



Trend
Getting better



Condition
Fair



Reliability
Very good

Trend

Annual average levels of ambient fine particles (PM_{2.5}) have declined at key monitoring sites across metropolitan Adelaide since 2005.

PM_{2.5} particles are solid or liquid matter smaller than 2.5 micrometres (0.0025 mm) in diameter (e.g. smoke) suspended in Earth's atmosphere. This assessment is of the annual average level of PM_{2.5} at four air quality monitoring stations across metropolitan Adelaide (top figure).

Since 2005, ambient levels of PM_{2.5} particles have reduced at all monitoring stations (bottom figure).

The decline in PM_{2.5} particles is linked to improvements in fuel quality, motor vehicle engine standards and product standards (e.g. wood heaters). A decline in manufacturing and improvements in pollution control technology have also contributed to a reduction in fine particle pollution. The occasional annual increase in PM_{2.5} averages can be linked to other contributors, such as smoke from planned burning and bushfires (bottom figure).

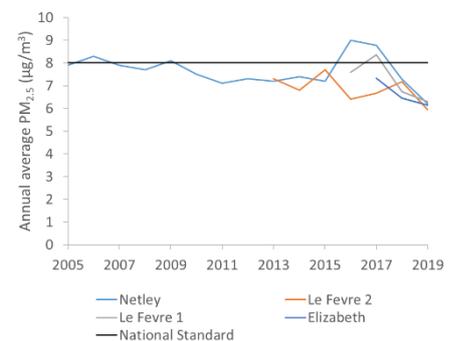
Condition

The condition of ambient levels of PM_{2.5} particles in South Australia is rated as fair.

In 2019, the long-term levels of PM_{2.5} particles averaged 6.2 micrograms per cubic metre (µg/m³) at Netley, 6.3 µg/m³ at Le Fevre 1, 6.0 µg/m³ at Le Fevre 2 and 6.1 µg/m³ at Elizabeth. These are all below the national standard of 8 µg/m³ (bottom figure).

Annual average PM_{2.5} particle concentrations have decreased since 2005 and are below the national standard.

Air quality monitoring stations across metropolitan Adelaide



Why is air quality a problem?

Ambient particles are the greatest air quality-related risk to human health, particularly in urban areas.

PM_{2.5} particles are small enough to be inhaled into the lungs and even enter the bloodstream. Both short- and long-term exposure to particles can have health effects, which may include premature death, aggravation of cardiovascular and respiratory diseases, and cancer.

Particle pollution can also affect ecosystems and agriculture, and reduce visibility (due to haze).

What are the pressures?

PM_{2.5} particles are mainly produced by combustion sources such as motor vehicles, power generation, industrial boilers, wood burning, hazard reduction burns and bushfires.

Increasing population numbers and higher-density living are placing increased pressure on our ability to manage ambient particle emissions.

Climate change is another pressure, with predictions of more frequent extreme events likely to result in further exposure to dust and smoke.

What is being done?

All levels of government are collaborating with other sectors to better understand and reduce the risks from air pollution.

The South Australian Government maintains a network of monitoring stations to measure and track pollutant levels. Other programs include the National Clean Air Agreement, regulation of industry, vehicle fuel quality and engine emissions standards, product standards, modernising transport infrastructure, and investments in modern technology and renewable energy.

For further information, see [Technical information](#)



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