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## Understanding the data

Learn how the air quality data readings are interpreted to give a regional air quality value.

### Air quality index

#### Data readings

In order to provide more detailed information than is available in the AQI (air quality index), measurements are also published as **hourly data readings**, and **daily data readings**, in scientific units rather than the derived values provided in the AQI.

Data readings are the actual scientific measurements for each air pollutant. The data readings are recorded in different units of measure, depending on the type of pollutant.

Pollutant	Units used for air quality data
Ozone	pphm (parts per hundred million)
Nitrogen dioxide	pphm (parts per hundred million)
Visibility (as B <sub>sp</sub> )	10 <sup>-4</sup> m <sup>-1</sup>
Carbon monoxide	ppm (parts per million)
Sulfur dioxide	pphm (parts per hundred million)
Particles	µg/m <sup>3</sup> (micrograms per cubic metre)

At each monitoring site, air quality

**Data readings**

are taken for each of the six pollutants.



#### AQI (air quality index values)

Data readings are converted into AQI values by using the formula:

$$AQI_{\text{pollutant}} = \frac{\text{Pollutant data reading}}{\text{Standard}} \times 100$$

This means the AQI is a *derived* value (based on the data reading). Because data readings have different underlying units of measure, it is difficult to compare the various pollutants. After we derive the AQI values we have a standardised set of values that we can then compare and present.

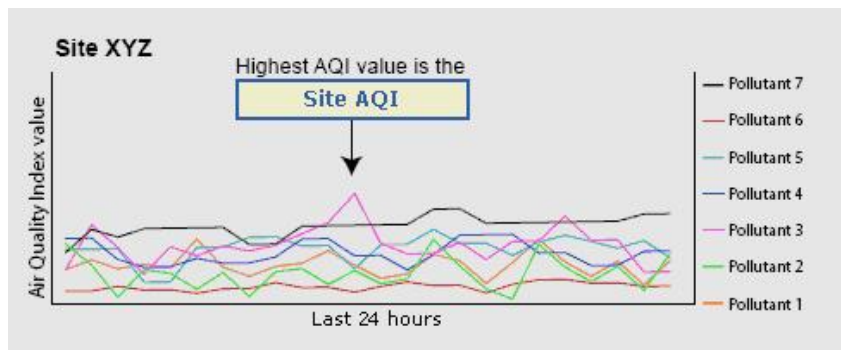
The data reading / standard x 100 is the

**Air quality index (AQI)**



### Site AQI

There are 24 monitoring sites around NSW where the air quality index (AQI) values are calculated. The AQIs are compared at each site. The **highest AQI value at each site** becomes the **site AQI**. In the example below, the highest AQI for pollutant 3 would be the site AQI



The highest  
Air quality index (AQI)  
value is taken as the  
**Site AQI**  
for that particular site



### Region AQI

All the site AQIs in a given region are compared. The highest site AQI for a region is taken as the region AQI. In the example below, the reading for site RST would be the region AQI



The highest  
**Site AQI**  
for a region is taken as the  
**Region AQI**

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