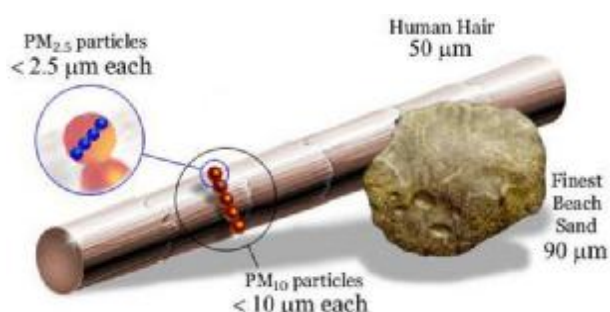


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Particulate Matter

Particulate matter refers to substances that exist in the atmosphere. It is a somewhat complex category, encompassing a wide range of chemically and physically diverse substances. Particulate matter includes all solid and aerosol matter that exists in ambient conditions.



Source: Ministry of the Environment

Particulate matter means lots of really small specks that you cannot see that float in the air around us. An example of this is smoke. These really small specks can be dangerous for people.

Effects on Health

As described above, particles with a diameter of 10 µm or less can be inhaled into the respiratory system. The main effect is on human health. The coarser fraction of airborne particles (2.5 µm to 10 µm) is deposited in the trachea bronchial region, where asthma attacks are triggered.

Effects on Visibility

Particulate matter in the air either absorbs or scatters light, reducing visibility. The reduction of the visibility by higher concentration of particulate matter and gases in the air is known as smog. Smog in big cities with a lot of industry and traffic is a normal daily condition. You can view a Palmerston North visibility camera on our website www.horizons.govt.nz.

Sources

Particulate matter can come from smoke, dust and from condensing vapours that can be suspended in the air for a long time. The main sources of the particulate matter are vehicle emissions, domestic wood burners, backyard burning and some industries.

Monitoring

Horizons Regional Council monitors PM₁₀ concentration in Taihape and Palmerston North at this stage. The national average (per 24 hours) concentration (National Standard) for PM₁₀ is 50 µg/m³. Temperature, wind direction, wind speed and relative humidity are also monitored at our air monitoring sites because these parameters are significant factors in defining air quality.