

AEM ELEMENTS PULSE Obligations

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1 Introduction

This document describes your obligations as a participant in Elements Pulse. There are three aspects to consider about the Station, its Sensors and the Observations they provide.

1. Siting and exposure
2. Uptime and observation delivery frequency
3. Maintenance

You'll manage all of this through the AEM Elements Station Manager which is accessible through your existing user accounts from WeatherLink.com or Earth Networks. Details on how to access are at the end of this document.

2 Station Siting / Exposure Information

Maintaining accurate information about your weather station's location, sensor locations, surrounding environment, and nearby obstacles determines the quality of the observations. For example, trees within a certain distance of the weather station can adversely affect wind measurements.

As part of the program, you will update the station and sensor siting/exposure information as follows:

1. At least once every 12 months when the station was not moved or relocated.
2. Anytime the station was moved or relocated since the last time you recorded the siting/exposure information.

The sensors that require updates collect the following observations:

1. Outside Air Temperature
2. Humidity
3. Pressure
4. Wind Speed/Direction
5. Rain

Here's a list of station and sensor siting/exposure information that you will collect and supply into the Elements Station Manager:

2.1 Station

- Latitude, Longitude and Elevation
- Mounting Location – Ground, Roof or Other
- If Roof mounted,

- describe the material composition below the mounting
 - define the distance from ground to the mount
- Urban Climate Zone

2.2 Outdoor Air Temperature Sensor

- Confirm presence of sensor
- Confirm presence of radiation shield
- Height of sensor above the mounting surface
- Confirm forced ventilation (aspiration)
- Details of the surrounding area's ground cover
- Details on heat sources nearby the sensor
- Details on projected shade from the sun

2.3 Humidity Sensor

- Confirm presence of sensor
- Height of sensor above the mounting surface
- Details of the surrounding area's ground cover
- Details on heat sources nearby the sensor
- Details on projected shade from the sun

2.4 Pressure Sensor

- Confirm presence of sensor
- Height of sensor above the mounting surface

2.5 Wind Sensor

- Confirm presence of sensor
- Height of sensor above the mounting surface
- Terrain Roughness Class (North, East, South, West)
- Presence, description and distance of Large Obstacles (North, East, South, West)
- Presence, description and distance of Tall Thin Obstacles (North, East, South, West)

2.6 Rain Sensor

- Confirm presence of sensor
- Height of sensor above the mounting surface
- Presence, description and distance of Obstacles

3 Uptime and Observation Delivery Frequency

Ensure the station has power and internet connectivity so it supplies weather observations at least every 5 minutes. If there is a quality problem with one or more of the following observations, AEM will notify you:

1. Outside Air Temperature
2. Humidity
3. Pressure
4. Wind Speed/Direction
5. Rain

4 Maintenance

Checking your participating weather station and sensor for problems and addressing them in a timely manner also determines observations quality.

As part of the program, you will periodically inspect and, if necessary, perform maintenance on your station. Required maintenance depends on your station. Details on maintenance are here:

[How to Perform Station Maintenance](#)

You will access the Elements Station Manager to record the dates of inspection and any maintenance you perform:

1. At least once every 12 months assuming the station was not moved.
2. Anytime the station was relocated since the last time you conducted maintenance activity.
3. If AEM contacts you about observation quality concerns coming from your station.

5 How to Access Elements Station Manager

The Elements Station Manager will be the place to view and record your station's siting/exposure and maintenance information. It is coming soon.