7	20	9
KS LAKIN	14	4464-07	37-56	101-15	2998	08/1889	4	097	5	03/1896	5	002	3	07	6	UNAD	9	02	1	16	8
KS LARNED	14	4530-08	38-10	99-05	1994	06/1860	0	078	9	01/1905	7	017	8	09	8	1.10	6	02	1	08	4
KS LAWRENCE	14	4559-06	38-58	95-16	1000	01/1861	0	096	6	04/1866	0	003	3	04	3	1.03	1	18	9	20	9
KS LEAVENWORTH 4SSE	14	4588-03	39-16	94-53	860	01/1836	0	089	8	04/1862	0	025	9	08	7	1.14	7	10	5	06	3
KS LIBERAL	14	4695-07	37-03	100-55	2834	02/1892	5	086	8	05/1899	5	009	6	07	6	UNAD	9	18	9	14	7
KS MANHATTAN	14	4972-03	39-12	96-35	1065	01/1858	0	100	1	05/1863	0	006	4	07	6	1.08	5	20	9	20	9
KS MCPHERSON	14	5152-05	38-23	97-40	1495	12/1876	1	090	7	12/1882	1	006	4	03	2	1.06	4	10	5	08	4
KS MEDICINE LODGE 2N	14	5173-08	37-18	98-35	1540	06/1891	5	098	4	01/1951	9	006	4	04	3	1.05	3	00	0	00	0
KS MINNEAPOLIS	14	5363-02	39-08	97-43	1310	06/1889	4	099	3	01/1956	9	014	7	03	2	1.05	3	12	6	12	6
KS NORTON 9SSE	14	5856-01	39-42	99-50	2360	06/1890	4	092	7	06/1890	3	019	8	05	4	1.11	7	06	3	06	3
KS OBERLIN	14	5906-01	39-50	100-32	2610	01/1887	3	100	1	01/1887	1	011	6	07	6	1.07	5	20	9	20	9
KS OLATHE 3E	14	5972-06	38-53	94-46	1055	01/1864	1	079	9	08/1874	0	024	9	07	6	1.10	6	12	6	14	7
KS OTTAWA	14	6128-06	38-37	95-17	900	06/1895	6	100	1	06/1895	4	002	3	04	3	1.04	2	16	8	02	1
KS PHILLIPSBURG	14	6374-02	39-44	99-19	1907	09/1891	5	097	5	09/1891	3	009	6	07	6	1.09	6	06	3	12	6
KS SAINT FRANCIS	14	7093-01	39-46	101-48	3300	05/1908	8	099	3	05/1908	7	004	3	06	5	1.10	6	12	6	10	5
KS SCOTT CITY	14	7271-04	38-29	100-54	2970	07/1889	4	087	8	07/1889	3	013	7	05	4	1.12	7	02	1	04	2
KS SEDAN	14	7305-09	37-07	96-10	820	04/1885	3	100	1	02/1886	1	007	5	06	5	1.07	5	04	2	14	7
KS WAKEENEY	14	8495-04	39-01	99-53	2450	01/1883	2	100	1	01/1883	1	002	3	03	2	1.05	3	12	6	04	2

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KY ANCHORAGE	15	0155-02	38-16	85-32	730	04/1895	6	091	7	04/1895	4	029	9	09	8	1.09	6	12	6	16	8
KY BEREA COLLEGE	15	0619-03	37-34	84-18	1070	02/1901	7	098	4	02/1901	6	010	6	07	6	1.06	4	04	2	06	3
KY BOWLING GREEN FAA AP	15	0909-02	36-58	86-26	534	01/1878	2	097	5	02/1887	2	005	4	03	2	1.06	4	08	4	10	5
KY FARMERS 2S	15	2791-03	38-07	83-33	680	12/1904	8	097	5	12/1904	7	018	8	09	8	1.07	5	02	1	06	3
KY FRANKFORT LOCK 4	15	3028-03	38-14	84-52	504	08/1882	2	096	6	08/1882	1	003	3	05	4	1.03	1	10	5	14	7
KY GREENSBURG	15	3430-02	37-15	85-30	590	08/1887	3	099	3	01/1954	9	000	1	01	0	1.01	0	06	3	06	3
KY HOPKINSVILLE	15	3994-01	36-50	87-30	590	05/1896	6	099	3	05/1896	5	002	3	05	4	1.02	1	14	7	14	7
KY LEITCHFIELD 2N	15	4703-02	37-31	86-18	620	10/1895	6	099	3	10/1895	5	008	5	06	5	1.06	4	16	8	16	8
KY MIDDLESBORO	15	5389-04	36-36	83-44	1175	01/1891	5	091	7	01/1891	3	027	9	11	9	1.08	5	18	9	04	2
KY OWENSBORO	15	6091-01	37-46	87-09	405	07/1896	6	098	4	07/1896	5	001	2	02	1	1.02	1	02	1	02	1
KY SHELBYVILLE 1E	15	7324-03	38-12	85-12	730	03/1888	4	099	3	03/1888	2	017	8	09	8	1.07	5	02	1	04	2
KY WILLIAMSBURG	15	8709-04	36-44	84-09	1000	10/1887	3	098	4	10/1887	2	019	8	17	9	1.11	7	18	9	06	3
KY WILLIAMSTOWN 3NW	15	8714-03	38-39	84-37	940	06/1902	7	099	3	06/1902	6	002	3	05	4	1.04	2	14	7	12	6

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LA ALEXANDRIA	16	0098-05	31-19	92-28	87	07/1882	2	095	6	12/1884	1	022	9	11	9	1.13	7	08	4	04	2
LA AMITE	16	0205-06	30-43	90-30	180	07/1882	2	095	6	01/1888	2	002	3	07	6	1.08	5	10	5	10	5
LA BASTROP	16	0537-03	32-47	91-54	140	12/1893	5	065	9	01/1964	9	000	1	01	0	1.01	0	08	4	02	1
LA BATON ROUGE	16	0549-06	30-32	91-08	64	01/1843	0	084	8	01/1979	9	000	1	00	0	0.99	0	02	1	02	1
LA BUNKIE	16	1287-05	30-57	92-10	80	05/1882	2	094	6	12/1957	9	000	1	01	0	1.00	0	20	9	08	4
LA CALHOUN EXP STN	16	1411-02	32-31	92-20	180	06/1888	4	098	4	06/1888	2	002	3	03	2	1.08	5	10	5	12	6
LA COVINGTON 4NNW	16	2151-06	30-32	90-07	40	08/1892	5	098	4	08/1892	4	001	2	05	4	1.11	7	18	9	16	8
LA DONALDSONVILLE	16	2534-09	30-07	90-59	40	07/1884	3	096	6	01/1888	2	009	6	07	6	1.08	5	12	6	00	0
LA FRANKLIN 3NW	16	3313-08	29-49	91-33	12	04/1882	2	090	7	01/1888	2	018	8	10	8	1.12	7	10	5	10	5
LA HOUMA	16	4407-09	29-35	90-44	15	10/1888	4	098	4	10/1888	2	029	9	10	8	1.10	6	06	3	04	2
LA JENNINGS	16	4700-07	30-12	92-40	25	09/1897	7	099	3	05/1981	9	100	9	01	0	1.35	7	08	4	08	4
LA KROTZ SPRINGS 2N	16	4945-05	30-34	91-45	40	12/1885	3	098	4	12/1885	1	005	4	05	4	1.07	5	14	7	14	7
LA LAFAYETTE CAA AP	16	5026-08	30-12	91-59	38	04/1884	2	098	4	01/1888	2	008	5	05	4	1.04	2	02	1	16	8
LA NEW ORLEANS AUDUBON	16	6664-09	29-55	90-08	6	04/1888	4	097	5	04/1888	2	005	4	03	2	1.04	2	14	7	02	1
LA PLAIN DEALING	16	7344-01	32-54	93-41	291	01/1892	5	100	1	01/1968	9	000	1	01	0	1.02	1	08	4	08	4
LA ST JOSEPH EXP STN	16	8163-03	31-57	91-14	78	08/1884	3	076	9	10/1891	3	032	9	07	6	1.10	6	10	5	06	3
LA THIBODAU 3ESE	16	9013-09	29-46	90-47	15	08/1884	3	097	5	05/1889	2	009	6	07	6	1.08	5	02	1	00	0
LA WINNSBORO 5SSE	16	9806-03	32-06	91-43	75	06/1890	4	065	9	01/1960	9	001	2	01	0	0.99	0	04	2	10	5

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ME ACADIA NATIONAL PARK	17	0100-03	44-21	68-16	470	11/1885	3	090	7	11/1885	1	012	6	07	6	1.07	5	14	7	02	1
ME EASTPORT	17	2426-03	44-55	67-00	85	01/1833	0	082	9	04/1865	0	011	6	09	8	1.08	5	16	8	18	9
ME FARMINGTON	17	2765-02	44-41	70-09	420	11/1889	4	099	3	11/1889	3	004	3	05	4	1.04	2	04	2	10	5
ME GARDINER	17	3046-02	44-13	69-47	140	01/1837	0	096	6	01/1861	0	007	5	05	4	1.04	2	06	3	12	6
ME HOULTON	17	3897-01	46-08	67-50	410	06/1836	0	065	9	01/1903	6	005	4	04	3	1.05	3	06	3	18	9
ME LEWISTON	17	4566-02	44-06	70-13	180	04/1886	3	100	1	04/1886	1	000	1	00	0	0.99	0	00	0	10	5
ME MILLINOCKET	17	5304-01	45-39	68-42	360	01/1903	7	099	3	01/1903	6	001	2	01	0	1.03	1	14	7	08	4
ME ORONO	17	6430-02	44-54	68-40	155	01/1869	1	095	6	01/1886	1	006	4	03	2	1.05	3	20	9	14	7
ME PORTLAND WSMO AP	17	6905-03	43-39	70-19	57	11/1840	0	091	7	01/1875	0	000	1	04	3	1.05	3	14	7	18	9
ME PRESQUE ISLE	17	6937-01	46-39	68-00	599	10/1909	8	099	3	10/1909	7	000	1	02	1	1.03	1	04	2	10	5
ME RIPOGENUS DAM	17	7174-01	45-53	69-11	965	01/1925	9	099	3	01/1925	9	001	2	01	0	1.02	1	10	5	14	7
ME WOODLAND	17	9891-02	45-09	67-24	140	07/1917	9	097	5	07/1917	8	007	5	03	2	1.05	3	08	4	18	9

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MD BALTIMORE WSO CITY	18	0470-06	39-17	76-37	14	01/1818	0	076	9	01/1897	5	000	1	01	0	1.00	0	02	1	02	1
MD CAMBRIDGE WATER TRMT PLANT	18	1385-02	38-34	76-04	5	01/1893	5	091	7	01/1893	4	021	8	09	8	1.11	7	10	5	06	3
MD CHESTERTOWN	18	1750-05	39-13	76-04	40	06/1855	0	057	9	02/1887	2	037	9	05	4	1.09	6	14	7	06	3
MD COLLEGE PARK	18	1995-04	38-59	76-57	90	03/1861	0	078	9	01/1888	2	003	3	03	2	1.05	3	04	2	06	3
MD CUMBERLAND 2	18	2282-07	39-38	78-45	730	08/1871	1	099	3	09/1912	8	005	4	05	4	1.07	5	12	6	18	9
MD DENTON 2E	18	2523-02	38-53	75-48	50	12/1891	5	090	7	12/1891	3	025	9	13	9	1.13	7	04	2	02	1
MD EASTON POLICE BARRACKS	18	2700-02	38-45	76-04	40	11/1891	5	099	3	11/1891	3	011	6	04	3	1.05	3	16	8	08	4
MD GLEN DALE BELL STATION	18	3675-04	38-58	76-48	150	01/1921	9	100	1	01/1921	8	005	4	03	2	1.05	3	16	8	02	1
MD LAUREL 3W	18	5111-04	39-06	76-54	400	05/1895	6	099	3	05/1895	4	001	2	04	3	1.05	3	18	9	16	8
MD MILLINGTON 2WNW	18	5985-05	39-16	75-52	30	01/1899	7	099	3	01/1899	5	006	4	04	3	1.05	3	10	5	14	7
MD OAKLAND 1SE	18	6620-08	39-24	79-24	2420	01/1893	5	091	7	01/1893	4	017	8	03	2	1.02	1	18	9	00	0
MD OWINGS FERRY LANDING	18	6770-03	38-41	76-40	160	01/1917	9	096	6	01/1917	8	011	6	04	3	1.06	4	12	6	14	7
MD PRINCESS ANNE	18	7330-01	38-13	75-41	20	01/1894	6	095	6	01/1894	4	006	4	06	5	1.08	5	20	9	20	9
MD SALISBURY	18	8000-01	38-22	75-35	10	05/1906	8	098	4	05/1906	7	012	6	07	6	1.04	2	02	1	18	9
MD SOLOMONS	18	8405-03	38-19	76-27	12	01/1892	5	100	1	01/1892	4	008	5	04	3	1.04	2	08	4	16	8
MD WESTMINSTER POLICE BRKS	18	9440-06	39-33	76-58	765	01/1893	5	079	9	01/1893	4	026	9	08	7	1.09	6	20	9	16	8
MD WOODSTOCK COLLEGE	18	9750-06	39-20	76-52	460	12/1870	1	097	5	02/1887	2	002	3	02	1	1.04	2	16	8	16	8

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MA AMHERST	19	0120-02	42-23	72-32	150	08/1835	0	100	1	08/1835	0	002	3	08	7	1.12	7	14	7	04	2
MA BEDFORD	19	0535-02	42-29	71-17	160	01/1885	3	096	6	01/1885	1	009	6	06	5	1.06	4	10	5	08	4
MA BLUE HILL OBSERVATORY	19	0736-02	42-13	71-07	629	03/1885	3	100	1	03/1885	1	002	3	04	3	1.05	3	04	2	12	6
MA CHESTNUT HILL	19	1447-02	42-20	71-09	120	01/1873	1	100	1	01/1873	0	000	1	01	0	1.03	1	02	1	04	2
MA CLINTON	19	1561-02	42-24	71-41	398	01/1887	3	095	6	01/1887	1	005	4	01	0	1.00	0	04	2	08	4
MA FRAMINGHAM	19	2975-02	42-17	71-25	170	04/1843	0	072	9	04/1843	0	029	9	02	1	1.05	3	08	4	10	5
MA LAWRENCE	19	4105-02	42-42	71-10	57	01/1856	0	096	6	01/1856	0	004	3	03	2	1.03	1	06	3	08	4
MA NEW BEDFORD	19	5246-03	41-38	70-56	70	10/1813	0	099	3	02/1843	0	000	1	02	1	1.03	1	20	9	06	3
MA PLYMOUTH	19	6486-03	41-57	70-40	90	06/1886	3	097	5	06/1886	1	006	4	03	2	1.04	2	00	0	02	1
MA PROVINCETOWN	19	6681-03	42-03	70-11	20	03/1882	2	084	8	03/1882	1	024	9	09	8	1.10	6	18	9	10	5
MA STOCKBRIDGE	19	8181-01	42-18	73-20	860	12/1929	9	092	7	12/1929	9	015	7	07	6	1.09	6	14	7	18	9
MA TAUNTON	19	8367-03	41-54	71-04	20	06/1874	1	099	3	06/1874	0	000	1	01	0	1.00	0	12	6	16	8

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MI ADRIAN 2NNE	20	0032-10	41-55	84-01	754	01/1870	1	093	7	01/1876	0	010	6	07	6	1.06	4	14	7	12	6
MI ALLEGAN	20	0128-08	42-31	85-50	670	10/1888	4	096	6	10/1888	2	010	6	12	9	1.10	6	12	6	10	5
MI ALMA	20	0146-06	43-23	84-40	760	01/1887	3	100	1	01/1887	1	011	6	09	8	1.06	4	06	3	10	5
MI ANN ARBOR UNIV OF MI	20	0230-10	42-18	83-43	900	04/1849	0	083	9	01/1876	0	016	7	10	8	1.07	5	16	8	18	9
MI BIG RAPIDS WATERWORKS	20	0779-06	43-42	85-29	930	01/1887	3	095	6	01/1887	1	011	6	08	7	1.11	7	04	2	10	5
MI CHATHAM EXP FARM	20	1484-02	46-21	86-56	875	07/1900	7	099	3	07/1900	6	000	1	03	2	1.02	1	06	3	10	5
MI CHEBOYGAN	20	1492-04	45-39	84-28	590	01/1890	4	099	3	01/1890	3	001	2	20	9	UNAD	9	18	9	12	6
MI COLDWATER STATE SCHOOL	20	1675-09	41-57	85-00	984	07/1868	1	084	8	01/1878	0	021	8	04	3	1.05	3	08	4	18	9
MI EAST TAWAS	20	2423-04	44-17	83-30	586	01/1883	2	084	8	01/1883	1	016	7	14	9	UNAD	9	06	3	06	3
MI FAYETTE 3SW	20	2737-02	45-41	86-42	765	12/1920	9	097	5	12/1920	8	009	6	04	3	1.10	6	08	4	12	6
MI HART	20	3632-05	43-42	86-22	675	05/1887	3	095	6	05/1887	2	005	4	02	1	UNAD	9	12	6	20	9
MI HILLSDALE	20	3823-09	41-56	84-38	1080	01/1881	2	092	7	01/1881	0	015	7	05	4	1.06	4	20	9	14	7
MI IRON MOUNTAIN KINGSFORD WWTP	20	4090-01	45-47	88-05	1060	02/1899	7	098	4	02/1899	5	008	5	06	5	1.05	3	06	3	10	5
MI IRONWOOD	20	4104-01	46-27	90-11	1430	08/1901	7	098	4	01/1958	9	000	1	01	0	1.02	1	06	3	06	3
MI ISHPEMING	20	4127-01	46-29	87-39	1436	08/1898	7	098	4	08/1898	5	009	6	05	4	1.05	3	08	4	02	1
MI KALAMAZOO STATE HOSPITAL	20	4244-08	42-17	85-36	945	01/1876	1	100	1	01/1876	0	001	2	04	3	1.06	4	06	3	12	6
MI MIDLAND	20	5434-06	43-37	84-13	642	05/1896	6	092	7	05/1896	5	026	9	07	6	1.09	6	04	2	06	3
MI MOUNT CLEMENS ANG BASE	20	5650-10	42-36	82-49	580	08/1896	6	093	7	08/1896	5	020	8	04	3	1.03	1	12	6	02	1
MI MOUNT PLEASANT UNIVERSITY	20	5662-06	43-35	84-46	796	04/1887	3	083	9	12/1901	6	021	8	03	2	1.06	4	08	4	04	2
MI MUNISING	20	5690-02	46-24	86-39	620	09/1896	6	093	7	09/1896	5	028	9	06	5	1.08	5	02	1	08	4
MI NEWBERRY STATE HOSPITAL	20	5816-02	46-20	85-30	875	10/1896	6	097	5	10/1896	5	002	3	05	4	UNAD	9	10	5	20	9
MI OWOSSO WASTEWATER PLANT	20	6300-09	43-01	84-11	738	01/1896	6	097	5	01/1896	5	012	6	04	3	1.04	2	18	9	16	8
MI SOUTH HAVEN	20	7690-08	42-24	86-17	620	09/1895	6	097	5	01/1927	9	007	5	02	1	1.02	1	18	9	14	7
MI STAMBAUGH 1S	20	7812-01	46-04	88-38	1485	02/1896	6	097	5	01/1963	9	000	1	00	0	0.99	0	08	4	08	4

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSPULL	R
MN ADA	21	0018-01	47-18	96-31	906	12/1892	5	083	9	12/1892	4	016	7	07	6	1.10	6	12	6	04	2
MN ALBERT LEA 3SE	21	0075-08	43-37	93-25	1230	03/1885	3	094	6	07/1887	2	020	8	07	6	1.07	5	16	8	14	7
MN BAUDETTE	21	0515-02	48-43	94-37	1075	01/1909	8	097	5	01/1909	7	003	3	06	5	UNAD	9	12	6	02	1
MN CLOQUET	21	1630-06	46-42	92-31	1265	04/1911	9	100	1	04/1911	8	000	1	01	0	1.00	0	06	3	08	4
MN DETROIT LAKES 1NNE	21	2142-01	46-50	95-51	1375	12/1895	6	099	3	12/1895	5	000	1	06	5	UNAD	9	00	0	10	5
MN FAIRMONT	21	2698-08	43-38	94-28	1187	01/1887	3	100	1	01/1887	1	001	2	04	3	1.02	1	00	0	10	5
MN FARMINGTON 3NW	21	2737-09	44-40	93-11	980	01/1888	3	100	1	01/1888	2	000	1	01	0	0.99	0	04	2	02	1
MN FOSSTON	21	2916-01	47-34	95-45	1310	07/1909	8	099	3	07/1909	7	000	1	06	5	UNAD	9	08	4	04	2
MN GRAND MEADOW	21	3290-09	43-42	92-34	1350	01/1886	3	100	1	01/1887	1	003	3	05	4	1.04	2	00	0	18	9
MN HALLOCK	21	3455-01	48-46	96-57	820	07/1899	7	099	3	07/1899	6	000	1	10	8	UNAD	9	20	9	16	8
MN ITASCA U OF MN	21	4106-01	47-13	95-12	1490	05/1911	9	100	1	05/1911	8	006	4	05	4	1.05	3	14	7	06	3
MN LEECH LAKE DAM	21	4652-02	47-15	94-13	1302	04/1887	3	100	1	04/1887	2	000	1	01	0	1.01	0	08	4	12	6
MN MAPLE PLAIN	21	5136-06	45-00	93-39	970	04/1887	3	092	7	04/1887	2	009	6	05	4	1.07	5	04	2	06	3
MN MILAN 1NW	21	5400-04	45-08	95-56	1020	08/1893	5	099	3	08/1893	4	003	3	03	2	1.06	4	20	9	12	6
MN MINNEAPOLIS WSFO AP	21	5435-06	44-53	93-13	834	07/1836	0	100	1	01/1891	3	004	3	03	2	1.03	1	00	0	02	1
MN MONTEVIDEO 1SW	21	5563-04	44-56	95-45	985	08/1889	4	099	3	08/1889	3	006	4	06	5	1.10	6	10	5	12	6
MN MORA	21	5615-06	45-53	93-18	990	07/1904	8	099	3	07/1904	7	006	4	04	3	1.05	3	18	9	14	7
MN MORRIS WC EXPERIMENT STATION	21	5638-04	45-35	95-55	1140	05/1885	3	099	3	05/1885	1	001	2	03	2	1.05	3	02	1	02	1
MN NEW ULM	21	5887-08	44-18	94-27	860	03/1864	1	087	8	01/1894	4	006	4	04	3	1.03	1	16	8	08	4
MN OLIVIA	21	6152-05	44-47	94-59	1094	01/1885	3	095	6	03/1885	1	016	7	07	6	1.08	5	02	1	16	8
MN PARK RAPIDS	21	6360-02	46-55	95-04	1434	01/1885	3	095	6	01/1885	1	006	4	03	2	1.05	3	08	4	14	7
MN PINE RIVER DAM	21	6547-06	46-40	94-07	1250	01/1887	3	100	1	01/1887	1	000	1	05	4	1.06	4	12	6	02	1
MN PIPESTONE	21	6565-07	44-01	96-19	1705	11/1892	5	091	7	11/1892	4	014	7	09	8	1.09	6	08	4	02	1
MN POKEGAMA DAM	21	6612-02	47-15	93-35	1280	01/1887	3	100	1	03/1887	2	002	3	03	2	1.04	2	04	2	02	1
MN ROSEAU 1E	21	7087-01	48-51	95-45	1047	03/1894	6	088	8	03/1894	4	012	6	04	3	UNAD	9	10	5	00	0

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MN SAINT PETER 2SW	21	7405-08	44-18	93-58	850	09/1887	3	097	5	09/1887	2	009	6	06	5	1.11	7	20	9	18	9
MN SANDY LAKE DAM LIBBY	21	7460-06	46-48	93-19	1234	01/1892	5	100	1	01/1892	4	001	2	01	0	0.99	0	20	9	08	4
MN TWO HARBORS	21	8419-03	47-01	91-40	625	01/1894	6	100	1	01/1894	4	005	4	02	1	1.03	1	04	2	04	2
MN VIRGINIA	21	8543-03	47-30	92-33	1435	11/1893	5	099	3	11/1893	4	000	1	04	3	1.03	1	00	0	04	2
MN WALKER AH-GWAH-CHING	21	8618-01	47-04	94-35	1407	12/1907	8	098	4	12/1907	7	001	2	00	0	0.99	0	14	7	04	2
MN WINNEBAGO	21	9046-08	43-46	94-10	1110	10/1894	6	099	3	10/1894	4	005	4	02	1	1.01	0	06	3	06	3
MN WINNIBIGOSHISH DAM	21	9059-02	47-26	94-03	1315	04/1887	3	100	1	04/1887	2	000	1	00	0	0.99	0	16	8	06	3
MN ZUMBROTA	21	9249-09	44-18	92-40	985	10/1893	5	092	7	10/1893	4	010	6	06	5	1.06	4	08	4	18	9

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MS ABERDEEN	22	0021-06	33-50	88-33	207	04/1882	2	093	7	01/1886	1	016	7	07	6	1.09	6	08	4	06	3
MS BATESVILLE 2SW	22	0488-02	34-18	89-59	215	04/1882	2	097	5	01/1964	9	000	1	00	0	0.99	0	14	7	14	7
MS BILOXI(CITY)	22	0792-10	30-24	88-54	15	01/1887	3	094	6	04/1888	2	028	9	14	9	1.11	7	10	5	08	4
MS BOONEVILLE	22	0955-03	34-40	88-34	490	04/1889	4	094	6	04/1889	2	017	8	10	8	1.06	4	04	2	10	5
MS BROOKHAVEN CITY	22	1094-07	31-33	90-27	425	08/1869	1	092	7	02/1889	2	004	3	07	6	1.08	5	06	3	06	3
MS CANTON	22	1389-05	32-36	90-02	228	08/1882	2	096	6	01/1949	9	000	1	00	0	0.99	0	12	6	12	6
MS CLARKSDALE	22	1707-01	34-12	90-34	173	11/1892	5	085	8	11/1892	4	025	9	10	8	1.09	6	20	9	20	9
MS COLUMBIA	22	1865-08	31-15	89-50	155	06/1903	7	098	4	06/1903	6	018	8	13	9	1.11	7	02	1	16	8
MS COLUMBUS LUXAPALLILA	22	1880-06	33-31	88-24	142	05/1855	0	096	6	01/1961	9	014	7	03	2	1.06	4	20	9	20	9
MS CORINTH CITY	22	1962-03	34-55	88-31	385	07/1882	2	091	7	02/1887	2	036	9	14	9	1.09	6	12	6	00	0
MS CRYSTAL SPRINGS EXP STN	22	2094-07	31-58	90-22	487	04/1892	5	099	3	04/1892	4	005	4	05	4	1.05	3	08	4	06	3
MS FOREST	22	3107-05	32-19	89-29	480	04/1882	2	093	7	01/1959	9	008	5	02	1	1.01	0	12	6	12	6
MS GREENVILLE	22	3605-04	33-23	91-01	132	01/1887	3	100	1	01/1887	1	007	5	07	6	1.08	5	02	1	06	3
MS HATTIESBURG	22	3887-09	31-19	89-18	161	04/1890	4	097	5	04/1890	3	025	9	19	9	1.12	7	14	7	00	0
MS HERNANDO	22	3975-02	34-50	90-00	363	04/1882	2	090	7	01/1980	9	000	1	00	0	0.99	0	20	9	06	3
MS HOLLY SPRINGS 4N	22	4173-02	34-49	89-26	483	08/1867	1	085	8	09/1888	2	016	7	08	7	1.06	4	00	0	00	0
MS KOSCIUSKO	22	4776-05	33-03	89-36	420	01/1889	4	099	3	01/1961	9	009	6	03	2	1.03	1	00	0	00	0
MS LAUREL	22	4939-09	31-41	89-07	225	02/1902	7	096	6	02/1902	6	026	9	11	9	1.11	7	16	8	16	8
MS LOUISVILLE	22	5247-06	33-08	89-04	581	12/1888	4	099	3	12/1888	2	001	2	04	3	1.04	2	14	7	02	1
MS MONTICELLO	22	5987-08	31-33	90-06	220	05/1907	8	099	3	05/1907	7	019	8	12	9	1.12	7	06	3	12	6
MS MOORHEAD	22	6009-04	33-27	90-31	117	04/1913	9	097	5	01/1955	9	011	6	02	1	1.03	1	06	3	06	3
MS NATCHEZ	22	6177-07	31-33	91-23	195	02/1799	0	065	9	01/1890	3	015	7	12	9	1.08	5	06	3	14	7
MS PONTOTOC EXP STN	22	7111-03	34-09	89-00	405	01/1889	4	098	4	01/1889	2	002	3	04	3	1.04	2	14	7	16	8
MS POPLARVILLE EXP STN	22	7128-10	30-51	89-33	313	04/1903	7	098	4	04/1903	6	002	3	03	2	1.04	2	10	5	10	5
MS PORT GIBSON	22	7132-07	31-58	91-00	120	08/1855	0	075	9	01/1974	9	000	1	00	0	0.99	0	02	1	02	1

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MS ROSEDALE	22	7582-01	33-51	91-01	150	11/1894	6	083	9	11/1894	4	022	9	05	4	1.12	7	12	6	14	7
MS STATE UNIVERSITY	22	8374-06	33-28	88-47	185	05/1884	3	097	5	01/1886	1	009	6	08	7	1.11	7	02	1	08	4
MS UNIVERSITY	22	9079-02	34-23	89-32	380	01/1855	0	072	9	01/1902	6	008	5	06	5	1.06	4	16	8	16	8
MS WATER VALLEY 1NNE	22	9400-02	34-10	89-38	380	01/1886	3	098	4	01/1886	1	002	3	03	2	1.03	1	08	4	10	5
MS WAVELAND	22	9426-10	30-18	89-23	8	09/1890	4	093	7	01/1971	9	036	9	01	0	1.07	5	08	4	08	4
MS WAYNESBORO 2W	22	9439-09	31-41	88-40	197	04/1882	2	095	6	12/1903	6	009	6	06	5	1.07	5	04	2	12	6
MS WOODVILLE	22	9793-07	31-06	91-14	400	03/1893	5	097	5	03/1893	4	020	8	12	9	1.13	7	18	9	12	6
MS YAZOO CITY 5NNE	22	9860-04	32-54	90-23	107	01/1886	3	100	1	01/1961	9	000	1	00	0	0.99	0	06	3	06	3

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MO APPLETON CITY	23	0204-03	38-12	94-02	800	12/1889	4	097	5	12/1889	3	003	3	08	7	1.06	4	00	0	14	7
MO ARCADIA	23	0224-05	37-35	90-37	926	01/1878	2	100	1	01/1878	0	000	1	04	3	1.05	3	06	3	08	4
MO BRUNSWICK	23	1037-01	39-25	93-07	660	07/1874	1	093	7	01/1897	5	013	7	05	4	1.04	2	12	6	18	9
MO CARUTHERSVILLE	23	1364-06	36-12	89-40	280	01/1878	2	086	8	03/1884	1	036	9	11	9	1.16	7	10	5	08	4
MO CLINTON	23	1711-03	38-22	93-46	790	10/1906	8	098	4	10/1906	7	015	7	07	6	1.10	6	16	8	14	7
MO CONCEPTION	23	1822-01	40-15	94-41	1108	11/1883	2	098	4	11/1883	1	001	2	01	0	1.03	1	00	0	08	4
MO DONIPHAN	23	2289-05	36-35	90-49	330	04/1904	8	099	3	04/1904	6	015	7	04	3	1.04	2	02	1	14	7
MO HARRISONVILLE	23	3649-03	38-39	94-20	900	10/1863	0	090	7	11/1872	0	010	6	06	5	1.07	5	16	8	10	5
MO JEFFERSON CITY WATER PLANT	23	4271-03	38-35	92-09	670	01/1891	5	098	4	01/1891	3	009	6	06	5	1.06	4	00	0	10	5
MO LAMAR	23	4705-04	37-30	94-16	980	12/1877	1	095	6	12/1877	0	018	8	09	8	1.08	5	18	9	04	2
MO LEBANON 2W	23	4825-04	37-40	92-39	1279	01/1878	2	090	7	01/1878	0	021	8	11	9	1.12	7	12	6	02	1
MO LEXINGTON 3NE	23	4904-01	39-12	93-52	825	04/1875	1	095	6	11/1890	3	006	4	04	3	1.04	2	02	1	08	4
MO LOCKWOOD	23	5027-04	37-23	93-57	1078	01/1904	8	098	4	01/1904	6	002	3	02	1	1.02	1	14	7	16	8
MO LOUISIANA STARK'S NURSERY	23	5093-02	39-26	91-04	469	01/1878	2	095	6	01/1902	6	017	8	05	4	1.08	5	16	8	04	2
MO MACON	23	5175-01	39-43	92-28	855	09/1899	7	098	4	12/1984	9	000	1	24	9	UNAD	9	04	2	12	6
MO MARBLE HILL	23	5253-05	37-18	89-58	390	01/1893	5	097	5	01/1893	4	013	7	10	8	1.08	5	14	7	04	2
MO MEXICO	23	5541-02	39-11	91-53	775	01/1893	5	100	1	01/1893	4	006	4	04	3	1.05	3	18	9	18	9
MO MOUNTAIN GROVE	23	5834-04	37-09	92-16	1450	01/1901	7	100	1	01/1901	6	006	4	02	1	1.00	0	06	3	06	3
MO NEOSHO	23	5976-04	36-52	94-22	1011	02/1893	5	100	1	02/1893	4	005	4	02	1	1.03	1	08	4	08	4
MO ROLLA UNIV OF MO	23	7263-05	37-57	91-46	1180	01/1896	6	097	5	01/1896	5	005	4	08	7	1.06	4	12	6	12	6
MO STEFFENVILLE	23	8051-02	39-58	91-53	690	11/1897	7	099	3	11/1897	5	004	3	04	3	1.07	5	20	9	12	6
MO TRENTON	23	8444-01	40-05	93-38	837	01/1895	6	100	1	01/1895	4	014	7	11	9	1.18	7	06	3	06	3
MO UNIONVILLE	23	8523-01	40-29	93-00	1062	03/1893	5	097	5	03/1893	4	023	9	09	8	1.08	5	16	8	10	5
MO WARRENSBURG 2SSE	23	8712-03	38-44	93-43	840	01/1896	6	094	6	01/1896	5	018	8	10	8	1.11	7	16	8	06	3
MO WARRENTON 1N	23	8725-02	38-49	91-08	845	01/1893	5	093	7	01/1893	4	013	7	03	2	1.07	5	04	2	08	4
MO WARSAW #1	23	8733-03	38-15	93-22	705	11/1892	5	096	6	11/1892	4	018	8	08	7	1.08	5	00	0	16	8

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STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R SC-DATE	R ZE	R #M	R CONF	R	CONS40	R	CONSFULL	R
MT ANACONDA	24	0199-01	46-08	112-57	5280	09/1905	8	099	3	09/1905	7	000	1	04	3	UNAD	9
MT AUGUSTA	24	0364-04	47-29	112-23	4070	07/1896	6	096	6	01/1900	6	014	7	09	8	1.11	7
MT BIG TIMBER	24	0780-05	45-50	109-57	4100	04/1894	6	087	8	12/1902	6	008	5	03	2	UNAD	9
MT BOZEMAN MONTANA ST UNIV	24	1044-02	45-40	111-03	4856	08/1868	1	092	7	01/1901	6	000	1	01	0	1.01	0
MT CASCADE SS	24	1552-04	47-13	111-43	3390	04/1904	8	099	3	04/1904	6	004	3	04	3	1.03	1
MT CHINOOK	24	1722-03	48-35	109-14	2340	12/1895	6	093	7	03/1899	5	006	4	14	9	UNAD	9
MT CHOTEAU AP	24	1737-03	47-49	112-10	3945	06/1890	4	083	9	08/1902	6	014	7	09	8	UNAD	9
MT CROW AGENCY	24	2112-05	45-36	107-27	3030	09/1879	2	099	3	01/1914	8	015	7	06	5	1.06	4
MT CUT BANK	24	2173-03	48-36	112-22	3838	12/1903	8	094	6	12/1903	6	005	4	07	6	UNAD	9
MT DILLON WMCE	24	2409-02	45-12	112-38	5228	02/1895	6	100	1	02/1895	4	000	1	06	5	UNAD	9
MT EKALAKA	24	2689-07	45-53	104-32	3425	01/1897	6	095	6	02/1897	5	008	5	07	6	1.13	7
MT ENNIS	24	2793-02	45-21	111-43	4953	01/1918	9	096	6	01/1918	8	004	3	04	3	UNAD	9
MT FLATWILLOW 4ENE	24	3013-04	46-51	108-19	3138	07/1913	9	099	3	07/1913	8	000	1	03	2	UNAD	9
MT FORKS 4NNE	24	3089-03	48-47	107-28	2600	01/1915	9	098	4	01/1915	8	006	4	04	3	1.05	3
MT FORT ASSINNIBOINE	24	3110-03	48-30	109-48	2687	01/1880	2	077	9	01/1918	8	000	1	01	0	1.04	2
MT FORTINE 1N	24	3139-01	48-47	114-54	3000	03/1906	8	100	1	03/1906	7	000	1	07	6	UNAD	9
MT GLASGOW WSO AP	24	3558-06	48-13	106-37	2284	01/1894	6	097	5	02/1907	7	003	3	11	9	UNAD	9
MT GLENDIVE	24	3581-06	47-06	104-43	2076	01/1889	4	100	1	01/1912	8	000	1	05	4	1.06	4
MT GREAT FALLS WSCMO AP	24	3751-04	47-29	111-22	3663	12/1891	5	099	3	01/1899	5	020	8	09	8	1.06	4
MT HAMILTON	24	3885-01	46-15	114-09	3529	06/1895	6	087	8	05/1896	5	012	6	12	9	UNAD	9
MT HAUGAN 3E	24	3984-01	47-23	115-21	3100	02/1908	8	100	1	02/1908	7	015	7	06	5	1.07	5
MT HEBGEN DAM	24	4038-02	44-52	111-20	6489	06/1904	8	098	4	06/1904	7	003	3	02	1	1.06	4
MT HELENA WSO	24	4055-04	46-35	112-00	3828	04/1880	2	100	1	04/1880	0	000	1	13	9	UNAD	9
MT HUNTLEY EXPERIMENT STATION	24	4345-05	45-55	108-15	2989	05/1906	8	099	3	05/1906	7	000	1	02	1	1.02	1
MT JORDAN	24	4522-06	47-19	106-54	2590	02/1905	8	082	9	02/1905	7	018	8	04	3	UNAD	9
MT KALISPELL WSO AP	24	4558-01	48-18	114-16	2965	06/1896	6	099	3	06/1896	5	000	1	07	6	UNAD	9
MT LIBBY 1NE RS	24	5015-01	48-24	115-32	2080	06/1895	6	099	3	09/1899	6	018	8	05	4	1.08	5
MT LIVINGSTON 12S	24	5080-05	45-29	110-34	4870	10/1895	6	091	7	10/1895	5	009	6	10	8	UNAD	9
MT MALTA 7E	24	5338-03	48-24	107-44	2245	06/1905	8	097	5	10/1905	7	010	6	05	4	1.10	6
MT MEDICINE LAKE 3SE	24	5572-06	48-29	104-27	1952	01/1911	9	096	6	01/1911	8	004	3	07	6	UNAD	9
MT MILDRED 5N	24	5668-07	46-46	104-58	2510	01/1909	8	097	5	01/1909	7	014	7	05	4	1.05	3
MT MILES CITY FAA AP	24	5690-07	46-26	105-52	2629	08/1877	1	099	3	01/1906	7	000	1	02	1	1.03	1

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
MT MOCCASIN EXPERIMENT STATION	24	5761-04	47-03	109-57	4300	01/1909	8	100	1	01/1909	7	000	1	01	0	UNAD	9	08	4	04	2
MT NORRIS MADISON POWER HOUSE	24	6157-02	45-29	111-38	4745	02/1907	8	100	1	02/1907	7	000	1	03	2	UNAD	9	08	4	02	1
MT PHILIPSBURG RS	24	6472-01	46-19	113-18	5270	10/1903	7	097	5	01/1917	8	004	3	05	4	1.05	3	02	1	20	9
MT PLEVNA	24	6601-07	46-25	104-30	2765	03/1912	9	099	3	03/1912	8	010	6	07	6	1.09	6	00	0	12	6
MT POPLAR	24	6660-06	48-07	105-12	1995	01/1888	3	096	6	01/1914	8	039	9	21	9	1.28	7	16	8	10	5
MT RED LODGE	24	6918-05	45-11	109-15	5575	03/1894	6	094	6	05/1898	5	005	4	04	3	1.08	5	04	2	12	6
MT SAINT IGNATIUS	24	7286-01	47-19	114-06	2900	02/1896	6	089	8	02/1896	5	011	6	03	2	UNAD	9	16	8	12	6
MT SAVAGE	24	7382-06	47-27	104-21	1985	09/1905	8	099	3	01/1954	9	000	1	00	0	0.99	0	10	5	10	5
MT VALIER	24	8501-03	48-19	112-15	3805	08/1911	9	099	3	08/1911	8	000	1	00	0	0.99	0	16	8	08	4
MT VIRGINIA CITY	24	8597-02	45-18	111-57	5758	02/1871	1	082	9	01/1900	6	013	7	10	8	UNAD	9	06	3	00	0
MT WEST YELLOWSTONE	24	8857-02	44-39	111-06	6657	07/1905	8	094	6	07/1905	7	027	9	10	8	1.09	6	20	9	10	5
MT WHITE SULPHUR SPRINGS #2	24	8930-04	46-31	110-53	5200	04/1894	6	083	9	08/1902	6	011	6	10	8	UNAD	9	20	9	20	9

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
NE ALBION	25	0070-03	41-41	98-00	1760	04/1892	5	095	6	04/1892	4	008	5	06	5	1.09	6	08	4	02	1
NE ALLIANCE	25	0130-01	42-06	102-52	3980	08/1889	4	091	7	12/1893	4	007	5	07	6	UNAD	9	02	1	08	4
NE ASHLAND 3NE	25	0375-06	41-04	96-20	1067	08/1883	2	098	4	08/1883	1	022	9	07	6	1.12	7	18	9	08	4
NE ATKINSON	25	0420-02	42-33	98-58	2125	06/1906	8	095	6	06/1906	7	008	5	03	2	1.07	5	20	9	20	9
NE AUBURN SESE	25	0435-09	40-23	95-45	930	11/1874	1	089	8	11/1878	0	025	9	08	7	1.10	6	08	4	18	9
NE BEATRICE 1N	25	0622-09	40-18	96-45	1297	04/1891	5	099	3	04/1891	3	001	2	03	2	1.00	0	02	1	06	3
NE BEAVER CITY	25	0640-08	40-08	99-50	2160	09/1890	4	097	5	09/1890	3	013	7	09	8	1.09	6	20	9	20	9
NE BRIDGEPORT	25	1145-01	41-40	103-06	3660	05/1897	6	099	3	05/1897	5	000	1	02	1	1.07	5	06	3	14	7
NE BROKEN BOW 2W	25	1200-05	41-25	99-41	2500	01/1895	6	099	3	01/1895	4	016	7	05	4	1.07	5	14	7	04	2
NE CRETE	25	2020-09	40-37	96-57	1435	01/1880	2	100	1	01/1895	4	000	1	03	2	1.07	5	20	9	14	7
NE CURTIS 1E	25	2100-07	40-38	100-30	2585	11/1893	5	093	7	01/1915	8	005	4	04	3	1.05	3	10	5	02	1
NE DAVID CITY	25	2205-06	41-15	97-08	1615	09/1888	4	097	5	09/1888	2	003	3	08	7	1.06	4	04	2	02	1
NE FAIRBURY 2SSE	25	2820-09	40-07	97-10	1340	07/1875	1	099	3	01/1899	5	000	1	05	4	1.09	6	06	3	04	2
NE FAIRMONT	25	2840-09	40-38	97-35	1640	11/1894	6	099	3	01/1950	9	000	1	02	1	1.04	2	12	6	12	6
NE FRANKLIN	25	3035-08	40-06	98-58	1855	01/1888	3	096	6	01/1888	2	029	9	16	9	1.17	7	16	8	06	3
NE GENEVA	25	3175-09	40-32	97-36	1630	08/1890	4	099	3	08/1890	3	000	1	06	5	1.07	5	14	7	16	8
NE GENOA 2W	25	3185-06	41-27	97-46	1590	12/1875	1	098	4	12/1875	0	005	4	06	5	1.10	6	18	9	08	4
NE GOTHENBURG	25	3365-05	40-56	100-10	2585	09/1894	6	099	3	09/1894	4	011	6	05	4	1.07	5	14	7	08	4
NE HALSEY 2W	25	3540-02	41-54	100-19	2705	02/1903	7	100	1	02/1903	6	009	6	07	6	1.12	7	12	6	14	7
NE HARRISON	25	3615-01	42-41	103-53	4850	03/1893	5	076	9	11/1900	6	033	9	11	9	1.18	7	14	7	08	4
NE HARTINGTON	25	3630-03	42-36	97-16	1370	08/1891	5	099	3	08/1891	3	005	4	07	6	1.07	5	04	2	10	5
NE HASTINGS	25	3660-08	40-35	98-21	1925	05/1880	2	089	8	04/1889	2	007	5	08	7	1.10	6	16	8	10	5
NE HAY SPRINGS	25	3710-01	42-41	102-41	3855	01/1886	3	099	3	01/1886	1	004	3	09	8	1.07	5	08	4	06	3
NE HEBRON	25	3735-09	40-10	97-35	1480	01/1886	3	099	3	01/1886	1	004	3	07	6	1.10	6	02	1	06	3
NE HOLDREGE	25	3910-08	40-26	99-22	2320	06/1890	4	098	4	06/1890	3	001	2	03	2	1.05	3	16	8	04	2
NE IMPERIAL	25	4110-07	40-31	101-38	3278	06/1890	4	099	3	06/1890	3	017	8	07	6	1.09	6	16	8	02	1
NE KIMBALL	25	4440-01	41-14	103-40	4705	11/1887	3	097	5	01/1945	9	000	1	02	1	1.03	1	12	6	12	6
NE LODGEPOLE	25	4900-01	41-09	102-38	3832	09/1894	6	094	6	01/1911	8	008	5	03	2	1.07	5	10	5	04	2
NE LOUP CITY 1N	25	4985-05	41-17	98-58	2120	11/1894	6	097	5	11/1894	4	009	6	07	6	1.09	6	06	3	12	6
NE MADISON	25	5080-03	41-50	97-27	1580	12/1884	3	090	7	12/1888	2	014	7	07	6	1.08	5	14	7	08	4
NE MCCOOK	25	5310-07	40-12	100-35	2580	06/1882	2	092	7	01/1883	1	031	9	12	9	1.18	7	02	1	14	7
NE MERRIMAN	25	5470-02	42-55	101-41	3250	01/1898	7	082	9	01/1898	5	018	8	13	9	UNAD	9	12	6	12	6

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NE MINDEN	25	5565-08	40-30	98-57	2170	01/1878	2	099	3	01/1878	0	001	2	08	7	1.11	7	20	9	20	9
NE NORTH LOUP	25	6040-05	41-30	98-46	1960	11/1887	3	097	5	12/1888	2	014	7	07	6	1.09	6	06	3	04	2
NE OAKDALE	25	6135-03	42-04	97-57	1720	08/1883	2	097	5	12/1888	2	003	3	04	3	1.03	1	04	2	02	1
NE PAWNEE CITY	25	6570-09	40-06	96-09	1185	02/1878	2	082	9	02/1885	1	018	8	04	3	1.08	5	08	4	00	0
NE PURDUM	25	6970-02	42-04	100-15	2690	04/1902	7	099	3	04/1902	6	000	1	02	1	1.08	5	12	6	14	7
NE RED CLOUD	25	7070-08	40-06	98-31	1720	03/1872	1	082	9	11/1889	3	010	6	06	5	1.09	6	14	7	04	2
NE SAINT PAUL	25	7515-05	41-12	98-27	1796	01/1896	6	100	1	01/1896	5	000	1	04	3	1.07	5	00	0	14	7
NE SEWARD	25	7715-06	40-54	97-05	1480	02/1885	3	094	6	01/1951	9	000	1	00	0	0.99	0	02	1	02	1
NE SYRACUSE	25	8395-09	40-40	96-11	1100	06/1871	1	094	6	07/1875	0	021	8	17	9	1.11	7	12	6	16	8
NE TECUMSEH	25	8465-09	40-22	96-11	1130	04/1878	2	098	4	04/1878	0	004	3	07	6	1.06	4	00	0	14	7
NE TEKAMAH 1S	25	8480-03	41-45	96-14	1040	03/1890	4	099	3	03/1890	3	005	4	08	7	1.08	5	00	0	06	3
NE WAKEFIELD	25	8915-03	42-16	96-52	1413	10/1894	6	099	3	01/1954	9	000	1	01	0	1.00	0	12	6	12	6
NE WEEPING WATER	25	9090-06	40-52	96-09	1100	03/1878	2	098	4	03/1878	0	009	6	08	7	1.10	6	10	5	18	9
NE YORK	25	9510-06	40-52	97-36	1610	03/1884	2	095	6	01/1951	9	004	3	02	1	1.03	1	08	4	08	4

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NV AUSTIN	26	0507-02	39-30	117-05	6605	02/1888	3	099	3	02/1888	2	026	9	17	9	1.25	7	16	8	08	4
NV BATTLE MOUNTAIN AP	26	0691-02	40-35	116-54	4539	01/1870	1	100	1	01/1870	0	000	1	07	6	UNAD	9	00	0	06	3
NV BOULDER CITY	26	1071-04	35-59	114-51	2525	09/1931	9	097	5	09/1931	9	001	2	01	0	UNAD	9	10	5	12	6
NV ELKO FAA AP	26	2573-02	40-50	115-47	5075	01/1870	1	100	1	01/1870	0	000	1	08	7	UNAD	9	02	1	06	3
NV FALLON EXPERIMENT STATION	26	2780-01	39-27	118-47	3965	04/1889	4	093	7	04/1889	2	006	4	05	4	UNAD	9	14	7	20	9
NV GOLCONDA	26	3245-01	40-57	117-29	4392	01/1878	2	100	1	01/1878	0	000	1	06	5	UNAD	9	10	5	08	4
NV LOVELOCK	26	4698-01	40-11	118-28	3975	04/1888	4	096	6	04/1888	2	004	3	10	8	UNAD	9	10	5	12	6
NV MCGILL	26	4950-02	39-24	114-46	6300	01/1888	3	100	1	01/1888	2	000	1	05	4	UNAD	9	04	2	18	9
NV MINA	26	5168-03	38-23	118-06	4552	01/1896	6	100	1	01/1896	5	000	1	04	3	UNAD	9	16	8	16	8
NV RENO WSFO AP	26	6779-01	39-30	119-47	4404	01/1870	1	100	1	01/1870	0	000	1	12	9	UNAD	9	10	5	08	4
NV SEARCHLIGHT	26	7369-04	35-28	114-55	3540	01/1914	9	100	1	01/1914	8	000	1	05	4	UNAD	9	08	4	06	3
NV WELLS	26	8988-02	41-07	114-58	5650	01/1870	1	100	1	01/1870	0	001	2	04	3	UNAD	9	10	5	02	1
NV WINNEMUCCA WSO AP	26	9171-01	40-54	117-48	4297	01/1870	1	100	1	01/1870	0	000	1	07	6	UNAD	9	12	6	12	6

PRECIPITATION

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NH BETHLEHEM	27	0703-01	44-17	71-41	1380	12/1892	5	097	5	12/1892	4	011	6	07	6	1.05	3	12	6	04	2
NH DURHAM	27	2174-02	43-09	70-57	74	06/1892	5	098	4	06/1892	4	007	5	07	6	1.08	5	10	5	10	5
NH FIRST CONNECTICUT LAKE	27	2999-01	45-05	71-17	1660	01/1918	9	100	1	01/1918	8	000	1	01	0	1.02	1	20	9	20	9
NH HANOVER	27	3850-02	43-42	72-17	603	11/1834	0	095	6	05/1861	0	002	3	02	1	1.03	1	06	3	16	8
NH KEENE	27	4399-02	42-55	72-16	480	01/1893	5	100	1	01/1893	4	011	6	06	5	1.07	5	12	6	18	9

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NJ ATLANTIC CITY STATE MARINA	28	0325-03	39-23	74-26	10	01/1874	1	100	1	01/1874	0	006	4	05	4	1.06	4	20	9	18	9
NJ BELVIDERE	28	0734-01	40-50	75-05	263	08/1881	2	092	7	08/1881	0	013	7	04	3	1.05	3	14	7	06	3
NJ BOONTON 1SE	28	0907-01	40-54	74-24	280	09/1892	5	091	7	09/1892	4	010	6	04	3	1.04	2	08	4	10	5
NJ CHARLOTTEBURG	28	1582-01	41-02	74-26	760	04/1893	5	100	1	04/1893	4	000	1	01	0	1.01	0	10	5	08	4
NJ FLEMINGTON	28	3029-01	40-30	74-52	180	02/1879	2	085	8	02/1879	0	022	9	06	5	1.07	5	04	2	12	6
NJ HIGHTSTOWN 2W	28	3951-02	40-16	74-34	100	05/1891	5	094	6	05/1891	3	015	7	14	9	1.08	5	12	6	08	4
NJ INDIAN MILLS 2W	28	4229-02	39-48	74-47	100	05/1901	7	100	1	05/1901	6	000	1	01	0	1.01	0	08	4	14	7
NJ LONG BRANCH OAKHURST	28	4987-03	40-16	74-00	30	01/1874	1	069	9	08/1885	1	031	9	06	5	1.11	7	14	7	08	4
NJ MOORESTOWN	28	5728-02	39-58	74-58	45	01/1865	1	098	4	01/1865	0	007	5	07	6	1.09	6	18	9	02	1
NJ NEW BRUNSWICK 3SE	28	6055-02	40-28	74-26	86	01/1854	0	100	1	01/1863	0	000	1	03	2	1.06	4	10	5	00	0
NJ PLAINFIELD	28	7079-01	40-36	74-24	90	06/1887	3	098	4	06/1887	2	005	4	06	5	1.04	2	12	6	16	8
NJ TUCKERTON	28	8899-02	39-36	74-20	20	01/1898	7	091	7	01/1898	5	014	7	08	7	1.08	5	04	2	14	7

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STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
NM AZTEC RUINS NATL MONUMENT	29	0692-01	36-50	108-00	5644	03/1895	6	091	7	03/1895	4	009	6	11	9	UNAD	9	06	3	08	4
NM BELL RANCH	29	0858-03	35-32	104-06	4500	01/1899	7	099	3	01/1899	5	001	2	01	0	UNAD	9	12	6	10	5
NM CARLSBAD	29	1469-07	32-25	104-14	3120	01/1894	6	100	1	01/1894	4	000	1	12	9	UNAD	9	06	3	00	0
NM CARRIZOZO	29	1515-05	33-39	105-53	5438	01/1908	8	100	1	01/1908	7	000	1	05	4	UNAD	9	10	5	06	3
NM CHAMA	29	1664-02	36-55	106-35	7850	07/1889	4	091	7	01/1906	7	019	8	12	9	1.12	7	20	9	10	5
NM CIMARRON 4SW	29	1813-02	36-28	104-57	6542	05/1904	8	099	3	05/1904	6	000	1	07	6	UNAD	9	06	3	06	3
NM CLAYTON WSO AP	29	1887-03	36-27	103-09	4669	02/1896	6	089	8	10/1899	6	011	6	06	5	UNAD	9	10	5	20	9
NM ELEPHANT BUTTE DAM	29	2848-05	33-09	107-11	4576	04/1907	8	100	1	04/1907	7	000	1	03	2	UNAD	9	02	1	12	6
NM FORT BAYARD	29	3265-04	32-48	108-09	6142	01/1867	1	100	1	08/1871	0	002	3	03	2	1.07	5	10	5	06	3
NM FORT SUMNER	29	3294-07	34-28	104-15	4025	05/1864	1	067	9	06/1899	5	011	6	09	8	UNAD	9	16	8	06	3
NM GAGE 4ESE	29	3368-08	32-13	108-01	4410	01/1899	7	097	5	01/1899	5	003	3	03	2	UNAD	9	08	4	06	3
NM JEMEZ SPRINGS	29	4369-02	35-46	106-41	6262	01/1910	8	100	1	01/1910	8	004	3	07	6	1.16	7	02	1	06	3
NM JORNADA EXPERIMENTAL RANGE	29	4426-08	32-37	106-44	4266	01/1914	9	100	1	01/1914	8	000	1	04	3	UNAD	9	06	3	10	5
NM LAS VEGAS SEWAGE PLT	29	4862-02	35-32	105-12	6349	01/1887	3	100	1	01/1902	6	008	5	08	7	1.10	6	00	0	16	8
NM LOS LUNAS 3SSW	29	5150-05	34-46	106-45	4840	01/1889	4	100	1	01/1889	2	000	1	08	7	UNAD	9	16	8	04	2
NM LUNA RS	29	5273-04	33-50	108-56	7050	01/1900	7	100	1	01/1900	6	006	4	06	5	1.19	7	12	6	20	9
NM MOUNTAIN PARK	29	5960-06	32-57	105-51	6780	11/1894	6	080	9	11/1894	4	024	9	07	6	1.19	7	08	4	20	9
NM MOUNTAINAIR	29	5965-06	34-31	106-15	6520	01/1902	7	100	1	01/1902	6	000	1	16	9	UNAD	9	00	0	18	9
NM OROGRANDE	29	6435-08	32-23	106-06	4179	12/1904	8	095	6	12/1904	7	004	3	11	9	UNAD	9	18	9	18	9
NM RED RIVER	29	7323-02	36-42	105-24	8676	01/1906	8	100	1	01/1926	9	005	4	02	1	1.04	2	08	4	08	4
NM ROSWELL FAA AP	29	7610-07	33-18	104-32	3669	01/1878	2	100	1	01/1878	0	000	1	07	6	UNAD	9	00	0	08	4
NM SAN JON	29	7867-03	35-07	103-20	4230	01/1907	8	100	1	01/1907	7	000	1	04	3	UNAD	9	14	7	16	8
NM SANTA ROSA	29	8107-07	34-57	104-41	4620	01/1908	8	100	1	01/1908	7	000	1	06	5	UNAD.	9	06	3	10	5
NM SOCORRO	29	8387-05	34-05	106-53	4585	11/1849	0	072	9	10/1875	0	012	6	14	9	UNAD	9	06	3	00	0
NM SPRINGER	29	8501-03	36-21	104-35	5878	01/1887	3	100	1	01/1887	1	000	1	09	8	UNAD	9	08	4	16	8
NM STATE UNIVERSITY	29	8535-08	32-17	106-45	3881	09/1851	0	093	7	01/1886	1	001	2	04	3	UNAD	9	10	5	04	2
NM TUCUMCARI 4NE	29	9156-03	35-12	103-41	4086	01/1905	8	100	1	01/1905	7	000	1	02	1	UNAD	9	08	4	04	2
NM TULAROSA	29	9165-08	33-05	106-03	4430	01/1908	8	098	4	01/1908	7	002	3	15	9	UNAD	9	16	8	14	7

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	IA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
NY ADDISON	30	0023-01	42-06	77-13	1025	07/1890	4	096	6	07/1890	3	023	9	11	9	1.11	7	16	8	02	1
NY ALBANY WSFOAP	30	0042-05	42-45	73-48	275	01/1826	0	098	4	05/1861	0	008	5	07	6	1.05	3	18	9	06	3
NY ALFRED	30	0085-01	42-15	77-47	1780	01/1852	0	068	9	04/1879	0	019	8	07	6	1.12	7	04	2	16	8
NY ALLEGANY STATE PARK	30	0093-01	42-06	78-45	1500	09/1924	9	099	3	09/1924	9	008	5	02	1	1.03	1	04	2	02	1
NY ANGELICA	30	0183-01	42-18	78-01	1420	01/1856	0	077	9	04/1879	0	014	7	12	9	1.11	7	08	4	02	1
NY AUBURN 2NE	30	0321-10	42-56	76-32	765	01/1827	0	068	9	06/1889	2	019	8	03	2	1.04	2	02	1	18	9
NY BAINBRIDGE 2E	30	0360-02	42-17	75-27	994	01/1908	8	092	7	01/1908	7	009	6	03	2	1.02	1	08	4	12	6
NY BATAVIA	30	0443-09	42-59	78-11	890	01/1931	9	100	1	01/1931	9	016	7	05	4	1.03	1	14	7	18	9
NY BINGHAMTON WSO AP	30	0687-02	42-13	75-59	1600	06/1890	4	100	1	06/1890	3	011	6	08	7	1.07	5	12	6	16	8
NY BRIDGEHAMPTON	30	0889-04	40-57	72-18	60	08/1930	9	099	3	08/1930	9	015	7	04	3	1.03	1	12	6	04	2
NY BROCKPORT 2NW	30	0937-09	43-15	77-58	413	02/1890	4	085	8	02/1890	3	017	8	04	3	1.06	4	02	1	10	5
NY BUFFALO WSCMO AP	30	1012-09	42-56	78-44	705	01/1832	0	086	8	01/1888	2	001	2	06	5	1.06	4	20	9	20	9
NY CANTON 4SE	30	1185-08	44-34	75-07	440	04/1855	0	086	8	09/1876	0	012	6	08	7	1.06	4	02	1	08	4
NY CARMEL 1SW	30	1207-05	41-25	73-42	490	01/1888	3	095	6	01/1888	2	005	4	02	1	1.04	2	06	3	12	6
NY CHASM FALLS	30	1387-08	44-45	74-13	1060	09/1926	9	095	6	09/1926	9	004	3	02	1	1.03	1	08	4	14	7
NY CHAZY	30	1401-07	44-53	73-26	170	06/1891	5	085	8	06/1891	3	016	7	04	3	1.09	6	20	9	04	2
NY COOPERSTOWN	30	1752-02	42-42	74-55	1200	01/1854	0	098	4	07/1870	0	002	3	04	3	1.06	4	04	2	14	7
NY CORTLAND	30	1799-02	42-36	76-11	1129	09/1850	0	078	9	06/1897	5	000	1	00	0	0.99	0	12	6	14	7
NY DANNEMORA	30	1966-07	44-43	73-43	1340	01/1906	8	099	3	01/1906	7	001	2	02	1	1.04	2	12	6	02	1
NY DANSVILLE	30	1974-10	42-34	77-42	685	07/1917	9	095	6	07/1917	8	007	5	04	3	1.05	3	12	6	14	7
NY ELMIRA 2SE	30	2610-01	42-05	76-47	840	01/1851	0	077	9	01/1890	3	009	6	08	7	1.07	5	06	3	02	1
NY FREDONIA	30	3033-09	42-27	79-18	760	01/1830	0	058	9	01/1915	8	000	1	02	1	1.07	5	08	4	08	4
NY GENEVA RESR FM	30	3184-10	42-53	77-02	718	11/1850	0	088	8	09/1874	0	010	6	07	6	1.11	7	06	3	12	6
NY GLENHAM	30	3259-05	41-31	73-56	275	02/1932	9	100	1	02/1932	9	000	1	01	0	1.01	0	00	0	02	1
NY GLOVERSVILLE	30	3319-06	43-03	74-20	870	05/1892	5	099	3	05/1892	4	003	3	06	5	1.06	4	12	6	02	1
NY HEMLOCK	30	3773-10	42-47	77-37	902	06/1898	7	098	4	06/1898	5	001	2	01	0	1.01	0	02	1	06	3
NY INDIAN LAKE 2SW	30	4102-03	43-45	74-17	1660	09/1899	7	098	4	01/1926	9	001	2	00	0	0.99	0	18	9	10	5
NY ITHACA CORNELL UN	30	4174-10	42-27	76-27	960	01/1828	0	080	9	01/1875	0	000	1	03	2	1.05	3	02	1	04	2
NY LAKE PLACID 2S	30	4555-03	44-15	73-59	1940	08/1897	7	086	8	08/1897	5	020	8	04	3	1.06	4	02	1	06	3
NY LAWRENCEVILLE	30	4647-08	44-45	74-39	500	07/1931	9	099	3	07/1931	9	000	1	01	0	1.02	1	08	4	06	3
NY LITTLE FALLS CITY RESER	30	4791-06	43-04	74-52	900	01/1897	6	099	3	01/1897	5	001	2	01	0	1.02	1	12	6	02	1
NY LITTLE FALLS MILL ST	30	4796-06	43-02	74-52	360	01/1897	6	083	9	01/1897	5	017	8	01	0	1.03	1	02	1	12	6

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NY LOCKPORT 2NE	30	4844-09	43-11	78-39	520	06/1870	1	085	8	01/1897	5	001	2	03	2	1.04	2	18	9	18	9
NY LOWVILLE	30	4912-03	43-48	75-29	860	01/1827	0	077	9	08/1884	1	012	6	09	8	1.08	5	06	3	00	0
NY MOHONK LAKE	30	5426-05	41-46	74-09	1245	01/1896	6	099	3	01/1896	5	001	2	00	0	0.99	0	06	3	02	1
NY MORRISVILLE 3S	30	5512-02	42-51	75-39	1390	08/1911	9	089	8	08/1911	8	029	9	09	8	1.08	5	18	9	06	3
NY NEW YORK CENTRAL PARK	30	5801-04	40-47	73-58	130	01/1836	0	099	3	01/1870	0	001	2	03	2	1.06	4	20	9	10	5
NY NORWICH	30	6085-02	42-32	75-32	1020	09/1906	8	097	5	09/1906	7	025	9	09	8	1.09	6	16	8	12	6
NY OGDENBURG 4NE	30	6164-08	44-44	75-26	280	01/1838	0	067	9	10/1883	1	012	6	04	3	1.07	5	12	6	08	4
NY ONEONTA STATE UNIV	30	6232-02	42-28	75-04	1400	09/1894	6	095	6	09/1894	4	015	7	04	3	1.06	4	16	8	04	2
NY OSWEGO	30	6314-09	43-28	76-30	350	01/1844	0	095	6	01/1871	0	003	3	04	3	1.06	4	06	3	06	3
NY PENN YAN 8W	30	6517-10	42-40	77-11	997	01/1829	0	080	9	01/1875	0	035	9	11	9	1.12	7	10	5	04	2
NY PLATTSBURGH AFB	30	6659-07	44-39	73-28	165	01/1840	0	068	9	09/1876	0	037	9	03	2	1.10	6	06	3	12	6
NY PORT JERVIS	30	6774-02	41-23	74-41	470	01/1880	2	094	6	01/1880	0	013	7	04	3	1.06	4	02	1	16	8
NY POUGHKEEPSIE FAA AP	30	6820-05	41-38	73-53	155	01/1830	0	052	9	06/1933	9	010	6	04	3	1.02	1	12	6	14	7
NY ROCHESTER AIRPORT	30	7167-09	43-07	77-40	547	01/1829	0	099	3	01/1872	0	000	1	06	5	1.06	4	16	8	08	4
NY SARATOGA SPRINGS 4SW	30	7484-05	43-02	73-49	310	05/1903	7	099	3	05/1903	6	014	7	06	5	1.07	5	00	0	10	5
NY SCARSDALE	30	7497-04	40-59	73-48	199	01/1904	8	098	4	01/1904	6	002	3	03	2	1.06	4	08	4	08	4
NY SCHENECTADY	30	7513-05	42-50	73-55	220	01/1829	0	037	9	04/1896	5	040	9	04	3	1.10	6	08	4	02	1
NY SETAUKET STRONG	30	7633-04	40-58	73-06	40	08/1885	3	099	3	08/1885	1	000	1	01	0	1.03	1	14	7	06	3
NY SOUTH WALES EMERY PARK	30	8058-09	42-43	78-36	1090	10/1931	9	094	6	10/1931	9	010	6	03	2	1.02	1	10	5	10	5
NY STILLWATER RESERVOIR	30	8248-03	43-53	75-02	1690	05/1921	9	096	6	05/1921	8	003	3	01	0	1.02	1	20	9	20	9
NY SYRACUSE WSO AP	30	8383-10	43-07	76-07	421	01/1843	0	061	9	08/1884	1	020	8	08	7	1.12	7	02	1	04	2
NY TUPPER LAKE SUNMOUNT	30	8631-03	44-14	74-26	1680	06/1899	7	085	8	06/1899	5	020	8	03	2	1.05	3	08	4	06	3
NY UTICA 3W	30	8739-06	43-06	75-17	500	01/1826	0	066	9	08/1884	1	031	9	09	8	1.09	6	10	5	18	9
NY WALDEN	30	8906-05	41-33	74-10	380	01/1922	9	099	3	01/1922	8	004	3	03	2	1.04	2	18	9	20	9
NY WANAKENA RANGER SCHOOL	30	8944-03	44-09	74-54	1510	06/1910	9	098	4	06/1910	8	004	3	01	0	1.00	0	02	1	10	5
NY WATERTOWN	30	9000-09	43-58	75-52	497	01/1856	0	073	9	06/1890	3	003	3	04	3	1.07	5	16	8	12	6
NY WEST POINT	30	9292-05	41-23	73-58	320	04/1836	0	090	7	09/1876	0	009	6	03	2	1.04	2	10	5	10	5

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NC ALBEMARLE	31	0090-05	35-22	80-11	610	07/1911	9	099	3	07/1911	8	017	8	07	6	1.09	6	14	7	08	4
NC BANNER ELK	31	0506-02	36-10	81-52	3750	09/1907	8	098	4	09/1907	7	005	4	04	3	1.04	2	18	9	02	1
NC CHAPEL HILL 2W	31	1677-03	35-55	79-06	500	04/1856	0	081	9	01/1894	4	017	8	04	3	1.05	3	02	1	12	6
NC EDENTON	31	2635-08	36-03	76-37	20	01/1896	6	099	3	01/1896	5	005	4	03	2	1.06	4	16	8	06	3
NC ELIZABETH CITY	31	2719-08	36-19	76-12	8	04/1911	9	097	5	04/1911	8	002	3	04	3	1.04	2	08	4	06	3
NC FAYETTEVILLE	31	3017-06	35-04	78-52	96	02/1871	1	089	8	01/1889	2	010	6	07	6	1.07	5	14	7	10	5
NC GOLDSBORO 1SSW	31	3510-07	35-21	78-01	82	03/1860	0	088	8	01/1896	5	001	2	02	1	1.03	1	00	0	04	2
NC HATTERAS	31	3897-08	35-13	75-41	5	09/1874	1	099	3	09/1874	0	000	1	07	6	UNAD	9	18	9	14	7
NC HENDERSON 2NNW	31	3969-03	36-22	78-25	480	06/1893	5	099	3	06/1893	4	016	7	09	8	1.07	5	08	4	06	3
NC HENDERSONVILLE 1NE	31	3976-01	35-20	82-27	2160	10/1890	4	091	7	10/1890	3	010	6	03	2	1.07	5	08	4	16	8
NC HIGHLANDS	31	4055-01	35-03	83-11	3840	04/1878	2	087	8	01/1894	4	010	6	05	4	1.07	5	18	9	18	9
NC KINSTON 5SE	31	4684-07	35-13	77-32	55	09/1899	7	092	7	09/1899	6	013	7	07	6	1.07	5	16	8	16	8
NC LENOIR	31	4938-02	35-55	81-32	1200	08/1871	1	099	3	01/1872	0	004	3	07	6	1.06	4	02	1	04	2
NC LOUISBURG	31	5123-03	36-06	78-19	260	01/1891	5	099	3	01/1891	3	006	4	08	7	1.06	4	14	7	06	3
NC LUMBERTON 6NW	31	5177-06	34-42	79-04	130	04/1882	2	096	6	01/1963	9	000	1	00	0	0.99	0	06	3	06	3
NC MARION	31	5340-01	35-41	82-00	1425	04/1888	4	092	7	04/1888	2	013	7	06	5	1.07	5	06	3	12	6
NC MARSHALL	31	5356-01	35-48	82-41	2050	01/1899	7	096	6	01/1899	5	019	8	05	4	1.07	5	10	5	14	7
NC MONROE	31	5771-05	34-58	80-30	586	01/1888	3	093	7	01/1888	2	014	7	04	3	1.06	4	10	5	00	0
NC MOREHEAD CITY 2WNW	31	5830-07	34-44	76-44	10	03/1896	6	091	7	03/1896	5	012	6	04	3	1.07	5	12	6	04	2
NC MORGANTON	31	5838-01	35-45	81-41	1160	02/1889	4	099	3	02/1889	2	004	3	04	3	1.07	5	06	3	20	9
NC MOUNT AIRY	31	5890-02	36-31	80-37	1030	04/1889	4	098	4	04/1889	2	002	3	04	3	1.03	1	06	3	16	8
NC NASHVILLE	31	6044-08	35-58	77-58	205	06/1904	8	099	3	06/1904	7	000	1	01	0	1.03	1	12	6	16	8
NC REIDSVILLE 2NW	31	7202-03	36-23	79-42	890	11/1901	7	099	3	11/1901	6	001	2	03	2	1.03	1	20	9	10	5
NC SALISBURY	31	7615-04	35-41	80-29	700	04/1882	2	097	5	03/1886	1	007	5	09	8	1.08	5	10	5	14	7
NC SMITHFIELD	31	7994-07	35-31	78-21	150	08/1889	4	097	5	12/1963	9	000	1	01	0	1.02	1	20	9	20	9
NC SOUTHPORT 5N	31	8113-06	34-00	78-01	20	01/1844	0	081	9	12/1962	9	005	4	01	0	1.01	0	08	4	08	4
NC STATESVILLE 2NNE	31	8292-04	35-49	80-53	950	06/1866	1	084	8	01/1902	6	001	2	03	2	1.02	1	04	2	12	6
NC TARBORO 1S	31	8500-08	35-53	77-32	35	08/1871	1	094	6	01/1890	3	004	3	05	4	1.07	5	16	8	18	9
NC WAYNESVILLE 1E	31	9147-01	35-29	82-58	2658	05/1894	6	092	7	05/1894	4	026	9	06	5	1.06	4	14	7	16	8

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ND BOTTINEAU	32	0941-02	48-50	100-27	1640	01/1892	5	099	3	01/1892	4	001	2	00	0	UNAD	9	20	9	20	9
ND CROSBY	32	1871-01	48-54	103-18	1952	04/1907	8	098	4	04/1907	7	001	2	11	9	UNAD	9	00	0	08	4
ND DICKINSON EXP STN	32	2188-07	46-53	102-48	2460	11/1891	5	099	3	01/1908	7	000	1	01	0	1.00	0	16	8	02	1
ND DUNN CENTER 2SW	32	2365-04	47-21	102-39	2232	01/1918	9	100	1	01/1918	8	009	6	07	6	1.06	4	06	3	10	5
ND FORT YATES	32	3207-08	46-06	100-38	1635	01/1882	2	083	9	01/1882	0	017	8	07	6	UNAD	9	20	9	10	5
ND FULLERTON 1ESE	32	3287-09	46-09	98-24	1435	01/1898	7	100	1	01/1898	5	006	4	04	3	1.06	4	10	5	06	3
ND GRAFTON	32	3594-03	48-25	97-25	827	01/1891	5	098	4	01/1967	9	000	1	00	0	0.99	0	20	9	20	9
ND GRAND FORKS UNIVERSITY	32	3621-03	47-56	97-05	830	06/1887	3	096	6	01/1967	9	001	2	00	0	0.99	0	02	1	10	5
ND HETTINGER	32	4178-07	45-59	102-39	2680	01/1907	8	098	4	01/1907	7	021	8	11	9	1.11	7	02	1	12	6
ND HILLSBORO 3N	32	4203-06	47-27	97-04	910	11/1905	8	098	4	01/1973	9	036	9	01	0	1.10	6	12	6	12	6
ND JAMESTOWN STATE HOSPITAL	32	4418-05	46-53	98-41	1467	07/1891	5	099	3	07/1891	3	001	2	01	0	UNAD	9	02	1	16	8
ND LANGDON EXPERIMENT STN	32	4958-03	48-45	98-20	1615	06/1896	6	091	7	06/1896	5	009	6	05	4	UNAD	9	14	7	02	1
ND LISBON	32	5220-09	46-26	97-40	1089	04/1897	6	096	6	04/1897	5	004	3	05	4	UNAD	9	08	4	08	4
ND MANDAN EXPERIMENT STN	32	5479-08	46-48	100-54	1750	08/1913	9	099	3	08/1913	8	000	1	00	0	0.99	0	16	8	10	5
ND MAYVILLE	32	5660-06	47-30	97-19	935	01/1893	5	093	7	01/1969	9	000	1	01	0	1.02	1	16	8	04	2
ND MOTT	32	6155-07	46-22	102-18	2530	07/1907	8	099	3	01/1950	9	012	6	02	1	1.04	2	02	1	02	1
ND NAPOLEON	32	6255-09	46-30	99-46	1980	05/1889	4	099	3	05/1889	2	000	1	06	5	UNAD	9	02	1	02	1
ND NEW ENGLAND	32	6315-07	46-33	102-52	2639	07/1888	4	092	7	01/1930	9	007	5	03	2	1.02	1	02	1	02	1
ND PEMBINA	32	6947-03	48-58	97-14	790	08/1871	1	094	6	08/1871	0	006	4	12	9	UNAD	9	10	5	06	3
ND RICHARDTON ABBEY	32	7530-07	46-53	102-19	2470	03/1916	9	099	3	03/1916	8	009	6	03	2	1.06	4	10	5	02	1
ND STEELE	32	8366-05	46-52	99-54	1865	04/1889	4	093	7	04/1889	2	006	4	11	9	UNAD	9	18	9	06	3
ND TOWNER 2NE	32	8792-02	48-21	100-24	1480	01/1896	6	090	7	01/1896	5	010	6	07	6	UNAD	9	08	4	06	3
ND WAHPETON 3N	32	9100-09	46-19	96-36	956	07/1889	4	097	5	07/1889	3	011	6	06	5	1.10	6	08	4	06	3
ND WILLOW CITY	32	9445-02	48-39	100-18	1460	06/1891	5	099	3	06/1891	3	000	1	07	6	UNAD	9	16	8	02	1

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
OH BUCYRUS	33	1072-02	40-49	82-58	955	04/1890	4	094	6	04/1890	3	012	6	06	5	1.07	5	10	5	14	7
OH CADIZ	33	1152-07	40-16	81-00	1260	09/1903	7	097	5	09/1903	6	010	6	04	3	1.05	3	06	3	20	9
OH CHIPPEWA LAKE	33	1541-03	41-04	81-54	1060	03/1857	0	075	9	02/1884	1	011	6	03	2	1.04	2	12	6	12	6
OH CIRCLEVILLE	33	1592-05	39-37	82-57	670	09/1887	3	097	5	09/1887	2	010	6	10	8	1.08	5	10	5	20	9
OH COSHOCTON WPC	33	1890-06	40-15	81-52	760	10/1908	8	098	4	10/1908	7	010	6	06	5	1.05	3	06	3	16	8
OH DELAWARE	33	2119-05	40-17	83-04	860	02/1896	6	100	1	02/1896	5	012	6	11	9	1.08	5	00	0	04	2
OH FINDLAY SEWAGE PLANT	33	2791-01	41-03	83-40	768	01/1886	3	099	3	01/1886	1	007	5	09	8	1.07	5	08	4	08	4
OH GREENVILLE WATER PLANT	33	3375-04	40-06	84-39	1024	02/1886	3	100	1	02/1886	1	009	6	06	5	1.05	3	18	9	18	9
OH HILLSBORO	33	3758-08	39-08	83-37	1100	04/1855	0	082	9	02/1887	2	023	9	15	9	1.11	7	12	6	14	7
OH HIRAM	33	3780-03	41-18	81-09	1230	09/1855	0	080	9	06/1883	1	004	3	05	4	1.07	5	10	5	06	3
OH IRONTON 1NE	33	3975-09	38-32	82-40	670	11/1882	2	098	4	11/1882	1	008	5	06	5	1.05	3	18	9	06	3
OH KENTON	33	4189-04	40-39	83-36	995	04/1862	0	087	8	01/1890	3	016	7	10	8	1.09	6	18	9	00	0
OH MCCONNELSVILLE LOCK 7	33	5041-10	39-39	81-51	660	04/1884	2	099	3	04/1884	1	008	5	06	5	1.05	3	02	1	02	1
OH MILLERSBURG 1W	33	5297-06	40-33	81-56	900	12/1916	9	097	5	12/1916	8	020	8	07	6	1.06	4	20	9	20	9
OH MILLPORT 2NW	33	5315-07	40-43	80-54	1145	08/1892	5	099	3	08/1892	4	001	2	04	3	1.04	2	10	5	08	4
OH NAPOLEON	33	5669-01	41-22	84-09	683	08/1885	3	098	4	08/1885	1	007	5	06	5	1.04	2	06	3	04	2
OH NORWALK	33	6118-02	41-16	82-37	670	06/1861	0	080	9	06/1894	4	006	4	03	2	1.04	2	14	7	14	7
OH OBERLIN	33	6196-02	41-16	82-13	816	01/1854	0	082	9	11/1882	1	014	7	08	7	1.06	4	16	8	08	4
OH PHILO 3SW	33	6600-10	39-50	81-55	1020	06/1895	6	099	3	06/1895	4	000	1	00	0	0.99	0	16	8	04	2
OH PORTSMOUTH	33	6781-09	38-45	82-53	540	01/1830	0	099	3	01/1859	0	005	4	06	5	1.06	4	18	9	18	9
OH TIFFIN	33	8313-02	41-07	83-11	738	04/1873	1	091	7	01/1878	0	014	7	11	9	1.06	4	14	7	14	7
OH UPPER SANDUSKY	33	8534-02	40-50	83-17	854	11/1882	2	098	4	11/1882	1	008	5	05	4	1.04	2	12	6	04	2
OH URBANA SEWAGE PLANT	33	8552-04	40-06	83-47	1000	01/1852	0	088	8	01/1896	5	000	1	05	4	1.06	4	00	0	18	9
OH WARREN 3S	33	8769-03	41-12	80-49	900	01/1882	2	096	6	02/1884	1	007	5	04	3	1.05	3	02	1	02	1
OH WAUSEON WATER PLANT	33	8822-01	41-31	84-09	750	03/1871	1	099	3	01/1875	0	005	4	06	5	1.07	5	02	1	02	1
OH WAVERLY	33	8830-09	39-07	82-59	560	01/1883	2	098	4	04/1884	1	008	5	07	6	1.06	4	10	5	16	8
OH WOOSTER EXP STN	33	9312-06	40-47	81-55	1020	09/1868	1	090	7	11/1882	1	007	5	09	8	1.07	5	16	8	00	0

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
OK ADA	34	0017-08	34-47	96-41	1015	02/1907	8	098	4	02/1907	7	021	8	05	4	1.06	4	10	5	06	3
OK ALTUS IRRIGATION RES STN	34	0179-07	34-35	99-20	1380	04/1913	9	099	3	01/1968	9	000	1	00	0	0.99	0	20	9	20	9
OK ANTLERS	34	0256-09	34-15	95-38	520	12/1917	9	095	6	01/1960	9	039	9	04	3	1.12	7	02	1	02	1
OK ARDMORE	34	0292-08	34-12	97-09	860	07/1901	7	098	4	07/1901	6	017	8	08	7	1.07	5	02	1	06	3
OK BARTLESVILLE 2W	34	0548-03	36-45	96-00	715	11/1907	8	098	4	11/1907	7	015	7	07	6	1.08	5	10	5	08	4
OK BEAVER	34	0593-01	36-48	100-32	2475	02/1896	6	097	5	01/1959	9	036	9	05	4	1.19	7	10	5	10	5
OK BOISE CITY 2E	34	0908-01	36-44	102-29	4145	09/1925	9	097	5	09/1925	9	002	3	10	8	UNAD	9	08	4	04	2
OK BUFFALO	34	1243-01	36-50	99-37	1795	03/1907	8	092	7	03/1907	7	015	7	07	6	1.12	7	20	9	16	8
OK CARNEGIE 2ENE	34	1504-07	35-07	98-34	1290	05/1914	9	099	3	01/1964	9	012	6	01	0	1.02	1	10	5	10	5
OK CHEROKEE POWER PLANT	34	1724-02	36-46	98-21	1180	06/1915	9	095	6	01/1960	9	001	2	01	0	1.01	0	06	3	06	3
OK CLAREMORE 2ENE	34	1828-03	36-19	95-35	588	05/1900	7	084	8	05/1900	6	037	9	11	9	1.14	7	00	0	04	2
OK DURANT-USDA	34	2678-08	34-01	96-23	660	09/1901	7	098	4	09/1901	6	006	4	08	7	1.12	7	08	4	08	4
OK ENID	34	2912-02	36-25	97-52	1245	02/1894	6	091	7	02/1899	5	021	8	14	9	1.14	7	00	0	04	2
OK ERICK 4E	34	2944-04	35-12	99-48	1985	09/1904	8	097	5	01/1952	9	000	1	02	1	1.05	3	20	9	20	9
OK GEARY	34	3497-04	35-38	98-19	1595	12/1911	9	098	4	01/1971	9	033	9	01	0	1.09	6	18	9	18	9
OK GOODWELL RESEARCH STATION	34	3628-01	36-36	101-37	3310	01/1910	8	100	1	01/1910	8	000	1	04	3	UNAD	9	14	7	08	4
OK GUTHRIE	34	3821-05	35-53	97-27	1030	12/1892	5	096	6	01/1967	9	049	9	06	5	1.17	7	02	1	02	1
OK HAMMON 1NNE	34	3871-04	35-38	99-22	1775	08/1913	9	098	4	08/1913	8	004	3	04	3	1.08	5	06	3	02	1
OK HENNESSEY 2SE	34	4055-05	36-05	97-52	1150	05/1895	6	096	6	01/1904	6	019	8	06	5	1.13	7	02	1	04	2
OK HOBART FAA AP	34	4204-07	35-00	99-03	1552	05/1903	7	099	3	01/1905	7	021	8	06	5	1.09	6	08	4	00	0
OK HOLDENVILLE	34	4235-06	35-05	96-24	860	04/1901	7	099	3	04/1901	6	012	6	07	6	1.11	7	04	2	08	4
OK HOOKER	34	4298-01	36-52	101-13	2995	06/1906	8	099	3	06/1906	7	020	8	13	9	1.31	7	12	6	14	7
OK HUGO	34	4384-09	34-00	95-31	570	01/1913	9	099	3	01/1913	8	002	3	05	4	1.05	3	02	1	10	5
OK JEFFERSON	34	4573-02	36-43	97-48	1045	01/1894	6	098	4	05/1897	5	029	9	15	9	1.18	7	16	8	14	7
OK KENTON	34	4766-01	36-54	102-58	4350	11/1900	7	097	5	11/1900	6	017	8	10	8	1.11	7	20	9	04	2
OK KINGFISHER 2SE	34	4861-05	35-51	97-54	1100	04/1897	6	100	1	01/1964	9	020	8	03	2	1.09	6	06	3	06	3
OK LAWTON	34	5063-07	34-37	98-27	1150	04/1912	9	099	3	01/1949	9	004	3	03	2	1.14	7	08	4	08	4
OK MANGUM RESEARCH STATION	34	5509-07	34-50	99-26	1520	07/1892	5	097	5	01/1957	9	000	1	01	0	1.00	0	12	6	12	6
OK MEEKER 4W	34	5779-05	35-30	96-59	925	01/1894	6	096	6	01/1968	9	062	9	04	3	1.27	7	18	9	18	9
OK MIAMI	34	5855-03	36-53	94-53	805	12/1917	9	098	4	12/1917	8	016	7	11	9	1.06	4	04	2	00	0
OK MUSKOGEE	34	6130-06	35-46	95-20	583	04/1899	7	097	5	04/1899	5	030	9	15	9	1.13	7	04	2	16	8
OK MUTUAL	34	6139-02	36-14	99-10	1865	10/1907	8	098	4	01/1956	9	000	1	02	1	1.03	1	04	2	04	2

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OK NEWKIRK	34	6278-02	36-53	97-03	1150	09/1897	7	095	6	01/1955	9	034	9	09	8	1.12	7	06	3	06	3
OK OKEENE	34	6629-04	36-07	98-19	1200	04/1903	7	097	5	04/1903	6	017	8	08	7	1.09	6	08	4	12	6
OK OKEMAH	34	6638-05	35-26	96-18	935	05/1912	9	099	3	01/1920	8	016	7	05	4	1.08	5	18	9	12	6
OK OKMULGEE WATERWORKS	34	6670-06	35-37	96-01	647	09/1903	7	097	5	01/1978	9	002	3	00	0	1.00	0	00	0	00	0
OK PAULS VALLEY 3WSW	34	6926-08	34-44	97-16	950	07/1892	5	088	8	12/1898	5	014	7	10	8	1.11	7	08	4	12	6
OK PAWHUSKA	34	6935-03	36-40	96-21	835	01/1898	7	097	5	01/1898	5	024	9	10	8	1.12	7	00	0	04	2
OK PERRY	34	7012-02	36-17	97-18	1025	11/1898	7	094	6	11/1898	5	021	8	15	9	1.13	7	00	0	10	5
OK POTEAU	34	7246-09	35-03	94-38	670	09/1917	9	098	4	09/1917	8	013	7	05	4	1.06	4	04	2	04	2
OK STILLWATER 2W	34	8501-05	36-07	97-05	895	01/1893	5	099	3	01/1894	4	008	5	05	4	1.11	7	12	6	02	1
OK TAHLEQUAH	34	8677-06	35-56	94-58	850	04/1894	6	087	8	05/1895	4	051	9	15	9	1.22	7	04	2	12	6
OK WAURIKA	34	9395-08	34-10	98-00	875	01/1910	8	099	3	01/1910	8	021	8	10	8	1.16	7	10	5	02	1
OK WEATHERFORD	34	9422-04	35-32	98-42	1670	07/1901	7	098	4	01/1972	9	026	9	01	0	1.07	5	06	3	06	3
OK WEBBERS FALLS 5WSW	34	9445-06	35-29	95-12	550	02/1900	7	097	5	02/1900	6	008	5	07	6	1.11	7	18	9	18	9

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STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
OR ASHLAND	35	0304-03	42-13	122-43	1750	01/1879	2	100	1	01/1879	0	000	1	09	8	UNAD	9	02	1	20	9
OR ASTORIA WSO AP	35	0328-01	46-09	123-53	8	08/1850	0	098	4	01/1911	8	023	9	14	9	1.07	5	12	6	12	6
OR BAKER FAA AP	35	0412-08	44-50	117-49	3368	07/1889	4	099	3	01/1912	8	007	5	03	2	1.05	3	14	7	16	8
OR BEND	35	0694-07	44-04	121-19	3650	01/1902	7	100	1	01/1902	6	000	1	10	8	UNAD	9	02	1	18	9
OR BROOKINGS	35	1055-01	42-03	124-17	70	04/1912	9	100	1	04/1912	8	004	3	06	5	1.09	6	08	4	18	9
OR CASCADIA	35	1433-02	44-24	122-29	860	01/1908	8	099	3	01/1908	7	014	7	15	9	1.08	5	08	4	12	6
OR CONDON	35	1765-06	45-14	120-11	2830	08/1894	6	087	8	05/1898	5	043	9	21	9	1.17	7	18	9	14	7
OR CORVALLIS STATE UNIV	35	1862-02	44-38	123-12	225	01/1889	4	100	1	01/1889	2	006	4	08	7	1.04	2	20	9	06	3
OR COTTAGE GROVE 1S	35	1897-02	43-47	123-04	650	08/1916	9	099	3	08/1916	8	002	3	01	0	0.99	0	14	7	12	6
OR CRATER LAKE	35	1946-05	42-54	122-08	6475	10/1919	9	089	8	10/1919	8	024	9	08	7	1.10	6	20	9	16	8
OR DANNER	35	2135-09	42-56	117-20	4225	08/1929	9	099	3	08/1929	9	001	2	02	1	1.01	0	14	7	18	9
OR DRAIN	35	2406-03	43-40	123-19	292	01/1903	7	093	7	01/1903	6	008	5	04	3	1.04	2	16	8	16	8
OR DUFUR	35	2440-06	45-27	121-08	1330	01/1909	8	100	1	01/1909	7	000	1	05	4	UNAD	9	08	4	16	8
OR FOREST GROVE	35	2997-02	45-32	123-06	180	01/1890	4	093	7	12/1899	6	025	9	05	4	1.07	5	18	9	16	8
OR FREMONT	35	3095-05	43-20	121-10	4512	10/1909	8	096	6	10/1909	7	003	3	03	2	UNAD	9	18	9	14	7
OR GRANTS PASS	35	3445-03	42-25	123-20	960	01/1889	4	099	3	01/1911	8	013	7	06	5	1.08	5	10	5	04	2
OR HEADWORKS PORTLAND WTRB	35	3770-02	45-27	122-09	748	01/1899	7	100	1	01/1899	5	000	1	03	2	1.02	1	18	9	10	5
OR HEPPNER	35	3827-06	45-22	119-33	1885	06/1889	4	099	3	03/1903	6	016	7	08	7	1.06	4	04	2	14	7
OR HERMISTON 2S	35	3847-06	45-49	119-17	624	07/1906	8	099	3	07/1906	7	000	1	09	8	UNAD	9	08	4	18	9
OR HOOD RIVER EXPERIMENT STN	35	4003-06	45-41	121-31	500	01/1884	2	100	1	12/1912	8	010	6	05	4	1.06	4	20	9	02	1
OR KLAMATH FALLS 2SSW	35	4506-07	42-12	121-47	4098	01/1884	2	095	6	01/1884	1	005	4	11	9	UNAD	9	14	7	20	9
OR LAKEVIEW 2NNW	35	4670-07	42-13	120-22	4778	01/1884	2	099	3	01/1884	1	002	3	10	8	UNAD	9	02	1	10	5
OR MALHEUR REFUGE HDQ	35	5162-07	43-17	118-50	4109	07/1937	9	098	4	07/1937	9	006	4	02	1	1.04	2	16	8	04	2
OR MCKENZIE BRIDGE RS	35	5362-04	44-11	122-07	1478	02/1902	7	078	9	01/1936	9	002	3	02	1	1.02	1	02	1	00	0
OR MCMINNVILLE	35	5384-02	45-14	123-11	148	01/1888	3	099	3	01/1888	2	012	6	12	9	1.08	5	08	4	14	7
OR MILTON-FREEWATER	35	5593-06	45-57	118-25	970	01/1914	9	100	1	01/1914	8	013	7	06	5	1.05	3	08	4	12	6
OR MORO	35	5734-06	45-29	120-43	1870	11/1897	7	086	8	05/1898	5	014	7	04	3	1.09	6	02	1	20	9
OR NEWPORT	35	6032-01	44-35	124-03	143	11/1891	5	097	5	11/1891	3	015	7	09	8	1.08	5	06	3	12	6
OR NORTH BEND	35	6073-01	43-25	124-15	6	01/1902	7	100	1	07/1903	6	019	8	10	8	1.10	6	04	2	06	3
OR PAISLEY	35	6426-07	42-42	120-32	4360	02/1892	5	077	9	04/1894	4	021	8	10	8	UNAD	9	10	5	16	8
OR PILOT ROCK 1SE	35	6634-06	45-29	118-49	1720	01/1908	8	100	1	01/1908	7	017	8	10	8	1.05	3	18	9	04	2
OR PRINEVILLE 4NW	35	6883-07	44-21	120-54	2840	01/1897	6	100	1	01/1897	5	000	1	08	7	UNAD	9	14	7	14	7

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
OR PROSPECT 2SW	35	6907-03	42-44	122-31	2482	01/1905	8	099	3	01/1905	7	018	8	07	6	1.05	3	10	5	14	7
OR RIDDLE	35	7169-03	42-57	123-21	680	12/1891	5	089	8	01/1914	8	012	6	09	8	1.08	5	10	5	18	9
OR ROSEBURG KQEN	35	7331-03	43-12	123-21	465	07/1877	1	099	3	01/1906	7	001	2	04	3	1.03	1	02	1	06	3
OR ROUND GROVE	35	7354-05	42-20	120-53	4888	03/1920	9	096	6	03/1920	8	019	8	03	2	1.07	5	12	6	14	7
OR THREE LYNX	35	8466-04	45-07	122-04	1120	10/1923	9	099	3	10/1923	9	000	1	00	0	0.99	0	14	7	16	8
OR TILLAMOOK 1W	35	8494-01	45-27	123-52	10	01/1889	4	081	9	09/1891	3	038	9	20	9	1.15	7	02	1	06	3
OR UNION EXP STN	35	8746-08	45-13	117-53	2765	01/1911	9	100	1	01/1911	8	002	3	03	2	1.03	1	00	0	10	5
OR VALE	35	8797-09	43-59	117-15	2240	01/1891	5	100	1	01/1891	3	000	1	13	9	UNAD	9	18	9	16	8
OR WALLOWA	35	8997-08	45-34	117-32	2923	01/1903	7	100	1	01/1903	6	018	8	13	9	1.08	5	10	5	16	8

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSPULL	R
PA ALLENTOWN WSO AP	36	0106-02	40-39	75-26	387	01/1912	9	100	1	01/1912	8	000	1	03	2	1.05	3	16	8	18	9
PA CHAMBERSBURG 1ESE	36	1354-04	39-56	77-38	640	02/1860	0	071	9	11/1892	4	022	9	07	6	1.08	5	04	2	02	1
PA EISENHOWER NATL HIST SITE	36	2537-04	39-48	77-16	520	01/1839	0	076	9	01/1904	6	004	3	04	3	1.05	3	14	7	12	6
PA ERIE WSO AP	36	2682-10	42-05	80-11	731	06/1873	1	100	1	01/1889	2	005	4	06	5	1.10	6	16	8	12	6
PA FRANKLIN	36	3028-10	41-23	79-49	990	09/1868	1	094	6	01/1898	5	002	3	05	4	1.09	6	16	8	16	8
PA FREELAND	36	3056-01	41-01	75-54	1900	07/1914	9	097	5	07/1914	8	002	3	02	1	1.01	0	10	5	12	6
PA GREENVILLE 2NE	36	3526-10	41-25	80-22	1130	03/1871	1	078	9	06/1898	5	014	7	11	9	1.08	5	20	9	10	5
PA HARRISBURG FAA	36	3699-04	40-13	76-51	338	08/1840	0	083	9	01/1891	3	000	1	07	6	1.07	5	04	2	12	6
PA JOHNSTOWN	36	4385-08	40-20	78-55	1214	02/1868	1	088	8	11/1884	1	004	3	05	4	1.04	2	18	9	20	9
PA MONTROSE	36	5915-06	41-50	75-52	1560	09/1903	7	097	5	09/1903	6	009	6	05	4	1.07	5	02	1	20	9
PA NEW CASTLE 1N	36	6233-09	41-01	80-22	825	01/1870	1	084	8	09/1893	4	013	7	03	2	1.06	4	00	0	12	6
PA PALMERTON	36	6689-02	40-48	75-37	410	04/1917	9	099	3	04/1917	8	004	3	02	1	1.02	1	16	8	00	0
PA READING 3N	36	7322-03	40-22	75-56	270	04/1839	0	079	9	04/1862	0	008	5	06	5	1.06	4	00	0	16	8
PA RIDGWAY	36	7477-07	41-25	78-45	1360	01/1891	5	084	8	09/1927	9	000	1	03	2	1.03	1	04	2	10	5
PA SELINSGROVE 2S	36	7931-05	40-46	76-52	420	08/1888	4	098	4	08/1888	2	009	6	10	8	1.12	7	12	6	18	9
PA STATE COLLEGE	36	8449-07	40-48	77-52	1170	09/1882	2	097	5	09/1882	1	003	3	05	4	1.05	3	00	0	00	0
PA STROUDSBURG	36	8596-01	41-00	75-11	480	01/1911	9	091	7	01/1911	8	018	8	07	6	1.06	4	04	2	00	0
PA TOWANDA 1ESE	36	8905-06	41-45	76-25	745	10/1894	6	099	3	10/1894	4	000	1	02	1	1.05	3	18	9	06	3
PA UNIONTOWN 1NE	36	9050-09	39-55	79-43	956	01/1888	3	098	4	01/1888	2	002	3	03	2	1.04	2	10	5	04	2
PA WARREN	36	9298-10	41-51	79-09	1210	01/1885	3	100	1	01/1885	1	004	3	08	7	1.11	7	14	7	18	9
PA WELLSBORO 3S	36	9408-06	41-42	77-16	1860	04/1879	2	100	1	01/1907	7	000	1	04	3	1.07	5	20	9	20	9
PA WEST CHESTER 1W	36	9464-03	39-58	75-38	450	07/1817	0	080	9	01/1860	0	001	2	04	3	1.08	5	02	1	04	2
PA WILLIAMSPORT WSO AP	36	9728-05	41-15	76-55	527	01/1873	1	085	8	09/1877	0	022	9	08	7	1.11	7	18	9	02	1
PA YORK PUMP STATION 3SSW	36	9933-04	39-55	76-45	390	09/1886	3	087	8	09/1886	1	013	7	02	1	1.02	1	12	6	08	4

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
RI BLOCK ISLAND WSO AP	37	0896-01	41-10	71-35	110	09/1880	2	099	3	09/1880	0	005	4	05	4	1.04	2	20	9	14	7
RI KINGSTON	37	4266-01	41-29	71-32	100	04/1889	4	100	1	04/1889	2	000	1	02	1	1.03	1	14	7	08	4
RI PROVIDENCE WSO AP	37	6698-01	41-44	71-26	51	12/1831	0	099	3	02/1843	0	005	4	05	4	1.05	3	16	8	18	9

PRECIPITATION

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SC AIKEN 4NE	38	0074-05	33-36	81-41	400	05/1854	0	088	8	01/1903	6	016	7	06	5	1.03	1	02	1	12	6
SC ANDERSON	38	0165-02	34-32	82-40	800	06/1884	3	094	6	05/1887	2	013	7	06	5	1.06	4	14	7	16	8
SC BEAUFORT 7SW	38	0559-07	32-23	80-46	20	04/1862	0	081	9	01/1927	9	004	3	07	6	1.05	3	06	3	06	3
SC BLACKVILLE 3W	38	0764-07	33-22	81-19	324	06/1884	3	095	6	01/1891	3	018	8	13	9	1.06	4	12	6	18	9
SC CALHOUN FALLS	38	1277-05	34-05	82-35	530	01/1892	5	098	4	01/1892	4	016	7	10	8	1.06	4	10	5	12	6
SC CAMDEN 3W	38	1310-03	34-15	80-39	140	05/1849	0	099	3	01/1892	4	000	1	06	5	1.05	3	02	1	02	1
SC CHARLESTON	38	1549-07	32-47	79-56	10	01/1785	0	082	9	01/1898	5	000	1	01	0	1.02	1	16	8	10	5
SC CHERAW	38	1588-04	34-42	79-53	140	04/1882	2	097	5	01/1887	1	014	7	10	8	1.07	5	06	3	06	3
SC CLEMSON UNIVERSITY	38	1770-02	34-41	82-49	819	01/1892	5	100	1	01/1892	4	000	1	04	3	1.03	1	14	7	04	2
SC COLUMBIA U OF SC	38	1944-06	33-59	81-01	242	06/1872	1	098	4	01/1965	9	002	3	01	0	1.02	1	02	1	02	1
SC CONWAY	38	1997-04	33-50	79-03	20	02/1888	3	097	5	01/1891	3	003	3	06	5	1.05	3	08	4	12	6
SC DARLINGTON 1N	38	2260-04	34-19	79-53	160	09/1895	6	097	5	09/1895	5	005	4	06	5	1.04	2	00	0	02	1
SC GEORGETOWN 2E	38	3468-04	33-21	79-15	10	06/1893	5	092	7	06/1893	4	026	9	11	9	1.10	6	02	1	12	6
SC GREENVILLE-SPARTANBURG AP	38	3747-02	34-54	82-13	957	01/1878	2	100	1	03/1884	1	015	7	10	8	1.07	5	02	1	04	2
SC GREENWOOD 3NE	38	3754-05	34-13	82-07	615	06/1884	3	096	6	05/1887	2	018	8	11	9	1.08	5	10	5	08	4
SC KERSHAW	38	4690-03	34-33	80-35	530	05/1916	9	097	5	05/1916	8	019	8	10	8	1.07	5	12	6	02	1
SC KINGSTREE 1SE	38	4753-04	33-39	79-49	58	04/1882	2	095	6	01/1889	2	010	6	07	6	1.05	3	20	9	10	5
SC LAURENS	38	5017-02	34-30	82-02	589	09/1901	7	082	9	09/1901	6	024	9	08	7	1.10	6	02	1	10	5
SC LITTLE MOUNTAIN	38	5200-05	34-12	81-25	711	10/1893	5	099	3	10/1893	4	005	4	05	4	1.04	2	02	1	10	5
SC NEWBERRY	38	6209-05	34-17	81-37	476	05/1887	3	100	1	05/1887	2	001	2	05	4	1.05	3	10	5	02	1
SC ORANGEBURG 2	38	6527-06	33-30	80-52	160	10/1916	9	098	4	10/1916	8	013	7	09	8	1.07	5	16	8	00	0
SC SALUDA	38	7631-05	33-59	81-46	480	01/1902	7	098	4	01/1902	6	015	7	12	9	1.08	5	16	8	14	7
SC SANTUCK	38	7722-02	34-38	81-31	520	09/1893	5	099	3	09/1893	4	006	4	06	5	1.06	4	20	9	04	2
SC SUMMERVILLE	38	8426-07	33-00	80-11	60	07/1898	7	099	3	07/1898	5	013	7	08	7	1.06	4	08	4	04	2
SC SUMTER	38	8440-06	33-56	80-21	177	12/1901	7	069	9	12/1901	6	034	9	08	7	1.11	7	10	5	20	9
SC WALHALLA	38	8887-02	34-45	83-05	980	07/1889	4	086	8	12/1892	4	025	9	08	7	1.06	4	16	8	12	6
SC WINNSBORO	38	9327-03	34-22	81-05	560	01/1887	3	094	6	01/1887	1	012	6	08	7	1.06	4	08	4	14	7
SC WINTHROP COLLEGE	38	9350-03	34-56	81-02	690	01/1900	7	100	1	01/1900	6	001	2	04	3	1.04	2	02	1	10	5
SC YEMASSEE	38	9469-07	32-41	80-51	25	04/1882	2	088	8	01/1891	3	021	8	08	7	1.08	5	18	9	20	9

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SD ABERDEEN WSO AP	39	0020-03	45-27	98-26	1296	03/1890	4	100	1	03/1890	3	000	1	11	9	UNAD	9	08	4	20	9
SD ACADEMY	39	0043-08	43-28	99-05	1675	07/1898	7	099	3	07/1898	5	009	6	06	5	1.09	6	18	9	02	1
SD ALEXANDRIA	39	0128-09	43-39	97-47	1350	03/1882	2	091	7	12/1888	2	019	8	11	9	1.14	7	08	4	08	4
SD CANTON 4WNW	39	1392-09	43-18	96-40	1345	07/1889	4	090	7	07/1889	3	030	9	10	8	1.16	7	02	1	02	1
SD CLARK	39	1739-07	44-53	97-44	1780	07/1889	4	094	6	01/1965	9	000	1	00	0	0.99	0	06	3	06	3
SD COTTONWOOD 2E	39	1972-05	43-58	101-52	2414	07/1909	8	098	4	07/1909	7	002	3	02	1	UNAD	9	08	4	12	6
SD DUPREE	39	2429-01	45-03	101-36	2365	01/1922	9	099	3	01/1922	8	010	6	04	3	1.04	2	20	9	02	1
SD EUREKA	39	2797-02	45-47	99-38	1870	09/1897	7	088	8	09/1897	5	012	6	06	5	UNAD	9	12	6	20	9
SD FAULKTON	39	2927-02	45-02	99-08	1580	03/1892	5	097	5	03/1892	4	020	8	08	7	1.12	7	04	2	10	5
SD FORESTBURG 3NE	39	3029-07	44-02	98-04	1231	05/1891	5	100	1	05/1891	3	004	3	06	5	1.09	6	16	8	14	7
SD GANN VALLEY	39	3217-07	44-02	98-58	1750	04/1886	3	099	3	04/1886	1	014	7	10	8	1.15	7	14	7	12	6
SD HIGHMORE 1W	39	3832-06	44-31	99-28	1890	02/1887	3	094	6	09/1894	4	002	3	00	0	1.00	0	06	3	06	3
SD HOPEWELL 1SE	39	3987-06	44-30	100-52	1922	09/1909	8	088	8	01/1951	9	004	3	00	0	1.00	0	06	3	02	1
SD HOT SPRINGS	39	4007-04	43-26	103-28	3535	01/1897	6	092	7	01/1897	5	016	7	04	3	1.07	5	10	5	14	7
SD HOWARD	39	4037-07	44-01	97-31	1560	09/1890	4	097	5	05/1892	4	020	8	11	9	1.12	7	14	7	14	7
SD KENNEBEC	39	4516-06	43-55	99-52	1700	05/1892	5	098	4	05/1892	4	011	6	12	9	1.12	7	02	1	08	4
SD MELLETTE	39	5456-03	45-09	98-30	1290	05/1892	5	095	6	05/1892	4	021	8	10	8	1.12	7	08	4	02	1
SD MENNO	39	5481-09	43-14	97-35	1324	05/1896	6	099	3	05/1896	5	008	5	11	9	1.15	7	04	2	08	4
SD MILBANK 2SSW	39	5536-03	45-12	96-38	1156	12/1889	4	097	5	01/1964	9	033	9	01	0	1.08	5	02	1	02	1
SD MURDO	39	5891-06	43-53	100-43	2300	12/1907	8	096	6	12/1907	7	031	9	09	8	1.16	7	06	3	04	2
SD PIERRE FAA AP	39	6597-06	44-23	100-17	1726	04/1866	1	097	5	01/1892	4	002	3	06	5	1.07	5	20	9	20	9
SD RAPID CITY	39	6947-05	44-05	103-16	3370	01/1888	3	099	3	01/1898	5	005	4	04	3	1.06	4	06	3	06	3
SD VERMILLION 2SE	39	8622-09	42-45	96-55	1190	12/1883	2	087	8	12/1888	2	014	7	05	4	1.07	5	20	9	18	9
SD WATERTOWN FAA AP	39	8932-07	44-55	97-09	1746	11/1891	5	097	5	11/1891	3	017	8	13	9	1.13	7	16	8	12	6
SD WOOD	39	9442-08	43-30	100-29	2180	01/1913	9	099	3	01/1913	8	001	2	03	2	1.09	6	12	6	12	6

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TN CLARKSVILLE SEWAGE PLANT	40	1790-03	36-33	87-22	382	01/1854	0	094	6	01/1889	2	005	4	05	4	1.03	1	16	8	08	4
TN COPPERHILL	40	2024-01	35-00	84-23	1535	04/1914	9	099	3	04/1914	8	007	5	06	5	1.04	2	02	1	02	1
TN COVINGTON 1W	40	2108-04	35-34	89-40	310	03/1883	2	098	4	03/1884	1	002	3	03	2	1.04	2	04	2	06	3
TN CROSSVILLE EXPERIMENT STN	40	2202-02	36-01	85-08	1810	03/1912	9	098	4	03/1912	8	031	9	14	9	1.08	5	10	5	20	9
TN DICKSON	40	2489-03	36-04	87-23	780	06/1884	3	084	8	07/1887	2	033	9	12	9	1.10	6	20	9	02	1
TN DOVER 1W	40	2589-03	36-29	87-51	475	01/1898	7	097	5	01/1898	5	007	5	06	5	1.04	2	18	9	12	6
TN JACKSON EXPERIMENT STN	40	4561-04	35-37	88-50	400	04/1891	5	097	5	04/1891	3	005	4	05	4	1.07	5	06	3	10	5
TN LEWISBURG EXPERIMENT STN	40	5187-03	35-27	86-48	787	06/1888	4	092	7	05/1897	5	004	3	04	3	1.03	1	10	5	18	9
TN MCMINNVILLE	40	5882-02	35-41	85-48	940	08/1872	1	090	7	01/1903	6	005	4	06	5	1.02	1	08	4	08	4
TN MURFREESBORO 5N	40	6371-03	35-55	86-22	550	02/1882	2	100	1	02/1882	0	008	5	08	7	1.05	3	18	9	04	2
TN NEWPORT 1NW	40	6534-01	35-59	83-12	1036	03/1888	4	097	5	11/1889	3	013	7	06	5	1.05	3	16	8	02	1
TN ROGERSVILLE 1NE	40	7884-01	36-25	82-59	1355	05/1883	2	098	4	04/1884	1	003	3	05	4	1.03	1	20	9	18	9
TN TULLAHOMA	40	9155-02	35-21	86-12	1048	03/1889	4	095	6	03/1889	2	008	5	06	5	1.05	3	00	0	04	2
TN UNION CITY	40	9219-04	36-25	89-04	335	04/1884	2	087	8	04/1884	1	031	9	13	9	1.14	7	10	5	14	7
TN WAYNESBORO	40	9502-03	35-18	87-46	750	10/1884	3	098	4	10/1884	1	013	7	10	8	1.06	4	06	3	04	2

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TX ALBANY	41	0120-03	32-44	99-17	1440	01/1892	5	097	5	01/1892	4	003	3	10	8	UNAD	9	16	8	14	7
TX ALICE	41	0144-09	27-44	98-04	201	01/1893	5	082	9	01/1893	4	018	8	07	6	UNAD	9	08	4	14	7
TX ALPINE	41	0174-05	30-22	103-40	4480	03/1900	7	072	9	12/1906	7	023	9	08	7	UNAD	9	10	5	00	0
TX BALLINGER 1SW	41	0493-02	31-44	99-58	1575	07/1895	6	099	3	07/1895	5	001	2	05	4	UNAD	9	06	3	16	8
TX BALMORHEA	41	0498-05	30-59	103-45	3220	09/1923	9	099	3	09/1923	9	000	1	03	2	UNAD	9	06	3	06	3
TX BEEVILLE 5NE	41	0639-07	28-27	97-42	255	01/1895	6	100	1	01/1923	9	005	4	03	2	1.11	7	10	5	06	3
TX BLANCO	41	0832-06	30-06	98-25	1370	05/1896	6	099	3	01/1975	9	000	1	00	0	0.99	0	04	2	04	2
TX BOERNE	41	0902-06	29-48	98-43	1422	07/1877	1	087	8	01/1889	2	012	6	08	7	1.11	7	16	8	10	5
TX BRENHAM	41	1048-07	30-09	96-24	353	09/1885	3	098	4	01/1966	9	000	1	00	0	0.99	0	18	9	18	9
TX BROWNWOOD	41	1138-03	31-43	99-00	1385	12/1888	4	095	6	12/1888	2	004	3	07	6	UNAD	9	18	9	12	6
TX CLARKSVILLE 2NE	41	1772-04	33-38	95-02	435	01/1872	1	079	9	01/1890	3	022	9	05	4	1.11	7	06	3	08	4
TX CORPUS CHRISTI WSO AP	41	2015-07	27-46	97-30	41	02/1887	3	100	1	02/1887	2	000	1	06	5	UNAD	9	12	6	20	9
TX CORSICANA	41	2019-03	32-05	96-28	425	10/1874	1	096	6	01/1963	9	004	3	02	1	1.01	0	14	7	14	7
TX CROSBYTON	41	2121-01	33-39	101-15	3010	04/1886	3	099	3	01/1965	9	012	6	01	0	1.03	1	04	2	04	2
TX DANEVANG 1W	41	2266-08	29-03	96-14	70	03/1896	6	098	4	01/1961	9	015	7	02	1	1.03	1	08	4	08	4
TX DILLEY	41	2458-09	28-40	99-10	582	03/1910	9	099	3	03/1910	8	001	2	08	7	UNAD	9	04	2	14	7
TX DUBLIN	41	2598-03	32-06	98-20	1502	09/1895	6	094	6	01/1970	9	000	1	00	0	0.99	0	02	1	02	1
TX EAGLE PASS	41	2679-09	28-42	100-29	805	10/1849	0	086	8	02/1887	2	003	3	07	6	UNAD	9	10	5	08	4
TX EL PASO WSO AP	41	2797-05	31-48	106-24	3918	01/1878	2	100	1	01/1878	0	000	1	14	9	UNAD	9	18	9	08	4
TX ENCINAL	41	2906-09	28-02	99-22	588	10/1907	8	095	6	10/1907	7	004	3	07	6	UNAD	9	12	6	12	6
TX FALFURRIAS	41	3063-09	27-14	98-08	120	03/1907	8	098	4	03/1907	7	002	3	08	7	UNAD	9	08	4	04	2
TX FLATONIA	41	3183-07	29-40	97-07	520	01/1908	8	099	3	01/1908	7	007	5	09	8	1.16	7	12	6	14	7
TX FORT STOCKTON	41	3280-05	30-53	102-52	2980	10/1859	0	084	8	01/1889	2	009	6	05	4	UNAD	9	00	0	14	7
TX GAINESVILLE	41	3415-03	33-38	97-08	760	05/1889	4	097	5	01/1890	3	008	5	05	4	1.12	7	02	1	04	2
TX GREENVILLE	41	3734-03	33-12	96-13	610	03/1900	7	098	4	03/1900	6	003	3	03	2	1.05	3	10	5	04	2
TX HALLETTSVILLE 3S	41	3873-07	29-24	96-57	261	10/1891	5	097	5	10/1891	3	017	8	07	6	1.14	7	02	1	06	3
TX HASKELL	41	3992-02	33-10	99-44	1605	04/1890	4	096	6	01/1964	9	000	1	00	0	0.99	0	10	5	10	5
TX LAMPASAS	41	5018-06	31-03	98-11	1024	04/1888	4	096	6	02/1890	3	010	6	05	4	1.08	5	06	3	02	1
TX LIBERTY	41	5196-08	30-03	94-48	35	10/1903	7	099	3	10/1903	6	011	6	07	6	1.09	6	16	8	14	7
TX LLANO	41	5272-06	30-45	98-41	1040	08/1891	5	098	4	08/1891	3	001	2	07	6	UNAD	9	08	4	16	8
TX LULING	41	5429-07	29-40	97-39	398	04/1882	2	095	6	01/1889	2	007	5	10	8	1.10	6	14	7	18	9
TX MARSHALL	41	5618-04	32-32	94-21	352	07/1892	5	086	8	12/1963	9	000	1	00	0	0.99	0	12	6	08	4

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TX MCCAMEY	41	5707-06	31-08	102-12	2450	02/1932	9	100	1	02/1932	9	000	1	01	0	UNAD	9	02	1	12	6
TX MEXIA	41	5869-03	31-41	96-29	535	05/1888	4	084	8	01/1889	2	016	7	04	3	1.13	7	04	2	02	1
TX MIAMI	41	5875-01	35-42	100-38	2755	03/1888	4	083	9	01/1961	9	013	7	03	2	1.09	6	06	3	06	3
TX MULESHOE 1	41	6135-01	34-14	102-45	3760	08/1921	9	099	3	08/1921	8	017	8	09	8	1.14	7	20	9	16	8
TX NEW BRAUNFELS	41	6276-07	29-44	98-07	710	01/1854	0	076	9	01/1889	2	010	6	08	7	1.10	8	12	6	10	5
TX PECOS	41	6892-05	31-25	103-30	2610	03/1889	4	057	9	11/1907	7	030	9	04	3	UNAD	9	20	9	10	5
TX PLAINVIEW	41	7079-01	34-11	101-42	3370	09/1889	4	096	6	09/1893	4	001	2	11	9	UNAD	9	06	3	14	7
TX QUANAH 5SE	41	7336-02	34-15	99-41	1495	05/1891	5	088	8	01/1948	9	001	2	00	0	0.99	0	06	3	10	5
TX RIO GRANDE CITY 3W	41	7622-09	26-23	98-52	176	09/1849	0	085	8	09/1874	0	008	5	09	8	UNAD	9	16	8	20	9
TX SAN ANTONIO WSFO	41	7945-07	29-32	98-28	788	09/1849	0	085	8	07/1886	1	000	1	11	9	UNAD	9	08	4	04	2
TX SEMINOLE	41	8201-01	32-43	102-40	3340	08/1922	9	093	7	08/1922	9	006	4	12	9	UNAD	9	04	2	14	7
TX SYNDER	41	8433-02	32-43	100-55	2335	02/1889	4	077	9	01/1892	4	022	9	05	4	UNAD	9	18	9	00	0
TX STRATFORD	41	8692-01	36-21	102-05	3693	07/1911	9	081	9	07/1911	8	019	8	10	8	UNAD	9	18	9	04	2
TX TEMPLE	41	8910-03	31-05	97-22	700	04/1882	2	095	6	01/1966	9	033	9	05	4	1.09	6	18	9	18	9
TX VEGA	41	9330-01	35-15	102-25	4010	03/1923	9	099	3	03/1923	9	017	8	06	5	1.16	7	06	3	04	2
TX WEATHERFORD	41	9532-03	32-46	97-49	1065	04/1882	2	094	6	01/1889	2	009	6	06	5	1.12	7	10	5	12	6

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
UT ALTON	42	0086-04	37-26	112-29	7040	06/1915	9	099	3	06/1915	8	012	6	08	7	1.16	7	02	1	08	4
UT BEAVER	42	0519-04	38-17	112-38	5940	05/1889	4	087	8	01/1958	9	018	8	04	3	1.09	6	12	6	16	8
UT BLANDING	42	0738-07	37-37	109-28	6130	12/1904	8	099	3	12/1904	7	022	9	08	7	1.20	7	20	9	08	4
UT BLUFF	42	0788-07	37-17	109-33	4315	06/1911	9	099	3	06/1911	8	001	2	10	8	UNAD	9	14	7	20	9
UT CORINNE	42	1731-03	41-35	112-08	4240	02/1870	1	098	4	06/1881	0	027	9	16	9	1.16	7	20	9	18	9
UT DESERET	42	2101-01	39-17	112-39	4585	08/1891	5	096	6	08/1891	3	004	3	06	5	UNAD	9	18	9	00	0
UT DUCHESNE	42	2253-06	40-10	110-24	5510	01/1906	8	099	3	01/1906	7	001	2	12	9	UNAD	9	10	5	16	8
UT ELBERTA	42	2418-03	39-57	111-57	4690	01/1902	7	100	1	01/1902	6	000	1	05	4	UNAD	9	04	2	08	4
UT ESCALANTE	42	2592-04	37-46	111-36	5810	05/1901	7	091	7	01/1941	9	003	3	02	1	1.06	4	12	6	20	9
UT FILLMORE	42	2828-04	38-57	112-19	5120	01/1892	5	100	1	01/1892	4	003	3	07	6	1.09	6	10	5	14	7
UT FORT DUCHESNE	42	2996-06	40-17	109-52	5050	12/1887	3	099	3	12/1887	2	000	1	09	8	UNAD	9	12	6	02	1
UT GREEN RIVER AVIATION	42	3418-07	39-00	110-10	4070	07/1891	5	095	6	07/1891	3	005	4	18	9	UNAD	9	06	3	02	1
UT HANKSVILLE	42	3611-07	38-22	110-43	4308	01/1910	8	100	1	01/1910	8	000	1	07	6	UNAD	9	16	8	04	2
UT HEBER	42	3809-05	40-30	111-25	5630	01/1893	5	100	1	01/1893	4	000	1	05	4	1.10	6	06	3	06	3
UT HIAWATHA	42	3896-05	39-29	111-01	7280	11/1916	9	098	4	11/1916	8	025	9	08	7	1.16	7	12	6	04	2
UT KANAB	42	4508-04	37-03	112-32	4950	01/1876	1	075	9	06/1908	7	055	9	13	9	1.28	7	12	6	12	6
UT LAKETOWN	42	4856-05	41-49	111-19	5980	01/1900	7	100	1	01/1900	6	000	1	05	4	UNAD	9	12	6	06	3
UT LEVAN	42	5065-04	39-33	111-52	5315	05/1889	4	099	3	05/1889	2	006	4	06	5	1.05	3	20	9	04	2
UT LOA	42	5148-04	38-24	111-39	7080	01/1892	5	088	8	04/1915	8	010	6	07	6	UNAD	9	16	8	16	8
UT LOGAN USU	42	5186-03	41-45	111-48	4790	11/1890	4	099	3	11/1890	3	017	8	12	9	1.09	6	06	3	10	5
UT MANTI	42	5402-04	39-15	111-38	5740	05/1892	5	098	4	01/1893	4	017	8	08	7	1.11	7	10	5	02	1
UT MOAB 4NW	42	5733-07	38-36	109-36	3965	08/1889	4	099	3	08/1889	3	001	2	13	9	UNAD	9	16	8	08	4
UT MODENA	42	5752-01	37-48	113-55	5480	01/1901	7	100	1	01/1901	6	006	4	03	2	1.08	5	20	9	14	7
UT MORGAN	42	5826-05	41-02	111-41	5060	01/1903	7	100	1	01/1903	6	000	1	08	7	UNAD	9	20	9	00	0
UT OGDEN PIONEER P H	42	6404-03	41-15	111-57	4350	02/1870	1	099	3	06/1881	0	013	7	07	6	1.07	5	18	9	14	7
UT PANGUITCH	42	6601-04	37-49	112-27	6720	06/1904	8	098	4	06/1904	7	002	3	19	9	UNAD	9	02	1	08	4
UT PAROWAN POWER PLANT	42	6686-04	37-50	112-50	6000	09/1890	4	096	6	09/1890	3	003	3	11	9	UNAD	9	18	9	06	3
UT RICHFIELD RADIO K SVC	42	7260-04	38-46	112-05	5270	08/1889	4	097	5	08/1889	3	003	3	15	9	UNAD	9	06	3	00	0
UT RIVERDALE	42	7318-03	41-09	112-00	4400	01/1914	9	100	1	01/1914	8	002	3	04	3	1.04	2	04	2	14	7
UT SAINT GEORGE	42	7516-02	37-09	113-35	2760	01/1878	2	100	1	01/1878	0	000	1	13	9	UNAD	9	12	6	14	7
UT SCIPPIO	42	7714-04	39-15	112-06	5300	07/1894	6	099	3	01/1929	9	000	1	02	1	1.04	2	20	9	16	8
UT SNAKE CREEK PH	42	7909-05	40-33	111-30	6000	12/1913	9	099	3	12/1913	8	004	3	02	1	1.00	0	20	9	20	9

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UT SPANISH FORK PH	42	8119-03	40-05	111-36	4720	07/1909	8	099	3	07/1909	7	002	3	07	6	1.06	4	02	1	12	6
UT THOMPSON	42	8705-07	38-58	109-43	5100	05/1911	9	099	3	05/1911	8	000	1	01	0	UNAD	9	02	1	14	7
UT TOOELE	42	8771-03	40-32	112-18	5070	03/1896	6	100	1	03/1896	5	013	7	07	6	1.06	4	04	2	04	2
UT UTAH LAKE LEHI	42	8973-03	40-22	111-54	4497	06/1904	8	099	3	06/1904	7	000	1	02	1	1.01	0	12	6	10	5
UT VERNAL AP	42	9111-06	40-27	109-31	5280	01/1928	9	097	5	01/1928	9	003	3	04	3	UNAD	9	10	5	12	6
UT WENDOVER AUTOB	42	9382-01	40-44	114-02	4237	06/1911	9	099	3	06/1911	8	000	1	05	4	UNAD	9	16	8	02	1
UT WOODRUFF	42	9595-05	41-32	111-09	6315	01/1897	6	086	8	01/1897	5	014	7	12	9	UNAD	9	16	8	14	7
UT ZION NATIONAL PARK	42	9717-02	37-13	112-59	4050	01/1904	8	096	6	01/1904	6	040	9	09	8	1.25	7	16	8	14	7

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VT BURLINGTON AP	43	1081-02	44-28	73-09	332	01/1828	0	091	7	01/1884	1	000	1	03	2	1.04	2	06	3	20	9
VT CAVENDISH	43	1243-03	43-23	72-36	800	03/1903	7	098	4	03/1903	6	004	3	01	0	1.00	0	04	2	08	4
VT CHELSEA	43	1360-01	43-59	72-27	800	03/1885	3	097	5	03/1885	1	006	4	07	6	1.06	4	02	1	10	5
VT CORNWALL	43	1580-02	43-57	73-13	490	05/1886	3	093	7	05/1886	1	016	7	05	4	1.06	4	12	6	18	9
VT ENOSBURG FALLS	43	2769-01	44-55	72-49	422	06/1891	5	093	7	06/1891	3	006	4	04	3	1.08	5	16	8	14	7
VT NORTHFIELD 3SSE	43	5740-01	44-06	72-37	1410	03/1887	3	096	6	03/1887	2	009	6	05	4	1.06	4	08	4	08	4
VT SAINT JOHNSBURY	43	7054-01	44-25	72-01	699	01/1854	0	073	9	03/1883	1	009	6	04	3	1.03	1	04	2	12	6

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VA BLACKSBURG 3SE	44	0766-06	37-11	80-25	2000	04/1891	5	099	3	04/1891	3	005	4	05	4	1.05	3	10	5	12	6
VA BURKES GARDEN	44	1209-06	37-05	81-20	3300	01/1896	6	099	3	01/1896	5	008	5	06	5	1.04	2	10	5	08	4
VA CHARLOTTESVILLE	44	1593-03	38-02	78-31	870	01/1849	0	076	9	01/1900	6	000	1	01	0	1.02	1	18	9	12	6
VA COLUMBIA 2SSE	44	1929-02	37-44	78-09	290	08/1898	7	099	3	08/1898	5	004	3	05	4	1.03	1	12	6	16	8
VA CULPEPER	44	2155-04	38-28	78-00	420	08/1907	8	099	3	08/1907	7	007	5	04	3	1.04	2	02	1	06	3
VA DALE ENTERPRISE	44	2208-05	38-27	78-56	1400	01/1880	2	099	3	01/1880	0	001	2	02	1	1.03	1	12	6	04	2
VA DANVILLE BRIDGE ST	44	2245-03	36-35	79-23	410	01/1891	5	096	6	11/1899	6	002	3	05	4	1.04	2	02	1	10	5
VA FARMVILLE 2N	44	2941-02	37-20	78-23	450	02/1897	6	071	9	02/1899	5	037	9	04	3	1.11	7	12	6	00	0
VA FREDERICKSBURG NATIONAL PARK	44	3192-01	38-19	77-27	90	01/1893	5	099	3	01/1893	4	019	8	12	9	1.09	6	16	8	10	5
VA HOPEWELL	44	4101-01	37-18	77-18	40	10/1916	9	098	4	10/1916	8	009	6	04	3	1.03	1	16	8	16	8
VA HOT SPRINGS	44	4128-05	38-00	79-50	2238	06/1892	5	099	3	06/1892	4	006	4	05	4	1.04	2	14	7	16	8
VA LEXINGTON	44	4876-05	37-47	79-26	1060	01/1861	0	091	7	04/1885	1	010	6	08	7	1.08	5	06	3	14	7
VA LINCOLN	44	4909-04	39-07	77-43	500	01/1901	7	099	3	01/1901	6	001	2	01	0	1.00	0	02	1	12	6
VA NORFOLK WSO AP	44	6139-01	36-54	76-12	24	01/1871	1	079	9	01/1910	8	001	2	02	1	1.04	2	06	3	02	1
VA PENNINGTON GAP	44	6626-06	36-45	83-03	1510	07/1931	9	099	3	07/1931	9	000	1	01	0	1.01	0	04	2	04	2
VA ROCKY MOUNT	44	7338-03	37-00	79-54	1232	05/1894	6	097	5	05/1894	4	002	3	03	2	1.03	1	04	2	04	2
VA STAUNTON SEWAGE PLANT	44	8062-05	38-09	79-02	1385	09/1868	1	082	9	04/1885	1	025	9	11	9	1.09	6	20	9	14	7
VA WILLIAMSBURG 2N	44	9151-01	37-18	76-42	70	11/1900	7	098	4	01/1959	9	000	1	00	0	0.99	0	00	0	00	0
VA WOODSTOCK 2NE	44	9263-04	38-54	78-28	660	09/1889	4	097	5	09/1889	3	011	6	09	8	1.06	4	10	5	04	2

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WA ABERDEEN	45	0008-01	46-58	123-49	10	01/1891	5	100	1	01/1904	6	006	4	06	5	1.04	2	08	4	12	6
WA BELLINGHAM 2N	45	0564-03	48-47	122-29	140	06/1857	0	071	9	01/1890	3	006	4	08	7	1.03	1	16	8	06	3
WA BLAINE	45	0729-03	49-00	122-45	60	08/1893	5	096	6	09/1896	5	022	9	12	9	1.09	6	14	7	14	7
WA BUCKLEY 1NE	45	0945-04	47-10	122-00	685	01/1913	9	100	1	01/1913	8	000	1	03	2	1.02	1	10	5	10	5
WA CEDAR LAKE	45	1233-05	47-25	121-44	1560	07/1898	7	099	3	07/1898	5	008	5	03	2	1.02	1	12	6	12	6
WA CENTRALIA	45	1276-03	46-43	122-57	185	01/1890	4	099	3	07/1897	5	007	5	05	4	1.03	1	16	8	12	6
WA CLEARBROOK	45	1484-03	48-58	122-20	64	03/1903	7	099	3	03/1903	6	005	4	02	1	1.01	0	02	1	18	9
WA CLE ELUM	45	1504-06	47-11	120-57	1930	01/1899	7	099	3	01/1899	5	027	9	13	9	1.13	7	18	9	20	9
WA COLFAX 1NW	45	1586-10	46-53	117-23	1955	01/1881	2	092	7	12/1899	6	009	6	10	8	1.06	4	14	7	18	9
WA COLVILLE AP	45	1650-09	48-33	117-53	1885	12/1859	0	081	9	01/1900	6	005	4	04	3	1.05	3	20	9	20	9
WA CONCONULLY	45	1666-07	48-33	119-45	2320	07/1894	6	094	6	01/1921	8	010	6	07	6	1.10	6	10	5	16	8
WA DAVENPORT	45	2007-07	47-39	118-08	2440	03/1893	5	084	8	04/1899	5	017	8	09	8	1.09	6	06	3	04	2
WA DAYTON 1WSW	45	2030-10	46-19	118-00	1557	12/1879	2	089	8	01/1904	6	010	6	06	5	1.05	3	02	1	10	5
WA ELLENSBURG	45	2505-08	46-58	120-33	1480	01/1884	2	094	6	01/1890	3	003	3	11	9	UNAD	9	10	5	08	4
WA EVERETT	45	2675-03	47-59	122-11	60	09/1894	6	077	9	09/1896	5	032	9	09	8	1.09	6	20	9	16	8
WA FORKS 1E	45	2914-01	47-57	124-22	350	01/1907	8	100	1	01/1907	7	006	4	08	7	1.11	7	12	6	02	1
WA GOLDENDALE 2E	45	3226-08	45-49	120-46	1800	01/1905	8	100	1	01/1905	7	000	1	10	8	UNAD	9	18	9	10	5
WA GRAPEVIEW 3SW	45	3284-04	47-18	122-52	30	01/1907	8	100	1	01/1907	7	002	3	03	2	1.03	1	02	1	18	9
WA KENNEWICK	45	4154-08	46-13	119-06	390	11/1884	3	090	7	10/1891	3	005	4	16	9	UNAD	9	16	8	02	1
WA LAURIER	45	4549-09	49-00	118-14	1644	01/1910	8	100	1	01/1910	8	000	1	01	0	0.99	0	12	6	04	2
WA LONG BEACH EXP STN	45	4748-01	46-22	124-02	25	01/1878	2	100	1	01/1878	0	000	1	03	2	1.05	3	02	1	18	9
WA LONGMIRE RAINIER NPS	45	4764-05	46-45	121-49	2762	01/1909	8	100	1	01/1909	7	008	5	03	2	1.02	1	02	1	06	3
WA LONGVIEW	45	4769-04	46-09	122-55	12	01/1925	9	100	1	01/1925	9	006	4	05	4	1.01	0	06	3	04	2
WA ODESSA	45	6039-07	47-20	118-41	1540	01/1903	7	100	1	01/1903	6	000	1	06	5	UNAD	9	06	3	06	3
WA OLGA 3E	45	6096-00	48-37	122-48	80	01/1890	4	100	1	01/1890	3	000	1	00	0	0.99	0	04	2	08	4
WA POMEROY	45	6610-10	46-28	117-37	1810	06/1881	2	092	7	01/1905	7	010	6	09	8	1.06	4	08	4	04	2
WA PORT ANGELES	45	6624-02	48-07	123-24	40	01/1883	2	100	1	01/1883	1	000	1	06	5	UNAD	9	18	9	20	9
WA PORT TOWNSEND	45	6678-02	48-07	122-45	100	01/1860	0	090	7	08/1873	0	000	1	09	8	UNAD	9	16	8	12	6
WA PULLMAN 2NW	45	6789-10	46-46	117-12	2545	01/1893	5	100	1	01/1893	4	008	5	06	5	1.07	5	12	6	20	9
WA PUYALLUP EXPERIMENT STN 2W	45	6803-03	47-12	122-20	50	01/1914	9	100	1	01/1914	8	008	5	02	1	1.02	1	14	7	02	1
WA RAYMOND 2S	45	6914-01	46-39	123-43	30	03/1895	6	096	6	09/1910	8	004	3	04	3	1.04	2	20	9	06	3
WA RITZVILLE 1SSE	45	7059-08	47-07	118-22	1830	04/1899	7	099	3	04/1899	5	000	1	02	1	1.03	1	04	2	16	8

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
WA SEATTLE NMFC	45	7458-03	47-39	122-18	19	01/1909	8	100	1	01/1909	7	003	3	06	5	1.06	4	04	2	18	9
WA SEDRO WOOLLEY	45	7507-03	48-30	122-14	60	08/1896	6	099	3	08/1896	5	003	3	04	3	1.04	2	12	6	04	2
WA SNOQUALMIE FALLS	45	7773-04	47-33	120-51	440	01/1898	7	100	1	01/1898	5	004	3	04	3	1.03	1	12	6	12	6
WA SPOKANE WSO AP	45	7938-09	47-38	117-32	2356	01/1878	2	100	1	01/1903	6	001	2	06	5	1.05	3	10	5	12	6
WA STEHEKIN 4NW	45	8059-06	48-21	120-43	1270	02/1906	8	088	8	02/1906	7	018	8	04	3	1.06	4	20	9	04	2
WA SUNNYSIDE	45	8207-08	46-19	120-00	747	02/1894	6	099	3	02/1894	4	001	2	04	3	UNAD	9	10	5	08	4
WA VANCOUVER 4NNE	45	8773-04	45-41	122-39	210	12/1849	0	079	9	01/1896	5	003	3	01	0	1.02	1	10	5	10	5
WA WALLA WALLA WSO CITY	45	8931-08	46-02	118-20	949	01/1873	1	100	1	01/1886	1	003	3	04	3	1.06	4	16	8	04	2
WA WATERVILLE	45	9012-07	47-39	120-04	2620	01/1890	4	100	1	01/1915	8	031	9	07	6	1.17	7	14	7	14	7
WA WENATCHEE	45	9074-08	47-25	120-19	640	05/1912	9	100	1	05/1912	8	000	1	08	7	UNAD	9	06	3	16	8
WA WILBUR	45	9238-07	47-45	118-40	2230	03/1892	5	092	7	01/1971	9	008	5	02	1	1.02	1	10	5	10	5
WA WINTHROP 1WSW	45	9376-06	48-28	120-11	1755	03/1906	8	097	5	03/1906	7	003	3	03	2	1.04	2	02	1	16	8

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
WV BENS RUN 1SSE	46	0687-01	39-28	81-06	644	10/1900	7	097	5	10/1900	6	004	3	03	2	1.03	1	04	2	06	3
WV BUCKHANNON 2W	46	1220-02	39-00	80-16	1445	08/1887	3	096	6	08/1887	2	008	5	05	4	1.03	1	02	1	12	6
WV GARY	46	3353-05	37-22	81-33	1426	06/1917	9	099	3	06/1917	8	000	1	01	0	1.02	1	08	4	16	8
WV GLENVILLE 1ENE	46	3544-02	38-56	80-49	720	08/1887	3	099	3	08/1887	2	014	7	09	8	1.07	5	14	7	06	3
WV LEWISBURG 2SSW	46	5224-05	37-46	80-28	2185	01/1854	0	065	9	04/1890	3	022	9	07	6	1.07	5	00	0	02	1
WV MANNINGTON 7WNW	46	5626-02	39-32	80-30	1100	01/1901	7	099	3	01/1901	6	011	6	05	4	1.02	1	02	1	12	6
WV MARTINSBURG FAA AIRPORT	46	5707-06	39-24	77-59	531	10/1891	5	099	3	10/1891	3	006	4	04	3	1.02	1	16	8	10	5
WV PARSONS 1SE	46	6867-04	39-06	79-40	1680	01/1899	7	094	6	01/1899	5	010	6	07	6	1.06	4	00	0	00	0
WV PICKENS 1	46	6991-04	38-40	80-13	2770	04/1902	7	097	5	04/1902	6	007	5	03	2	1.04	2	18	9	18	9
WV SPENCER 1SE	46	8384-03	38-48	81-21	740	02/1892	5	092	7	02/1892	4	020	8	09	8	1.07	5	10	5	06	3
WV WELLSBURG WATER TRMT PLANT	46	9368-01	40-17	80-37	660	02/1878	2	086	8	01/1900	6	000	1	03	2	1.04	2	12	6	16	8
WV WILLIAMSON	46	9605-03	37-40	82-17	673	09/1900	7	099	3	09/1900	6	006	4	04	3	1.01	0	04	2	16	8
WV WINFIELD LOCK & DAM	46	9683-03	38-32	81-55	571	10/1900	7	096	6	10/1900	6	003	3	03	2	1.02	1	10	5	16	8

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	ZA	R	SC-DATE	R	ZE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
WI ANTIGO 1SSW	47	0239-03	45-08	89-09	1450	05/1894	6	094	6	05/1894	4	010	6	04	3	1.04	2	14	7	02	1
WI ASHLAND EXPERIMENT FARM	47	0349-01	46-34	90-58	650	07/1856	0	070	9	04/1887	2	018	8	08	7	1.08	5	06	3	16	8
WI BRODHEAD	47	1078-08	42-37	89-23	790	11/1897	7	098	4	11/1897	5	001	2	05	4	1.06	4	02	1	06	3
WI DARLINGTON	47	2001-07	42-41	90-07	930	01/1901	7	094	6	01/1901	6	017	8	05	4	1.06	4	06	3	00	0
WI FOND DU LAC	47	2839-06	43-48	88-27	760	01/1886	3	100	1	01/1886	1	010	6	07	6	1.07	5	18	9	06	3
WI HANCOCK EXPERIMENT FARM	47	3405-05	44-07	89-32	1076	11/1902	7	097	5	11/1902	6	007	5	05	4	1.06	4	18	9	16	8
WI HATFIELD HYDRO PLANT	47	3471-04	44-24	90-44	953	09/1908	8	099	3	09/1908	7	001	2	03	2	1.05	3	10	5	02	1
WI LANCASTER 4WSW	47	4546-07	42-50	90-47	1042	01/1888	3	091	7	01/1929	9	010	6	03	2	1.04	2	10	5	14	7
WI MANITOWOC	47	5017-06	44-06	87-41	660	02/1858	0	096	6	01/1961	9	000	1	00	0	0.99	0	02	1	02	1
WI MARSHFIELD EXPERIMENT FARM	47	5120-05	44-39	90-08	1250	01/1913	9	100	1	01/1913	8	003	3	04	3	1.03	1	04	2	06	3
WI MEDFORD	47	5255-02	45-08	90-21	1470	06/1889	4	099	3	06/1889	2	016	7	08	7	1.08	5	08	4	00	0
WI MINOCQUA DAM	47	5516-02	45-53	89-44	1580	09/1903	7	098	4	09/1903	6	009	6	03	2	1.02	1	20	9	16	8
WI NEW LONDON	47	5932-05	44-23	88-44	760	01/1857	0	071	9	12/1890	3	006	4	06	5	1.06	4	06	3	04	2
WI OCONTO 4W	47	6208-03	44-54	87-57	660	12/1890	4	099	3	12/1890	3	018	8	12	9	1.10	6	20	9	20	9
WI OSHKOSH	47	6330-06	44-02	88-33	750	09/1888	4	096	6	12/1893	4	007	5	04	3	1.03	1	14	7	16	8
WI PORTAGE	47	6718-08	43-32	89-26	800	08/1887	3	099	3	08/1887	2	007	5	08	7	1.06	4	02	1	10	5
WI PRAIRIE DU CHIEN	47	6827-07	43-02	91-09	658	05/1836	0	070	9	01/1900	6	000	1	03	2	1.03	1	18	9	20	9
WI RACINE	47	6922-09	42-42	87-46	595	05/1896	6	098	4	05/1896	5	025	9	11	9	1.08	5	08	4	14	7
WI SPOONER EXPERIMENT FARM	47	8027-01	45-49	91-53	1100	04/1894	6	097	5	04/1894	4	016	7	08	7	1.05	3	16	8	20	9
WI STANLEY	47	8110-01	44-58	90-56	1120	09/1903	7	096	6	09/1903	6	019	8	09	8	1.14	7	02	1	00	0
WI VIROQUA 2NW	47	8827-07	43-34	90-54	1200	04/1889	4	096	6	04/1889	2	015	7	06	5	1.05	3	14	7	16	8
WI WATERTOWN	47	8919-08	43-11	88-44	820	05/1891	5	099	3	05/1891	3	012	6	07	6	1.06	4	10	5	08	4
WI WAUKESHA	47	8937-09	43-01	88-14	860	03/1856	0	073	9	01/1863	0	024	9	06	5	1.09	6	04	2	02	1

PRECIPITATION

STATE & STATION NAME	ST#	STN-DIV	LAT-N	LONG-W	EVL(FT)	BPOR	R	IA	R	SC-DATE	R	IE	R	#M	R	CONF	R	CONS40	R	CONSFULL	R
WY ALTA INNW	48	0140-02	43-47	111-02	6430	06/1909	8	099	3	06/1909	7	008	5	05	4	1.06	4	20	9	20	9
WY BASIN	48	0540-04	44-23	108-03	3837	03/1898	7	098	4	03/1898	5	002	3	03	2	UNAD	9	04	2	08	4
WY BORDER 3N	48	0915-03	42-15	111-02	6120	01/1902	7	100	1	01/1902	6	009	6	06	5	1.08	5	02	1	02	1
WY BUFFALO BILL DAM	48	1175-04	44-30	109-11	5156	01/1905	8	100	1	01/1905	7	000	1	01	0	UNAD	9	04	2	04	2
WY CHEYENNE WSFO	48	1675-08	41-09	104-49	6126	01/1871	1	100	1	01/1885	1	012	6	09	8	1.11	7	04	2	10	5
WY CHUGWATER	48	1730-08	41-45	104-49	5282	11/1900	7	099	3	11/1900	6	000	1	01	0	1.03	1	20	9	06	3
WY COLONY	48	1905-06	44-56	104-12	3570	04/1914	9	100	1	04/1914	8	000	1	02	1	1.07	5	06	3	02	1
WY DIVERSION DAM	48	2595-09	43-14	108-56	5575	10/1907	8	090	7	10/1907	7	009	6	04	3	UNAD	9	10	5	20	9
WY DUBOIS	48	2715-09	43-34	109-38	6925	06/1905	8	096	6	06/1905	7	003	3	03	2	UNAD	9	18	9	12	6
WY EVANSTON 1E	48	3100-03	41-16	110-57	6810	10/1889	4	092	7	10/1889	3	008	5	03	2	UNAD	9	04	2	20	9
WY FARSON	48	3170-03	42-07	109-26	6590	04/1908	8	090	7	04/1908	7	011	6	13	9	UNAD	9	18	9	02	1
WY GREEN RIVER	48	4065-03	41-32	109-28	6089	04/1897	6	091	7	04/1897	5	009	6	11	9	UNAD	9	18	9	00	0
WY LAKE YELLOWSTONE	48	5345-01	44-33	110-24	7770	02/1904	8	093	7	02/1904	6	012	6	07	6	1.10	6	04	2	10	5
WY LARAMIE FAA AP	48	5415-10	41-19	105-41	7266	07/1867	1	089	8	10/1886	1	004	3	05	4	UNAD	9	06	3	20	9
WY LUSK	48	5830-07	42-46	104-28	5020	02/1889	4	097	5	02/1889	2	003	3	07	6	UNAD	9	14	7	12	6
WY MIDWEST	48	6195-05	43-24	106-17	4815	07/1922	9	097	5	07/1922	8	002	3	04	3	UNAD	9	18	9	16	8
WY MORAN 5WNW	48	6440-02	43-51	110-35	6798	03/1911	9	100	1	03/1911	8	000	1	01	0	1.01	0	10	5	00	0
WY NEWCASTLE	48	6660-07	43-51	104-13	4315	07/1906	8	095	6	07/1906	7	005	4	07	6	UNAD	9	10	5	10	5
WY PATHFINDER DAM	48	7105-10	42-28	106-51	5930	01/1899	7	100	1	01/1899	5	000	1	01	0	UNAD	9	12	6	00	0
WY PAVILLION	48	7115-09	43-15	108-41	5440	04/1919	9	099	3	04/1919	8	001	2	01	0	UNAD	9	20	9	20	9
WY PINE BLUFFS	48	7235-08	41-11	104-04	5075	04/1900	7	090	7	04/1900	6	010	6	10	8	UNAD	9	04	2	04	2
WY PINEDALE	48	7260-03	42-52	109-52	7175	01/1906	8	087	8	01/1906	7	040	9	15	9	1.19	7	14	7	12	6
WY POWELL FIELD STATION	48	7388-04	44-47	108-45	4370	02/1907	8	100	1	02/1907	7	000	1	05	4	UNAD	9	18	9	14	7
WY RIVERTON	48	7760-09	43-01	108-23	4954	02/1907	8	090	7	02/1907	7	010	6	08	7	UNAD	9	10	5	02	1
WY SARATOGA	48	7990-10	41-27	106-49	6790	10/1889	4	089	8	04/1905	7	004	3	16	9	UNAD	9	08	4	20	9
WY SHERIDAN FIELD STATION	48	8160-05	44-50	106-50	3750	09/1891	5	098	4	01/1893	4	000	1	05	4	UNAD	9	14	7	00	0
WY TORRINGTON EXP FARM	48	8995-08	42-05	104-13	4098	01/1922	9	100	1	01/1922	8	000	1	03	2	1.07	5	12	6	06	3
WY WHEATLAND 4N	48	9615-08	42-07	104-57	4638	05/1889	4	088	8	06/1896	5	029	9	11	9	1.18	7	10	5	10	5
WY WORLAND	48	9770-04	44-01	107-57	4060	02/1907	8	095	6	02/1907	7	005	4	10	8	UNAD	9	04	2	16	8
WY YELLOWSTONE PARK	48	9905-01	44-58	110-42	6200	01/1889	4	099	3	01/1889	2	001	2	04	3	UNAD	9	12	6	16	8

APPENDIX C

Reprints of Pertinent Literature

A Model to Estimate the Time of Observation Bias Associated with Monthly Mean Maximum, Minimum and Mean Temperatures for the United States

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ABSTRACT

Hourly data for 79 stations in the United States are used to develop an empirical model which can be used to estimate the time of observation bias associated with different observation schedules. The model is developed for both maximum and minimum monthly average temperature as well as monthly mean temperature. The model was tested on 28 independent stations, and the results were very good. Using seven years of hourly data the standard errors of estimate using the model were only moderately higher than the standard errors of estimate of the true time of observation bias. The physical characteristics of the model directly include a measure of mean monthly interdiurnal temperature differences, analemma information, and the effects of the daily temperature range due to solar forcing. A self-contained computer program has been developed which allows a user to estimate the time of observation bias anywhere in the contiguous United States without the costly exercise of accessing 24-hourly observations at first-order stations.

1. Introduction

In the United States the importance of standardizing the method of calculating monthly mean temperatures was recognized as early as 1876 (Schott, 1876). The current practice of calculating monthly mean temperatures in the United States is to sum the daily maximum and minimum temperatures, divide by two, and find the average of these values over the month. At the first-order stations the daily maximum and minimum temperatures are derived from the 24-hour period corresponding to the standard calendar days, i.e., midnight to midnight. The vast majority of weather stations in the United States, however, are not first-order stations. Cooperative weather stations measuring temperature (approximately 5,000 in the United States) are staffed by volunteer weather observers, and as Mitchell (1958) points out, there is an understandable reluctance on the part of the observers to read their extreme thermometers at midnight. As a result the cooperative weather observers operate on a climatological day which does not necessarily correspond to the calendar day. When the ending time of the 24 hours of the climatological day varies from station to station or over a period of years at a given station, then a nonclimatic time of observation bias is introduced into the monthly means (and daily means). These biases have been thoroughly documented by Mitchell (1958), and more recent work has addressed the problem on a more local

basis (Baker, 1975; Schaal and Dale, 1977; Winkler et al., 1981; Blackburn, 1983; Head, 1985).

In the United States there has been a systematic change in the preferred ending time of the climatological day. The instructions for cooperative weather observers measuring temperature (Weather Bureau, 1935, 1941, 1952; National Weather Service, 1972) recommend that maximum and minimum temperatures be recorded for the 24 hours ending near sunset (between 1700 and 2000 LST). About 75% (of a total of 3317) of the weather observers followed this schedule until the 1940s. Since that time many observers have changed their observation schedules to conform with the time precipitation measurements are needed (morning hours) for hydrological operational requirements (Schoun; personal communication, 1985), and now only about 45% (of a total of 5,392) record their previous 24-hour maximum and minimum temperature during the late afternoon hours (Table 1). Currently, one of the most frequent A.M. observation times is near 0700 LST and one of the most frequent P.M. observation times is near 1700 LST. Even a cursory investigation of the history of observation times at a handful of stations indicates that it is rare to find cooperative stations with uniform observing times throughout their history, and in many instances observers have changed their time of observation several times in a single decade.

Detailed spatial or temporal studies of climate in the

TABLE 1. Percent of A.M. (0100 to 1100 LST), P.M. (1200 to 2100 LST), and MD (2200 to 0000 LST) cooperative weather station in the United States.

Year	a.m. (%)	p.m. (%)	MD (%)
1931	14	79	7
1941	15	76	9
1951	19	65	16
1965	25	64	11
1975	34	55	11
1984	42	47	11

United States are frequently required to draw upon data from a denser network than the first-order stations and/or stations away from highly urbanized climates. This places added emphasis on the cooperative station network. The ever-present time of observation bias, however, presents difficulty in using these stations for detailed spatial analyses or in investigations of climate fluctuations or change. For these reasons we developed a procedure which requires a minimum of input from the user to estimate the time of observation bias for any ending hour of the climatological day for any location in the United States during any month of the year, applicable to the maximum, minimum and mean temperature.

2. Preliminary concepts

The term "time of observation bias" (TOB) in this article is defined as the difference between the monthly mean temperatures derived from a station which ends its climatological day at midnight (local standard time) and the same station which ends its climatological day at any other time. In Fig. 1 the time of observation bias for Bismarck, North Dakota is seen to vary substantially by hour, season, and even for the temperature element of interest. Bismarck is shown for illustration, although any station could have been used. We have defined two time of observation biases in Fig. 1, drift and drift-removed time of observation bias. The TOB with drift (hereafter referred to simply as TOB) includes the effects of month-end temperatures (i.e., hourly temperatures from the last day of the previous month incorporated into a 24-hour mean of the first day of the following month) on the mean temperature. The drift-removed curves have this effect removed. Blackburn (1983) discusses this problem. The bias due to drift is most pronounced during the transition seasons as evident in Fig. 1. The TOB during the fall and spring months around 0100 LST is substantially larger than that observed during the winter and summer (Fig. 1). This occurs because the observer who ends the climatological day at 0100 LST records the maximum, minimum, and mean temperature on the first of each month based on 23 hours of the previous calendar day and month, and only one hour of the current calendar day and month. This effectively forces the months dur-

ing seasons when the mean monthly temperature is decreasing (i.e., the fall) to have a positive TOB around 0100 LST and the opposite effect during spring. This effect is mitigated with each succeeding hour after 0100 LST, and by 2400 LST it vanishes. The end-of-month temperature bias can be removed by using Eq. (1),

$$\text{DCTOB}_i = \text{TOB}_i - (T_{\text{mo}} - T_{\text{mo}-1})[(24 - i)/24] \quad (1)$$

where DCTOB_i is the drift corrected TOB for hour i , T_{mo} is the calendar day monthly mean temperature for month (mo), and $T_{\text{mo}-1}$ is the calendar day monthly mean temperature for month (mo) with the last day of the month replaced with the last day of the previous month. Equation 1 has been used to obtain the drift-removed plots in Fig. 1. The TOB attributed to the end-of-month effect is of some importance, but it is not the primary cause of the total TOB bias.

There are two properties of a temperature series that are necessary to produce DCTOB. First, there must exist a nonzero mean monthly interdiurnal temperature difference (δ), and second, there must exist a diurnal temperature cycle (ρ) independent of δ . If either one of these two quantities is zero then the TOB is zero. Figure 2 demonstrates this principle. The six curves in Fig. 2 represent

a) A station without a diurnal cycle of temperature (whether such a station exists is not important for this argument), but with interdiurnal temperature difference $\delta = 10$.

b) A station with $\delta = 0$, but with a nonzero diurnal temperature cycle, $\rho = 20$.

c) A station with both a nonzero diurnal temperature cycle ($\rho = 20$) and nonzero interdiurnal temperature difference ($\delta = 10$). The time series for station C is equal to the sum of the temperatures at stations A and B. The value of $\rho = 2\delta$.

d) A station with nonzero δ and ρ , and $\delta = \rho = 10$.

e) A station with nonzero δ and ρ , and $\delta = 10$, $\rho = 4$.

f) A station with nonzero δ and ρ , and $\delta = 4$, $\rho = 10$.

Table 2 summarizes the daily maximum, minimum, and mean temperature for a midnight-to-midnight and a noon-to-noon observation schedule for a hypothetical month (February) using the six time series in Fig. 2.

Station C has nonzero δ and ρ , and as a result the TOB is 5°C , (cf. bottom row of station C in Table 2). At station D, δ is held constant with respect to station C, but ρ is reduced by 50% compared to station C. Despite this change in ρ the TOB¹ does not change indicating that δ was the limiting factor in determining the TOB at C. Station E has ρ reduced still further. Now ρ is only 40% of its value at station D, and it is

¹ In our example, the TOB and the DCTOB are identical. There is no drift in the daily mean temperature over the month of interest.

TIME OF OBSERVATION BIAS BISMARCK, NORTH DAKOTA

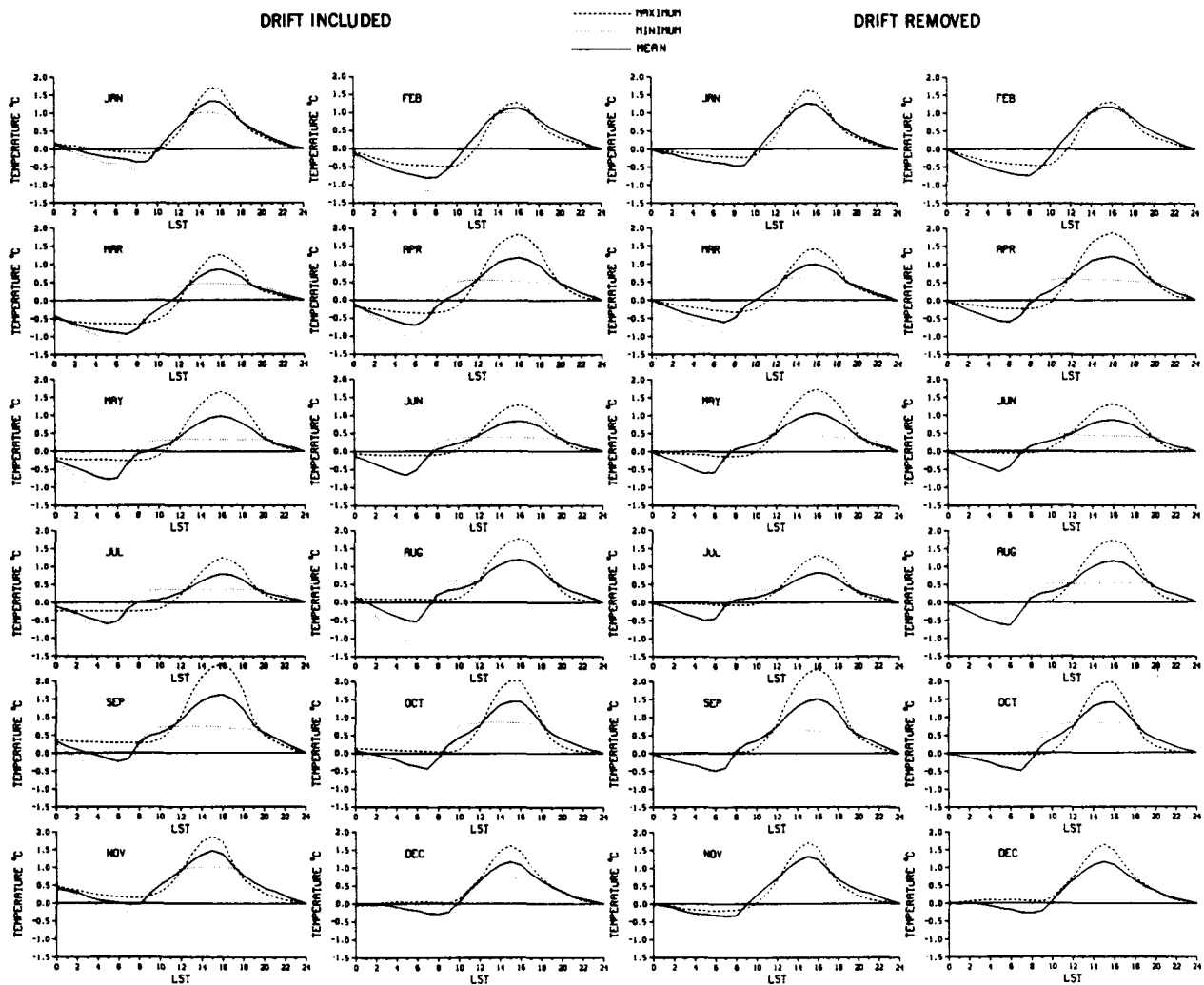


FIG. 1. Time of observation bias at Bismarck, ND for drift and drift-removed monthly mean temperature.

less than δ . At this station, ρ is the limiting factor of the magnitude of the TOB, and as a result the TOB = 2°C or 40% of its value at station D. For station F, δ is reduced by 40% of its value at station D, and now it becomes the decisive factor for the magnitude of the TOB. Again, similar to station E, the TOB is 40% of that calculated at station D. Of course, these examples are oversimplified, but they served us well in developing a strategy to predict the TOB at stations with varying δ and ρ .

Our choice of potential predictors in our model was guided by the examples in Fig. 2 and Table 2. A measure of δ and ρ are the two variables which will form the basis for any model to predict the TOB. The oversimplifications in our examples include the periodic behavior of the interdiurnal temperature difference averaged over 24 hours and an idealized diurnal tem-

perature cycle. Often, much of the interdiurnal temperature difference is due to thermal advection. In practice, the diurnal temperature cycle due to solar forcings is altered, not only by thermal advection, but by changes in cloudiness, wind speeds, humidity, etc. This implies some days will have larger ρ s than others, even after removing the effects of interdiurnal temperature differences. If a very small ρ is present (an overcast windy day) on a day with large δ , then ρ can be a limiting variable even if the monthly average of ρ is somewhat larger than δ . Additionally, the periodic behavior of δ in Fig. 2 leads to some unsettling properties, i.e., $\delta = 10^\circ\text{C}$ for a midnight to midnight observer, but $\delta = 5^\circ\text{C}$ as calculated from noon to noon (station A). We shall assume that the midnight-to-midnight value of δ is representative for all hours of the day. This turns out to be a very good assumption as

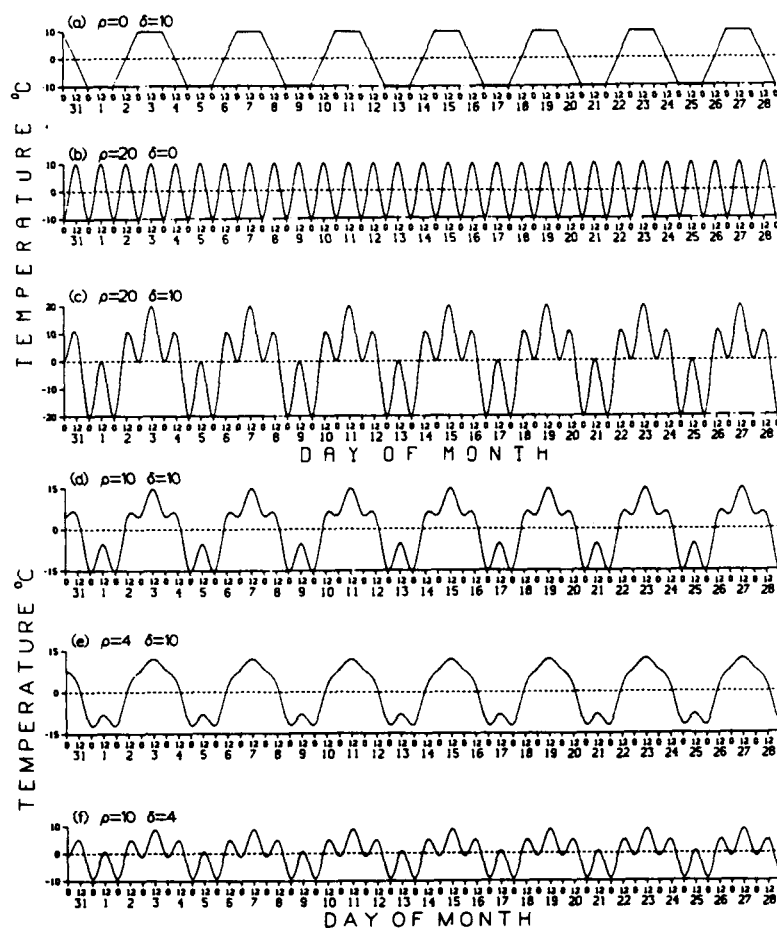


FIG. 2. Temperatures for a station with interdiurnal temperature variability only ($\delta = 10$), diurnal oscillation of temperature only ($\rho = 20$), and other stations with various combinations of δ and ρ .

there is very little evidence to indicate that thermal advection, a large contributor to δ , is dependent upon the time of day in any significant manner.

The importance of the TOB over the United States as derived from all 107 first-order stations in Fig. 3 (listed in the Appendix) is apparent in Fig. 4 by in-

TABLE 2. The maximum (Max), minimum (Min), and mean temperature for climatological days ending at noon and midnight (MD) based on the six hypothetical stations depicted in Fig. 2. The cycle of max, min and mean for days 1-4 repeat themselves 6 more times for days 5-28.

Day of month	Noon-Noon			MD-MD			Noon-Noon			MD-MD			Noon-Noon			MD-MD		
	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
$\delta = 10$ Station A $\rho = 0$																		
1	0	-10	-5	-10	-10	-10	10	-10	0	10	-10	0	10	-20	-5	0	-20	-10
2	0	-10	-5	10	-10	0	10	-10	0	10	-10	0	10	-20	-5	10	-20	-5
3	10	0	5	10	10	10	10	-10	0	10	-10	0	20	0	10	20	0	10
4	10	0	5	10	-10	0	10	-10	0	10	-10	0	20	0	10	10	-20	-5
28	10	0	5	10	-10	0	10	-10	0	10	-10	0	20	0	10	10	-20	-5
Mean	5	-5	0	5	-5	0	10	-10	0	10	-10	0	15	-10	2.5	10	-15	-2.5
$\delta = 10$ Station D $\rho = 10$																		
1	5	-15	-5	-5	-15	-10	2	-12	-5	-8	-12	-10	5	-9	-2	1	-9	-4
2	5	-15	-5	5	-15	-5	2	-12	-5	8	-12	-2	5	-9	-2	5	-9	-2
3	15	5	10	15	5	10	12	2	7	12	8	10	9	-1	4	9	-1	4
4	15	5	10	5	-15	-5	12	2	7	8	-12	-2	9	-1	4	5	-9	-2
28	15	5	10	5	-15	-5	12	2	7	8	-12	-2	9	-1	4	5	-9	-2
Mean	10	-5	2.5	5	-10	-2.5	7	-5	1	5	-7	-1	7	-5	1	5	-7	-1
$\delta = 10$ Station B $\rho = 20$																		
1	10	-10	0	10	-10	0	10	-10	0	10	-10	0	10	-20	-5	10	-20	-5
2	10	-10	0	10	-10	0	10	-10	0	10	-10	0	20	0	10	20	0	10
3	10	-10	0	10	-10	0	10	-10	0	10	-10	0	20	0	10	10	-20	-5
4	10	-10	0	10	-10	0	10	-10	0	10	-10	0	20	0	10	10	-20	-5
28	10	-10	0	10	-10	0	10	-10	0	10	-10	0	20	0	10	10	-20	-5
Mean	10	-10	0	10	-10	0	10	-10	0	10	-10	0	15	-10	2.5	10	-15	-2.5
$\delta = 4$ Station F $\rho = 10$																		
1	5	-15	-5	-5	-15	-10	2	-12	-5	-8	-12	-10	5	-9	-2	1	-9	-4
2	5	-15	-5	5	-15	-5	2	-12	-5	8	-12	-2	5	-9	-2	5	-9	-2
3	15	5	10	15	5	10	12	2	7	12	8	10	9	-1	4	9	-1	4
4	15	5	10	5	-15	-5	12	2	7	8	-12	-2	9	-1	4	5	-9	-2
28	15	5	10	5	-15	-5	12	2	7	8	-12	-2	9	-1	4	5	-9	-2
Mean	10	-5	2.5	5	-10	-2.5	7	-5	1	5	-7	-1	7	-5	1	5	-7	-1

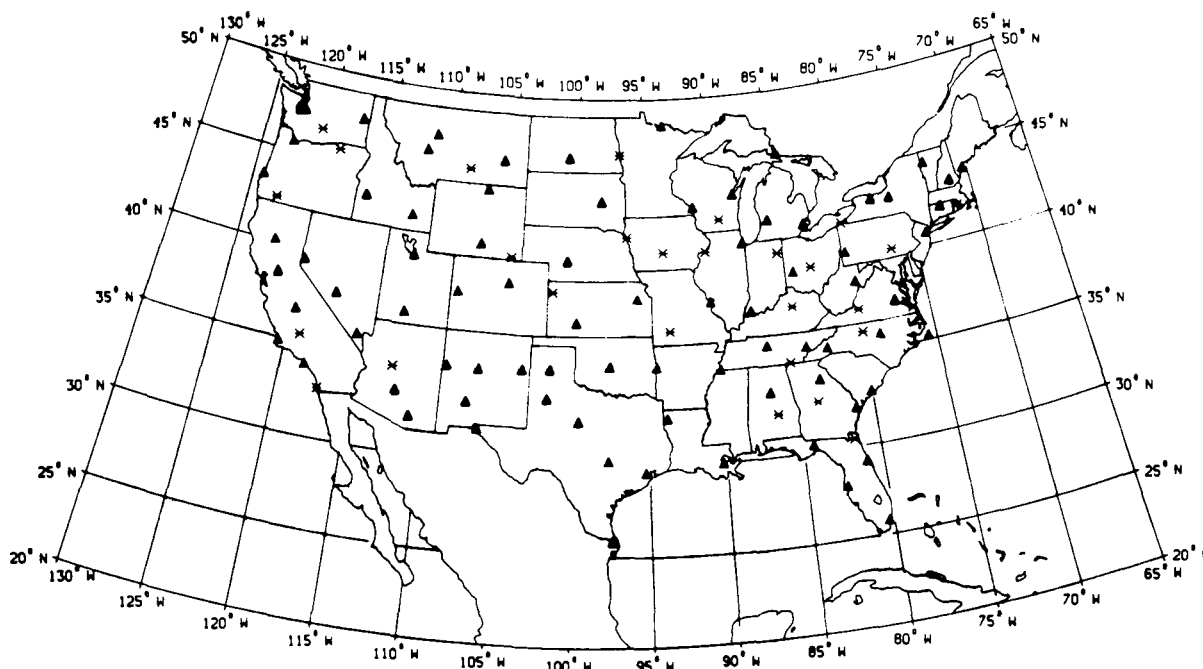


FIG. 3. Distribution of stations used in the development of the time of observation bias model (triangles), and stations used to test the model (asterisks).

spection of the difference field of mean monthly temperatures for two dissimilar climatological days. The differences are relatively large during the late fall, winter, and early spring compared to those during summer. The fact that there are pronounced seasonal and geographic differences is very important with respect to the potential predictability of the TOB. One word of caution is required regarding the interpretation of the patterns in Fig. 4. The isopleths suggest a continuous field, but discontinuities exist across changes in time zones. The steep gradient along the lee of the Rocky Mountains, for example, is considerably enhanced by the change of time zones from Central to Mountain time. For instance, if one station was situated 1 km east of the change in time zones in western Kansas and another 1 km west, the westernmost station's 0700 LST observation is comparable to that of 0800 LST of the eastern station, and likewise its 1700 LST observation is comparable to that of 1800 LST at the easternmost station. The TOBs at 0800 LST and 1800 LST in western Kansas are less than those at 0700 LST and 1700 LST. This effectively reduces the difference between the 0700 LST and the 1700 LST observation times at the westernmost station despite the fact that both locations would end their climatological day at the same local time. Similar effects occur along all the changes of time zones. The variability of true solar noon also affects the TOB within a time zone in a continuous manner from east to west or north to south, because of varying times of sunrise and sunset. The development of a physically realistic TOB predictive model must address these characteristics.

Despite the smooth appearance of the TOB in Fig.

1 there can be considerable variability of the TOB from year to year (Fig. 5). This year-to-year variability is attributed to the changes of δ and ρ from year to year due to differences in the timing of frontal passages, cloudiness, precipitation, etc. This variability has important implications for the development of predictive equations, and the use of such equations to calculate a TOB for a specific month of a given year. As indicated in Fig. 5 the TOB for any month and given year can be substantially different from the mean TOB. This suggests that estimates of TOB from a general model will be most appropriate when applied to a mean derived from a series of years. If the TOB for a specific year and month is important at a cooperative station then the hourly data for the year and month in question for a nearby first-order station can be used to give the best estimate of the TOB. The technique which we develop in this article is most appropriate when applied to means comprised of a series of years to estimate nonclimatic trends which are detrimental to spatial and temporal analyses of mean monthly maximum, minimum and mean temperature.

3. Data

Beginning in 1957 all United States first-order weather stations reported temperatures on the hour (actually read approximately 10–15 minutes before the hour). Prior to June of 1957 hourly temperatures were observed hourly, on the half-hour (U.S. Department of Commerce, 1970). Hourly temperatures (reported in whole °F) are available from the National Climatic Data Center (NCDC) for all first-order stations through

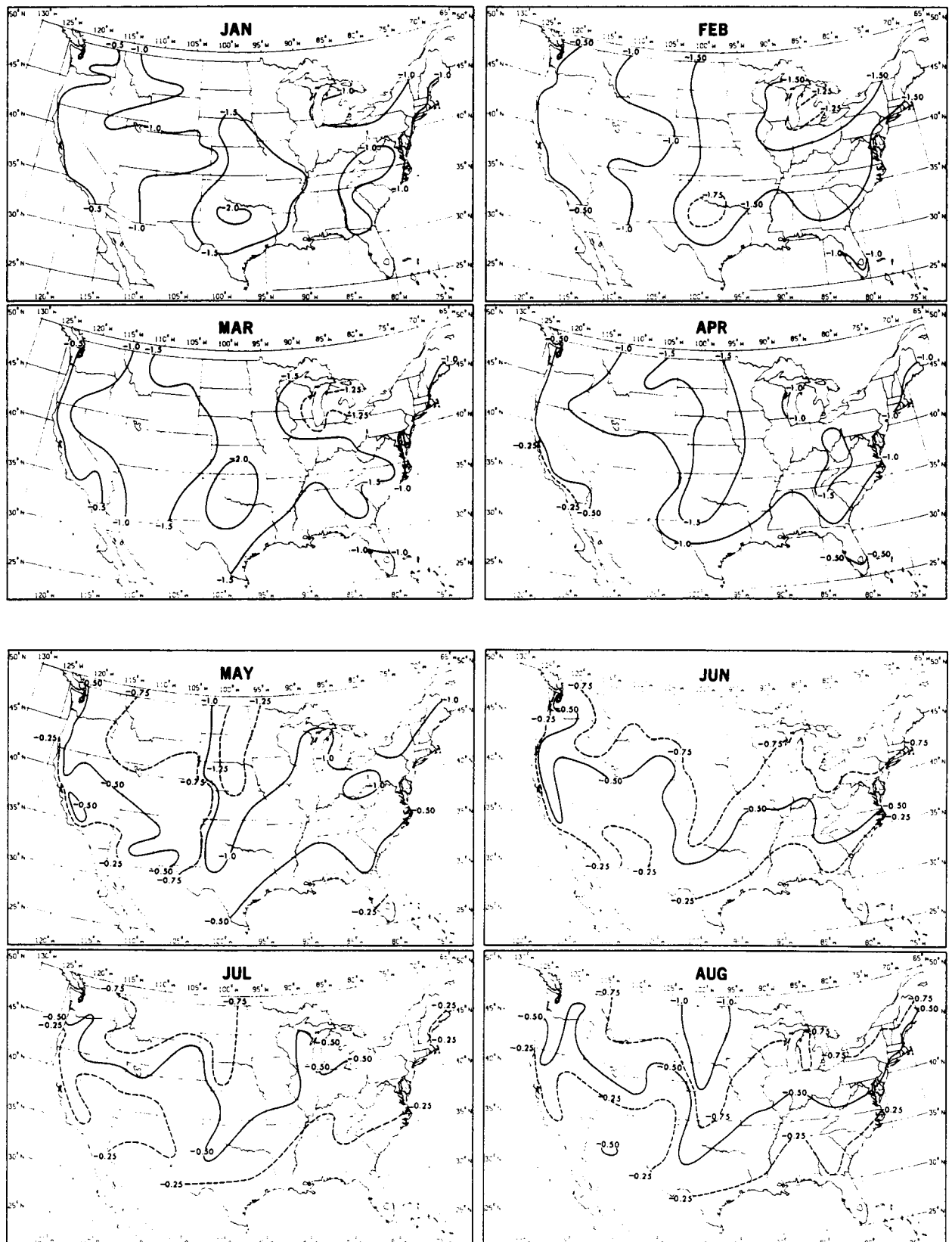


FIG. 4. Mean monthly temperature differences (°C) of a climatological day ending at 0700 LST minus 1700 LST.

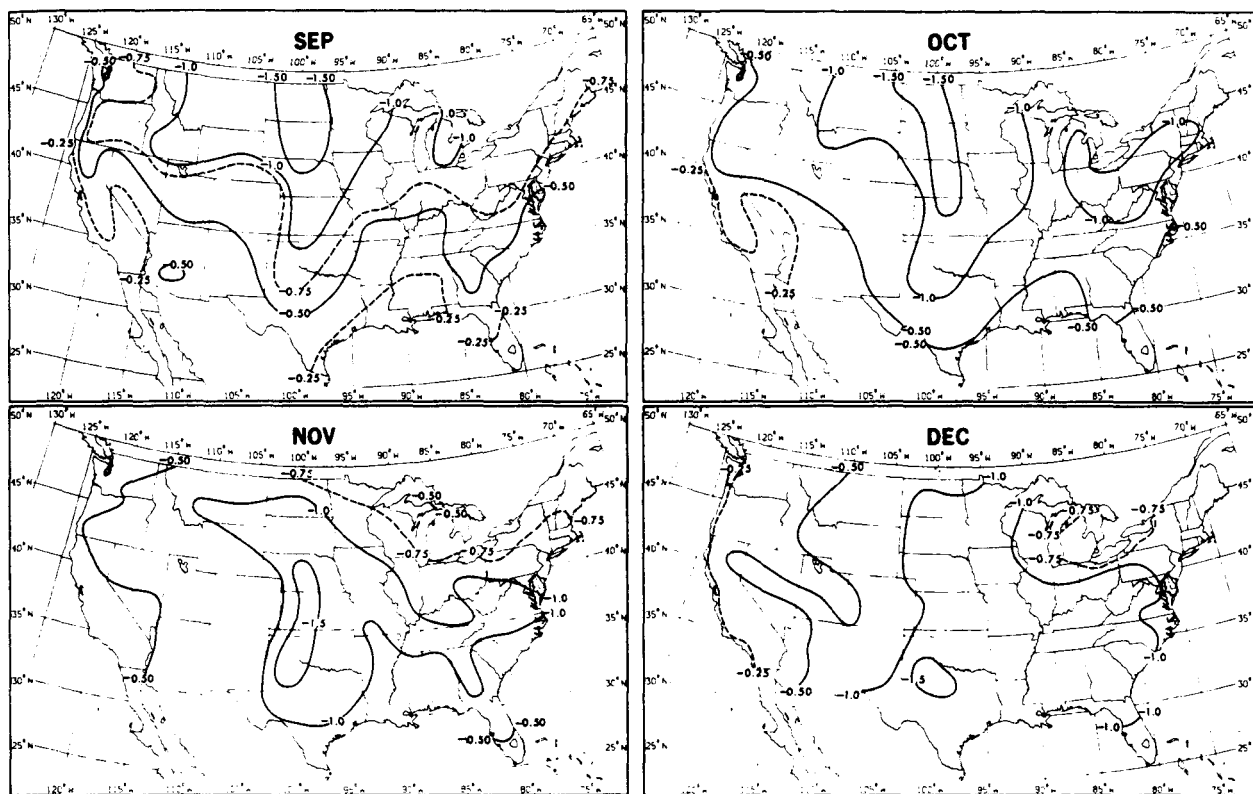


FIG. 4. (Continued)

1964. After 1964 only three-hourly data were routinely digitized onto magnetic tape. (Efforts are currently underway at NCDC to keypunch hourly data for many stations since 1965.) For these reasons seven years of hourly data (1958–64) were used at 107 first order stations in the United States to develop equations which can be used to predict the TOB (Fig. 4). Of these 107 stations, 79 were used to develop the equations, and 28 were reserved as an independent test sample.

The choice of stations was based on their spatial distribution and their station histories. Spatial station relocations were limited to less than 1500 m except for two stations—Asheville, North Carolina, and Tallahassee, Florida. These stations had relatively large station moves, 20 km and 5 km respectively, but they were retained because of their strategic location with respect to topography and major water bodies. At 72 of the 79 stations used to develop the TOB equations, temperature was recorded very close to 2 m above the surface. At the remaining seven stations, the instruments were repositioned from heights in excess of 5 m to those near 2 m sometime between 1958 and 1964. Changes in instrument heights from the 28 independent stations were more frequent: at nearly 50% of these stations the height of the instruments was reduced to 2 m above the ground from heights in excess of 5 m sometime in the same period.

The effects of changing instrument heights and station relocations, however, are probably less significant than the fact that hourly data were used to estimate the TOB rather than the actual highest (maximum) and lowest (minimum) temperatures during any 24-hour period (Mitchell, 1958). This latter effect was further investigated at four stations—Seattle, Washington; Bismarck, North Dakota; Tucson, Arizona; and Savannah, Georgia—by comparing the actual midnight-to-midnight maximum and minimum temperatures with those obtained from hourly data. The difference between the true 24-hour maximum as opposed to the highest of 25 hourly observations was nearly twice as great in summer as in winter, but less seasonal variation was noted for the minimum temperature (cf. Table 3). No systematic relationship between the magnitudes of the differences could be detected from the data of the four stations. Attempts were made to estimate the true maximum and minimum on a daily basis from the hourly data by using cubic splines, consideration of the random effects of rounding to the nearest whole Fahrenheit degree (about one-half Celsius degree), and hourly estimates of boundary layer stability based on the Pasquill stability categories (Doty et al., 1976). However, little success was achieved. We conclude, as do Collison and Tabony (1984) using data from England, that the failure of such methods suggests that

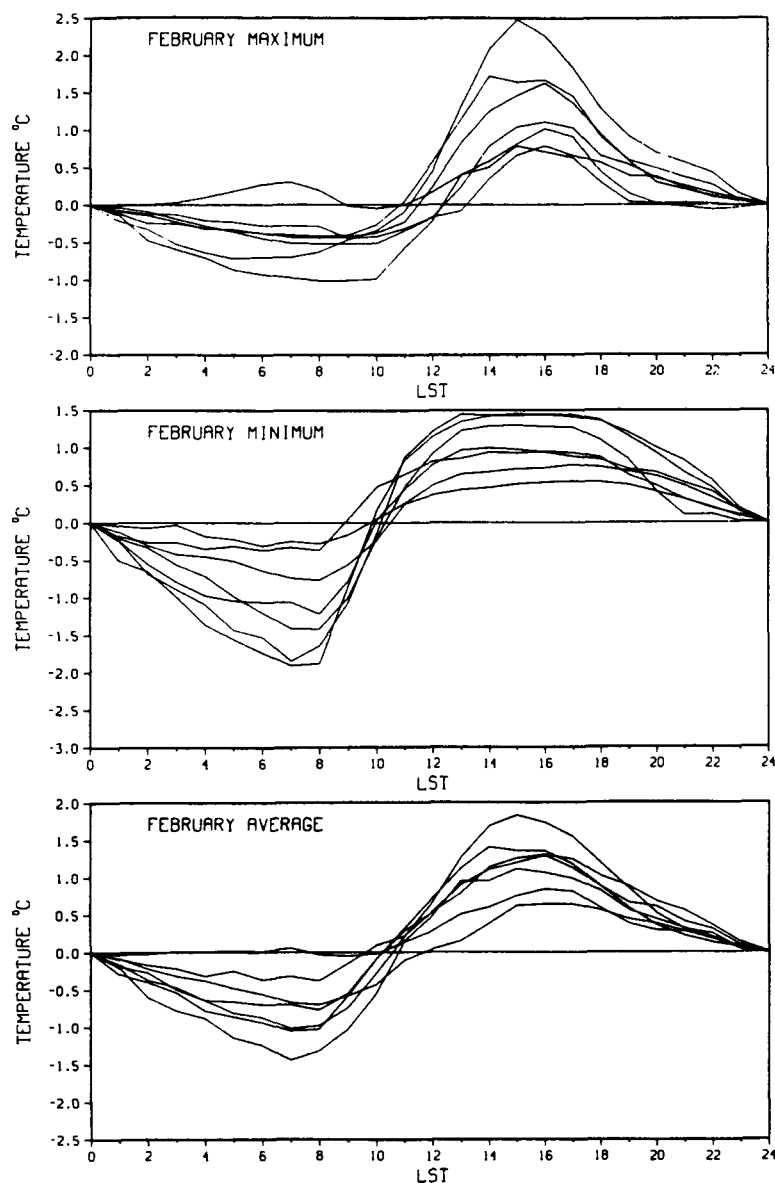


FIG. 5. Time of observation biases for each year 1958-64 for Bismarck, ND.

the actual daily maximum and minimum, relative to hourly readings, is the result of local site peculiarities and microscale processes, and is not well-related to synoptic-scale weather variations. For this reason we used site-specific average corrections to the hourly data to estimate the true daily maximum and minimum.

For example, Table 3 depicts the average corrections to the hourly data for Bismarck to obtain the true daily maximum and minimum. These corrections were applied, and the TOB was calculated and compared to the TOB obtained without using the corrections. The differences were negligible, i.e., less than 0.03°C for all

TABLE 3. Mean difference of hourly maximum and minimum temperatures from the true 24-hour maximum and minimum temperature at Bismarck, ND.

Temperature difference	Month												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Ann
Maximum ($^{\circ}\text{C}$)	-0.23	-0.31	-0.38	-0.43	-0.47	-0.53	-0.50	-0.50	-0.47	-0.35	-0.31	-0.25	-0.39
Minimum ($^{\circ}\text{C}$)	0.54	0.50	0.46	0.47	0.44	0.44	0.41	0.43	0.44	0.44	0.53	0.58	0.47

months and hours for the four stations tested. In hindsight, this is not a surprising result because the effect of underestimating the maximum, and overestimating the minimum is only important on days with a carry-over (i.e., usually just prior or subsequent to a period when there is a significant change in the daily mean temperature) of the maximum or minimum temperature of the previous day. This carry-over is often much larger than the average difference between the true maximum (minimum) and the hourly maximum (minimum) (Fig. 2).

4. Development of the TOB model

a. The basic form of the model

The development of the TOB model is based on the concepts set forth in section 2. The goal of the model is to predict the TOB by using readily available climate information, and not resorting to hourly data at nearby first order stations. The approach taken was to use multilinear regression equations, i.e., the coefficients of equations are linear, but the equations themselves involve products or quotients of dissimilar variables. (In the traditional terminology of linear regression these terms are often referred to as the "interaction effects.") The form of the multilinear regression equation is given by Law et al. (1984). As related to our problem it can be defined by

$$DCTOB_{mo,i} = a(\delta_{mo}\rho_{mo}B_{smo,i}) \quad (2)$$

where the subscript i represents an hour of a specific month (mo) and smo represents the local solar month; a is a coefficient to be determined by a least-squares procedure, and B is the base curve for the maximum, minimum or mean temperature. The base curve B , is the time series of TOB _{i} averaged from all 79 dependent stations (triangles in Fig. 3) for each local solar month and hour, where the hours are averaged with respect to hours before or after sunrise. We have defined a local solar month by the maximum elevation of the

TABLE 4. The limits of the maximum solar elevation (degrees) above the horizon for each of the 12 solar months.

Solar month	Range of maximum solar elevation
1	$X < 22.5$
2	$22.5 \leq X < 28.5$
3	$28.5 \leq X < 34.5$
4	$34.5 \leq X < 40.5$
5	$40.5 \leq X < 46.5$
6	$46.5 \leq X < 52.5$
7	$52.5 \leq X < 58.5$
8	$58.5 \leq X < 64.5$
9	$64.5 \leq X < 70.5$
10	$70.5 \leq X < 76.5$
11	$76.5 \leq X < 82.5$
12	$X \geq 82.5$

TABLE 5. Percent of the total variance of the DCTOB explained by the base B .

Month	Maximum (%)	Minimum (%)	Mean (%)
Jan	81	89	88
Feb	85	86	88
Mar	85	89	90
Apr	87	88	91
May	83	83	84
Jun	77	73	78
Jul	76	74	78
Aug	79	72	80
Sep	78	76	81
Oct	84	82	86
Nov	83	88	89
Dec	80	85	86
Mean	81.5	82.1	84.9

sun above the horizon for the fifteenth of that month, for a given station location. Table 4 contains the class limits of the sun's elevation above the horizon for each of 12 solar months used in this study. We have arbitrarily chosen to divide the maximum solar elevation above the horizon into 12 categories across the United States. In practice this means that we actually average the base curve across the standard calendar months, but this prevents us from averaging across large latitudinal cross section of the country, i.e., from Florida to Maine. In this regard the general shape of the diurnal cycle of the DCTOB is more consistent than it would have been by averaging over the standard calendar months. An approximate form of Eq. (1) is used to obtain the TOB _{i} once the DCTOB _{i} has been estimated:

$$TOB_i = DCTOB_i + [(T_{ma} - T_{mb})/60][(i - 24)/24], \quad (3)$$

where the subscript mb represents the month before mo, and ma represents the month after mo.

b. The base curve (B)

The role of B in Eq. (2) can be regarded as an initial estimate of the DCTOB. Since B is categorized with respect to the time of sunrise and maximum solar elevation, its configuration is a good estimate of the DCTOB. By averaging with respect to maximum solar elevation we avoid combining locations like Bismarck, North Dakota, and Tallahassee, Florida, during the same calendar month; and by averaging with respect to hours before and after sunrise we mitigate the problems associated with east-west changes in sunrise within the various time zones (section 2; Fig. 4). The amplitude of B is greater for low compared to higher sun elevations.

The significance of B can be evaluated by simplifying Eq. (2) to

$$DCTOB_{mo,i} = b(B_{smo,i}) \quad (4)$$

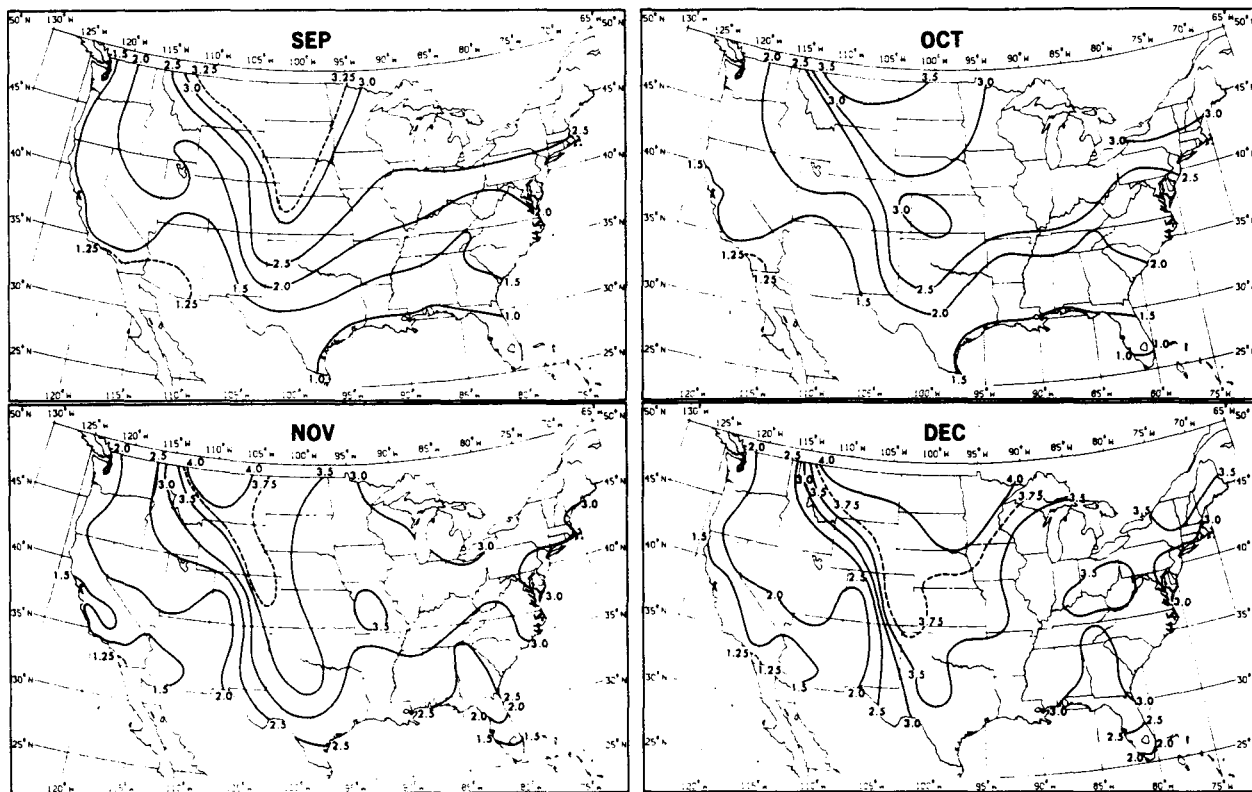


FIG. 6. (Continued)

The variance explained by B in Eq. (4) using data from all 79 dependent stations for each calendar month (Table 5) indicates that B is a very good initial estimate of the DCTOB. Of course, there is no possibility of obtaining any east-west gradients of the TOB using Eq. (4). From Fig. 4, we know that Eq. (4) is not an acceptable model.

c. Interdiurnal temperature differences (δ)

The 24-hour mean daily temperature was calculated for each station. Using this quantity the mean monthly absolute value of the day-to-day differences of the daily means (δ) was calculated for all stations. The spatial patterns of δ for each month are depicted in Fig. 6. The patterns indicate that this parameter is spatially coherent, and not subject to large spatial gradients except along the West Coast. This is a very desirable feature since it suggests that point values can be adequately estimated by simple interpolation from Fig. 6.

The values of δ at each of the 79 dependent stations were used to derive the coefficient c in the following bilinear equation:

$$\text{DCTOB}_{\text{mo},i} = c(\delta_{\text{mo}} B_{\text{smo},i}). \quad (5)$$

The effectiveness of such an equation is indicated in Table 6. The variance (R^2) of the TOB explained by Eq. (5) is extremely high during all months for the average temperature, somewhat lower (but still quite

high) for the maximum temperature, and lower still for the minimum temperature. A comparison of Tables 5 and 6 indicates that the introduction of δ has improved estimates of the DCTOB for all months and all elements.

d. Diurnal temperature range less interdiurnal variability (ρ)

The diurnal temperature range attributed to the diurnal temperature cycle was calculated for each sta-

TABLE 6. Percent of the total variance of the DCTOB explained by B and δ .

	Maximum (%)	Minimum (%)	Mean (%)
Jan	93	91	93
Feb	94	91	94
Mar	91	92	95
Apr	93	90	95
May	93	89	94
Jun	90	84	91
Jul	88	82	89
Aug	90	81	91
Sep	91	85	94
Oct	93	89	95
Nov	90	92	95
Dec	85	89	91
Mean	90.9	87.9	93.1

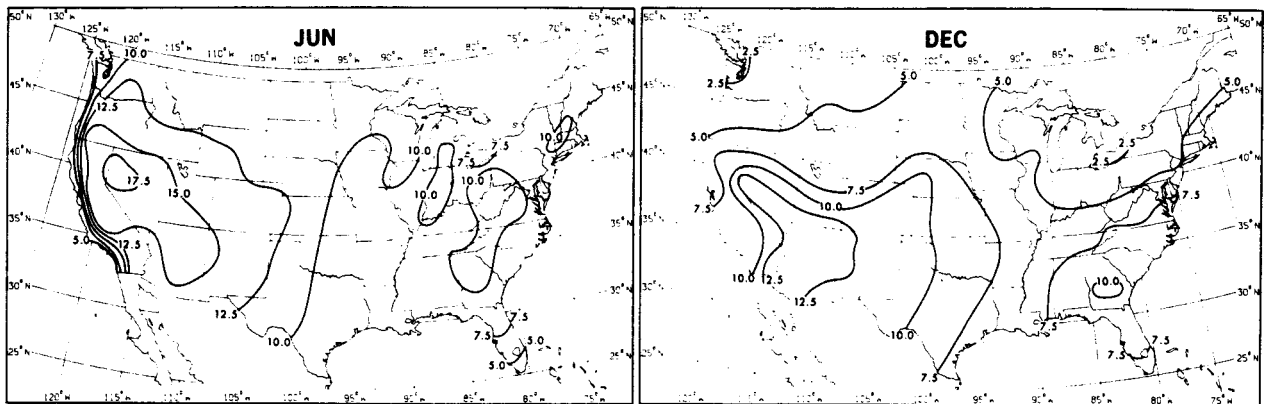


FIG. 7. Spatial patterns of ρ , the diurnal temperature ($^{\circ}\text{C}$) range, after removing the effects of interdiurnal temperature variability.

tion by implicitly removing the effects of δ . This procedure involves the calculation of the hourly mean temperature for each month using all seven years of data. The difference between the highest and lowest hourly mean temperature is a measure of the diurnal temperature range (ρ) without the effects of the interdiurnal variability (δ), assuming that δ is independent of the time of day. The other procedure whereby the temperature range is calculated each day and averaged across each month and year, implicitly contains some effects of interdiurnal temperature differences, δ . The magnitude and the spatial patterns of ρ are depicted for the two solstice months in Fig. 7. There is considerable spatial variation of ρ within a month and between these two months as well. The north-south gradient of ρ is relatively large during December, at least partially due to the relatively low solar insolation at the higher latitudes, and relatively little cloud cover in the Southwest. During summer the gradient of ρ has virtually vanished in the eastern United States. The most important aspect of Fig. 7 however, is the magnitude of ρ with respect to that of δ (Fig. 6). We see that ρ is usually much larger than δ . Only during December at the northern stations do we find values of ρ nearly equal to δ . Based on our examples in Fig. 2 and Table 2 this indicates that ρ may be superfluous to the TOB model during many months.

The variance explained by the use of ρ , δ , and B [Eq. (2)] for each element indicates the addition of ρ actually reduces the total variance explained by the model (Table 7). When the variation of ρ is reduced by scaling to the 0.5 power before introducing it into Eq. (2), the variance explained by Eq. (2) increases (Table 7), but with respect to Table 6 not enough to warrant the general inclusion of ρ into the model. December is the only month when ρ enhances the value of Eq. (2) with respect to that of Eq. (5). An F-test indicates that the increase in variance explained with the addition of ρ is significant at the 0.01 level for both the maximum and mean temperature. This is attributed to the magnitude of δ and ρ at the northerly lo-

cations during this time of the year. In fact, a significant portion of the increase of variance in Eq. (5) is due to better estimates of the TOB at the most northerly locations. In December the use of Eq. (2) tends to overpredict the TOB at the most northerly stations for all three elements considered: maximum, minimum, and the mean. Since Eq. (5) explains a few percent more than the total variance of the DCTOB explained by Eq. (2), and it is simpler than Eq. (2), we prefer Eq. (5) for all months except December; in December we use Eq. (2). We do not expect the DCTOB determined from Eq. (5) to apply to stations on isolated mountain peaks where ρ may be substantially less than δ . Even during December however, we do not expect very good results at these remote locations from Eq. (2), unless one has a reasonable estimate of ρ . On the other hand, no systematic error with respect to elevation was evident when Eqs. (2) and (5) were applied to our data set.

5. Independent tests using the TOB model

Equations (2), (3) and (5) were used to calculate the TOB at 28 independent stations for maximum, min-

TABLE 7. Percent of the total variance of the DCTOB explained by the B curve, δ , and ρ . Numbers in parentheses reflect the total variance for the same variables except the square root of ρ is used instead of actual values.

Month	Maximum (%)	Minimum (%)	Mean (%)
Jan	88 (89)	85 (90)	90 (94)
Feb	91 (92)	87 (91)	92 (95)
Mar	90 (92)	87 (91)	91 (95)
Apr	91 (93)	87 (89)	92 (94)
May	90 (92)	86 (88)	90 (93)
Jun	85 (89)	78 (82)	80 (89)
Jul	80 (85)	75 (79)	83 (85)
Aug	86 (89)	73 (78)	89 (88)
Sep	90 (92)	79 (83)	90 (92)
Oct	91 (94)	84 (88)	95 (94)
Nov	90 (92)	85 (90)	91 (95)
Dec	88 (89)	83 (89)	89 (93)
Mean	88.3 (90.7)	82.4 (86.5)	88.4 (92.3)

imum, and mean temperatures for all 12 months. The TOBs were predicted using a computer program which required as input the following quantities: month of interest, latitude, longitude, mean temperature of previous month, and mean temperature of the subsequent month. The values of δ and ρ for the 79 dependent stations and an additional 23 points along areas of sharp gradients, i.e., mainly West Coast locations, provided a grid of values for δ and ρ . In order to obtain δ and ρ between grid points a quadrant scan was made to detect the nearest grid point within each quadrant. A simple linear interpolation scheme was then applied to obtain the appropriate value for the specific location. The only restriction included the following distance check: if a station was more than 750 km from the interpolated position it could not be used. This is potentially important for stations located along borders of the United States so that stations in Florida are not used in interpolations in Texas, etc. Figure 8 summarizes these results for all 28 stations. The 16 and 84% confidence limits reflect the average uncertainty of the observed TOB at any single station. This is defined by using the sample standard deviation s of the hourly estimates of the true TOB for each month (cf. Fig. 5) to obtain the uncertainty s_u associated with the estimate of the true TOB at each station. The result is $s_u = s/\sqrt{n}$, where n

is the number of years of data. The values of s_u are pooled from all 28 stations to obtain the 16 and 84% (one sigma) confidence limits in Fig. 8 (the "I's"). The two thick curves represent the standard deviation of the observed TOB minus the predicted TOB from all 28 stations. The thin curve represents the average TOB predicted by the model, and it is used to detect bias, i.e., the tendency to consistently over- or under-predict.

The only indication of bias for the maximum temperature appears during the early morning hours in January and October, but even during these hours the model average is just barely outside the confidence interval of the observed TOB (e.g., the thin line beyond the confidence limits). The standard error of prediction varies from approximately 0.10 to 0.20°C near sunrise which is nearly as large as the actual TOB, but during the afternoon hours the standard error of prediction is usually between 0.15 and 0.30°C which is approximately one-fourth of the TOB.

The standard error of prediction for the minimum temperature at sunrise is 0.2–0.3°C at a time when the actual TOB is about three times as large. During the afternoon the standard error of prediction is reduced to 0.10–0.15°C or about one-third of the actual TOB bias. Figure 8 indicates a tendency to overestimate the TOB during the early morning hours in April, but to

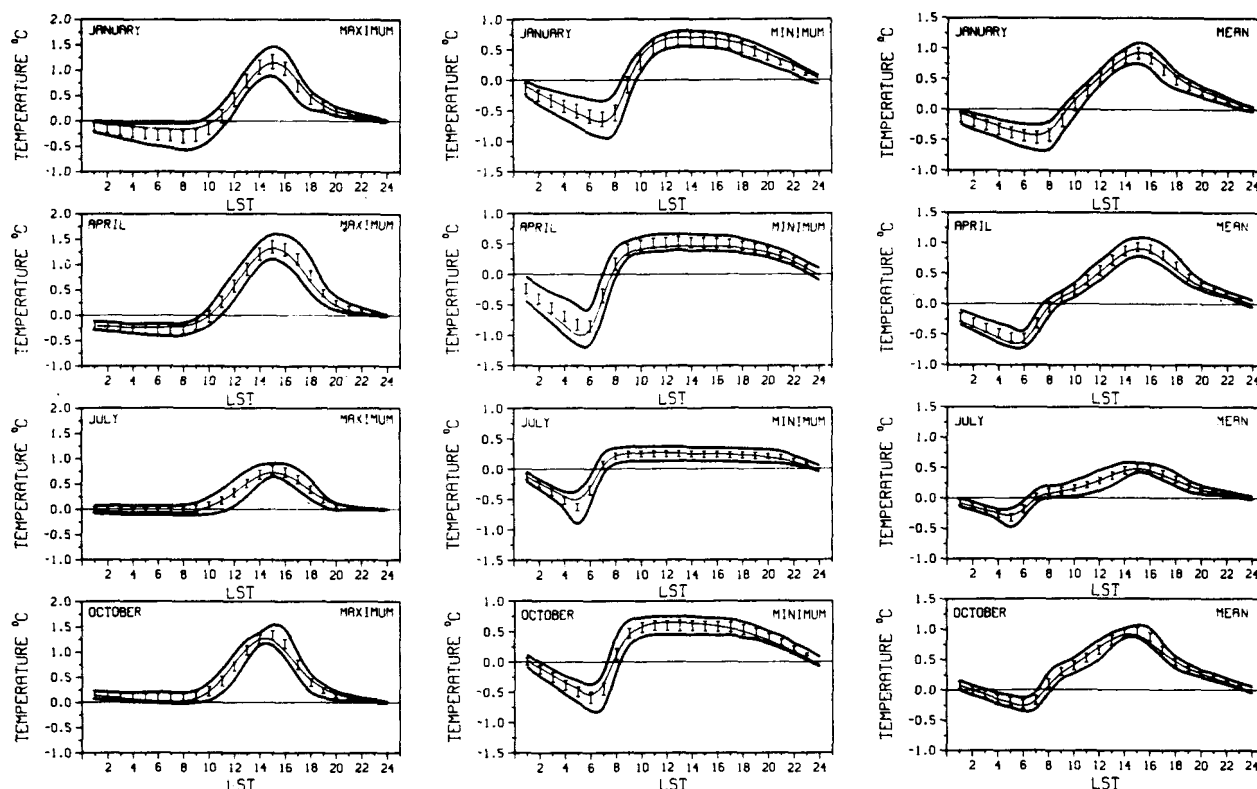


FIG. 8. Standard error of prediction of the model estimates of the TOB (two bold curves), the mean estimate of the TOB derived from the TOB model (thin curve), and the 16 and the 84% confidence limits of the mean observed TOB (capital "I") for all 28 independent stations. Cubic splines were used to smooth each curve.

underestimate during July. This may have arisen largely by chance since the months on either side of these two months have considerably less bias, and actually change sign for two of the four adjacent months.

The standard error of prediction for the mean temperature varies from approximately 0.15–0.20°C around sunrise to approximately 0.10–0.20°C during the afternoon. This is only moderately larger than the corresponding confidence limits for the estimate of the true TOB, and is about two to three times smaller than the observed TOB around sunrise, and about five times smaller than those during the afternoon. The average of the TOB predicted by the model (thin line Fig. 8) does not depict any serious over- or under-prediction, as the model predictions usually fall within the confidence limits during all hours of each month.

Similar to the results in the developmental data set the TOB model equations perform slightly better for the mean temperature compared to the maximum or minimum separately. This is not surprising since the influence of δ and ρ is spread over a greater time span, i.e., two values (maximum and minimum temperature) usually separated by several hours. The TOB model is least effective during the early morning hours for the maximum temperature because for this element this is a time when the TOB is relatively small.

6. Conclusion

We have shown that the TOB in the United States can be quite large—as much as 2°C—and that the difference in biases, e.g., when the observation time changes from the late afternoon to near sunrise, is even greater. We find a significant increase of “A.M.” observers with the demise of “P.M.” observers. This often means that spatial or temporal analyses of climate, especially climate change, based on cooperative weather stations must adjust the observations for the TOB.

We have developed a TOB model which can be used to estimate the TOB with reasonable accuracy at any location in the contiguous United States. The model is based on physically realistic principles. It should be generally applicable except for locations where the monthly mean diurnal temperature range (less interdiurnal variability) is less than the monthly mean interdiurnal temperature difference. Only small areas of the United States are exclusive to this method such as might be found on high mountain peaks. The main advantage of this model is that it eliminates the cumbersome task of obtaining hourly data at first-order stations, and then calculating and interpolating the TOB to the location of interest.

An ANSI (American National Standards Institute) FORTRAN-77 computer program is available from the authors at cost which includes the TOB model presented and tested herein. In this program we use data from 109 stations to fix δ and ρ , as well as the 23 additional points located in areas of sharp gradients. The program is written as a subroutine and requires the following specification: latitude of station, longitude of station, month of interest, hour of interest, estimate of the mean temperature of the subsequent month, and an estimate of the mean temperature of the previous month. Users can override the program's estimate of δ and ρ by entering their own values. The subroutine returns the TOB with respect to daily readings taken at midnight.

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APPENDIX

Development and Test Station List

Development Stations				Test Stations			
Station, State	Lat (N)	Long (W)	Elevation (m)	Station, State	Lat (N)	Long (W)	Elevation (m)
Miami, FL	25°49'	80°17'	2	Jacksonville, FL	30°25'	81°39'	7
Brownsville/Rio Grand, TX	25°54'	97°26'	5	Montgomery, AL	32°18'	86°24'	60
Tampa, FL	27°58'	82°32'	7	Macon, GA	32°42'	83°39'	109
Daytona, FL	29°11'	81°03'	9	San Diego, CA	32°44'	117°10'	6
Houston/Hobby, TX	29°39'	95°17'	15	Prescott, AZ	34°39'	112°26'	1529
New Orleans/Moisant, LA	29°59'	90°15'	1	Chattanooga, TN	35°02'	85°12'	205
Austin, TX	30°18'	97°42'	187	Bakersfield, CA	35°25'	119°03'	149
Tallahassee, FL	30°26'	84°19'	20	Greensboro, NC	36°05'	79°57'	272
El Paso, TX	31°48'	106°24'	1195	Norfolk, VA	36°53'	76°12'	8
Tucson, AZ	32°07'	110°56'	788	Springfield, MO	37°14'	93°23'	386
Savannah/Travis, GA	32°08'	81°12'	12	Roanoke, VA	37°19'	79°58'	363
Abilene, TX	32°26'	99°41'	534	Lexington, KY	38°02'	84°36'	298
Shreveport, LA	32°33'	93°46'	53	Goodland, KS	39°22'	101°42'	1113
Charleston, SC	32°54'	80°02'	12	Columbus, OH	40°00'	82°53'	248
				Harrisburg, PA	40°13'	76°51'	102
				Fort Wayne, IN	41°00'	85°13'	244

APPENDIX (Continued)

Development Stations				Test Stations			
Station, State	Lat (N)	Long (W)	Elevation (m)	Station, State	Lat (N)	Long (W)	Elevation (m)
Truth or Consequences, NM	33°14'	107°16'	1469	Cheyenne, WY	41°09'	104°49'	1871
Phoenix, AZ	33°26'	112°02'	338	Moline, IL	41°27'	90°31'	180
Birmingham, AL	33°34'	86°45'	186	Des Moines, IA	41°32'	93°39'	29
Lubbock, TX	33°39'	101°50'	988	Providence, RI	41°44'	71°26'	17
Los Angeles, CA	33°56'	118°23'	30	Erie, PA	42°05'	80°11'	223
Athens/Ben Epps, GA	33°57'	83°19'	243	Medford, OR	42°22'	122°52'	401
Santa Maria, CA	34°54'	120°27'	73	Sioux City, IA	42°23'	96°22'	333
Albuquerque, NM	35°03'	106°37'	1618	Madison, WI	43°08'	89°20'	262
Memphis, TN	35°03'	89°59'	80	Pendleton, OR	45°41'	118°51'	454
Zuni, NM	35°06'	108°48'	1963	Billings, MT	45°48'	108°32'	1088
Tucumcari, NM	35°11'	103°36'	1234	Yakima, WA	46°34'	120°32'	322
Amarillo, TX	35°14'	101°42'	1094	Fargo, ND	46°54'	96°48'	273
Cape Hatteras, NC	35°16'	75°33'	2				
Fort Smith, AR	35°20'	94°23'	140				
Oklahoma City, OK	35°24'	97°36'	390				
Asheville, NC	35°36'	82°32'	671				
Knoxville, TN	35°49'	83°59'	290				
Raleigh/Durham, NC	35°52'	78°47'	134				
Las Vegas/McCarran, NV	36°05'	115°10'	659				
Nashville, TN	36°07'	86°41'	178				
Fresno, CA	36°47'	119°42'	101				
Richmond, VA	37°30'	77°20'	48				
Bryce Canyon, UT	37°42'	112°09'	2315				
Dodge City, KS	37°46'	99°58'	791				
Evansville, IN	38°02'	87°32'	117				
Tonopah, NV	38°04'	117°05'	1654				
Sacramento/Executive, CA	38°31'	121°30'	5				
St Louis, MO	38°45'	90°23'	168				
Elkins, WV	38°53'	79°51'	600				
Topeka, KS	39°04'	95°38'	268				
Grand Junction, CO	39°07'	108°32'	1478				
Reno, NV	39°30'	119°47'	1340				
Denver/Stapleton, CO	39°46'	104°53'	1613				
Dayton, OH	39°54'	84°12'	305				
Red Bluff, CA	40°09'	122°15'	104				
Pittsburgh, PA	40°30'	80°13'	351				
Newark, NJ	40°42'	74°10'	3				
Salt Lake City, UT	40°47'	111°58'	1287				
North Platte, NE	41°08'	100°42'	848				
Chicago/Midway, IL	41°47'	87°45'	186				
Rawlins, WY	41°48'	107°12'	2053				
Hartford, CT	41°56'	72°41'	52				
Detroit City, MI	42°25'	83°01'	189				
Grand Rapids, MI	42°54'	85°40'	208				
Pocatello, ID	42°55'	112°32'	1360				
Syracuse, NY	43°04'	76°16'	122				
Rochester, NY	43°07'	77°40'	166				
Concord, NH	43°12'	71°31'	103				
North Bend, OR	43°25'	124°15'	3				
Boise, ID	43°34'	116°13'	866				
Portland, ME	43°39'	70°19'	19				
La Crosse, WI	43°56'	91°17'	202				
Huron, SD	44°23'	98°13'	391				
Burlington, VT	44°28'	73°09'	101				
Green Bay, WI	44°29'	88°08'	210				
Sheridan, WY	44°46'	106°58'	1202				
Portland, OR	45°36'	122°36'	6				
Miles City, MT	46°26'	105°52'	801				
Sault Ste Marie, MI	46°28'	84°22'	220				
Helena, MT	46°36'	112°00'	1187				
Bismarck, ND	46°46'	100°45'	503				
Seattle/Tacoma, WA	47°26'	122°18'	116				
Great Falls, MT	47°29'	111°22'	1117				
Spokane, WA	47°37'	117°31'	718				
International Falls, MN	48°34'	93°23'	359				

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An Approach to Adjusting Climatological Time Series for Discontinuous Inhomogeneities

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ABSTRACT

A method is described whereby climatological time series of temperature and precipitation can be adjusted for station inhomogeneities using station history information. The adjusted data retains its original scale and is not an anomaly series. The methodology uses the concepts of relative homogeneity and standard parametric (temperature) and nonparametric (precipitation) statistics. The technique has been tested in Monte Carlo simulations, and is shown to produce climatological time series more consistent with the concept of a homogeneous climate record than would otherwise be the case. Additionally, the technique provides an estimate of the confidence interval associated with each adjustment. It has been applied to over 1200 stations in the United States. In many instances the adjustments in temperature time series are substantial (as large as actual climate fluctuations during the twentieth century) often leading to a more consistent pattern of regional climate change than would otherwise be surmised from inspection of the unadjusted data.

1. Introduction

In recent years there has been a proliferation of climate analyses focusing on the problems of climate change. Many investigators have examined long term changes in temperature and precipitation (Jones et al., 1986; Diaz and Quayle, 1980; Wigley et al., 1985; Barnett, 1985; Williams and van Loon, 1976; van Loon and Williams, 1976a, 1976b; etc.) with increasing interest in the potential impacts of inadvertent man-made modification of the climate, e.g., increased concentration of greenhouse gases. Other studies have addressed the specific question of climate variability (Karl et al., 1984a; Karl, 1985; Agee, 1982; Thompson, 1975; Vining and Griffiths, 1985; Brinkman, 1983) using long periods of record. The modern historical record has also been used by dendrochronologists and paleoclimatologists to calibrate proxy data such as tree ring growth, pollen and marine plankton (Blasing and Duvick, 1984; Fritts et al., 1971; Webb and Wigley, 1985, etc.). Even the diagnostic studies of aperiodic events such as El Niño/Southern Oscillation, sunspot frequency, volcanic dust loading of the atmosphere, etc., often rely on a long climate record to draw inferences with respect to their impact on the climate.

The value of all these studies is no better than the data used to represent the modern historical climate record. Since this is the building block for so much work it is essential that the climatic record is represented by the best sources of data with a minimum of errors and biases. Both recent and not so recent articles suggest that this is often not the situation in many da-

taset (Karl et al., 1984b, 1986; Karl, 1985; Kukla et al., 1986; Schaal and Dale, 1977; Mitchell, 1953).

As general circulation models (GCM) continue to improve and provide more reliable regional information regarding the expected greenhouse warming (Schlesinger and Mitchell, 1985) it is inevitable that more interest will focus on regional climate and regional climate change. In this regard it is very important that the climate record be as free of station discontinuities and inhomogeneities (due to station changes and observation methods) as possible. Unlike hemispheric or global scale studies of climate change, the number of long-term stations on a regional basis, e.g., 2° latitude by 2° longitude, 50 000 km², agricultural reporting districts, climate divisions, etc., is much smaller by at least two orders of magnitude. Inhomogeneities that tend to offset each other when many stations are used, are much less likely to do so when smaller station networks are used to detect regional climate change. This paper focuses on the development and application of a procedure to systematically adjust individual time series of monthly temperature and precipitation for discontinuities due to nonclimate effects, i.e., station relocations, new instruments, changes in instrument heights, changes in observation schedules, etc.

2. Preliminary concepts

a. Homogeneity

Conrad and Pollak (1950) provide an exact definition of relative homogeneity: "A climatological series

is relatively homogeneous with respect to a synchronous series at another place if the temperature differences (precipitation ratios) of pairs of homologous averages constitute a series of random numbers that satisfies the law of errors." The underlying assumption behind such a definition is that variations in average weather have similar tendencies over rather large regions. For example, a cold winter in Massachusetts is usually accompanied by a cold winter in New Hampshire, and a very dry winter in central California usually occurs when the winter is very dry in northern California. Exceptions to these tendencies are not systematic in time, but rather are randomly distributed in time. Acceptance of the definition of relative homogeneity reduces the problem of determining whether two series are relatively homogeneous to one of a selection of appropriate inferential statistical methods. Conrad and Pollak (1950) also use the terminology absolute homogeneity if a third station is used and the differences (or ratios) of the three pairs of stations are all random. The goal of the work presented here is not, however, to identify homogeneous or inhomogeneous stations, but rather to use the concept of differences and ratios to adjust the climate record for discontinuous nonclimate biases which may have entered the climate record.

b. The use of differences or ratios

There are two important characteristics associated with the effective use of the method of differences (or ratios). Neighboring stations can detect discontinuities

at a specific candidate station (a station which may require adjustments due to nonclimate discontinuities) more readily when the correlation of monthly or seasonal anomalies of temperature or precipitation between the candidate and its neighbors are high and the year-to-year variances of the anomalies are small. Table 1 demonstrates this concept using three stations in the midwestern United States. Des Moines, Iowa (DSM) is used as the candidate (CAN) station and Grand Island, Nebraska (GRI) and Rockford, Illinois (RFD) as its neighbors. The observed correlation of July anomalies during the period 1961 through 1970 between DSM and GRI is 0.81 and between RFD and DSM, 0.84. The variance at GRI is twice that of RFD. It is rather obvious that the higher the correlation between the candidate and its neighbor, the easier it will be to detect a discontinuity, but it is less apparent that the variance also plays an important role. In order to illustrate this, the correlation between RFD and DSM is made identical to that between GRI and DSM, but the observed variance and mean is retained at RFD. The normalized anomalies of July temperatures at RFD are set equal to those at GRI by making use of the Z-score defined as

$$Z_{GRI,i} = (T_{GRI,i} - \bar{T}_{GRI})/s_{GRI} \quad (1)$$

where T_{GRI} is the monthly mean for year i at GRI and $\bar{T}_{GRI}$ is the 10 year mean and s is the standard deviation at GRI. The value of $T_{RFD,i}$ is found by

$$T_{RFD,i} = Z_{GRI,i}s_{RFD} + \bar{T}_{RFD}. \quad (2)$$

TABLE 1. The mean July temperature at Des Moines, Iowa (DSM) and two neighboring stations with identical normalized departures from the mean (Z-scores) and correlation with DSM (correlation = 0.81), but unlike year-to-year variances. A discontinuity (+0.5°C) is introduced into the record DSM between 1965 and 1966; RFD is the station identifier for Rockford, Illinois and GRI for Grand Island, Nebraska.

Year	Temperature (°C)								
	Monthly means			Differences		+0.5 Discontinuity differences		-0.5 Discontinuity differences	
	DSM	GRI	RFD	GRI-DSM	RFD-DSM	GRI-DSM	RFD-DSM	GRI-DSM	RFD-DSM
1961	23.37	24.92	22.45	1.55	-0.92	1.55	-0.92	1.55	-0.92
1962	23.48	22.14	20.51	-1.34	-2.97	-1.34	-2.97	-1.34	-2.97
1963	24.36	25.39	22.78	1.03	-1.58	1.03	-1.58	1.03	-1.58
1964	25.11	26.33	23.46	1.22	-1.65	1.22	-1.65	1.22	-1.65
1965	23.75	23.75	21.65	0.00	-2.10	0.00	-2.10	0.00	-2.10
Mean ₁	24.01	24.51	22.17	0.49	-1.84	0.49	-1.84	0.49	-1.84
1966	25.89	27.22	24.08	1.33	-1.81	0.83	-2.31	1.83	-1.31
1967	22.26	23.78	21.65	1.52	-0.61	1.02	-1.11	2.02	-0.11
1968	23.42	24.00	21.81	0.58	-1.61	0.08	-2.11	1.08	-1.11
1969	24.42	25.11	22.59	0.69	-1.83	0.19	-2.33	1.19	-1.33
1970	24.78	25.83	23.10	1.05	-1.68	0.55	-2.18	1.55	-1.18
Mean ₂	24.15	25.19	22.63	1.03	-1.51	0.53	-2.01	1.53	-1.01
Mean	24.08	24.85	22.41	0.76	-1.68	0.51	-1.93	1.01	-1.43
Variance	1.08	2.17	1.07	0.77	0.40	0.69	0.38	0.99	0.56
Mean ₁ - mean ₂	-0.14	-0.68	-0.48	-0.54	-0.33	-0.04	0.17	-1.04	-0.83

Next, the differences $T_{\text{GRI},i} - T_{\text{DSM},i}$ and $T_{\text{RFD},i} - T_{\text{DSM},i}$ are calculated, and a discontinuity (either $+0.5^\circ$ or -0.5°C) is introduced at DSM between the years 1965 and 1966. Because of the smaller variance at RFD compared to GRI, the variance of the difference series RFD-DSM is smaller than that at GRI-DSM. As shown in Table 1, the differences of the mean of the differences between RFD and DSM are closer to estimating the magnitude of both the positive and negative discontinuity introduced at DSM than those between GRI and DSM. This effect can be much larger when the variance of two neighboring stations is quite different, i.e., maritime versus continental. Furthermore, since the variance is usually substantially greater during winter compared to summer (differences substantially greater than those depicted in Table 1), consideration of a station's variance is quite important in any objective method which establishes general decision rules for assessing and adjusting for the magnitude and sign of a discontinuity.

Actually, if the mean temperatures at DSM (Table 1) in the first 5 years versus the second 5 years had been used to estimate the discontinuity, the differences between these periods would have closely matched the actual discontinuity. Despite this circumstance, such an approach cannot be used in practice because it precludes any possibility of climate variability and change.

For precipitation, ratios between the candidate (CAN) and a neighbor (NEIGH) are used instead of differences. Actually, the logarithm of the ratios are more physically meaningful quantities to use compared to the ratios themselves. For example, the ratios 0.50 and 2.00 are 0.5 and 1.0 units away from unity, but the logarithm of these values produce values equally distant from 0 (the logarithm of 1.0). This is desirable in the sense that a CAN with twice as much precipitation compared to its NEIGH is treated exactly opposite to the situation when it has only one-half of its NEIGH's precipitation.

c. Seasonal (or annual) versus monthly adjustments

The question arises regarding the appropriate month or month(s) over which the difference or ratio series should be calculated. Mitchell (1961) indicates that it is often difficult with respect to temperature to detect much in the way of changes of the difference series between seasons, and for precipitation it is often difficult to justify ratios for more than a few seasons, i.e., rainfall predominantly derived from convective versus stratiform precipitation. Additionally, it is usually advantageous to use a difference series or ratio series over a season (or seasons) compared to a single month since this usually reduces the variability of the difference series, and provides a better chance of detecting and adjusting for small inhomogeneities. On the other hand, if there is a good reason for suspecting important changes in the differences of one station to another

from one month to the next, then monthly difference series should be considered. In our analyses we use seasonal (sometimes annual) difference and log ratio series.

3. The method of adjusting for discontinuities

a. Data

The methodological approach for adjusting time series of temperature and precipitation is specifically developed to make use of station history information. Brower (1985) describes a Historical Climatological Network (HCN) in the United States which has over 1200 stations (Fig. 1). This network, consisting mostly of cooperative station data (most of which are in rural areas, over 70% have populations $< 10\,000$, and over 90% have populations $< 50\,000$), has detailed station histories which can be accessed by electronic computers as well as a relatively large number of long time series (≥ 80 years) with monthly temperature and precipitation data. The station history information can be used to ascertain all the information regarding changes in instrument locations (horizontal or vertical), changes in instruments, or changes in observation methods, i.e., tridaily observations, maximum/minimum observations, etc.

Given the availability of station history information, these data are used explicitly in the adjustment technique. Any change in instrument location, type of instrument, or averaging methods are treated as a potential station discontinuity, regardless of the magnitude of the change, i.e., a relocation of instruments by 20 m is treated the same as a relocation of instruments by 1 km. Microclimatological differences can often be quite substantial (Kalma et al., 1987; Carlson, 1986; Oke, 1978).

There are other methods which attempt to isolate—and to some extent adjust for—inhomogeneities in a station's climate record without explicitly considering station history information. Details of some of these methods are given by Maronna and Yohai (1978), Potter (1981), Mitchell (1961), and Alexanderson (1984, 1986). These methods are particularly useful for detecting undocumented station changes since they require no station history information. On the other hand, they must estimate the exact timing and number of discontinuities in the climate record which can be difficult, particularly when there are several station changes over the stations in the network. Mitchell (1961) indicates that ambiguous conclusions are possible when several neighboring stations do have inhomogeneities. Since station history information is not explicitly used in these methods, it complements the method, presented here, and can be viewed as a second (or first) step in an attempt to produce homogeneous records. Actually, some type of an iterative scheme making use of both approaches would be ideal, but no doubt a substantial undertaking.

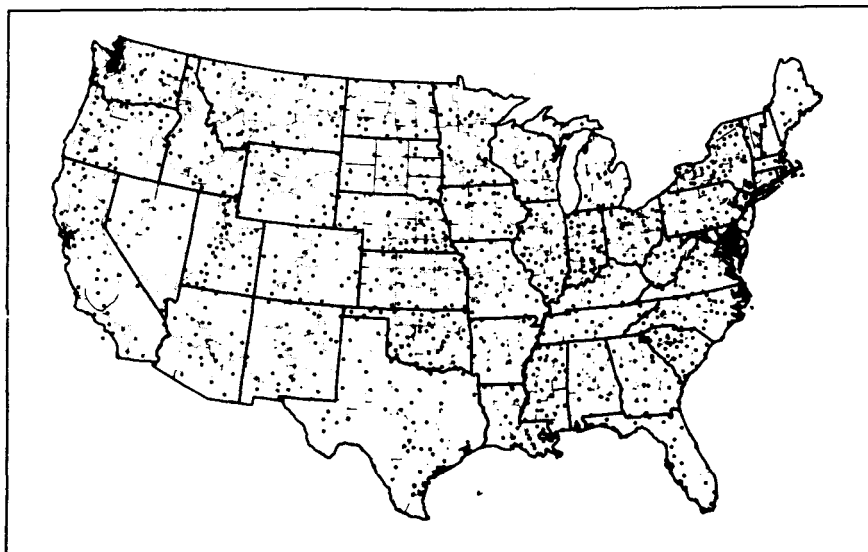


FIG. 1. Spatial distribution of the stations in the historical climatology network.

b. Adjustments and their associated confidence intervals

1) METHODS

There are several approaches that can be taken to adjust a station's records depending upon the homogeneity of the nearby stations with which it is compared. For example, if there is a nearby, already established homogeneous station with a reasonably high correlation of monthly anomalies between the two stations, the established homogeneous (HOM) station can be used to assess the impact of the candidate station's discontinuity. A simple *t*-test for temperature or the relatively powerful nonparametric Wilcoxon rank-sum test (Devore, 1982) can be used if the assumptions of normality and equal variances of the temperature difference series (d) or the log ratio difference series (r , the logarithm of the ratio of precipitation at the candidate station to the homogeneous station) before and after the discontinuity are thought to be invalid. The temperature or precipitation difference series can be bracketed into two parts $d_1(r_1)$ and $d_2(r_2)$. The statistical significance of the differences before (b) and after (a) the discontinuity in question can then be calculated. If the statistical test indicates that it is unlikely that the quantity $(d_{b,CAN-HOM} - d_{a,CAN-HOM})$ for temperature [or $(r_{b,CAN/HOM} - r_{a,CAN/HOM})$ for precipitation] has arisen due to chance, the CAN station should be adjusted (and the adjustment tested for statistical significance) to its longest period of record without any discontinuities. The reason why it is desirable to adjust to the longest period without discontinuities (indicated by the CAN history, remembering that in this case the CAN station is compared to a HOM) is attributed to the additional degrees of freedom gained by the statis-

tical test, viz., a greater number of years to compare changes in the difference or log ratio series. In this regard, for each discontinuity, the adjustments, if any, are related back to the climate monitored at the CAN during its longest period of apparent homogeneity.

Based on the station histories in the HCN there are few, if any, homogeneous stations. Each network of nearby stations contains its own station inhomogeneities so it is from these stations that adjustments for potential discontinuities must be assessed. For this reason several stations are used in the difference series and the adjustments are always made such that the most current homogeneous period (which contains at least 5 yr of data; cf. section 3b2 and step 6 of this section) is used as the base period to which all adjustments are made. This is necessary because very few stations have a long homogeneous record as indicated by the station histories. This avoids over reliance on one station which may have undocumented nonclimate changes in its climate record such as the gradual urbanization around the station or changes in the local environment. In this regard, the overall procedure of identifying and producing homogeneous station records can be considered a two-step process. First, documented station changes are assessed, and second, methods such as those discussed in section 3a can be used to identify undocumented biases. The method enumerated here addresses the first of these two steps.

The purpose of this technique is to produce climate time series, as free as possible of discontinuous station inhomogeneities. Ultimately, regional and local climate change can be investigated from these stations. Some measure of uncertainty about the adjustments is desirable. This measure of uncertainty has not been addressed previously, but given this information it could

prove quite useful in decisions regarding the ability to detect regional and local climate change above or below some threshold value. The uncertainty also provides some objective measure of selecting the most suitable stations for further analyses.

Another important characteristic of adjusted climate records with respect to regional climate change is the ability to retain the original measurement scale. Nelson et al. (1979) have provided a method where this is possible over climate divisions. This allows estimates to be made, even when using monthly data, regarding changes in quantities such as degree days, streamflow, etc. In studies of large geographic areas of climate change, this is not an issue of concern (Mitchell, 1961; Jones et al., 1986).

The use of at least several nearby stations requires a substantial quantity of electronic computer compatible data, particularly when station discontinuities are relatively frequent as in the United States (about six per century in the HCN). The methods used in this article for the HCN are given in detail. In some instances several decisions were made based on the HCN characteristics, i.e., station density, interstation correlation, variance, etc. Such decisions are noted and others who may choose to use this procedure (or variations of it) will need to consider any unique characteristics of their network. We point out these instances in the enumeration of the adjustment technique which is given as follows:

1) Identify and use as many of the candidate station's nearest neighbors as possible. Care should be taken to assure at least a positive correlation of anomalies with the candidate station. Another important aspect is that there are always at least several stations which have no changes in station history (potential discontinuities) during or on either side of a potential discontinuity at the candidate station. Due to the density of stations in the HCN the use of 20 nearest neighbors were chosen. This almost always resulted in significant positive correlations of anomalies (using standard statistical tests).

2) For the period of simultaneous operation, calculate the correlation of each of the nearest neighbors to the candidate station as well as the year-to-year standard deviation and means of each station over the seasons that will be used to assess and adjust for the impact of a potential inhomogeneity. For temperature and precipitation the four standard meteorological seasons were used for the HCN (winter: December, January, and February; spring: March, April, and May; etc.) but in special circumstances annual values were used. (Repeat step 1 using more or less neighbors if correlations are too low, negative or near zero, or station changes too frequent such that few, if any, stations have at least 5 yr of data without potential discontinuities themselves before and after discontinuities at the candidate station.)

3) For the candidate station, proceed backward in time and identify the year of the first potential discontinuity since the most recent discontinuity or the most recent year of data.

4) Form a difference series between the candidate and each of its nearest neighbors such that the number of years included in the difference series is limited by discontinuities in the CAN and NEIGH station. The number of years may differ from one NEIGH to the next. Figure 2 illustrates this concept.

5) For temperature, calculate the confidence interval using the Student's *t*-test for some preset significance level of the difference of the various difference series, *d*, before and after the potential discontinuity. This will result in one confidence interval for each difference series formed in step 4. For precipitation use the rank-sum confidence interval for the differences of the log arithm of the ratios. The calculation of the Student's *t* confidence interval and Wilcoxon rank-sum confidence interval can be found in Devore (1982) and many other statistical texts.

The "*t*" interval is given by

$$d_b - d_a + t_{\alpha/2, m+n-2} [s_p(1/m + 1/n)^{0.5}], \quad (1)$$

where

$$s_p = \{[(m-1)s_b^2 + (n-1)s_a^2]/(m+n-2)\}^{0.5},$$

and *m* is the number of years in the series before the discontinuity; *n* the number of years after the discontinuity; $t_{\alpha/2}$ the critical value of the *t* distribution for significance level α ; and s_b and s_a are the sample standard deviations before and after the potential discontinuity, respectively. The quantity $d_b - d_a$ is used as the offset of the potential discontinuity.

The Wilcoxon rank-sum interval can be obtained by calculating all possible differences for each year *i* of $r_{b,i}$ with each $r_{a,i}$. This will result in *m* times *n* differences. If these differences are ordered from lowest to highest the rank-sum interval is given by

$$r_{(mn-c+1)} r_{(c)}, \quad (2)$$

where *c* is the critical constant for the two-tailed, significance level for the Wilcoxon rank-sum test. The equation

$$C = (mn/2) + Z_{\alpha/2} \{[mn(m+n)]/12\}^{0.5} \quad (3)$$

provides good approximations for *C* down to sample sizes ≥ 5 yr before and after the potential discontinuity. The quantity $Z_{\alpha/2}$ is the standard normal deviate (*z*-score) for significance level ($\alpha/2$). The offset for the potential discontinuity is defined by the midpoint of the confidence interval $r_{(mn-c+1)}$, $r_{(c)}$.

The rank-sum interval gives up little with respect to the *t*-interval (Devore, 1982) even when the populations are normal, and in non-normal populations where the tails are heavy the interval may be considerably shorter than the *t*-interval.

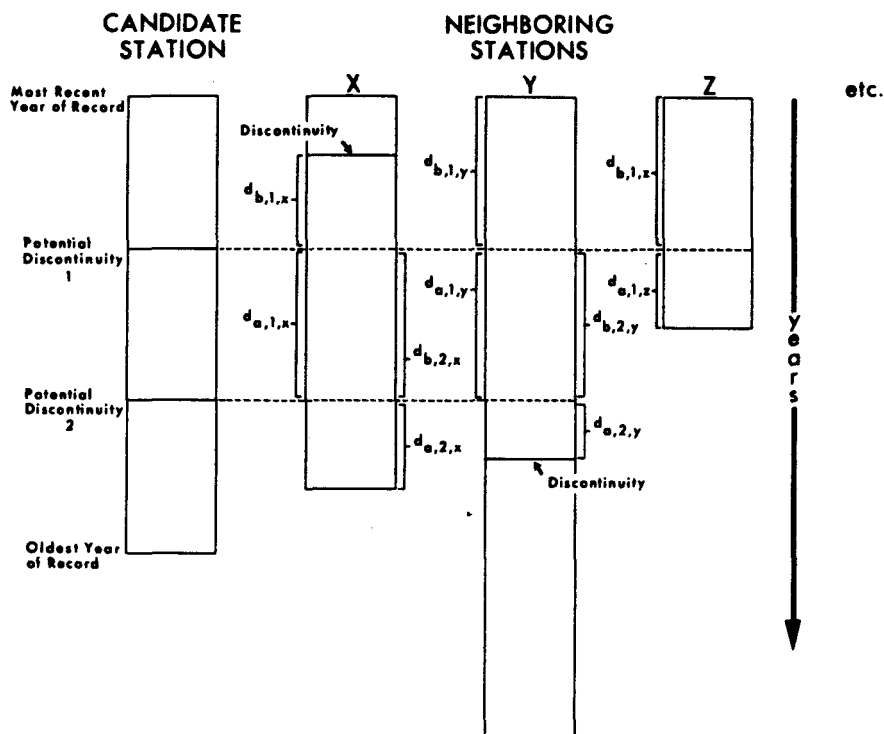


FIG. 2. Schematic of the procedure used to define the number of years in each difference series, d_x , d_y , and d_z bracketing a potential discontinuity at the candidate station.

6) Next, the width of the confidence intervals are ranked from narrowest to widest. If a sufficient number of years without potential discontinuities is available at nearby stations all confidence intervals other than the narrowest are recalculated (as in step 5) over the years of common operation with the candidate station straddling the potential discontinuity in question. At this point the two narrowest confidence intervals are identified and their original observations are merged together by a weighted average. That is:

$$d_{xy} = [CI_x / (CI_x + CI_y)] d_x + [CI_y / (CI_x + CI_y)] d_y. \quad (4)$$

Each set of observations is weighted by the width of its respective confidence intervals.

As before, the number of years over which the confidence interval (CI) is calculated must not contain potential discontinuities in any of the stations used (Fig. 2). If the resulting CI is wider than the CI calculated at the previous step, then proceed on to the next step in the process, and use the number of neighbors from the previous weighted average. Otherwise, merge in the next smallest CI and repeat the procedure. If there are fewer than two stations available that span at least 5 yr before and 5 yr after a potential discontinuity, stop and reassess whether enough information is available to correct for a discontinuity. In the HCN, as will be discussed in subsection 3b2, our tests indicate that when fewer than 5 yr of data or only one neighbor is available, satisfactory adjustments cannot be consistently made.

If all stations in the network of 20 neighbors are included (this would be very unusual) go on to the next step.

7) The CI calculated in step 6 will have a width that may include a zero offset or no difference in the difference series, $(d_{b,CAN-NEIGH} - d_{a,CAN-NEIGH}) = 0$. If this occurs, no adjustment to the candidate series is called for, but the CI of the potential discontinuity in the series is a measure of the uncertainty in estimating the magnitude of the potential discontinuity. For identical confidence levels as the width of the CI becomes smaller, the test will be able to detect smaller potential discontinuities. If the CI does not include zero, then this difference becomes a nonzero offset $(d_{b,CAN-NEIGH} - d_{a,CAN-NEIGH})$, and it replaces any previously retained offsets. Subsequently, it is added back to the candidate station for all the years after the potential discontinuity in question, but only after all tests for potential discontinuities have been completed.

For precipitation, essentially the same procedure is followed, but log ratios are used in the difference series. If the CI includes zero, no adjustment is retained; otherwise the adjustment retained is the ratio $(10^{d_{b,CAN/NEIGH}} / 10^{d_{a,CAN/NEIGH}})$, and it replaces any previously retained offset factors. Finally, it is multiplied by the original candidate time series after all tests for potential discontinuities have been completed.

8) For subsequent potential discontinuities repeat steps 3 through 7. The total uncertainty in the estimate

of the total offset at some constant confidence level after the j th discontinuity is calculated by

$$\text{OFFSET}_j \pm \left[\sum_{i=1}^j (w_i/2)^2 \right]^{0.5}. \quad (5)$$

The width of the CI is w_i at the i th discontinuity for significance level α . This assumes that the offset for the $i-1$ potential discontinuity is independent of that in the i th discontinuity. Our results (section 3b2) indicate that this is a good assumption.

After all the potential discontinuities have been tested, then the confidence interval at each potential discontinuity can be used as a measure of how much confidence can be placed in the magnitude of any undetected potential discontinuities. It is entirely feasible that a CAN station with many adjustments may have a relatively narrow CI associated with each of its potential discontinuities and may be a more desirable station for studies of regional climate change than another station with few potential discontinuities. This can arise because of the characteristics of the CAN as well as the neighboring stations, i.e., small variances (year-to-year), high correlations with the candidate station, and/or few potential discontinuities. This will be demonstrated in a simulated dataset in subsection 3b2. In general, of course, stations with more discontinuities will have wider or larger CIs.

2) TESTING OF THE ADJUSTMENT SCHEME

The most important attributes of any scheme to assess or adjust station discontinuities is its ability to adjust the observations in the correct sense. In this regard, tests were carried out such that the appropriateness of any adjustments of the time series can be judged relative to a homogeneous series. This can be accomplished in two ways. First, stations that are relatively homogeneous for some given interval can be artificially made inhomogeneous by introducing an offset at a particular year. The ability of the adjustment scheme to find the appropriate adjustment can then be ascertained. There are several limitations in using this method to assess the value of any adjustment procedure:

1) Some procedure is required to ascertain whether the stations are relatively homogeneous to begin the tests;

2) The stations are assumed to have no undocumented biases or errors; and

3) The types of tests that can be performed are limited to the actual observations.

A preferred alternative solution is to select several networks of stations with known interstation correlations and variances and use the concepts from autoregressive modeling to simulate the observed data such that it is known to be absolutely homogeneous. Then biases of some magnitude can be introduced into the series using a simulated station history. These inho-

mogeneous data are then adjusted and the confidence interval of the adjustments estimated. These estimates are then evaluated with respect to the original data to assess the methodology.

Based on the annual mean temperature and precipitation for each of the candidate stations with over 80 yr of data to each of their 20 for all the stations in the northeast portion of the United States (approximately 150 stations), the variance explained by each of the candidate's 20 nearest neighbors was calculated and averaged across the 20 stations. This amounted to one value per candidate station or about 150 values. For temperature, the highest average variance explained was 0.72, the median 0.62, the tenth percentile 0.48, and the lowest 0.28, but for precipitation the respective average variances explained were 0.53, 0.43, 0.29, and 0.18. This is an important characteristic with respect to the ability of neighboring stations to detect a potential discontinuity at the candidate station. This information formed the basis for various scenarios of interstation correlations (or departures from the mean at the candidate explained by neighbors), year-to-year variances, and the magnitude of artificially generated discontinuities in the data. Specifically, for each of the average variances explained by the nearest 20 stations as identified by the position statistics above, i.e., for temperature 0.72, 0.62, 0.48 and 0.28; for precipitation 0.53, 0.43, 0.29, and 0.18, a total of 168 time series (21 stations times 8 sets) were generated such that each neighbor station had the same correlation with the candidate station and year-to-year variance as that observed in the original network of stations. This was accomplished using the following relationships:

$$X_{i,CAN} = (r_{-1}X_{i-1,CAN} + Z_i)s_{CAN}, \quad (6)$$

where $X_{i,CAN}$ is the candidate stations observation at year t , r_{-1} is the lag one autocorrelation, Z_i is an independent normal random deviate with mean zero (500 for precipitation) and standard deviation $(1 - r_{-1}^2)^{0.5}$. In this regard, any year-to-year persistence in the original series (often reflected as trends or vice versa) is preserved. We purposely neglect higher order autoregressive models because the variance density of the spectrum, beyond the annual cycle, is overwhelmed by white and red noise. The observations for the 20 nearest neighbors are then given by

$$X_{i,NEIGH} = [(r_{CAN,NEIGH}X_{i,CAN}) + Z_i]s_{NEIGH}, \quad (7)$$

where $r_{CAN,NEIGH}$ is the correlation of the candidate station with a specific neighbor and s_{NEIGH} is the year-to-year standard deviation of the neighboring station. By varying the size of s_{NEIGH} and s_{CAN} to one, three, and six times its observed value, three sets of simulations were produced for each of the four scenarios of average interstation correlations for temperature and precipitation.

The next step involved the introduction of the potential discontinuity. This was accomplished by using the normal random deviate with a mean zero but a

standard deviation (σ_m) equal to 0.1, 0.5, and 1.0 for temperature and 0.01, 0.03, and 0.05 for precipitation with mean equal to 1. For temperature, Fahrenheit units can be assumed since the data are originally measured in this system, but for precipitation these numbers are dimensionless since they are merely multiplication factors of the simulated data. In total, this produced 36 scenarios for temperature and 36 for precipitation with various combinations of interstation correlations (4), year-to-year variances (3), and standard deviations of the magnitude of the discontinuity (3) (cf. Table 2) ($4 \times 3 \times 3 = 36$). Each series consisted of 100 values.

The question remains as to a reasonable choice for the number and timing of the discontinuities in each of the 36 simulations. Technicians working with the station histories in the HCN indicated that about six discontinuities per 100 years of data was a reasonable

TABLE 2. Scenarios used to test the adjustment program for precipitation and temperature. Here T implies temperature, P precipitation, sim simulation, obs observed, and ρ^2 the average variance explained by each of the 20 nearest neighbors.

	$\rho^2_{CAN, NEIGH}$		$S_{can, sim}/$ $S_{can, obs}$	$S_{neigh, sim}/$ $S_{neigh, obs}$	$S_{discontinuity}$	
	P^*	$T^\dagger$			P	T
1	0.53	0.72	1	1	0.01	0.1
2	0.53	0.72	1	1	0.03	0.5
3	0.53	0.72	1	1	0.05	1.0
4	0.53	0.72	3	3	0.01	0.1
5	0.53	0.72	3	3	0.03	0.5
6	0.53	0.72	3	3	0.05	1.0
7	0.53	0.72	6	6	0.01	0.1
8	0.53	0.72	6	6	0.03	0.5
9	0.53	0.72	6	6	0.05	1.0
10	0.43	0.62	1	1	0.01	0.1
11	0.43	0.62	1	1	0.03	0.5
12	0.43	0.62	1	1	0.05	1.0
13	0.43	0.62	3	3	0.01	0.1
14	0.43	0.62	3	3	0.03	0.5
15	0.43	0.62	3	3	0.05	1.0
16	0.43	0.62	6	6	0.01	0.1
17	0.43	0.62	6	6	0.03	0.5
18	0.43	0.62	6	6	0.05	1.0
19	0.29	0.45	1	1	0.01	0.1
20	0.29	0.45	1	1	0.03	0.5
21	0.29	0.45	1	1	0.05	1.0
22	0.29	0.45	3	3	0.01	0.1
23	0.29	0.45	3	3	0.03	0.5
24	0.29	0.45	3	3	0.05	1.0
25	0.29	0.45	6	6	0.01	0.1
26	0.29	0.45	6	6	0.03	0.5
27	0.29	0.45	6	6	0.05	1.0
28	0.18	0.28	1	1	0.01	0.1
29	0.18	0.28	1	1	0.03	0.5
30	0.18	0.28	1	1	0.05	1.0
31	0.18	0.28	3	3	0.01	0.1
32	0.18	0.28	3	3	0.03	0.5
33	0.18	0.28	3	3	0.05	1.0
34	0.18	0.28	6	6	0.01	0.1
35	0.18	0.28	6	6	0.03	0.5
36	0.18	0.28	6	6	0.05	1.0

* $P = 500$, $\sigma^2(P) = \text{OBSERVED}$

$^\dagger T = \text{OBSERVED}$, $\sigma^2(T) = \text{OBSERVED}$

number to expect based on their experience with the station histories. The number, of course, could vary substantially from station to station. Using this information, a random number generator (congruence method) was used to simulate the probability of a station discontinuity at each of the stations in the network corresponding to the 100 yr of simulated data. Four stations were assigned a probability of 0.04 for a discontinuity, four a probability of 0.05, five a probability of 0.06, four a probability of 0.07, and four a probability of 0.08. Using these probabilities, the station with the fewest discontinuities had only 1, but the station with the largest number of discontinuities had 11. In order to produce several variations of the number of potential discontinuities at the candidate station, 21 sets of station histories were produced from the simulation by interchanging the history of the candidate station with each of the other station histories. This was accomplished by interchanging the candidate's history with the first neighbor, the first neighbor's history with the second neighbor's history . . . and the 20th neighbor with original candidate station's history. This process was repeated 21 times so that 21 sets of station histories, each set different from the other set, was produced for each of the 36 scenarios given in Table 2. In this manner each time a potential station history discontinuity was encountered, going back in time through the simulated station history, the time series from the next data point (or year) to the beginning of the series (the earliest year) was perturbed by an amount equal to P , where P is a standard normal deviate with the mean equal to zero and the standard deviation equal to that specified for the scenario under consideration. The original unperturbed series is always retained so that the adjustments could be evaluated for their accuracy as well as the appropriateness of the confidence intervals.

Another approach that could have been used to assess the value of the method would have been to determine the limit of detectability of discontinuities of some specified magnitude, with the magnitudes chosen as various multiples of the variance of the difference or log ratio series. There are several difficulties with this approach, however: first, the detectability of the discontinuity is a function not only of the magnitude of the discontinuity and the variance of the difference series, but also of the sample size (d_b and d_a); second, the treatment of individual discontinuities cannot be considered in isolation of other discontinuities since few series have only one potential discontinuity. That is, one erroneous adjustment, especially if made in the most recent period of record, would jeopardize the appropriateness of all other adjustments.

Figures 3 and 4 summarize the effects of the adjustments. Focusing on Fig. 3, several prominent features appear in all the scenarios regardless of the explained variance of the neighboring stations with respect to the candidate station. First, the higher significance or confidence levels have the smallest improve-

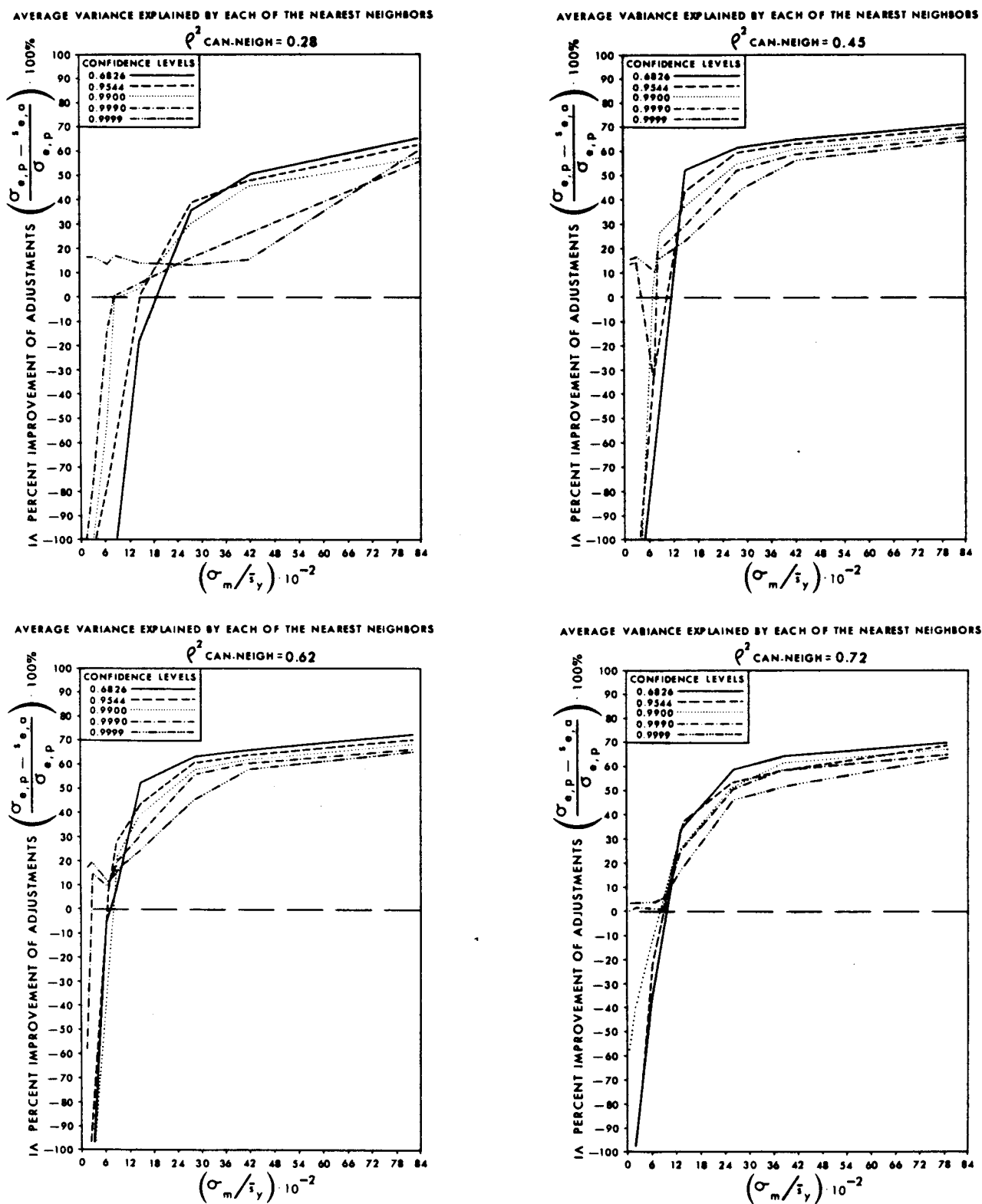


FIG. 3. For the t -interval (used for temperature series), the percent improvement of the adjusted data versus the ratio of the standard deviation of the discontinuity (σ_m) to the year-to-year standard deviation averaged over the network of 20 nearest neighbors ($\bar{s}_y$). Standard deviation of perturbed simulated data denoted by $\sigma_{e,p}$, and the standard error of estimate of the adjusted data denoted by $s_{e,a}$. $\rho_{\text{CAN-NEIGH}}$ is the average of the year-to-year variance explained by each of the 20 nearest neighbors.

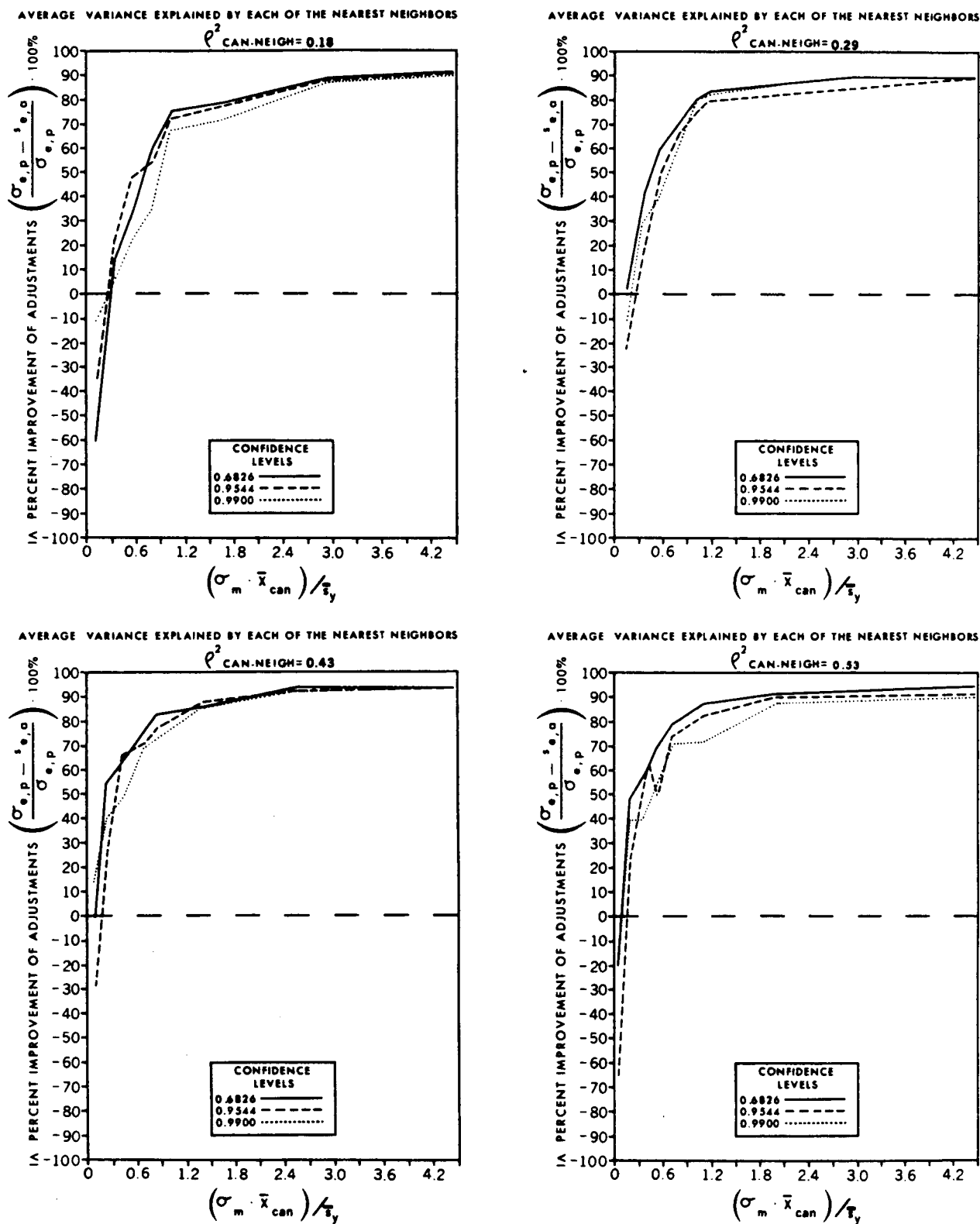


FIG. 4. As in Fig. 3 except for the case of precipitation series and nonparametric Wilcoxon rank-sum interval.

ment, with respect to making no adjustments whatsoever at large values of $\sigma_m/\bar{s}_y$, but they have the largest improvements when $\sigma_m/\bar{s}_y$ becomes small. The quan-

tity $\bar{s}_y$ is simply the square root of the year-to-year variances averaged over the 20 neighbors. Second, the higher significance level does not vary as dramatically

in its improvement with respect to making no adjustments compared to the lower significance levels. Third, the lower significance levels have the greatest improvement with respect to no adjustment when $\sigma_m/\bar{s}_y$ is large (>0.25). It is apparent that at the low confidence levels the line connecting identical confidence levels for various ratios of $\sigma_m/\bar{s}_y$ depicts a negative improvement with respect to no adjustment whatsoever as $\sigma_m/\bar{s}_y$ becomes small (<0.10) particularly as $\rho_{\text{CAN-NEIGH}}^2$ decreases. On the other hand, higher confidence level adjustments continue to improve upon the discontinuous series even for many low values of $\sigma_m/\bar{s}_y$ and $\rho_{\text{CAN-NEIGH}}^2$. If some assumptions can be made with respect to the magnitude of the smallest expected potential discontinuities in the climate record, then some guidelines can be developed with respect to the appropriate significance level to choose for the decision to adjust at each potential discontinuity in the station history. If the smallest standard deviation of discontinuities at any candidate station is assumed to be 0.2°F (0.1°C) with mean zero, virtually the limit of the resolution of the reported data, then rules can be adopted such that the significance level chosen for making an adjustment will in general improve upon the unadjusted data. For example, in Fig. 3, if the $\bar{s}_y$ is 0.5, then the ratio of σ_m to $\bar{s}_y$ is 0.40, and it appears the best confidence level for use is 0.68 for all four values of ρ^2 . This indicates that even when the discontinuity is small in magnitude and there are relatively poor interstation correlations, if the year-to-year standard deviation of the neighboring and candidate stations is *quite* small, it is advantageous to adjust with a relatively low significance level. On the other hand, when $\bar{s}_y$ is large and σ_m small, then it pays to be very conservative in the adjustment procedure, and the use of a high confidence level would be recommended, i.e., 0.9999. An evaluation of the errors in the adjustments indicates that this is often due to the fact that when the ratio of σ_m to $\bar{s}_y$ is small, one poor adjustment can totally cancel out many good adjustments, particularly if the poor adjustment occurs near the most recent years of record.

Figure 4 depicts the characterization of the most appropriate confidence levels for use with precipitation series. Only three confidence levels are represented due to the formulation of significance levels of nonparametric tests with small sample sizes. The abscissa in these diagrams has the ratio $\sigma_m/\bar{s}_y$ multiplied by the mean of the candidate station $\bar{X}_{\text{CAN}}$. The rationale for this stems from the fact that the discontinuities for precipitation are obtained by multiplication of the observed simulated value by σ_m (as opposed to addition for temperature). As described earlier, the ratio method has long been accepted as an effective means of representing differences of precipitation between stations (Kohler, 1949; Conrad and Pollak, 1950). Using this concept, the magnitude of the discontinuity is also a function of the mean precipitation.

The primary difference between Figs. 3 and 4 is the small difference between the various confidence inter-

val's percent improvement for the nonparametric test and the relatively large difference for the parametric t -test. Since the narrowest confidence interval (lowest confidence level) provides slightly better adjustments than the wider confidence intervals (highest significance level) for most values along the abscissa it is used for all adjustments with respect to precipitation.

In each of the 72 scenarios the accuracy of the CIs was determined by calculating the percent of time the original unperturbed data fell into the calculated CI. The results were satisfactory with all of the CIs spanning the original data reasonably close (within a few percent) to the expected frequency. From these results it was apparent that when adjustments were poor, and not properly correcting for the inhomogeneities (less than 0% improvement), it was due to a few very poor adjustments with respect to the original unperturbed data.

Based on the results from the 72 scenarios and 21 sets of station histories for each scenario, it was also determined that at least 5 yr of data before and after each potential discontinuity should be available before an assessment of the magnitude of the potential discontinuity is attempted. As indicated in section 2b1 (step 6), when there are fewer than 5 yr of data available, the adjustment scheme ignores the potential discontinuity and adjusts back to the previous discontinuity. In the HCN this usually occurs in the nineteenth century when many stations begin to drop out of the network or when stations have frequent changes.

Based on Figs. 3 and 4, decision rules for adjustment were developed using the assumption that on the average, the true σ_m that would be expected for a series of station discontinuities would be 0.2°F (0.1°C) for temperature and a 3% change in the precipitation record. In effect this means that about 95% of all station moves or new instruments produce no more than $\pm 0.4^\circ\text{F}$ (0.2°C) bias in temperature and a bias of $\pm 6\%$ with respect to precipitation. These criteria are used as the basis for the decision regarding whether adjustments should be attempted. If the true standard deviation of the moves is larger, then by being overly conservative we choose not to introduce errors at stations which may already be reasonably homogeneous as opposed to moderately reducing large inhomogeneities at stations which have many discontinuities. On the other hand, if the true standard deviation of the moves is less than that assumed the opposite is true. The various significance levels and decision rules for $\rho_{\text{CAN-NEIGH}}^2$, $\bar{X}_{\text{CAN}}$, and $\bar{s}_y$ which were used, based on the HCN, are given in Table 3. The decision rules for adjusting the time series are derived using the relationship

$$\sigma_m/\bar{s}_y < \Phi \quad (8)$$

for temperature, and

$$\sigma_{mp}\bar{X}_{\text{CAN}}/\bar{s}_y < \Phi \quad (9)$$

for precipitation, where Φ is the point on the abscissa (Figs. 3 and 4) of no improvement or a larger percent improvement using another confidence level; $\bar{X}_{\text{CAN}}$ is

TABLE 3. Confidence levels used in the HCN adjustment program for various means ($\bar{X}$), average interstation variances explained by each neighboring station ($\rho^2_{\text{CAN, NEIGH}}$), and the year-to-year standard deviation averaged across the network ($\bar{s}_y$). (ADJ implies adjustment.)

Temperature Adjustments		
$\rho^2_{\text{CAN - NEIGH}}$	$\bar{s}_y$ (°F)	Confidence level
<0.36	<0.9	0.6826
<0.36	>0.9 but <1.8	0.9500
<0.36	>1.8	0.9999
>0.36 but <0.54	<2.0	0.6826
>0.54 but <0.54	>2.0 but <3.0	0.9500
>0.36 but <0.54	>3.0	0.9999
>0.54 but <0.67	<2.0	0.6826
>0.54 but <0.67	>2.0 but <3.2	0.9500
>0.54 but <0.67	>3.2	0.9999
>0.67	<2.0	0.6826
>0.67	>2.0 but <3.2	0.9900
>0.67	>3.2	0.9999

Precipitation Adjustments		
(All adjusted using a confidence level of 0.6826)		
$\rho^2_{\text{CAN - NEIGH}}$	Adjust if	
<0.24	$(\bar{s}_y/\bar{X}_{\text{can}}) < 0.1$	
>0.24 but <0.36	$(\bar{s}_y/\bar{X}_{\text{can}}) < 0.2$	
>0.36	$(\bar{s}_y/\bar{X}_{\text{can}}) < 0.3$	

the mean precipitation for one of the four seasons or the annual precipitation; and σ_{mi} and σ_{mp} are the standard deviations of the station discontinuity. For operational purposes, if the characteristics of the candidate station and 20 nearest neighbors fail (8) or (9) for seasonal averaging periods, annual values are used instead. If no adjustment is called for at this point, then the adjustments are not likely to make the data less biased than the original data, and in some instances they could make it considerably more biased. This rarely occurred in the temperatures series, but was not uncommon in the precipitation series, particularly in the warmer seasons in the dry western United States.

As was discussed in subsection 3b1, one of the main advantages of the approach used in this adjustment scheme is that CIs are provided for each adjustment. The extent to which each station can be determined to be free of discontinuities is provided by these CIs. Those stations with the narrowest CIs are those to which the most confidence can be attached. It cannot be inferred, however, that stations with wide CIs are necessarily contaminated with nonclimatic biases. Instead, based on the climate network, it cannot be ascertained as to whether their record is relatively free of discontinuities. Another important characteristic of the method relates to the fact that, unlike some methods (Nelson et al., 1979), adjustments are not made for every potential discontinuity. Instead they are based

on the results of Monte Carlo simulations which capture many of the important characteristics of the data.

4. Adjustments: Examples

Several examples are provided which illustrate the impact of the adjustment scheme on the original observations. In these examples, discontinuities for changes in the ending time of the climatological day with respect to maximum and minimum temperature (Mitchell, 1958) were not treated as discontinuities, although they could have been, but the model developed by Karl et al. (1986) was used to adjust for these discontinuities. Each station was made consistent with a midnight-to-midnight observation schedule. On a monthly basis for a relatively long time series this effect is insignificant with respect to precipitation, and it was ignored. Additionally, missing data in the original series were estimated, but not used in the adjustment scheme, by a procedure identical to that described for the adjustments, i.e., estimates were based on the differences or log ratios with neighboring stations. In this regard, a confidence interval of the missing data estimate could also be provided. Furthermore, when potential discontinuities were too numerous to make adjustments (fewer than 5 yr before and after a potential discontinuity) then estimates of the original data were made by treating the data as if they were missing, consistent with the most recent location of the station's instruments or instrument type (or most recent location with at least 5 yr of operation).

a. Temperature

The time series of mean annual temperatures at four New England stations are presented in Fig. 5. All of these stations are within several kilometers of the ocean except for Amherst, Massachusetts. The stations are separated, at most, by approximately 150 km (Amherst to Block Island, Rhode Island) while some stations (New Bedford, Massachusetts to Block Island) are separated by about 50 km. Despite the proximity of these stations, the overall picture of the regional change in climate during the twentieth century is somewhat confusing as New Bedford depicts dramatic warming, Blue Hill, Massachusetts, gradual warming, and Amherst and Block Island, only slight warming. After making adjustments for potential discontinuities, the four stations depict a more coherent record of twentieth century climate change than do the original observations, namely, a progressive warming.

Many of the differences can be attributed to the great number of potential discontinuities at each station. Some of the noteworthy changes include a change in height of the thermometer above the ground at New Bedford, in 1974, from 1.5 to 17 m along with a 10 m decrease in station elevation and a 150 m station relocation. Additionally, the potential discontinuity in 1906 looks suspicious as the station moved about 160 m, its elevation above sea level decreased by 10 m, and

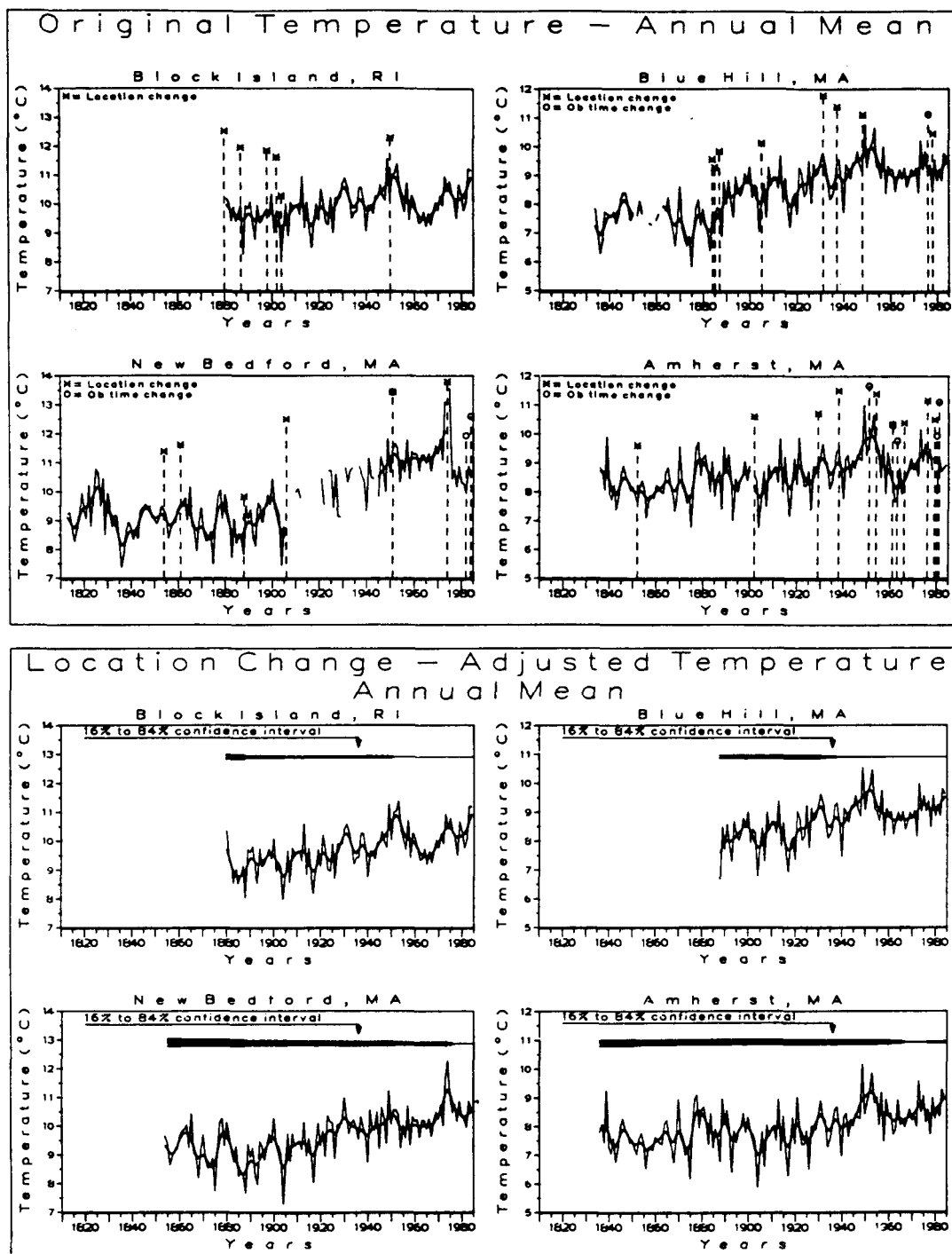


FIG. 5. Original, time of observation (ob) bias adjusted, and location change and time of observation bias adjusted mean annual temperatures. Smooth curve is a nine-point binomial filter truncated at the endpoints. The width of the confidence intervals are given for time of observation bias adjustments and location change adjustments.

it changed the method of calculating mean temperature by using maximum/minimum thermometers in place of tidally temperature observations from a dry bulb thermometer. At Amherst, there are many potential discontinuities in the record, especially in the 1950s and 1960s. Most of the changes are station relocations

and associated changes in its elevation above sea level. Blue Hill, Massachusetts has a number of potential discontinuities in its record, but most of the changes are not large except for a 4 m change in instrument height above the ground in 1887 (5.5 to 1.8 m) and again between 1931 and 1937 (1.8 to 5.5 to 1.8 m).

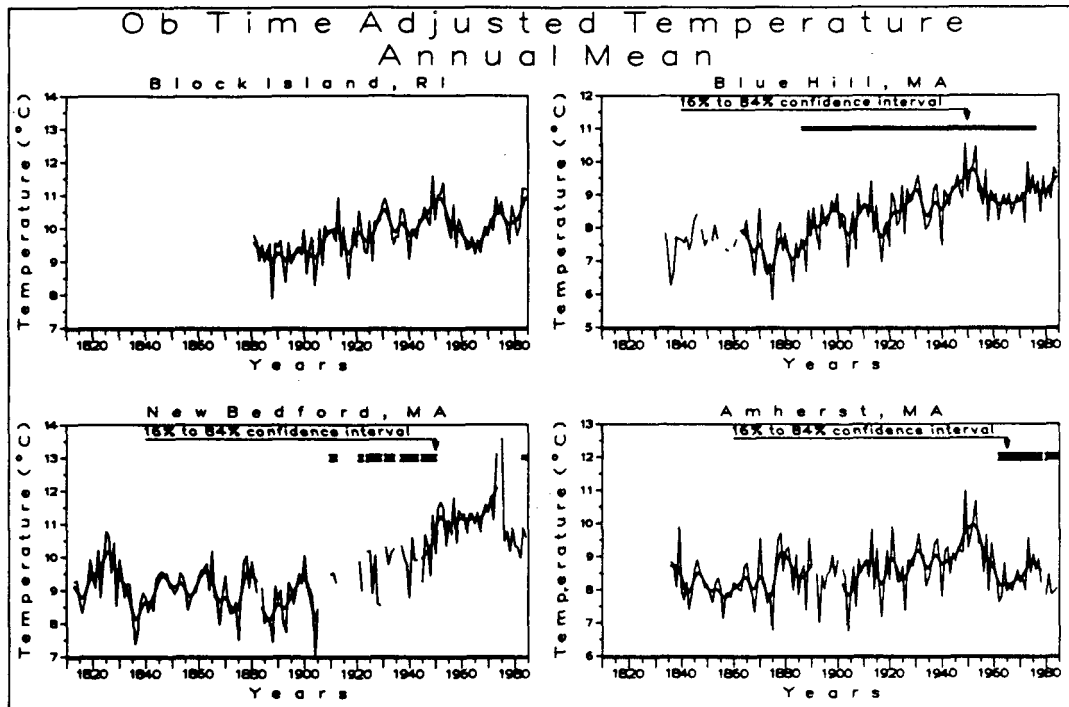


FIG. 5. (Continued)

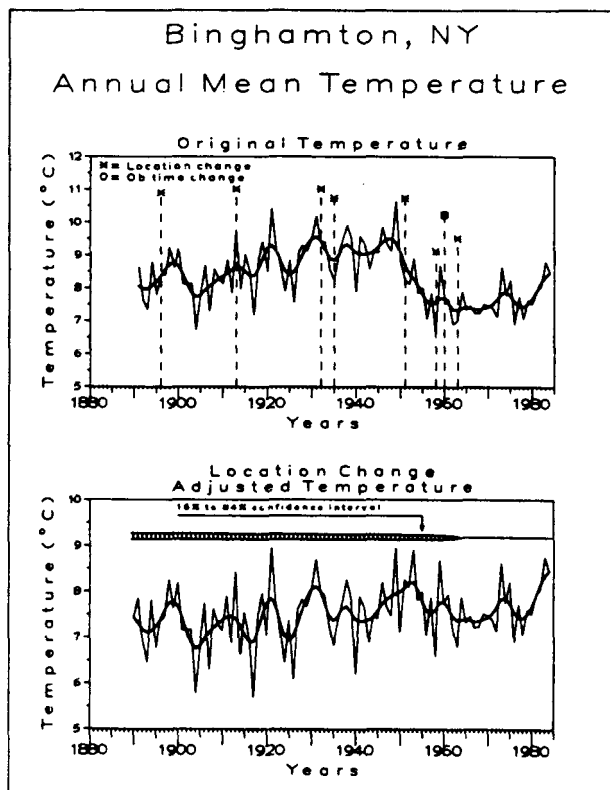


FIG. 6. As in Fig. 5 except no time of observation bias adjustments were needed.

Block Island has had one substantial move since 1904 as the station relocated 1 km in 1951 and changed its elevation by about 25 m.

An example of a rather large adjustment required at the beginning of a climate fluctuation is given in Fig. 6. In 1951 the Binghamton, New York station moved from the city to the airport, about 15 km north-northwest of the city location, and as a result its elevation changed by 225 m and the height of the thermometer above the ground was reduced from 17 to 1.2 m. This resulted in an exaggerated cool epoch in the climate record during a time when the region was already undergoing a relatively cool sequence of mean annual temperatures.

An example of some of the more subtle impacts of station inhomogeneities can be seen by examination of the original and adjusted data at Setauket, New York (Fig. 7). This station has a reasonably good station history, and it has been operated by the same family since 1885 with only one potential discontinuity which occurred in 1960. The station moved only 300 m, but a standard cotton region shelter was also introduced at this time and the ending time of the climatological day changed from 2100 LST to 1700 LST. Previous to 1960 a "window box" attached to a window on a north-facing unheated porch had been used to house the thermometers. The effect of moving the thermometer from the wall to an open field 300 m away from the house had a major impact on the minimum temperature and the range, and a lesser impact on the maxima

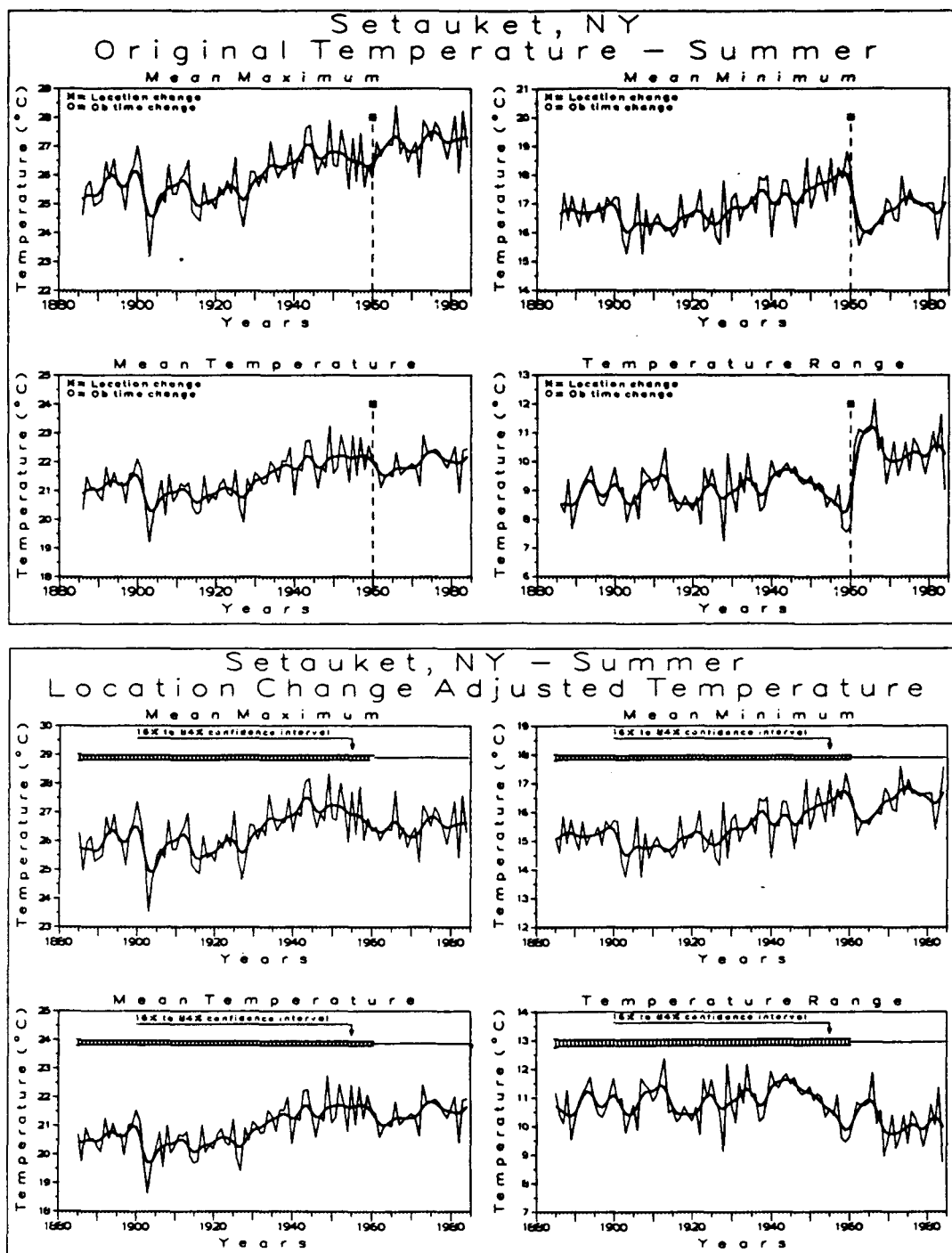


FIG. 7. As in Fig. 5 except summertime (June, July and August) original, time of observation (ob) bias adjusted, and location change and time of observation bias adjusted temperature for the maximum, minimum, mean, and range (maximum minus minimum).

and mean. The maxima and range were reduced, and the minima and mean were increased when the window box shelter was in use. The temperature range, based on the original data, was increasing during the period 1941–80, contrary to what Karl et al. (1984) report for the northeast United States during summer. Subsequent to the adjustments however, the temperature

range at Setauket fell in line with the other stations as Karl et al. (1984) report.

b. Precipitation

Three different adjustment problems are presented in Fig. 8 with respect to precipitation. At Wellsboro 3S, Pennsylvania, a gradual bias took place with respect

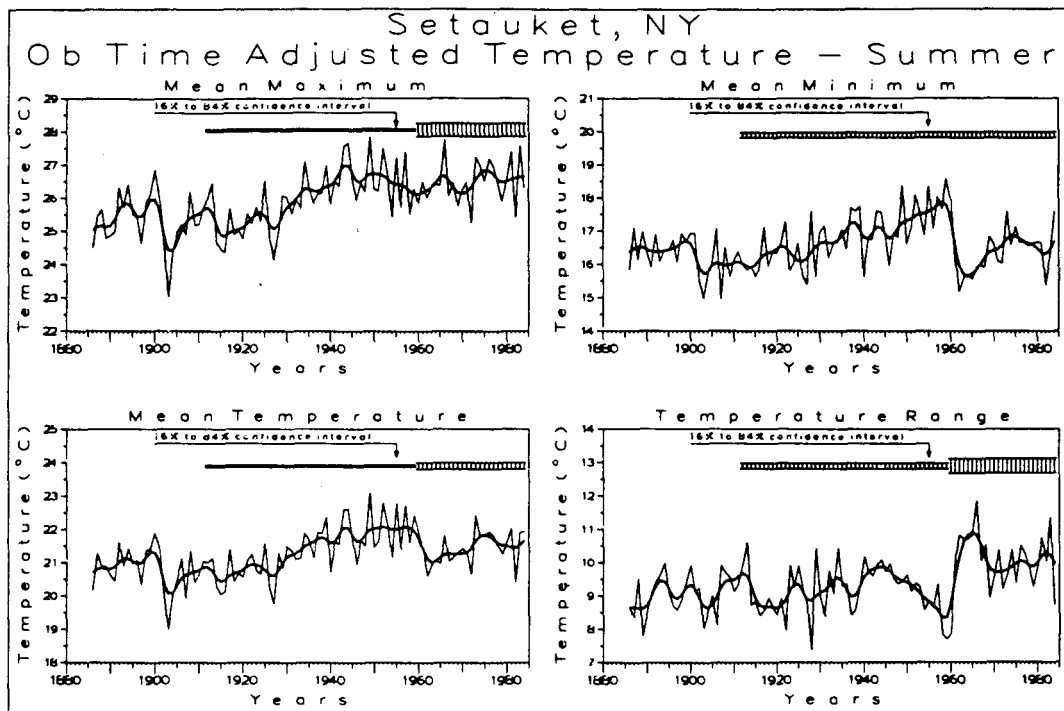


FIG. 7. (Continued)

to the precipitation record prior to 1900. Rochester, New York, had a decade (1870s) of high precipitation values relative to the rest of the network, which occurred between two station and instrument relocations (about 10 m in the vertical and several hundred meters in the horizontal direction). At Syracuse, New York, an unusually large amount of precipitation was reported for six consecutive years (1971–76) during a 10-yr period when the instruments were not changed or moved, based on the station history.

Not surprisingly, the adjustment scheme did not properly adjust for the gradual bias as Wellsboro (Fig. 8). The overall amount of precipitation prior to 1900 still contains a suspicious looking trend toward lower precipitation. The overall quantity of precipitation during this period is somewhat closer to the observed precipitation subsequent to the 1906 station move. This is a good example of the need to check for undocumented biases. If this station is not removed from the network prior to using the scheme it will improperly adjust nearby stations prior to 1900.

The adjustment scheme considerably reduces the precipitation at Rochester during the 1870s, and the decade reverses from extremely wet to moderately dry in comparison to other decades. The relative dryness is more consistent with other stations operating at this time. The adjustment scheme appears to have improved the consistency of the climate record.

An interesting example of an apparent undocumented change at Syracuse is depicted during the years between the 1968 and 1978 station changes. Beginning

about 1971 and persisting until 1977, Syracuse received substantially more precipitation than any of its nearby neighbors in the HCN as well as other stations with shorter records not included in the HCN. Figure 9 depicts the gradual increase of precipitation at Syracuse relative to several nearby stations (since 1970) and two climate divisions. A climate division average is based on all available National Weather Service data within a given portion of a state. One climate division (Central Lakes Climate Division) contains Syracuse while the other (Great Lakes Climate Division) is just north of Syracuse and is adjacent to the Great Lakes. Other nearby stations in New York are only tens of kilometers away from Syracuse. Skaneateles is about 25 km southwest, Baldwinsville approximately 15 km west, Brewerton Lock 23 km north, and Canastota about 15 km east of Syracuse. In Fig. 9, the gradual change to relative heavy precipitation at Syracuse is several years after a station relocation of the recording rain gauge of only several hundred meters, and it appears to end just prior to another relocation of similar proportions in 1978. Perhaps by serendipity, the undocumented anomalous measurements are adjusted downward. Nonetheless, the precipitation during the years 1969 and 1970 probably should not have been adjusted nor included in the period of years which were used to calibrate the size of the adjustment necessary. In this regard, for the adjusted data the specific years 1969 and 1970 are underestimates of the actual precipitation and the remaining years 1971 to 1977 are still probably slightly overestimated.

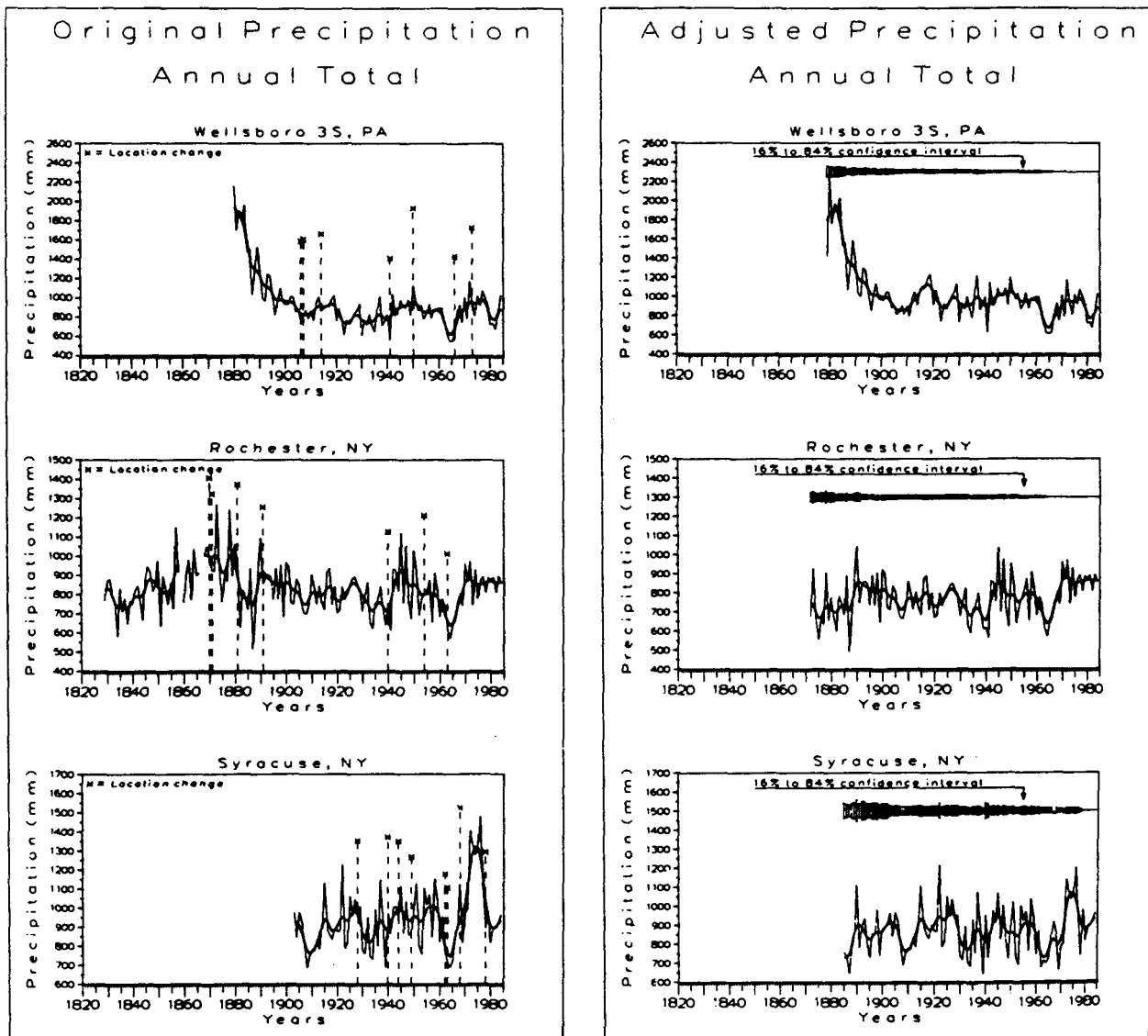


FIG. 8. As in Fig. 5 except original location change adjusted total annual precipitation.

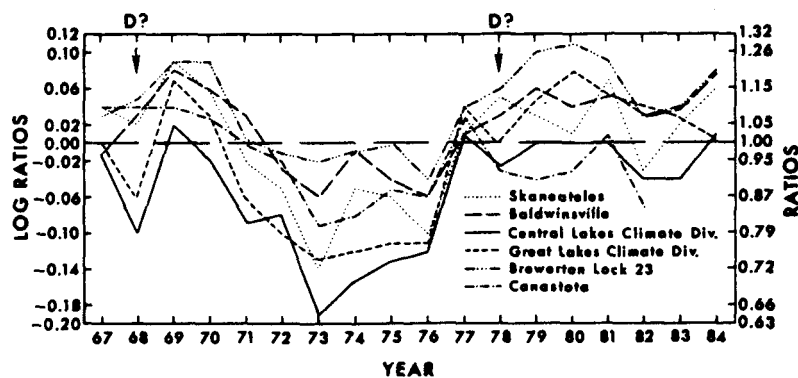


FIG. 9. Log ratio and ratio of total annual precipitation at nearby N.Y. stations divided by total annual precipitation at Syracuse, N.Y. "D?" implies a potential discontinuity.

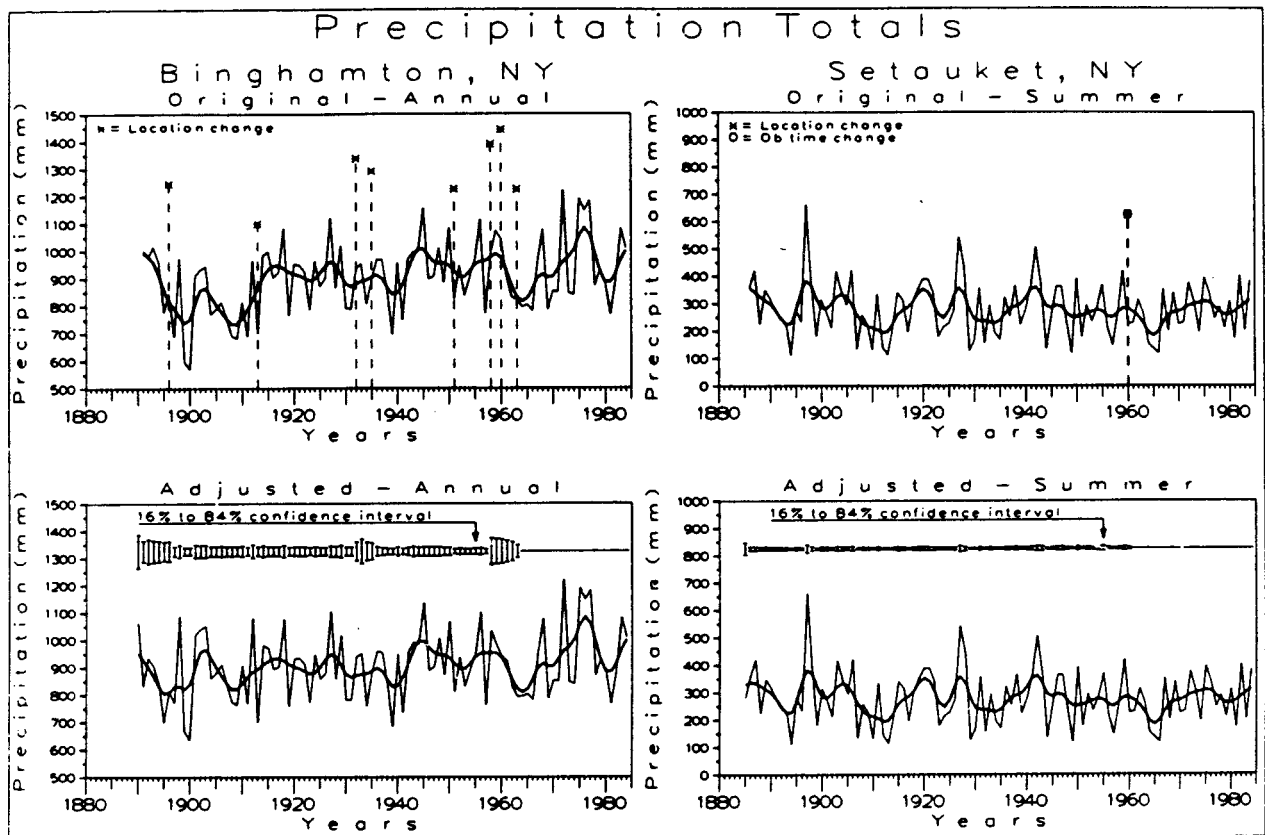


FIG. 10. As in Fig. 8 except for summer seasonal total at Setauket, N.Y.

Other examples of potential discontinuities are depicted in Fig. 10. The relatively innocuous move at Setauket, New York, is not adjusted for, but perhaps more surprising are the lack of any adjustments at Binghamton, where the temperature record was found to be quite inhomogeneous.

5. Summary and conclusions

A scheme has been developed which adjusts climatological time series of temperature and precipitation for discontinuities due to station changes. The procedure has been tested and developed by the utilization of simulation studies, and it has been implemented in over 1200 stations in the United States. The method can be applied to maximum and minimum as well as mean monthly or seasonal temperatures and total precipitation. It requires station history information and a network of nearby stations in order to assess any potential discontinuity at a specific station. The method produces an adjusted time series in the same scale as the original measurements (not an anomaly series) and confidence intervals either side of the data whenever a potential discontinuity exists in the time series.

The adjustment procedure was guided by a series of simulation studies which tested the adequacy of the

approach. The results indicated that the error of estimating the adjustments needed for station discontinuities is a function of the station's correlation with a network of nearby stations, the magnitude of the year-to-year variance of the network, and the number and expected size of any of the potential discontinuities attributed to station changes. The simulation studies indicated that in some circumstances, depending on the network characteristics, adjustments to data based on changes before and after a potential discontinuity can actually make the data more biased than if no adjustments had been applied.

In order to illustrate the impact of the adjustments, several time series were analyzed. Comparison of the original and the adjusted temperatures indicate that by using the adjusted data, a substantially cleaner and consistent picture of regional climate change evolves than would otherwise be the case by using the original data. Examples can easily be found where the impact of changes in instrument locations, e.g., roof top to surface, window box to cotton region shelter, etc., are largely removed and the time series is made more suitable for use in studies of regional climate change. Comparison of original and adjusted precipitation time series, however, indicates that important differences in regional trends are not as readily discernable. On the average, the precipitation time series should be an im-

provement over the original series, but occasionally some obviously poor adjustments can be found, i.e., at Wellsboro 3S, PA.

As with many techniques, certain caveats must be given for the described method:

- 1) Accurate and complete station history information is essential to this method. Unfortunately, even with the detailed station histories compiled for the HCN, some stations do not have complete station histories as shown in section 4;
- 2) station histories rarely include information on environmental changes around the station;
- 3) the method may adjust too often if the assumption regarding the standard deviation of the biases introduced by station changes is significantly too high, but this can be easily changed; and
- 4) stations with nonclimatic progressive changes due to urbanization may lead to inappropriate adjustments at nearby stations.

The latter problem is mitigated to some extent in the HCN since 70% of the stations have populations < 10 000 in the 1980 census and 90% have populations < 50 000. Also, the method uses as many nearby stations as possible which reduces such effects and the adjustments usually do not span more than 20 yr so that only a portion of the urban warming at a single station may be included in the adjustments. The visual prescreening of difference plots prior to the use of this method, as described by Jones et al. (1986), can be used to help identify these stations. Unfortunately, the visual prescreening process, like the other methods which do not explicitly use station histories, is also hampered when there are a substantial number of discontinuities in the record, and when much of the network has potential urban effects. Probably the best solution is to avoid the use of urban stations in the adjustment method and to use an iterative procedure with methods that do and do not use station histories.

One possible improvement to the method, that has not been tested, would be to vary the confidence level (α) in the decision to adjust or not adjust; that is, make α a function not only of interstation correlation, variances, and means, but on the position of the potential discontinuity in the time series. During the years near 1984 (or most current year) keep α low (<0.01), but near the beginning of the record, α could be relaxed and made higher. This might improve the technique because a poor adjustment near the most recent year of record causes problems throughout the rest of the time series. Particularly for precipitation time series, one poor adjustment in the most recent years can lead to some miserable adjustments throughout the record because the offsets are multiplicative rather than additive, such as in the temperature time series adjustments.

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Urbanization: Its Detection and Effect in the United States Climate Record

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ABSTRACT

Several equations were developed that related the effect of urban growth, measured by increasing population, to the mean seasonal and annual temperature: the diurnal maximum, minimum, average, and range. These equations were derived from a network of 1219 stations across the United States, which were analyzed for the years 1901–84. The results indicate that urban effects on temperature are detectable even for small towns with populations under 10 000. Stations with populations near 10 000 are shown to average 0.1°C warmer for the mean annual temperature than nearby stations located in rural areas with populations less than 2000. Urbanization decreases the daily maxima in all seasons except winter and the temperature range in all seasons. It increases the diurnal minima and the daily means in all seasons.

The equations indicate that, for the annual mean temperature, urbanization during the twentieth century accounts for a warm bias of about 0.06°C in the U.S. Historical Climatology Network (HCN). Due to the large number of stations located in sparsely populated areas [(over 85% (70%) of all stations had a 1980 population of less than 25 000 (10 000)], the impact of urbanization is not large in relation to decadal changes of temperature in the United States. The average heat island impact during the period 1901–84 for the HCN is largest for the daily minima (0.13°C) and the temperature range (-0.14°C), while the impact on the daily maxima (-0.01°C) is an order of magnitude smaller.

1. Introduction

The instrumental records of monthly, seasonal, and annual averages of land surface temperatures are useful in a wide range of applications, from studies of important seasonal and multiyear climate anomalies and fluctuations (Ropelewski and Halper 1986; Yarnal and Diaz 1986; Karl and Young 1987; Karl 1988), to assessments of long-term (nineteenth and twentieth century) temperature trends (Diaz 1986; Jones et al. 1986; Ellsaesser et al. 1986; Karl et al. 1984). The latter is an important and essential aspect of efforts aimed at the early detection of the greenhouse effect (Wigley et al. 1985). Considering the importance and usefulness of such data, it is surprising to find a dearth of studies aimed at the identification and quantification of the effects of urbanization, not only for large urban areas but for cities of all sizes, especially since urbanization and the greenhouse effect are expected to produce similar signals in the climate record.

A considerable number of studies (Oke 1973; Landsberg 1975; Oke 1979; Landsberg 1981; Oke 1982; WMO 1986) have addressed urban heat as a physical phenomenon and quantified various aspects of maximum instantaneous urban-to-rural temperature differences. Unfortunately, these results are difficult to link to seasonal and annual mean temperatures. Other studies have attempted to quantify the effect on the temperature record of increasing levels of urbanization in major cities (Mitchell 1953; Dettwiller 1970; Fukui 1970; Cayan and Douglas 1984; Duchon 1986; Goodridge 1985; Kukla et al. 1986; Chow 1986). These studies demonstrate the importance of isolating and removing from the climate record, for some applications (i.e., climate change detection, seasonal and monthly forecasts, etc.), the anomalous warmth produced by major cities. At the same time, the question remains regarding the level of urbanization which can be tolerated in the construction of a temperature record with an acceptably low bias for climate change studies.

There are many reasons why this important issue has not been adequately addressed in the construction of large-area averages of temperature. The difficulty in quantifying "urbanization" has no doubt frustrated

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many investigators. In addition, a more physically oriented approach necessitates the study of the urban climate of specific cities, each with its own unique characteristics. As pointed out by Oke (1979), the internal pattern of the heat island of each city is often dominated by microscale features related to land use and building density. In large-scale studies of climate change using hundreds or even thousands of stations, the microclimate of each station cannot, at present, be properly parameterized. This presents a major obstacle to the quantification of the heat islands produced by small cities and necessitates the use of population as a measure of urbanization. The noise introduced by the microclimate of each city, however, may disguise the effect of urbanization.

One method of trying to overcome such difficulties is to use very large samples, i.e., many pairs of small cities and rural stations. Until recently, such data were not readily accessible. Fortunately, the Historical Climatology Network (HCN) provides a relatively dense network of long-term stations (1219) across the contiguous United States (Quinlan et al. 1987). Many stations in this network are located in small cities in remote areas [over 85% (70%) of all stations had a 1980 population of less than 25 000 (10 000)]. Data from this network provide an opportunity to assess the effect of urbanization on the climate record for urban areas of various sizes.

2. Data

The HCN contains monthly averages of maximum, minimum, and average temperature for 1219 stations with varying periods of record, most beginning either in the early 1900s or the late 1800s. In the United States and in many other countries, the daily average temperature is defined as the sum of the maximum and minimum divided by 2. At the time of this study, these data were available through 1984. The data have been subjected to rigorous quality control procedures and to various other procedures that adjust for *documented* potential discontinuities (station moves, new observation schedules, new instruments, etc.). Karl and Williams (1987) and Karl et al. (1986a) discuss the methodology used to adjust the data for these discontinuities. Karl and Williams (1987) use the method of differences between neighboring stations and Monte Carlo simulations to assess the significance of any potential discontinuity, and Karl et al. (1986) provide a model for eliminating the bias associated with varying observation schedules at cooperative stations. Quinlan et al. (1987) provide information regarding the quality control procedures used in making the data computer compatible as well as an objective summary of the integrity of each station's record for a variety of factors. They rank the stations in the HCN in terms of the statistical confidence interval of the adjustments they apply (or do not apply) for potential discontinuities

and the percent of adjusted data that had to be estimated using the Karl and Williams (1987) methodology. For some early periods, potential discontinuities are either too frequent or nearby stations too distant for any adjustments to be reliably attempted. These data were not used. Relationships developed in this study for the *detection* of the urban heat island are derived from HCN stations that were ranked in the upper 90% with respect to the average width of the confidence intervals for adjustments due to discontinuities. In addition, no station had more than 25% of its data replaced with estimates from nearby stations because of missing observations or frequent moves.

The magnitude of the heat island bias in the HCN was estimated using these stations as well as a network that included all stations, regardless of the confidence interval of the adjustments and the quantity of estimated data (see section 6).

3. Procedures

The purpose of this study is to produce a method by which the urbanization effects of even small cities in midlatitudes (in the United States, at least) can be removed prior to their use in forming regional- or continental-scale spatial averages of temperature for analyzing secular climate change. The parameter chosen to represent urbanization is the population of the city or metropolitan area where the station is located. This is not the most desirable physical quantity for representing urbanization around the climate station, but it is one of the few documented statistics that is readily available for the past century and over much of the world. Differences in the thermal conductance between urban and rural surfaces may be important, but Oke (1981) argues that there is little data to support large differences. Indeed, Oke (1981) provides data to support the notion that the canyon sky-view factor (the fraction of the overlying hemisphere occupied by sky) in the city is the dominant mechanism that produces urban heat islands during nights with calm, cloudless skies, where anthropogenic heat is of negligible importance. Unfortunately, it is not possible to calculate this quantity from existing station histories. In the United States, however, the populations of every incorporated city has been defined by the U.S. Census Bureau since 1790. In this study, these populations were used as a measure of urbanization. When populations of metropolitan areas were defined by the U.S. Census Bureau, they were used to represent urbanization in contrast to the population within city limit boundaries.

A total of 941 stations were identified from the HCN as having complete records going back to 1941 and 541 with records going back to 1901 in which adjustments for potential discontinuities could be assessed. It must be emphasized that these stations underwent extensive scrutiny before they were used (Karl et al. 1986a; Karl and Williams 1987). From these stations

a set of urban/rural station pairs was formed so that the distance between the urban and rural sites was no more than 100 km and each rural station was at least 30 km from the urban station. In this regard, we suspect that most of the rural stations were outside the urban plume. Indeed, as Lowry (1977) indicates, in the surface boundary layer the thermal effects of the city have a limited area of extent. The conceptual basis for this is described in Oke (1976, 1982) and Clarke (1969). During the evening and nighttime, the urban thermal plume quickly rises above the surrounding rural surface boundary layer.

We have arbitrarily defined rural stations as those with a 1980 population of less than 2000. Figures 1–4 depict these station pair groupings for the periods 1901–84 and 1941–84 for both seasonal mean temperature and the means of the maximum, minimum, and diurnal temperature range (the latter being the difference between the maximum and minimum temperature values). During the 1901–84 period these form a disproportionate share of the stations in the eastern United States, but for the 1941–84 period the distribution is

more symmetric. In the HCN, adjustments for discontinuities were made independently for each element (maximum, minimum and mean), so that the number of pairs can vary because of the differing quality and availability of data for the different elements. Station pairs among the maximum, minimum, and temperature range, however, were not allowed to vary. Stations were used only if *both* the maximum and minimum passed the quality checks. As depicted in Figs. 1–4, a different set of stations was used for the maximum, minimum, and temperature range compared to the mean temperature.

The question of an appropriate method for segregating the urban effect from the background climate arises. Lowry (1977) provides a general framework describing the assumptions required when using, among other methods, urban-to-rural temperature differences as a measure of the urban heat island. These temperature differences have been used with two different techniques. First, urban-to-rural temperature differences were related to a measure of urbanization at the urban station. The rural station was assumed to be

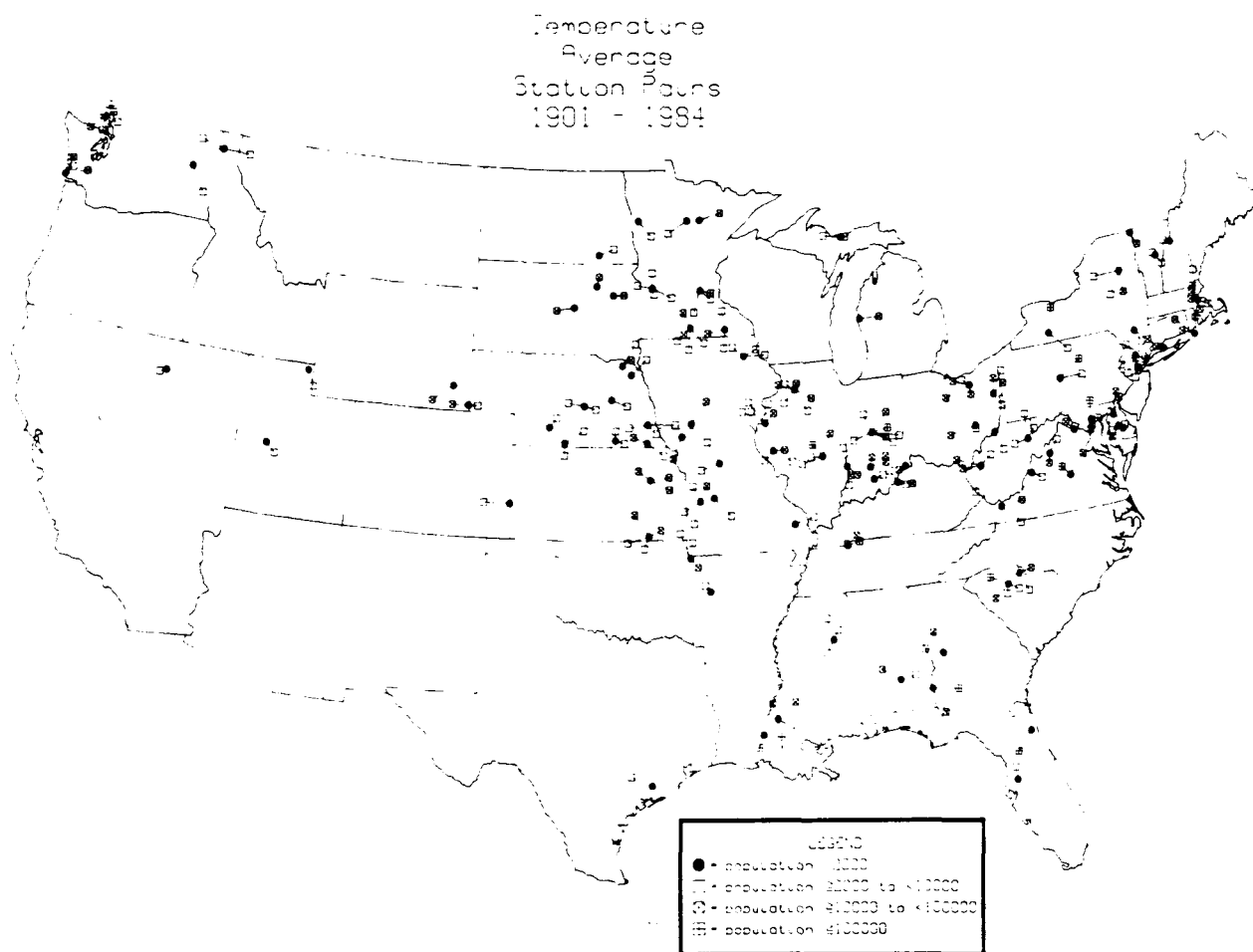


FIG. 1. Urban/rural station pairs for the mean temperature, 1901–84.

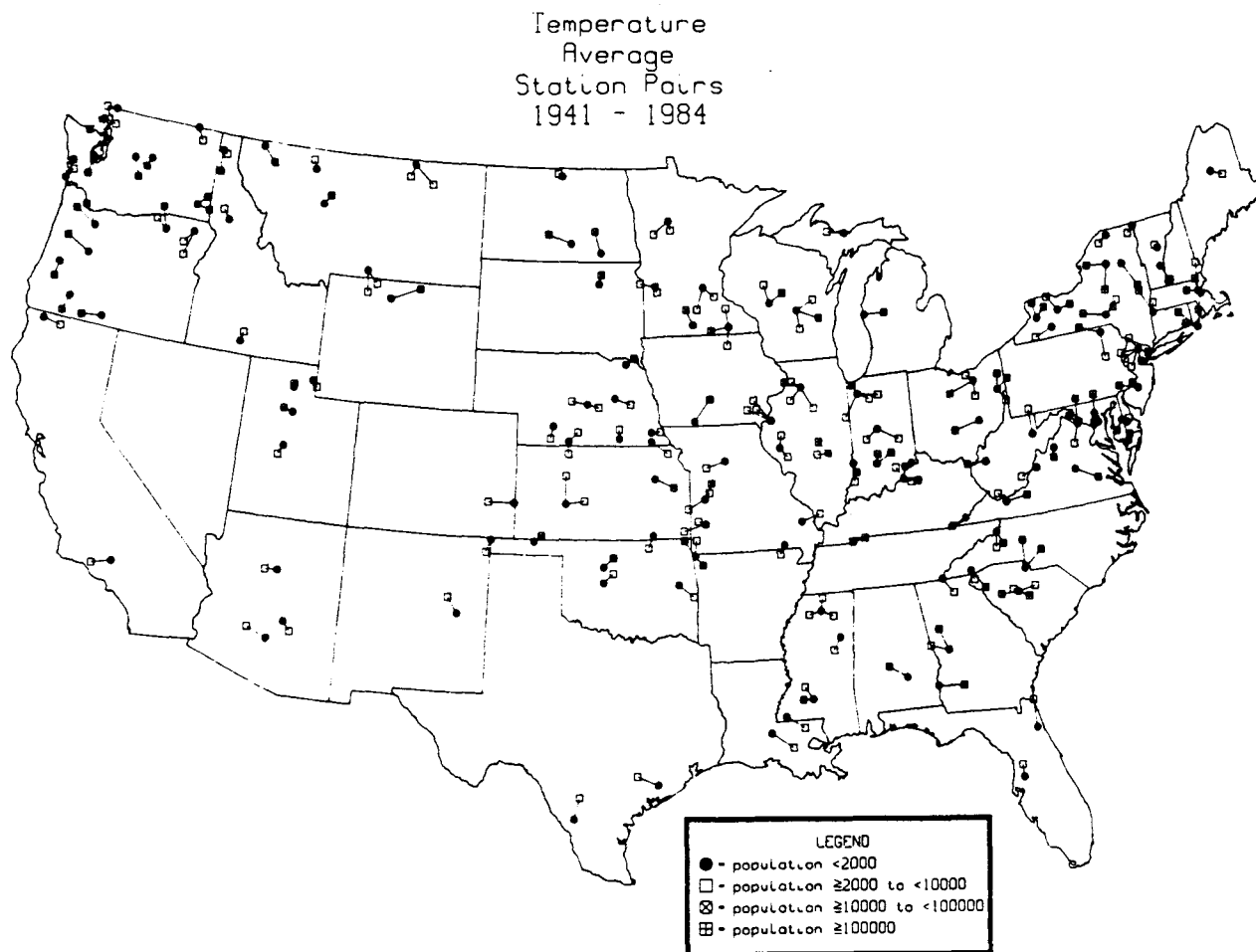


FIG. 2. As in Fig. 1, except for 1941-84.

uneffected by urbanization. In this approach, which we define as the basic Time Averaged Method (TAM), differences between the two stations in local landscape (topography, vegetation, water bodies, soil types, etc.) and background climate (latitude, continentality, etc.) must also be assumed to be unimportant. Clearly, this is a poor assumption, one we will need to address. In the second approach, which we define as the Time Rate of Change Method (TCM), the time trends of the urban-to-rural differences of temperature are related to a measure of urbanization at the urban station (cf. Mitchell 1953, 1961). In this approach, the differences in local landscape and background climate are minimized, but as Lowry (1977) points out, even here, one must assume that the probability of weather regimes or weather types remains constant over time. In addition, and perhaps in some instances this is a more severe assumption, the homogeneity (no significant changes of instruments, instrument location, vegetation, observing schedules, etc.) of the temperature records at the two sites must continue throughout the period of comparison. Since neither method of detecting the effects of urbanization is ideal, we used both, but

with some significant variations in the basic TAM due to the assumptions of the background climate and landscape at each station.

After all urban-to-rural station pairs were identified, temperature differences were calculated, for each season and annually, for the urban minus the rural station temperature. To assess the effects of urbanization on the temperature record, these temperature differences were used with the two techniques. In the TCM, the changes in the urban-to-rural temperature differences were categorized over time. That is, time series of urban minus rural temperature differences were calculated and categorized as defined in Table 1. The rural stations chosen had a relatively low population throughout the period of record, while the urban stations were selected solely on the basis of their 1980 population. This means that the rate of growth of these urban stations is only limited by their 1980 population, but growth rates can vary from station to station within categories.¹ In ad-

¹ The effects of varying population growth rates within categories were also tested using this method.

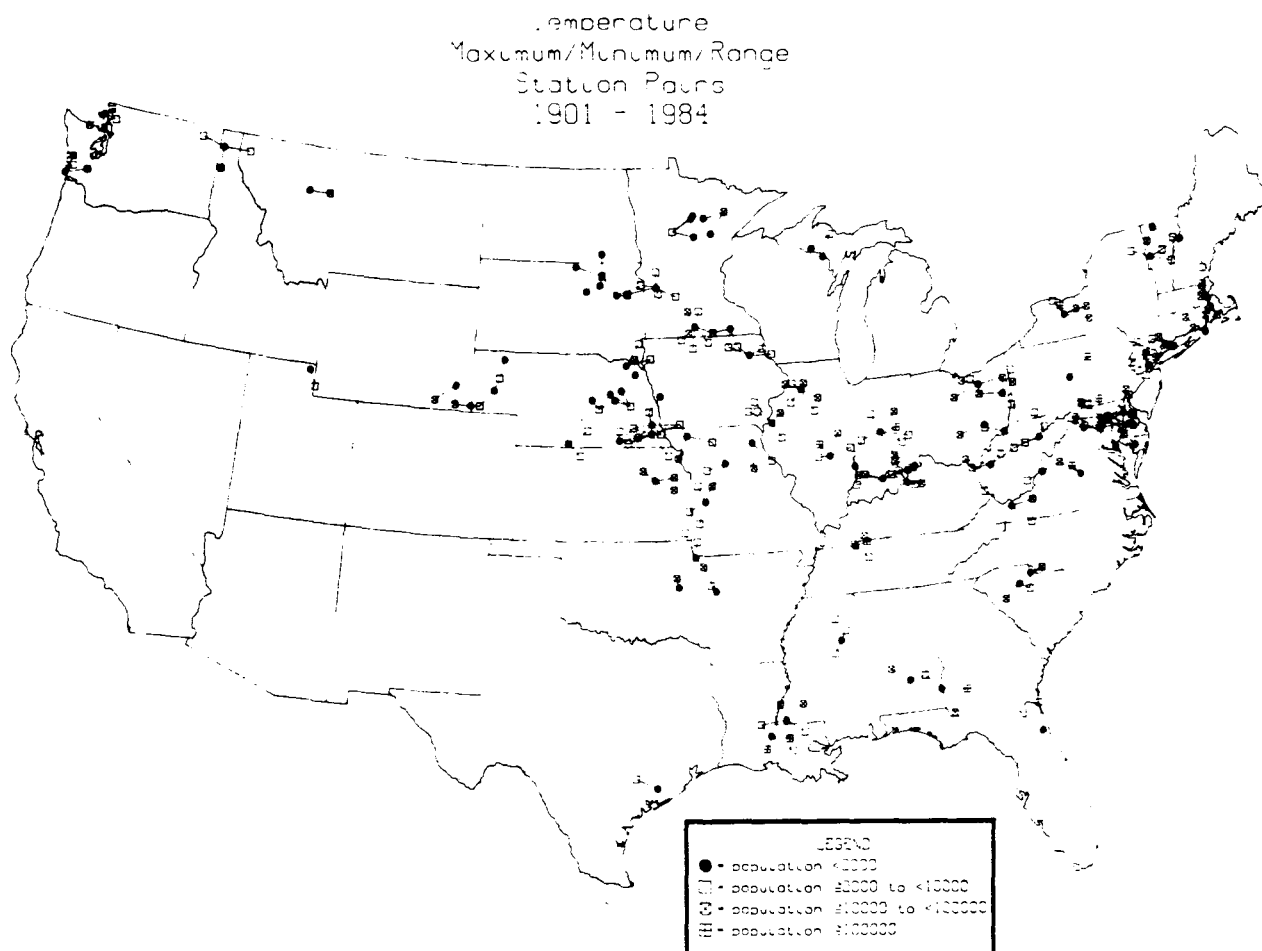


FIG. 3. As in Fig. 1, except for the maximum, minimum, and diurnal temperature range.

dition to the Mitchell (1961) study, many others have used this approach to identify the effect of urbanization in climate time series (Duchon 1986; Cayan and Douglas 1984; Kukla et al. 1986; Goodridge 1985). In the alternative to the basic TAM, hereafter referred to simply as TAM, averages of the urban-to-rural temperature difference over small time segments (several years) after removing the effects of elevation and latitudinal differences, were related to the population of the urban station. (As previously noted, the rural station's population is known to be less than 2000.)

Identical station pairs were used with both techniques for the 1941-84 period of record (the 1901-84 station pairs were not used in the TAM). Another separate set of data was included to make sure the adjustment procedure used by Karl and Williams (1986) did not mask heat island biases. The original observations (adjusted for time of observation biases) were used in the TCM for the station pairs depicted in Figs. 1-4.

In the TCM one must identify the time rate of change of the seasonal and annual means of the urban-to-rural temperature differences. We accomplished this by dif-

ferencing period means. The 1901-42 mean difference was subtracted from the 1943-84 mean; likewise, the mean for the period 1941-62 was subtracted from the mean for 1963-84. Other methods, such as ordinary least square trends and resistant (robust) least square trends (Emerson and Hoaglin 1983), were considered but dismissed because of the nature of the time series derived using the TCM. Irregular fluctuations were often deeply embedded in the time series, exaggerating the leverage of the time series near the beginning and end points associated with trend analysis (although resistant methods would tend to minimize this to some extent). Because of the relatively large number of pairs in each category of population (Table 1), it was possible to assess the statistical significance of this difference across the various time periods by using a paired difference *t*-test with a null hypothesis, "The difference of the mean of all stations aggregated within a category across the two time periods is zero," versus an alternate hypothesis, "The difference of the mean across the two time periods is positive." In the paired difference *t*-test, the standard deviation is calculated on the basis of the station-to-station (pairs) variability of the urban-to-ru-

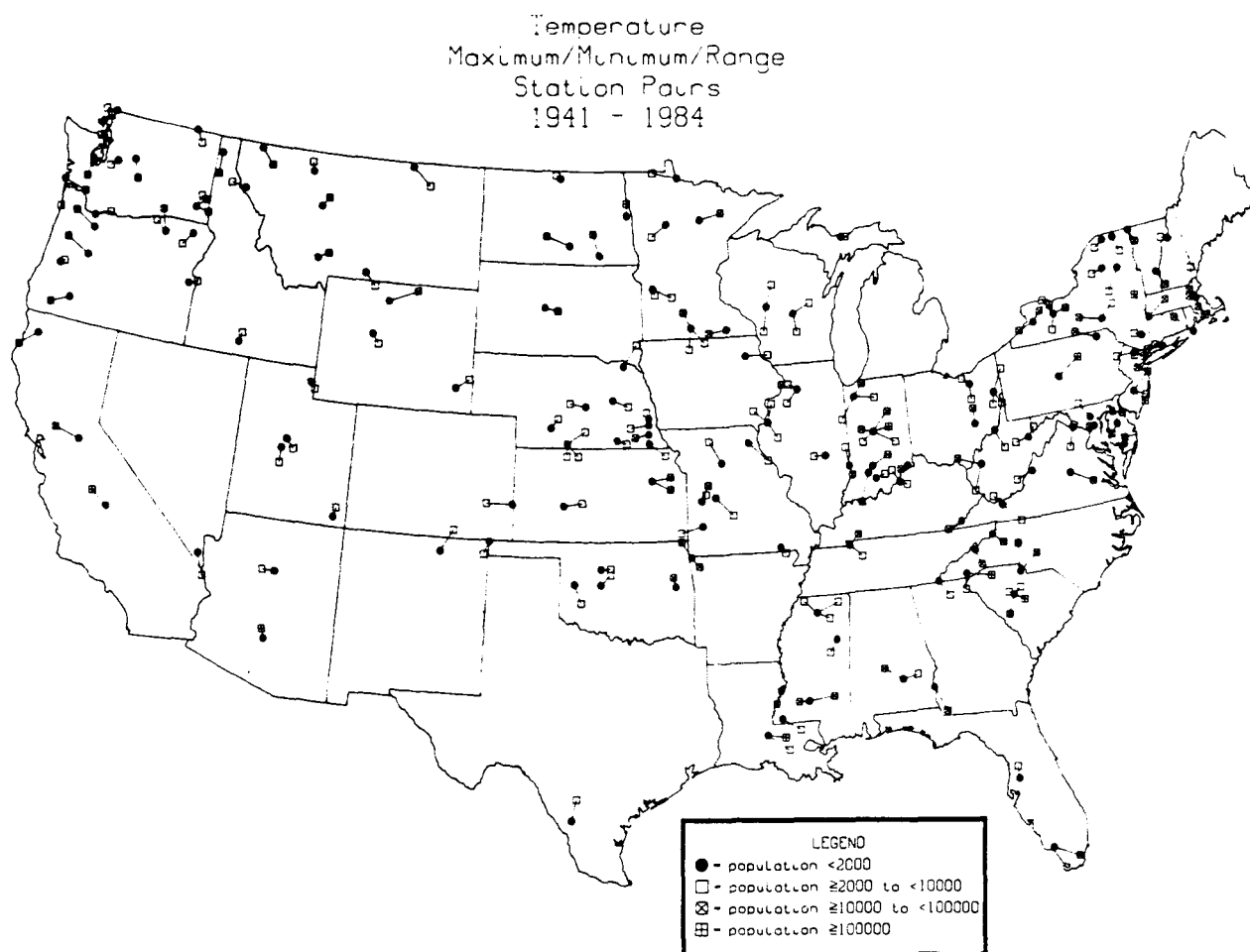


FIG. 4. As in Fig. 3, except for 1941-84.

ral temperature difference between the two time periods. In this method, factors such as the differences between urban and rural station pairs, i.e., topography, latitude, continentality, etc., are not very important because *only* the changes within each station pair are considered, not the absolute difference.

The TAM avoids the disadvantages associated with the use of long time series to assess the effects of ur-

banization. Instead, time averages of a small group of years are used to calculate mean urban-to-rural temperature differences. Specifically, the *mean* urban-to-rural temperature difference ($\bar{T}_{u-r}$) was calculated separately for 9 years centered around both 1950 and 1980, i.e., 1946-54 and 1976-84, respectively. The differences were then related to the urban population. This approach minimizes the effects of undocumented

TABLE 1. The mean 1980 population (left of solidus) and the number of urban-to-rural station pairs which includes the total for all comparisons under the <2000 category (right of solidus) is given for one rural and three urban categories. Abbreviations are NA, not applicable; MAX, maximum temperature; MIN, minimum temperature; RNG, temperature range (maximum - minimum); AVERAGE, (MAX + MIN)/2.

Period of record	Variable	1980 Population			
		Rural <2000	Small urban 2000-9999	Medium urban 10 000-100 000	Large urban >100 000
1941-84	Average	750/414	5030/233	23 362/150	740 403/31
1941-84	Max/Min/Rng	724/407	5084/226	23 365/148	805 202/32
1901-84	Average	840/213	5086/120	24 416/75	987 474/18
1901-84	Max/Min/Rng	841/305	5250/152	25 652/128	1 296 767/25

changes to the stations but, as previously mentioned, it introduces other related nonurban sources of variability between pairs, i.e., differences in elevation, latitude, continentality, etc. To the extent possible, this additional variability was removed from the urban-to-rural temperature differences by modifying the basic TAM. This was accomplished by using the observed-predicted residuals ($\bar{T}_{u-r}^*$) of $\bar{T}_{u-r}$ from multiple regression equations, in which the differences in latitude (part of the background climate) and elevation (part of the local landscape climate) of the station pairs were used as independent variables and the $\bar{T}_{u-r}$ as the dependent variable. These equations were developed on a seasonal and annual basis over the entire United States. Such an approach cannot address all the important local landscape climate characteristics, such as a river valley location versus a plateau, a mountain slope versus a mountain valley, a sea breeze versus no sea breeze, etc., but it does help to minimize two of the major differences in climate among the urban-to-rural station pairs.

Throughout this study we average across many station pairs, which mitigates much of the noise introduced by local landscape climate variability and background climate if this variability occurs in a near-random manner across the station pairs. We have no reason to believe that it does not.

4. Results

a. Detection of urbanization using the Time Rate of Change Method (TCM)

The year-to-year, urban-to-rural temperature differences ($\bar{T}_{u-r}$) for the 1901–84 time period and for each of the four elements—annual average, maximum and minimum temperature, and temperature range—are depicted in Figs. 5–8 for various categories of 1980 urban population. In Fig. 5, it is apparent that there is considerable year-to-year variability of $\bar{T}_{u-r}$ for all categories, and that there are also significant decadal or multidecadal fluctuations. For the lowest category of urban population, 2000–10 000, it is difficult to detect a systemic change in $\bar{T}_{u-r}$, but for other categories there is a general tendency toward larger positive $\bar{T}_{u-r}$ in the later years of record. It must be emphasized that these time series are compiled from many station pairs and that some time series of individual urban-to-rural station pairs look quite different from those presented here. Although it can be logically argued that abrupt shifts in the times series of urban–rural temperatures are characteristic of the steplike development and architectural spurts common in large cities, it is difficult to explain the fluctuating or vacillating characteristics of the time series using this reasoning. It is conceivable that these are part of natural climate fluctuations (changes in the frequency of weather types) as envisioned by Lowry (1977). This is especially pertinent considering that no time series presented in Fig. 5 con-

sists of fewer than 18 pairs and usually includes many more.

The maximum temperature (Fig. 6) for all categories with a 1980 population of less than 100 000 displays no tendency toward increasing $\bar{T}_{u-r}$ and in fact, the category with a population of 10 000 to 25 000 exhibits a tendency toward decreasing urban–rural temperature differences over time. The category with 100 000 or more shows an abrupt rise during the mid-1950s, with a tendency in later years to return to differences of magnitude prior to the 1950s. When differences between the two 42-yr periods (1901–42 versus 1943–84) and the two 22-yr periods (1941–62 versus 1963–84) are calculated, larger positive values of $\bar{T}_{u-r}$ can be found in the latter period. The nature of the abrupt rise in the 1950s and the fall in the 1980s, however, suggests that this difference may be due to causes unrelated to urbanization effects.

All categories of population exhibit a general increase of $\bar{T}_{u-r}$ with respect to the minimum temperature (Fig. 7). This is apparent for the categories with a 1980 population of 2000–10 000, 10 000–25 000, and >100 000 categories. The trend in the 10 000–25 000 category, however, may simply be an overestimate of the urban effect, since temperatures are shown to be lower in urban areas than in rural areas prior to 1925, and there is no trend for the 25 000 to 100 000 category until the mid-1960s. As stated earlier, systematic differences in local landscape and background climatic differences are not considered in this method, so it is conceivable that urban areas could have cooler temperatures than nonurban areas, although, in addition, multiyear fluctuations of the frequency of weather types affecting these differences must also be considered. Nevertheless, the general increase in the mean $\bar{T}_{u-r}$ is seen primarily as a consequence of changes in minimum (or nighttime) temperatures.

The effects on the diurnal temperature range reflect the nonuniformity of the trends of $\bar{T}_{u-r}$ for the maximum and minimum (Fig. 8). There is a definite trend toward a decreasing temperature range in the 10 000 to 25 000 category. Here again, a large portion of the decrease in this category is due to the rise in the minimum (Fig. 7), which may be exaggerated. This is also true in the 2000 to 10 000 category, but only for the period 1901–40. The decrease in range for other categories is less apparent.

Figures 9 and 10 summarize the magnitude of $\bar{T}_{u-r}$ for each variable and category identified in Table 1 with respect to the differences of $\bar{T}_{u-r}$ for the first half and second half (averages) of the 1901–84 and 1941–84 time periods. The most important result that can be derived from these figures in terms of the TCM is the fact that the *average* temperature appears to be slightly affected by urbanization even down to the lowest category, 2000 to 10 000; these results, however, are not statistically significant until the next category, 10 000 to 100 000, is considered. For the *minimum*

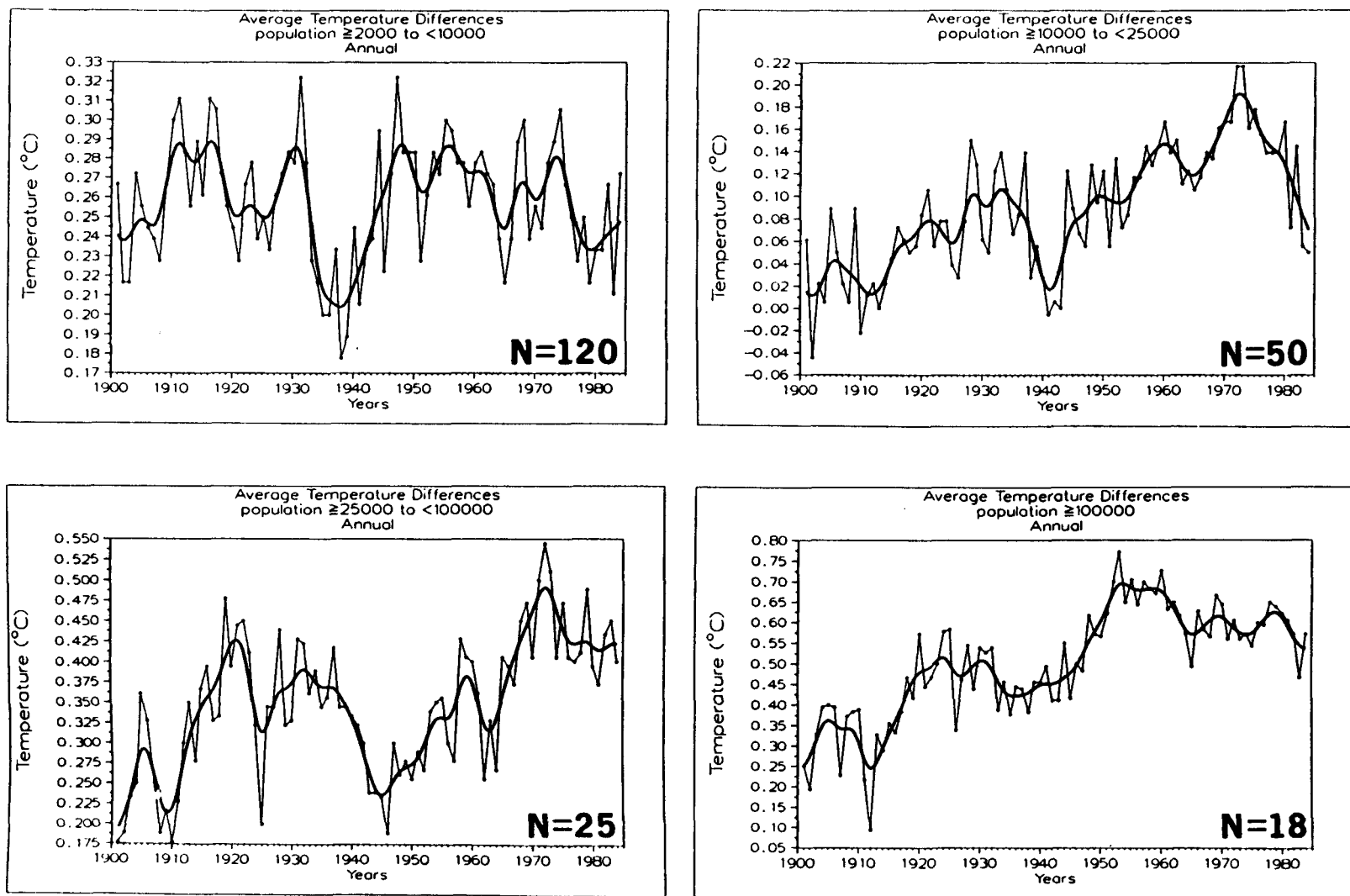


FIG. 5. Time series of the average urban minus rural (population < 2000) temperature difference for various categories of 1980 population at the urban station. Smoothed curve is a nine-point binomial filter with double weighted endpoints. Here N is the number of station pairs used in the graph.

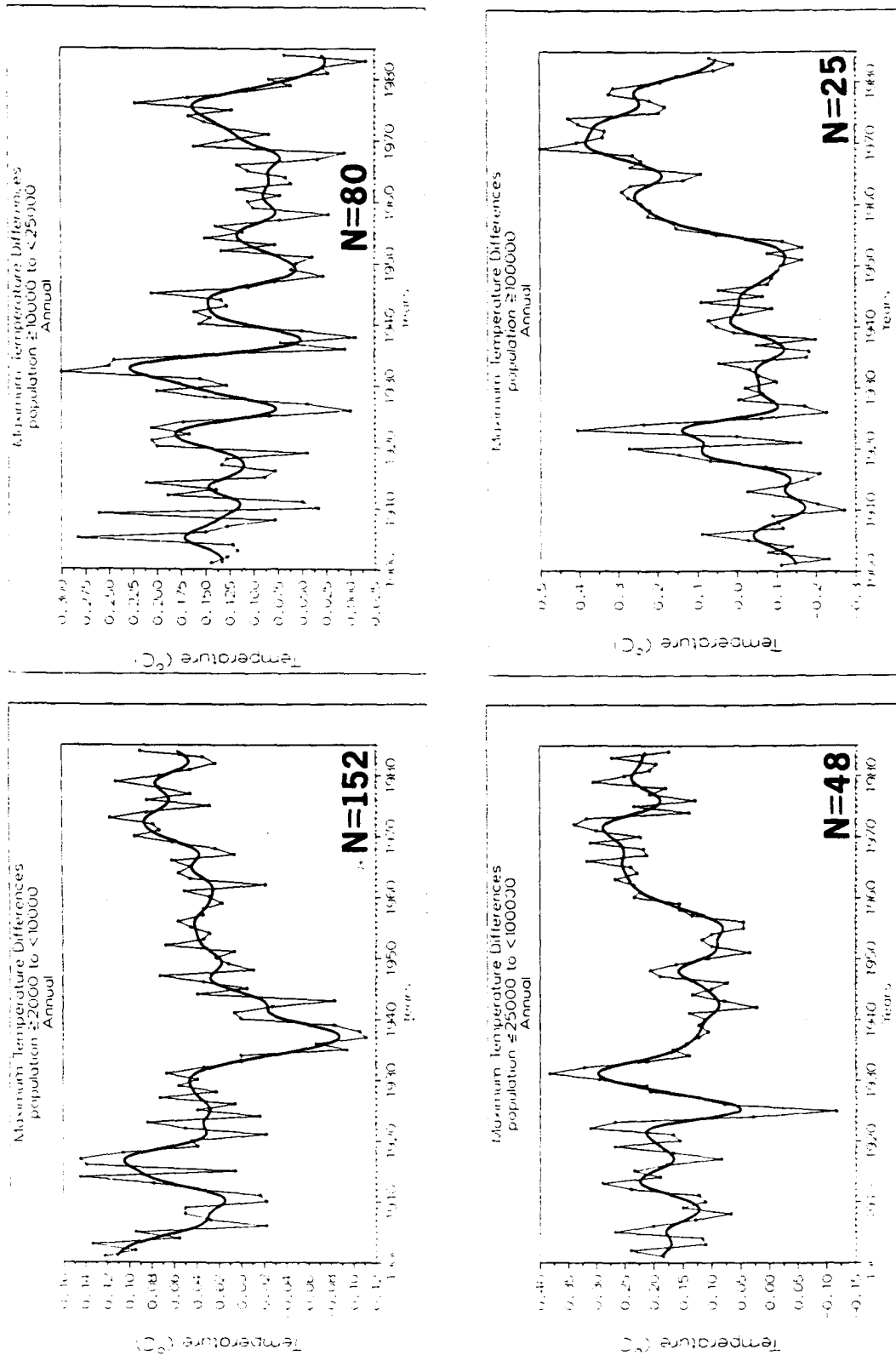


FIG. 6. As in Fig. 5, except for the mean maximum.

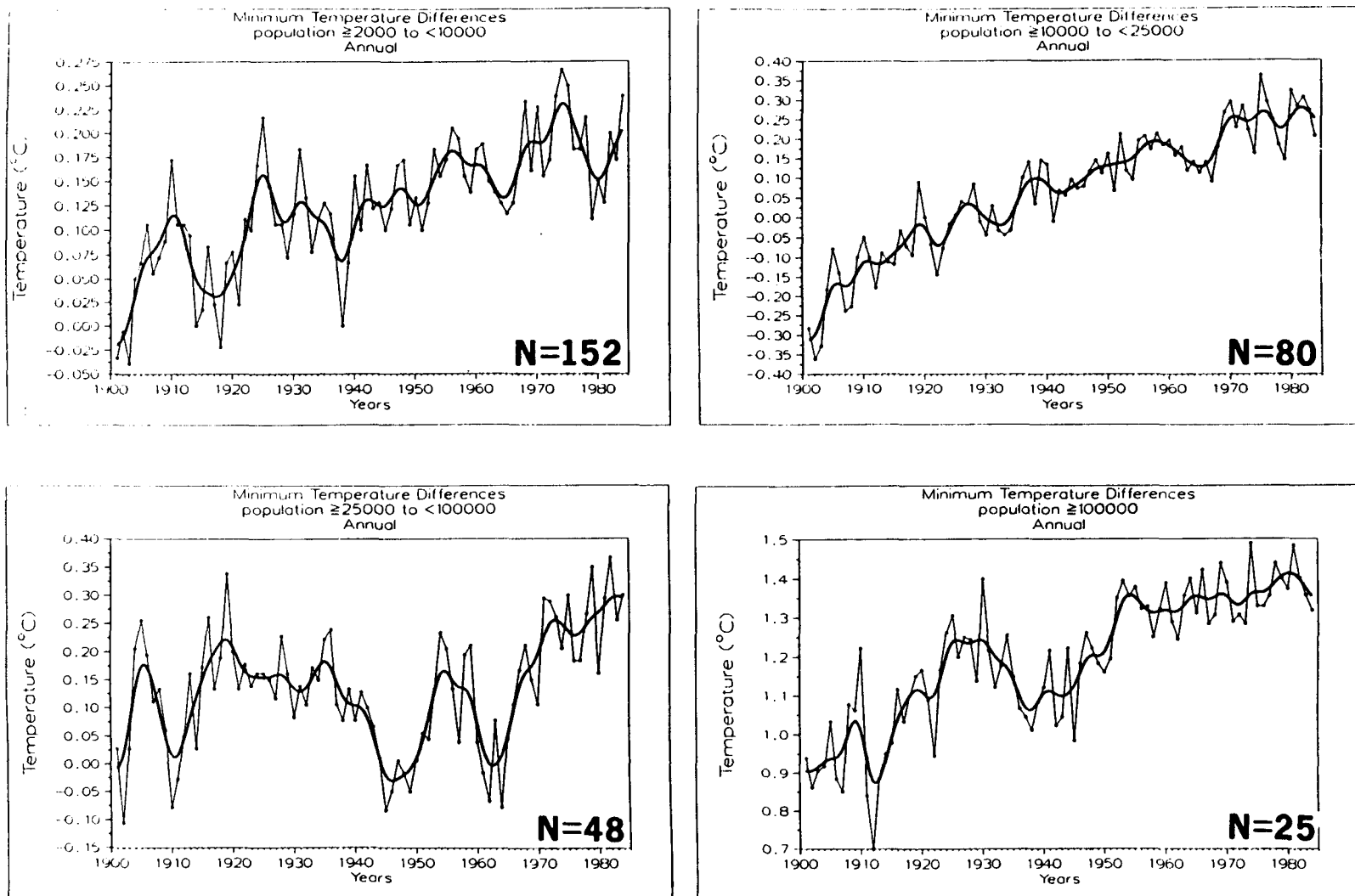


FIG. 7. As in Fig. 5, except for the mean minimum.

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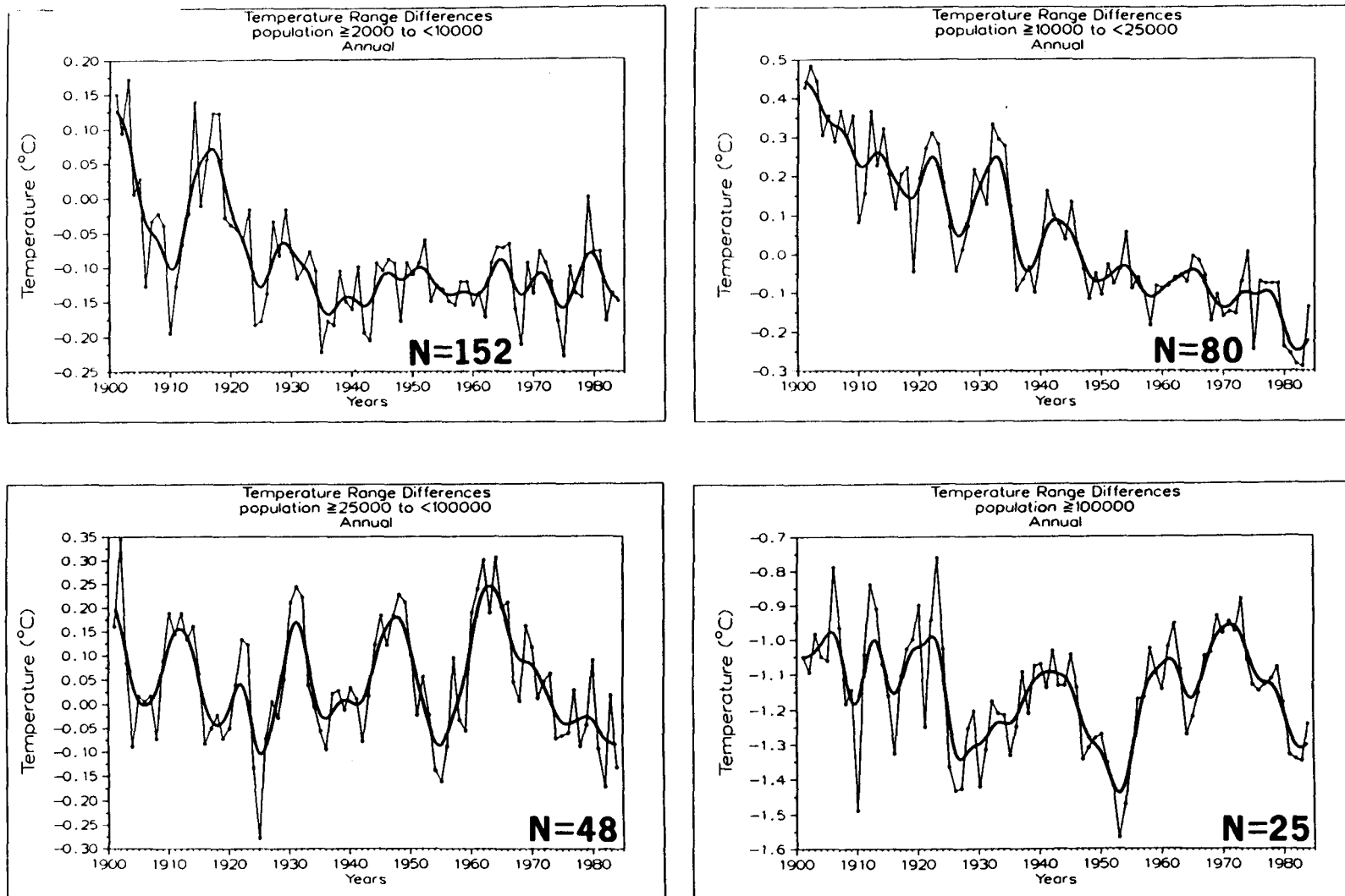


FIG. 8. As in Fig. 5, except for the mean diurnal range.

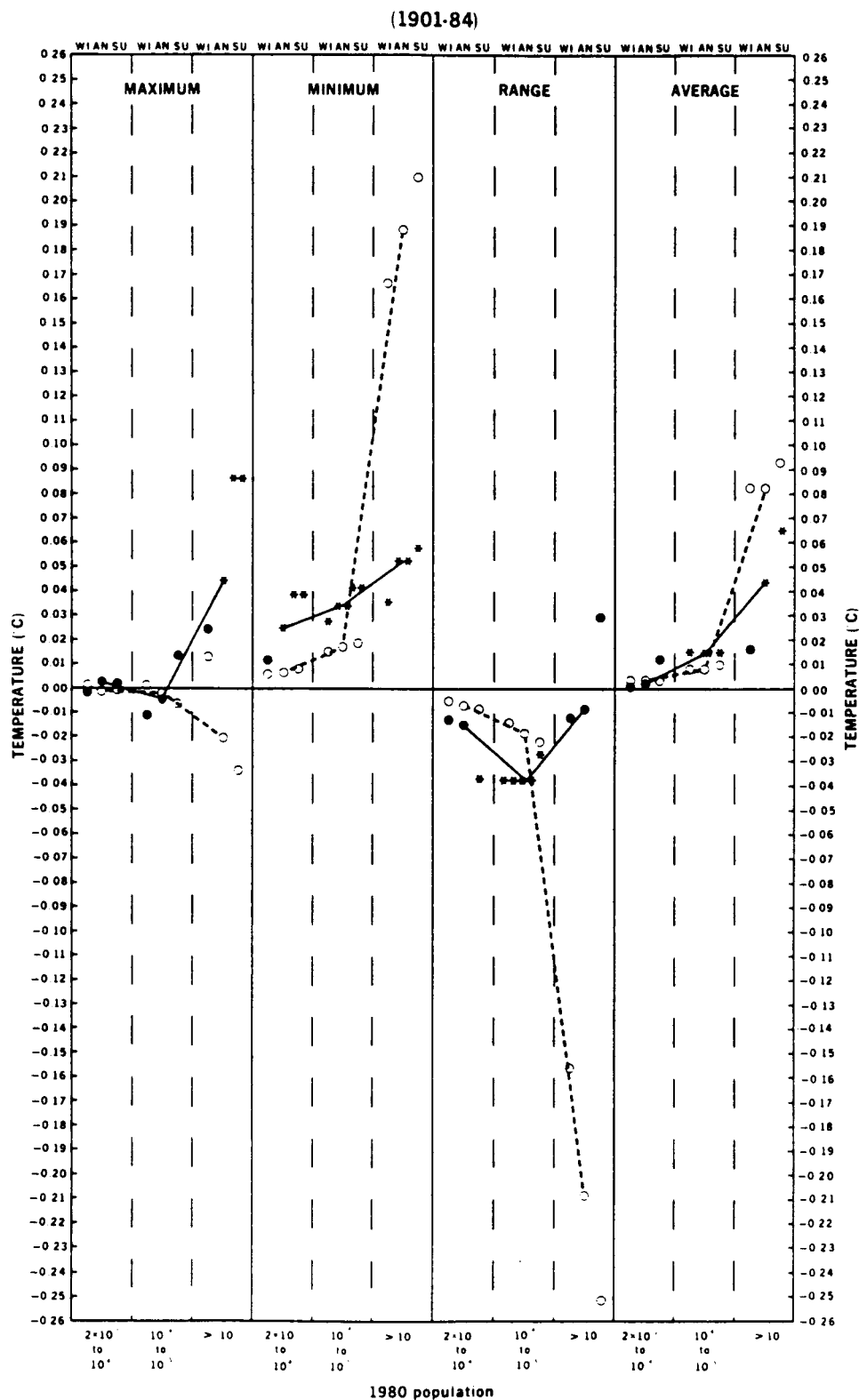


FIG. 9. Relative change in temperature ($^{\circ}\text{C}/\text{decade}$) at urban stations compared to rural stations during the years 1901-84. Here WI implies winter; AN, annual; and SU, summer. Open (blackened) dots and dashed (solid) lines pertain to the TAM (TCM). Dashed (solid) lines connect annual values for the TAM (TCM) for the three population categories. For the TCM blackened dots are replaced by an asterisk when significant at the 10% level and double asterisks at the 1% level.

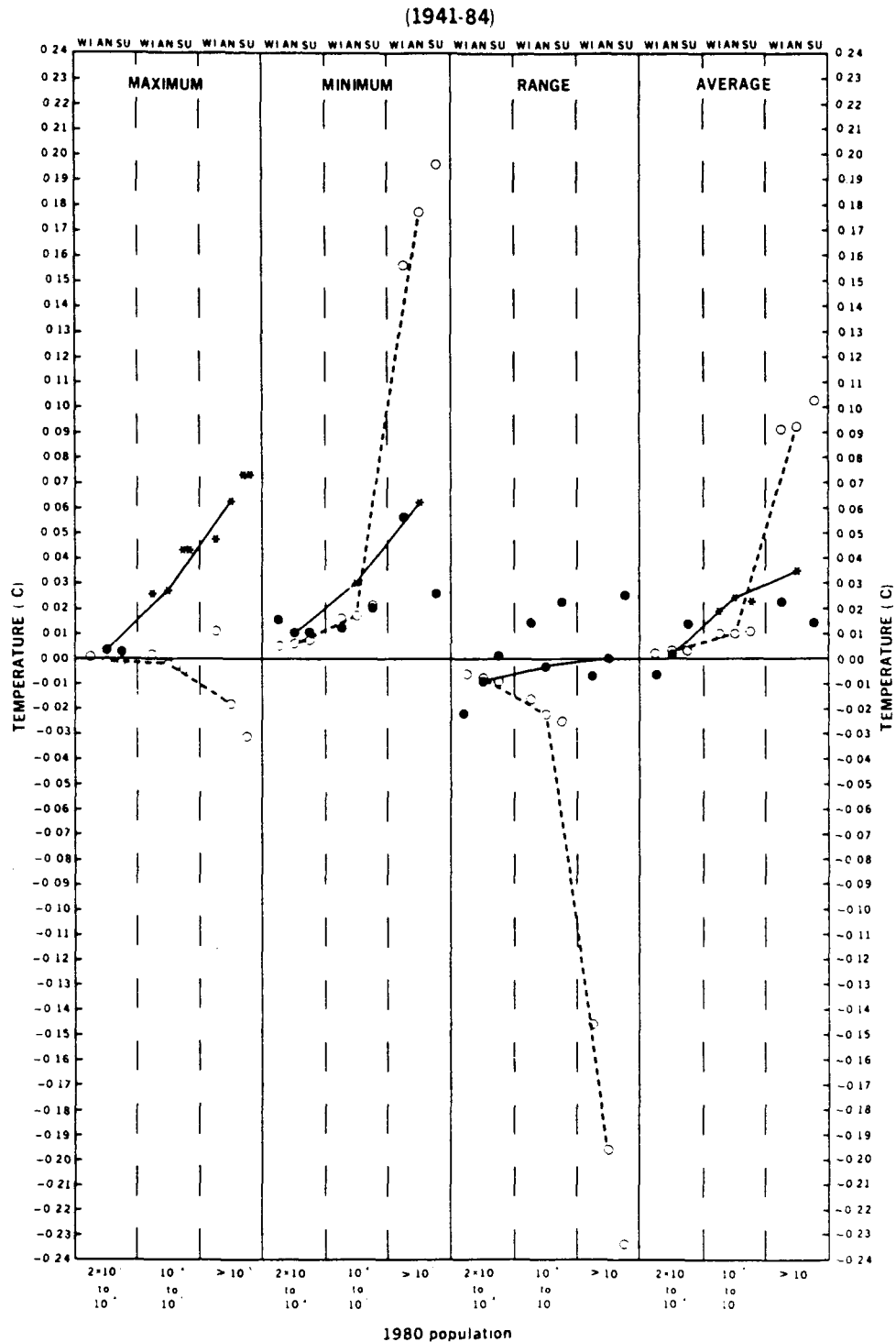


FIG. 10. As in Fig. 9, except for the 1941-84 time period.

temperature the increase in the urban-rural temperature difference can be found to be statistically significant even down to the 2000 to 10 000 population category. The inconsistency of the results for the *maximum* temperature for the different population groups is puzzling,

especially for the 1941-84 time period. Previous work, summarized by Landsberg (1981), suggests that the maximum temperature is substantially less affected by urbanization than the minimum. Figures 5-8 indicate that a significant portion of the change of $\bar{T}_{u-r}$

is in the form of fluctuations or vacillations, as opposed to gradual increases that would reflect general increases in population or urbanization aggregated across many stations. Noting the uncertainty of the maximum temperature, the *temperature range* seems to have been only slightly affected by urbanization during the 1941–84 period but generally decreased in an erratic manner with respect to the urban stations over the 1901–84 period.

In order to determine if there were important regional differences with respect to the TCM, the analysis procedure was repeated by dividing the country in half, a northern network and a southern network, using the 40° parallel as a boundary. No significant differences could be detected. Similarly, it was divided into eastern and western networks, using the 90° meridian as a boundary, but again, no significant differences were found.

When the same analysis was repeated with original observations, uncorrected for potential discontinuities but corrected for time of observation biases, the relative warming of the stations located in urbanized areas was found to be approximately the same or smaller than that obtained from the adjusted data. This implies that the procedure used by Karl and Williams (1987) to adjust for potential discontinuities did not appreciably mask or smear urban warming effects across the network.

The rate of population change did not help explain the low-frequency fluctuations in the time series. The rate of change was used to categorize the subsets based on the population from 1920, 1950 and 1980. The logarithms and ratios of the changes were compared to the temperature difference series but no significant relationship was found. Many other transformations are possible, but only these two were tested.

b. Detection of urbanization using the Time Average Method (TAM)

1) DEVELOPMENT OF REGRESSION EQUATIONS

Prior to the development of the relationship between instantaneous heat island intensity and canyon sky-view factors as a measure of urbanization, Oke (1976) and other workers used empirical methods to develop relationships between city size and the instantaneous maximum $\bar{T}_{u-r}$. The goal in this part of the analysis is to produce similar relationships, but for seasonal and annual differences of temperature. Once developed, these relationships can be used to remove the effects of increasing population (urbanization) in large-scale studies of climate change. For this reason, we developed regression coefficients for various regression equations. They are given in Table 2. Each equation was devel-

TABLE 2. Coefficient a and the correlation (R) of regression equations using all populations of the form: $\bar{T}_{u-r}^* = a$ (urban population)^{0.45}, where $\bar{T}_{u-r}^*$ is the urban–rural temperature difference in °C.

Season	Coefficient a	Coefficient 95% confidence interval			R
		Upper	Lower		
<i>Average</i>					
Winter	1.81×10^{-3}	2.01×10^{-3}	1.61×10^{-3}		0.53
Spring	1.47×10^{-3}	1.64×10^{-3}	1.30×10^{-3}		0.50
Summer	2.03×10^{-3}	2.35×10^{-3}	1.71×10^{-3}		0.40
Fall	2.01×10^{-3}	2.21×10^{-3}	1.81×10^{-3}		0.57
Annual	1.82×10^{-3}	2.00×10^{-3}	1.64×10^{-3}		0.57
<i>Maximum</i>					
Winter	2.4×10^{-4}	4.8×10^{-4}	0		0.07
Spring	-8.6×10^{-4}	-5.8×10^{-4}	-11.4×10^{-4}		-0.22
Summer	-6.5×10^{-4}	-2.5×10^{-4}	-10.5×10^{-4}		-0.11
Fall	-2.7×10^{-4}	-0.5×10^{-4}	-4.9×10^{-4}		-0.18
Annual	-3.9×10^{-4}	-1.7×10^{-4}	-5.6×10^{-4}		-0.12
<i>Minimum</i>					
Winter	3.18×10^{-3}	3.50×10^{-3}	2.86×10^{-3}		0.57
Spring	3.12×10^{-3}	3.41×10^{-3}	2.83×10^{-3}		0.60
Summer	4.00×10^{-3}	4.44×10^{-3}	3.56×10^{-3}		0.54
Fall	4.10×10^{-3}	4.48×10^{-3}	3.72×10^{-3}		0.60
Annual	3.61×10^{-3}	3.93×10^{-3}	3.37×10^{-3}		0.62
<i>Range</i>					
Winter	-2.97×10^{-3}	-2.59×10^{-3}	-3.35×10^{-3}		-0.48
Spring	-3.98×10^{-3}	-3.55×10^{-3}	-4.41×10^{-3}		-0.54
Summer	-4.79×10^{-3}	-4.29×10^{-3}	-5.29×10^{-3}		-0.56
Fall	-4.36×10^{-3}	-3.88×10^{-3}	-4.84×10^{-3}		-0.54
Annual	-3.99×10^{-3}	-3.57×10^{-3}	-4.41×10^{-3}		-0.56

oped separately for both 1950 and 1980, and subsequently, by combining data for both 1950 and 1980² after some of the effects of local landscape and background climate (elevation and latitude) were considered. In the process of formulating these equations, several problems emerged.

The first problem was related to the appropriate transformation of the population variable as represented by the urban metropolitan population. The regression equation used was of the form:

$$\bar{T}_{u-r}^* = f(\text{POPULATION}_u), \quad (1)$$

where population refers to the urban population and $\bar{T}_{u-r}^*$ is the mean urban minus rural temperature difference after the differences between the stations in elevation and latitude are considered. Several transformations of population were chosen; the square root and the logarithm of population were tested first. Mitchell (1953) used the square root of population and Oke (1973, 1976) the logarithm of population in his work dealing with instantaneous $\bar{T}_{u-r}$. Here, the square root of population proved more satisfactory, as statistically significant higher values of R in each of the separate regression equations were obtained using the 1950 and 1980 populations. As Mitchell (1953) argued, the

² This means that for a few urban pairs, the 1950 population was less than 2000.

square root function may have its basis in the tendency of the area of a city to: 1) be proportional to its population; 2) change in area proportional to its population change; and 3) be roughly circular in shape. The reason why the square root function proved more satisfactory than the logarithm in the regression equations is of interest. Oke (1976) has convincingly demonstrated the utility of using the logarithm of population, and more recently (Oke 1982), he has attached physical significance to the use of the logarithm of population in terms of city canyon sky-view factors. It must be remembered, however, that his work addresses the maximum observed urban-to-rural temperature difference, which is usually measured in parts of the city that have the greatest development, i.e., the lowest sky view factors. In this analysis, however, it is unlikely that an urban station will be located in that part of the city with the greatest development or lowest sky view factor. Instead, observing stations may be scattered across the city, and the probability that a station is located in an area with relatively low canyon sky view factor is likely to be disproportionately higher for cities with large populations and many developed areas than for cities with small populations and only one central developed area. In this regard, the square root function increases with population at a faster rate than the logarithm. This, then, could help explain the better relation of the square root function with heat islands studied herein. Furthermore, it would suggest that there is no reason why the square root of population should be the best dependent variable, and that other powers should be considered if the residuals of the regression equation are not well behaved. For both the 1950 and 1980 data, the resulting form of (1) then became

$$\bar{T}_{u-r}^* = a (\text{POPULATION}_u)^b, \quad (2)$$

where a is a coefficient determined by least squares methods and b equals 0.5.

The second problem concerned the variance of the residuals of Eq. (2) which were not random for predicted values of $\bar{T}_{u-r}^*$ and were heteroscedastic. This undesirable characteristic was addressed by a weighted least squares regression analysis as suggested by Draper and Smith (1966). For each of the three categories of population defined in Table 1, the relative importance of the observations within each category was made equal. Since there are three categories, the weight of each observation was defined by

$$0.333(N/N_c), \quad (3)$$

where N is the total number of observations and N_c is the number of observations in category c .

In order to test whether the form of (2) was an appropriate linear equation, a was calculated for each of the three categories of urban population in Table 1 using unweighted least squares procedures. For these calculations, both the 1950 and the 1980 subsets were merged together, since the coefficients were quite consistent for these two subsets. After calculating a , it be-

came apparent that, as the population increased, the value of a tended to become slightly smaller in absolute value, especially for the average temperature. Furthermore, several of the coefficients from each category were found to be outside of others' 95% confidence interval. Other values of b were tried in order to resolve this problem, i.e., $b = 0.35, 0.40$, and 0.45 . A satisfactory result was achieved using

$$\bar{T}_{u-r}^* = a (\text{POPULATION}_u)^{0.45}. \quad (4)$$

Tables 2-5 contain the results of these tests with $b = 0.45$. Inspection of the coefficients indicates that all the coefficients, regardless of population category, are contained within the limits of others' 95% confidence interval. Table 6 was prepared in order to show any remaining systematic tendency of decreasing values of a with increasing population. None exists for the average or the maxima, but it could be argued that the exponent $b = 0.45$ has undercorrected for the minimum and temperature range. It is possible that a more appropriate exponent in (4) would be slightly below 0.45 for the range and the minimum, but the end points of the 95% confidence intervals for each of the population categories were quite close; therefore, no such change was made. Slightly different values of b for the temperature range and the minimum temperature

TABLE 3. As in Table 2, except for population of less than 10 000.

Season	Coefficient a	Coefficient 95% confidence interval		
		Upper	Lower	R
<i>Average</i>				
Winter	1.46×10^{-3}	3.12×10^{-3}	-0.20×10^{-3}	0.08
Spring	2.03×10^{-3}	3.35×10^{-3}	0.71×10^{-3}	0.13
Summer	3.19×10^{-3}	5.06×10^{-3}	1.31×10^{-3}	0.15
Fall	1.73×10^{-3}	3.25×10^{-3}	0.21×10^{-3}	0.10
Annual	2.07×10^{-3}	3.43×10^{-3}	0.71×10^{-3}	0.13
<i>Maximum</i>				
Winter	-1.41×10^{-3}	0.19×10^{-3}	-3.01×10^{-3}	-0.08
Spring	-0.74×10^{-3}	0.89×10^{-3}	-2.39×10^{-3}	-0.04
Summer	0.33×10^{-3}	2.39×10^{-3}	-1.72×10^{-3}	0.01
Fall	-1.17×10^{-3}	0.35×10^{-3}	-2.69×10^{-3}	-0.07
Annual	-0.77×10^{-3}	0.63×10^{-3}	-2.17×10^{-3}	-0.05
<i>Minimum</i>				
Winter	4.11×10^{-3}	6.71×10^{-3}	1.51×10^{-3}	0.14
Spring	4.90×10^{-3}	7.10×10^{-3}	2.70×10^{-3}	0.20
Summer	6.75×10^{-3}	9.35×10^{-3}	4.15×10^{-3}	0.23
Fall	4.80×10^{-3}	7.60×10^{-3}	2.20×10^{-3}	0.15
Annual	5.12×10^{-3}	7.52×10^{-3}	2.72×10^{-3}	0.20
<i>Range</i>				
Winter	-5.56×10^{-3}	-2.76×10^{-3}	-8.36×10^{-3}	-0.18
Spring	-5.65×10^{-3}	-2.65×10^{-3}	-8.65×10^{-3}	-0.17
Summer	-6.74×10^{-3}	-3.34×10^{-3}	-10.14×10^{-3}	-0.18
Fall	-5.97×10^{-3}	-2.57×10^{-3}	-9.37×10^{-3}	-0.16
Annual	-5.89×10^{-3}	-2.89×10^{-3}	-8.89×10^{-3}	-0.18

TABLE 4. As in Table 2, except for population of between 10 000 and 100 000.

Season	Coefficient a	Coefficient 95% confidence interval		
		Upper	Lower	R
<i>Average</i>				
Winter	1.48×10^{-3}	2.66×10^{-3}	0.30×10^{-3}	0.15
Spring	1.26×10^{-3}	2.20×10^{-3}	0.32×10^{-3}	0.16
Summer	2.13×10^{-3}	3.55×10^{-3}	0.71×10^{-3}	0.18
Fall	1.27×10^{-3}	2.27×10^{-3}	0.27×10^{-3}	0.15
Annual	1.51×10^{-3}	2.51×10^{-3}	0.61×10^{-3}	0.20
<i>Maximum</i>				
Winter	-0.80×10^{-3}	0.60×10^{-3}	-2.00×10^{-3}	-0.08
Spring	-1.84×10^{-3}	0.32×10^{-3}	-3.36×10^{-3}	-0.14
Summer	-1.89×10^{-3}	0.31×10^{-3}	-4.09×10^{-3}	-0.10
Fall	-1.13×10^{-3}	0.13×10^{-3}	-2.39×10^{-3}	-0.11
Annual	-1.14×10^{-3}	0.16×10^{-3}	-2.44×10^{-3}	-0.13
<i>Minimum</i>				
Winter	3.45×10^{-3}	5.15×10^{-3}	1.75×10^{-3}	0.24
Spring	3.26×10^{-3}	4.56×10^{-3}	1.96×10^{-3}	0.29
Summer	4.81×10^{-3}	6.37×10^{-3}	3.25×10^{-3}	0.35
Fall	3.09×10^{-3}	4.85×10^{-3}	1.33×10^{-3}	0.20
Annual	3.65×10^{-3}	5.07×10^{-3}	2.23×10^{-3}	0.30
<i>Range</i>				
Winter	-4.33×10^{-3}	-2.61×10^{-3}	-6.05×10^{-3}	-0.29
Spring	-5.11×10^{-3}	-2.91×10^{-3}	-7.31×10^{-3}	-0.27
Summer	-6.94×10^{-3}	-4.34×10^{-3}	-9.54×10^{-3}	-0.30
Fall	-4.22×10^{-3}	-1.82×10^{-3}	-6.62×10^{-3}	-0.21
Annual	-5.08×10^{-3}	-3.08×10^{-3}	-7.08×10^{-3}	-0.28

compared to the other elements could not be adequately justified on any physical basis. Furthermore, such a change would alter the results to only a very small degree.

The information provided in Tables 2–5 is of particular importance because it indicates that (4) can be applied to very low as well as to very high urban populations, a result that is not so obvious from an inspection of the scatter in Fig. 11, especially for low populations. In particular, the large number of urban-to-rural station pairs in the low population categories helps to offset the large variance in residuals and reduces what otherwise would be very large standard errors of estimate for a .

2) CHARACTERISTICS OF THE REGRESSION EQUATIONS

Some of the important characteristics of the regression equations are immediately apparent (Table 2). First, for most seasons the coefficients associated with the minima have a different sign than those associated with the maxima. Furthermore, the magnitude of the coefficients for the minima are much larger (by approximately an order of magnitude) than those for the

maxima. These differing signs and the relatively large positive coefficients of the minima produce negative coefficients for the temperature range for all seasons. The magnitude of the coefficients for the average temperature is about one-half that for the minimum temperature, but the signs are unchanged.

The seasonal variation of the magnitude of the coefficients is significant. The coefficients are larger for the range, minima, and average during the summer and fall months than during the winter and spring months. The changes in the minima are mainly responsible for the larger coefficients of the average and range during summer and fall.

5. Interpretation of the results

A comparison of the results of the TCM and the TAM was completed by applying the equations derived from the TAM, in the same format as that used for the TCM, to predict the magnitude of the urbanization effect. Equation (4), the coefficients in Table 2, and twentieth-century population statistics were used to calculate the change in the $\bar{T}_{u-r}$ over the two sets of time periods, 1941–62 versus 1963–84 and 1901–42 versus 1943–84, using the station pairs depicted in Figs. 1–4 for each set. Population estimates were obtained

TABLE 5. As in Table 2, except for population greater than 100 000.

		Coefficient 95% confidence interval		
Season	Coefficient a	Upper	Lower	R
<i>Average</i>				
Winter	1.74×10^{-3}	2.12×10^{-3}	1.36×10^{-3}	0.81
Spring	1.46×10^{-3}	1.86×10^{-3}	1.06×10^{-3}	0.75
Summer	1.94×10^{-3}	2.84×10^{-3}	1.04×10^{-3}	0.53
Fall	1.86×10^{-3}	2.32×10^{-3}	1.42×10^{-3}	0.78
Annual	1.74×10^{-3}	2.18×10^{-3}	1.30×10^{-3}	0.71
<i>Maximum</i>				
Winter	0.28×10^{-3}	0.88×10^{-3}	-0.32×10^{-3}	0.14
Spring	-0.68×10^{-3}	0.04×10^{-3}	-1.40×10^{-3}	-0.28
Summer	-0.52×10^{-3}	0.48×10^{-3}	-1.52×10^{-3}	-0.16
Fall	-0.24×10^{-3}	0.24×10^{-3}	-0.72×10^{-3}	-0.16
Annual	-0.29×10^{-3}	0.25×10^{-3}	-0.83×10^{-3}	-0.16
<i>Minimum</i>				
Winter	3.02×10^{-3}	3.76×10^{-3}	2.28×10^{-3}	0.78
Spring	3.02×10^{-3}	3.82×10^{-3}	2.22×10^{-3}	0.75
Summer	3.81×10^{-3}	5.17×10^{-3}	2.45×10^{-3}	0.65
Fall	3.79×10^{-3}	4.79×10^{-3}	2.79×10^{-3}	0.75
Annual	3.42×10^{-3}	4.32×10^{-3}	2.42×10^{-3}	0.76
<i>Range</i>				
Winter	-2.77×10^{-3}	-1.67×10^{-3}	-3.87×10^{-3}	-0.61
Spring	-3.71×10^{-3}	-2.51×10^{-3}	-4.91×10^{-3}	-0.68
Summer	-4.41×10^{-3}	-3.71×10^{-3}	-5.51×10^{-3}	-0.74
Fall	-4.02×10^{-3}	-2.76×10^{-3}	-5.28×10^{-3}	-0.69
Annual	-3.71×10^{-3}	-2.55×10^{-3}	-4.87×10^{-3}	-0.70

TABLE 6. Relative position of the magnitude of the coefficient a of the regression equation: $\bar{T}_{u-r} = a(\text{population}_u)^{0.45}$ with respect to three categories of population: 1) 2000 to 10 000, 2) 10 000 to 100 000, and 3) > 100 000. Here L, M, H, stand for the rank of the coefficients: low, medium, or high.

Season	1	2	3
<i>Average</i>			
Winter	L	M	H
Spring	H	L	M
Summer	H	M	L
Fall	M	L	H
Annual	H	L	M
<i>Maximum</i>			
Winter	L	M	H
Spring	M	H	L
Summer	L	H	M
Fall	H	M	L
Annual	M	H	L
<i>Minimum</i>			
Winter	H	M	L
Spring	H	M	L
Summer	H	M	L
Fall	H	L	M
Annual	H	M	L
<i>Range</i>			
Winter	H	M	L
Spring	H	M	L
Summer	M	H	L
Fall	H	M	L
Annual	H	M	L

from the U.S. Census Bureau statistics for the 1920, 1950, and 1980 census. From these census figures the population of each station during each year from 1900 to 1984 was estimated by using the time rate of change derived from the difference in population 1950–20 for the period prior to 1950, and 1980–50 for the period after 1950. Figures 9 and 10 give the results of such calculations for the TAM. Several general characteristics are apparent. First, for the TAM, the difference between the rate of urban warming (or cooling) is consistent regardless of the time period (either 1901–84 or 1941–84) chosen for comparison. For example, for the average temperature, the warming rate of the most populous category is approximately $0.09^\circ\text{C decade}^{-1}$ for the period from 1941 to 1984 and $0.08^\circ\text{C decade}^{-1}$ for the whole period from 1901 to 1984. This consistency in the rates of change holds for all elements and population categories. The same cannot be said for the TCM results. The warming due to urbanization for the maximum temperature is greater by nearly 0.04°C for two of the three population categories solely by changing time periods. The results from the TAM indicate that this cannot be attributed to a change in the network of station pairs nor to a large change in the rate of

population increase. It is more likely that this variability is a result of the noise in the time series introduced by imperfect adjustments for discontinuities, undocumented inhomogeneities, changes in the frequency of air mass regimes or weather types, and other inherent random and nonrandom variations.

The primary difference between the two methods of deriving average temperature is manifested in the highest population category (> 100 000). Compared to the TCM, the TAM predicts nearly twice the bias due to urban warming. Both methods, depict a positive urban bias, however, even at very low urban populations. This is consistent with the results of Landsberg (1975) for Columbia, Maryland. The difference in the highest category (> 100 000) is due to the much larger warming rate of the TAM for the minimum temperature. In the same category, very large differences occur in the rate of temperature decrease of the diurnal temperature range. There is much closer agreement for the two lower population categories with respect to the sign and magnitude of the rates of change of $\bar{T}_{u-r}$ for most elements. In these two categories, only during the period from 1941 to 1948 is there a discrepancy between the two methods, namely, in the maximum temperature for the 10 000 to 100 000 category.

In terms of seasonal variations, both the TAM and the TCM indicate that the rate of warming for the minimum and the average temperature is larger during summer and fall than during winter and spring. This is consistent with the results of other work for both $\bar{T}_{u-r}$ and the instantaneous maximum T_{u-r} in much of the United States (Landsberg 1981). The season with the smallest urban effect is spring. Apparently, the relative infrequency of calm nights in midlatitudes during the spring as compared to the other seasons, and the smaller amounts of anthropogenic heat compared to winter, prevent the urbanization effect in spring from being as large as that during other seasons.

6. Implications of urbanization

The results of previous studies can be used to help resolve the differences between the TCM and the TAM. Prior analyses, which have addressed both the maximum and minimum temperature using variations of either the TCM (Cayan and Douglas 1984) or the TAM (Chandler 1965; Landsberg 1981; Hage 1972; Garstang et al. 1975), have all indicated that the minimum temperature is more strongly affected by urbanization than the maximum. Furthermore, the many studies of instantaneous T_{u-r} suggest that the urbanization effects in daytime (maximum temperature) are small; some studies have detected a "cool island" (Oke 1982). This is consistent with the results of the TAM. Because of this, and because

1) the TCM is somewhat inconsistent from time period to time period with respect to the warming rate of the maximum temperature;

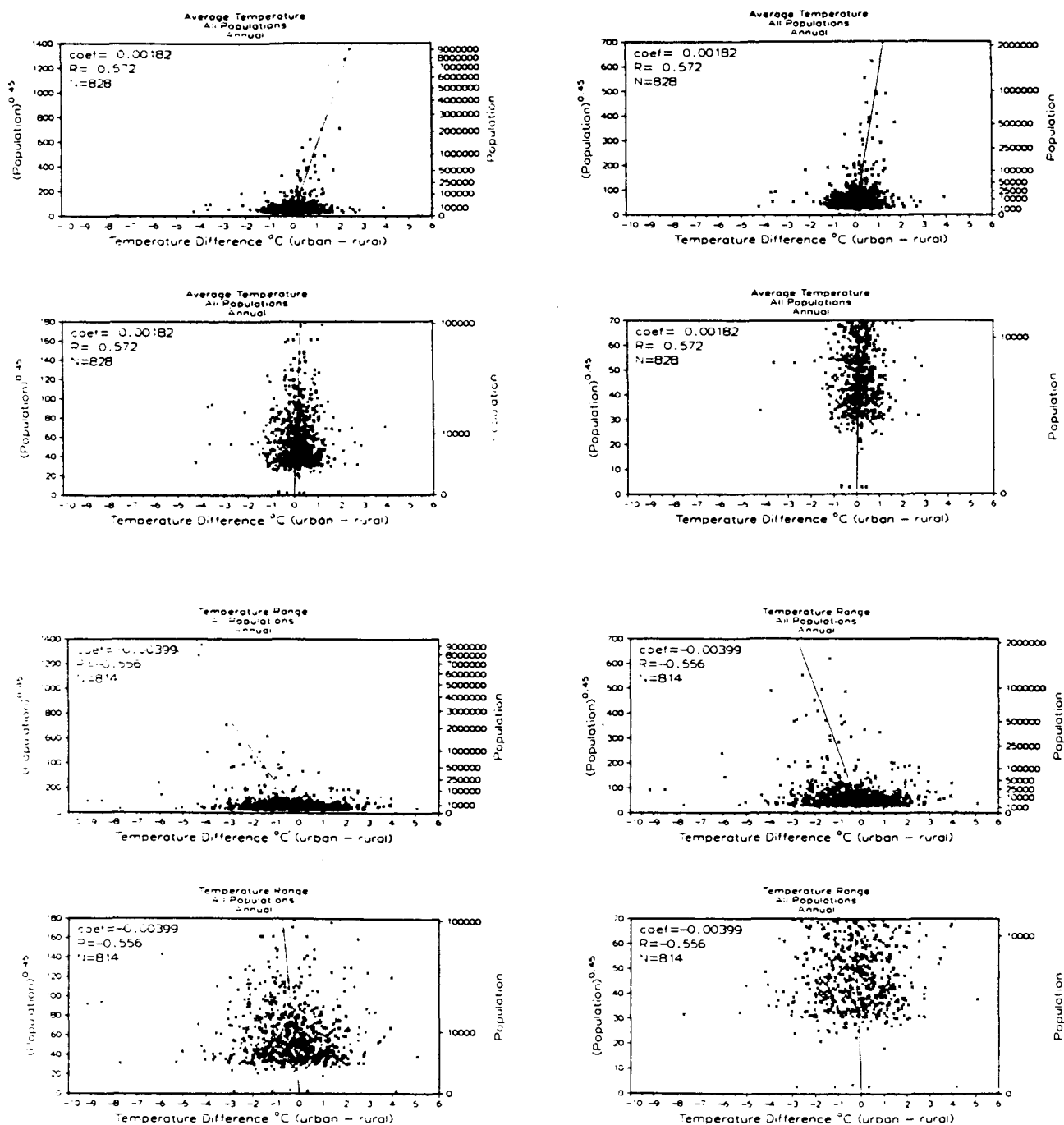


FIG. 11. Scatter plots of $\bar{T}_{ur}$ (see section 3) related to population shown in four different ranges. The solid line depicts regression line of best fit, and a vertical dashed line represents no relation between population and $\bar{T}_{ur}$. The regression line is based on all urban populations for 1950 and 1980 combined.

2) the TCM is vulnerable to imperfect adjustments for station changes;

3) the TCM can be adversely affected by undocumented changes in the local landscape in the immediate vicinity of the station any time over the entire twentieth century;

4) the TCM can be affected by changes in the frequency of air mass regimes over time; and

5) there is uncertainty about the most appropriate technique for calculating the time rate of change due to the fluctuations and vacillations in the series; the results from the TAM are preferred.

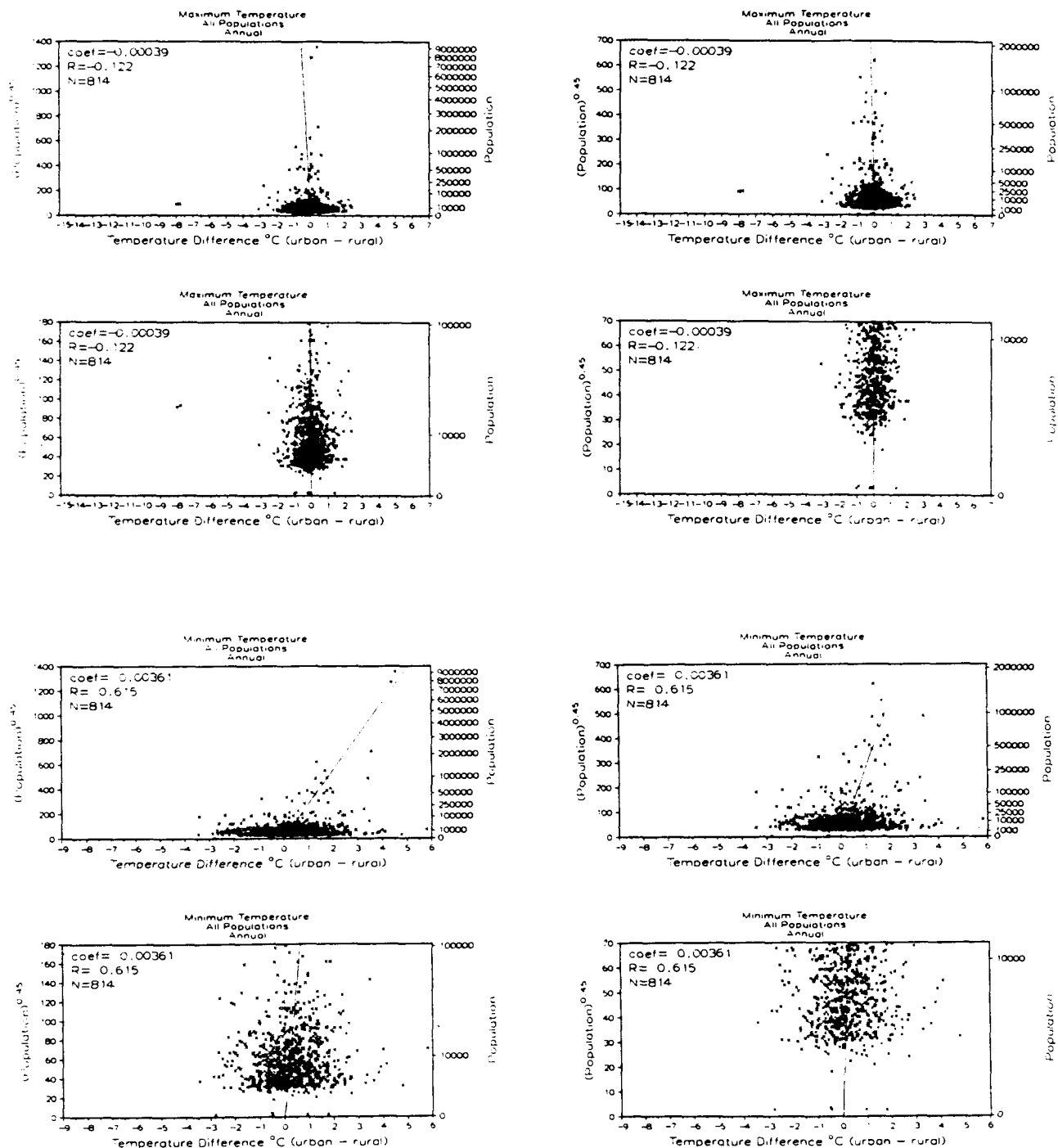


FIG. 11. (Continued)

The TAM was used to calculate the effect of urbanization on the climate record of the United States in the HCN. Stations from two subsets of the original 1219 stations were used. In both subsets, data were adjusted for potential discontinuities. In one subset (subset *a*), at least 75% of the adjusted data had to be present (no more than 25% of the data estimated), and

the stations with the widest confidence intervals in the adjustments were not used (i.e., the widest 10% were omitted). In the other subset (subset *b*), all stations that could be adjusted were used, regardless of quality. Area-weighted temperatures were calculated by forming 23 regions in the United States (Fig. 12) and identifying a fixed network of stations for various time periods for

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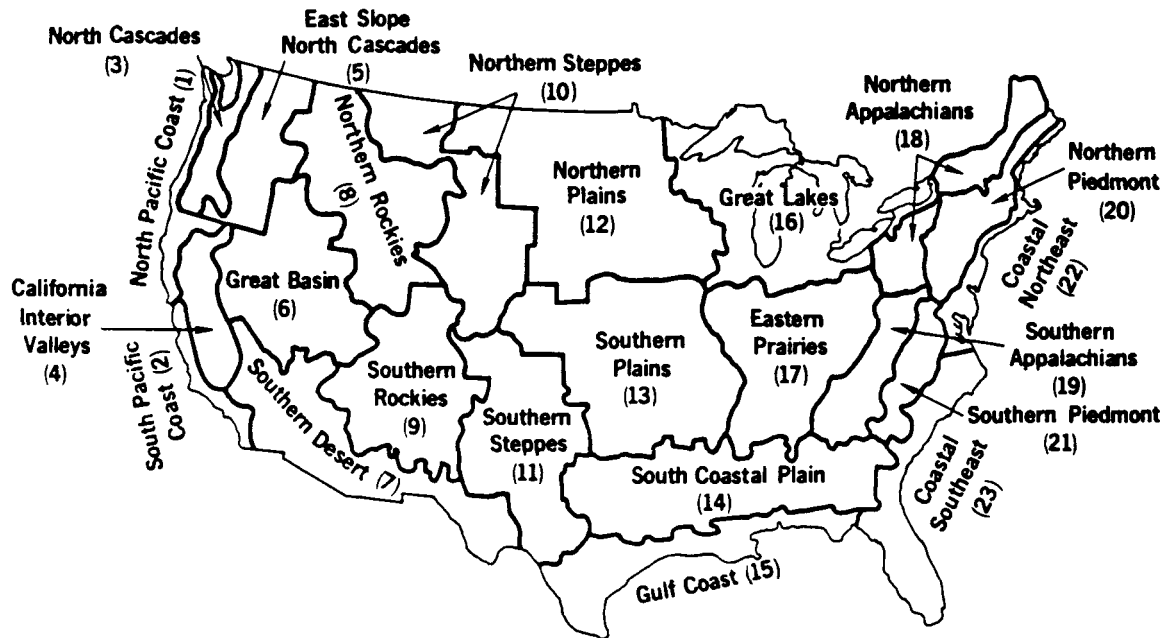


FIG. 12. Regions used to area weight temperatures in the United States area-average calculation.

the maximum, minimum, and range, as well as for the average temperature (Fig. 13). Seasonal means for each region were calculated by weighting each station within a region equally, and a United States area mean was calculated by weighting each area according to the area of the region relative to the area of the contiguous United States. Adjustments for urbanization effects were applied to the data using (4) for each network and for each season. The populations of each station were derived as described in section 5. Figure 14 depicts the urbanization corrected and noncorrected temperature time series for the "higher" quality network (subset *a*). The urbanization bias in these networks is small. It averages approximately $+0.06^{\circ}\text{C}$ for the average temperature, $+0.13^{\circ}\text{C}$ for the minimum temperature, -0.01°C for the maximum temperature, and a -0.14°C for the temperature range over the 1901–84 time period. When the same urbanization corrections are applied to the subset *b* time series, the heat island bias is nearly identical in both networks.

Much of what is presented in Fig. 14 with respect to the mean temperature has been noted by others, who have used mostly nonurban stations (Diaz and Quayle 1980; Karl et al. 1984), but the changes in the maximum, minimum, and temperature range in the United States over the entire twentieth century have never before been documented. One of the most interesting characteristics of the climate record is the decrease in the diurnal temperature range since the 1940s

and the lack of any noticeable trend prior to this time. Karl et al. (1984, 1986b, 1987) discuss this recent decrease as it may relate to the greenhouse effect or aerosol loading.

Table 7 and Fig. 15 provide an estimate of the effect of urbanization for cities of various sizes compared to a rural station. It is clear from Figs. 14 and 15 that, due to the large number of rural stations in the HCN, the effect of population growth in the HCN networks is not large when temperature data are aggregated across much of the HCN database. The average difference in the mean temperature trend is only 0.06°C , quite small compared to the year-to-year variability of the annual mean and many of the multiyear climate fluctuations or changes in level (cf. Fig. 14). However, the use of another dataset with a greater urban representation, if uncorrected, could easily result in much larger biases.

7. Conclusion and recommendations

Urbanization has influenced the climate records of even small towns in the United States (Fig. 15). A method has been developed that, when used with large-scale area averages, removes most of the bias for the temperature maximum, minimum, average, and range, given the history of station population. The urbanization bias was found to be a predominately nighttime phenomenon especially pronounced in minimum temperature and the diurnal temperature range.

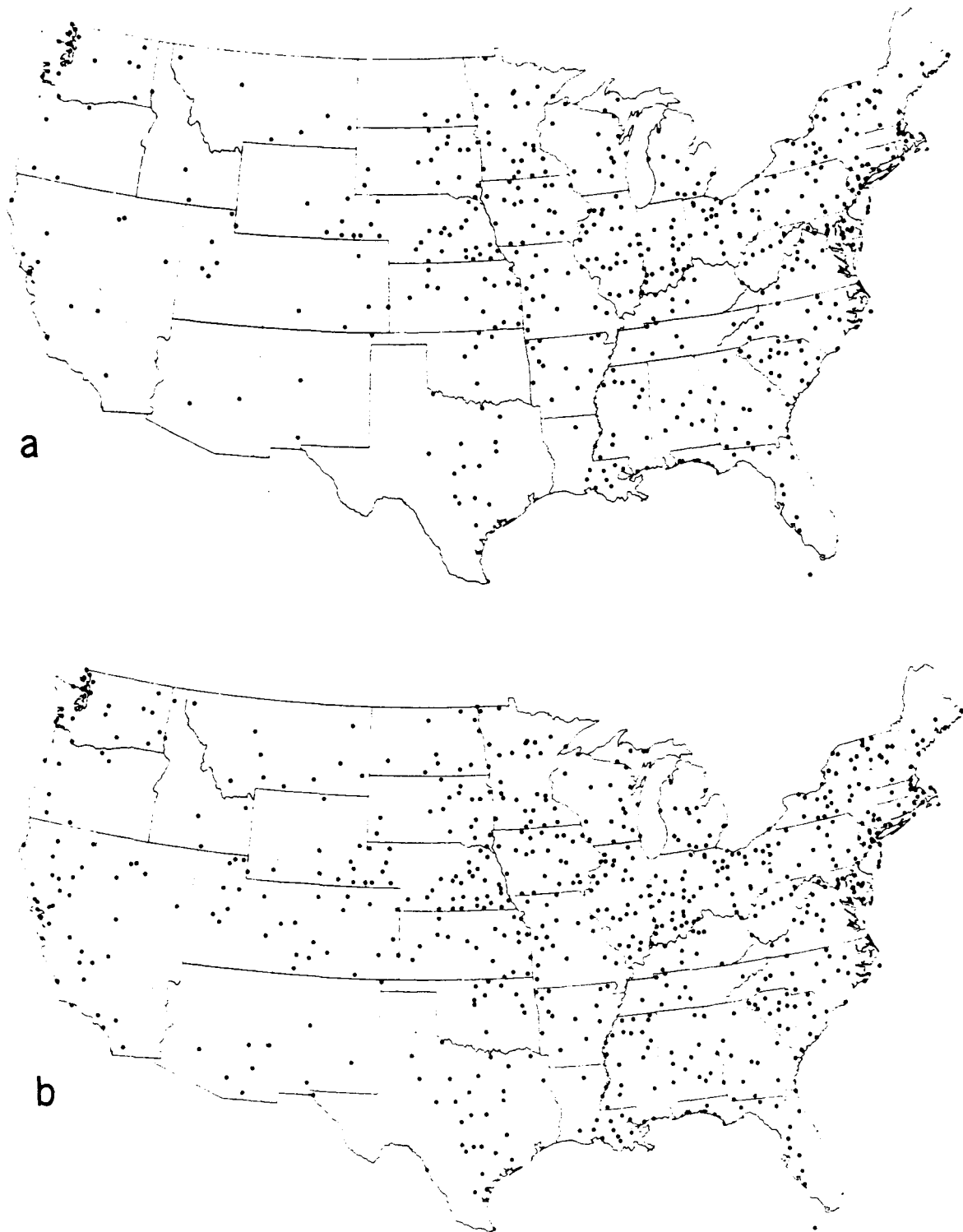


FIG. 13. Fixed network of stations (1901-84) where the confidence of the adjustments and the amount of estimated data (a) were considered and (b) where they were not considered.

The effect of urbanization on the Historical Climatology Network during the twentieth century (1901-84) is shown to be practically negligible for the maxi-

mum temperature but significant for the diurnal minima, means, and range. On an annual basis it amounts to 0.06°C , 0.13°C and -0.14°C for the average, min-

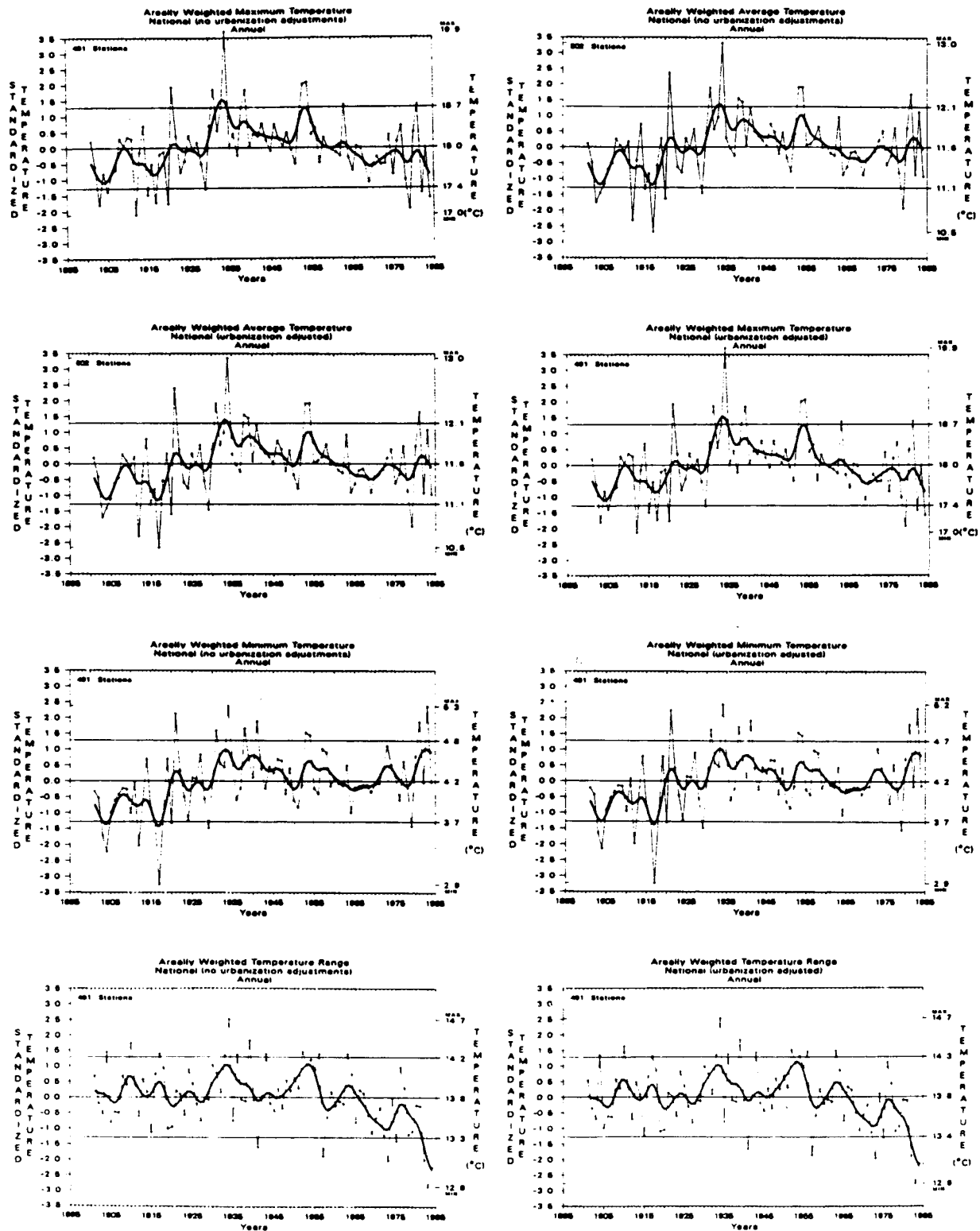


FIG. 14. Time series of urban adjusted (right panel) versus unadjusted (left panel) area-weighted mean temperature for the United States for the higher-quality stations in the Historical Climatology Network (Fig. 13a).

TABLE 7. The effect of urbanization on the annual temperature ($^{\circ}\text{C}$) in the United States with respect to a station located in a rural environment (population < 2000). Each element is derived independently of other elements [(max + min)/2 = avg].

Population	Average	Maximum	Minimum	Diurnal temperature range
2000	0.06	-0.01	0.12	-0.13
5000	0.08	-0.02	0.16	-0.18
10 000	0.11	-0.02	0.22	-0.24
20 000	0.16	-0.03	0.32	-0.35
50 000	0.24	-0.05	0.48	-0.53
100 000	0.32	-0.07	0.63	-0.70
200 000	0.44	-0.09	0.87	-0.96
500 000	0.67	-0.14	1.33	-1.47
1 000 000	0.91	-0.20	1.81	-2.00
2 000 000	1.25	-0.27	2.48	-2.74
5 000 000	1.88	-0.40	3.73	-4.12
10 000 000	2.57	-0.55	5.10	-5.63

imum and diurnal temperature range, respectively. It must be noted, however, that the Historical Climatology Network is a relatively rural station network, in which over 85% of the stations are located in cities with a population of less than 25 000 in 1980. This implies that the growth rate of these stations has been quite small over the twentieth century. Results from subsets of the network and from other studies indicate that much larger biases are present in rapidly growing urban areas. Several additional points about the results deserve emphasis:

- 1) The results are based on a statistical aggregate over many station pairs.
- 2) There are strong fluctuations in long time series of urban-to-rural temperature differences, which may

be related to climate variability or local changes around each site. This makes it difficult to assess the effect of urbanization using such time series, especially for stations with small urban warming biases.

3) No significant regional differences were detected, but some significant seasonal differences were found with respect to the magnitude of the urban bias. The bias was found to be greatest during summer and fall, and least during winter and spring.

4) The adjustment scheme used in the HCN had little effect on the results.

Some words of caution are pertinent. The rural stations used to estimate the impact of urbanization had an average population in 1980 of 700, so that, for a station located in an unpopulated area, the computed magnitude of the annual average heat island effect is underestimated. On the other hand, if the equations we developed are extrapolated to a population of zero, such underestimates are likely to be relatively small, no more than 0.03°C .

We do not recommend the use of the equations developed in this study to predict the impact of a heat island at any particular station as the explained variance of the equations is not high enough for such an appraisal to be valid. Instead, the equations should be used only if a number of stations are available to represent regional averages. Local climate effects, the specific location of the station in relation to the city center, and the special attributes of any given city, possibly unrelated to population, preclude the prediction of the urban effect at any single location by this methodology alone.

For similar reasons, the general application of such equations in a global context cannot be recommended

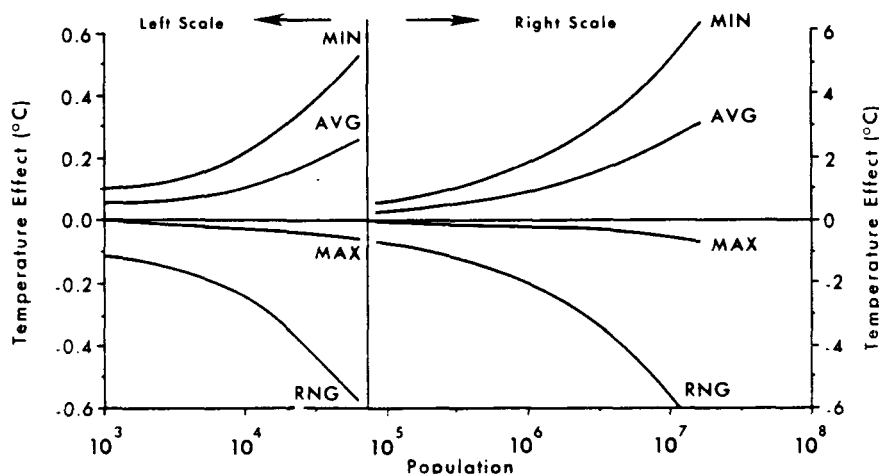


FIG. 15. Annual mean temperature bias due to urban effects as a function of population derived from stations in the U.S. Historical Climatology Network. The left scale is for population up to 90 000 and the right scale for populations of 90 000 or more. Here AVG implies average temperature, MAX, maximum temperature, MIN, minimum temperature, and RNG, temperature range.

TABLE 8. Predicted annual T_{u-r} ($^{\circ}\text{C}$) using Oke's (1976) equations.

Population	Europe	North America	Ratio
2000	2.6*	3.3	0.79
5000	3.4*	4.5	0.76
10 000	4.0*	5.5	0.73
20 000	4.6*	6.4	0.72
50 000	5.4	7.6	0.71
100 000	6.0	8.5	0.71
200 000	6.6	9.4	0.70
500 000	7.4	10.6	0.70
1 000 000	8.0	11.6	0.69
2 000 000	8.6	12.5	0.69
5 000 000	9.4*	13.7	0.69
10 000 000	10.0*	14.6	0.68

* Predicted values are outside the bounds of the developed regression equations.

either. The varying ratios of anthropogenic heat generated by the city to amount of insolation received, quantities of evapotranspiration, ventilation, etc., are likely to be appreciably different in tropical and polar climates compared to the midlatitudes. Indeed, prolonged intense inversions in polar climates have been shown to produce very large heat islands (Weller 1982). On the other hand, the climate of the United States may be similar enough to other midlatitude locations in Europe and Asia that the equations developed might be effective. Oke (1976, 1982) provides evidence to suggest, however, that the estimate of the greatest instantaneous T_{u-r} for any given city is characteristically different for European and North American cities because of characteristic differences in canyon sky-view factors for equal populations. Table 8 contains the estimated effect of population on the largest instantaneous T_{u-r} in Europe and North America. Since these values were associated with clear, calm nocturnal temperatures, one can assume that a large portion of the differences can be attributed to the characteristics of the cities themselves. If so, then one could conceivably use the ratio of the maximum instantaneous T_{u-r} of European versus North American cities as an adjustment to the predicted effect of urbanization as derived from the equations developed in this study, but this should only serve as an interim solution to the problem until data can be examined in other parts of the world. At the present time, however, the station density of computer compatible global land surface datasets needs improvement.

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