

NevCAN Instrumentation

A consistent set of sensors are installed at each station to monitor precipitation, air temperature, wind speed and direction, incoming solar radiation, net radiation, relative humidity, barometric pressure, soil moisture and temperature at several depths, precipitation runoff and plant phenology, transpiration and growth. A webcam is mounted on each tower to provide real time assessment of site conditions as well as archival photographs to help assess plant phenology, snow depth and snow melt timing.



Instrumentation schematic

Networking capabilities provide real time transmission of data and webcam images to the Nevada Climate Change Data Portal where any interested person may download data free-of-charge. One of the primary NevCAN goals is to make climate change science and data accessible to all and thus enhance understanding of climate variability and its impacts.



Sheep, Montane, March 24, 2011 webcam

Photo and figure credits: Jay Arnone (DRI), Brian Bird (UNLV), Lynn Fenstermaker (DRI), Scotty Strachan (UNR) and Lisa Wable (DRI).

The Nevada Climate Change project is jointly operated by UNLV, UNR and DRI with funding from NSF EPSCoR. For information about NevCAN and the developing data archive please go to:

<http://sensor.nevada.edu>

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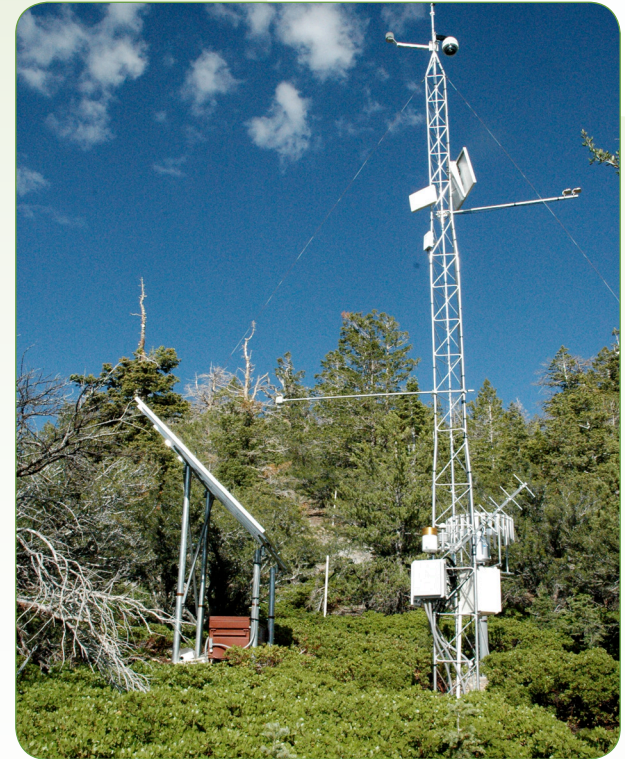
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NEVADA CLIMATE CHANGE

Exploring the past, present and future of the Great Basin and Mojave Deserts; science, education, policy and outreach



The Nevada Climate-ecohydrological Assessment Network, NevCAN

A collaborative effort by the University of Nevada Las Vegas, University of Nevada Reno, and Desert Research Institute with support from the National Science Foundation's Exploratory Program to Stimulate Competitive Research (EPSCoR)

The Universities of Nevada (Reno and Las Vegas) and the Desert Research Institute have collaborated with land owner agencies in Nevada to establish two elevational transects of monitoring stations collectively named the Nevada Climate-ecohydrological Assessment Network (NevCAN). The primary purpose of NevCAN is to collect data for long-term assessment of climate variability and change and its impact on ecological and hydrological processes and function in Nevada.

These basin-to-mountain top transects are located in the Sheep Range (located approx 35 km NNW of Las Vegas) and in the Snake Range (east central NV along the UT border; approx 335 km NNE of Las Vegas). The Sheep Range transect has five monitoring stations beginning at 900 m and ending at 3015 m. All of the monitoring stations are located on land managed by the U.S. Fish and Wildlife Service and several of the stations are co-located with Natural Resource Conservation Service (NRCS) Soil Climate Analysis Network (SCAN) sites.

The Snake Range transect has seven monitoring stations beginning at 1790 m on the west side of the range, 3355 m at the western subalpine site and ending at 1560 m on the eastern side of the range. An 8th monitoring station at 1564 m (Salt Desert West) will be incorporated into the Snake Range transect as funding permits; this site has had an operational eddy covariance system since 2007. The Snake Range transect encompasses several collaborating land holder agencies including: the Long Now Foundation, Bureau of Land Management, Great Basin National Park and the Nevada Land Conservancy.



Snake, Subalpine West



Sheep, Blackbrush

