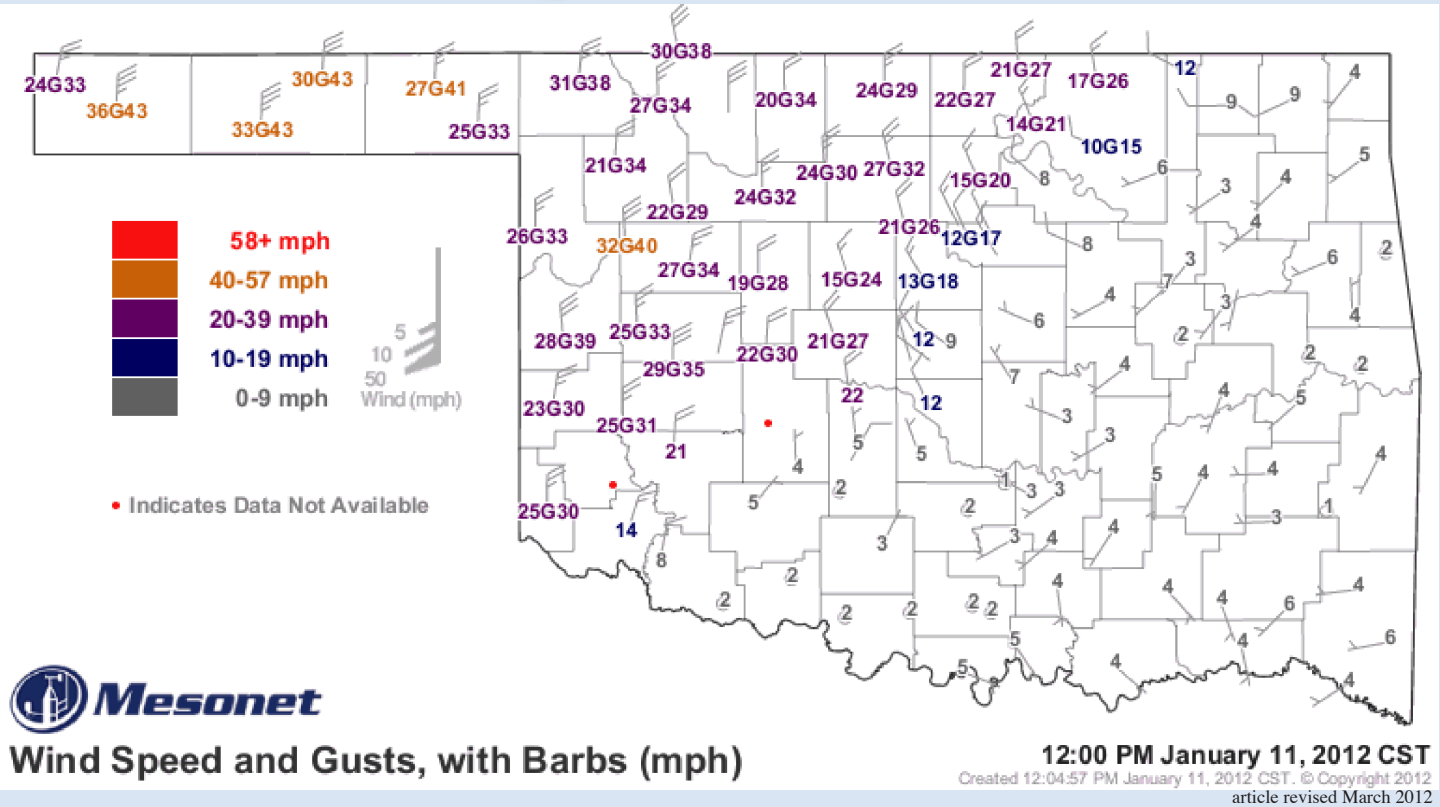
Reading Wind Barbs



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Wind barbs are a convenient way to represent both wind direction and speed. Wind barbs have three parts: a dot, a staff and feathers or flags.

Wind Direction

The staff part of a wind barb shows wind direction. The dot end of the staff is where the wind is blowing to, while the top of the staff shows the direction from which the wind is coming. The top row of wind barbs in the figure to the right all indicate a north wind. The dot is to the south and the top of the wind barb staff is to the north. The second row of wind barbs in the figure to the right shows how the wind barb is rotated to denote different wind directions.

Wind direction can also be reported as a compass degree. There are 360 degrees on the compass, with north being 0 or 360 degrees and south 180 degrees.

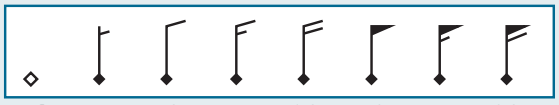
Wind Speed

Wind speed is indicated by feathers added to the top of the staff. These feathers show wind speed adjusted to the nearest 5 mph increment.

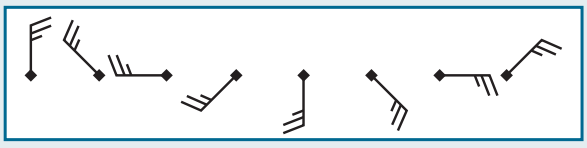
A short feather represents a 5 mph average wind speed. A long feather equals 10 mph. A pennant or flag is used to show a 50-mph wind speed.

When winds are 2 mph or less, a small open circle is used.

Feathers and pennants are combined to denote various wind speeds. For example, two long feathers and a short feather represent a 25 mph wind, as seen in the second wind barb row in the figure below.



Speed:	**calm**	**5**	**10**	**15**	**20**	**50**	**55**	**60**	**units**
Dir (from):	**NA**	**All blowing *from* the North**							
(toward):		**or all *towards* the South**							



Speed:	**25**	**25**	**25**	**25**	**25**	**25**	**25**	**25**	**units**
Dir (from):	**N**	**NW**	**W**	**SW**	**S**	**SE**	**E**	**NE**	
(toward):	**S**	**SE**	**E**	**NE**	**N**	**NW**	**W**	**SW**	

Wind barbs show wind speed and direction. Above are examples of varying winds. To view wind barb maps, go to www.mesonet.org, click Weather, then Wind in the left menu.

wind power

Wind is a form of solar energy. Winds are caused by the uneven heating of the atmosphere by the sun, the irregularities of the earth's surface and rotation of the earth.

Currently the state with the 8th most installed wind capacity overall in the US, Oklahoma is now harnessing clean, renewable wind energy to help meet energy needs, according to the American Wind Energy Association.

Wind power is the fastest growing energy source in the world. It is not only a clean and renewable source of electricity, but it can also be cost effective. Oklahoma alone has enough wind resource potential to supply nearly 31 times the state's current electricity needs. Currently, about 5 percent of Oklahoma's electricity is from wind power.

Since ancient times, people have used wind for energy. Over 5,000 years ago, the ancient Egyptians used wind to sail ships on the Nile River.

American colonists used windmills to grind wheat and corn, to pump water, and to cut wood at sawmills. As late as the 1920s, Americans used small windmills to generate electricity in rural areas without electric service.When power lines began transporting electricity to rural areas in the 1930s, local windmills were used less, though they can still be seen on some Western ranches.

The oil shortages of the 1970s changed the energy picture for the country and the world. It created an interest in alternative energy sources, paving the way for the re-entry of windmill technology to generate electricity.

In the early 1980s wind energy really took off in California, partly because of state policies that encouraged renewable energy sources. Support for wind development has since spread to other states, and Texas tops other states with installed wind power capacity in 2012.

Our Story

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, then the observations are transmitted to a central facility every 5 minutes, 24 hours per day year-round.

Mesonet
Oklahoma's Weather Network