

CLIMATE

Pinpointing Shifts in America's Changing Climate

Impact

The newly-completed Climate Reference Network improves our ability to understand and predict trends and variation in climate

If several people tested the old adage “It’s so hot you could fry an egg on the sidewalk!,” they would find that city and rural conditions vary because of factors including the “urban effect” where heat is trapped and emitted by buildings, streets, and even the sidewalk itself. NOAA researchers considered this urban effect when

choosing locations for the 114 atmospheric observation stations that comprise the newly-completed U.S. Climate Reference Network (CRN).

Funded through OAR’s Climate Program Office, and installed by the Air Resources Laboratory, the CRN tracks and collects national average changes in temperature and precipitation trends with exceptional precision and accuracy. The CRN pinpoints shifts in America’s changing, often unpredictable, climate. The placement of each CRN station is crucial to obtain accurate information on current and likely future climatic conditions. All stations are constructed in rural environments, away from urban areas that could confound the interpretation of any precipitation and/or temperature trends observed.

Each CRN station logs real-time measurements of surface temperature, precipitation, wind speed and solar radiation. NOAA’s geostationary satellites relay the data from these ground-based stations to NOAA’s National Climatic Data Center, in Asheville, NC, which posts the observations online. NOAA climate forecasters use CRN data to develop the U.S. Drought Monitor, which assesses the status of drought nationwide. National Weather Service forecasters use CRN data to verify forecasts and monitor meteorological conditions.

As a result of installing the additional stations, NOAA has improved its ability to understand and predict trends and variation in climate. This data network will be instrumental in collecting climate observations with precision for the next 50-100 years.

“We’re entering a new age of understanding climate change, by adding more sound, reliable data about what’s really happening in the atmosphere and on the ground.”

Dr. Tom Karl, Director of NOAA’s National Climatic Data Center.

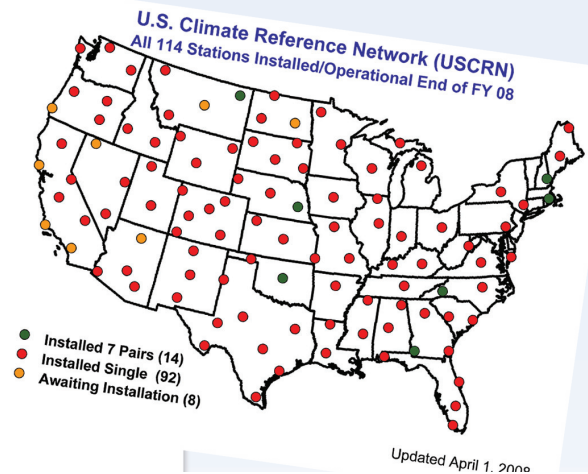


Image : A CRN station in Baker, NV.

Learn More:

www.arl.noaa.gov/CRN.php