

**Teacher Guide**  
**Climate Change or Climate Variability:**  
**Making Sense of U.S. Temperature and Precipitation Data**

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**Activity Focus:** Students analyze U.S. temperature and precipitation data from NOAA to determine if the U.S. climate is changing. Students interpret the temperature and precipitation data in the contexts of the hydrologic cycle and agricultural impact on the environment.

**Major Concepts:** Weather can be defined as the physical conditions of the lower atmosphere over a short time period whereas climate refers to the average weather conditions for a location over a long time period. Climate scientists use average temperature and average precipitation as the main weather conditions for determining climate. The Earth may be divided into six major climate regions or zones based upon temperature profiles and latitude. Climate variability involves the short-term change or fluctuation in temperature and precipitation, whereas climate change encompasses the significant change in temperature and precipitation lasting for an extended period of time (decades or longer). Although the precipitation and temperature patterns for the U.S. are increasing, this change varies geographically. The geographic variations in precipitation and temperature will impact agriculture in different ways.

**Objectives:** After completing this activity, students will be able to:

- state the difference between weather and climate
- determine the climate zone for their school
- analyze temperature and precipitation data for the U.S.
- explain how temperature and precipitation patterns in the U.S. are changing.
- describe how a change in the Earth's temperature affects the hydrologic cycle
- relate changes in U.S. temperature and precipitation to drought conditions in the U.S.
- transform data into a graphic form.
- calculate basic descriptive statistics.

**Materials and Preparation:** You will need to prepare the following materials before conducting this activity.

- Copy the *Climate Change or Climate Variability: Making Sense of U.S. Temperature and Precipitation Data* data interpretation and visualization activity (make 1 copy per student).
- Provide each student/group with graph paper for answering the data transformation questions. You may want to provide each group with a grid-lined transparency to record their transformations.
- Duplicate the 8 data sets and make sample chips (see appendix). It is suggested that you use a different color paper for each data set. Cut each temperature or

precipitation year into a single sample and place similar data into an envelope for student use. The number of each data set will depend on how students are assigned to analyze the data. If time is a concern you may want to assign students different data sets to analyze. You will have data sets (envelopes) for the following:

- Winter (Dec-Feb) Precipitation U.S.
- Summer (Jun-Aug) Precipitation U.S.
- Winter (Dec-Feb) Temperature U.S.
- Summer (Jun-Aug) Temperature U.S.
- Annual Temperature U.S.
- Annual Precipitation U.S.
- Annual Temperature Central Region
- Annual Precipitation Central Region

To obtain current precipitation and temperature data go to the NOAA National Climate Prediction Center web site:

<http://www.ncdc.noaa.gov/oa/climate/research/cag3/cag3.html>

- Make a transparency or PowerPoint slide for each Figure and data set graph (appendix) for use in the class discussion.

**Procedures:** Organize students into small groups of 3-4 or have students work independently on completing the activity. If students are working in small groups, have them read and discuss as a group each question before recording a consensus response. Have students place their data on the blackboard or the overhead transparency to share with the class and discuss their analysis and interpretation.

1. Introduce the activity by showing students the global warming cartoon (appendix), asking them to share their interpretations of the cartoon. Ask students “what does the cartoon say about global warming and climate change?” Ask students if they think our weather and climate are changing; is it becoming hotter and drier in the U.S.? Have students answer the “what I currently know and think” questions before starting the activity. You may want to discuss these as a class.
2. To complete the *Explore and Explain* section of the activity students will need data sets for:
  - average winter (Dec.-Feb.) precipitation and temperature data for the U.S
  - average summer (June-Aug.) precipitation and temperature data for the U.S.

Have students complete the climate zone questions. You may want to share and discuss their answers as a class, displaying the climate zone map (Figure 1). Next, review the data analysis procedures with students, reminding them that they are analyzing U.S. weather data in order to answer the following question:

- *Does the temperature and precipitation data support the notion that the climate in the U.S. is changing?*

If time is a concern, you may wish to assign students different data sets to analyze, having each group share their graph, statistical analysis, and interpretation. Have students share before going on to the *Extend* section of the activity. Be sure and discuss the “Thinking about your data sets” questions.

3. For the *Extend* portion of the activity students will need data sets for:

- annual precipitation and temperature data for the U.S.
- annual precipitation and temperature data for the central U.S.

Review the data analysis procedures with students, reminding them that they are analyzing U.S. weather data in order to answer the following questions:

- *Is there a difference in the annual precipitation and temperature data for the U.S. compared to the central U.S.?*
- *Does the temperature and precipitation data support or refute the notion that the climate in the U.S. is changing?*

If time is a concern, you may wish to assign students different data sets to analyze, having each group share their graph, statistical analysis, interpretations, and answers to the questions before going on to the *Apply* section of the activity. Share the NOAA graphs (appendix) with students. Have students compare their graphs to the NOAA graphs. Do student interpretations change?

4. Discuss the application questions as a class, asking students to share their responses to the questions. You may want to display the hydrologic cycle figure (Figure 2) while discussing students’ responses.
5. Have students reflect on their ideas by re-answering the engage questions writing their responses to the “what I now know and think” questions and have them reflect on their own thinking by completing the “how my ideas and thinking have changed” question. You may want to have students share how their ideas have changed.
6. Collect student/group responses. Administer assessment item.

**Assessments:** The following assessments may be used as a pre/post activity assessment or as part of a module assessment.

- What is the difference between weather and climate?
- What is the difference between climate change and climate variability?

- In what ways might climate change impact temperature and precipitation patterns in the United States?

**Quiz:** The following quiz may be used as a post activity assessment.

Weather is defined as the \_\_\_\_\_ conditions of the lower atmosphere, and climate refers to the \_\_\_\_\_ weather conditions over a long time period.

Most of the United States is in which climate zone?

- A. Tropical
- B. Dry or arid
- C. Warm temperate with cool winter
- D. Cool temperate with cool winter
- E. Polar

Annual temperature and precipitation data for the U.S. shows a:

- A. Decreasing trend
- B. Increasing trend
- C. Stable trend
- D. Variable trend

Global warming will cause the hydrologic cycle to:

- A. Decrease, evaporate less water, and thus less precipitation
- B. Increase, evaporate more water, and thus more precipitation
- C. Stay the same, thus no change in evaporation or precipitation

True or False: Precipitation in the U.S. has increased, however the amount varies by geographic region.

### **Bibliography**

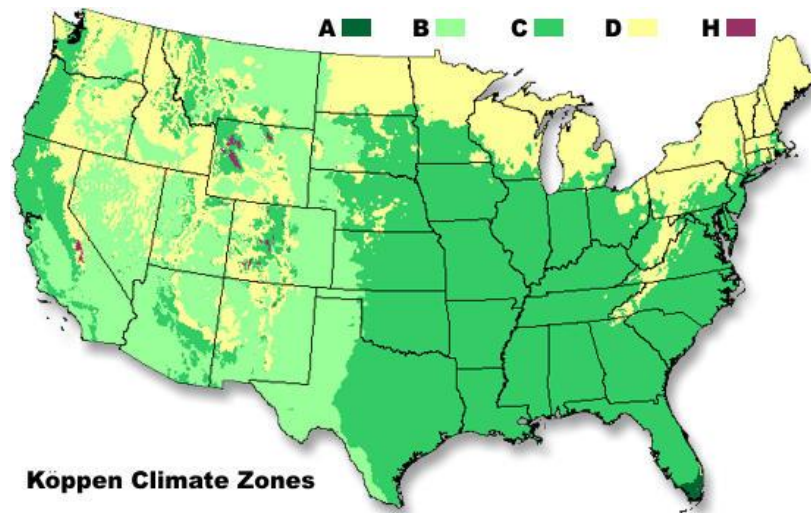
EPA. Climate Change. <http://www.epa.gov/climatechange/index.html>

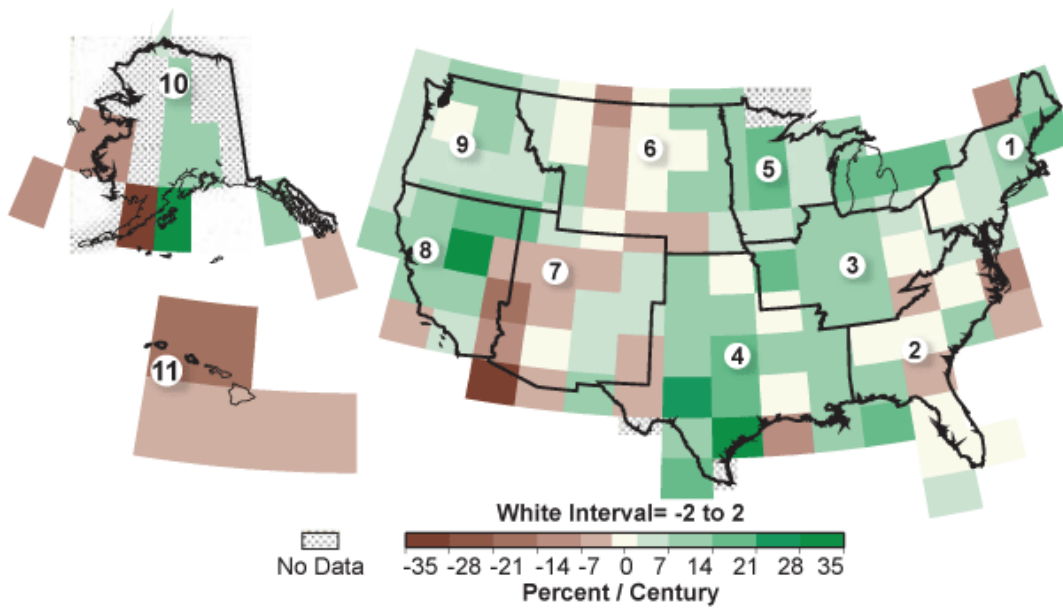
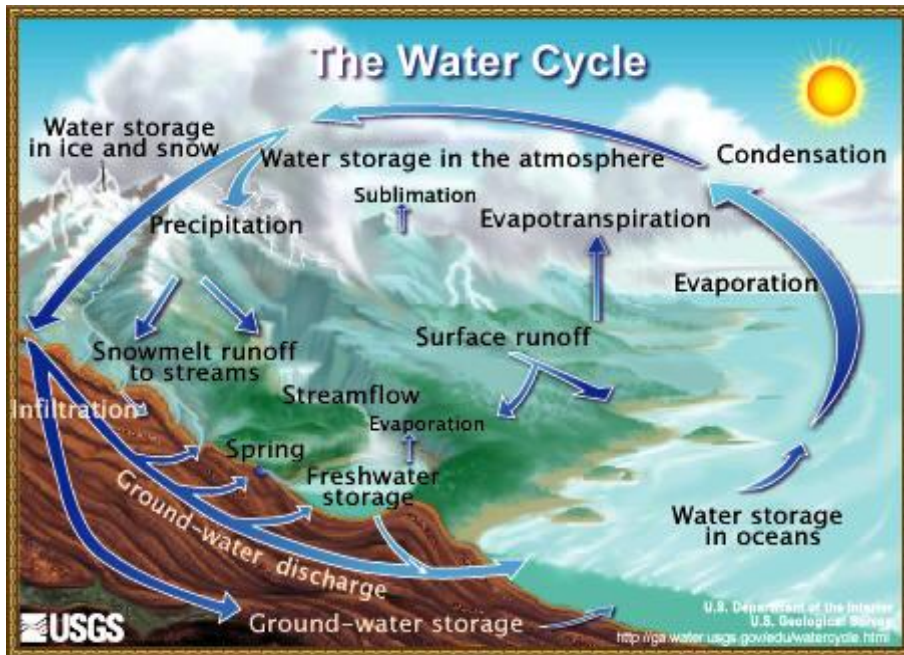
NOAA Jet stream. <http://www.srh.noaa.gov/srh/jetstream/matrix.htm>

NOAA Climate Prediction Center

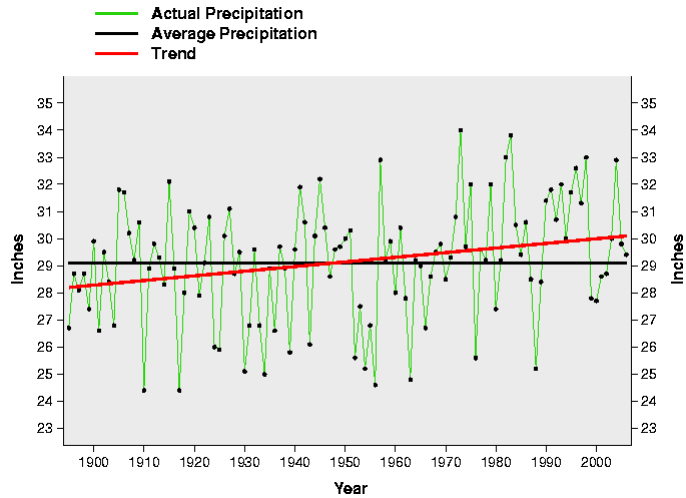
[http://www.cpc.ncep.noaa.gov/products/expert\\_assessment/seasonal\\_drought.html](http://www.cpc.ncep.noaa.gov/products/expert_assessment/seasonal_drought.html)

Appendix:

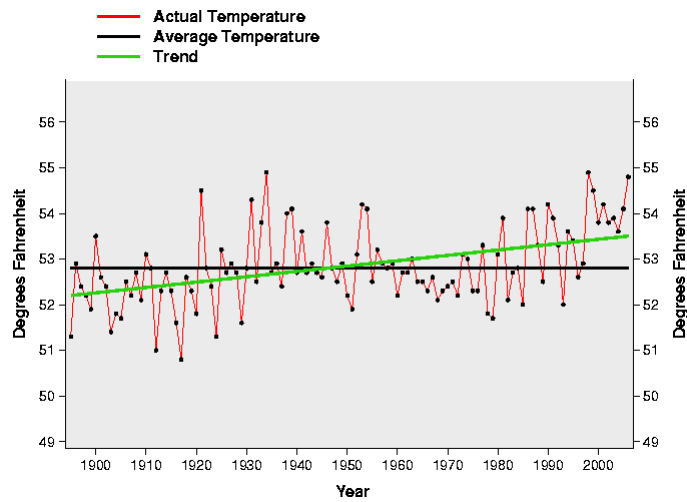




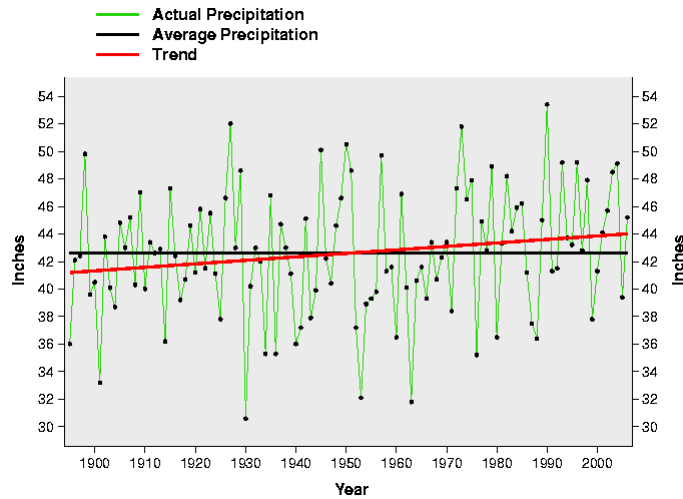
# Annual Precipitation, US



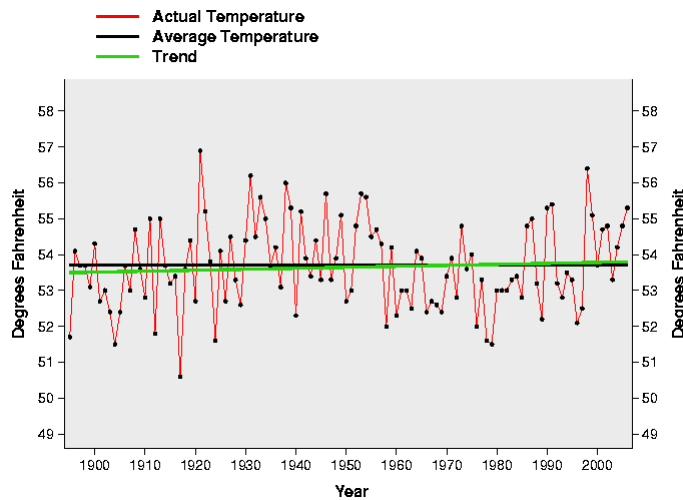
# Annual Temperature, US



# Annual Precipitation, Central US



# Annual Temperature, Central US





### Precipitation and Temperature Data

Year	Winter (Dec-Feb) Precipitation U.S.
2007	6.24 inches
2006	6.07 inches
2005	6.78 inches
2004	6.49 inches
2003	6.63 inches
2002	5.40 inches
2001	5.60 inches
2000	5.69 inches
1999	6.69 inches
1998	8.68 inches
1997	8.00 inches
1996	6.50 inches
1995	6.68 inches
1994	6.10 inches
1993	7.89 inches
1992	6.99 inches
1991	6.48 inches
1990	6.49 inches
1989	5.45 inches
1988	6.08 inches
1987	6.33 inches
1986	5.40 inches
1985	5.80 inches
1984	6.59 inches
1983	8.12 inches
1982	7.14 inches
1981	4.45 inches
1980	6.08 inches
1979	8.12 inches
1978	7.16 inches
1977	4.08 inches
1976	5.36 inches

1975	7.21 inches
1974	7.47 inches
1973	7.13 inches
1972	6.89 inches
1971	6.17 inches
1970	6.11 inches
1969	7.58 inches
1968	6.35 inches
1967	5.73 inches
1966	6.59 inches
1965	7.28 inches
1964	5.20 inches
1963	4.58 inches
1962	7.08 inches
1961	5.93 inches
1960	6.74 inches
1959	5.48 inches
1958	6.72 inches
1957	5.84 inches
1956	6.57 inches
1955	5.67 inches
1954	6.15 inches
1953	6.69 inches
1952	7.18 inches
1951	6.19 inches
1950	7.43 inches
1949	7.78 inches
1948	6.13 inches
1947	5.14 inches
1946	7.01 inches
1945	6.35 inches
1944	6.09 inches
1943	6.06 inches
1942	6.05 inches
1941	6.46 inches

1940	6.34 inches
1939	6.88 inches
1938	6.54 inches
1937	8.34 inches
1936	6.87 inches
1935	5.72 inches
1934	5.79 inches
1933	6.82 inches
1932	8.50 inches
1931	4.55 inches
1930	6.28 inches
1929	5.91 inches
1928	5.57 inches
1927	6.72 inches
1926	5.79 inches
1925	6.33 inches
1924	6.38 inches
1923	6.70 inches
1922	6.43 inches
1921	6.38 inches
1920	5.34 inches
1919	6.86 inches
1918	5.33 inches
1917	5.92 inches
1916	8.16 inches
1915	7.89 inches
1914	6.99 inches
1913	6.64 inches
1912	6.67 inches
1911	6.12 inches
1910	6.76 inches
1909	7.26 inches
1908	7.04 inches
1907	7.11 inches
1906	6.39 inches

1905	6.23 inches
1904	5.16 inches
1903	7.89 inches
1902	6.02 inches
1901	5.28 inches
1900	6.17 inches
1899	6.18 inches
1898	6.33 inches
1897	6.18 inches
1896	6.66 inches

<b>Year</b>	<b>Summer (Jun-Aug) Precipitation U.S.</b>
2006	7.93 inches
2005	8.97 inches
2004	9.66 inches
2003	8.76 inches
2002	7.63 inches
2001	8.33 inches
2000	7.71 inches
1999	8.22 inches
1998	8.55 inches
1997	8.78 inches
1996	8.65 inches
1995	8.49 inches
1994	8.58 inches
1993	9.59 inches
1992	9.92 inches
1991	8.12 inches
1990	8.01 inches
1989	9.37 inches
1988	6.89 inches
1987	8.38 inches
1986	8.57 inches
1985	8.27 inches
1984	8.14 inches
1983	7.36 inches
1982	8.76 inches
1981	9.26 inches
1980	6.82 inches
1979	8.76 inches
1978	7.97 inches
1977	8.50 inches
1976	7.43 inches
1975	9.03 inches
1974	8.21 inches

1973	8.01 inches
1972	8.60 inches
1971	8.24 inches
1970	7.48 inches
1969	8.62 inches
1968	8.72 inches
1967	8.85 inches
1966	7.67 inches
1965	8.67 inches
1964	8.17 inches
1963	7.85 inches
1962	8.14 inches
1961	8.61 inches
1960	8.18 inches
1959	8.27 inches
1958	9.33 inches
1957	8.08 inches
1956	7.14 inches
1955	8.06 inches
1954	6.88 inches
1953	7.44 inches
1952	7.13 inches
1951	8.82 inches
1950	9.17 inches
1949	8.81 inches
1948	8.37 inches
1947	8.15 inches
1946	8.03 inches
1945	9.08 inches
1944	8.22 inches
1943	7.88 inches
1942	9.11 inches
1941	9.58 inches
1940	8.52 inches
1939	8.38 inches

1938	8.47 inches
1937	8.29 inches
1936	6.34 inches
1935	8.32 inches
1934	6.88 inches
1933	7.08 inches
1932	8.46 inches
1931	7.50 inches
1930	6.03 inches
1929	6.97 inches
1928	10.26 inches
1927	8.64 inches
1926	8.38 inches
1925	7.44 inches
1924	7.33 inches
1923	8.73 inches
1922	7.64 inches
1921	8.25 inches
1920	8.80 inches
1919	8.48 inches
1918	6.92 inches
1917	7.24 inches
1916	8.90 inches
1915	10.09 inches
1914	8.32 inches
1913	7.02 inches
1912	8.62 inches
1911	8.02 inches
1910	7.21 inches
1909	8.42 inches
1908	8.76 inches
1907	8.47 inches
1906	9.60 inches
1905	9.29 inches
1904	8.57 inches

1903	8.76 inches
1902	8.07 inches
1901	7.82 inches
1900	8.46 inches
1899	8.08 inches
1898	8.80 inches
1897	7.76 inches
1896	7.84 inches
1895	8.46 inches



<b>Year</b>	<b>Winter (Dec-Feb) Temperature U.S.</b>
2007	33.63 deg F
2006	35.70 deg F
2005	35.53 deg F
2004	33.31 deg F
2003	33.97 deg F
2002	36.06 deg F
2001	31.46 deg F
2000	36.96 deg F
1999	36.84 deg F
1998	36.51 deg F
1997	33.95 deg F
1996	33.51 deg F
1995	36.13 deg F
1994	32.41 deg F
1993	31.55 deg F
1992	36.84 deg F
1991	33.82 deg F
1990	34.20 deg F
1989	32.67 deg F
1988	32.57 deg F
1987	35.04 deg F
1986	33.58 deg F
1985	31.12 deg F
1984	31.10 deg F
1983	35.89 deg F
1982	31.31 deg F
1981	35.35 deg F
1980	33.91 deg F
1979	27.23 deg F
1978	29.62 deg F
1977	30.68 deg F
1976	35.20 deg F
1975	33.60 deg F

1974	33.87 deg F
1973	31.75 deg F
1972	33.23 deg F
1971	32.92 deg F
1970	32.74 deg F
1969	31.42 deg F
1968	32.10 deg F
1967	33.68 deg F
1966	31.93 deg F
1965	32.85 deg F
1964	31.20 deg F
1963	31.45 deg F
1962	31.82 deg F
1961	33.38 deg F
1960	32.89 deg F
1959	32.21 deg F
1958	34.45 deg F
1957	34.64 deg F
1956	32.46 deg F
1955	32.43 deg F
1954	36.20 deg F
1953	36.17 deg F
1952	33.88 deg F
1951	33.49 deg F
1950	34.08 deg F
1949	31.19 deg F
1948	31.77 deg F
1947	34.06 deg F
1946	32.76 deg F
1945	33.06 deg F
1944	34.07 deg F
1943	33.80 deg F
1942	33.24 deg F
1941	34.91 deg F
1940	32.65 deg F

1939	33.68 deg F
1938	34.48 deg F
1937	31.29 deg F
1936	28.66 deg F
1935	34.27 deg F
1934	36.12 deg F
1933	32.04 deg F
1932	35.35 deg F
1931	34.96 deg F
1930	33.37 deg F
1929	29.59 deg F
1928	32.36 deg F
1927	34.41 deg F
1926	34.35 deg F
1925	32.42 deg F
1924	33.32 deg F
1923	33.36 deg F
1922	32.08 deg F
1921	35.57 deg F
1920	31.30 deg F
1919	33.65 deg F
1918	29.97 deg F
1917	29.97 deg F
1916	32.29 deg F
1915	31.39 deg F
1914	33.48 deg F
1913	31.91 deg F
1912	30.21 deg F
1911	33.70 deg F
1910	29.01 deg F
1909	34.31 deg F
1908	34.25 deg F
1907	34.67 deg F
1906	33.40 deg F
1905	29.43 deg F

1904	30.69 deg F
1903	31.02 deg F
1902	31.88 deg F
1901	32.98 deg F
1900	33.10 deg F
1899	28.93 deg F
1898	33.14 deg F
1897	33.33 deg F
1896	33.92 deg F

<b>Year</b>	<b>Summer (Jun-Aug) Temperature U.S.</b>
2006	74.21 deg F
2005	73.26 deg F
2004	71.09 deg F
2003	73.45 deg F
2002	73.89 deg F
2001	73.37 deg F
2000	73.01 deg F
1999	72.68 deg F
1998	73.27 deg F
1997	71.89 deg F
1996	72.64 deg F
1995	72.64 deg F
1994	73.00 deg F
1993	71.32 deg F
1992	70.26 deg F
1991	72.79 deg F
1990	72.66 deg F
1989	71.97 deg F
1988	73.87 deg F
1987	72.55 deg F
1986	72.69 deg F
1985	71.82 deg F
1984	72.44 deg F
1983	72.89 deg F
1982	71.30 deg F
1981	72.70 deg F
1980	73.19 deg F
1979	71.45 deg F
1978	72.30 deg F
1977	72.96 deg F
1976	71.26 deg F
1975	71.63 deg F
1974	71.72 deg F

1973	72.37 deg F
1972	71.49 deg F
1971	72.09 deg F
1970	72.78 deg F
1969	72.11 deg F
1968	71.42 deg F
1967	71.17 deg F
1966	72.01 deg F
1965	70.91 deg F
1964	71.83 deg F
1963	72.17 deg F
1962	71.41 deg F
1961	72.51 deg F
1960	72.41 deg F
1959	72.95 deg F
1958	71.99 deg F
1957	72.31 deg F
1956	72.41 deg F
1955	72.31 deg F
1954	72.88 deg F
1953	72.83 deg F
1952	73.26 deg F
1951	71.40 deg F
1950	70.45 deg F
1949	72.58 deg F
1948	72.11 deg F
1947	71.97 deg F
1946	71.84 deg F
1945	71.06 deg F
1944	71.82 deg F
1943	72.99 deg F
1942	71.97 deg F
1941	72.09 deg F
1940	72.63 deg F
1939	72.80 deg F

1938	72.82 deg F
1937	73.40 deg F
1936	74.73 deg F
1935	72.63 deg F
1934	74.27 deg F
1933	73.58 deg F
1932	72.68 deg F
1931	73.49 deg F
1930	72.80 deg F
1929	71.91 deg F
1928	70.98 deg F
1927	70.39 deg F
1926	71.96 deg F
1925	72.44 deg F
1924	71.46 deg F
1923	71.60 deg F
1922	72.61 deg F
1921	72.94 deg F
1920	70.87 deg F
1919	72.56 deg F
1918	72.63 deg F
1917	71.49 deg F
1916	71.48 deg F
1915	69.69 deg F
1914	72.36 deg F
1913	72.22 deg F
1912	70.33 deg F
1911	72.01 deg F
1910	71.69 deg F
1909	72.07 deg F
1908	70.81 deg F
1907	70.30 deg F
1906	71.13 deg F
1905	71.37 deg F
1904	70.30 deg F

1903	70.14 deg F
1902	71.09 deg F
1901	73.22 deg F
1900	72.61 deg F
1899	71.68 deg F
1898	72.35 deg F
1897	71.52 deg F
1896	72.53 deg F
1895	71.05 deg F



<b>Year</b>	<b>Annual Temperature U.S.</b>
2006	54.79 deg F
2005	54.08 deg F
2004	53.62 deg F
2003	53.86 deg F
2002	53.76 deg F
2001	54.23 deg F
2000	53.84 deg F
1999	54.53 deg F
1998	54.94 deg F
1997	52.94 deg F
1996	52.57 deg F
1995	53.41 deg F
1994	53.61 deg F
1993	51.98 deg F
1992	53.29 deg F
1991	53.87 deg F
1990	54.24 deg F
1989	52.47 deg F
1988	53.33 deg F
1987	54.08 deg F
1986	54.08 deg F
1985	52.02 deg F
1984	52.75 deg F
1983	52.65 deg F
1982	52.08 deg F
1981	53.88 deg F
1980	53.13 deg F
1979	51.67 deg F
1978	51.80 deg F
1977	53.33 deg F
1976	52.26 deg F
1975	52.27 deg F
1974	53.05 deg F

1973	53.09 deg F
1972	52.17 deg F
1971	52.50 deg F
1970	52.43 deg F
1969	52.28 deg F
1968	52.12 deg F
1967	52.57 deg F
1966	52.28 deg F
1965	52.45 deg F
1964	52.48 deg F
1963	53.05 deg F
1962	52.71 deg F
1961	52.68 deg F
1960	52.24 deg F
1959	52.92 deg F
1958	52.77 deg F
1957	52.89 deg F
1956	53.15 deg F
1955	52.51 deg F
1954	54.13 deg F
1953	54.18 deg F
1952	53.13 deg F
1951	51.93 deg F
1950	52.24 deg F
1949	52.91 deg F
1948	52.49 deg F
1947	52.78 deg F
1946	53.81 deg F
1945	52.59 deg F
1944	52.72 deg F
1943	52.93 deg F
1942	52.70 deg F
1941	53.57 deg F
1940	52.69 deg F
1939	54.07 deg F

1938	54.01 deg F
1937	52.36 deg F
1936	52.94 deg F
1935	52.68 deg F
1934	54.91 deg F
1933	53.81 deg F
1932	52.53 deg F
1931	54.33 deg F
1930	52.77 deg F
1929	51.60 deg F
1928	52.65 deg F
1927	52.88 deg F
1926	52.71 deg F
1925	53.25 deg F
1924	51.31 deg F
1923	52.39 deg F
1922	52.75 deg F
1921	54.49 deg F
1920	51.76 deg F
1919	52.26 deg F
1918	52.61 deg F
1917	50.85 deg F
1916	51.64 deg F
1915	52.27 deg F
1914	52.69 deg F
1913	52.35 deg F
1912	51.02 deg F
1911	52.76 deg F
1910	53.11 deg F
1909	52.08 deg F
1908	52.74 deg F
1907	52.22 deg F
1906	52.47 deg F
1905	51.73 deg F
1904	51.84 deg F

1903	51.36 deg F
1902	52.39 deg F
1901	52.63 deg F
1900	53.52 deg F
1899	51.86 deg F
1898	52.17 deg F
1897	52.42 deg F
1896	52.87 deg F
1895	51.34 deg F

<b>Year</b>	<b>Annual Precipitation U.S.</b>
2006	29.39 inches
2005	29.84 inches
2004	32.88 inches
2003	29.95 inches
2002	28.66 inches
2001	28.58 inches
2000	27.73 inches
1999	27.84 inches
1998	32.97 inches
1997	31.29 inches
1996	32.59 inches
1995	31.69 inches
1994	30.04 inches
1993	31.97 inches
1992	30.67 inches
1991	31.77 inches
1990	31.40 inches
1989	28.42 inches
1988	25.25 inches
1987	28.46 inches
1986	30.61 inches
1985	29.41 inches
1984	30.48 inches
1983	33.81 inches
1982	32.99 inches
1981	29.17 inches
1980	27.38 inches
1979	32.02 inches
1978	29.17 inches
1977	29.62 inches
1976	25.62 inches
1975	32.02 inches
1974	29.72 inches

1973	33.99 inches
1972	30.77 inches
1971	29.29 inches
1970	28.54 inches
1969	29.79 inches
1968	29.52 inches
1967	28.61 inches
1966	26.67 inches
1965	28.95 inches
1964	29.23 inches
1963	24.77 inches
1962	27.80 inches
1961	30.41 inches
1960	27.95 inches
1959	29.88 inches
1958	29.25 inches
1957	32.90 inches
1956	24.57 inches
1955	26.81 inches
1954	25.23 inches
1953	27.51 inches
1952	25.63 inches
1951	30.33 inches
1950	29.99 inches
1949	29.70 inches
1948	29.65 inches
1947	28.57 inches
1946	30.42 inches
1945	32.25 inches
1944	30.08 inches
1943	26.07 inches
1942	30.58 inches
1941	31.85 inches
1940	29.63 inches
1939	25.82 inches

1938	28.85 inches
1937	29.72 inches
1936	26.59 inches
1935	28.85 inches
1934	25.05 inches
1933	26.80 inches
1932	29.60 inches
1931	26.79 inches
1930	25.09 inches
1929	29.50 inches
1928	28.67 inches
1927	31.15 inches
1926	30.12 inches
1925	25.94 inches
1924	25.95 inches
1923	30.75 inches
1922	29.11 inches
1921	27.94 inches
1920	30.39 inches
1919	30.99 inches
1918	27.95 inches
1917	24.44 inches
1916	28.90 inches
1915	32.06 inches
1914	28.27 inches
1913	29.31 inches
1912	29.75 inches
1911	28.94 inches
1910	24.37 inches
1909	30.64 inches
1908	29.17 inches
1907	30.17 inches
1906	31.73 inches
1905	31.84 inches
1904	26.84 inches

1903	28.42 inches
1902	29.46 inches
1901	26.63 inches
1900	29.88 inches
1899	27.43 inches
1898	28.70 inches
1897	28.11 inches
1896	28.68 inches
1895	26.66 inches



<b>Year</b>	<b>Annual Temperature Central Region</b>
2006	55.3 deg F
2005	54.8 deg F
2004	54.2 deg F
2003	53.3 deg F
2002	54.8 deg F
2001	54.7 deg F
2000	53.7 deg F
1999	55.1 deg F
1998	56.4 deg F
1997	52.5 deg F
1996	52.1 deg F
1995	53.3 deg F
1994	53.5 deg F
1993	52.8 deg F
1992	53.3 deg F
1991	55.4 deg F
1990	55.3 deg F
1989	52.2 deg F
1988	53.2 deg F
1987	55.0 deg F
1986	54.8 deg F
1985	52.8 deg F
1984	53.4 deg F
1983	53.3 deg F
1982	53.0 deg F
1981	53.0 deg F
1980	53.0 deg F
1979	51.5 deg F
1978	51.6 deg F
1977	53.3 deg F
1976	52.0 deg F
1975	54.0 deg F

1974	53.6 deg F
1973	54.8 deg F
1972	52.8 deg F
1971	53.9 deg F
1970	53.4 deg F
1969	52.4 deg F
1968	52.6 deg F
1967	52.7 deg F
1966	52.4 deg F
1965	53.9 deg F
1964	54.1 deg F
1963	52.5 deg F
1962	53.0 deg F
1961	53.0 deg F
1960	52.3 deg F
1959	54.2 deg F
1958	52.0 deg F
1957	54.3 deg F
1956	54.7 deg F
1955	54.5 deg F
1954	55.6 deg F
1953	55.7 deg F
1952	54.8 deg F
1951	53.0 deg F
1950	52.7 deg F
1949	55.1 deg F
1948	53.9 deg F
1947	53.3 deg F
1946	55.7 deg F
1945	53.4 deg F
1944	54.4 deg F
1943	53.4 deg F
1942	53.9 deg F
1941	55.2 deg F
1940	52.3 deg F

1939	55.3 deg F
1938	56.0 deg F
1937	53.1 deg F
1936	54.2 deg F
1935	53.6 deg F
1934	55.0 deg F
1933	55.6 deg F
1932	54.5 deg F
1931	56.3 deg F
1930	54.4 deg F
1929	52.6 deg F
1928	53.3 deg F
1927	54.5 deg F
1926	52.7 deg F
1925	54.1 deg F
1924	51.6 deg F
1923	53.8 deg F
1922	55.2 deg F
1921	56.9 deg F
1920	52.7 deg F
1919	54.4 deg F
1918	53.6 deg F
1917	50.6 deg F
1916	53.4 deg F
1915	53.2 deg F
1914	53.7 deg F
1913	55.0 deg F
1912	51.8 deg F
1911	55.0 deg F
1910	52.8 deg F
1909	53.6 deg F
1908	54.7 deg F
1907	53.0 deg F
1906	53.7 deg F
1905	52.4 deg F

1904	51.6 deg F
1903	52.4 deg F
1902	53.0 deg F
1901	52.7 deg F
1900	54.3 deg F
1899	53.1 deg F
1898	53.7 deg F
1897	53.7 deg F
1896	54.1 deg F
1895	51.7 deg F

<b>Year</b>	<b>Annual Precipitation Central Region</b>
2006	45.17 inches
2005	39.44 inches
2004	49.08 inches
2003	48.52 inches
2002	45.70 inches
2001	44.09 inches
2000	41.35 inches
1999	37.85 inches
1998	47.90 inches
1997	42.78 inches
1996	49.17 inches
1995	43.15 inches
1994	43.71 inches
1993	49.24 inches
1992	41.47 inches
1991	41.29 inches
1990	53.38 inches
1989	45.03 inches
1988	36.43 inches
1987	37.49 inches
1986	41.24 inches
1985	46.19 inches
1984	45.93 inches
1983	44.19 inches
1982	48.17 inches
1981	43.27 inches
1980	36.50 inches
1979	48.91 inches
1978	42.80 inches
1977	44.92 inches
1976	35.16 inches
1975	47.94 inches

1974	46.50 inches
1973	51.79 inches
1972	47.35 inches
1971	38.39 inches
1970	43.39 inches
1969	42.34 inches
1968	40.66 inches
1967	43.38 inches
1966	39.33 inches
1965	41.58 inches
1964	40.61 inches
1963	31.75 inches
1962	40.14 inches
1961	46.87 inches
1960	36.45 inches
1959	41.59 inches
1958	41.31 inches
1957	49.69 inches
1956	39.77 inches
1955	39.35 inches
1954	38.89 inches
1953	32.11 inches
1952	37.16 inches
1951	48.58 inches
1950	50.46 inches
1949	46.56 inches
1948	44.60 inches
1947	40.38 inches
1946	42.21 inches
1945	50.09 inches
1944	39.86 inches
1943	37.88 inches
1942	45.06 inches
1941	37.20 inches
1940	36.01 inches

1939	41.09 inches
1938	43.00 inches
1937	44.72 inches
1936	35.35 inches
1935	46.79 inches
1934	35.31 inches
1933	42.05 inches
1932	42.95 inches
1931	40.25 inches
1930	30.57 inches
1929	48.62 inches
1928	43.05 inches
1927	51.96 inches
1926	46.58 inches
1925	37.76 inches
1924	41.12 inches
1923	45.53 inches
1922	41.50 inches
1921	45.80 inches
1920	41.25 inches
1919	44.62 inches
1918	40.73 inches
1917	39.19 inches
1916	42.38 inches
1915	47.26 inches
1914	36.18 inches
1913	42.91 inches
1912	42.64 inches
1911	43.40 inches
1910	40.05 inches
1909	46.96 inches
1908	40.34 inches
1907	45.24 inches
1906	42.98 inches
1905	44.78 inches

1904	38.73 inches
1903	40.13 inches
1902	43.82 inches
1901	33.22 inches
1900	40.47 inches
1899	39.63 inches
1898	49.83 inches
1897	42.41 inches
1896	42.13 inches
1895	36.04 inches