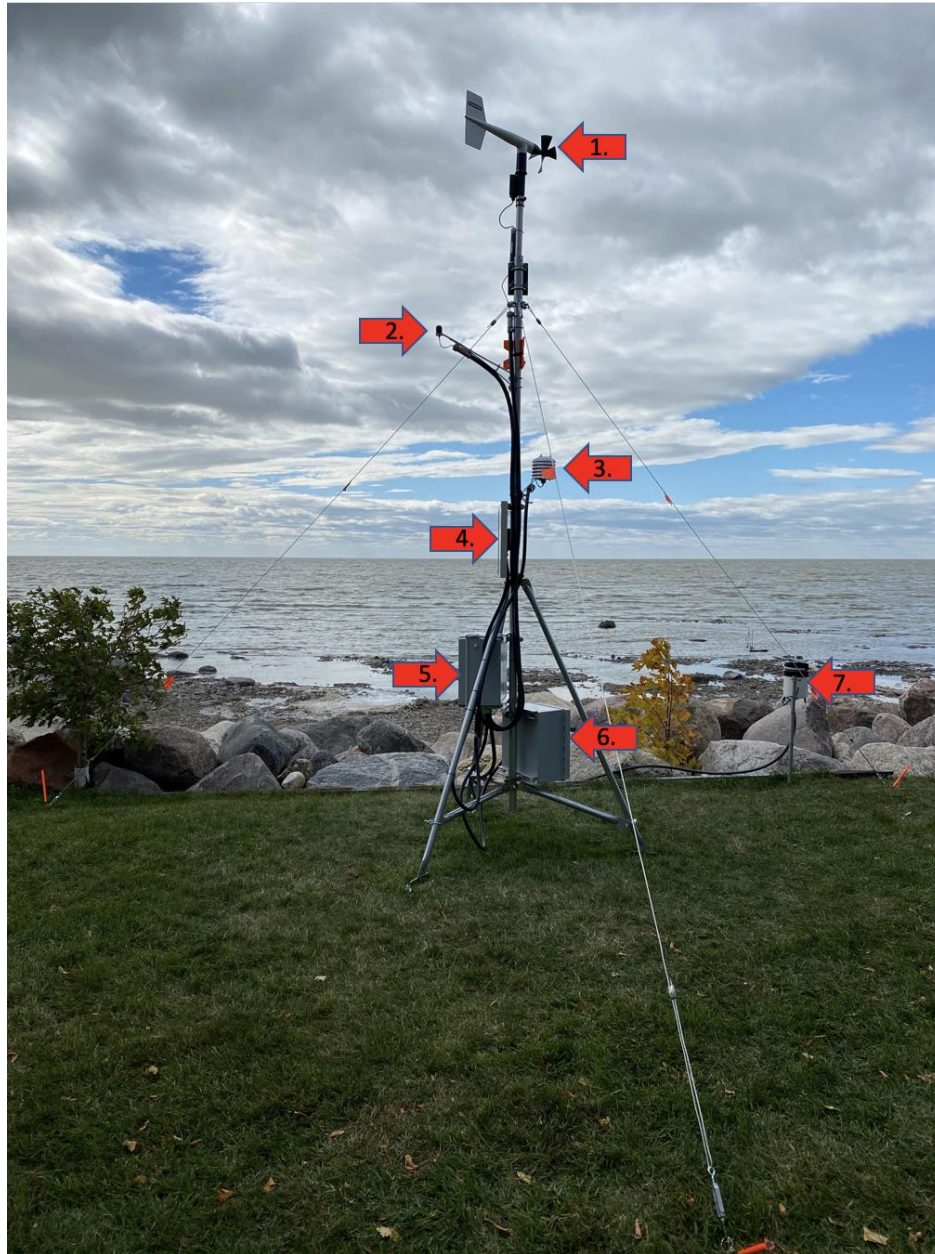


# Manitoba Métis Federation

## Weather Keeper Sensor Guide



### Sensors on your Weather Station:

1. Anemometer
2. PAR sensor
3. Temperature and Relative Humidity sensor
4. Solar panel
5. Logger housing box with Barometric Pressure sensor
6. Battery housing box
7. Rain gauge or bucket sensor

## Manitoba Métis Federation

### Weather Keeper Measurement Description

Sensor	Measurement	Description
Anemometer	Wind Speed (km/h)	Measured using a spinning anemometer mounted on the wind vane at the top of the tower, about 3 m above the ground. We report the average speed for every 15 minute period, in meters per second.
Anemometer	Gust Speed (km/h)	The highest wind speed recorded in each 15 minute period, and are also recorded in kilometres per hour.
Anemometer	Wind Direction (°)	Measured using a wind vane mounted at the top of the tower. As we do with wind speed, we report the average direction for every 15 minutes, in compass degrees from true north.
Photosynthetically Active Radiation	PAR (μE)	The intensity of the part of sunlight that plants can use to support new growth, and also the wavelengths of light that our eyes are sensitive to. It is measured on a small white disc that records the sum of light falling directly from the sun, and light scattered by the sky and clouds. It is reported in a unit called a micro-Einstein.
Temperature and Relative Humidity	Temperature (°)	We report temperature in the shade, in Centigrade degrees. It is measured using an electronic thermometer shielded from direct sunlight, mounted inside an enclosure with louvered walls to allow free air flow past the sensor.
Temperature and Relative Humidity	Relative Humidity (RH %)	The amount of water vapour in the air reported as a percentage of the amount that would saturate it at the air temperature. Warmer air can hold more water vapour than cooler air.
Barometric Pressure	Barometric Pressure (mbar)	Measured using a barometer mounted inside the enclosure that houses the air temperature sensor. It is reported in millibars, where 1,000 millibars is the average air pressure at sea level. Changing pressure often indicates a coming change in the weather. Increasing pressure is associated with clearing skies. Decreasing pressure is associated with increasing cloudiness, and possibly an approaching storm.
Rain Gauge	Rain (mm)	Reported in millimetres accumulated every 15 minutes in a gauge set about 1 m above the ground. Rain falling into a 6-inch diameter funnel drips onto a one of a pair of “buckets”, mounted on a teeter-totter. When one bucket is filled, the teeter-totter flips, the first bucket is emptied and rain then drips into the other “bucket” until it is filled, and so on. Each flip is equals 0.2 mm of rain.