

AIR QUALITY FACT SHEET GLADSTONE

PM₁₀ & PM_{2.5}

PM₁₀ and PM_{2.5} particles are invisible to the naked eye.



A standard measurement of urban air pollution is the amount of particulate matter in the air.

PM₁₀ and PM_{2.5} particles are generated by combustion and non-combustion processes, including windblown dust, sea salt, industrial processes, car engines and fires.



PM_{2.5} refers to airborne particles less than 2.5 micrometres in diameter.

Smoke from fires and dust storms can be common causes of increased PM_{2.5} concentrations. Deposited dust (dust fall) refers to air particles that settle out over a given area and time under the influence of gravity.



The recommended air quality standards for PM_{2.5} are:

- 25 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$) for a 24-hour exposure period
- 8 $\mu\text{g}/\text{m}^3$ for an annual exposure period.

Gladstone displayed an overall lower annual average compared to the annual average of PM₁₀ particles recorded in Mackay.



A PM₁₀ particle is less than 10 microns in diameter or less than one-fifth of the diameters of a human hair.

Fisherman's Landing in Gladstone had an annual average of 31.5 ($\mu\text{g}/\text{m}^3$), which was higher than all other Gladstone sites. This could be due to road works, dust storms, fires etc.



The recommended air quality standards for PM₁₀ are:

- <50 micrograms per cubic metre ($\mu\text{g}/\text{m}^3$) for a 24-hour exposure period
- <25 $\mu\text{g}/\text{m}^3$ for an annual exposure period.

In December 2017 to November 2018 Gladstone air quality monitoring stations recorded values below this average.

PM₁₀ is an air pollutant of concern as particles less than 10 μm are capable of penetrating our lower airways and can cause negative health effects.

