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ILLINOIS
CLIMATE

OFFICE OF THE
STATE CLIMATOLOGIST



Do you ever wonder what the average snowfall is in Rockford? How about the latest spring frost observed in Springfield? Need to know more about drought conditions in your area? Do you want to know more about climate change in Illinois? The Illinois State Climatologist can help answer these questions and more.

The Illinois State Climatologist is the primary source for Illinois climate information and services. Located at the Illinois State Water Survey, a division of the Institute of Natural Resource Sustainability at the University of Illinois at Urbana-Champaign, the State Climatologist maintains an extensive archive of historical climate data dating back to the mid-1800s. In addition, the State Climatologist has access to a wide range of research and knowledge about the climate of Illinois. The State Climatologist works with a wide range of clients, including students, teachers, homeowners, engineers, lawyers, other scientists, farmers, as well as federal, state, and local officials.

UNDERSTANDING CLIMATE

Illinois has a highly variable climate that provides both opportunities and challenges. The climate is ideal for growing major crops and supports a wide range of economic activities. However, events such as heat waves, winter storms, drought, and floods can have a significant impact on the state economy, environment, and the health and safety of Illinois residents. Research indicates that our society is becoming more sensitive to weather and climate over time.

Variability and change are natural features of climate. However, there is growing concern about the threat of human-induced climate change. An understanding of past climate change in Illinois as well as potential future climate change using climate models is critical in determining the impacts on Illinois. Useful and accurate climate information will be important in addressing ongoing and new climate issues in Illinois.

The State Climatologist can help Illinois residents find out about past climate conditions, understand current conditions, and learn more about potential future climate conditions in several ways:

- *Using historical data to understand past events.* Knowledge of past extreme weather and climate events can reduce our vulnerability to future climate events.
- *Monitoring current climate conditions.* Potential problems, such as drought, are identified before they occur, allowing time to plan and implement the most effective actions.
- *Assisting in planning research activities.* The State Climatologist has participated in a variety of projects dealing with heavy rainfall, water supply, drought, and other weather hazards throughout the state.

ILLINOIS HISTORICAL RECORDS

The following records were collected from the available climate archives. A large network of volunteer observers with standard training and equipment provide most of the official climate data in the state.

- The highest temperature reported in Illinois was 117 degrees in East St. Louis on July 14, 1954.
 - The lowest temperature reported in Illinois was -36 degrees in Congerville on January 5, 1999.
 - The most rainfall from a single event was 16.94 inches in Aurora during a 24-hour period spanning July 17-18, 1996.
 - The most precipitation in a year was a virtual tie between New Burnside in 1950 (74.58 inches) and Carbondale in 1945 (74.50 inches).
 - The most snow from a single storm occurred in Astoria on February 27-28, 1900, with 37.8 inches.
 - The most snow for a single winter was 105.1 inches at Antioch during the winter of 1978-1979.
- *Providing information services.* The State Climatologist distributes information through an extensive web site, and handles requests by phone, letter, fax, or e-mail. In addition, the State Climatologist is available to give talks to a wide range of audiences, issues press releases, and grants interviews to the media.

ILLINOIS CLIMATE DATA

Climate data available include:

- *Daily/monthly/annual climate data* for over 400 Illinois stations. Data reported include high and low temperatures, precipitation, and snowfall. Many of these stations date back to the 1940s and a few even back to the mid-1800s.
- *Hourly and 15-minute precipitation data* for nearly 150 Illinois stations.
- *Detailed climate statistics* for major cities such as Chicago, Peoria, Rockford, Springfield, Moline, and St. Louis.
- *Statewide and regional data* are available as well.

Because of frequent interactions with various local, state, and federal agencies, the State Climatologist can guide users to additional data sources, including the Midwestern Regional Climate Center, also located at the Illinois State Water Survey.

APPLIED RESEARCH

The State Climatologist conducts research on climate topics that affect Illinois. Research results appear in Survey publications, scientific journals, and on the Web site (www.isws.illinois.edu).

Topics include:

- Climate trends
- Drought
- El Niño and La Niña
- Heavy rainfall and floods
- Summer heat
- Tornadoes
- Winter Storms

