

# **OKLAHOMA MESONET**

[www.mesonet.org](http://www.mesonet.org)

The Oklahoma Mesonet is a world-class network of environmental monitoring stations. The network was designed and implemented by scientists at the University of Oklahoma (OU) and at Oklahoma State University (OSU).

The Oklahoma Mesonet consists of 120 automated stations covering Oklahoma. There is at least one Mesonet station in each of Oklahoma's 77 counties.

At each site, the environment is measured by a set of instruments located on or near a 10-meter-tall tower. The measurements are packaged into "observations" every 5 minutes, and then the observations are transmitted to a central facility every 5 minutes, 24 hours per day year-round.

"Mesonet" is a combination of the words "mesoscale" and "network".

In meteorology, "mesoscale" refers to weather events that range in size from about one mile to about 150 miles. Mesoscale events last from several minutes to several hours. Therefore, mesoscale weather events are phenomena that might go undetected without densely spaced weather observations. Thunderstorms, wind gusts, heat bursts, and drylines, are examples of mesoscale events.

A "network" is an interconnected system.

Thus, the Oklahoma Mesonet is a system designed to measure the environment at the size and duration of mesoscale weather events.

So, what can the Oklahoma Mesonet site do for us? Maps can be found to find current air temperatures, 24-hour rainfall totals and averages, wind speed, radar, and much more. You can choose any city in Oklahoma and, as you hover over each county on the map, the location site will be revealed for you.

One example, besides those mentioned above, is the average soil temperature of a particular area. Why is this information important for a gardener? Some plant materials need soil temperatures to be quite warm, such as tomatoes, peppers, and caladium bulbs to grow and flourish and not to just sit idle until the soil warms up. The soil temps are given at varying depths according to what you are planting, whether it is an annual at four inches or a large shrub at fifteen inches.

The Oklahoma Mesonet site is always a great way to check current weather conditions or, more specifically, soil, water or even weather advisories. There is also an app for mobile phones by the same name.