



# Air Quality Index

## What is the Air Quality Index?

The Air Quality Index (AQI) was created to help the public understand how air quality correlates to health.

One way of conveying air quality information is to report the actual concentration of each pollutant. The problem with this is that different pollutants affect health at different concentrations so there's no uniformity. The AQI was developed to avoid this problem by converting pollutant concentrations to a uniform scale based on the potential health effects at the measured concentrations. The AQI enables one to easily determine when air pollution levels are high so activities can be modified.

## What do the numbers mean?

The AQI uses a numerical scale ranging from 0 to 500, with 0 representing pristine air. The higher the AQI value, the greater the level of air pollution and the greater the health danger. An AQI of 100 usually corresponds to the federal standard for that pollutant (except for PM<sub>2.5</sub>, where the AQI is set at 150 rather than 100). So values below 100 are generally thought of as satisfactory, whereas values above 100 are considered to be unhealthy – at first for sensitive groups of people, then for everyone as the AQI values get higher.

## How is the AQI determined?

Air quality is measured by a network of monitors that record actual pollutant concentrations or mass. These raw measurements are converted using a formula developed by the U.S. Environmental Protection Agency which relates similar degrees of health effects to AQI's scale.

An AQI value for an area is calculated for each of the major pollutants: ground-level ozone, particulate matter (PM<sub>2.5</sub> and PM<sub>10</sub>), carbon monoxide, sulfur dioxide, and nitrogen dioxide. The highest of the values for the individual pollutants becomes the AQI value for that day.

## Why is San Diego's AQI always for ozone or particulates?

Because San Diego meets the clean air standards for carbon monoxide, sulfur dioxide, and nitrogen dioxide. Depending on which is forecast to be higher for that day, the AQI will be for either ozone or particulates. Ozone is predominantly the pollutant of concern during the summer months while PM<sub>2.5</sub> results in higher AQIs during the fall and winter months.

## What do the categories mean?

The AQI scale has been divided into distinct categories, each corresponding to a different level of health concern. In addition, a specific color has been assigned to each of the health risk categories to make it easier for people to understand quickly the significance of air pollution levels in their communities. The AQI is a national index, so the values and colors used to show local air quality and the associated level of health concern will be the same everywhere you go in the U.S.

