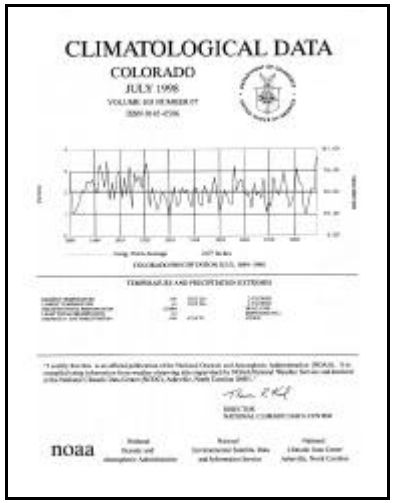
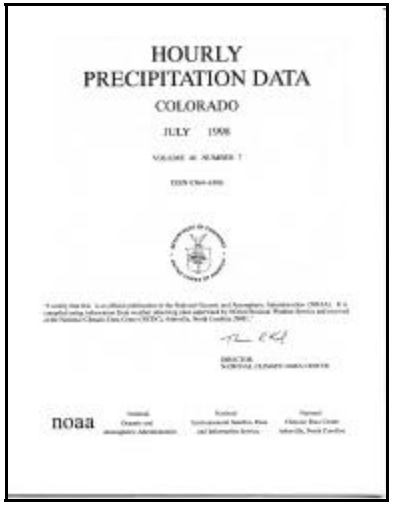
COOP climate data are published monthly in two NCDC publications. They are:




Climatological Data (by state)




Hourly Precipitation Data (by state)

Climate data can be obtained via the web (costs may be incurred) at the NCDC home page (***http://www.ncdc.noaa.gov/***) or by calling NCDC customer support at **1-800-271-4800**.

**COOP Modernization**

Although the COOP has been very successful in fulfilling its original mission defining U.S. weather and climate, its data are now used for a variety of needs requiring more timely receipt of observations.

NWS and NCDC are currently assessing strategies for COOP modernization through the development of a low-cost, standardized climate/weather observing system capable of supporting federal multi-agency requirements and the needs of NOAA and all other climate/weather data users. Goals of the modernization; standardization of observational techniques and improved compatibility of interagency data benefitting the nation's economy in the long term. To accomplish these goals the NWS and NCDC will be seeking funding sources and establishing partnerships with the private sector and academia.

For further information on the COOP program, contact:

National Weather Service
1325 East-West Hwy
SSMC2
W/OSO14x1, Rm 4410
Silver Spring, MD 20910

# Cooperative Observer Program (COOP)

**The Nation's largest and oldest weather/climate observing network (1890 - Present)**

http://www.coop.nws.noaa.gov

January 2000

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Weather Service

## COOP Mission

In addition to meeting the original 1890 agriculturally oriented mission to describe the climate of the U.S., today's COOP observations support many other applications of non-airport climate and weather data by industry, government, and individuals. These include:

- climate change and variability,
- NWS forecast and warning process,
- water management,
- drought assessment,
- presidential disaster declarations (snowstorms, etc.),
- crop yield forecasts,
- energy consumption models,
- litigation,
- engineering, power plant, and architectural design,
- recreation,
- public service,
- flood zone determination,
- risk management, and,
- insurance industry needs.

## History

The COOP is a nationwide weather and climate monitoring network of 11,700 volunteer citizens and institutions observing and reporting weather information on a 24-hour basis. COOP observations form the backbone of temperature and precipitation (including snowfall) records describing U.S. climate.

Today's Cooperative Observers have proud traditions traced back to the infant days of the nation. As early as 1797, Thomas Jefferson envisioned a nationwide network of weather observers with a least one observer per county.

Today's COOP was formally established by the Organic Act of 1890 with the purpose of taking meteorological observations to "establish and record the climatic conditions of the U.S."

## Network Characteristics

Today's network of 11,700 volunteer observers collect daily hydrometeorological data.

Locations with Cooperative Observers

Observations include some or all of the following parameters:

- 24-hour maximum and minimum temperature,
- 24-hour liquid precipitation amounts (including melted snowfall),
- snowfall and snow depth,
- evaporation,
- soil temperature,
- river stage, and,
- special phenomena such as hail, thunder, damaging winds, fog, etc.

Stations are established, closed, supervised, and inspected by NWS personnel. Annual visits ensure observer proficiency, adherence to instrument and exposure standards, and network integrity.

About 5,800 COOP stations have their monthly summaries published by NOAA's National Climatic Data Center (NCDC). Several thousand observers also report 24-hour summaries of observations to the NWS on a daily basis.

Because the network's observers have generated consistent long-term historical climate data, the network has established an invaluable record of climate. Climatic atlases for the country are based on decades of observations from COOP observers.

About 1,220 stations in the COOP network, those with 80 or more years of high quality data in a environmentally stable setting, make up the nation's research-quality Historical Climate Network. This data set supplies much of the information used in climate change and variability studies.

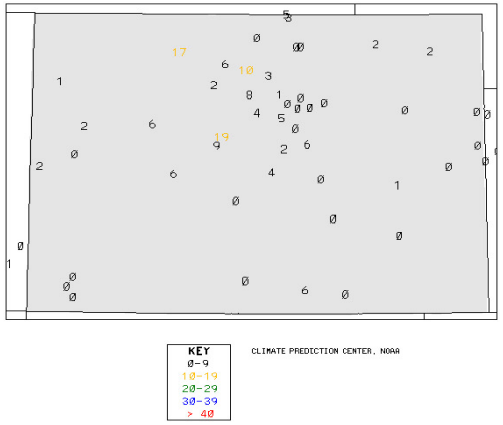
From any perspective, this little known, low-cost network is a vital element of the nation's infrastructure–arguably the most comprehensive national observing network for monitoring temperature, precipitation, snowfall, and other weather events in the United States.

## Program Management

Program operations, including training, data acquisition, and station maintenance, are managed by the NWS. Data processing, including quality control, archiving, and publication are managed by the National Environmental Satellite, Data, and Information Service's NCDC.

## Products

Preliminary daily observations of maximum and minimum temperature, precipitation, including snowfall, and snow depth for a select number of stations can be obtained via the web at individual NWS forecast office home pages or via the NWS national COOP home page (***http://www.coop.nws.noaa.gov/***). An example is shown below.




COOP Snow Depth Map (in.)
Colorado, Dec. 21, 1999