

## Wind Rose

<http://www.nc-climate.ncsu.edu/windrose.php>

### THE NEED

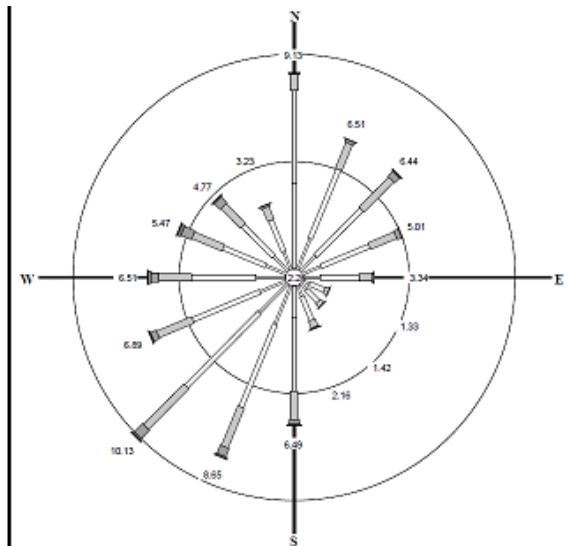
A wind rose is a graphical tool used to show wind speed and wind direction for a given location over a specified period of time. A wind rose would be very useful in showing prevailing wind directions over specified locations. Requests for a wind rose have been coming into the State Climate Office of NC since 2002. Examples of wind rose requests have been for determining prevailing wind direction over a 20 year time period for the determination of dispersal of airborne pollutants or determining prevailing wind directions over airports.

### SERVING THE NEED

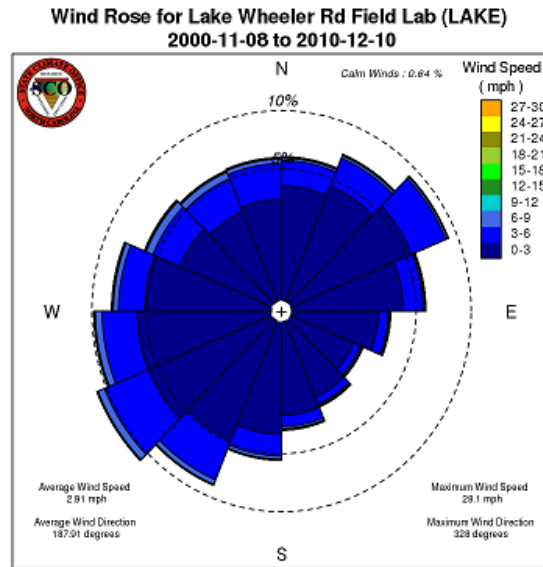
A wind rose was developed that will allow the user to choose the increments for wind speed, the units for the wind speed, and the time period for any of the stations available in the CRONOS database. The wind rose will be implemented on the State Climate Office of NC website for users to create their desired wind rose for any station that reports wind speed and wind direction in our database. The wind rose image displays calm winds, maximum wind speed and wind direction, average wind speed and wind direction, and frequency rings representing the frequency of winds blowing from a particular direction.

### IMPACT

Old Wind Rose



New Wind Rose



The new wind rose is currently implemented on the CRONOS website for users to utilize. The Division of Air Quality would find this extremely useful for determining the direction of air pollutant travel over various locations by looking at the wind direction using the wind rose for any particular location.

### PARTNERS & SUPPORT

CRONOS station data from the NC ECONet that is operated and maintained by the State Climate Office of NC, and the National Weather Service.