

National Environment Protection Measures

National Environment Protection Measures (NEPMs) are broad framework-setting statutory instruments defined in the National Environment Protection Council (NEPC) Act 1994. They outline agreed national objectives for protecting or managing particular aspects of the environment. A NEPM will become law in each participating jurisdiction once it is made by NEPC. NEPC legislation has been enacted in WA (National Environment Protection Council (Western Australia) Act 1996).

NEPMs are similar to environmental protection policies (EPP's) and may consist of any combination of goals, standards, protocols, and guidelines. Typically a NEPM may contain:

- a goal;
- one or more standards;
- one or more monitoring and reporting protocols;
- guidelines.

There are currently five NEPMs in place that relate either entirely or partly to air quality.

Ambient Air Quality NEPM

The National Environment Protection Measure for Ambient Air Quality (Air NEPM) was made in 1997 and specifies standards and goals for ambient levels of the "criteria" air pollutants. The criteria pollutants are ubiquitous in urbanised areas and are general indicators of air quality.

Perth's air quality is assessed according to standards specified by the Air NEPM. The Air NEPM standards and goals for the six criteria pollutants covered by the NEPM are contained in Table 1.

Table 1 - Standards and Goal

Pollutant	Averaging period	Maximum concentration	Goal within 10 years Maximum allowable exceedences
Carbon monoxide	8 hours	9.0 ppm	1 day a year
Nitrogen dioxide	1 hour	0.12 ppm	1 day a year
	1 year	0.03 ppm	none
Photochemical oxidants (as Ozone)	1 hour	0.10 ppm	1 day a year
	4 hours	0.08 ppm	1 day a year
Sulfur dioxide	1 hour	0.20 ppm	1 day a year
	1 day	0.08 ppm	1 day a year
	1 year	0.02 ppm	none
Lead	1 year	0.50 ug/m ³	none
Particles as PM ₁₀	1 day	50 ug/m ³	5 days a year

The Air NEPM requires that each Australian jurisdiction report annually to the National Environment Protection Council (NEPC) on general air quality, breaches and trends based on monitoring network data. Implementation reports and further information on the Air NEPM is available at the Environment Protection and Heritage Council website at www.ephc.gov.au.

Ambient Air Quality NEPM – Particles Standard PM_{2.5}

In May 2003, the NEPC made the Variation to the Air NEPM which strengthens air quality standards to help protect Australians from the adverse health impacts of small pollutant particles. The Variation introduces advisory reporting standards for fine particles 2.5 micrometres or less in size (known as PM_{2.5}).

These are known to produce respiratory and cardiovascular illness. The advisory reporting standards will assist in gathering sufficient data nationally on fine particles, with the information used to inform the review process for the Air NEPM, which commenced in 2005.

The Variation to the Air NEPM also requires that each Australian jurisdiction report annually to the NEPC on general air quality, breaches and trends based on monitoring network data. Implementation reports and further information on the Variation to the Air NEPM is available at the Environment Protection and Heritage Council website at www.ephc.gov.au.

Diesel Vehicle Emissions NEPM

Emissions from motor vehicles constitute the most significant source of urban air pollution in Australia. Continued annual growth in vehicle kilometres travelled and fuel consumption by the diesel fleet highlights this as an area of growing concern from the air quality perspective. Analysis of the Australian diesel fleet shows that diesel vehicles are increasing as a proportion of the total fleet.

The emissions of most interest in relation to diesel vehicles are oxides of nitrogen (NO_x) and fine particles. NO_x is a precursor to the formation of photochemical smog, and fine particles have been identified as a major health risk.

The Diesel Vehicle Emissions NEPM (Diesel NEPM) was made by National Environment Protection Council (NEPC) in 2001, and contains guidelines to assess the contribution made by diesel vehicles to air quality problems and the develop programs to address emissions. The WA State Government is required to implement the Diesel NEPM as per the National Environment Protection Council (Western Australia) Act 1996.

The Diesel NEPM strategies are generally consistent with the Perth Air Quality Management Plan (AQMP) and include common approaches, including emissions testing, smoky vehicle control and audited maintenance programs. The Department of Environment is implementing the Diesel NEPM in Western Australia through the [CleanRun Program](#).

Under the Measure each Australian jurisdiction is required to report annually to NEPC on progress in meeting the goals of the Diesel NEPM. Implementation reports and further information on the Diesel NEPM is available at the Environment Protection and Heritage Council website at www.ephc.gov.au.

Air Toxics NEPM

"Air toxics" are gaseous, aerosol or particulate pollutants that are often present in the air in low concentrations with characteristics such as toxicity or persistence so as to be a hazard to human, plant or animal life. Air toxics are emitted into ambient air from a wide range of sources. The exposure of the Australian population to these substances is dependent on individual lifestyle and places of work and residence.

There is a growing international recognition of the potential health risks associated with exposure to air toxics and of the need for action to minimise these risks. There is evidence that cancer, birth defects, genetic damage, immunodeficiency, respiratory and nervous system disorders can be linked to exposure to occupational levels of air toxics.

The National Environment Protection (Air Toxics) Measure (Air Toxics NEPM) was made by the National Environment Protection Council in 2004. The WA State Government is required to implement the Air Toxics NEPM as per the National Environment Protection Council (Western Australia) Act 1996. The Air Toxics NEPM provides a framework for monitoring, assessing and reporting on the ambient levels of five air toxics – benzene, formaldehyde, PAHs, toluene and xylenes. The NEPM is designed to improve the information base regarding ambient air toxic levels within the Australian environment and to standardise the method of data collection across the nation.

Under the Measure each Australian jurisdiction is required to report annually to NEPC on progress in meeting the goal of the Air Toxics NEPM. Implementation reports and further information on the Air Toxics NEPM is available at the Environment Protection and Heritage Council website at www.ephc.gov.au.

National Pollutant Inventory NEPM

The National Pollution Inventory NEPM (NPI NEPM) provides the framework for the development and establishment of the National Pollutant Inventory (NPI), which is an Internet database designed to provide the community, industry and government with information on the types and amounts of certain substances being emitted to the environment. The NPI is designed to satisfy community demand for this information and increase understanding of the relative environmental impact of local industry and everyday activities.

The information on the NPI can help governments with environmental planning and management. When estimating emissions for the NPI, industry may become aware that certain manufacturing processes could be cleaner and/or more efficient. Annual reporting can also assist industry to document progress in reducing emissions.

Australian industrial facilities using more than a specified amount of the substances listed on the NPI reporting list are required to estimate and report emissions of these substances annually. Emissions from facilities using less than the specified amount of the substances listed on the NPI will be estimated by government. Government will also estimate emissions arising from everyday household activities, such as driving to work and mowing the lawn. Both of these types of emissions will be included on the database.

Currently industries are required to report their emissions to air, land and water of the 90 substances listed on the NPI.

The *Perth Airshed Inventory Update 1998-1999* gives a breakdown, by significant sources, of the estimated total mass of specific air pollutants emitted in the Perth metropolitan area between 1998 and 1999.

The NPI website is available at www.npi.gov.au, and further information on the NPI NEPM is available at the Environment Protection and Heritage Council website at www.ephc.gov.au.