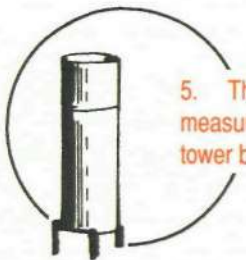




4. The data logger, which reads the weather instruments and temporarily stores the data, is mounted in a shelter at eye level.

ICN data are all submitted to quality-control procedures before being added to a permanent database archive. Quality control includes both computerized checks and manual checks by a quality-control analyst. Timely quality control allows for quick resolution of instrument and communication problems, minimizes missing data, and provides users with the most reliable data set available.



5. The weighing-bucket raingage, which measures precipitation, is located near the tower but outside its rain shadow.

### Uses of ICN Data

Data supplied by the Illinois Climate Network can be valuable to a variety of users for a variety of purposes:

- To agricultural producers for irrigation scheduling and other management decisions.
- To private businesses interested in using wind and solar radiation as alternative energy resources.
- To seed companies and Extension staff for monitoring crop development and vulnerability to pest damage.
- To university agronomists and graduate students for developing and improving crop simulation models or to support field activities.
- To researchers interested in monitoring the state's water resources, climate change, and the effect of weather on agriculture.

### For More Information

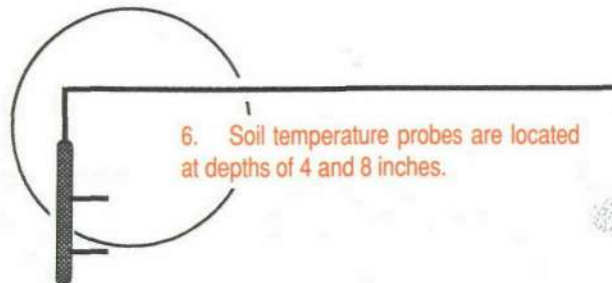
For more information about the Illinois Climate Network or to obtain monthly summaries and other ICN information products, please telephone or write to:

Dr. Steven E. Hollinger  
(217) 244-2939

or Beth C. Reinke  
(217) 244-2941

Office of Applied Climatology  
Illinois State Water Survey  
Richard G. Semonin, Chief  
2204 Griffith Drive  
Champaign, Illinois 61820-7495  
(217) 333-2210

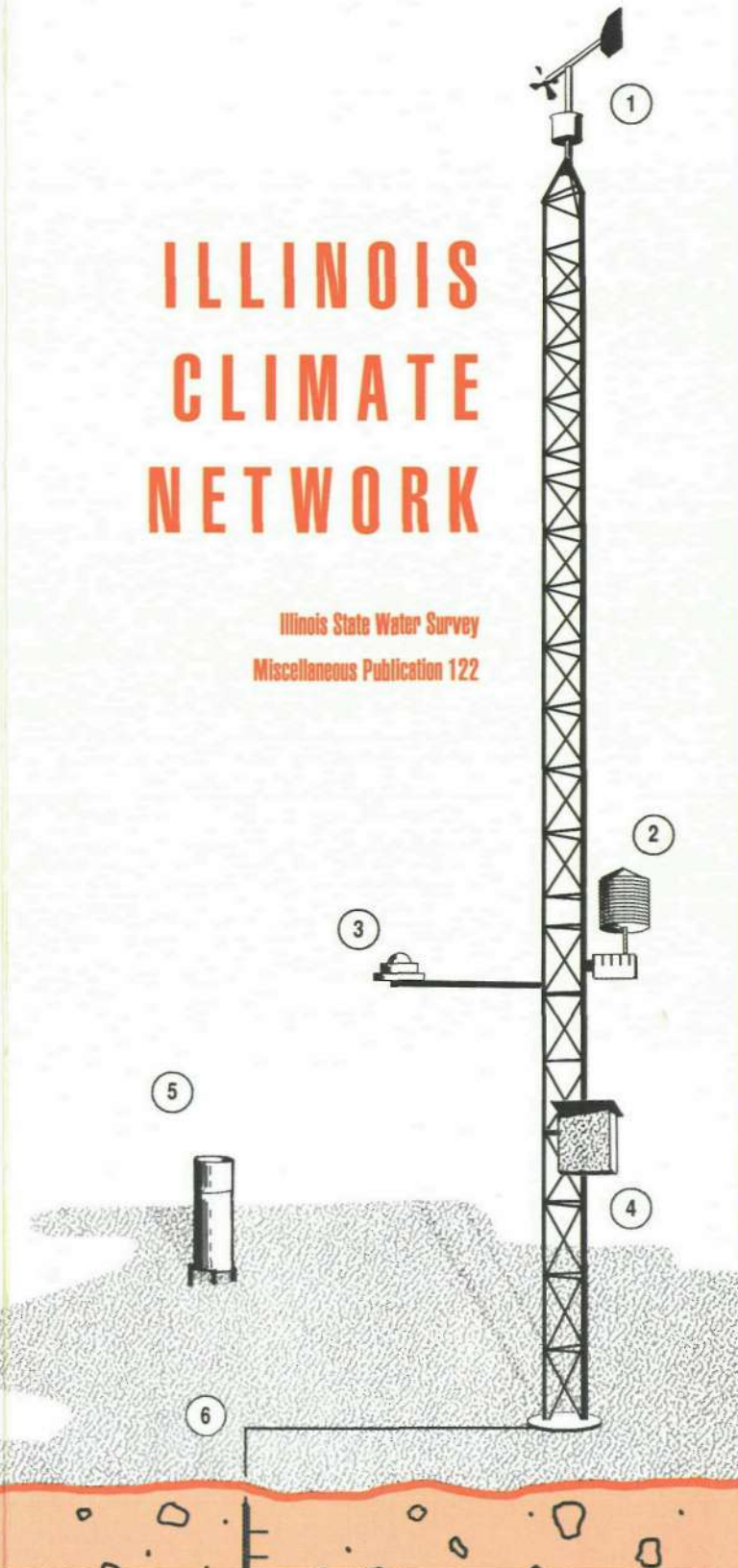
1990



6. Soil temperature probes are located at depths of 4 and 8 inches.

# ILLINOIS CLIMATE NETWORK

Illinois State Water Survey  
Miscellaneous Publication 122







1. A propvane anemometer atop the tower monitors wind speed and direction 10 meters above ground level.

Irrigation, chemical applications, pest management, and alternative energy development - all these operations rely on accurate and timely climate data. Decision makers in both Illinois agriculture and Illinois business and industry can now turn to a dependable statewide network for timely climate data year-round.

The Illinois State Water Survey's Illinois Climate Network (ICN) is the state's most comprehensive source for near real-time weather data. It's an information service offering more data than any other single source - and some of it is available nowhere else.

### What Is the Illinois Climate Network?

The ICN is part of the Water Survey's Natural Resources Benchmark Network, which monitors the state's climate and water resources. It consists of eighteen automated weather stations located in rural areas throughout Illinois. The stations are associated with University of Illinois Agricultural Experiment farms, Southern Illinois University Agricultural Experiment farms, and community colleges around the state.



2. The temperature/relative humidity probe is housed in a shelter 2 meters above ground level.

Automated data loggers at each station read the weather instruments every 10 seconds and compute hourly means or totals at the end of each hour. Daily maximum and minimum values are derived from the 10-second readings.

A computer located at the Water Survey Research Center in Champaign downloads the data each day. The raw data retrieved from the data loggers are then processed to produce hourly and daily weather summaries. The summaries are available as hard-copy, computer-generated reports or as ASCII files on floppy diskettes ready for use in personal computers.

Sites of automated weather stations of the Illinois Climate Network

1. Brownstown
2. Bondville
3. Champaign
4. DeKalb
5. Dixon Springs
6. Freeport
7. Belleville
8. Peoria
9. Springfield
10. Monmouth
11. Olney
12. Perry
13. Ina
14. Kilbourne
15. Carbondale
16. Stelle
17. St. Charles
18. Wildlife Park



3. An Eppley pyranometer measures incoming solar radiation. It is mounted on an arm extending from the tower 2 meters above ground level.

### Information Provided by the ICN

Each station within the Illinois Climate Network provides hourly averages for:

- Wind speed
- Wind direction
- Solar radiation
- Air temperature
- Relative humidity
- Soil temperatures at depths of 4 and 8 inches
- Dew-point estimates
- Evapotranspiration estimates

Daily weather summary information is provided by each network station for:

- Total precipitation
- Minimum and maximum air temperature
- Solar radiation totals
- Minimum and maximum soil temperature
- Maximum wind speed
- Minimum and maximum relative humidity

### Accurate Instruments and Quality Data

The weather instruments at the automated stations were selected to withstand harsh environments and to provide a high degree of accuracy and reliability. Field instruments are inspected on a regular basis, and instrument readings are periodically verified with independent standards to ensure that data are of the highest quality possible.