



## Community Information Open Day

### Fact sheet 1

## DEC Background Air Toxics Study -A Snapshot

The Department of Environment and Conservation began developing the background air toxics study in 2004. This study was undertaken to assess the concentrations of toxic pollutants in ambient air in metropolitan and selected regional areas. After taking into consideration input from the community and other key stakeholders, sampling began in January 2005.

### Study aims

The aims of the study were to:

- gather data on the levels of air toxics at a number of urban locations in Perth;
- compare the measured levels of air toxics against guidelines proposed in the National Environment Protection (Air Toxics) Measure (NEPM);
- compare the measured levels of air toxics against guidance levels set by other authorities such as the World Health Organisation and the US Environmental Protection Authority;
- collect air toxics data to use in future health risk assessments and epidemiological studies;
- engage and encourage participation from all stakeholders including the community, special interest groups, State and Federal agencies and industry.

### Existing monitoring sites

The first monitoring sites were established many years ago in metropolitan Perth. When the DEC air toxics study began in 2005, the existing sites at Duncraig, Queens Building (Perth CBD) and Hope Valley were used. These sites continue to monitor various pollutants and are 'active' monitoring sites. A permanent power supply is needed to operate these sites and monitoring equipment can be programmed to collect samples at specific time intervals and on specific days. Data is collected daily by these monitoring sites and used to characterise the air quality throughout the metropolitan and selected regional areas.

### Other areas involved in the study

In 2004 the study was extended to include monitoring at additional metropolitan sites, including North Rockingham, Kwinana Beach, Challenger, Calista, Medina, Munster, Wattleup, Kwinana and Rockingham. Throughout the study, passive samplers were used at these sites. A passive sampler generally samples for a longer period of time than an active sampler. Both sampling styles are effective, however the main difference is that passive sampling does not need a power supply, so is easier to locate and set up.

### Summary table - monitoring site and pollutant

The following table indicates the substances monitored at each of the twelve monitoring sites during 2005 and 2006.

Site Name	Polycyclic Aromatic Hydrocarbons	Carbonyls	Heavy metals	Volatile Organic Compounds	Nitrogen Dioxide O <sub>2</sub>	Amonia <sub>3</sub>	Particulates (2.5 microns) <sub>2.5</sub>
Duncraig	✓	✓	✓	✓			
Queens Buildings	✓	✓	✓	✓			
Hope Valley	✓	✓	✓	✓			
North Rockingham				✓	✓		
Kwinana Beach				✓			
Challenger				✓		✓	
Calista				✓	✓		
Medina				✓	✓		
Munster				✓			
Wattleup				✓	✓		
Kwinana							✓
Rockingham							✓

The results of the Background Air Toxics Study are available on the DEC website. A brief description of the pollutants and their concentrations at each site are provided. Targeted monitoring will follow the Midland study, including studies of air quality in light industrial areas, in the vicinity of shopping centres and near major roads.